

# A47 North Tuddenham to Easton

**Scheme Number: TR010038**

**Volume 9**

## **9.6 Applicant's Response to the Examining Authority's First Written Questions (ExQ1)**

The Infrastructure Planning (Examination Procedure) Rules 2010  
Rule 8(1)(c)

Planning Act 2008

September 2021

## Infrastructure Planning

### Planning Act 2008

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

## A47 North Tuddenham to Easton Development Consent Order 202[x]

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### 9.6 APPLICANT'S RESPONSE TO THE EXAMINING AUTHORITY'S FIRST WRITTEN QUESTIONS

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## **1 INTRODUCTION**

- 1.1.1 The Development Consent Order (DCO) application for the A47 North Tuddenham to Easton scheme was submitted on 15 March 2021 and accepted for examination on 12 April 2021.
- 1.1.2 The purpose of this document is to set out Highways England's (the Applicant) response to the Examining Authority's First Written Questions 1 (ExQ1) issued 18 August 2021.

## **2 KEY ABBREVIATIONS**

- 2.1.1 The following abbreviations have been used in the Applicant's responses to the First Written Questions:
- dDCO = draft Development Consent Order
  - DMRB = Design Manual for Roads and Bridges
  - ES = Environmental Statement
  - ExA = Examining Authority
  - NPSNN = National Policy Statement for National Networks 2014
  - NWL = Norwich Western Link
  - the Scheme = the A47 North Tuddenham to Easton dualling scheme

### 3 GENERAL AND CROSS-TOPIC QUESTIONS

No	Question To	ExA Question	Guidance
Q1.0.1	The Applicant	How would the Proposed Development: <ul style="list-style-type: none"> <li>• meet the requirements to deliver 'good design' in accordance with paragraphs 4.28 to 4.35 of the National Networks NPS; and</li> <li>• satisfy the National Infrastructure Commission's Design Principles for National Infrastructure?</li> </ul>	<p>Compliance with each paragraph of the National Networks NPS, including paragraphs 4.28 to 4.35. is presented in the National Policy Statement for National Networks Accordance Tables (<b>APP-141</b>).</p> <p>The design principles of the Scheme are considered in Chapter 3 'Design Principles' of the Scheme Design Report, Rev.1 (<b>AS-009</b>). This chapter explains that there are 10 principles of good design which should be implemented by a scheme, as identified within Highways England's Strategic Design Panel Progress Report<sup>1</sup>: Good Road Design. Therefore, the Scheme has been developed in accordance with the below ten principles of good design as defined in Highways England's The Road to Good Design (2018)<sup>2</sup> and DMRB GG103 Good Road Design. These cover the principal objectives identified in the NPS.</p> <p>Accordingly good design:</p> <ul style="list-style-type: none"> <li>• makes roads safe and useful</li> <li>• is inclusive</li> <li>• makes roads understandable</li> <li>• fills in context</li> <li>• is restrained</li> <li>• is thorough</li> <li>• is environmentally sustainable</li> <li>• is innovative</li> <li>• is long lasting</li> <li>• is a collaborative process.</li> </ul> <p>The design was developed by a professional, independent engineering design consultancy employed by the Applicant. The design applied industry approved standards and good design principles. Chapter 3 of the Scheme Design Report, Rev. 1 (<b>AS-009</b>), describes how the Scheme considers each of the design principles and how each principle has been applied within the design of the Scheme, along with the additional consideration of how the Scheme sought to reduce carbon emissions.</p> <p>The following indicates how the four National Infrastructure Commission's Design Principles for National Infrastructure<sup>3</sup> align with the discussion on compliance with the good design principles in Chapter 3 of the Scheme Design Report, Rev. 1 (<b>AS-009</b>).</p> <p><b>Mitigate greenhouse gas emissions and adapt to climate change:</b></p> <ul style="list-style-type: none"> <li>• 3.8 Good Road Design is Environmentally Sustainable</li> <li>• 3.12 Design Amendments to Reduce Carbon</li> </ul> <p><b>Reflect what society wants and share benefits widely</b> (designed for people, with views of communities affected by the infrastructure taken into account and reflected in the design):</p> <ul style="list-style-type: none"> <li>• 3.3 Good Road Design is Inclusive</li> <li>• 3.4 Good Road Design is Understandable</li> <li>• 3.7 Good Road Design is Thorough</li> <li>• 3.11 Good Road Design is a Collaborative Process</li> </ul> <p><b>Provide a sense of identity and improve our environment:</b></p> <ul style="list-style-type: none"> <li>• 3.5 Good Road Design Fits in Context</li> <li>• 3.6 Good Road Design is Restrained</li> <li>• 3.8 Good Road Design is Environmentally Sustainable</li> <li>• 3.9 Good Road Design is Innovative</li> </ul> <p><b>Achieve multiple benefits and solve problems well:</b></p> <ul style="list-style-type: none"> <li>• 3.3 Good Road Design is Inclusive</li> <li>• 3.7 Good Road Design is Thorough</li> <li>• 3.9 Good Road Design is Innovative</li> </ul>

<sup>1</sup> Available at:

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/844039/Strategic\\_Design\\_Panel\\_progress\\_report\\_3.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/844039/Strategic_Design_Panel_progress_report_3.pdf)

<sup>2</sup> Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/672822/Good\\_road\\_design\\_Jan\\_18.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/672822/Good_road_design_Jan_18.pdf)

<sup>3</sup> Available at: <https://nic.org.uk/app/uploads/NIC-Design-Principles.pdf>

No	Question To	ExA Question	Guidance
Q1.0.2	The Applicant	'The Road to Good Design' describes the role of Highways England's Strategic Design Panel as overseeing the independent design review of individual Highways England projects. To what extent has the Strategic Design Panel been involved in the design of the Proposed Development and in particular new interchanges / junctions, bridges and underpasses? Is the Panel likely to be involved in reviewing detailed design proposals? If so, how would their comments be presented to the ExA?	<p>Highways England's Strategic Design Panel was set up in 2017 and is intended to focus on strategic input rather than scheme specific details targeting where its expertise, insight and guidance will have most positive impact and wider benefit, such as standards, procurement and evaluation. As such, the Strategic Design Panel is not of direct applicability to the Scheme.</p> <p>The Scheme, in line with "The Road to Good Design" was reviewed by the Applicant's internal design panel, which confirmed it would not be required during the design stages of the Scheme as the design was not considered complex or contentious. There are no plans to engage a panel for the remaining stages of the Scheme.</p>
Q1.0.3	The Applicant	Under the general heading of Legislative and policy framework, Chapter 1 of the ES [APP040] refers to various elements of Highways England Policy. Being the Applicant's own guidance and standards, what weight would the Applicant suggest these documents are given?	<p>Highways England's own policy, guidance and standards have been developed to deliver Highways England's statutory duty as the Secretary of State's appointed strategic highways company by way of an Order in accordance with section 1 of the Infrastructure Act 2015 (2015 Act).</p> <p>The effect of this appointment is to confer upon Highways England the legislative functions of a strategic highways company as regards the areas and highways in respect of which it is appointed. As a result, the Applicant is the highway authority, traffic authority and street authority for the strategic road network.</p> <p>The policy documents represent a part of the performance framework to deliver Highways England's statutory duties as the licence holder, by responding to the Secretary of State's statutory directions and guidance to Highways England as required by the 2015 Act. The policy documents and standards have evolved from those established and applied by Highways England's predecessor (the Highways Agency). This framework makes clear, to both Highways England and the wider community of road users and stakeholders, what Highways England is expected to achieve and how they must behave in discharging their duties and in delivering our vision and plans for the network, set out in the Road Investment Strategy. Highways England's compliance with its duties is monitored by the Office of Rail and Road.</p> <p>The Highways England Licence document (2015) sets out key requirements which must be complied with by the licence holder as well as statutory guidance. In exercising its functions and complying with its legal duties and obligations, the licence holder must act in such a manner which it considers best calculated to deliver the following, amongst other commitments presented in Section 4.1 of the Case for the Scheme (<b>APP-140</b>):</p> <ul style="list-style-type: none"> <li>• ensure the effective operation of the network</li> <li>• ensure the maintenance, resilience, renewal, and replacement of the network</li> <li>• ensure the improvement, enhancement and long-term development of the network.</li> </ul> <p>Although the Applicant is the source of policy, standards and guidance for the strategic highway network, those documents are monitored against the Secretary of State's statutory guidance and directions. On that basis, although the Applicant understands that it might appear that there is an element of it setting the tests it has to meet, the reality is that the relevant policy, standards and guidance are derived from the Applicant's statutory duties and they cover the whole of the strategic road network in England, not just the areas of the Scheme. On that basis, the Applicant considers that significant weight should be given to its policies.</p>
Q1.0.4	The Applicant	Scheme objectives are set out in paragraph 2.2 of Chapter 2, The Proposed Scheme [APP041]. How were these objectives determined? Why is there no specific reference to the delivery of good design?	<p>Following the first Road Investment Strategy (RIS1) 2015/16 to 2019/20 published in March 2015, the second Road Investment Strategy 2020 to 2025 (RIS2) published in March 2020 sets a long-term strategic vision for the network by:</p> <ul style="list-style-type: none"> <li>• specifying the performance standards Highways England must meet</li> <li>• listing planned enhancement Schemes expected to be built</li> <li>• stating the funding made available during the second Road Period, covering the financial years 2020-21 to 2024-25</li> </ul> <p>The Scheme objectives were agreed with the Secretary of State for Transport as part of the process to develop RIS2. These objectives are then monitored to ensure delivery.</p> <p>Ensuring this strategic vision is at the centre of the development and delivery of road schemes requires a design led culture to be developed by Highways England and our project teams. Highways England's 'The Road to Good Design' (2018) and DMRB GG103 'Good road design' identify ten principles of good design that have</p>

No	Question To	ExA Question	Guidance
			been applied to the Scheme, as discussed in the response to Q1.0.1 above. RIS2 also states Highways England's ten principles of good road design provide a useful framework which should guide design work.
Q1.0.5	The Applicant	Please provide a table setting out the maximum parameters of the Proposed Development to understand what maximum parameters have been assessed within each aspect of the ES Chapter.	The Applicant has provided a table in Annex A setting out the maximum parameters of the Scheme assessed within each aspect of the ES Chapter.
Q1.0.6	The Applicant	Comments have been submitted from Interested Parties (IPs) with regards to the design of the proposed Wood Lane Junction. Please provide details of alternatives considered and explain how and why the design approach as submitted was determined.	<p>The Scheme Design Report, Rev.1 (<b>AS-009</b>) sets out the justification for the junction at Wood Lane, details the options considered and outlines the Applicant's position on the inter relationship with the proposed Norwich Western Link (NWL) road scheme.</p> <p>The Stage 2 Scheme Assessment Report (SAR) provides information on the junction proposals in Section 23.3 (Junctions on the Route) with scheme layouts contained within Appendix N. All 4 options considered had a proposed junction on the axis of Berrys Lane and Wood Lane. Section 23.1.3 also confirms that these were the four layouts used for the transportation and environmental assessments reported within the SAR.</p> <p>The proposed new junctions were presented at statutory consultation along with the A47 North Tuddenham to Easton Junction &amp; Sideroad Strategy Report<sup>4</sup> (Highways England, 2020). This report describes the existing and modelled operation of the existing junctions at the proposed Norwich Road and Wood Lane intersections with the A47.</p> <p>The proposed junctions are designed in accordance with UK DMRB CD122 – Geometric design of grade separated junctions and follow the junction hierarchy outlined in Appendix A of the SAR. Layout option A3 (Dumbbell roundabout) was selected, comprising of one bridge and two roundabouts. It also explains the need for fully graded separated options at these locations in accordance with CD 122 and to support the Applicant's aim to create a more free-flowing, safe and serviceable, integrated network.</p> <p>CD122 states that <i>"In relation to traffic flow capacity, a dumbbell roundabout layout can be considered an intermediate between the diamond / half cloverleaf and the two bridge roundabout layouts. The dumbbell layout has the advantage of requiring less land than both the diamond and the two bridge roundabout layouts. It also requires only one bridge."</i></p> <p>The Applicant has also taken into consideration that the B1535 Wood Lane sideroad is the Local Highways Authority (LHA) heavy goods vehicles (HGV) route, linking the A47 with the Fakenham Road at Morton on the Hill to the north. Until the Norwich Western Link becomes the new HGV route, the proposed Wood Lane junction would need to be able to connect the new A47 dual carriageway to the B1535.</p> <p>The Applicant has also engaged throughout the design development process with the Local Highway Authority (Norfolk County Council), the South of the A47 Taskforce (led by George Freeman MP), the Local Liaison Group (Norfolk County Council and Parish Councils) and individual Parish Councils. As a result of these collaborative engagements, several changes to the proposed sideroad network connecting to Wood Lane junction have been incorporated into the DCO application. For example, closing access to Berrys Lane to through traffic from the A47, removing the direct connection for the B1535 to Wood Lane junction, and removal of the side road connection to Church lane, East Tuddenham. The design changes arising from consultation feedback are reported in Table 4.12 of the Consultation Report (<b>APP-024</b>).</p> <p>The Applicant has engaged with Norfolk County Council throughout the design development process, sharing traffic models, survey data and submitted design, and traffic proposals for review. The proposed NWL scheme and associated traffic flows have been accounted for as part of the junction selection and design process.</p> <p>The Applicant has undertaken design assurance checks with Highways England's Safety, Engineering &amp; Standards team and Transport Planning Group plus Norfolk County Council to validate the traffic modelling and junction proposals. Section 3.12 of the Scheme Design Report, Rev 1 (<b>AS-009</b>) sets out the Applicant's approach to reducing carbon.</p> <p>A hierarchical approach to carbon management has been applied, which applies the principles of build nothing, build less, build clever,</p>

<sup>4</sup> This report is available amongst the Consultation 2020 documents at: <https://highwaysengland.co.uk/ourwork/east/a47-north-tuddenham-to-easton-improvement/>

No	Question To	ExA Question	Guidance
			<p>build efficiently (as described in PAS 2080: Carbon Management in Infrastructure).</p> <p>A senior member of the A47 Scheme Integrated Project Team met with representatives of the Parish Council and listened to the proposal put forward by Weston Longville (see snapshot below, overleaf). As explained at the time, the proposed design has followed the junction hierarchy presented within the Design Manual for Roads &amp; Bridges, CD 122 – Geometric design of grade separated junctions.</p> <p>The Parish Council's desire for a free flow interchange is not required for the traffic flows and would be significantly over designed. The proposal tabled from the Parish Council would require significantly more land take to accommodate the free flow links, require the construction of five new structures compared to one structure as proposed and would lead to an increase in embodied carbon. As such, the proposals would not represent an economical or environmentally sustainable approach.</p> <p>The Applicant notes alternative options for Wood Lane junction have also been presented in Weston Longville's Deadline 1 Written Representation. The Applicant will provide feedback on those designs at Deadline 3. The Applicant has also responded to the relevant representations by Interested Parties in the Applicant's Responses to the Relevant Representations (<b>REP1-013</b>).</p> <p>The Applicant notes that there is currently a Local Highway Authority proposal being discussed with Weston Longville Parish Council comprising a series of measures to provide mitigation measures to further discourage vehicles from travelling through Weston Longville. The Applicant continues to support Norfolk County Council with the assessments and Parish Council engagement that Norfolk County Council are undertaking regarding localised mitigation measures north and south of the A47 corridor.</p>
Q1.0.7	The Applicant	The Wood Lane Junction makes provision for a new link to the Norwich Western Link (NWL). Please explain what assumptions have been made with regards to the delivery of the NWL in terms of the scheme design and supporting modelling. Should the NWL not be delivered or be delayed, what would the implications be for the surrounding road network?	<p>As reported in the Scheme Design Report, Rev.1 (<b>AS-009</b>), the Applicant is working collaboratively with Norfolk County Council as it is important to understand the relationship with regards to how the design, build, maintenance and operational use of the A47 and NWL schemes would interact if both were consented. For example, while both schemes are modelled on similar software, the traffic models are independent of one another and will vary due to different development timelines (e.g. base year model, assumptions as to opening year) and different effects on the surrounding local network. However, the Applicant has been working collaboratively with the NWL project delivery team to make sure there is a consistent traffic modelling methodology for both schemes.</p> <p>The Applicant has also allowed within the dDCO the ability to create a stub off Wood Lane junction and designed the roundabout accordingly to avoid environmental and economic costs that would need to be incurred to reconfigure a roundabout on a strategic highway junction at a later stage. These benefits are discussed in Section 9.2 of the Scheme Design Report, Rev.1 (<b>AS-009</b>).</p> <p>As there is a well advanced scheme that will connect with the A47, it is both sensible and pragmatic for the A47 Scheme to anticipate that the NWL may come forward. The Applicant is required to be as efficient as possible with public money and to ensure the community and environmental benefits from joined up working with regards planning new major developments are realised, and to ensure cost control both for the short and long term.</p> <p>Through analysis of traffic modelling scenarios and engagement with the Local Liaison Group, the Applicant explored the concerns related to safety and disturbance from increased traffic passing through Ringland, via Honingham Lane and onto Taverham Road during the period between the Scheme opening and NWL opening. As an outcome of this process and engagement with the Local Liaison Group, the Applicant proposes to implement the temporary closure of Honingham Lane to through traffic, in the interim period between the A47 opening and NWL scheme opening. This measure would reduce the volume of traffic utilising this route during that period. If the NWL scheme does not obtain planning consent, the Applicant will continue to engage with Norfolk County Council on the implementation of this proposal (e.g. long term closure of Honingham Lane or alternative measures). This commitment is stated within Section 9.2 of the Scheme Design Report, Rev.1 (<b>AS-009</b>); see paragraph 9.2.10.</p>
Q1.0.8	The Applicant	The construction programme is set out in Table 2.1 of ES Chapter 2 [APP-041] and identifies that construction is anticipated to take approximately 23 months. Please provide an additional table which identifies the Works reference numbers to	The Applicant has sought to align which works fall within each phase as currently understood but that phasing remains under consideration. Further detail is provided in Annex B.



No	Question To	ExA Question	Guidance
		be carried out during each phase of the construction programme to help understand the timescale of the Works listed in Schedule 1 of the dDCO [APP-017].	
Q1.0.9	The Applicant	The construction compound duration in Table 2.2 of ES Chapter 2 does not match with that in Table 2.1 as they are anticipated to be present/in use for 32 months but decommissioned in month 23. A longer duration may require additional assessment/modelling work. Please clarify this discrepancy.	The discrepancy is an error and Table 2.2 in Chapter 2 of the ES was revised to show 23 months in the revised ES Chapter 2 'The Proposed Scheme' ( <b>AS-005</b> ) submitted on 25 June 2021 with the Section 51 letter response.
Q1.0.10	The Applicant	What level of contingency has been built into the programme	All delivery programs have an anticipated contingency allowance built into the tasks which cumulatively allow responding to unforeseen circumstances and are managed through the robust and detailed planning and programming element of the works.
		And what would be the implications for the various assessments, should the programme be delayed?	<p>The assessments undertaken within the Environmental Statement have been completed using an indicative and representative likely approach to construction as detailed in section 2.6 of ES Chapter 2 (<b>AS-005</b>). The approach to construction methodology has been developed with support from the Principal Contractor.</p> <p>Each assessment undertaken in the EIA does consider worst case scenarios and, where applicable, provides mitigation to minimise any identified effects. This includes providing programme allowances, for example, should any seasonal restrictions with respect to ecological, in-river or agricultural restrictions which may apply and need to be factored in.</p> <p>Should the programme be delayed considerably outwith the indicative programme considered in the EIA, a review of the ecological survey data would be required; however, it is noted that contingency for this by way of pre-construction site survey requirements has been accounted for in the ES already and are committed to as actions in Table 3.1 of the Environmental Management Plan (<b>APP-143</b>).</p>
Q1.0.11	The Applicant	Paragraph 2.6.22 of ES Chapter 2 [APP-041] states that all imported materials would arrive to the site via the existing A47 (50/50 distribution from east and west) with approximately 50 to 150 Heavy Goods Vehicles accessing the site each day over the construction period. Some deliveries will arrive as Abnormal Indivisible Loads (AILs) but the number of movements as AILs are not specified. Can the Applicant clarify the number of movements of AILs that it anticipates will be accessing the Proposed Development site over the assessment period	<p>Abnormal Loads will be required throughout the Construction Phase, but the Applicant will work with the local highway authority (Norfolk County Council) to schedule the majority of these AILs to off peak times.</p> <p>Currently, anticipated frequency of deliveries cannot be confirmed until detailed design and constructability optioneering has taken place. These controls on AIL movements and timings to minimise impacts on traffic movements will be managed through a traffic management plan, to be developed in consultation with the local highway authority. and secured by Requirement 10 'Traffic management' of the dDCO (<b>REP1-004</b>).</p>
		And confirm that this has been taken into account in the assessment of the worst case scenario presented in the ES?	The ES has considered the impacts from construction traffic based upon the worst case figures of approximately 50 – 150 vehicles a day, travelling to the site and accessing the various construction compounds. In a number of technical chapters, the ES has presented the likely significance of the impacts associated with construction traffic and recommended suitable mitigation measures to minimise these impacts as far as possible. With regards to AIL movements, once the volume required and the programme of delivery is determined at the next design stage, it is expected that these will be timed to minimise impacts on traffic movements and will be suitably managed through a traffic management plan. As stated above, this plan will be developed in consultation with the local highway authority and secured by Requirement 10 'Traffic management' of the dDCO ( <b>REP1-004</b> ). The impacts associated with AILs (and any other construction traffic) are of a similar nature with regards to potential disruption, increased noise and pollution and increasing congestion on the existing road infrastructure. It is considered that the impacts from all proposed construction traffic has been assessed within the ES and has considered the worst case scenario with regards to the proposed volumes of traffic and that the conclusions would not change based upon the confirmation of the number of expected AIL movements.
Q1.0.12	The Applicant	The ES refers to the need for utility diversions in paragraphs 2.6.37 to 2.6.41 but it is unclear regarding the length and likely location of any utility diversions. Although their limits of deviation are shown as limit of deviation along with other minor works on the Works Plans please describe their length and other likely dimensions.	The lengths of utility diversions are subject to confirming the exact route, within the utility limits of deviation, during the development of the detailed design of the highways structures. However, Schedule 1 of the dDCO ( <b>REP1-004</b> ) describes the utility types and start/end points of each utility asset within each utility limit of deviation, while Section 10 'Statutory Undertaker (Utilities) Considerations' of the Scheme Design Report, Rev.1, ( <b>AS-008</b> ) describes the type and dimensions of the proposed utility assets.

No	Question To	ExA Question	Guidance
		Please confirm that these diversions have been included as part of the assessment of likely effects arising from the Proposed Development	The assessments undertaken within the Environmental Statement have been completed using an indicative and representative likely approach to construction which includes utility diversions as detailed in full in section 2.6 of ES Chapter 2 ( <b>AS-005</b> ). The approach to construction methodology, including utility diversions, has been developed with support from the Principal Contractor. Utility corridors are identified on the Works Plans which provide spatial provision in the Scheme footprint so that they can be considered consistently across the EIA as necessary.
Q1.0.13	The Applicant	The Applicant should provide a list of all plans and other documents that will require Secretary of State (SoS) certification (including plan / document references). This should be updated throughout the Examination process for ease of tracking document versions and a final list supplied to the ExA before the close of the Examination.	<p>The list of plans and other document that that will require Secretary of State (SoS) certification is provided in Schedule 10 of the dDCO submitted at Deadline 1; tracked changes and clean versions (<b>REP1-003 and REP1-004</b>, respectively).</p> <p>Since the submission of the DCO application, during the Examination process the Applicant has and will continue to update plans and other documents that will require Secretary of State (SoS) certification. The Guide to the Application contains a full list of documents and version numbers, with the current clean version issued at Deadline 1 (<b>REP1-012</b>).</p>

#### 4 AIR QUALITY AND EMISSIONS

No	Question To	ExA Question	Guidance
Q2.0.1	The Applicant	ES Chapter 5: Air Quality [APP-044], paragraph 4.3.1 makes reference to potential changes to legislative requirements in Autumn 2021. Please explain what the likely implications are and how this effects the assessments. Has any sensitivity testing been undertaken? If not, please explain.	<p>The reference to potential changes to legislative requirements in Autumn 2021 related to the emerging Environment Bill.</p> <p>The assessment has been compared against the UK Air Quality Strategy objectives. These will remain unchanged following the Environment Bill. Therefore, the assessment would remain unchanged. There are no Pollution Climate Mapping (PCM) links within the study area and therefore even if the Environment Bill were to change the assessment criteria of Limit Values from those stipulated by the EU would not change the results of this assessment.</p>
Q2.0.2	The Applicant	In Table 2.2 of ES Chapter 2 [APP-041] the construction compound is anticipated to be present/in use for 32 months but decommissioned in month 23. Can the Applicant justify the assumption made in paragraphs 5.4.5 to 5.4.7 of ES Chapter 5: Air Quality [APP-044] that construction traffic air quality impacts are unlikely to lead to significant effects if the construction period is under 2 years in duration and provide evidence that will ensure the construction period will not extend beyond 2 years, potentially triggering significant effects? How confident can the ExA be that the construction programme would not be subject to delays to take it beyond two years?	<p>With regards reassurance the Scheme can be delivered within 23 months, this timeline has the risk of delays built in as discussed in our response to Q1.0.10; therefore it is a reasonable worst case for assessment purposes. The Applicant is also committed to opening the Scheme by start of 2025.</p> <p>Through robust programming and planning the Applicant will endeavor and plan to maintain all deliverables and construction activities on programme by utilising weekly dynamic reviews/updates and collaborative planning between all parties involved. Any slippage to the master program will be picked up and mitigated at this point. The Applicant will also use a series of micro milestones and monitor delivery/construction works against these dates.</p> <p>The assessment of construction activities in DMRB LA105 ensures that a pragmatic assessment is undertaken for a temporary impact. Therefore, where the construction activities are short term in duration and / or limited in the amount of time they spend in any one area (i.e. 2 years or less), even if they were modelled they would conclude that the impact is small and temporary and consequently would not trigger a significant effect. In a worst-case scenario if there are large changes in pollutant concentrations at receptors the impact is short term and would be back to the pre-construction levels in a short period, not resulting in a significant effect.</p>
Q2.0.3	The Applicant	ES Chapter 5: Air Quality [APP-044] paragraph 5.4.8, please provide further explanation as to why 2015 represents the baseline year. Can the ExA be confident that there have been no substantial changes within the intervening period?	<p>The strategic traffic model used for the air quality assessment of the Scheme is called the Norwich Area Transport Strategy Model (NATS model). The NATS Model was developed in line with the DfT's Transport Appraisal Guidance, as described in Chapter 4 'Transport Assessment' in the Case for the Scheme (<b>APP-140</b>).</p> <p>The 2019 NATS model has not yet been approved by the Department for Transport. On that basis, the 2015 NATS model remains the approved model and so was used in the Applicant's assessment as the baseline year. However, the Applicant has undertaken a comparison between the NATS 2015 and 2019 traffic models based on the total annual average daily traffic (AADTs) summed across the major links within the Scheme</p>

No	Question To	ExA Question	Guidance
			<p>area. In summary, the comparison indicates that there is a difference of 3.3% AADTs between the NATS 2015 model and the NATS 2019 model.</p> <p>It is noted that the 2019 model has the Broadland Northway road scheme in the baseline, whereas the 2015 model does not. However, the A47 Scheme's first forecast year of 2025 Do Minimum and Do Something scenarios do account for the Broadland Northway scheme. However, an increase in traffic of 3.3% is broadly in line with the expected traffic growth over a four-year period (2015-2019), including accounting for the Broadland Northway scheme. Therefore the comparison shows a good degree of consistency between the two models at an aggregate level and that there are no other substantial changes in the intervening period not accounted for in the 2015 based traffic models used in the assessment.</p>
Q2.0.4	The Applicant	ES Chapter 5: Air Quality [APP-044] paragraph 5.4.9 observed that only those instances where PM10 in the baseline year have been assessed. Given the baseline year is 2015, how confident can the ExA be that no exceedances have occurred since the baseline period?	<p>In line with DMRB LA105, determining the level of assessment (i.e. simple or detailed) required a review of current air quality and Air Quality Management Areas to determine the level of sensitivity the receiving environment would have.</p> <p>As per paragraph 5.4.11 of EA Chapter 5 Air Quality (<b>APP-044</b>): <i>"The baseline conditions were determined by reviewing air quality information in annual status reports, published by the local authorities. Information provided in these reports include historic monitoring data and current air quality concerns such as pollution hotspots reporting exceedance of the NO2 and PM10 annual mean objectives within the local authority. This information has allowed current baseline pollutant concentrations within the study area to be mapped."</i></p> <p>This review did not identify any current exceedances of PM10. Currently there is no PM10 monitoring undertaken which would also confirm that PM10 is not a concern. As explained in our response to Q2.0.6, below, there is a downward trend in background pollutant concentrations so 2015 will be worst case in comparison with current pollutant concentrations.</p>
Q2.0.5	Norfolk County Council Breckland District Council Broadland District Council South Norfolk Council	ES Chapter 5: Air Quality [APP-044] paragraph 5.4.10, are the parties happy with the approach taken with regards to PM2.5? If not, please explain.	No response required by the Applicant.
Q2.0.6	The Applicant	ES Chapter 5: Air Quality [APP-044], paragraph 5.4.12, states that the opening year represents the worst case in terms of air quality impacts. Please explain and provide further justification for this statement.	<p>Pollutant emissions will reduce with time due to the electrification of the UK fleet and other national policy. Therefore, the emissions during the opening year will be greater than the design year (15 years from then).</p> <p>As stated in paragraph 5.8.3 of ES Chapter 5 Air Quality' (<b>APP-044</b>): <i>"Modelling has been undertaken using the approach outlined in LA 105, using the Interim Highways Agency Long Term Gap Analysis Calculator v1.1 (LTTE6). This approach is considered the most robust in projecting and estimating the future concentrations in 2025 and considers the uncertainty associated in long-term trends. These results have formed the basis in estimating the impact and significance of the Proposed Scheme on selected sensitive receptors, alongside determining compliance with the EU directive for annual mean NO2 concentrations."</i></p> <p>Therefore, the traffic modelling accounts for predicted proportions of the vehicle types, fuel type, forecast fuel consumption parameters and emission factors according to the Department for Transport. These data tables include forward forecasting of different vehicle types (such as electric) for future years. The use of these data tables are considered best practice for calculating end-user (traffic) air pollutant emissions.</p>
Q2.0.7	The Applicant	ES Chapter 5: Air Quality [APP-044], paragraph 5.4.26, states that consultation was undertaken with Highways England specialists. Please explain what other consultation took place to inform the air quality assessment, such as agreement on receptors, methodology etc? How were the results of this consultation reflected in the final assessment?	<p>Consultation was undertaken on the air quality assessment scope and methodology through consultation with statutory authorities on the EIA Scoping Report (<b>APP-135</b>) through the Planning Inspectorate, then through presentation of the Preliminary Environmental Information Report during statutory consultation in 2020.</p> <p>The Applicant's response to the EIA Scoping Opinion in 2019 (<b>APP-136</b>) is presented in ES Appendix 4.1 Scoping Opinion Response Table (<b>APP-081</b>), while Consultation Report Annex N (<b>APP-038</b>) presents response to Statutory Consultation feedback.</p>

No	Question To	ExA Question	Guidance
Q2.0.8	Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 5: Air Quality [APP-044], paragraph 5.4.39 states that professional judgement was used when selecting the ecological receptors. Are the parties satisfied that this approach has identified all the appropriate receptors?	No response required by the Applicant.
Q2.0.9	The Applicant	ES Chapter 5: Air Quality [APP-044], paragraph 5.5.1 states that using 2015 baseline data adds extra uncertainty as traffic flows and background concentrations will not be representative of the current climate. Please comment on the appropriateness of this approach and the implications for the assessment.	Please see the response to Q2.0.3 demonstrating confidence in the 2015 baseline data compared to more recent 2019 baseline data. Although using 2015 baseline data does add extra uncertainty, the analysis shows that the actual difference is minimal.
Q2.0.10	The Applicant	ES Chapter 5: Air Quality [APP-044], paragraph 5.5.1, has any sensitivity testing/analysis been undertaken on the results to ensure robustness and address the identified assumptions and limitations. If so what, if not why?	Whilst there are these uncertainties/limitations in the air quality modelling, the modelling has been verified against baseline year measurement data in accordance with LAQM TG(16). This verification factor is applied to the baseline and Do-Minimum and Do-Something scenarios. This ensures robustness of the assessment and follows best practice.
Q2.0.11	Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 5: Air Quality [APP-044], section 5.7, Baseline conditions, are the parties satisfied that this provides an accurate assessment of the current conditions? If not, please explain why.	No response required by the Applicant.
Q2.0.12	The Applicant	ES Chapter 5: Air Quality [APP-044], paragraph 5.8.20, are these trees either within the Applicants control or protected? What would be the implications should these trees be removed? Please explain why only a desk-based review was considered sufficient?	This relates to the Bawburgh County Wildlife Site, as shown in ES Figure 5.8 ( <b>APP-058</b> ), located approximately 3km south-east of the Scheme. The trees are not in the control of the Applicant, they are part of this protected conservation area.  With regards the risks from removing the trees, this will not affect the assessment as the nitrogen deposition zone is not influenced by the presence of the trees. However, the trees and improved grassland area between the trees and A47 are not sensitive to nitrogen deposition, thus the conclusion of no impact. The nitrogen sensitive wetland habitat within the County Wildlife Site is located beyond the trees from the A47 and therefore outwith the 20m impact zone.
Q2.0.13	The Applicant	ES Chapter 5: Air Quality [APP-044], paragraph 5.11.1, given the importance placed by the UK Government on improving air quality and the potential for future changes to limit values, please provide further justification as to why no additional monitoring is proposed.	The assessment has identified no significant effects and the predicted pollutant annual mean NO <sub>2</sub> concentrations are significantly below the Air Quality Objective (40ug/m <sup>3</sup> ). Therefore, there is no risk to compliance with the Limit Values. In ES Chapter 5 Air Quality ( <b>APP-044</b> ), paragraphs 5.7.31 and 5.7.32 confirm there are no Pollution Climate Mapping (PCM) links within the study area and therefore there is no risk to the UKs ability to comply with limit values.
Q2.0.14	The Applicant	ES Chapter 5: Air Quality [APP-044], paragraph 5.12.5, please explain what new tools have been made available and what the likely changes would have been had these new tools been utilised.	This line should refer to 'new versions of the tools used' and not 'new tools'. The version changes are minor, so the level of significance is unlikely to change had the assessment used these latest versions, as stated in paragraph 5.12.5 of ES Chapter 5 Air Quality ( <b>APP-044</b> ).

## 5 BIODIVERSITY, ECOLOGY AND NATURAL ENVIRONMENT (INCLUDING HABITATS REGULATIONS ASSESSMENT (HRA))

No	Question To	ExA Question	Guidance
Q3.0.1	Natural England Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	Can the parties comment on the approach taken by the Applicant in its HRA Report [APP139] and confirm whether it is satisfactory? If not, please explain why.	No response required by the Applicant.
Q3.0.2	The Applicant	ES Chapter 8: Biodiversity [APP-047], paragraph 8.4.13, should consideration be given to the in-combination effects of the proposed development with the NWL. If so, please explain what these would be. If not, why not?	Cumulative impacts are considered in ES Chapter 15 'Cumulative Effects Assessment' ( <b>APP-054</b> ) in accordance with the requirements of the Infrastructure Planning EIA Regulations 2017 and Planning Inspectorate Advice Note Seventeen. Other developments (which do not include the other A47 corridor improvement schemes as referenced in ES Chapter 8, paragraph 8.4.13) were included as part of the cumulative assessment methodology and this is detailed in section 15.3 of ES Chapter 15. However, as noted in the response to representations by Norfolk County Council, with the release of more details about the NWL scheme in the NWL Scoping Report, the Applicant is proposing to update ES Chapter 15 to reflect the NWL scheme as a Tier 2 development under Advice Note Seventeen guidance. This proposed amendment will include a review of inter-project cumulative biodiversity effects and it is intended to issue the updated ES Chapter 15 at Deadline 3.
Q3.0.3	The Applicant	ES Chapter 8: Biodiversity [APP-047], paragraph 8.4.20, is the Applicant able to provide an update on these discussions, especially in light of a number of comments raised in the Relevant Representations with regards to bats and the NWL? It would be helpful to the ExA if there can be a regular provision of updates on these discussions during the course of the Examination.	<p>Please see our response to Q3.0.16, below, which discusses the issues raised in the Relevant Representations with regards the bats and the Norwich Western Link (NWL) road scheme and our responses to those RRs.</p> <p>The Applicant can confirm that it is a member of the NWL Ecology Liaison Group, which includes WSP (NWL ecological consultants); Norwich Bat Group; NCC; The Woodland Trust; Wensum Valley Bird Watching Society, Norfolk and Norwich Naturalist Society, Norfolk Badger Trust, Natural England, Environment Agency, Friends of Tud Valley, Costessey Conservation Volunteers, Norfolk Amphibian and Reptile Group, Norfolk River Trust, Buglife and Butterfly Conservation.</p> <p>These meetings are still on-going, with the most recent in July 2021. The group exchange news on surveys and discuss application of mitigation measures for the NWL Scheme, which have been used to inform the assessment and mitigation proposed in ES Chapter 8 Biodiversity (<b>APP-047</b>) for the A47 Scheme.</p> <p>Where matters arising are relevant to the A47 Scheme, these are being recorded in the Statement of Common Ground (SoCG) with Norfolk County Council, as promoter of the NWL. Through updates to the SoCG, the Applicant will provide the ExA with updates on these discussions during the course of the Examination.</p>
Q3.0.4	Natural England Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 8: Biodiversity [APP-047], Section 8.7, Baseline conditions, are the parties satisfied that this section provides an accurate and robust assessment of the baseline conditions. If not, why not?	No response required by the Applicant
Q3.0.5	The Applicant Natural England Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 8: Biodiversity [APP-047], Table 8.3, please confirm that all the surveys are still valid and in-date and can therefore be relied upon by the ExA during the course of the Examination and Recommendation stage. If not, please explain what is required to address them.	CIEEM (2019) Guidelines for Ecological Impact Assessment (EclA) require ecological data to have been collected within one or two years prior to an EclA being written. Table 8-3 in ES Chapter 8 Biodiversity ( <b>APP-047</b> ) demonstrates the most recent surveys were completed in 2019 or 2020, which is within 2 years of the EclA being written at the end of 2020. Additional desktop data is not required as field surveys have been completed since 2017, which provide a more accurate record of ecology baseline within the DCO boundary.
Q3.0.6	Natural England Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 8: Biodiversity [APP-047], paragraph 8.8.6, please confirm that you are content with the approach and the justification and evidence for it? If not, please explain why.	No response required by the Applicant.

No	Question To	ExA Question	Guidance
Q3.0.7	The Applicant	ES Chapter 8: Biodiversity [APP-047], would the Proposed Development result in an overall biodiversity net gain and if so, to what extent?	<p>The Scheme seeks to maximise biodiversity delivery in accordance with the current statutory and policy requirements. The Scheme has aligned with Best Practice Principles, specifically those published by the CIEEM, in developing its landscaping and biodiversity proposals. These incorporate high biodiversity (or priority habitats) as shown in the Environmental Masterplan, Rev.1 (<b>AS-007</b>).</p> <p>Appendix B.5 of the Environmental Management Plan (<b>APP-143</b>) will contain a Landscape and Ecology Management Plan (LEMP) to be produced by the appointed Landscape Architect and Ecologist prior to construction. The LEMP will describe the proposed management and monitoring, including durations, of the landscape and ecological mitigation and compensation features of the Scheme. The commitment to deliver the LEMP will be secured through dDCO Requirement 4 'Environmental Management Plan' (<b>REP1-004</b>).</p> <p>There is currently no mandated framework for calculating and reporting on biodiversity net gain. Any such calculation is subject to the commencement of the Environment Act and its associated secondary legislation, which is expected to set out the Secretary of State biodiversity metric and methodology. Any calculation using existing Biodiversity Metric approaches is still subject to variation. For this reason, the Applicant cannot commit to providing an overall biodiversity net gain (BNG) or indicate the extent of BNG.</p>
Q3.0.8	The Applicant	With regards to the Great Crested Newt (GCN) translocation sites, how long is this envisaged to take,	<p>Population size class assessment surveys of ponds within 500 m of the DCO boundary, where great crested newt are present, estimated populations within the 'Small' size range. If an European protected species mitigation (EPSM) licence is granted by Natural England to translocate any great crested newt from within the DCO boundary, the licence condition would be for a minimum of 30 consecutive days of trapping and translocation until a minimum of five consecutive great crested newt free trapping days have passed at which point the translocation will have been considered successful and will cease. The five consecutive free days may be within the 30 day minimum period (i.e. days 26 - 30) or may continue indefinitely until five consecutive free days have passed.</p> <p>This does not include any lead in time for habitat manipulation and installation of mitigation fencing and pitfall traps which will be highly variable based on numerous external factors such as land access, presence of utilities, sourcing of materials and machinery, contractor availability, ECoW availability, weather, and any specific permits required. This also does not include follow up time for removal of fencing and pitfall traps.</p>
		has this been built into the construction programme and the assumptions with regards to start of construction? What contingency has been allowed for should the translocation take longer than anticipated?	<p>The GCN relocation will commence the season prior to commencing construction. The Applicant will endeavor to remove all the GCN in this timeframe and is currently engaging with Natural England to agree a ghost European Protected Species (EPS) licence to avoid delays to the award of the official EPS licence if the DCO is made. However, if seasonal translocation restrictions means some GCN remain in the area when the main construction works need to commence, these will be isolated and protected from construction activities until translocation can be completed in that area.</p>
Q3.0.9	The Applicant	ES Chapter 8: Biodiversity [APP-047], paragraph 8.11.4, identifies that further barn owl surveys should be conducted in 2021. Please update the ExA on the progress of these.	<p>Although the ES Chapter 6 Biodiversity recommended further barn owl surveys should be conducted in 2021, it was decided to do the survey in 2022 to ensure the landscape and ecology mitigation planting design is informed by the most current baseline situation immediately prior to commencement of construction. This will inform the commitment under Action BD5 of the Environmental Management Plan (<b>APP-143</b>): "Low-flight prevention screening, in the form of appropriate landscape planting shall be installed in accordance with the Environmental Masterplan (high hedges or tree screens being planted on raised banks (bunds)) to help prevent barn owl road casualties." The mitigation will be presented in the final landscape design to be delivered under Requirement 5 'Landscaping' of the dDCO (<b>APP-017</b>).</p>

No	Question To	ExA Question	Guidance
Q3.0.10	The Applicant	ES Chapter 8: Biodiversity [APP-047], paragraph 8.11.6 refers to crossing points and identifies that if a reduction in numbers crossing is observed, further mitigation will be required. Please provide further explanation of this, including at what level would further mitigation be required and what form would this mitigation take?	<p>ES Appendix 8.13 Bat Crossing Point Report (<b>APP-108</b>) determined bat crossing points 1, 7, 8, and 9 had the most bat traffic and so they were surveyed in full. The Environmental Masterplan, Rev.1 (<b>AS-007</b>), and ES Chapter 8 Biodiversity (<b>APP-047</b>) show current mitigation proposals for bat crossing points 1, 7, 8, and 9 are to plant mature tree standards (&gt;4.25 m tall) either side of the new and existing A47, and in between where required. This, along with fencing, will encourage bats to fly up and over traffic. There are few studies assessing the effectiveness of hop-overs (<a href="https://www.conservationevidence.com/actions/980">https://www.conservationevidence.com/actions/980</a>) so there is some uncertainty in respect of hop-over effectiveness. As a result, a worst case assessment was applied as discussed in the below response to Q3.0.13. However, the development does present an opportunity for a long term study on the effectiveness of this mitigation.</p> <p>Three underpasses and an overpass are also to be created with directional fencing and vegetation planting and management to encourage bats through the pass rather than over the road; these have been shown to be effective in previous studies (<a href="https://www.conservationevidence.com/actions/977">https://www.conservationevidence.com/actions/977</a>; <a href="https://www.conservationevidence.com/actions/976">https://www.conservationevidence.com/actions/976</a>).</p> <p>Monitoring is proposed at each of these crossing points and nearby underpasses/overpasses, to be monitored in years 1, 3, and 5 after Scheme completion. This is a commitment under Action BD6 in Table 3.1 of the Environmental Management Plan, to be secured under Requirement 4 of the dDCO (<b>REP1-004</b>). Should this monitoring show a reduction of bats crossing the roads, the Applicant will engage with stakeholders including Natural England and Norfolk County Council to discuss options and identify suitable additional mitigation. This could range from planting more trees to taking strategic actions within the wider areas to benefit the local/regional bat population. The Applicant will share data at a regional level to contribute to growing the evidence base regarding the efficacy of bat mitigation.</p>
Q3.0.11	Natural England Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 8: Biodiversity [APP-047], in general, are the parties content with the proposed receptor sites? If not, why not.	No response required by the Applicant
Q3.0.12	The Applicant	ES Chapter 8: Biodiversity [APP-047] Table 8.14, impacts on Barn Owls are described as being moderate adverse, but once landowner mitigation is agreed, this would change to slight adverse. Please update the ExA on the progress of these discussions.	Highways England are currently in the process of completing acquisition of the land holding the active barn owl nesting site which will be removed. The land purchase has been agreed and the matter is close to final legal completion. There is enough suitable habitat within the area around the acquired site to place compensatory boxes, and which provides an opportunity to implement habitat improvements to the area for barn owls. Suitable mitigation for this species will be designed in Stage 5 through the landscaping design to be secured under Requirement 5 of the dDCO ( <b>REP1-004</b> ).
Q3.0.13	The Applicant	ES Chapter 8: Biodiversity [APP-047] Table 8.14 identifies that there would be a large adverse and thus a significant residual effect on bats. Please provide further justification to demonstrate that all potential options have been fully explored to mitigate such effects?	<p>ES Chapter 8 Biodiversity (<b>APP-047</b>) identifies the loss of 14 tree roosts from felling, disturbance (light, vibration, noise), loss of foraging habitat, water pollution (leading to reduction in abundance of prey species), fragmentation of commuting routes, and road collisions as the adverse impacts to bats. The loss of 14 tree roosts will be mitigated through the European protected species mitigation licence method statement. Disturbance will greatly reduce post construction. Lost foraging habitat will be compensated for with increased and enhanced tree planting as a remediation measure. Compensatory planting is proposed along the verges of the Scheme to mitigate the loss of foraging habitats and to shield suitable habitat and roosts from disturbance. Copses of trees and woodland grassland mosaics are proposed along the Scheme to act as 'stepping stones' between suitable roosting and foraging habitat. There will be a time lag while planting matures, but this has been reflected in determining the significance of the impact. Fragmentation of commuting routes (e.g. crossing points) and road mortalities are proposed to be mitigated through planting of standards (trees over about 2 metres) as 'hop overs' at crossing points and construction of underpasses and overpasses with directional fencing and vegetation planting.</p> <p>The main cause of the residual 'large adverse' impact of the Scheme on bats is due to the uncertainty around use of hop-</p>

No	Question To	ExA Question	Guidance
			<p>overs in bat mitigation at the existing crossing points (<a href="https://www.conservationevidence.com/actions/980">https://www.conservationevidence.com/actions/980</a>). Alternative mitigation measures were carefully considered, as detailed further below.</p> <p>The erection of bat gantries was not considered as it has been shown that these are ineffective (see <a href="https://www.conservationevidence.com/actions/978">https://www.conservationevidence.com/actions/978</a>). In addition, Highways England and Natural England are further reviewing the use of gantries (raised netting to encourage a higher road flight path for bats) as part of a pilot scheme. However, until this form of mitigation is proven, Natural England and Highways England will not allow it to be used until the monitoring results are finished and the methodology is reviewed.</p> <p>Underpasses (<a href="https://www.conservationevidence.com/actions/976">https://www.conservationevidence.com/actions/976</a>), overpasses (<a href="https://www.conservationevidence.com/actions/977">https://www.conservationevidence.com/actions/977</a>), and green bridges (<a href="https://www.conservationevidence.com/actions/979">https://www.conservationevidence.com/actions/979</a>) have been shown to be used by commuting bats crossing ecological barriers such as roads and are likely, if installed at crossing points, to be more effective than planting standards as hop-over points.</p> <p>The feasibility of designing these features was carefully considered for each location found to be used as a crossing point for bats:</p> <ul style="list-style-type: none"> <li>• For the crossing point 1 (Oak farm), there is no underpass because there is no connection requirement for people. Installing any infrastructure just for bats (either a raised road, overpass or a green bridge) was not deemed feasible due to the land take on a private residential property and close proximity of a surface watercourse. To install an underpass would be similarly constrained in this location, since an installation of this nature would require a significant amount of excavation. An overpass or green bridge would also present an unacceptable visual impact to the residents of Farm. Therefore, the only appropriate mitigation measure which was considered to be appropriate in this location is planting heavy standard trees to act as hop overs.</li> <li>• For crossing point 7 and 8 north of Honingham (both are very close together), the location is similarly constrained. Any infrastructure to provide an overpass/underpass or green bridge in this location would require the removal of a significant amount of woodland which would present a greater impact to bat foraging and commuting routes. However, the new Hall Farm underpass is proposed nearby to the west, located to combine Hall Farm access, maintenance access to a Scheme drainage pond and the byway RB1 diversion, which requires the diversion length to be minimized. Directional planting will encourage bats to use this underpass. Mitigation is further boosted by the planting of heavy standard trees to act as hop overs over the existing A47 to the south of the new road layout.</li> <li>• For crossing point 9 just east of St Andrew's Grade II* listed church, an underpass at the location of the crossing point would not work due to it needing to cross slip roads approaching the Norwich Road junction and the impact on the setting of the existing grade II* listed church that is being protected from the development. Iterations of Scheme design have included moving the road layout away from the church as much as practicable and keeping the road at grade to avoid significant visual impact to the church. In addition to the context of the setting of this church, an underpass is already proposed to be placed west of St Andrew's church, approximately 330m from the bat crossing point, to create a direct as possible link between the cycle track passing the church and Honingham roundabout. For similar reasons as to why an underpass at the location of the crossing point is not considered appropriate, the creation of an overpass or green bridge is also not considered appropriate on both visual impact and safety grounds. Therefore, the mitigation for bats crossing the road in this location includes both planting heavy standard trees to act as hop overs as well as directional planting to encourage bats to use the underpass between the church and Honingham roundabout. The Applicant acknowledges that further improvements in the landscape</li> </ul>



No	Question To	ExA Question	Guidance
			planting, shown in the Environmental Masterplan, Rev.1 ( <b>AS-007</b> ), can be made to further encourage bats between the existing crossing point and the underpass. Opportunities to improve the planting plans will be taken at the detailed design stage as part of the landscaping design under Requirement 5 of the dDCO ( <b>REP1-004</b> ).
Q3.0.14	The Applicant	ES Chapter 8: Biodiversity [APP-047], paragraph 8.12.2 states that the underpasses on the Proposed Scheme are not directly on existing bat flight paths as that could not be designed into the Proposed Scheme but will have planting to encourage bats to use them. Please provide further justification to explain this statement.	Please refer to the response to Q3.0.13.
	Natural England Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	Are NE, NCC, BC, BDC and SNC satisfied with this approach?	No response required by the Applicant.
Q3.0.15	The Applicant	Can the Applicant signpost to where an in-combination assessment of effects arising from Sheringham and Dudgeon Extension Offshore Wind Farm has been undertaken, or explain how this site has been screened out? Where necessary an updated HRA in combination assessment should be provided.	<p>Cumulative impacts are considered in ES Chapter 15 'Cumulative Effects Assessment' (<b>APP-054</b>) in accordance with the requirements of the Infrastructure Planning EIA Regulations 2017 and Planning Inspectorate Advice Note Seventeen.</p> <p>ES Chapter 15, paragraph 15.3.5, confirms that following consultation with Norfolk County Council, Broadland District Council, Breckland Council and South Norfolk Council, additional projects including Sheringham and Dudgeon Extension Offshore Wind Farm were added to the scope of assessment. Therefore it was not screened out.</p> <p>As per paragraph 15.5.7 of the ES Chapter 15, the reported residual effects of the wind farm projects were considered in combination with the Proposed Scheme and other developments. Relevant topics with overlapping receptors included:</p> <ul style="list-style-type: none"> <li>• Cultural Heritage</li> <li>• Landscape and visual effects</li> <li>• Agriculture</li> <li>• Traffic and transport</li> </ul> <p>Both the Ørsted Hornsea Project Three and Sheringham and Dudgeon both intersect the Scheme and are within the DCO boundary and of a similar scale, type and construction programme. At the time of writing, the conclusions of the Ørsted Hornsea Project Three were used in combination with professional judgment as a proxy for potential cumulative impacts as this was the most appropriate information available to the author.</p> <p>The parameters set out in the ES Chapter 15 are considered proportionate and suitable with respect to the conclusions of the Sheringham and Dudgeon Scoping Report (2019).</p> <p>Based on the high level information available, and the assessment parameters set out in ES Chapter 15, there are no identified significant cumulative effects and thus it will not change the conclusions of the HRA.</p>
Q3.0.16	The Applicant	The Proposed Development is located within the 6km radius Core Sustainance Zone of a nationally important 'super-colony' of a very rare Annex II bat species, the western barbastelle ( <i>Barbastella barbastellus</i> ). This super-colony is located in the Ringland/Attlebridge/Weston Longville/Lenwade area and includes a known 77 confirmed barbastelle roosts (to date - located from radio-tracking), one of which is the largest known extant barbastelle roost in the country. The area exceeds criteria for Special Area of Conservation designation and as such should be treated in the same manner. (Wild Wings Ecology [RR-084]). Norfolk County Council (NCC) [RR-061] states that the bat activity survey area (all species)	<p>This Applicant's response to the status of this colony, consultation with third parties and cumulative effects with Norwich Western Link road scheme is provided in Common Response I from the Applicant's Response to the Relevant Representations (<b>REP1-013</b>), copied below for ease of reference.</p> <p>Additional to that response, the main impact risks associated with Core Sustainance Zones would be effects related to bats crossing the Scheme to access feeding zones beyond the Scheme from their colony. ES Appendix 8.13 Bat Crossing Point Report (<b>APP-108</b>) determined that bat crossing points 1, 7, 8, and 9 have the most bat traffic. With regards the 6km Core Sustainance Zone for Barbestelle bats, it is important to note that crossing points 1 and 9 lie 6km or more from the centre of the Roarr! Dinosaur Adventure, where the Barbestelle bat colony is located at Morton on the Hill. Crossing points 7 and 8 are located approximately 5.5 km from the centre of the Roarr!</p>

No	Question To	ExA Question	Guidance
		<p>was up to 1km from the DCO boundary. NCC states that in its comments in response to the Preliminary Environmental Information Report, it requested that bat survey work should consider in-combination impacts with the NWL and that it should be acknowledged that core sustenance zones for bats varies with species (6km for barbastelles). NCC went on to note that the Core Sustenance Zones for Barbastelle bats is 6km away and there is moderate confidence in zone size. There is a known colony of bats at Morton-on-the-Hill which is less than 6km from the site. Can the Applicant comment on whether they have consulted with relevant consultees on the potential effects of the Proposed Development on the colonies of barbastelle bat species as highlighted by Norfolk County Council and Wild Wings Ecology in their relevant representations and clarify whether these colonies were considered as part of the Habitats Regulations Assessment.</p>	<p>Dinosaur Adventure. With crossing points 7 and 8 located immediately adjacent to the north side of the urban village of Honingham, there is no prime feeding habitat within 6km beyond crossing points 7 and 8. However, as outlined in the above responses to Q3.0.10 and Q3.0.12 mitigation is proposed to maintain the ability for bats to cross the Scheme in these areas.</p> <p><b><u>Common Response I from the Applicant's Response to the Relevant Representations (REP1-013)</u></b></p> <p>Effects on Barbastelle bats <i>Barbastella barbastellus</i> have also been considered in ES Chapter 8 Biodiversity (<b>APP-047</b>) and the Report to Inform Habitats Regulations Assessment (<b>APP-139</b>). Section 8.4 of ES Chapter 8 outlines how the Applicant has consulted the NWL scheme promoters on a monthly basis regarding barbastelle bats and the wider mitigation proposals for bats by the Scheme. In addition, bat mitigation implemented as part of the completed northern distributor road and the associated monitoring data were discussed. Data was exchanged on the locations of barbastelle bats, survey techniques and mitigation<sup>5</sup>. These meetings are still ongoing.</p> <p>The Applicant is also part of the NWL Ecology Liaison Group, which includes WSP (NWL ecological consultants); Norwich Bat Group; NCC; The Woodland Trust; Wensum Valley Bird Watching Society, Norfolk and Norwich Naturalist Society, Norfolk Badger Trust, Natural England, Environment Agency, Friends of Tud Valley, Costessey Conservation Volunteers, Norfolk Amphibian and Reptile Group, Norfolk River Trust, Buglife and Butterfly Conservation.</p> <p>Section 8.4 of ES Chapter 8 also confirms the Applicant consulted Anna Fullford (formerly Berthinussen), at Conservation First. Ms Fullford has published papers in 2012<sup>6</sup> and 2015<sup>7</sup> on bats use of gantries and underpasses to cross roads safely.</p> <p>With regards consideration of Wild Wings Ecology's research findings, the Applicant is aware that Norfolk County Council has requested Wild Wings Ecology's research findings but has not yet received that data. This was confirmed at a meeting of Norfolk County Council's planning and highways delegation committee on Friday 28 August 2021, where cabinet member Graham Plant said he was concerned as to why data had not been released by Dr Packman following her study<sup>8</sup>. In order to further assess the position, the Applicant asks that the Examining Authority requests that a copy of the Wild Wing's Ecology research findings is provided to the Examining Authority and relevant Interested Parties (Norfolk County Council, Natural England and the Applicant) in order that that data can be properly understood in advance of any Issue Specific Hearing to address the topic.</p> <p>As outlined in Section 8.4 of ES Chapter 8, the assessment of impacts on ecology and nature conservation follows the most recent national design standards for highways, the Design Manual for Roads and Bridges (DMRB).</p> <ul style="list-style-type: none"> <li>• Ecological survey and design measures – DMRB, LA 118 Biodiversity Design.</li> <li>• Assessing and reporting the effects of highway projects on biodiversity – DMRB, LA 108 Biodiversity (Revision 1).</li> <li>• Assessment and reporting of the implications on European sites – DMRB, LA 115 Habitats Regulations assessment) (Revision 1).</li> </ul> <p>The assessment has also been undertaken in reference to the Chartered CIEEM's Ecological Impact Assessment (EclA) guidance (2018).</p> <p>As reported in the ES Chapter 8 and the Report to Inform Habitats Regulations Assessment, the only site nationally and internationally designated for bats requiring assessment is Paston Great Barn Special Area of Conservation, located 29.3km north east. Although it is claimed there is a potentially nationally significant bat colony to the north of the Scheme, the evidence that such a colony exists is based on a single study which has not been released so cannot be assessed by the Applicant. If Wild Wing's Ecology provides the Applicant with the study, the Applicant will provide further comments in writing in due course.</p> <p>Meanwhile, as there is currently no colony with statutory designated status, any bats from the Morton-on-the-Hill have been considered on the same basis as all other non-designated bat colonies. Therefore, the cumulative effects assessment only considered non-statutory bat roosts within 50m of the DCO boundary and where that search area overlapped with the NWL. Morton-on-the-Hill, where Norfolk County Council state the colony is located, is several kilometres north of the nearest point on the Scheme DCO boundary.</p> <p>It is noted that Norfolk County Council's reference to a nationally significant breeding barbastelle colony of bats is in a document presented for discussion with an agenda for the Planning and</p>

<sup>5</sup> Data was also exchanged for GCN, reptiles, birds, fungi and invertebrates.

<sup>6</sup> Berthinussen, A., & Altringham, J. (2012). Do bat gantries and underpasses help bats cross roads safely? PLoS ONE, 7.

<sup>7</sup> Berthinussen, A., & Altringham, J. (2015). WC1060 Development of a Cost-Effective Method for Monitoring the Effectiveness of Mitigation for Bats Crossing Linear Transport Infrastructure. Leeds.

<sup>8</sup> See local news article: <https://www.edp24.co.uk/news/local-council/concern-over-bat-colony-amid-plans-dualled-a47-8279474>

No	Question To	ExA Question	Guidance
			<p>Highways Delegations Committee (see <a href="http://bit.ly/NCC_PlanDeleg_June2021">http://bit.ly/NCC_PlanDeleg_June2021</a>). However, whilst NCC tabled the matter for discussion, as we understand no evidence was made available to NCC, they did not make a determination on the potential for there to be such a bat colony</p> <p>So far as the Applicant is aware, the assertion that there is a nationally significant breeding barbastelle colony in this area is based on the Wild Wings Ecology research (see news article: <a href="https://www.edp24.co.uk/news/local-council/concern-over-bat-colony-amid-plans-dualled-a47-8279474">https://www.edp24.co.uk/news/local-council/concern-over-bat-colony-amid-plans-dualled-a47-8279474</a>). As set out above, this does not appear to be NCC's position, and the Applicant needs to review the relevant research in order to comment further.</p> <p>Cumulative impacts are considered in ES Chapter 15 Cumulative Effects Assessment (<b>APP-054</b>) in accordance with the requirements of the Infrastructure Planning EIA Regulations 2017 and Planning Inspectorate Advice Note Seventeen. Other developments were included as part of the cumulative assessment methodology and this is detailed in section 15.3 of ES Chapter 15. However, as noted in response to representations by Norfolk County Council, with the release of more details about the NWL scheme in the NWL Scoping Report the Applicant is proposing to update ES Chapter 15 to reflect the NWL scheme as a Tier 2 development under Advice Note Seventeen guidance. This proposed amendment will include an updated review of inter-project cumulative biodiversity effects, including on bats.</p>

## 6 CLIMATE

No	Question To	ExA Question	Guidance																																								
Q4.0.1	The Applicant	ES Chapter 14: Climate [APP-053], paragraph 14.3.3 refers to the publication of the sixth Carbon Budget to be published in June 2021. This is now available. An assessment and conclusion of likely significant effects should be provided against this budget. In addition, a conclusion should be drawn regarding emissions during subsequent carbon budgets periods based on worst case assumptions.	<p>The net change in carbon associated with the construction and operation of the Scheme when compared against legislated for carbon budgets is set out in the table below:</p> <table border="1"> <thead> <tr> <th rowspan="2">Project Stage</th> <th colspan="4">Carbon emissions distributed per relevant carbon budget (tCO<sub>2</sub>e)</th> <th rowspan="2">Estimated total emissions over 60-year appraisal period (tCO<sub>2</sub>e)</th> </tr> <tr> <th>Fourth (2023 to 2027)</th> <th>Fifth (2028 to 2032)</th> <th>Sixth (2033 to 2037)</th> <th>2038 to 2087</th> </tr> </thead> <tbody> <tr> <td>Baseline (DM)</td> <td>2,848,032</td> <td>4,640,659</td> <td>4,508,084</td> <td>41,145,692</td> <td>53,142,467</td> </tr> <tr> <td>Construction (DS)</td> <td>87,727</td> <td>-</td> <td>-</td> <td>-</td> <td>87,727</td> </tr> <tr> <td>Operation (DS)</td> <td>2,871,931</td> <td>4,681,354</td> <td>4,549,858</td> <td>41,548,386</td> <td>53,651,530</td> </tr> <tr> <td>Total (DS)</td> <td>2,959,658</td> <td>4,681,354</td> <td>4,549,858</td> <td>41,548,386</td> <td>53,739,257</td> </tr> <tr> <td>Difference (DS-DM)</td> <td>+111,626</td> <td>+40,695</td> <td>+41,774</td> <td>+402,694</td> <td>+596,790</td> </tr> </tbody> </table> <p>Note: The construction carbon value is representative of the Highways England Carbon Tool assessment. The operational carbon value is representative of estimated operational energy plus estimated user utilisation emissions for the ARN over the 60-year appraisal period. DM = Do Minimum, DS = Do Something.</p> <p>DMRB LA114 section 3.20 states that the assessment of projects on climate shall only report significant effects where increases in greenhouse gas emissions will have a material impact on the ability of Government to meet its carbon reduction targets.</p> <p>Section 5.17 of the National Policy Statement for National Networks 2014 (NPSNN) states that it is very unlikely that the impact of a road project will, in isolation, affect the ability of Government to meet its carbon reduction plan targets. Section 5.18 goes on to state that any increase in carbon emissions is not a reason to refuse development consent, unless the increase in carbon emissions resulting from the proposed scheme are so significant that it would have a material impact on the ability of Government to meet its carbon reduction targets. In the Ministerial Statement published on 22 July 2021 (<a href="https://www.gov.uk/government/speeches/review-of-national-policy-statement-for-national-networks">https://www.gov.uk/government/speeches/review-of-national-policy-statement-for-national-networks</a>) the Secretary of State for Transport confirmed that the advice in the NPSNN remains the relevant framework</p>	Project Stage	Carbon emissions distributed per relevant carbon budget (tCO <sub>2</sub> e)				Estimated total emissions over 60-year appraisal period (tCO <sub>2</sub> e)	Fourth (2023 to 2027)	Fifth (2028 to 2032)	Sixth (2033 to 2037)	2038 to 2087	Baseline (DM)	2,848,032	4,640,659	4,508,084	41,145,692	53,142,467	Construction (DS)	87,727	-	-	-	87,727	Operation (DS)	2,871,931	4,681,354	4,549,858	41,548,386	53,651,530	Total (DS)	2,959,658	4,681,354	4,549,858	41,548,386	53,739,257	Difference (DS-DM)	+111,626	+40,695	+41,774	+402,694	+596,790
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No	Question To	ExA Question	Guidance
			<p>for assessing DCOs pending a review of the NPS. In line with section 5.18 of the NPSNN and sections 3.19 and 3.20 of DMRB LA114, it is considered that the magnitude of emissions from the Scheme, in isolation, would not have a material impact on the ability of the UK Government to meet its published carbon budgets, and is not anticipated to give rise to a significant effect.</p> <p>It should be noted that this assessment is conservative. Given current policy commitments, described below, it is considered to be an overestimate as the uptake of new electric vehicles in future years would be expected to be higher than the proportions used in the Scheme assessment. Furthermore, the recent publication of both the Department for Transport's (DfT's) Transport Decarbonisation Plan and Highways England's net zero plan are likely to further reduce carbon emissions.</p> <p>The DfT's Transport Decarbonisation Plan was published in July 2021. The plan outlines a number of commitments by the Government to remove all emissions from road transport to achieve net zero target by 2050. Commitments that will have a direct impact on road user emissions from the Scheme will include:</p> <ul style="list-style-type: none"> <li>• An end to the sale of new petrol and diesel cars and vans by 2030</li> <li>• All new cars and vans to zero emissions at the tailpipe by 2035</li> <li>• All new L-category vehicles to be fully zero emissions at the tailpipe by 2035</li> <li>• The end of the sale of all non-zero emissions HGVs by 2040</li> </ul> <p>In addition, the Government is providing support for at least 4,000 zero emission buses and has committed to holding a consultation on a date to end the sale of new non-zero emissions motorbikes.</p> <p>On 20 July 2021, Highways England published its own 2030/2040/2050 net zero highways plan:  <a href="https://highwaysengland.co.uk/netzerohighways/">https://highwaysengland.co.uk/netzerohighways/</a>.</p> <p>This plan includes commitments to ensure that Highways England's corporate emissions become net zero by 2030, its maintenance and construction activities will become net zero by 2040 and road user emissions on the strategic road network will become net zero by 2050.</p> <p>The Applicant recognises that they have a key role in the development and maintenance of a strategic road network that will facilitate the journey to net zero emissions. Highways England's roadmap to net zero by 2050 sets out commitments to: develop a blueprint for EV charging and energy storage by 2023; report to Government on global HGV technology trials; and set out proposals for trials in the UK in 2022.</p> <p>The Net zero highways 2030/2040/2050 plan recognises that:</p> <p><i>"Roads will be a vital part of zero carbon travel</i></p> <ul style="list-style-type: none"> <li>• <i>Most journeys are made by road</i></li> <li>• <i>Road travel will decarbonise fast, but there is more to do</i></li> <li>• <i>A net zero Britain will still travel by road in 2050</i></li> <li>• <i>Investment in Britain's roads supports a thriving net zero economy"</i></li> </ul> <p><i>"This plan is based on strong science and evidence. It aligns with:</i></p> <ul style="list-style-type: none"> <li>• <i>The 1.5°C reduction goal of the Paris Agreement</i></li> <li>• <i>The UK's commitment to be a net zero economy by 2050</i></li> <li>• <i>Government's Decarbonising Transport: A Better, Greener Britain (2021) and Industrial Decarbonisation Strategy</i></li> <li>• <i>The Committee on Climate Change's sixth carbon budget"</i></li> </ul> <p>Under the Climate Change Act 2008, UK carbon budgets are set by Government in response to recommendations from the UK Climate Change Committee. The latest Committee recommendations informed the development of the 6th Carbon Budget. In advising successive UK governments on carbon budget matters, the Climate Change Committee takes into account a range of considerations including progress made in respect of previous and current carbon budgets. As the seventh, eighth, ninth and subsequent carbon budgets have not yet been prepared, it is not possible to assess the Scheme against these. However, noting the fact that 97% of emissions during the period of unpublished carbon budgets (from 2037) will come from tail-end emissions and having regard to the DfT's Transport Decarbonisation Plan and Highways England's net zero plan, there is no basis on which to conclude that the Scheme, which will not have a material effect on government's ability to meet its published carbon budgets, could have a material effect on the ability to meet future carbon budgets.</p>

No	Question To	ExA Question	Guidance
Q4.0.2	The Applicant	ES Chapter 14: Climate [APP-053], paragraph 14.3.8, confirmation has now been made that this date is 2030. Please explain how this change alters the conclusions of the assessment.	<p>Do something and do minimum end user (traffic) scenarios have used output from the traffic assessment described in ES Chapter 4 Environmental Assessment Methodology (<b>APP-043</b>). The greenhouse gas emissions for do something and do minimum have then been calculated for the Scheme using the Department for Transport (DfT) Transport Appraisal Guidance Methodology, Unit A3 Environmental Appraisal.</p> <p>The modelling used to support the assessment accounts for predicted proportions of the vehicle types, fuel type, forecast fuel consumption parameters and emission factors according to DfT. These data tables include forward forecasting of different vehicle types (such as electric) for future years. The uses of these data tables is considered best practice for calculating end-user (traffic) greenhouse gas emissions.</p> <p>At the time of writing, no updates have been published in the DfT data tables to incorporate the Government's announcement banning the sale of petrol and diesel cars beyond 2030. Therefore, the assessment represents a reasonable worst case with the accelerated updated of zero emission vehicles likely to reduce end user GHG emissions.</p>
Q4.0.3	The Applicant	ES Chapter 14: Climate [APP-053], paragraph 14.4.3, can the Applicant explain why no further consultation has taken place?	<p>Consultation was undertaken on the climate assessment through receipt of the Scoping Opinion in 2019 (<b>APP-136</b>) and through presentation of the Preliminary Environmental Information Report during statutory consultation in 2020.</p> <p>In accordance with the requirements of the Infrastructure Planning EIA Regulations 2017, the NPSNN, and DMRB LA 114 Climate, Chapter 14 considers:</p> <ul style="list-style-type: none"> <li>• The effects on climate from the Proposed Scheme</li> <li>• The vulnerability of the Proposed Scheme to Climate Change</li> </ul> <p>The methodology followed to assess these considerations did not require further consultation as data to assess the effects on climate came from construction designs and publicly available carbon emissions factors (e.g. BEIS Emission Factors, WebTAG data tables, or the Highways England Carbon Tool).</p> <p>With regards to the vulnerability, the assessment was performed using the Met Office UKCP18 data to evaluate potential climatic impacts which may affect the Proposed Scheme. As this concluded that there would not be significant impact on the Scheme due to climate change no further assessment was conducted.</p> <p>However, consultation on climate considerations were undertaken as part of engagement with stakeholders on other ES chapters, such as: with Natural England on climate adaptation in ES Chapter 8 Biodiversity (<b>APP-047</b>); and with the Lead Local Flood Authority, Internal Drainage Board and Environment Agency on flood risk climate change allowances in ES Chapter 13 Road Drainage and the Water Environment (<b>APP-052</b>).</p>
	Natural England Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	Are NE, NCC, BC, BDC and SNC satisfied with approach?	No response required by the Applicant.
Q4.0.4	The Applicant	ES Chapter 14: Climate [APP-053] paragraph 14.4.8, please explain what the Applicant considers the level of material impact to be?	DMRB LA114 accords with the approach in the NPSNN. A "material impact" is defined as "an event/outcome that is a key decision making consideration". For the purposes of the NPSNN a material impact would arise where a scheme would likely affect the UK Government's ability to meet its carbon targets as set out in legislated carbon budgets. In line with section 5.18 of the NPSNN and sections 3.19 and 3.20 of DMRB LA114, it is considered that the magnitude of emissions from the Scheme, in isolation, would not have a material impact on the ability of the UK Government to meet its carbon budgets.
Q4.0.5	The Applicant	ES Chapter 14: Climate [APP-053] paragraph 14.5.1, please explain why some assumptions cannot be made? Does the Applicant not have information available from other developments that could be used to provide a benchmark?	The carbon assessment has been carried out using the Highways England Carbon Tool (Version 2.3). This uses benchmark carbon emissions factors to assess the emissions associated with materials and transport to site. As outlined in ES Appendix 14.1 Embodied Carbon Assessment ( <b>APP-131</b> ), attempts have been made to calculate the carbon emissions for every construction item. However, in some instances, either carbon factors do not currently exist (and therefore carbon cannot be estimated with a suitable degree of accuracy) or suitable information does not exist on which to base carbon assumptions, e.g. a drainage attenuation structure, drainage connections or a road bollard. In these instances, their impact is not considered to be material to the Scheme's overall carbon estimate.

No	Question To	ExA Question	Guidance
Q4.0.6	The Applicant	ES Chapter 14: Climate [APP-053] paragraph 14.5.2 please explain what levels of maintenance are expected?	<p>As referred to in ES Appendix 14.1 Embodied Carbon Assessment (<b>APP-131</b>), it is expected that the road construction will require maintenance and replacement during its design life. The carbon emissions associated with these future activities have been excluded from this assessment due to the inherent uncertainty in their frequency and extent.</p> <p>ES Appendix 14.1 has sought to provide an estimate of potential emissions in maintenance. This has been done by assessing the carbon emissions resulting from the replacement of the surface asphalt courses due to the design life of the materials (five times for the surface course and once for the binder course over a 60 year appraisal period) as a reasonable worst-case replacement scenario, based on professional judgement. This accounts for approximately 8,112 tCO<sub>2</sub>e.</p>
	Natural England Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	Are NE, NCC, BC, BDC and SNC satisfied with approach?	No response required by the Applicant.
Q4.0.7	The Applicant	ES Chapter 14: Climate [APP-053] paragraph 14.5.4, please clarify how this has been calculated?	<p>With regards to lighting, the design team have estimated 13.5 kilowatt the load required to light the proposed scheme. It is anticipated that lighting will be required for 4,080 hours per year. This value will vary daily due to seasonal differences.</p> <p>Multiplying these two values together gives the total kilowatt hours for the scheme. This was then multiplied with the BEIS (2020) carbon emission factor for grid electricity to give an annual carbon estimated from lighting over the lifetime of the Scheme. This assessment did not account for the gradual decarbonisation of the UK electricity grid so the carbon associated with lighting is considered a worst case scenario.</p>
Q4.0.8	The Applicant	ES Chapter 14: Climate [APP-053] Table 14.6, please provide more explanation of the figures, how they are calculated and what assumptions underly them?	<p>The carbon emissions for the baseline (do minimum) scenario has been calculated from the traffic model for the affected road network. The parameters for the ARN are described in more detail in ES Chapter 5 Air Quality (<b>APP-044</b>), sections 5.6.6 and 5.6.7.</p> <p>Using this traffic model, end user (traffic) greenhouse gas emissions have been calculated for the Scheme using the Department for Transport's 'Transport Appraisal Guidance Methodology, Unit A3 Environmental Appraisal'<sup>9</sup>. This allows for carbon emissions to be judged at the baseline year (2015), opening year (2025) and design year (2040). Using these figures, estimations are made to calculate emissions during these time periods in order to assess over the respective carbon budgets.</p> <p>These figures also assume that end user emissions do not change beyond 2040 over the remainder of the 60-year appraisal. It is expected that the uptake of zero emission cars beyond this period will be significantly higher than those provided within the Transport Appraisal Guidance data tables (see the Applicant's response to Q4.0.1), which mean the end user emissions (over the 60-year appraisal period are likely to be the worst case scenario.</p>
Q4.0.9	The Applicant	ES Chapter 14: Climate [APP-053] paragraph 4.8.5, do these figures include changes to vehicle types as outlined in paragraph 14.3.8? What are the assumptions behind the dosomething figures?	<p>Do something and do minimum end user (traffic) scenarios have used output from the traffic assessment described in ES Chapter 4 Environmental Assessment Methodology (<b>APP-043</b>). The GHG emissions for do something and do minimum have then been calculated for the Proposed Scheme using the Department for Transport's (DfT) Transport Appraisal Guidance Methodology, Unit A3 Environmental Appraisal<sup>10</sup>.</p> <p>The modelling used to support the assessment accounts for predicted proportions of the vehicle types, fuel type, forecast fuel consumption parameters and emission factors according to DfT. These data tables include forward forecasting of different vehicle types (such as electric) for future years. The uses of these data tables is considered best practice for calculating end-user (traffic) greenhouse gas emissions.</p> <p>At the time of writing, no updates have been published in the DfT data tables to incorporate the Government's announcement banning the sale of petrol and diesel cars beyond 2030. Therefore, the assessment represents a reasonable worst case.</p>

<sup>9</sup> Available at: <https://www.gov.uk/government/publications/tag-unit-a3-environmental-impact-appraisal>

<sup>10</sup> Available at: <https://www.gov.uk/government/publications/tag-unit-a3-environmental-impact-appraisal>

No	Question To	ExA Question	Guidance
Q4.0.10	The Applicant	A number of the RRs highlight the that on 1 May 2019, the UK Government declared a climate emergency and that the proposed development will significantly increase carbon emissions and undermine efforts to reach net zero carbon emissions by 2050 (Climate Change Act 2008). Please provide a response.	<p>ES Chapter 14 Climate (<b>APP-053</b>) considers the effects on climate from the Scheme and also the vulnerability of the Scheme to climate change in accordance with the requirements of the Infrastructure Planning EIA Regulations 2017, the NPSNN, and DMRB LA 114 Climate (DMRB LA 114). This includes carbon emissions associated with the Scheme which are presented in relation to the UK's legally binding carbon budgets.</p> <p>The Carbon Budget Order 2021, which provides for the Sixth Carbon Budget, took effect on 24 June 2021. This is the first carbon budget issued since the declaration of a climate emergency and the first aligned to the 2050 national net zero target. The Applicant can only undertake an assessment of the likely significant effect of carbon against published Government policy, specifically against the relevant published carbon budgets. As explained in the Applicant's responses to Q4.0.1 and Q4.0.11, the UK carbon budgets are the only measures against which the significance of emissions can be assessed.</p> <p>Since the DCO application was prepared the Government has issued the Policy paper "The Ten Point Plan for a Green Industrial Revolution"; communicated its new Nationally Determined Contribution (NDC) under the Paris Agreement to the United Nations Framework Convention on Climate Change; in its press release of 20 April 2021 that announced the Sixth Carbon Budget, confirmed that it is developing an approach to securing net carbon reduction that is committed to innovation; and in July 2021 issued its transport decarbonisation plan that confirmed the people will still drive on improved roads, but increasingly in zero emission cars. Reference has already been made in the Applicant's response to Q4.0.1 to the publication in July 2021 of the DfT's Transport Decarbonisation Plan and Highways England's net zero plan.</p> <p>A detailed assessment of the embodied carbon through the construction, operation and maintenance of the Scheme has been undertaken using the Highways England Carbon Tool and following the methodology within the associated guidance document. The Department for Transport's WebTAG (Web-based transport analysis guidance) greenhouse gases (GHG) methodology was followed to calculate end-user emissions. As well as reporting estimated emissions associated with the Scheme, Section 14.9 of ES Chapter 14 Climate (<b>APP-053</b>) highlights carbon mitigation opportunities taken forward during design and further opportunities to reduce emissions during construction.</p> <p>In response to the release of the Sixth Carbon Budget (<a href="https://www.theccc.org.uk/publication/sixth-carbon-budget/">https://www.theccc.org.uk/publication/sixth-carbon-budget/</a>) and number of relevant representations on this matter, the Applicant will provided an updated ES Chapter 14 (<b>APP-053</b>) for Deadline 3 to allow consideration before the November Hearings.</p>
Q4.0.11	The Applicant	A number of RRs and a number of the responses received at Preliminary Deadlines A and B consider that there is a need to include an in-combination assessment of the proposed development with other A47 projects, along with other road development in the locality. Please provide a response.	<p>Cumulative impacts for all the disciplines considered in the environmental impact assessment, including biodiversity, ecology, air quality, noise and carbon emissions, are reported in ES Chapter 15 Cumulative Effects Assessment (<b>APP-054</b>). Chapter 15 has been completed in accordance with the requirements of the Infrastructure Planning EIA Regulations 2017 and Planning Inspectorate Advice Note Seventeen. Other developments were included as part of the cumulative assessment methodology and this is detailed in section 15.3 of the chapter.</p> <p>As per Table 15.1, in section 15.3, the construction and operational phase traffic data includes traffic associated with other developments, so the greenhouse gas emissions assessment reported within the Chapter 14 Climate is inherently cumulative. In accordance with Department for Transport's Transport Appraisal Guidance, the uncertainty log includes the management of the uncertainties required for formulating the core scenario. The uncertainty log contains the significant local authority and Highways England network schemes. Based on Transport Appraisal Guidance, the schemes included in the Do-Minimum (DM) scenario have a likelihood of at least 'near certain' or 'more than likely'. Therefore other schemes, such as the other A47 schemes and the NWL, are listed in the uncertainty log as near certain' or 'more than likely' and as such it is included in the core scenario.</p> <p>The Scheme is also assessed against legislated carbon budgets in ES Chapter 14 Climate (<b>APP-053</b>), which are also inherently cumulative as they consider emissions across sectors in the economy. In a recent judgment on RIS2<sup>11</sup> the High Court confirmed (paragraph 140) that the only cumulative targets against which the cumulative assessment of emissions could be made were the carbon budgets. There were no other targets: "Although the claimant has sought to emphasise the need for a</p>

<sup>11</sup> R (Transport Action Network Ltd) (TAN) v The Secretary of State for Transport (SoST) and Highways England Company Limited [2021] EWHC 2095 (Admin). Available at: <https://www.judiciary.uk/wp-content/uploads/2021/07/TAN-v-SST-judgment-260721.pdf> with the summary of the judgment: 260721.pdf at <https://www.judiciary.uk/wp-content/uploads/2021/07/TAN-v-SST-summary-260721.pdf>.

No	Question To	ExA Question	Guidance
			<p><i>cumulative assessment of emissions over the period 2020 to 2050, it has not suggested that there is any target expressed in cumulative terms over such a period (or anything similar) against which an assessment could be compared. There is currently no such target in the CCA 2008. The Paris Agreement does not identify targets for individual nations, and it is not suggested that the "nationally determined contribution" communicated by the UK refers to any such cumulative target. The only cumulative targets in the CCA 2008 are the carbon budgets which, at the time of the decision under challenge, did not run beyond 2032. Accordingly, the claimant's argument in this part of the case leads nowhere." In the case of the Scheme, the Applicant has assessed the likely significance of emissions against all published carbon budgets, including the 6<sup>th</sup> Carbon Budget.</i></p>
Q4.0.12	The Applicant	<p>Environmental Statement Chapter 15: Cumulative Effects Assessment [APP-054], Table 15-1, states the construction and operational phase traffic data includes traffic associated with other developments and that the emissions assessment reported within the climate chapter is therefore inherently cumulative. However, this does not account for other sources of emissions, for example, through the use of construction materials such as cement and the use of construction machinery as outlined in Design Manual for Roads and Bridges (DMRB) LA 114 Table 3.11.1.</p> <p>Considering the requirements of the NNNPS and paragraphs 3.21.1 and 3.21.2 of DMRB LA 104 guidance applied to the cumulative assessment, can the Applicant either further justify an omission of cumulative effects on climate or provide such an assessment</p>	<p>The assessment undertaken with ES Chapter 14 Climate looks at emissions associated with the construction and operation of the Scheme. Table 14-10 in ES Chapter 14 shows the emissions from both elements under the do-something assessment which are summarised below for the 60-year appraisal period:</p> <ul style="list-style-type: none"> <li>• Construction (DS) = 87,727 tCO<sub>2</sub>e</li> <li>• Operation (DS) = 53,651,530 tCO<sub>2</sub>e</li> </ul> <p>CO<sub>2</sub>e is a quantification of the global warming potential of a range of greenhouse gases expressed as a single equivalent unit of carbon.</p> <p>The operational assessment has been calculated from the traffic model for the affected road network. The parameters for the ARN are described in more detail in ES Chapter 5 Air Quality (<b>APP-044</b>), sections 5.6.6 and 5.6.7. The traffic model accounts for all other committed schemes within the affected road network (for example, the Norwich West Link road) and thus includes an in-combination cumulative assessment of operational emissions.</p> <p>The assessment of significance undertaken in accordance with paragraph 5.18 of NPSNN is an inherently cumulative approach, reflecting the fact that the carbon budgets span all economic sectors.</p> <p>The predicted carbon emissions from the construction period are set out in the table in the response to Q4.0.1 above. They fall within the Fourth Carbon Budget.</p> <p>As indicated above, the vast majority of emissions over the appraisal period are associated with the operation of the Scheme. Emissions associated with construction account for less than 0.002% of the Scheme's total emissions over the 60-year appraisal.</p> <p>A cumulative assessment has been undertaken because the carbon budgets span all sectors of the economy and thus are inherently cumulative. In the RIS2 judgment<sup>12</sup> The High Court recognised that it is the government's role to determine how best to balance emissions across the entire economy (paragraph 54) and that that the carbon budgets enable net increases in emissions to be managed within the carbon budgets by balancing with performance in other sectors: "<i>The SST must also have been aware that there is no sectoral target for transport, or any other sector, and that emissions in one sector, or in part of one sector, may be balanced against better performance in others. A net increase in emissions from a particular policy or project is managed within the government's overall strategy for meeting carbon budgets and the net zero target as part of "an economy-wide transition"</i> (paragraph 127). Accordingly, the fact that the Scheme is predicted to give rise to a net increase in greenhouse gas emissions does not undermine the ability of the UK to reach net zero by 2050 and the assessment of significance in accordance with NPSNN paragraphs 5.17 and 5.18 is an inherently cumulative one.</p>

<sup>12</sup> R (Transport Action Network Ltd) (TAN) v The Secretary of State for Transport (SoST) and Highways England Company Limited [2021] EWHC 2095 (Admin). Available at: <https://www.judiciary.uk/wp-content/uploads/2021/07/TAN-v-SST-judgment-with-the-summary-of-the-judgment-260721.pdf> at <https://www.judiciary.uk/wp-content/uploads/2021/07/TAN-v-SST-summary-260721.pdf>.



## 7 COMPULSORY ACQUISITION, TEMPORARY POSSESSION AND OTHER LAND OR RIGHTS CONSIDERATIONS

No	Question To	ExA Question	Guidance
Q5.0.1	The Applicant	The Book of Reference (BoR) [APP-023] includes several Statutory Undertakers with interests in land. Can the Applicant: a) Provide a progress report on negotiations with each of the Statutory Undertakers listed in the BoR, with an estimate of the timescale for securing agreement with them; b) Indicate whether there are any envisaged impediments to the securing of such agreements; and c) State whether any additional Statutory Undertakers have been identified since the submission of the BoR with the application.	<p>Negotiations are ongoing with each of the Statutory Undertakers and it is expected that they will be concluded before the end of Examination. An update on the specific Statutory Undertakers is as follows:</p> <ul style="list-style-type: none"> <li>• Anglian Water – The Applicant has responded to Anglian Water's proposed Protective Provisions and will be including revised Protective Provisions in the dDCO at Deadline 3. Protective Provisions are not agreed, but negotiations continue.</li> <li>• National Grid (Gas) - The Applicant is currently negotiating standard Protective Provisions and standard agreements with National Grid Gas.</li> <li>• Openreach – Have confirmed that they are content to rely on the Schedule 9 Part 2 Protective Provisions.</li> <li>• Vodafone – Have appointed a solicitor to look at Schedule 9 Part 2 Protective Provisions and the Applicant is currently engaging with Vodafone to seek agreement.</li> <li>• UKPN - have been notified of the Scheme by the Applicant but have not made a relevant representation. The Applicant has regularly met with UKPN in relation to the Scheme. and in any event, UKPN can rely on the standard Schedule 9 Part 1 Protective Provisions.</li> </ul> <p>There are no envisaged impediments to the securing of the required agreements.</p> <p>No additional statutory undertakers have been identified since submission of the latest Book of Reference submitted at Deadline 1 (<b>REP1-008</b>).</p>
Q5.0.2	The Applicant	Paragraph 4.11.3 of the Statement of Reasons (SoR) [APP-021] states that the Applicant has sought to achieve a balance between minimising land take and securing sufficient land to ensure delivery of the Scheme. Please provide evidence to support this statement.	<p>The Applicant has sought to reduce land take through the Scheme development process and has engaged with all affected landowners during the Scheme development. For example, the removal of a proposed right of way diversion under the River Tud Crossing was replaced by the less intrusive Honingham underpass leading to a reduction in loss of woodland and the DCO boundary for temporary landtake in the field between St Andrew's Church and the River Tud. Further permanent landtake reductions were achieved, in response to statutory consultation, with removal of proposed side road links, such as the Wood Lane to Church Lane, East Tuddenham, side road through the northern edge of the Berry Hall Estate; these post statutory consultation design changes are reported in Table 4.12 of the Consultation Report (<b>APP-024</b>). The design considerations are reported in the Scheme Design Report, Rev.1 (<b>AS-009</b>), which include Chapter 11 that explains the reasons for the landtake due to the construction compounds and material storage / processing areas.</p>
Q5.0.3	The Applicant	What assurance and evidence can the Applicant provide of the accuracy of the land interests identified as submitted and indicate whether there are likely to be any changes to the land interests, including the identification of further owners/interests or monitoring and update of changes in interests?	<p>The Land Referencing Method Statement (Annex C to this document) describes the activities carried out to ensure that all those affected by the Scheme are identified as required by the Planning Act 2008.</p> <p>Regular land referencing refresh exercises have been conducted at key milestones through-out the lifecycle of the project up to submission. These activities are detailed in the Method Statement.</p> <p>Land can be transferred and exchanged throughout the Examination and the Applicant will continue its land referencing refresh exercise to ensure these interests are identified at the points required by the Examination Timetable.</p>
Q5.0.4	The Applicant	Paragraph 4.15.3 of the SoR [APP-021] makes reference to seeking to acquire by negotiation, please provide regular updates on the progress of these negotiations.	<p>The Applicant has submitted at Deadline 2 a Compulsory Acquisition Schedule (<b>TR0100038/EXAM/9.6</b>) that details the progress of the ongoing negotiations with the relevant landowners.</p> <p>It is the Applicant's intention to acquire by agreement as far as is possible. However, as stated at paragraph 4.15.4 of the Statement of Reasons (<b>APP-021</b>), the Applicant is mindful that it is under a duty to acquire land at best value and that it is required to deliver the Scheme within a specified timescale. Whilst efforts will be made to acquire by agreement where possible, the Applicant has concluded that it may not be possible to acquire all land interests necessary to deliver the Scheme before the Secretary of State's decision on the Scheme.</p>

No	Question To	ExA Question	Guidance
			The Applicant will continue to regularly update the ExA on progress of the negotiations.
Q5.0.5	Broadland District Council	At paragraph 4.17.11 of the SoR [APP-021], the Applicant does not consider the presence of the unimplemented Local Development Order to be a risk or an impediment to the Scheme. What is BDC's view of this statement?	No response required by the Applicant.
Q5.0.6	The Applicant	<p>In the summary, paragraph 8.1.2 of the SoR [APP-021] states that there is a compelling case in the public interest for CA. Please address the following:</p> <p>a) What assessment, if any, has been made of the effect upon individual Affected Persons and their private loss that would result from the exercise of CA powers in each case?;</p> <p>b) How has it been demonstrated within the application that the public benefits of the scheme outweigh any residual adverse effects including private loss suffered by individual landowners and occupiers?; and</p> <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>The Applicant responds as follows:</p> <p>a) The Applicant's professional team has considered the nature and status of the principal parties affected and the likely application of the compensation code for each principal claimant.</p> <p>Paragraphs 5.1.6 and 5.1.10 of the SoR (<b>APP-021</b>) set out the consideration that has been given to the Affected Persons, balancing with the Applicant's ability to deliver the Scheme. Specifically, the Applicant's view is that there is a compelling case in the public interest for the compulsory acquisition of the land, as the benefits to the public of the compulsory acquisition of land would outweigh the private loss that would be suffered by those whose land is to be acquired.</p> <p>b) The Applicant's SoR (<b>APP-021</b>) as a whole and in particular section 5 (The Case for Compulsory Acquisition) indicates that the public benefits of the Scheme outweigh any adverse effects including private loss suffered by individual owners and occupiers. In addition, the Applicant's Case for the Scheme (<b>APP-140</b>) sets out the relevant policies that support the Scheme, as well as the potential effects on the strategic road network if the Scheme were not to go ahead. The Applicant is a publicly owned company whose purpose is to plan, design, build, operate and maintain the strategic road network (SRN) for the benefit and safety of the wider public. The Applicant would not be proposing the Scheme if there were not significant benefits to the public in doing so, despite there being the potential for private loss to be suffered by individuals.</p> <p>In addition, the Scheme is supported by the Government's wider strategic policy objectives whilst specifically addressing a significant problem of traffic congestion on the strategic road network, providing additional capacity and facilitating long-term development. In addition the Scheme supports the local transport policy objectives (see section 6.2 of the Case for the Scheme (<b>APP-140</b>)). The principles of the Compensation Code will apply when assessing compensation for the affected owners and occupiers. For all of these reasons the Applicant can be entitled to consider that public benefit outweighs private loss, and that there is a compelling case in the public interest for the Scheme to be delivered.</p> <p>c) The balancing exercise was carried out on the basis of (legally privileged) advice provided by the Applicant's solicitors and the privileged advice of the Valuation Office provided to the Applicant in regard to the assessment of compensation and negotiations with landowners. Throughout the application process the Applicant has had in mind the need to balance between public benefit and private loss and has prepared the application accordingly. Specifically the Applicant considered the justification for the acquisition of each plot, on a plot-by-plot basis, and this supported the balancing exercise that is considered in section 5 of the SoR (<b>APP-021</b>).</p> <p>Chapter 7 of the Case for the Scheme (<b>APP-140</b>) summarises how the Case for the Scheme and accompanying NPS NN Accordance Tables (APP-141) set out the policy context against which the Scheme should be viewed. Together they demonstrate a clear justification for the Scheme grounded in national, regional and local planning and transport policy, and that the substantial and long-lasting transportation, economic and community benefits will outweigh the impacts. In particular, Section 7.4 discusses how the construction or operation of the Scheme, through careful and comprehensive assessment, complies with those NPS NN paragraphs that recommend the Secretary of State does not grant development without reasonable justification.</p>
Q5.0.7	The Applicant	Paragraph 5.1.14 of the SoR [APP-021] refers to most appropriate option. Please explain and expand on this, and how did land acquisition feature within the decision-making process?	<p>The Applicant has developed the preferred route following a review of 22 alternative route options considered through the assessment process and responses to the non-statutory route options consultation outlined in Section 2 of the Case for the Scheme (<b>APP-140</b>). Paragraph 2.2.6 of the Case for the Scheme confirms land take requirements were a consideration in the route options appraisal process.</p> <p>Land acquisition was led by the design determining the permanent footprint needs taking into consideration factors such as technical</p>

No	Question To	ExA Question	Guidance
			<p>guidance, safety, environmental constraints and costs. Further reductions to landtake were made following engagement with stakeholders and affected landowners during the Scheme development as well as further reviews of the design. For example, permanent landtake reductions were achieved, in response to statutory consultation, with removal of proposed side road links, such as the Wood Lane to Church Lane, East Tuddenham, side road through the northern edge of the Berry Hall Estate; these post statutory consultation design changes are reported in Table 4.12 of the Consultation Report (<b>APP-024</b>). More reductions are described in the response to Q5.0.9 below. The design considerations are reported in the Scheme Design Report, Rev.1 (<b>AS-009</b>), such as Chapter 11 that explains the reasons for the landtake due to the construction compounds and material storage / processing areas.</p>
Q5.0.8	The Applicant	<p>Section 6 of the SoR [APP-021] addresses human rights. Where is it demonstrated that interference with human rights in this case would be proportionate and justified? How has the proportionality test been undertaken and explain how this approach has been undertaken in relation to individual plots?</p>	<p>a) Interference with human rights is both proportionate and justified for the reasons given in the response to question 5.0.6 above. In particular, the Scheme is supported by national and local policy. In preparing its application, the Applicant has sought to acquire only land or interests that are required to allow the Scheme to proceed and to cause as little interference with existing interests in land as possible. Particular examples are:</p> <p>i) The Applicant's decision to adopt an alignment as close as possible to the existing alignment of the A47, so as to keep interference with land owners and occupiers to a minimum.</p> <p>ii) The use of powers less than for freehold acquisition (for instance the acquisition of new rights for the alteration and diversion of existing utilities apparatus) rather than seeking full freehold acquisition powers.</p> <p>iii) The Applicant has sought to use, wherever possible, land for compounds and working areas within the area bounded by the existing A47 and the proposed realigned A47, to restrict the extent of the land affected by the DCO scheme.</p> <p>b) The Applicant analysed the appropriate use of powers for each individual plot to decide whether powers less than for freehold acquisition could be deployed and has done so where this is appropriate without compromising the principles of the Scheme as supported by RIS2. Whilst a plot by plot analysis of other proportionality of the proposed compulsory acquisition has not been carried out, the principles outlined in paragraph a) above demonstrate how the Applicant approached the consideration of the appropriateness of compulsory acquisition powers. In relation to most principal landowners, engagement with the owner, on both a formal and informal basis, has not indicated that the Applicant's decision regarding the use of compulsory acquisition powers is disproportionate and a compelling case in the public interest exists in relation to the powers sought in each plot.</p> <p>Where a landowner has raised a specific issue on the proposed compulsory acquisition of their land the Applicant is in continued dialogue with them.</p>
Q5.0.9	The Applicant	<p>Reference is made with the SoR [APP-021] to The Land over which compulsory acquisition powers are sought as set out in the draft DCO is the minimum necessary to ensure the delivery of the Scheme (6.1.7). How does this statement sit with the RRs on behalf of the owners of Berry Farm Estate [RR-075]?</p>	<p>The Applicant's position is that the land included within the Application is no more than is reasonably required for the construction, operation and maintenance of the Scheme, and the limits of the land required have been drawn as tightly as possible so as to avoid unnecessary land take.</p> <p>If it were to be found at a later stage that less land is required, or that fewer rights are required over the land, then the Applicant will seek to minimise effects on the landowners. This has already been demonstrated by the Applicant with the change, in the Book of Reference submitted at Deadline 1 (<b>REP1-007</b> and <b>REP1-008</b>), at Plot 14/6a which, following further investigation and discussions with the landowners, has changed from permanent acquisition to temporary acquisition.</p> <p>In relation to the Berry Hall Estate, the Applicant notes the comments of the owners in their relevant representation, which the Applicant has provided comments on in their Responses to Relevant Representations (<b>REP1-013</b>) RR-061.1 to RR-061.14.</p> <p>Following the statutory consultation that took place in February to April 2020, the Applicant considered the responses received from Affected Persons and, those received from the Berry Hall Estate. As set out at RR-061.8 of the Applicant's Responses to Relevant Representations, the Applicant has made several changes to the Scheme to reduce the impact on Berry Hall Estate as follows:</p> <ul style="list-style-type: none"> <li>• Removal of a proposed side road connection between Church Lane, East Tuddenham, and the proposed Wood Lane junction</li> </ul>

No	Question To	ExA Question	Guidance
			<p>thereby reducing the permanent land take along the northern edge of the Berry Hall Estate.</p> <ul style="list-style-type: none"> <li>Reduced the length of the National Grid Gas pipeline diversion works so as to keep all works east of Berrys Lane, instead of within the landscaped parkland to the south-east of Berry Hall.</li> <li>Avoiding use of land immediately north of Merrywood House and north-east of Berry Hall for a main construction site compound; these are now just for construction work areas / access needs.</li> <li>Positioned the construction compound and material storage area required south of the A47 at Wood Lane junction in the agricultural field the north-west of Berry Hall in order to utilise the existing natural tree screening.</li> <li>Closure of Berry Lane as a through road to Dereham Road and the A47 to the north, which also creates a safe local road for the local residents and farming operations.</li> </ul> <p>The Applicant has also previously explained the reasoning for the land required from the Berry Hall Estate, and why the compounds and material storage areas cannot be located on the opposite (north) side of the A47 as proposed by the landowners. This is set out in Annex O of the Consultation Report (<b>APP-024</b>), on pages 27 to 30. This is also re-iterated at RR-061.9 of the Applicant's Responses to Relevant Representations (<b>REP1-013</b>). The Applicant is engaging with the owners of the Berry Hall Estate and will consider their proposal for alternative Wood Lane design options, in the Transport Appraisal Report submitted by the owners at Deadline 1 (<b>REP1-057</b>).</p> <p>The Applicant has engaged in discussions pre-DCO submission and continues to engage with the landowner and representatives of the Berry Hall Estate to minimise any adverse effects and respond to their concerns. Meetings have been held since the submission of the Relevant Representation to discuss the alternative proposals and more are planned post Deadline 1.</p>
Q5.0.10	The Applicant	Please review Section 7.6 of the SoR [APP-021] in light of the submission from Berry Farm Estate [RR-075]	<p>As set out in RR-061.2 of the Applicant's Responses to Relevant Representations (<b>REP1-013</b>), the Applicant does not consider that the tax designation of the estate per se is a "designated heritage asset" for the purposes of the National Planning Policy Framework.</p> <p>Section 7.6 of the Statement of Reasons (<b>APP-021</b>) deals with designated heritage assets within the Scheme extents. Given the above, it is not considered that the tax designation for the Berry Hall Estate should be listed or highlighted in this section. That said, further consideration has been given to the Berry Hall Estate's tax designation in the context of the EIA conclusions and the Applicant's Response to the Relevant Representations (<b>REP1-013</b>), RR-061.1 to RR-061.14, confirm no changes to the EIA conclusions on landscape and heritage]. As such the conclusion at paragraph 7.6.7 of the Statement of Reasons (APP-021) "<i>The Applicant does not consider the environmental effects or presence of cultural landmarks, the impact of the Scheme on which is assessed in the Environmental Statement (TR010038/APP/6.1), to be an impediment to the Scheme. Even in light of the special considerations, the Applicant considers the compelling case in the public interest for acquiring the land for the Scheme to be established</i>" remains appropriate.</p> <p>In any event, the listed buildings and their setting within the Estate are designated heritage assets and have been taken properly into account in the EIA, in particular ES Chapter 6 Cultural Heritage (<b>APP-045</b>), as well as being highlighted in the Statement of Reasons (<b>APP-021</b>) at paragraph 7.6.1.</p>
Q5.0.11	The Applicant	Given that at Paragraph 7.1.3 of the SoR [APP-021], reference is made to no consultation having been taken place with the Secretary of State for Environment, Food and Rural Affairs or the Ministry of Defence, please provide further evidence and justification to support the conclusion in paragraph 7.1.4 that these interests do not present an impediment for the Scheme.	<p>There is no proposed acquisition of freehold land held by a Crown Authority as part of the Scheme.</p> <p>It should be noted that the Applicant has been in discussions with the Government Legal Department in relation to obtaining Crown consent for the Scheme. Discussions are ongoing and it is anticipated that the relevant Crown consents will be provided to the Applicant during the course of the Examination.</p> <p>The interests held by the Secretary of State for Environment, Food and Rural Affairs (DEFRA) are interests within the existing A47 and on land owned by the Applicant (Plots 6/1d, 11/2f and 12/1a). The plots are required for de-trunking of the existing A47 pursuant to the draft DCO (<b>REP1-004</b>) and for new works within the existing highway respectively. On that basis it is not anticipated that the Crown interest will be an impediment to the Scheme and Crown</p>

No	Question To	ExA Question	Guidance
			<p>consent is expected to be received from DEFRA during the course of the Examination.</p> <p>The interests held by the Ministry of Defence (MoD) relate to a historic deed registered against title owned by Honingham Aktieselskab Limited. The relevant Plots (9/5a, 10/3a, 10/3b, 10/5a, 10/5b, 10/5d, 10/5e, 10/5f, 11/1a, 11/1b, 11/1c, 11/1d, 11/1e, 11/1f, 11/1g, 11/1h, 12/3a and 12/3b) are required on a permanent, temporary and rights basis (as applicable) and for purposes including the construction of the new carriageway, diversion of utility apparatus and for environmental mitigation. The Applicant is in discussions with both the landowner, as detailed in the Compulsory Acquisition Schedule (<b>TR0100038/EXAM/9.6</b>), and the MoD in relation to the Crown interest. It is not anticipated that the Crown interest will be an impediment to the Scheme and Crown consent is expected to be received from the MoD during the course of the Examination.</p> <p>Both DEFRA and the MoD were consulted in relation to the Scheme and this is noted in the SoR (<b>APP-021</b>) at paragraph 7.1.3.</p>
Q5.0.12	The Applicant	<p>The former Department for Communities and Local Government published guidance related to procedures for CA (September 2013) in Planning Act 2008: procedures for the compulsory acquisition of land. This states that <i>"Applicants should be able to demonstrate that adequate funding is likely to be available to enable the compulsory acquisition within the statutory period following the order being made, and that the resource implications of a possible acquisition resulting from a blight notice have been taken account of."</i> The Funding Statement [APP-022] does not identify the CA costs separately from the project costs or explain in detail how a figure for CA costs was arrived at. Please clarify further the anticipated cost of CA and how this figure has been estimated.</p>	<p>Paragraph 2.1.1 of the Funding Statement (<b>APP-022</b>) states that the most likely estimate of the Scheme is £195.27 million. This includes the land acquisition; compensation costs and claims associated with the Scheme; legal fees and land agent fees. The costs associated with land acquisition are integrated into the Scheme estimate and met through the sources of funding detailed in Section 3 of the Funding Statement. Paragraphs 3.1.2 to 3.1.5 refer to the government's commitment to fully fund the Scheme as part of the Road Investment Strategy 2020-2025.</p> <p>The Highways England Delivery Plan (2020-2025) sets out in detail how Highways England will deliver its strategic outcomes and measure success. Page 34 of this Delivery Plan lists the A47 North Tuddenham to Easton as a 'Scheme open for traffic during RP2' along with a reference in Annex C on page 74 to the anticipated start of works and when the Scheme is expected to be open for traffic. Accordingly, Highways England has reaffirmed its commitment to the timely delivery of the Scheme and the funding necessary to ensure this.</p> <p>The Scheme estimate which has been prepared in accordance with Highways England procedures and the HM Treasury Green Book includes an allowance for compensation payments relating to the Compulsory Acquisition of land interests in and over land and the temporary possession and use of land. It also takes account of potential claims under Part 1 of the Land Compensation Act 1973; Section 10 of the Compulsory Purchase Act 1965 and Section 152(3) of the 2008 Act.</p> <p>Estimates for compensation and land acquisition costs have been informed by: land referencing activities; engagement of professional surveyors from the Valuation Office Agency (VOA) used regularly by the Applicant for surveying and valuation purposes; and information received from consultation and engagement with parties who have interest in the land. The estimate was reached by appraising the compensation anticipated to be payable as a result of the Scheme (both permanent and temporary) including land value, loss and damage, disturbance, injurious affection (including Part 1 of the Land Compensation Act 1973), landowner fees and costs in line with the Compensation Code and the Department for Communities and Local Government published Guidance related to produces for Compulsory Acquisition.</p>
Q5.0.13	The Applicant	<p>The Applicant is requested to complete the annexed Compulsory Acquisitions Objections Schedule (Annex A) and to make any entries that it believes would be appropriate, and at each successive deadline to make any new entries or delete any entries that it considers would be appropriate, taking account of the positions expressed in Relevant Representations and Written Representations, and giving reasons for any additions.</p>	<p>This has been provided at Deadline 2 as part of the Compulsory Acquisition Schedule (<b>TR0100038/EXAM/9.6</b>).</p>

## 8 CUMULATIVE EFFECTS

No	Question To	ExA Question	Guidance
Q6.0.1	Natural England Historic England Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	Are the parties satisfied with the Applicant's cumulative effects assessment and the shortlist of projects considered, as set out in Appendix 15.2 [APP-133]. If not, please explain why.	No response required by the Applicant.
Q6.0.2	The Applicant	Please review Appendix 15.1 [APP-132] as there appear to be a number of developments which have an uncertainty level of 'more than likely', but are attributed Tier 3, whereas others are attributed Tier 1. Please review and confirm that all entries accord with Table 2 of Advice Note 17.	<p>ES Appendix 15.1 Cumulative Effects Assessment Long List (<b>APP-132</b>) references the uncertainty log, which is compiled by the local authority.</p> <p>As part of the transport forecasting, a list of potential developments, with varying degree of certainty that the development will occur, informs the future traffic scenarios. This list is referred to as an uncertainty log, as discussed in Section 4.3 of the Case for the Scheme (<b>APP-140</b>). The forecast for developments is up to 2036. Only those developments that are considered as being 'Near Certain' and 'More Than Likely' are used in the traffic model; see ES Chapter 15, Table 15-3 (Certainty of developments).</p> <p>ES Chapter 15 Table 15-3 sets out criteria employed by the Transport Forecasting Package Report 2018, which details the methodology of the uncertainty log. 'Under construction' is one of three criteria that defines 'near certain', however not all near certain developments are under construction. The Applicant agrees that all developments under construction are classified as Tier 1 in Table 15-3, but not all 'near certain' developments are under construction and therefore can be classified as Tier 3 where appropriate.</p> <p>For developments in the uncertainty log with 'more than likely' or 'near certain' status (i.e. not yet submitted a planning or consent application), and thereby absent from the local planning authority and the Planning Inspectorate portal (i.e. Tier 3 defined in Planning Inspectorate Advice Note Seventeen), it is assumed that the development(s) are not likely to have significant effects on the environment, therefore Neutral effects have been assigned for these projects.</p> <p>All shortlisted developments were reviewed for potential environmental effects from publicly available information. As part of the EIA process and under the Town and Country Planning (Environmental Impact Assessment) Regulations 2017, all developments that would potentially result in likely significant effects have a requirement to inform the public. In absence of any listings of EIA Scoping Reports or other relevant publicly available information, it is reasonable to assume that the shortlisted developments have not been considered to potentially result in likely significant effects. This approach is consistent with Advice Note 17 Table 2 Assigning certainty to 'other existing development and/or approved development', where an EIA Scoping Reports equates to a Tier 2 development.</p>

## 9 DRAFT DEVELOPMENT CONSENT ORDER (DCO)

No	Question To	ExA Question	Guidance
Q7.0.1	The Applicant	Please supply subsequent versions of the dDCO in both .pdf and Word formats and in two versions, with the first forming the latest consolidated draft and the second showing changes from the previous version in tracked changes, along with comments/explanations outlining the reason for the change. The consolidated draft version in Word is to be supported by a report validating that version of the dDCO as being in the SI template and with updated revision numbers.	<p>The Applicant confirms this approach is and will continue to be undertaken.</p> <p>A Schedule of Changes to dDCO will also provide with each subsequent version of the dDCO submitted.</p>
Q7.0.2	The Applicant	The Applicant is asked to ensure that all application or subsequent plans and documents referred to in the dDCO in whatever provision are identified by Drawing or Document and Revision Numbers in subsequent versions of the dDCO. Where	The Applicant will ensure it adopts this approach. The list of certified documents with reference numbers can be found in Schedule 10 of the dDCO.

No	Question To	ExA Question	Guidance
		revisions are prepared to plans and documents, these should be reflected in the latest version of the dDCO. The Applicant should undertake a final audit of plans and documents referred to in the dDCO prior to submitting its final preferred dDCO to the Examination. Where it is necessary to refer to document numbers the Applicant should use the Examination Library system.	
Q7.0.3	The Applicant	The Applicant should confirm that Schedule 10 (Documents to be Certified) will be updated in each subsequent version of the dDCO provided during the Examination. This should accompany an update to the Applicant's Guide to the Application [AS-010] recording the latest version of each plan and documents.	The Applicant notes this requirement and will endeavour to do so.
Q7.0.4	The Applicant	Please demonstrate that the 'associated development' meets the guidance provided by the SOS.	<p>As stated in paragraph 2.15 of the Explanatory Memorandum (<b>APP-018</b>), in some cases there may be some overlap between associated development and works which form part of the NSIP. However, all elements of the Scheme either constitute part of the NSIP or are associated development within the meaning of section 115(2) of the 2008 Act, and so can properly be authorised by the Order.</p> <p>The associated development can be summarised as follows:</p> <ol style="list-style-type: none"> <li>1. side roads, junctions and other highway infrastructure required to connect the new highway to the existing road network</li> <li>2. the drainage infrastructure required to ensure safe operation of the road</li> <li>3. the utility diversions required as a result of the proposed development</li> <li>4. temporary laydown and storage compounds and areas required for the construction of the proposed development</li> <li>5. works associated with environmental mitigation</li> </ol> <p>The Applicant confirms that there is a direct relationship between the associated development set out in the dDCO and the principal development, and that all the associated development supports the construction or operation of the principal development, or helps address its impacts. It is subordinate to the NSIP and, as demonstrated in the Scheme Design Report, Rev.1 (AS-009), has been designed to be proportionate in nature and scale to the principal development.</p>
Q7.0.5	The Applicant	Interpretation 2(1) – this defines commencement but excludes the laying of cables and site clearance. How does this fit with retained elements/protection of archaeology and biodiversity interests? Please explain and justify.	<p>The wording is drawn from precedents in a number of made orders. The Applicant has given the provision further consideration and has deleted " the diversion and laying of underground apparatus" from the definition.</p> <p>Site clearance is retained in the definition as any such works that affect protected species would have to be the subject of applications for licenses for the relevant works if conducted in advance of commencement. On that basis the pre-commencement surveys referred to in requirement 7 would be carried out in advance of the licence application.</p>
Q7.0.6	The Applicant	Art 2: The definition of "maintain" is not as clear as it could be particularly in relation to the interface with the ES. The definition should make it clear that any of the activities classed as maintenance can only be carried out if they do not give rise to any materially new or different environmental effects to those identified in the ES.	<p>The definition of "maintain" in the dDCO includes, to the extent assessed in the environmental statement, inspect, repair, adjust, alter, remove, replace or reconstruct in relation to the authorised development.</p> <p>The extent of maintenance that has been assessed is set out in paragraphs 2.6.48 and 2.6.49 of ES Chapter 2 The Proposed Scheme (<b>AS-005</b>) which confirms that long-term maintenance and repairs will be undertaken as required to maintain appropriate standards for the strategic road network.</p> <p>This definition has been accepted in the A63 Castle Street, A19 Downhill Lane, A585 Windy Harbour, M42/M6, M25 Wisely and A38 Derby Junction DCOs.</p>
Q7.0.7	The Applicant	Please review the dDCO to ensure that 'Book of Reference' is consistently referred to with capitals.	This has been corrected in the revised dDCO submitted at Deadline 2
Q7.0.8	The Applicant	Please review the dDCO to ensure that 'Environmental Statement' is constantly referred to with capitals.	This has been corrected in the revised dDCO submitted at Deadline 2.
Q7.0.9	The Applicant	Article 2(3) please confirm that this approach is reflected within the assessments undertaken within the ES.	<p>Article 2(3) states "<i>All distances, directions and lengths referred to in this Order are approximate and distances between points on a work comprised in the authorised development are taken to be measured along that work.</i>"</p> <p>This wording was included in the model provisions and in the</p>

No	Question To	ExA Question	Guidance
			majority of development consent orders granted to date. The Applicant confirms that this approach is reflected in the assessments undertaken within the ES. The Applicant's response to Q1.0.5 and the table in Annex A of this document set out the maximum parameters of the Scheme assessed within each aspect of the ES Chapter.
Q7.0.10	The Applicant	Art 7: Please explain why this article is required and what is the likelihood of the Applicant needing to secure a planning permission within the Order limits for development not associated with the Proposed Development?	This is not the intention of the Applicant and is not anticipated. The article is provided to give clarity as to how subsequent chapters in the planning history of distinct parts of the Order lands should be considered. It is possible that the Applicant may need to secure planning permission for works that are outside of its permitted development rights but do not qualify as nationally significant infrastructure projects. It is also possible that beneficial owners of Order land used temporarily by the Applicant during the construction period might later seek planning permission for the benefit of their land when possession is returned to them.
Q7.0.11	The Applicant	Art 8: Have these limits been assessed within the ES and if so, explain and demonstrate how. Please justify the provision for exceedances beyond the stated vertical limits of deviation.	The Applicant confirms that the limits of deviation have been assessed within the Environmental Statement, as presented in Section 2.6, paragraphs 2.6.51 to 2.6.56, of Environmental Statement Chapter 2 The Proposed Scheme ( <b>AS-005</b> ). The additional flexibility, which is subject to Secretary of State approval, following consultation, is provided in case additional deviation is necessary to ensure that the Scheme can be constructed if, for instance, it is discovered that utility locations or connections require additional flexibility or ground conditions or drainage mean that small variations in excess of the stated limits are necessary. Given the topography of the area and the length of this linear Scheme it is considered unlikely that such additional tolerances will be necessary and if relied upon then the additional variations will be very limited in nature and extent. In the circumstances this additional flexibility is therefore considered appropriate to avoid the need to apply for a fresh development consent following detailed design and survey works. The flexibility is always subject to the control of the Secretary of State and falling within the outcomes of the Environmental Statement.
Q7.0.12	The Applicant	Art 10: This Article appears to be drafted in such a way that it gives the Applicant the power to transfer or grant to these entities for the purposes of carrying out the Works listed in sub-section 4. The EM suggests that the intention is to allow these entities to move their own apparatus where this needs to be diverted for the NSIP. However, the relevant Works (as set out in Schedule 1) would appear to be far wider than this. This Article should be modified to limit the transfer/grant for the (limited) purposes set out in the EM and not for the entirety of the relevant Works.	The Applicant has amended Article 10 to ensure the transfer of benefit only applies to the apparatus owned by the particular entity.
Q7.0.13	The Applicant	Neither Art 11(4) nor the EM identify the specific streets to which this provision applies. Should it and, if not, why not?	Article 11(4) expressly states that it applies to any stopping up, alteration or diversion of a street conferred by Article 16. The power in Article 16 provides Highways England with the ability to stop up, alter, divert, prohibit the use of or restrict the use of any street required for the purposes of carrying out the authorised development, but only temporarily. As the detailed design of the Scheme has not yet been carried out, it is necessary to maintain a sufficient degree of flexibility so that the scheme can proceed. The powers in Article 16 provide that flexibility. The right to exercise these powers is not unfettered, as such changes must be "for the purposes of carrying out the authorised development". Moreover, where the undertaker is not the street authority of a street the consent of the street authority is required before such changes are made. In light of the above, the power is therefore considered to be necessary, reasonable and proportionate, and the Applicant has not sought to limit the power to specified streets.
Q7.0.14	Norfolk County Council	Art 12(1): It includes wording ' <i>the highway including any culverts or other structures laid under it must be maintained by and at the expense of the local highway authority from its completion with the exception of the culvert to be delivered as Work No. 5</i> ' – are NCC happy with this?	No response required by the Applicant.
Q7.0.15	The Applicant	Art 12 (6): There appears to be words missing from within the third line, where it	The word "and" has been removed from the dDCO.



No	Question To	ExA Question	Guidance
		states '(being those elements over the waterproofing membrane and)...'. Please review and update as necessary.	
Q7.0.16	The Applicant	Art 13 (4): This sets speed limits for specified roads. Have these speed limits been the basis for the ES assessments and if so, how?	<p>Speed limits are built into the traffic model used by the environmental assessment topics based on traffic model data. The traffic model has been developed in accordance with the Department of Transport's Transport Appraisal Guidance Unit M3.1: Highway Assignment Modelling (2020), as described in Chapter 4 'Transport Assessment' in the Case for the Scheme (<b>APP-140</b>). The outputs of the base model, including speed limits, modelled speeds and observed speeds of the model network, were fed into environmental assessments.</p> <p>During model development, careful checks were made to ensure that various aspects of the NATS model network coding and configuration were realistic and accurate, including the representation of speed limits and modelled journey times. Speed limits were initially derived from Google data and then double checked through TrafficMaster journey time data.</p> <p>TrafficMaster data was obtained for the period October 2014 to September 2015. From this dataset a neutral month was extracted to inform the traffic modelling assessment. WebTRIS journey times were also utilised in the traffic modelling validation assessment to supplement the TrafficMaster data. WebTRIS data was available along the A47 corridor for neutral months in 2015.</p> <p>The results of the calibration indicated that the transport appraisal guidance criteria were achieved for the journey time validation assessment.</p>
Q7.0.17	The Applicant	Art 13(6): This includes the words ' <i>unless otherwise agreed in writing with the relevant planning authority</i> '. Please justify what these circumstances may be and would result in the footpaths, cycle tracks, footways and bridleways not being constructed in the specified locations?	<p>This wording has been included to provide an element of flexibility to the relevant authority in case there are unforeseen changes to their public rights of way network which occur between the close of the examination and the date on which the proposed scheme is open to traffic.</p> <p>If, for example, a new public right of way is added to the definitive map or an existing public right of way is stopped up in the vicinity of the Scheme for other reasons, this may render a new or substitute public right of way proposed as part of the Scheme as unsuitable or unnecessary.</p> <p>The dDCO (<b>REP1-004</b>) has been updated to refer to the local highway authority, which is more appropriate in for this Scheme.</p>
Q7.0.18	The Applicant	Art 13(7): The explanation for this in the EM is noted, but should this not include some agreement or consultation with the developer of the NWL to ensure delivery of this element? More justification is required, along with a better indication/undertaking to provide certainty over its delivery.	<p>This section of cycle track is an optional element and will only be provided permanently if the NWL is not delivered. If the NWL is consented it will not be possible for this part of the proposed cycle track to remain in use.</p> <p>Therefore, the Applicant intends to deliver this element of the Scheme and allow permissive use by the public unless and until the NWL planning application is determined. If the NWL scheme is not granted consent, the Applicant will consider dedicating the route as a public right of way, but may choose to leave it as a permissive route. If the NWL is granted planning permission, the Applicant will withdraw permission for the public to use the route so that construction of the NWL can be carried out.</p> <p>It is important to note that the A47 Scheme is only required to maintain the RB1 byway connection across the A47, east of the Wood Lane junction. As the B1535 Wood Lane provides a cycle network connection to the north, the optional section of cycle track offers an enhancement option to facilitate movement of cyclists northwards from east of Wood Lane junction in a no NWL scenario as an alternative to using the existing RB1. However, as NWL is expected to provide a new north bound byway route east of Norwich Western Link Road with a connection to Wood Lane in the north, the A47 Scheme's optional section of cycle track would not be required. The east-west provision for non-motorised users is maintained via connections south of the Scheme A47, accessed via Hall Farm underpass and the new cycle track to Honingham via Dereham Road and across to Berrys Lane.</p> <p>Therefore, this part of the cycle track is not required to mitigate any impacts and therefore its delivery does not need to be certain. However, the Applicant is seeking the power to construct the cycle track connection in the event the NWL is not consented.</p> <p>So the drafting of Article 13(7) must provide the flexibility for the Applicant to decide if and when to dedicate the cycle track as public highway.</p>
Q7.0.19	The Applicant	Art 14: This is a wide power – authorising alteration etc. of any street within the Order limits. It should be clear why this power is necessary. Has consideration been given to whether or not it should be limited to	<p>Because the detailed design of the Scheme has not yet been carried out, it is necessary to maintain a sufficient degree of flexibility so that the Scheme can proceed. The powers in Article 14 provide that flexibility.</p>

No	Question To	ExA Question	Guidance
		identified streets?	<p>Article 14 broadly reflects the very broad powers of a highway authority to make changes to a highway as they see fit and without consultation with third parties. For example, Section 75 of the Highways Act 1980 allows a highway authority to vary the relative widths of the carriageway and footway; section 65 allows a highway authority to alter a cycle track; and section 77 allows a highway authority to raise or lower the level of a highway.</p> <p>The right to exercise these powers is not unfettered, as such changes must be "for the purposes of constructing and maintaining the authorised development". Moreover, where the undertaker is not the street authority of a street the consent of the street authority is required before such changes are made.</p> <p>In light of the above, the power is therefore considered to be necessary, reasonable and proportionate, and the applicant has not sought to limit the power to specified streets.</p>
Q7.0.20	The Applicant	Art 14: The EM refers to a period of 28 days, yet there appears to be no such wording in the dDCO. Please clarify and confirm.	The period referred to is the six week period in Article 14(4). The Applicant will correct the EM to reflect the drafting in the dDCO.
Q7.0.21	The Applicant Norfolk County Council	Art 15 Street works: Should this article be restricted to specific streets set out in a Schedule? Should it confirm that the power is "without the consent of the street authority"? Should the powers be exercised with the consent of the street authority subject to consultation? What is the view of NCC in respect of this Article?	<p>This Article is in a form common to, or at least in similar terms as, a number of recently made Highways England Orders – see for instance The A1 Birtley to Coal House Development Consent Order 2021 (2021 No.74).</p> <p>The Scheme is a highway NSIP and impacts a large number of streets in comparison to other types of NSIPs so the power is not restricted to a specific list of streets set out in a Schedule.</p> <p>As the detailed design of the Scheme has not yet been carried out, it is necessary to maintain a sufficient degree of flexibility so that the scheme can proceed. The powers in Article 15 provide that flexibility, but are not unfettered and only apply to those streets within the Order limits.</p> <p>The powers should not be subject to the consent of the street authority, but there is no need to include confirmatory wording in legislation.</p>
Q7.0.22	Norfolk County Council	Art 16 (6): Are NCC happy with a period of 28 days.	No response required by the Applicant.
Q7.0.23	The Applicant	Art 22: In justification of this article, please indicate which buildings may require protective works and why? How does this relate to the scope of commencement defined in Art 2?	<p>The Applicant does not believe any protective works will be required, but Article 22 has been included given the proximity of the works to St Andrew's Church and St Peter's Church and other buildings in case it becomes apparent that protective works are required once development commences.</p> <p>The Article is not linked to the definition of "commence"; as set out in sub-section (2), protective works can be carried out at any time before or during the carrying out in the vicinity of the building of any part of the authorised development and after the completion of that part of the authorised development in the vicinity of the building at any time up to the end of the period of 5 years beginning with the day on which that part of the authorised development is first opened for use.</p>
Q7.0.24	The Applicant	Art 26: The EM states that this article sets a 5 year time limit on the power of Highways England to take temporary possession of land, although it does not prevent Highways England from remaining in possession of land after that time if it took possession within the 5 year limit. What is the rationale for the power to remain in temporary possession of land after the initial 5-year period has expired?	<p>The exercise of powers under Article 34 is subject to the same 5 year period as mentioned in Article 26 and the undertaker is permitted to remain in possession beyond 5 years of the date of the Order if temporary possession has already been taken at that point. However, Article 34(3) imposes time limits on temporary possession once the works have concluded. The undertaker must not (without agreement of the owners of the land) remain in possession of any land:</p> <ul style="list-style-type: none"> <li>• Taken under Article 34(1)(a)(i) after the end of the period of one year beginning with the date of completion of the work no. specified in column 4 of Schedule 7. This is the time limit set out in Schedule 1 paragraph 28 of the Model Provisions.</li> <li>• Taken under Article 40(1)(a)(ii) after the end of the period of one year beginning with the completion of the work for which temporary possession of the land was taken, unless the undertaker has served a notice of entry under section 11 of the Compulsory Purchase Act 1965 or made a GVD under section 4 of the Compulsory Purchase (Vesting Declarations) Act 1981 (i.e. sought to acquire the land permanently).</li> </ul> <p>These provisions incorporate a reasonable and proportionate level of flexibility to ensure the Scheme is still deliverable in the event of unforeseen delays, whilst the time limits in Article 34 ensure the Applicant cannot remain in temporary possession indefinitely.</p>
Q7.0.25	The Applicant	Art 27: The EM at paragraph 4.99 refers to Paragraph (5), but there are only 4 listed within the dDCO, please clarify and amend	The Explanatory Memorandum ( <b>APP-019</b> ) has been updated accordingly, and submitted at Deadline 2.

No	Question To	ExA Question	Guidance
		accordingly.	
Q7.0.26	The Applicant	Art 27: The EM at 4.97 identifies that Paragraph (2) provides that the power to impose restrictive covenants under paragraph (1) is exercisable only in respect of plots specified in column (1) of Schedule 3. This does not appear to be reflected in the dDCO. Please clarify and amend accordingly.	The Explanatory Memorandum ( <b>APP-019</b> ) should refer to Schedule 5 and has been updated accordingly, and submitted at Deadline 2.
Q7.0.27	Norfolk County Council	Art 28: Are NCC content with a period of 28 days?	No response required by the Applicant.
Q7.0.28	The Applicant	Art 34(1): References to "that land" in (b) and (c) should specify that this is as referred to in sub-paragraph (a).	This follows the wording as set out in Article 28(1) of the Model Provisions.
		Art 34(1)(d) refers to "mitigation works". This phrase does not appear in the definitions, nor is any further explanation given in the EM. The phrase should either be defined or an explanation of the need for these works/this power provided within the EM.	This wording is drawn from precedent in a number of made orders. The mitigation works are those works set out in the Register of Environmental Actions and Commitments contained as Table 3.1 within the Environmental Management Plan ( <b>APP-143</b> ).
Q7.0.29	The Applicant	Art 37: The SoS will be unable to authorise removal or repositioning of apparatus unless satisfied that the extinguishment or removal is necessary for the purpose of carrying out the development to which the order relates in accordance with section 138 of the Planning Act 2008. Justification is needed to show that extinguishment or removal is necessary.	This Article only deals with apparatus positioned underneath streets which have been stopped up as a direct result of the Scheme pursuant to Article 17. The affected streets are listed in Schedule 4. The reference to Article 16 in Article 37(2) has been corrected to refer to Article 17. It protects the rights of the statutory undertaker where a street is stopped up and allows them to retain their apparatus with the same rights. The Applicant may request that the apparatus is moved, but the statutory undertaker must only do so if it has the power to place it in another position, the Applicant must also pay all costs relating to relocation.
Q7.0.30	The Applicant	Art 39: As this is not taken from the Model Provisions, further qualification and justification in relation to this application is required.	The Explanatory Memorandum ( <b>APP-019</b> ) has been updated to provide further justification, and submitted at Deadline 2.
Q7.0.31	The Applicant	Art 40(1): This uses the phrase "... any tree or shrub within or overhanging land within the Order limits" but the EM uses "... any tree or shrub that is near the project". Please clarify and amend accordingly.	The Explanatory Memorandum ( <b>APP-019</b> ) has been updated to align with the wording in the dDCO ( <b>REP1-003</b> ), and submitted at Deadline 2.
Q7.0.32	The Applicant Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	Art 40(4)(c): The Applicant has identified the hedgerows to be removed in Part 1 of Schedule. 8. The EM should explain why the additional general power in Article 40 (4)(c) is required.	This wider power is included within the Order in case it becomes necessary to remove additional hedgerows not immediately identified by the Applicant, particularly if additional accommodation works such as private means of access or additional works accesses are resolved upon this being required following additional landowner consultation and/or further work on the detailed design and implementation programme for the DCO scheme. The power is subject to relevant planning authority providing its consent is therefore subject to appropriate controls and is analogous to consents being required under the Hedgerows Regulations 1997. It is therefore considered an appropriate balance between the competing needs of landowners and the Applicant and the appropriateness of protecting hedgerows versus the need to swiftly implement a major infrastructure project.
Q7.0.33	The Applicant	Art41: What are the respective parties views of the imposition of a date of 24 July 2020?	This is the date the arboricultural survey was carried out, therefore any Tree Preservation Orders made after this date will not be known to the Applicant and have not been considered as part of the DCO application.
Q7.0.34	The Applicant	Art 42: The EM should explain why this power is required in the context of the Proposed Development.	This Article follows Article 35 of the Model Provisions as set out in the Explanatory Memorandum ( <b>APP-019</b> ). The same Article is in a form common to, or at least in similar terms as, a number of recently made Highways England Orders and is justified in the same or similar terms to the EM ( <b>APP-019</b> ). Those recent Orders include: The M42 Junction 6 Development Consent Order 2020 (2020 No. 528); A585 Windy Harbour to Skipool Highway Development Consent Order 2020 (2020 No. 402); A19 Downhill Lane Junction Development Consent Order 2020 (2020 No. 746); A63 (Castle Street Improvement, Hull) Development Consent Order 2020 (2020 no. 556); and the A303 Sparkford to Ilchester Dualling Development Consent Order 2021 (2021 No. 125). On that basis, the Applicant is of the opinion that wording in the EM is sufficiently

No	Question To	ExA Question	Guidance
			clear.
Q7.0.35	The Applicant	<p>Art 49: Further justification for the use of consecrated grounds is required and whether alternatives were considered to avoid its use. If they were, please explain and provide justification as to why they were deemed unsuitable.</p> <p>It is claimed that the area is unused, however evidence should be provided to confirm this and that there is no intention to use the land prior to the commencement of development.</p>	<p>An alternative layout was assessed in this location to avoid the use of the consecrated land. This would have required the use of short 50m radius curves constructed in an S curve (left curve to right curve) arrangement to avoid the consecrated land.</p> <p>A 7% crossfall would be required through this section for the road carriageway over the length of the curves and transitioning between the left hand and right hand curves.</p> <p>The proposed 50m horizontal curves would have been greater than a 4 step relaxation in horizontal curvature for a Design Speed of 60km/h (UK DMRB CD 109, Table 2.10).</p> <p>This section of road to the north of St. Peters Church has no lighting and has a proposed footway / cycleway link spanning the A47 mainline adjacent to the bend into the village.</p> <p>The option was considered by the Applicant and ruled out on safety grounds.</p> <p>It is understood from consultation with the Diocese at the time of submission of the ES that no burials have taken place in the land. Discussions remain ongoing between the Applicant and the Diocese to ensure no burials are undertaken in any part of the consecrated field until the Applicant has acquired the affected part of the land. The Applicant has requested reassurance of this commitment from the Diocese of Norwich.</p>
Q7.0.36	The Applicant	Art 51: Should the certified plans and documents be made publicly available? If so, how should this be delivered, and for what length of time?	<p>The Explanatory Note (<b>APP-019</b>) in the dDCO states:  <i>"A copy of the plans, engineering drawings and sections, book of reference and environmental statement mentioned in this Order and certified in accordance with article 51 (certification of documents, etc.) may be inspected free of charge during working hours at Highways England, Bridge House, 1 Walnut Tree Close, Guildford, Surrey GU 1 4LZ."</i></p> <p>The documents are held indefinitely by the Applicant.</p>
Q7.0.37	The Applicant	Art 53: Please clarify the reason why it would fall on the President of the Institution of Civil Engineers to appoint an arbitrator should parties not agree on one?	<p>The President of the Institution of Civil Engineers is the person that a large number of made Orders under the 2008 Act relating to transport schemes identify as the person who would be looked to appoint an arbitrator in the event of the parties not agreeing the identification of the arbitrator.</p> <p>The Applicant believes that both its own reference and the significant volume of precedent suggests that the President of the Institution of Civil Engineers is the appropriate person to carry out this function if required.</p>
Q7.0.38	The Applicant	R3: Should this requirement make provision for the detailed design of some aspects of the Proposed Development to be submitted to and approved by the SoS after consultation with relevant parties (for example Easton Footbridge, given that this would be a prominent feature)?	The Requirement is in a form common to, or at least in similar terms as, a number of recently made Highways England Orders – see for instance A303 (Amesbury to Berwick Down) Development Consent Order 2020 (2020 no. 1297) requirement 3; and requirement 3 of the A63 (Castle Street Improvement, Hull) Development Consent Order 2020 (2020 no. 556). It is not anticipated that additional consultation is required given the detail of design provided with the application.
Q7.0.39	The Applicant	R4(1): Should this specify any other consultees, such as the EA? (The ExA also notes that the EA requests to be a named consultee on this requirement within its RR [RR-033]).	This has been updated in the revised dDCO ( <b>REP1-004</b> ) submitted at Deadline 1.
Q7.0.40	The Applicant	R6: Please review the RR from the EA [RR-033] and amend accordingly.	This has been updated in the revised dDCO ( <b>REP1-004</b> ) submitted at Deadline 1.
Q7.0.41	The Applicant	R8: Should this requirement make provision for the long-term management and maintenance of surface and foul water drainage systems?	<p>Highways England Operations Department are responsible for the maintenance of the road network and associated infrastructure.</p> <p>The drainage will be maintained in accordance with Highways England's standard practices as an integral part of the overall Scheme during its operational phase.</p> <p>Therefore, a specific requirement is not needed</p>
Q7.0.42	The Applicant	R8: Should this specify any other consultees, such as the EA? (The ExA also notes that the EA requests to be a named consultee on this requirement within its RR [RR-033]).	This has been updated in the revised dDCO ( <b>REP1-004</b> ) submitted at Deadline 1.
Q7.0.43	The Applicant	R9: Should this include a reference to consultation with Historic England (HE) and NCC on the written scheme of investigation?	This has been updated in the revised dDCO ( <b>REP1-004</b> ) submitted at Deadline 1.
Q7.0.44	The Applicant	R9: Should this requirement make provision for the reporting and publishing of data?	The requirement to provide analysis, publication and dissemination of results and archive deposition would be part of the Written

No	Question To	ExA Question	Guidance
			Scheme of Investigation (WSI), which will be agreed with Historic England and Norfolk County Council Environmental Services (NCCES) in advance, as per Action CH4 in Table 3.1 of the Environmental Management Plan ( <b>APP-143</b> ). Requirement 9(1) requires the WSI to reflect the measures in the REAC and Requirement 9(2) requires compliance with the WSI, this drafting adequately secures the reporting and publishing of data. It is acknowledged that though 'recording and archiving' of data is listed under Action CH4, reporting and publication is not specifically started so this would be clarified in the second iteration Environmental Management Plan to be prepared in consultation with Historic England and NCCES under Requirement 4 of the dDCO ( <b>REP1-004</b> ).
Q7.0.45	The Applicant	R10: Should the word constructed be replaced with the word implemented?	The requirement has been updated accordingly.
Q7.0.46	The Applicant	R11: As written this is difficult to understand and interpret. Please review and amend accordingly.	The Requirement is in a form common to, or at least in similar terms as, a number of recently made Highways England Orders – see for instance A303 (Amesbury to Berwick Down) Development Consent Order 2020 (2020 no. 1297) requirement 3; requirement 3 of the A63 (Castle Street Improvement, Hull) Development Consent Order 2020 (2020 no. 556); requirement 12 of the A19 Downhill Lane Junction Development Consent Order 2020 (2020 No. 746); and requirement 12 of the A585 Windy Harbour to Skippool Highway Development Consent Order 2020 (2020 No. 402). On that basis, the Applicant is of the opinion that wording is sufficiently clear.
Q7.0.47	The Applicant	R12: Work Nos 56 and 97 identify a number of ponds within their description. It would be clearer and more precise, if the Requirement referred to the specific ponds covered by this requirement.	The requirement applies to all ponds and ditches to be provided within the limits of deviation for Work Nos 56 and 97 as opposed to certain ponds and ditches.
		Should this Requirement make provision for the long-term management and maintenance of these ponds?	The management and maintenance of the ponds will be addressed and secured in the Landscape and Ecology Management Plan which must be prepared and submitted as part of the second iteration of the Environmental Management Plan ( <b>APP-143</b> ), to be secured under Requirement 4 of the dDCO ( <b>REP1-004</b> )
Q7.0.48	The Applicant	R15(2): Why is it considered appropriate for the agreement of the SoS to be deemed after the period specified?	This provision mirrors the procedure in Article 27 and 28 of The Town and Country Planning (Development Management Procedure) (England) Order 2015, which provide for deemed discharge of conditions after 8 weeks. The deeming provision is subject to R15(3) which ensures that where a consultee considers the details are likely to give rise to materially new or materially different environmental effects in comparison to those in the environmental statement, the application is deemed to have been refused at the end of the eight-week period.  The Applicant believes it is appropriate for all parties to have clear and certain time limits to avoid undue delay and potential commercial implications of a delayed decision. This wording has been accepted in a number of made Orders including the A1 Birtley to Coal House Development Consent Order 2021 (SI 2021 No. 74).
Q7.0.49	The Applicant	R18: Please provide more explanation and justification for this requirement.	Requirement 18 allows the Applicant to start providing information to the relevant authorities as part of the requirement discharge process in advance of the Order being granted.  HE have agreed RIS2 delivery commitments with the Secretary of State as part of the funding requirements of the RIS2 programme. In common with other RIS2 schemes, the A47 North Tuddenham to Easton is to be open for traffic before the end of the RIS2 period.
Q7.0.50	Norfolk County Council	R19: Do the parties consider 10 business days sufficient time to respond to consultation on the discharge of requirements?	No response required by the Applicant.

## 10 GEOLOGY AND SOILS

No	Question To	ExA Question	Guidance
Q8.0.1	The Applicant	ES Chapter 9: Geology and Soils [APP-048], table 9.12, identifies that the loss of Agricultural Land Classification Grade 2 would be moderate adverse, due to the amount, with the loss of Grade 3a being major adverse because the amount would exceed 20ha. Given that both classifications fall within the Best and Most Versatile category identified in 9.7.14, what is the rationale for splitting these two categories in terms of assessing the magnitude? Please also review Table 9.13 in light of this question.	<p>Although Grade 2 and Grade 3a land are both Best and Most Versatile land, they are considered as separate receptors. Grade 2 and Grade 3a land have different sensitivity as per Table 9-4 in ES Chapter 9 Geology and Soils (<b>APP-048</b>), which is based on Table 3.11 from the DMRB LA 109. Grade 2 land is considered to be very good quality agricultural land and is of very high sensitivity while Grade 3a is good quality agricultural land and is of high sensitivity.</p> <p>The magnitude of impact is assessed with reference to Table 9-5, which is based on Table 3.12 and Table E/2.1 from the DMRB LA 109. The physical removal or permanent sealing of over 20ha of agricultural land is considered to be a major magnitude of impact while between 1ha and 20ha is considered to be a moderate magnitude of impact. The sensitivity and magnitude of impact are then combined to determine the significance of effects in Table 9-13 in ES Chapter 9 Geology and Soils (<b>APP-048</b>).</p>
Q8.0.2	The Applicant	ES Chapter 9: Geology and Soils [APP-048], paragraph 9.9.5 states that the key principle considered to minimise effects on soils is to ensure that the footprint of the Proposed Scheme is reduced as much as practicable, without adversely affecting the design. Please demonstrate how this principle was achieved.	<p>The Applicant has sought to reduce land take throughout the Scheme development process and has engaged with all affected landowners during that process. The design considerations are reported in the Scheme Design Report, Rev.1 (<b>AS-009</b>), in particular Chapter 11 which explains the reasons for the landtake due to the construction compounds and material storage / processing areas.</p> <p>ES Chapter 9 Geology and Soils (<b>APP-048</b>) assesses impacts and mitigation for permanent and temporary agricultural landtake.</p>
Q8.0.3	The Applicant	ES Chapter 9: Geology and Soils [APP-048], paragraph 9.9.13 identifies that where there are excess soils generated, these will be saved and reused outside the Proposed Scheme where there are opportunities to do so. Please explain this statement in more detail, including where will soil be stored until required and what are the implications of moving the soil? Have these storage areas and movements formed part of other assessment work? If so how, if not, why not?	<p>The Scheme is not planning for the offsite re-use or disposal of significant quantities of excess soils generated through construction activities. In accordance with the Waste Framework Directive (WFD) 2008/98/EC and 'Waste Hierarchy' therewithin, the Scheme is designed to minimise the generation of soils and to reduce the requirement for their off-site re-use or disposal. The design looks to use all soils on the Scheme where possible. Offsite re-use or disposal is the last option of consideration.</p> <p>The management of excavated soils is detailed within Section 10.9 of ES Chapter 10 (Material Assets and Waste) (<b>APP-049</b>) which outlines design, mitigation and enhancement measures for the Scheme. The following measures are presented in Section 10.9 and in summary:</p> <p>Where possible, the Scheme design has been developed, through a balanced design, to maximise the re-use of site-won soils within the Scheme and achieve an earthworks balance as far as practical.</p> <p>Although not anticipated in significant quantities, the Principal Contractor will use excavated soils as far as possible either within the Scheme itself or, if unsuitable or surplus to requirements, will then be reused off-site if feasible.</p> <p>An Environmental Management Plan (EMP) (<b>APP-143</b>) has been prepared in parallel to development of the Scheme design. It includes the adoption and implementation of industry standard practice and measures for managing excavated soils in accordance with current UK waste regulatory framework.</p> <p>The on-site re-use of excavated site-won soils during construction shall be governed by a materials management plan (MMP) which will form part of the EMP. The MMP shall be developed in accordance with CL:AIRE DoW CoP, Version 2, 2011. Suitability for re-use requires chemical and geotechnical assessment to demonstrate that excavated soils do not constitute waste. The MMP will detail the procedures and measures to be implemented to classify, track, store, re-use and dispose of all excavated soils encountered during the construction phase.</p> <p>If excess soils are generated, a Site Waste Management Plan (SWMP) prepared as part of the EMP will be used to provide an auditable record of how excess soils will be managed during construction (prioritising off-site re-use, recovery and recycling over disposal to landfill). The SWMP will include duty of care information for both the contractors transferring any excess soils and that of the appropriate receiving facility. An outline SWMP for the Proposed Scheme is provided within Appendix 10.2 of ES Chapter 10 (Material Assets and Waste) (<b>APP-116</b>).</p> <p>Excavated soils are to be temporarily stored within designated storage areas before re-use or disposal as outlined above. These storage areas have been included for within the design of the Scheme as detailed in Section 11.2 (Material Storage and</p>

No	Question To	ExA Question	Guidance
			Processing Areas) of the Scheme Design Report, Rev.1, ( <b>AS-009</b> ) and assessed as part of the Proposed Scheme described in ES Chapter 2 ( <b>AS-005</b> ).
Q8.0.4	The Applicant	ES Chapter 9: Geology and Soils [APP-048], Table 9-13 identifies large adverse significance for Grade 2 soils and very large adverse for Grade 3a. Given paragraph 9.4.20 which identifies that residual effects that are of moderate, large or very large significance will give rise to significant effects, please explain and clarify whether the construction impacts presented in Table 9-13 are significant?	Significant effects are those that are of moderate, large or very large significance and therefore the construction effects on Grade 2 and Grade 3a agricultural land, presented in Table 9-13 in ES Chapter 9 Geology and Soils ( <b>APP-048</b> ), are significant.

## 11 HISTORIC ENVIRONMENT

No	Question To	ExA Question	Guidance
Q9.0.1	The Applicant	ES Chapter 6: Cultural Heritage (APP-045), paragraphs 6.4.15/16 – were the locations and the methods for initial surveys subject to consultation and agreed with relevant parties? If so, please provide evidence to demonstrate this.	The geophysical survey specification was approved by Norfolk County Council Environment Services (NCCES) (a shared service with the local planning authorities) at a meeting at NCC offices (Dereham) on 22 January 2018.  The trenching specification was approved by NCCES on 5 May 2020 (NCCES Ref CNF47877).
Q9.0.2	The Applicant	ES Chapter 6: Cultural Heritage (APP-045), paragraph 6.5.5 states that the final archaeological trenching report will not be available till a later date. Will this be made available during the course of the Examination, and if not, what are the implications for this?	The archaeological trenching report was issued in draft for comment from consultees prior to DCO application. The final version was issued as ES Appendix 6.3 Archaeological Evaluation ( <b>APP-088</b> ).
Q9.0.3	The Applicant	ES Chapter 6: Cultural Heritage (APP-045), paragraph 6.5.6 what assumptions have been made and which locations do they apply to? Has the applicant any intention of revisiting these locations during the course of the Examination? If not, why not?	Internal discussions with the noise and traffic teams showed that the traffic levels at the time of site visits were slightly reduced compared to pre-pandemic levels for all parts of the study area. The assumption stated is therefore a general precautionary approach. One of the Cultural Heritage Experts undertaking the site visit had also been to many parts of the study area pre-pandemic as part of two separate projects (Highways England Cultural Heritage Management Plan feasibility studies 2019), as well as in their own leisure time. This provided an additional perspective. Due to the overall small difference in pre-pandemic traffic levels and levels during the survey, as well as the perspective available from the surveyor, no further site visits are planned during the Examination.
Q9.0.4	Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 6: Cultural Heritage [APP-045], Section 6.7, identifies the baseline conditions. Are BC, SNC, BDC, NCC and HE in agreement with this list and the overall assessment of effects on these?	No response required by the Applicant.
Q9.0.5	The Applicant	ES Chapter 6: Cultural Heritage [APP-045], paragraph 6.7.54 identifies that it must be assumed that the remainder of both the surveyed and un-surveyed land retains further archaeological potential. Is the Applicant proposing any further work during the examination to assess these areas and if not, why not?	No further work is proposed during the Examination. The surveys undertaken to date are sufficient to characterise the archaeological potential of the Scheme, as stated in 6.7.55 and 6.9.20 of ES Chapter 6 Cultural Heritage ( <b>APP-045</b> ). However, as stated in paragraph 6.9.22, part of the mitigation strategy is the ability to adapt methods to the changing conditions and the significance of the remains identified. The outline methodology set out in paragraph 6.9.22 is not prescriptive and further evaluation-type works may or may not be undertaken post-examination, as a risk-reduction measure in surveyed and un-surveyed areas. A protocol for unexpected finds in addition to the archaeological recording proposals is set out in paragraph 6.9.23. The measures are committed to in actions CH3, 4, 5 and 6 in Table 3.1 of the Environmental Management Plan ( <b>APP-143</b> ), thus secured through Requirement 4 of the dDCO ( <b>REP1-004</b> ). These measures commit to delivery through a written scheme of investigation (WSI) agreed with the relevant bodies. The WSI will contain measures to ensure appropriate monitoring and oversight by consultees to ensure the effectiveness of the methods.
Q9.0.6	The Applicant	ES Chapter 6: Cultural Heritage [APP-045], paragraph 6.8.10 refers to low possibility of further unknown and unrecorded burials	Evidence is summarised in paragraph 6.7.15 of ES Chapter 6 Cultural Heritage ( <b>APP-045</b> ), referring to results of evaluation trenching reported in ES Appendix 6.3 Archaeological Evaluation

No	Question To	ExA Question	Guidance
		outside of the modern boundary of the churchyard. What evidence has been used to come to this view?	<b>(APP-088)</b> . This section also relies on professional experience that burials purposely placed outside a graveyard are less likely the further away from settlements the church is located. The development history of the church is also a factor, with no indication of an earlier church immediately nearby or changes in the churchyard boundaries.
Q9.0.7	The Applicant	ES Chapter 6: Cultural Heritage [APP-045], paragraph 6.8.11, as there is no detailed design for the bridge, please explain how this assessment was undertaken and justify the magnitude of impact?	<p>The precautionary principle is used for the impact of the bridge in lieu of detailed designs and the table in Annex A of this document sets out the maximum parameters of the Scheme assessed within the ES. This links the assessment to the Scheme Design Report, Rev. 1, <b>(AS-009)</b> that states the proposed footbridge design is a steel concrete composite footbridge supported on reinforced concrete bankseats situated on reinforced earth approach embankments.</p> <p>The Examining Authority will note the text states "<i>the footbridge[...] could potentially be visible from the churchyard</i>". The mitigation measures described in paragraph 6.9.6, in ES Chapter 6 Cultural Heritage <b>(APP-045)</b> state that, the additional planting will reduce the impact on the setting of the church. The detailed design of planting will adapt to the detailed bridge design to ensure the mitigation is adequate and this is committed to in the Environmental Management Plan <b>(APP-143)</b>. This commitment will be secured through Requirements 4 'Environmental Management Plan' and 5 'Landscaping' of the dDCO <b>(REP1-004)</b>.</p>
Q9.0.8	The Applicant	ES Chapter 6: Cultural Heritage [APP-045], paragraph 6.8.13 identifies that the proposal would have a major adverse effect upon St Andrew's Church, what alternatives were considered by the applicant and what mitigation is proposed?	<p>The route options review process is outlined in Section 2 of the Case for the Scheme <b>(APP/140)</b>. The identification of the preferred route alignment was based on a review of 22 alternative route options followed by non-statutory consultation on short listed 4 route options in 2017.</p> <p>The preferred route design was then developed and subject to Statutory Consultation (February – April 2020), Targeted Consultation (December 2020-January 2021) and meetings / direct correspondence with stakeholders and the public.</p> <p>Following statutory consultation the alignment of the proposed A47 dual carriageway was moved 150m away from St Andrew's Church and a proposed north facing retaining wall replaced with landscaped earth embankment. This reduced the intrusion of the Scheme on the church's setting. In addition, the severance of the existing A47 between St Andrew's Church and Honingham roundabout also reduces vehicle traffic passing St Andrew's church further protecting its setting.</p> <p>Design and mitigation considerations for St Andrew's Church are discussed in paragraphs 6.4.19 (bullet 2), 6.9.14, 6.9.15 and 6.9.7 plus tables 6.3 and 6.4 in ES Chapter 6 Cultural Heritage <b>(APP-045)</b>. General setting mitigation through planting is set out in paragraphs 6.9.3 and 6.9.4 and illustrated in the Environmental Masterplan, Rev.1 <b>(AS-007)</b>.</p> <p>Please note the correspondence and agreements on the Scheme design and mitigation in the Statement of Common Ground with Historic England <b>(REP1-009)</b>.</p>
Q9.0.9	The Applicant	ES Chapter 6: Cultural Heritage [APP-045], paragraph 6.8.14, what is the justification for the loss of the estate fencing and wall of Church Farm? What alternatives were considered to avoid its loss?	<p>The intention is not to remove the Church Farm House Wall. This change will provide the cultural heritage benefits that will be reported in an addendum note to ES Chapter 6 Cultural Heritage <b>(APP-045)</b>, to be issued at Deadline 3.</p> <p>In direct reference to Catherine Hooker's question (RR-005.1) and Ben Hooker (RR-008), the Applicant can confirm its intention not to permanently acquire this parcel as reported in the Applicant's Response to the Relevant Representations <b>(REP1-013)</b>.</p> <p>Subsequent to the DCO submission, the Applicant has completed more detailed, location-specific topography surveys. These surveys have provided the necessary confidence that the junction realignment can be designed and constructed without needing to permanently acquire any of the land within Church Farm House Garden. Excavation works in the neighboring land parcel will be within the canopy / root zone of the mature trees, hence the requirement for temporary rights to protect those trees.</p> <p>This approach has been discussed with the landowners. Consequently, revised Land Plans <b>(REP1-002)</b> and Book of Reference, Rev.2, <b>(REP1-008)</b> were submitted at Deadline 1 to reflect this commitment.</p>
Q9.0.10	The Applicant	ES Chapter 6: Cultural Heritage [APP-045], paragraph 6.8.24 refers to the operational impacts on St Peter's Church, please explain	ES Chapter 11 Noise and Vibration <b>(APP-050)</b> sets out the noise impacts on St Peter's Church upon the opening of the Scheme (section 11.8.62) and over the long-term with the Scheme (section



No	Question To	ExA Question	Guidance
		and justify how and why the impact would improve in the long-term?	<p>11.8.67 to 11.8.86). The magnitude of the impact of changes in road traffic noise are presented in accordance with DMRB LA111. The DMRB LA111 impact magnitude scale for road traffic noise changes on scheme opening is different to the impact magnitude scale for road traffic noise changes over the long-term. The DMRB LA111 impact magnitude scales account for the fact that road traffic noise changes on scheme opening are more readily perceptible than noise changes over the long-term.</p> <p>The Church is considered as a sensitive non-residential receptor in Table 11.11 but is not reported on individually since the impact magnitude due to the change in road traffic noise is minor adverse upon Scheme Opening, reducing to negligible over the long-term with the Scheme.</p> <p>The above includes the mitigation measures embedded into the design of the Scheme in terms of a low noise road-surface (as described in Sections 11.9.22 and 11.9.23), and an acoustic barrier in the vicinity of St Peter's Church on the northern boundary of the church yard (Noise Barrier 4 within Section 11.9.24 and ES Figure 11.2, sheet 3, <b>(APP-074)</b>).</p> <p>It also applies to road traffic noise affecting the church building. In addition, with the movement of the A47 mainline slightly north away from St Peter's church combined with the above embedded mitigation, some parts of the church grounds will be subject to a minor reduction in operational road traffic upon Scheme Opening, with other parts of the church grounds experiencing a minor increase in operational road traffic upon Scheme Opening. This is presented graphically within ES Figure 11.8 <b>(APP-074)</b>.</p> <p>No significant adverse effects are expected at the church yard due to the predicted change in operational road traffic noise as a result of the Scheme.</p>
Q9.0.11	The Applicant	ES Chapter 6: Cultural Heritage [APP-045], paragraph 6.9.15 states that monitoring for vibration is not strictly necessary? Please explain and justify this, especially given the contents of paragraphs 6.8.5 and 6.8.6. How does the Applicant propose to ensure this monitoring is secured?	<p>Paragraph 6.8.5 in ES Chapter 6 Cultural Heritage <b>(APP-045)</b> incorrectly uses the term slight adverse for the impact. This will be corrected to minor adverse in a revised ES Chapter 6 to submitted at Deadline 3. Paragraphs 6.8.5 and 6.8.6 in ES Chapter 6 Cultural Heritage <b>(APP-045)</b> refer to section 11.8.14 of ES Chapter 11 Noise and Vibration <b>(APP-050)</b>, where both churches are within the category of sensitive receptors over 30m from the Scheme, and so will not experience greater than a temporary minor magnitude of impact.</p> <p>Applying the precautionary principal, the minor impact has been assumed. Specific vibration effects on the church are not predicted by the noise and vibration assessment (see section 11.8.13 in ES Chapter 11). Hence, monitoring is not strictly necessary according to accepted vibration risk assessment criteria.</p> <p>Monitoring will be implemented through Action CH2 in the Environmental Management Plan <b>(APP-143)</b>. Specific monitoring methodology is not detailed, as this will depend on the findings of condition survey and structural risk assessment. Appropriate measures will be ensured through consultation of Historic England and the local planning authority heritage advisors. These methodologies will be incorporated into the Detailed Heritage Written Scheme of Investigation (Mitigation Strategy). This commitment will be secured under Requirement 4 of the dDCO <b>(REP1-004)</b>.</p> <p>Please note the correspondence and agreements on the Scheme mitigation in the Statement of Common Ground with Historic England <b>(REP1-009)</b>.</p>
Q9.0.12	The Applicant	ES Chapter 6: Cultural Heritage [APP-045], Section 6.9, sets out a number of mitigation and enhancement measures. Please clarify how these are proposed to be secured?	<p>Table 3.1 in the Environmental Management Plan <b>(APP-143)</b> contains the following actions that cover the mitigation measures detailed in Section 6.9 of the ES Chapter 6 Cultural Heritage <b>(APP-046)</b>; these actions are secured by Requirement 4 of the dDCO <b>(REP1-004)</b>:</p> <ul style="list-style-type: none"> <li>• Action CH1 'To limit impacts on the setting and location of heritage assets and historic landscape'.</li> <li>• Action CH2 'Protection of heritage assets during construction'.</li> <li>• Action CH3 'Preservation in-situ of known and potential archaeological resources during the final design phase'.</li> <li>• Action CH4 'To deal with unexpected archaeological discoveries during construction'.</li> <li>• Action CH5 'To protect the potential heritage value of peat samples confirmed near the River Tud'.</li> <li>• Action CH6 'Mitigation of impact on known and potential</li> </ul>

No	Question To	ExA Question	Guidance
			<p>archaeological remains’.</p> <ul style="list-style-type: none"> <li>• Action CH7 ‘Monitoring of archaeological mitigation strategy’.</li> <li>• Action CH8 ‘To limit the visual impact during construction activities’.</li> </ul>
Q9.0.13	The Applicant	ES Chapter 6: Cultural Heritage [APP-045], paragraph 6.9.16, what measures are in place, should unexpected burials be encountered? What is the process for dealing with any finds and how would this impact upon the scheme and its timescale for delivery?	<p>Measures are contained within Actions CH4 (Unexpected archaeological discoveries) and CH6 (Mitigation of impact on known and potential archaeological remains) in Table 3.1 of the Environmental Management Plan (<b>APP-143</b>); these will be secured through Requirement 4 of the dDCO (<b>REP1-004</b>). These commitments provide for protocols for temporarily halting works and consulting with the relevant stakeholders as well as protocols for preservation in-situ where appropriate, to be included in the Written Scheme of Investigation (Mitigation Strategy).</p> <p>It is not expected that unexpected finds or burials would significantly delay construction. Should particularly complex or sensitive remains be identified, it is most likely these would be localised and construction plans can be adjusted to avoid the area while archaeological mitigation is undertaken. Remains of sufficient sensitivity that they would require preservation in-situ and of a scale that would significantly affect the design and programme of the Scheme are considered vanishingly unlikely.</p>
Q9.0.14	The Applicant	ES Chapter 6: Cultural Heritage [APP-045], paragraphs 6.9.17 and 18, has there been any discussion with HE with regards to the suitability for listing of the milestones?	<p>No specific discussions have been undertaken for the milestones within the proposed Scheme area. However, discussions undertaken for the A47 Blofield to North Burlingham dualling scheme for milestones belonging to the same group were positive and encompassed the county of Norfolk in general. Paragraphs 6.9.17 and 6.9.18 in ES Chapter 6 Cultural Heritage (<b>APP-045</b>) state only that the milestones will be proposed for listing. This is not a guarantee that listing will be achieved. This has not been factored into the assessment of impact and effect, only the protection during works and restoration/conservation actions. Were the listing guaranteed, the impact would be Major Beneficial, for a Large Beneficial effect, due to the greatly enhanced protection. It is worth noting that one of Historic England's listing priorities is "Infrastructure", of which the milestones are a part. This has not been mentioned in the chapter so as to avoid the appearance of over-promising.</p>
Q9.0.15	The Applicant	ES Chapter 6: Cultural Heritage [APP-045], paragraph 6.9.19, is this area shown on a plan, if so, what is the reference, and if not, could it?	<p>These are shown on ES Figure 6.4 (<b>APP-059</b>).</p>
Q9.0.16	The Applicant	ES Chapter 6: Cultural Heritage [APP-045], paragraph 6.9.22, how long are these precommencement activities expected to take?	<p>Drafting of and consultation on the Written Scheme of Investigation (WSI) has been forward-programmed to after Examination, but before determination in order to streamline procurement and enable adequate time for works. Duration of site activities cannot be confirmed at this stage as this will be dependent on the final agreed scope of the WSI and the emerging results of archaeological works, as well as weather and availability of archaeologists.</p>
Q9.0.17	The Applicant	ES Chapter 6: Cultural Heritage [APP-045], given the sensitivity of St Peter's Church and St Andrew's Church, please explain what the lighting proposals are in their vicinity?	<p>The proposals in the vicinity of St Andrew's Church are for the construction of a grade separated junction at the existing Norwich Road Junction, approximately 360m east of the church. The junction will be lit by 48 LED luminaires, with the closest luminaire to St Andrew's Church approximately 340m to the east.</p> <p>Luminaires are to focus light onto the ground, emitting no light above the horizontal plane. Luminaires proposed have good optical control, with the option for the installation of additional shields to limit potential light spill. Luminaires emit warm white light, in a correlated colour temperature.</p> <p>Indicative lighting layouts provided alongside ES Appendix 7.7 Lighting (<b>APP-095</b>) Assessment demonstrate that it is highly unlikely there will be any increase in light spill onto the existing church.</p> <p>No additional lighting is proposed in the immediate vicinity of St Peter's Church.</p>
Q9.0.18	The Applicant	ES Chapter 6: Cultural Heritage [APP-045], paragraph 6.11.1, will the measures for monitoring be agreed during the course of the Examination?	<p>Measures for monitoring are a standard requirement for archaeological Written Schemes of Investigation (WSIs). The WSI will be prepared and submitted to the Secretary of State for approval prior to development commencing pursuant to Requirement 9 of the dDCO (<b>REP1-004</b>). The measures will be developed in consultation with relevant stakeholders (e.g. Historic</p>

No	Question To	ExA Question	Guidance
			England and NCCES), but will also be subject to approval by the Secretary of State.
Q9.0.19	The Applicant	ES Chapter 6: Cultural Heritage [APP-045], please review the RR from the owner of Berry Hall [Ref-075] and their reference to the need to assess the impact of the proposals upon the wider Berry Hall Estate. Please provide further assessment in this regard.	<p>The effects on the Berry Hall estate have been assessed as part of the setting of the listed building in ES Chapter 6 Cultural Heritage (<b>APP-054</b>); see sections 6.7.24, to 6.7.28, 6.8.8, 6.8.15, 6.8.31, 3.8.32, 6.9.3, 6.9.11 and 6.12.3 plus Tables 6.3 and 6.4.</p> <p>NPS NN and NPPF guidance is clear that the tax designation of the estate is not a "designated heritage asset". NPS NN section 5.123 and NPPF Annex 2 define designated heritage assets as: Scheduled Monuments; Listed Buildings; Protected Wreck Sites; Protected Military Remains; Registered Parks and Gardens; Registered Battlefields and Conservation Areas. However, the Applicant has reviewed the associated Heritage Management Plan (HMP), provided by the landowner. The assessment is that, while there are some interesting details to note, there is nothing in the HMP which would change the assessment in the ES.</p>
Q9.0.20	The Applicant	The National Networks NPS differentiates between 'substantial harm' and 'less than substantial harm' to the significance of designated heritage assets. Please qualify any harm that would arise to the significance of designated heritage assets having regard to these categories. Please also carry out the appropriate balancing exercise with regards to weighing the impacts against public benefits.	<p>While the final assessment of harm and the weighting of public benefits against that harm is the prerogative of the decision-maker, the legislation and policy referenced in sections paragraphs 6.3.2, 6.3.3 and 6.3.4 of ES Chapter 6 Cultural Heritage (<b>APP-045</b>) contain guidance on levels of harm which have been used in the formulation of the criteria for assessment of the magnitude of impacts set out in Table 2 of ES Appendix 6.1 Cultural Heritage Information (<b>APP-085</b>). Therefore it is our suggestion that the Significance of Effect maps to levels of harm are used in the following manner:</p> <ul style="list-style-type: none"> <li>• Large Adverse and Very Large Adverse Significance of Effect = Substantial Harm</li> <li>• Moderate Adverse, Minor Adverse and Slight Adverse Significance of Effect = Less Than Substantial Harm</li> <li>• Neutral and all Beneficial Significances of Effect = No Harm</li> </ul> <p>This would mean there is substantial harm to the significance of St Andrew's Church (NHLE1170701 Grade II* Listed Building) and less than substantial harm to the significance of</p> <ul style="list-style-type: none"> <li>• St Peter's Church (NHLE1305921 Grade I Listed Building)</li> <li>• Church Farm House (NHLE1051542 Grade II Listed Building)</li> <li>• Berry Hall (NHLE1306730 Grade II Listed Building)</li> <li>• Honingham Park (MNF 49020) a non-designated asset.</li> </ul> <p>Paragraph 7.4.6 in the Case for the Scheme (<b>APP-140</b>) discusses compliance with paragraphs 5.131 and 5.132 of the National Networks NPS and presents the basis for considering that on balance the wider benefits outweigh the harm.</p> <p>Historic England's comments on the Scheme's efforts to do all it can to avoid or reduce harm to the heritage assets are at:</p> <ul style="list-style-type: none"> <li>• Statement of Common Ground with Historic England (<b>REP1-009</b>).</li> <li>• Historic England Deadline 1 Submission - Written Representation and Position Statement (<b>REP1-030</b>).</li> </ul>
Q9.0.21	The Applicant	ES Chapter 6: Cultural Heritage [APP-045], the RR from NCC [RR-061] raises a question that the proposal does not appear to be designed to retain pedestrian access to St Andrew's Church via the existing lychgate. Please review and clarify.	<p>The lych gate and churchyard will not be affected physically.</p> <p>Environmental Masterplan, Rev.1 (<b>AS-007</b>) drawing sheet 11 shows a proposed footpath and grass verge at grade, which would allow foot access through the gate, via the grass verge. However, the Applicant has recognised that this would not be as accessible as a paved connection from the proposed highway footpath to the path passing under the lych gate.</p> <p>There is an existing path leading from the church entrance to the existing highway footpath, via the lych gate. Therefore, the Applicant will amend the proposed design to incorporate a paved link between the proposed highway footpath and the existing footpath passing under the lych gate; this does not materially change any of the application assessments and will be reflected in the updated DCO plans (<b>APP-004</b> to <b>APP-016</b>, as required) and Environmental Masterplan, Rev.1 (<b>AS-007</b>) to be issued at Deadline 3. The existing footpath is in fair condition and it is envisioned that there will be no need to conduct works on the lych gate itself or on any other part of the grounds of St Andrew's Church (NHLE1170701).</p> <p>For the sake of clarity, the structural assessment and monitoring measures outlined in sections 6.9.13 and 6.9.14 of the ES Chapter</p>

No	Question To	ExA Question	Guidance
			6 Cultural Heritage ( <b>APP-045</b> ), following industry best practice, are intended to include the lych gate as part of St Andrew's Church.
Q9.0.22	The Applicant -	ES Chapter 6: Cultural Heritage [APP-045], reference is made in the RRs from BDC [RR008] to the lack of reference to a C19 lodge to Honingham Hall (to the east of St Andrew's Church) which BDC considers to be of sufficient heritage and architectural interest to be a non-designated heritage asset. Please review and clarify.	<p>Although not separately listed, ES Chapter 6 (<b>APP-045</b>), paragraph mentions the lodge in paragraph 6.3.124 as a part of Honingham Park (MNF49020) (here called a gate house):</p> <p><i>"... There is a single-storey gate house which appears to be of mid-19<sup>th</sup> century construction, on a path which formerly led to Honingham Hall ... the north. The entrance to the path breaks the wrought iron fence with brick and stone gate piers"</i></p> <p>Paragraph 6.7.21 mentions the lodge in relation to Church Farm House (NHLE 1051542) and Barn at Church Farm (NHLE 1170764):</p> <p><i>"... There is a three to five-foot tall red brick wall from Taverham Road along the A47, forming the southern boundary of the garden and for Honingham Park. .... The fence then continues to seven-foot tall brick and stone gate piers for a gate lodge to Honingham Hall. These elements of the setting illustrate the connection of the farm complex to the park and hall and make a positive contribution to the setting."</i></p> <p>The Applicant considers that the diversion of the Scheme will be beneficial to the setting of this building so is not a cause of concern. However, the value of these features is recognised in the overall assessment of value of Honingham Park (MNF49020) and Action CH2 of the Environmental Management Plan (<b>APP-143</b>) which requires the gateway piers and southern boundary of Honingham Park (MNF49020) between St Andrew's Church and Taverham Road to be recorded prior to any works taking place and the gate piers protected during construction works. Action CH2 also excludes certain assets in the DCO boundary from the works and to be recorded and protected during construction (for example with fencing). These assets include the milestone opposite St Andrew's Church (MNF62797).</p> <p>Delivery of Action CH2 is secured in the dDCO through Requirement 4 'Environmental Management Plan' (<b>REP1-004</b>).</p>

## 12 LANDSCAPE AND VISUAL

No	Question To	ExA Question	Guidance
Q10.0.1	Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 7: Landscape and Visual Effects [APP-046], Are the Council's satisfied that the viewpoints and photomontage locations selected (as shown on ES Figure 7.5 [APP-093]) are adequately representative of the Proposed Development?	No response required by the Applicant.
Q10.0.2	Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	Are the parties satisfied with the Environmental Masterplan [APP-138] and the indicative proposals shown for the Proposed Development?	No response required by the Applicant.
Q10.0.3	Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 7: Landscape and Visual Effects [APP-046], Are the Council's satisfied with the Applicant's approach to defining the baseline conditions?	No response required by the Applicant.
Q10.0.4	The Applicant	ES Chapter 7: Landscape and Visual Effects [APP-046], what level of lighting/height/numbers etc was assessed. How does this compare to the existing situation?	<p>Lighting proposals are for the lighting of the proposed grade separated junctions at the Wood Lane Junction and the Norwich Road Junction. The design of the Scheme lighting has been undertaken in accordance with the UK DMRB TA 501 – Road Lighting Appraisal. This document sets out the process for the appraisal of new and replacement road lighting for motorway and all-purpose trunk roads.</p> <p>The conflict area for the roundabouts has been lit following the Institution of Lighting Professionals (ILP) Professional Lighting Guide PLG 02 - The Application of Conflict Areas on the Highway, and in accordance with BS5489-1:2020 Table A4, Lighting Classes for Conflict Areas. In accordance with the ILP PLG02, lighting is</p>

No	Question To	ExA Question	Guidance
			<p>provided on the approach to the conflict areas for 5 seconds of driving distance at the expected speed to ensure a good visual guidance path is provided.</p> <p>Lighting to the Wood Lane Junction is to be provided by 55 LED Luminaires, mounted on 10 metre columns. Lighting to Links 1, 6, 8, &amp; 10 is designed to the C4 lighting class, set out within BS EN 5489-1:2020; which requires an average illuminance of 10.00 Lux and a uniformity of 0.40. Lighting to Links 2, 3, 4, 5, 6, &amp; 9 is designed to the M4 lighting class, set out within BS EN 13201:2015. Whilst the requirements of this standard are not set by illuminance, M4 is broadly consistent with a P2 lighting class under BS EN 5489-1:2020; which requires an average illuminance of 10.00 Lux. The existing staggered T-junctions at this location are unlit.</p> <p>Lighting to the Norwich Road Junction is to be provided by 48 LED Luminaires, mounted on 10 metre columns. Lighting to Links 1, 6, 8, &amp; 10 is designed to the C4 lighting class, set out within BS EN 5489-1:2020; which requires an average illuminance of 10.00 Lux and a uniformity of 0.40. Lighting to Links 2, 3, 4, 5, 7, &amp; 9 is designed to the M4 lighting class, set out within BS EN 13201:2015. Whilst the requirements of this standard are not set by illuminance, M4 is broadly consistent with a P2 lighting class under BS EN 5489-1:2020; which requires an average illuminance of 10.00 Lux. The existing staggered T-junctions at this location are unlit.</p> <p>Lighting to both junctions is to use luminaires which focus light onto the ground, emitting no light above the horizontal plane. Luminaires proposed have good optical control, and the option for the installation of additional shields to limit potential light spill. Luminaires emit warm white light, in a correlated colour temperature (CCT) of 3000K.</p> <p>Lighting associated with the existing at grade Easton roundabout and four approach / departure arms will be removed as part of the Scheme.</p> <p>The final detailed design of the lighting provision will be confirmed as part of the detailed design, to be approved through dDCO Requirement 3 in consultation with the relevant planning authority.</p> <p>The impacts of lighting on the existing environment and proposed mitigation measures are assessed within ES Chapter 7 Landscape and Visual Effects (<b>APP-046</b>) and ES Appendix 7.7 Lighting Assessment (<b>APP-095</b>). Section 7 of ES Appendix 7.7 provides a summary of the safety need for artificial lighting on the approach to and through the proposed junctions, slip roads and associated roundabouts. The Applicant has also designed the junction below the proposed A47 mainline in a cutting to minimise the impact of light spill.</p>
	Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	Are the parties happy with this?	No response required by the Applicant.
Q10.0.5	The Applicant	ES Chapter 7: Landscape and Visual Effects [APP-046], Please explain how the form and design of the new bridge at Easton has been considered to minimise landscape and visual effects.	<p>The new bridge at Easton would comprise a steel concrete composite footbridge supported on reinforced concrete bankseats situated on reinforced earth approach embankments.</p> <p>The key elements of the bridge design which minimise landscape and visual effects are:</p> <ul style="list-style-type: none"> <li>• It's position to the west of residential properties within Easton to limit visual effects.</li> <li>• It's position beside retained tree cover on both sides of the A47 which provides a screen to views.</li> <li>• It's simple form with no visually prominent features which protrude above the main structure.</li> <li>• The proposed landscape and visual mitigation design, presented in the Environmental Masterplan, Rev.1 (<b>AS-007</b>), will further minimise the landscape and visual effects of the new bridge and associated ramps as it is further screened from view. The final landscape planting design for the detailed bridge design will be developed in consultation with the relevant planning authority, as per Requirement 5 'Landscaping' of the dDCO (<b>REP1-004</b>).</li> </ul> <p>ES Chapter 7 Landscape and Visual Effects (<b>APP-046</b>) has applied the precautionary principle for the assessment of landscape and</p>

No	Question To	ExA Question	Guidance
			visual effects of the bridge in the absence of a detailed design.
Q10.0.6	The Applicant	Given that the bridge would be a visible feature of the Proposed Development, should there be a requirement within the dDCO for its detailed design, in consultation with BDC and / or subject to design review by Highway England's Strategic Design Panel?	<p>The final detailed design and supporting landscape mitigation planting will be confirmed, in consultation with the relevant planning authority, pursuant to Requirement 3 'Detailed Design' and Requirement 5 'Landscaping' of the dDCO (<b>REP1-004</b>).</p> <p>Highways England's Strategic Design Panel focuses on strategic input rather than scheme specific details targeting its expertise, insight and guidance where it will have the most positive impact and wider benefit, such as standards, procurement and evaluation. As such, the Strategic Design Panel would not be involved in the detailed design of the Scheme.</p>
Q10.0.7	The Applicant	ES Chapter 7: Landscape and Visual Effects [APP-046], 7.4.10, are these assessment dates reasonable and do they reflect the approach taken in other chapters?	<p>The dates listed in paragraph 7.4.10 of ES Chapter 7 are reasonable and are consistent with other ES chapters.</p> <p>Additionally, the Applicant can clarify that:</p> <ul style="list-style-type: none"> <li>the estimated construction period is 23 months which would commence in January 2023; and</li> <li>the road will open to traffic in October 2024, however construction activity (e.g. compound removal and site restoration) will continue past this point.</li> </ul>
Q10.0.8	Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 7: Landscape and Visual Effects [APP-046], 7.6.2 – are the parties content that 1km from the DCO boundary is sufficient for assessment purposes?	No response required by the Applicant.
Q10.0.9	Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 7: Landscape and Visual Effects [APP-046], 7.7 Baseline Conditions – are the parties satisfied that the assessment provides an accurate evaluation of the existing baseline conditions? If not, please explain where it is lacking	No response required by the Applicant.
Q10.0.10	The Applicant	ES Chapter 7: Landscape and Visual Effects [APP-046], 7.7.33, given that paragraph 7.7.32 identifies that 'As the existing extent of lighting is concentrated around Easton, Hockering and Honingham, the surrounding areas are susceptible to a spread or coalescence of lighting beyond existing limits', please explain and justify why, in 7.3.33, the night-time context around settlements is considered to be of low sensitivity?	In responding to the query regarding sensitivity levels stated in Para 7.7.33 of ES Chapter 7 Landscape and Visual Effects ( <b>APP-046</b> ), the Applicant refers to Paragraph 7.7.32 and specifically the point made that as there are relatively low levels of existing light levels within the overall study area, this accentuates the distinction in the night time context between the small number of built areas, such as Easton, Hockering and Honingham, where there is lighting along streets and from houses, and un-built areas (mainly agricultural land) where there is minimal or no lighting. Paragraph 7.7.33 therefore concludes that the built areas, such as Easton, Hockering and Honingham, are of a lower sensitivity to change in the night time context than the un-built areas, which are judged to be of medium sensitivity to changes to the night time context.
Q10.0.11	The Applicant	ES Chapter 7: Landscape and Visual Effects [APP-046], 7.7.35, please provide further explanation as to how the 20 viewpoints were selected and were any proposed locations discounted? What level of input was received from the Councils over their selection?	<p>The selection of the 20 representative viewpoints by the Applicant was based on the approach set out in the Guidelines for Landscape and Visual Impact Assessment, 3<sup>rd</sup> Edition (Landscape Institute and IEMA, 2013), which recommends consideration of: zone of theoretical visibility analysis; fieldwork; and desk based research on access and recreation, including footpaths, bridleways, and distribution of population. Viewpoints were selected to represent the different types of visual receptors within the study area and key locations where effects of the scheme were predicted to be experienced.</p> <p>The Applicant consulted with the Councils on the final list of viewpoints and this is evident in Table 7-4 of ES Chapter 7 Landscape and Visual Effects (<b>APP-046</b>) which identifies the reasons for selection of each viewpoint and if viewpoints have been specifically requested by the Councils. Draft viewpoint lists were issued to the Councils and comments were received in response from South Norfolk Council and Breckland Council. It was agreed that South Norfolk represented Broadland District Council in the process. Viewpoints were divided into 7 no. 'visualisation' views (1 to 7) and 13 no. 'baseline' views (A to M) following discussion and agreement of the respective focus with the Councils; taken from ES Appendix 7.5 Representative Viewpoints (<b>APP-093</b>).</p>
	Norfolk County Council Breckland Council Broadland District Council	Are the Councils happy that the viewpoints are representative?	No response required by the Applicant.

No	Question To	ExA Question	Guidance
	South Norfolk Council		
Q10.0.12	The Applicant	ES Chapter 7: Landscape and Visual Effects [APP-046], paragraph 7.8.5, 2 <sup>nd</sup> Bullet point refers to the design of the flood attenuation basins having been consulted with the landscape. Please explain and review this.	<p>With regards the specific reference made in ES Chapter 7 Landscape and Visual Effects (<b>APP-046</b>), paragraph 7.8.5: "...consulted with the landscape", the Applicant can confirm that this should read "<i>The design of the flood attenuation basins has been consulted with the landscape specialist</i>". The preferred design of the flood attenuation basins was developed through an iterative development of the design involving the design team, environmental specialists (including the landscape specialist), the principal contractor and stakeholders, including the Environment Agency. This achieved a balanced design which provides landscape integration, drainage, flood management and ecological considerations and this is referred to in the 2nd bullet point. Particular foci of the landscape specialist with regards the design of the flood attenuation basins were: the integration of the ponds into the existing landscape context; and the potential visual effects on nearby visual receptors.</p> <p>The design as such will continue to be developed through the detailed design phase supported by the landscaping scheme and Landscape and Ecological Management Plan, set out in Annex B.5 of the Environmental Management Plan, to be secured under Requirements 5 and 4 of the dDCO (<b>REP1-004</b>) respectively.</p>
Q10.0.13	Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 7: Landscape and Visual Effects [APP-046], Table 7.6 - are the assumptions around tree heights for Yr15 reasonable? If not, please explain.	No response required by the Applicant.
Q10.0.14	The Applicant	ES Chapter 7: Landscape and Visual Effects [APP-046], what measures does the applicant intend to put in place to monitor the mitigation and for how long? In instances where new planting fails, how will this be rectified?	<p>Appendix B.5 of the Environmental Management Plan (<b>APP-143</b>) will contain a Landscape and Ecology Management Plan (LEMP) to be produced by the appointed Landscape Architect and Ecologist prior to construction. The LEMP will describe the proposed management and monitoring, including durations, of the landscape and ecological mitigation and compensation features of the Project. The commitment to deliver the LEMP will be secured through dDCO Requirement 4 'Environmental Management Plan' (REP1-004).</p> <p>With regards monitoring and rectifying failed planting, Requirement 5(f) requires:</p> <p><i>"measures for the replacement, in the first available planting season, of any tree or shrub planted as part of the landscaping scheme that, within a period of 5 years after the completion of the part of the authorised development to which the relevant landscaping scheme relates, dies, becomes seriously diseased or is seriously damaged."</i></p>
Q10.0.15	The Applicant	ES Chapter 7: Landscape and Visual Effects [APP-046], 7.10.60 – on Drawing No. HE551489-GTY-ELS-000-DR-LX-30022 R11 is showing slight or neutral for 15yr, yet the text at 7.10.60, refers to it as large adverse. Please review and amend accordingly.	<p>R11 is incorrectly represented at Year 15 on ES Figure 7.5 (sheet 1 of 3 / Drawing No. HE551489-GTY-ELS-000-DR-LX-30022). This drawing has been corrected to show red rather than green and re-submitted in an update to ES Figures – Figures 7.1 to 7.5 (<b>APP-060</b>).</p> <p>While 7.10.60 correctly lists R11 as being subject to a residual significant visual effect at Year 15, it should read as 'moderate adverse' rather than 'large adverse'. The correct analysis is reported in ES Appendix 7.4 Visual Receptors (<b>APP-092</b>) and in the amended ES Figure 7.5 submitted at Deadline 2.</p>

## 13 MATERIAL ASSETS AND WASTE

No	Question To	ExA Question	Guidance
Q11.0.1	Norfolk County Council	ES Chapter 10: Material assets and waste [APP-049], identifies that the Proposed Development intersects part of a known sand and gravel reserve (Mineral Safeguarding Area) as shown in Norfolk County Council's mineral safeguarding area mapping. Does NCC consider that this designation has any implications for the Proposed Development and if so, what?	No response required by the Applicant.
Q11.0.2	Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 10: Material assets and waste [APP-049], are the Councils satisfied with the identified study areas and with the baseline conditions. If not, please explain why.	No response require by the Applicant
Q11.0.3	The Applicant	ES Chapter 10: Material Assets and Waste [APP-049], paragraph 10.9.13, bullet points 5 and 6 refer to opportunities for the re-use of surplus excavated, recycled or recovered material outside of the Order limits at local developments or community projects. Have any of these opportunities been investigated further, what is the likelihood of their implementation and how would such opportunities be secured?	<p>Opportunities for the re-use of surplus excavated, recycled or recovered material outside of the Order limits at local developments or community projects have not yet been investigated further as it is intended to maximise re-use of material within the design and avoid/minimise the need for off-site disposal.</p> <p>The Applicant will develop the Material and Waste Strategy as the design phase matures and endeavor to utilise the latest industry techniques and best practice. This approach will increase the efficiencies of reuse of site won materials which in turn will reduce the importation requirement ultimately reduce waste disposal offsite.</p> <p>The actions to implement the strategy will be defined in the material management plan and site waste management plan as part of the second iteration of the Environmental Management Plan, to be secured through dDCO Requirement 4 (<b>REP1-004</b>).</p>

## 14 NOISE AND VIBRATION

No	Question To	ExA Question	Guidance
Q12.0.1	Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 11: Noise and Vibration [APP-050] are the parties satisfied that the baseline conditions as identified in Section 11.7 is accurate? Have all the receptors been correctly identified? If not, please explain.	No response require by the Applicant
Q12.0.2	Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 11: Noise and Vibration [APP-050] paragraph 11.4.3, are the parties satisfied with the changes to the assessment methodology from the scoping report? If not, please explain why.	No response required by the Applicant
Q12.0.3	Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 11: Noise and Vibration [APP-050] paragraph 11.4.11 are the parties satisfied with this approach? If not, please explain why.	No response required by the Applicant
Q12.0.4	The Applicant	ES Chapter 11: Noise and Vibration [APP-050] paragraphs 11.5.3 and 11.5.4 refer to hours of working. Where are these hours controlled? Should these be part of the dDCO requirements?	<p>Action NV1 in Table 3.1 of the Environmental Management Plan (APP-143) states:</p> <p><i>"Construction works will take place mainly during the daytime. Construction works outside of normal construction hours of 07:00-19:00 weekdays and 07:00-19:00 on Saturdays shall be minimised as far as practicable.</i></p> <p><i>Where works outside of these hours are unavoidable, the Principal Contactor will consult with the local planning authority, and agree appropriate methods of mitigation that account for the location of works, hours of work and expected duration."</i></p> <p>This commitment will be secured through dDCO Requirement 4 'Environmental Management Plan' (<b>REP1-004</b>). Separate controls apply to avoid significant effects due to construction noise and vibration outside of normal working hours - this requires prior approval of the local authority through Section 61 of the Control of</p>



No	Question To	ExA Question	Guidance
			Pollution Act.
Q12.0.5	The Applicant	ES Chapter 11: Noise and Vibration [APP-050] paragraph 11.5.13, identifies that roads other than those identified would not typically be used by heavy construction vehicles. In what instances does the applicant expect heavy construction vehicles to use other roads, how often and what type of vehicles? How does this fit with 11.9.20 and the Traffic Management Plan (TMP)?	<p>The Applicant will manage and control ALL large and heavy site vehicles and restrict them to utilising only the strategic road network or onsite haul routes. Access to local road networks will be discouraged with roadside signage and briefings which will include and identify all approved routes to and from the Construction areas.</p> <p>These controls and construction traffic routes will be managed through a traffic management plan, to be developed in consultation with the local highway authority (Norfolk County Council), and secured by Requirement 10 'Traffic management' of the dDCO (<b>REP1-004</b>).</p> <p>This approach aligns with paragraph 11.9.20 in ES Chapter Noise and Vibration (<b>APP-050</b>): "Use of other local roads should be avoided. Additionally, construction related traffic arriving from offsite shall be routed via the existing A47 and the haul road following the Proposed Scheme alignment only. This shall be implemented in the outline Traffic Management Plan (TR010038/APP/7.5)."</p>
Q12.0.6	Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 11: Noise and Vibration [APP-050] paragraph 11.7.3 are the parties content with the way the appellant has addressed the issue of undertaking surveys during the COVID19 pandemic? If not, why not.	No response required by the Applicant.
Q12.0.7	The Applicant	ES Chapter 11: Noise and Vibration [APP-050] paragraph 11.4.12 under the identified future do nothing and do something scenarios, has any allowance been made for new residential development within the study area? If so, how many and where. If not, why not.	<p>Chapter 4 'Transport Assessment', in the Case for the Scheme (<b>APP-140</b>), describes the development of the traffic model do minimum and do something scenarios used in the Chapter 11 operational impact assessment.</p> <p>As discussed in Section 4.3 and 4.3 of the Case for the Scheme, local authority forecasts on development growth are derived from the uncertainty log. The uncertainty log details developments and transport schemes which are both nearby and significant to the model and its planning status.</p> <p>ES Appendix 15.1 Cumulative Effects Assessment Long List (<b>APP-132</b>) references the full uncertainty log compiled by the local authority and identifies all proposed dwellings in the traffic model used in the operational noise assessment. Of particular note and in close proximity to the Scheme is a 900 dwelling residential development located to the south and east of Easton village.</p> <p>In addition to incorporation of proposed dwellings within the traffic model data, ES Chapter 11 also considers noise and vibration effects at new residential receptors, introduced as committed developments, as described in the 'buildings' section of Table 11.4 of ES Chapter 11 Noise and Vibration (<b>APP-050</b>): "A total of 207 future residential receptors and one village hall at the Easton Village residential extension (a committed development) have been allocated based on information available in the planning portal."</p>
Q12.0.8	The Applicant	ES Chapter 11: Noise and Vibration [APP-050] for those receptors identified in paragraphs 11.8.58, 11.8.59 and 11.8.60 noting that the National Networks NPS, paragraph 3.3, states that the Government expects applicants to avoid and mitigate environmental and social impacts, what mitigation measures, other than those outlined, were explored for these properties? Why were they discounted?	<p>The identified receptors are predicted to experience major adverse impacts in terms of the change in road traffic noise that would occur despite mitigation being included within the Scheme. The significance of the effects of these noise changes are discussed in Section 11.10 of ES Chapter 11 Noise and Vibration (<b>APP-050</b>). Mitigation has been incorporated into the design of the Scheme to avoid significant adverse effects where it is feasible to do so.</p> <p>In the case of Mattishall Lane, the provision of acoustic barriers (Barrier 1 and Barrier 2) and a low noise surface is not sufficient to avoid perceptible changes in road traffic noise. However, the road traffic noise level with the Scheme will be no more than 61 dB <math>L_{A10,18hour}</math>, below the Significant Observed Adverse Effect Level (SOAEL).</p> <p>In the case of Church Lane, the provision of an acoustic barrier (Barrier 3) and a low noise surface is not sufficient to avoid perceptible changes in road traffic noise. However, the road traffic noise level with the Scheme will be no more than 56 dB <math>L_{A10,18hour}</math>, below the Significant Observed Adverse Effect Level (SOAEL).</p> <p>At Hall Farm Cottages, Hockering Nursery and Newgate, the provision of a low noise surface is not sufficient to avoid perceptible changes in road traffic noise. Mitigation in the form of noise barriers is not sufficient to avoid significant effects in terms of the perceptibility of the noise change and as such were not considered to be a proportionate or reasonable mitigation measure in these instances. In all locations, the road traffic noise level with the</p>

No	Question To	ExA Question	Guidance
			<p>Scheme will be no more than 64 dB <math>L_{A10,18\text{hour}}</math>, below the Significant Observed Adverse Effect Level (SOAEL).</p> <p>In all locations, the road traffic noise level with the Scheme will be no more than 64 dB <math>L_{A10,18\text{hour}}</math>, below the Significant Observed Adverse Effect Level (SOAEL).</p> <p>At the new Easton Village residential development no significant effects are expected since, although there will be a perceptible noise change, road traffic noise level with the Scheme will be below the Lowest Observed Adverse Effect Level (LOAEL). Mitigation in the form of a low noise surface is sufficient to avoid significant adverse effects in this location.</p>
Q12.0.9	The Applicant	ES Chapter 11: Noise and Vibration [APP-050] Table 11.11 demonstrates that, within the study area, the majority of noise sensitive receptors are predicted to have a negligible or no noise change due to the Proposed Scheme over the long-term, however, this includes embedded mitigation (see 11.8.68). What are the effects without this mitigation?	As per Section 2.7 of ES Chapter 2 The Proposed Scheme ( <b>APP-041</b> ), noise barriers formed part of the embedded environmental mitigation in the design that was being assessed in ES Chapter 11 Noise and Vibration ( <b>APP-050</b> ). Therefore, a version of Table 11.11, in ES Chapter 11, without mitigation has not been produced during the assessment for this reason.
Q12.0.10	Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 11: Noise and Vibration [APP-050] paragraph 11.9.6 are the parties content with the triggers for the implementation of temporary mitigation? If not, please explain why.	No response required by the Applicant.
Q12.0.11	The Applicant	ES Chapter 11: Noise and Vibration [APP-050] paragraph 11.9.18 how will these further assessments of construction vibration be secured? During the course of the Examination can the applicant provide an indication of the types of mitigation that can be provided to avoid significant effects?	<p>Action NV1 in Table 3.1 of the Environmental Management Plan (<b>APP-143</b>) states the following to manage the risk of significant effects due to construction vibration:</p> <p><i>“Where certain vibration creating activities (such as piling activities) occur within 30m of residential properties:</i></p> <ul style="list-style-type: none"> <li>• <i>carry these works out only during the daytime.</i></li> <li>• <i>inform the occupiers of the likely times and duration of works at least one week prior to works commencing</i></li> <li>• <i>monitor the vibration levels</i></li> <li>• <i>carry out a building condition survey to identify any sensitive aspects of the building and to ensure the current status of the building is recorded.”</i></li> </ul> <p>This commitment will be secured through dDCO Requirement 4 'Environmental Management Plan' (<b>REP1-004</b>).</p> <p>Note that the effects highlighted relate to human perception of vibration, and there is minimal risk of building damage due to construction vibration.</p>
Q12.0.12	The Applicant	ES Chapter 11: Noise and Vibration [APP-050] paragraph 11.9.29 are the parties satisfied with the justifications provided for the exclusion of these mitigation measures from the proposed scheme? As a result, do the parties consider that the proposed noise barriers are in accordance with NPS NN as mitigation measures that are considered to be proportionate and reasonable? If not, please explain why.	<p>Please see the response to Q12.0.8.</p> <p>Compliance with NPS NN paragraphs 5.186 to 5.200 (Noise and Vibration) is discussed in the National Policy Statement for National Networks Accordance Tables (<b>APP-141</b>).</p>
Q12.0.13	The Applicant	ES Chapter 11: Noise and Vibration [APP-050] paragraph 11.10.2, at which locations does the applicant consider to be suitable for the early provision of the permanent noise barriers? Has the provision of these been included within the assessment that has led to the conclusions in Table 11.14?	The Principal Contractor has the flexibility to provide the permanent noise barriers as soon as possible, or to provide suitable temporary noise barriers at these locations during specific work phases. The resulting assessment within Table 11.14, of ES Chapter 11 Noise and Vibration, includes the effect of an acoustic barrier (temporary or permanent). This commitment is in actions NV1 and NV2 within the Environmental Management Plan ( <b>APP-143</b> ), which is secured through Requirement 4 of the dDCO ( <b>REP1-004</b> ).
Q12.0.14	The Applicant	ES Chapter 11: Noise and Vibration [APP-050] paragraph 11.10.3, will the applicant keep the examination updated on preparation of mitigation measures for this location?	Additional mitigation of construction noise to avoid significant effects at this receptor is secured through the fifth bullet point of action NV1 in the Environmental Management Plan ( <b>APP-143</b> ). Real-time monitoring of noise from these works, will give the Contractor opportunity to take proactive measures to reduce construction noise, such as a change in work methods, should threshold values be exceeded at the receptor. These commitments will be delivered during the detailed design development and construction stages following the Examination process; but will be

No	Question To	ExA Question	Guidance
			secured through Requirement 4 of the dDCO ( <b>REP1-004</b> ).
Q12.0.15	The Applicant	ES Chapter 11: Noise and Vibration [APP-050] Table 11.16, of those receptors identified to experience significant adverse effects, what other mitigation measures, other than those identified in the assessment have been considered to reduce the impacts?	<p>The identified significant adverse effects are expected to occur due to perceptible changes in road traffic noise due to the Scheme in locations where the Lowest Observed Adverse Effect Level (LOAEL) is exceeded. In all instances, the level of road traffic noise would be below the Significant Observed Adverse Effect Level (SOAEL).</p> <p>The above includes the provision of proportionate or reasonable mitigation embedded within the design of the Scheme, such as provision of low noise surfacing along the length of the new A47 dual carriageway.</p> <p>The provision of other mitigation measures was considered during the EIA at some of these locations, as discussed in the fourth column of Table 11.16 in ES Chapter 11 Noise and Vibration (<b>APP-050</b>). All of the above receptors do not qualify for statutory secondary insulation under the Noise Insulation Regulations; however, this could be considered at the discretion of the Applicant.</p>

## 15 POPULATION AND HUMAN HEALTH

No	Question To	ExA Question	Guidance
Q13.0.1	Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 12: Population and human health [APP-051] are the parties satisfied with the assessment methodology? If not, please explain.	No response required by the Applicant.
Q13.0.2	Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 12: Population and human health [APP-051] are the parties satisfied that Section 12.7 provides an accurate assessment of the baseline conditions?	No response required by the Applicant.
Q13.0.3	The Applicant	ES Chapter 12: Population and human health [APP-051] paragraph 12.4.3, the 2020 surveys were undertaken during the COVID pandemic, has this had any implications for the results, if so, how has this been addressed?	The walking, cycling and horse riding (WCH) surveys were undertaken between 13 July and 26 July, inclusive, during a period of dry and bright weather. Government advice at that time was to undertake exercise in your local area and it is generally acknowledged that this advice led to increased use of walking and cycling activity due to reduced volumes of traffic on the roads. Therefore, if anything, the WCH activity recorded by the surveys may be slightly higher than would normally have been expected. The use of potentially inflated WCH usage figures will have resulted in a robust assessment of the effects of the Scheme on WCH.
Q13.0.4	Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 12: Population and human health [APP-051] paragraph 12.4.11 are parties satisfied that the data is sufficient to enable the Applicant to state that they are representative of the average use?	No response required by the Applicant.
Q13.0.5	The Applicant	ES Chapter 12: Population and human health [APP-051] paragraph 12.4.16 identifies that no response has been received from the remaining key consultees. Please explain what the implications/limitations are as a result of this. Are any attempts proposed to be made during the course of the examination to engage with these parties? If not, why not?	<p>Paragraphs 12.4.13 - 12.4.16, of ES Chapter 12 Population and Human Health (<b>APP-051</b>), relate to consultation with five consultees regarding the scope of the human health assessment following the change in scope of the Chapter further to changes to DMRB standards. The consultees were identified using UK Government guidance (Guidance on promoting healthy and safe communities<sup>13</sup>). It was determined that consultation would be undertaken with the Local Authority Officer for the District Councils, as detailed in Section 12.4 of ES Chapter 12.</p> <p>One of the consultees, which was not considered to be a key consultee, was Norfolk Insight. Norfolk Insight replied suggesting that the enquiry was re-directed to Norfolk County Council instead. Norfolk County Council were consulted where relevant, such as regarding the scope of the Walkers, Cyclists and Horse-Riders (WCH) assessment.</p> <p>Of the remaining four consultees, only one did not respond - Norfolk and Waveney NHS Clinical Commissioning Group. Attempts were made during the assessment period to contact Norfolk and Waveney NHS Clinical Commissioning Group but no response was received. No further contact has been made since submission of</p>

<sup>13</sup> <https://www.gov.uk/guidance/health-and-wellbeing>

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			<p>the DCO and it is not proposed to consult with them further during the determination process.</p> <p>It was considered at the time of the assessment, that the assessment should proceed without this response on the basis that the scope of ES Chapter 12 follows DMRB LA 112 and given the support received from the other consultees. This was not considered to be a limitation to the assessment, but was noted in the ES Chapter 12 for reference (paragraph 12.4.16).</p> <p>The table below has been provided to clarify the status of the consultation and responses.</p> <table border="1"> <thead> <tr> <th>Consultee</th> <th>Response Received</th> <th>Comment</th> </tr> </thead> <tbody> <tr> <td>Broadland District Council</td> <td>Yes</td> <td>The comments provided in the response were included in the assessment as described in paragraphs 12.4.14 and 12.4.15 of ES Chapter 12 (<b>APP-051</b>).</td> </tr> <tr> <td>Breckland District Council</td> <td>Yes</td> <td>The response confirmed that the methodology proposed was acceptable.</td> </tr> <tr> <td>South Norfolk District Council</td> <td>Yes</td> <td>The response was provided by an Officer from Broadland Council on behalf of Broadland and South Norfolk District Councils. Comments provided in the response were included in the assessment as described in paragraphs 12.4.14 and 12.4.15 of ES Chapter 12 (<b>APP-051</b>).</td> </tr> <tr> <td>Norfolk Insight</td> <td>No</td> <td>Email reply was received from Norfolk Insight to instead redirect the query to Norfolk County Council.</td> </tr> <tr> <td>Norfolk and Waveney NHS Clinical Commissioning Group</td> <td>No</td> <td>No response to the initial email (dated 21/08/20) or follow up emails (dated 18/09/20 and 08/10/20) were received during the assessment period.  Telephone lines were also unavailable during the assessment period due to COVID-19.  No further communication has been initiated since DCO submission.</td> </tr> </tbody> </table>	Consultee	Response Received	Comment	Broadland District Council	Yes	The comments provided in the response were included in the assessment as described in paragraphs 12.4.14 and 12.4.15 of ES Chapter 12 ( <b>APP-051</b> ).	Breckland District Council	Yes	The response confirmed that the methodology proposed was acceptable.	South Norfolk District Council	Yes	The response was provided by an Officer from Broadland Council on behalf of Broadland and South Norfolk District Councils. Comments provided in the response were included in the assessment as described in paragraphs 12.4.14 and 12.4.15 of ES Chapter 12 ( <b>APP-051</b> ).	Norfolk Insight	No	Email reply was received from Norfolk Insight to instead redirect the query to Norfolk County Council.	Norfolk and Waveney NHS Clinical Commissioning Group	No	No response to the initial email (dated 21/08/20) or follow up emails (dated 18/09/20 and 08/10/20) were received during the assessment period.  Telephone lines were also unavailable during the assessment period due to COVID-19.  No further communication has been initiated since DCO submission.
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Q13.0.6	Norfolk County Council	ES Chapter 12: Population and human health [APP-051] are NCC satisfied that the proposed footpath closures and proposed diversions are justified and that the proposed alternative routes are acceptable? If not, why not?	No response required by the Applicant.																		
Q13.0.7	Norfolk County Council	ES Chapter 12: Population and human health [APP-051] paragraph 12.4.26, are NCC satisfied that the concerns raised by Norwich Cycle Campaign have been address through the proposed scheme? If not, why not?	No response required by the Applicant.																		
Q13.0.8	The Applicant	ES Chapter 12: Population and human health [APP-051] paragraph 12.5.1, is more recent data likely to be available during the course of the examination? If so, how does the applicant intend to update the assessment?	<p>The data referred to in Paragraph 12.5.1 was used to establish the health profile of local communities in the assessment in accordance with DMRB 112. The data used in the assessment was sourced from Public Health England Local Health profiles (2013 to 2017 and 2017 to 2018) and 2011 Census data (ONS, 2016). At the time of assessment and submission, these datasets were the most recent and publicly available datasets.</p> <p>The use of 2011 Census data remains the most up to date data source as the recent 2021 Census data is not expected to be published until March 2022 and March 2023 (see response to Q13.0.13).</p> <p>Since the assessment was completed, the Public Health England public health profiles have been updated in June 2021 at district level. However, the updated datasets do not alter the findings or conclusions of the assessment presented and that the assessment does not require to be updated. The data within Table 12.8 of ES Chapter 12 Population and Human Health (<b>APP-051</b>), remains comparable with the updated datasets currently published on the Public Health England Fingertips tool.</p> <p>The likely health outcomes of the Scheme on the communities are</p>																		

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			predicted using health determinant categories as set out in DMRB 112 and as presented in ES Chapter 12 Table 12.9 along with the health profile data in ES Chapter 12 Table 12.8. Each community within the study area was considered to have a high sensitivity to change as a pre-cautionary approach. Therefore the assessment presented remains representative of current data for public health.
Q13.0.9	The Applicant	ES Chapter 12: Population and human health [APP-051] paragraph 12.5.5 is any further consultation planned during the examination with non-responders? If not, why not?	Questionnaires were sent out to nineteen agricultural land holdings by email to either the farmer, land agent and in some cases both parties. Follow up emails were sent, and calls were made to several of the non-responding parties but with no response. At the time of assessment as identified in paragraph 12.5.5 of ES Chapter 12 Population and Human Health ( <b>APP-051</b> ), only seven had provided a response. In the absence of a response to the questionnaire, a high level assessment for the remaining 12 land holdings was made by an agricultural expert using professional judgment and publicly available information. It is considered that based on the information available for all landholdings, an appropriate assessment was undertaken for the DCO application.  Further consultation is planned during the Examination with non-responders, but as part of the on-going land agent negotiations by the Applicant to reach agreement on land acquisition and mitigation as part of the DCO process.
Q13.0.10	The Applicant	ES Chapter 12: Population and human health [APP-051] paragraph 12.7.8 refers to existing congestion during peak hours, creating a degree of severance and accessibility issues for local communities. Please explain and justify this statement. What locations and what are the effects? What are the effects outside of peak hours?	A47 Corridor feasibility studies during 2014 and 2015 identified that the single carriageway section of the A47 between North Tuddenham and Easton experiences peak period congestion and is currently operating over capacity resulting in congestion related delays. The A47 North Tuddenham and Easton stretch of single carriageway also has a poor safety record. The A47 is ranked 2nd nationally for fatalities on A roads and the accident severity ratio is above average. During the period 2014 to 2018 a total of 2 fatal, 15 serious and 76 slight accidents have been recorded along a 11km length of the existing A47 from North Tuddenham to Easton.  The combination of delays along sideroads to the A47 and poor safety is a cause of north to south severance, especially to non-motorised users who cannot easily and safely access other forms of travel and services, during peak and non-peak periods. Particular examples from consultation feedback include: unsafe non-motorised user crossings of the A47 at Easton roundabout; and the importance of Mattishall Lane connecting residents of Hockering with Mattishall to access the GP surgery and local school. The provision of new two-tier grade separate junctions would remove the safety and congestion severance risks associated with crossing traffic travelling along the A47 during peak periods.  Chapter 4 'Transport Assessment', in the Case for the Scheme ( <b>APP-140</b> ), presents traffic modelling scenarios used to inform the assessment in ES Chapter 12 Population and Human Health ( <b>APP-051</b> ). The model contains AM and PM peak hours (08:00 to 09:00 and 17:00 to 18:00) and an IP average hour (10:00 to 16:00) time segments.  Of particular note, Section 4.6 'Current Network Performance' describes the congestion during peak hours, the affected locations and durations of delays. This section concludes that traffic modelling analysis indicates that the A47 mainline is operating above the desirable capacity of 85% during the AM and PM peaks (volume over capacity ratios of 89% to 94%). In addition to this, on average vehicles trying to access the A47 from the minor side roads will experience around 0.5 to 2 minutes of delay. Section 4.7 'Future Year Network Performance' describes the situation in the Do Minimum 2025 and 2024 scenarios. Section 4.8 explores changes in peak AM and PM peak hours and IP average hour journey times between the 2015 Base Year, 2025 & 2040 Do Something and Do Minimum scenarios.
Q13.0.11	Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 12: Population and human health [APP-051] Table 12.5 are the parties satisfied that this represents an accurate list of all receptors? If not, please explain why.	No response required by the Applicant.
Q13.0.12	Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 12: Population and human health [APP-051] Table 12.6 are the parties satisfied with the sensitivity levels attributed to each of the receptors? If not, please explain why.	No response required by the Applicant.

No	Question To	ExA Question	Guidance
Q13.0.13	The Applicant	ES Chapter 12: Population and human health [APP-051] paragraph 12.7.32 are 2021 census data sets expected to be available during the course of the examination. If so, will the applicant update this section?	The latest Census survey was undertaken in March 2021. However, the initial findings are expected to be published in March 2022 with the final release of outputs released in March 2023 <sup>14</sup> . ES Chapter 12 Population and Human Health ( <b>APP-051</b> ) used the most recent Census data available at the time of assessment, which was Census 2011. The referenced section of the ES will therefore not be updated as the 2021 Census data will not be published in full before the end of the Examination period in February 2022.
Q13.0.14	The Applicant	ES Chapter 12: Population and human health [APP-051] paragraph 12.10.26 refers to the potential for the field to be used as a burial ground before the Proposed Scheme is constructed. How does this fit with other statements in the rest of the ES and what are the implications for the proposed development if the land is used for burials?	<p>St Peter's Church has an active burial ground which is being expanded to the east of the site following consecration of the field to the east of the church. Permanent (0.03ha) and temporary (0.11ha) land-take from a small area of this consecrated land is required for the construction of the Scheme.</p> <p>The assessment presented in the ES Chapter 12 Population and Human Health (<b>APP-051</b>) considers the likely and worst case scenario with respect to assigning significance to St Peter's Church and the consecrated land. ES Chapter 12, Paragraph 12.10.26 states "<i>The magnitude of impact has been identified as moderate, as whilst the field has been consecrated, it is not yet in use as a burial ground. Discussions are ongoing with the diocese to purchase the area of land needed prior to any burials occurring. However, as a worst case scenario, should the field be used as a burial ground before the Proposed Scheme is constructed, the magnitude of impact will increase to major, as construction of the Proposed Scheme will result in loss of land with severe damage to key characteristics, for the direct development of land to accommodate highways assets. When considering a worst case scenario that the land is used for burials, there would be a Large adverse significance of effect. Should agreement be reached with the diocese to not bury on this land, a Moderate adverse significance of effect has been identified.</i>"</p> <p>ES Chapter 6 Cultural Heritage (<b>APP-045</b>) also reports the consecrated land which is used to inform the heritage asset's level of heritage value. ES Chapter 6 paragraph 6.8.10 reports that there is a low possibility that there are further unknown and unrecorded burials outside the modern boundary of the churchyard on which construction to the north and east of the churchyard might have an impact. ES Chapter 6 also confirms that archaeological monitoring will be undertaken in St Peter's Church churchyard as part of construction works with respect to recording of unexpected burials in the area surrounding St Peters Church. This will be managed under the Environmental Management Plan (<b>APP-143</b>) and secured through the draft Development Consent Order Requirement 4 'Environmental Management Plan' (<b>REP1-004</b>).</p> <p>It is understood from consultation with the Diocese at the time of submission of the ES that no burials have taken place in the land. Discussions remain ongoing with between the Applicant and the Diocese to ensure no burials are undertaken in any part of the consecrated field until the Applicant has acquired the affected part of the land.</p>
Q13.0.15	The Applicant	ES Chapter 12: Population and human health [APP-051] paragraph 12.10.87 refers to no permanent property demolition or loss of curtilage of properties as a result of the Proposed Scheme. Please explain and review this statement in light of the RRs from Ben Hooker [RR-006] Catharine Hooker [RR-015] and David Hooker [RR021]?	<p>The intention is not to demolish any private properties or result in permanent damage to any private properties.</p> <p>In direct reference to Catherine Hooker's question (<b>RR-005</b>) and Ben Hooker (<b>RR-008</b>), the Applicant's intention not to permanently acquire this parcel as reported in the Applicant's Response to the Relevant Representations (<b>REP1-013</b>).</p> <p>Subsequent to the DCO submission, the Applicant has completed more detailed, location-specific topography surveys. These surveys have provided the necessary confidence that the junction realignment can be designed and constructed without needing to permanently acquire any of this land parcel. Excavation works in the neighboring land parcel will be within the canopy / root zone of the mature trees, hence the requirement for temporary rights to protect those trees.</p> <p>This approach has been discussed and agreed with the landowners. Consequently, revised Land Plans (<b>REP1-002</b>) and Book of Reference, Rev.2, (<b>REP1-008</b>) were submitted at Deadline 1 to reflect this commitment.</p>
Q13.0.16	The Applicant	To what extent would the Proposed Development provide local employment and training opportunities?	The Applicant has and its Principal Contractor have contractual commitments to the Department for Transport (DfT) to employ local contractors where possible and develop recruitment through STEM

<sup>14</sup> <https://www.ons.gov.uk/census/censustransformationprogramme/census2021milestones>

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			<p>engagement with local colleges and labour supply chain partners. Recruitment commitments also include creating secure routes to skills, including for ex-convicts and local armed forces veterans, and appointing one apprentice per £5M value awarded.</p> <p>The Applicant's Principal Contractor is already creating local employment with 55% of staff on the A47 programme of works based in the East region and working from a new office in Norwich. Six new graduates have already been employed on the A47 programme by the Principal Contractor.</p>

## 16 TRANSPORT AND TRAFFIC

No	Question To	ExA Question	Guidance
Q14.0.1	Norfolk County Council Breckland District Council Broadland District Council South Norfolk Council	Are the parties satisfied with the Applicant's Transport Case for the Scheme as set out in Chapter 4 of the Case for the Scheme [APP-140]? Please provide reasons for any disagreement with any aspect of it.	No response required by the Applicant.
Q14.0.2	Norfolk County Council Breckland District Council Broadland District Council South Norfolk Council	Are the parties satisfied with the Applicant's revised outline TMP [APP-144] (which includes details of construction traffic routing)? Please provide reasons for any concerns with any aspect of it.	No response required by the Applicant.
Q14.0.3	The Applicant	Does the Applicant intend to produce a Travel Plan for construction workers, and if so, how would this be secured?	<p>Travel Plans will be developed with the supply chain partners as the project develops through detailed design and the onboarding process of said supply chain.</p> <p>This would form one of the measures to be applied to deliver the following commitment under Action G4 in the Environmental Management Plan (<b>APP-143</b>), secured by Requirement 4 of the dDCO (<b>REP1-004</b>):</p> <p><i>"The PC [Principal Contractor] will seek to reduce worker vehicle movements and HGV movements, particularly at peak periods."</i></p>
Q14.0.4	The Applicant	Please explain what provision is made for the retention of public transport links?	The Applicant will establish continuous dialogue with all public transport providers with the aim to maintain links throughout the construction phase. This will be managed through the traffic management plan ( <b>APP-143</b> ), to be developed in consultation with the local highway authority (Norfolk County Council), and secured by Requirement 10 'Traffic management' of the dDCO ( <b>REP1-004</b> ).
Q14.0.5	The Applicant	The ExA has been referred by a number of IPs to the Sideroad Strategy. Please explain the status of this document.	<p>The Scheme Design Report, Rev.1 (<b>AS-009</b>) sets out the Applicant's final proposals for the sideroad network. The sideroad network design was presented at statutory consultation, in February to April 2020, along with the A47 North Tuddenham to Easton Junction &amp; Sideroad Strategy Report (Highways England, 2020)<sup>15</sup>.</p> <p>The purpose of this background report was to provide a junction and sideroad recommendation based on technical expertise, in line with current design standards (UK DMRB) and the Scheme Objectives for the proposed design presented at Statutory Consultation.</p> <p>The report was developed from the Stage 2 design work, which led to the Preferred Route Announcement (PRA) and presented in the Stage 2 Scheme Assessment Report (SAR). The Stage 2 Scheme Assessment Report (SAR) provides information on the junction and sideroad proposals in Section 23.3 (Junctions on the Route) with scheme layouts contained within Appendix N. Section 23.1.3 also confirms that these were the 4 layouts used for the transportation and environmental assessments reported within the SAR.</p> <p>The "Junction &amp; Sideroad Strategy" outlines the design process and describes the existing and modelled operation of the existing and proposed junctions.</p> <p>The proposed sideroad network was refined as a result of consultation feedback and further stakeholder engagement. In particular, concerns about north-south traffic movements were</p>

<sup>15</sup> This report is available amongst the Consultation 2020 documents at: <https://highwaysengland.co.uk/ourwork/east/a47-north-tuddenham-to-easton-improvement/>

No	Question To	ExA Question	Guidance
			<p>noted and explored which led to changes in the proposed design.</p> <p>The Applicant has engaged throughout the design development process with the Local Highway Authority (Norfolk County Council), the South of the A47 Taskforce (led by George Freeman MP), the multi parish "Local Liaison Group" and individual Parish Councils.</p> <p>As a result of these collaborative engagements several changes to the proposed sideroad network were incorporated in the final Scheme design, including closure of Berrys Lane to through traffic and removal of several proposed new side road connections. These changes are reported in Table 4.12 of the Consultation Report (<b>APP-024</b>) and covered within the primary document, The Scheme Design Report, Rev.1 (<b>AS-009</b>).</p>
Q14.0.6	The Applicant	Construction related traffic arriving from offsite shall be routed via the existing A47 and the haul road to be implemented in the outline TMP. The outline TM P [APP-144] states that the TMP will be subject to consultation with the local planning authority and approval by the Secretary of State as set out in the draft DCO. Can the Applicant clarify how the TMP would be secured through the DCO and under which Requirement(s)?	The production of the traffic management plan is secured by requirement 10 of the dDCO.

## 17 WATER ENVIRONMENT

No	Question To	ExA Question	Guidance
Q15.0.1	Environment Agency Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 13: Road drainage and the water environment [APP-052], are the parties content with the Applicant's Flood Risk Assessment (FRA) and drainage proposals? If not, please explain why and what additional information is required.	No response required by the Applicant.
Q15.0.2	The Applicant	ES Chapter 13: Road drainage and the water environment [APP-052], the EA raise a number of comments in their RR [RR-033], please provide a detailed response to their observations.	<p>The Applicant has provided an as detailed as possible response to the Environment Agency's Relevant Representation (RR-066) as part of the Applicant's response to the Relevant Representations (REP1-013). Where matters cannot be addressed in the response to the Relevant Representation, the Applicant has committed to providing further information or an update at Deadline 3.</p> <p>The Applicant has had further meetings with the Environment Agency to discuss its Relevant Representation and how the Scheme intends to address the matters raised. The Applicant is continuing to consult with the Environment Agency.</p>
Q15.0.3	The Applicant	ES Chapter 13: Road drainage and the water environment [APP-052], do the parties agree that section 13.7, baseline conditions, is an accurate assessment of the current situation? If not, why not.	<p>The baseline conditions set out in the ES Chapter 13 (<b>APP-052</b>), section 13.7, are considered an accurate representation of the surface water and groundwater environment. The supplementary ground investigation, which is currently being undertaken, will provide further confidence that the baseline conditions are an accurate representation.</p> <p>Where there is less confidence currently in the ground conditions, the Applicant has taken a conservative approach in the assessments.</p>
Q15.0.4	The Applicant	ES Chapter 13: Road drainage and the water environment [APP-052], paragraph 13.4.16 identifies that Anglian Water have requested assurances that additional monitoring boreholes will not result in contamination risks, and that aquifer protection measures have been incorporated into the design, citing unexpected artesian conditions within the River Tud floodplain. How has this been addressed?	<p>The monitoring boreholes have been located away from sensitive groundwater extraction points (e.g. protected aquifers), taking into account groundwater drawdown. The ground investigation methodology also involves measures after use to seal the hole from surface pollution.</p> <p>An Environmental Permit was acquired from the Environment Agency for the groundwater surveys to date and will be renewed for future groundwater monitoring requirements. Close liaison with the Environment Agency and Anglian Water during the detailed design stage will ensure all assurances are agreed as part of the consent application process.</p>
Q15.0.5	The Applicant	ES Chapter 13: Road drainage and the water environment [APP-052], paragraph 13.4.20, states that Norfolk County Council accepted, in principle, that flood compensatory storage at Oak Farm and	Norfolk County Council as the Lead Local Flood Authority has requested clarification on a number of matters in relation to: the Flood Risk Assessment ( <b>APP-124</b> and <b>APP-125</b> ); several aspects of the design related to Oak Farm and Hockering culverts; and the



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		Hockering might not be required. However, further information is required to determine this. What is the implication for the proposed development if flood compensatory storage is required?	<p>requirement (or otherwise) for compensatory flood storage.</p> <p>At Oak Farm, allowance for the worst case compensatory flood storage would be provided for in the flood alleviation compensation area identified north of Oak Farm, as shown on Sheet 2 of the General Arrangement Plans (<b>APP-005</b>). The flood worst case compensatory storage requirement at Hockering is estimated as 27m<sup>3</sup>, including a 20% allowance for uncertainty, due to the lack of topographic data in the area at the time of the assessment, but could be catered for in the upstream drainage provision. The Applicant is reviewing the need to use these compensatory requirements as part of the requests for further information from Norfolk County Council and the Environment Agency. An update will be provided by Deadline 3 to allow consideration before any Issue Specific Hearings, but it would not require additional landtake beyond that within the existing DCO boundary.</p>
Q15.0.6	Environment Agency Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 13: Road drainage and the water environment [APP-052], paragraph 13.7.6 states that as the works will not impact on the water environment, the River Wensum is not considered a direct receptor. Are the parties content with this conclusion and the justification given for it?	No response required by the Applicant.
Q15.0.7	Environment Agency Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 13: Road drainage and the water environment [APP-052], paragraphs 13.7.65-13.7.69, are the EA and the Councils content that these are correct?	No response required by the Applicant.
Q15.0.8	The Applicant	ES Chapter 13: Road drainage and the water environment [APP-052], paragraph 13.8.7 refers to horizontal directional drilling being required for the gas main diversion which will utilise bentonite. Bentonite slurry may affect ponds, groundwater and the water environment or pathways to such features. Please clarify how any likely significant effects arising from this potential impact to the water environment have been assessed as part of the ES and what mitigation is proposed and how this is to be secured as part of the DCO?	<p>The likely significant effects of utilities diversions has been assessed in Table 13.8 of ES Chapter 13 (<b>APP-052</b>), and specifically under activity "<i>Earthworks within the saturated aquifer, including excavations, ground improvement, utilities, pilings, and cuttings</i>". The proposed mitigation includes best practice construction measures to be included within the Environmental Management Plan (<b>APP-143</b>). In addition, any works within a source protection zone SPZ1 or 2 must obtain approval from the Environment Agency and include water level monitoring before, during and after construction.</p> <p>The Environment Agency will be a named consultee under Development Consent Order (<b>REP1-004</b>) Requirement 4 'Environmental Management Plan'. Under Requirement 4, the Environment Agency will be consulted to ensure a suitable action is added to Table 3.1 'Record of Environmental Actions and Commitments' in the Environmental Management Plan so the Environment Agency are consulted on the method statement directional drilling for utilities crossings.</p>
Q15.0.9	The Applicant	ES Chapter 13: Road drainage and the water environment [APP-052], paragraph 13.9, please confirm how will the mitigation be delivered and how is this to be secured as part of the DCO?	Mitigation measures, both embedded and essential are described are set out in the Record of Environmental Actions and Commitments (REAC) which forms Table 3.1 in the Environmental Management Plan ( <b>APP-143</b> ). Delivery of these commitments, including consultation with the Environment Agency, relevant planning authority and local highway authority, will be secured through Development Consent Order ( <b>REP1-004</b> ) Requirements 4 'Environmental Management Plan'.
Q15.0.10	The Applicant	ES Chapter 13: Road drainage and the water environment [APP-052], paragraph 13.9.10, identifies that consent from Norfolk County Council and the Internal Drainage Board must be obtained prior to the start of construction activities. Please confirm that this is listed within the Consents and Agreements Position Statement [APP-020].	The Consents and Licences Position Statement, Rev.1 ( <b>REP1-006</b> ) lists the consent required from the Norfolk Rivers Internal Drainage Board and Norfolk County Council.
Q15.0.11	EA Natural England Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 13: Road drainage and the water environment [APP-052], paragraph 13.9.15 refers to the provision of replacement ponds. Are the parties satisfied that the replacement proposals will deliver the necessary mitigation? Do they provide an improvement to the current situation?	No response required by the Applicant.

No	Question To	ExA Question	Guidance
Q15.0.12	The Applicant	ES Chapter 13: Road drainage and the water environment [APP-052], paragraph 13.9.16 refers to a piling risk assessment. Where and how is this to be secured as part of the DCO?	The piling risk assessment will be secured through commitment RD3 in the Record of Environmental Actions and Commitments (Table 3.1) of the Environmental Management Plan (EMP) ( <b>APP-143</b> ). Commitment RD3 will be updated to clearly state this in the second iteration of the EMP, which will be secured, in consultation with the Environment Agency, through Development Consent Order ( <b>REP1-004</b> ) Requirement 4 'Environmental Management Plan'.
Q15.0.13	EA Natural England Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 13: Road drainage and the water environment [APP-052], paragraph 13.9.22 refers to the Drainage strategy (Appendix 13.2 (TR010038/APP/6.3)) which proposes all road drainage will drain by surface water outfalls to the River Tud and its tributaries at twelve locations, utilising nine new outfalls. Is this approach acceptable to parties and in their view, is it adequate to deal with surface water and does it make suitable allowances to cover the design life of the Proposed Scheme?	No response required by the Applicant.
Q15.0.14	EA Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 13: Road drainage and the water environment [APP-052], paragraph 13.9.29, are parties satisfied that these are sufficient allowances to cover the design life of the proposed scheme?	No response required by the Applicant.
Q15.0.15	EA Norfolk County Council Breckland Council Broadland District Council South Norfolk Council	ES Chapter 13: Road drainage and the water environment [APP-052], paragraph 13.9.32, are parties content that these measures are sufficient to address the identified flooding? If not, please explain.	No response required by the Applicant.
Q15.0.16	The Applicant	ES Appendix 13.4 (para 2.9.19) [APP-129] states that there are uncertainties over the works to be undertaken intersecting the Chalk aquifer. Further investigations are required to ascertain accurate hydraulic properties of this aquifer to understand any impacts of construction. Can the Applicant clarify what uncertainties they have over the works involved which may affect the aquifer and how these have been assessed and what mitigation measures are proposed, if considered necessary.	ES Chapter 13 Road Drainage and the Water Environment ( <b>APP-052</b> ), section 13.5, discusses assumptions and limitations. This section sets out that the main uncertainties relating to data gaps in the information collected during the ground investigation (as a result of design changes following the specification of the ground investigation) and the limited duration and timing of the groundwater level monitoring period. Due to the data limitations all assessments have been made based on a reasonable worst case scenario basis, and will be reassessed following collection of additional information during the supplementary ground investigation.  Paragraphs 13.9.16 to 13.9.20 of the ES Chapter 13 ( <b>APP-052</b> ) set out the mitigation measures to be adopted to minimise the impact of construction works on the Chalk aquifer. These will be secured through the Development Consent Order (APP-017) Requirement 4 'Environmental Management Plan'. The supplementary ground investigation will inform the detailed design and allow the mitigation measures to be confirmed.
Q15.0.17	The Applicant Environment Agency	Consultation with the Environment Agency has led to an agreement of a 35% climate change allowance to be applied for the FRA [APP-124 and APP-125]. In July 2021 the peak river flow allowances were updated by the Environment Agency to reflect the latest projections in UKCP18. Can the Applicant and the Environment Agency confirm that the agreed climate change allowance is still applicable for the FRA.	The Applicant is aware of revised peak river flow climate change allowances published in July 2021 and has had written confirmation from the Environment Agency stating there is no requirement for any changes in approach for the Scheme (including retaining the 35% climate change allowance to be applied for the FRA).

## ANNEX A - ADDITIONAL INFORMATION FOR Q1.0.5

Parameter	Paragraph Reference from ES Chapter 2 'The Proposed Scheme' (APP-041)	Comment
Design	2.4.1 - 2.4.99	The Scheme description text should be read in conjunction with ES Figure 1.1 (APP-055), ES Figures 2.1 - 2.3 (APP-056), Environmental Masterplan (APP-138), General Arrangement Plans (APP-005) and Works Plans (APP-007).
Height	2.6.54 - 2.6.55	The vertical limit of deviation for the Scheme is 1m up and 1m down. The vertical limits of deviation are referenced against the vertical profile levels indicated on the Engineering Section Plans (APP-010).
Width	2.6.56	The new carriageway would not deviate past the horizontal limits of deviation shown on the Works Plans (APP-007). In no case would the Scheme extend beyond the defined Order limits.
Existing baseline scenario	2.5.1 - 2.5.20	The existing conditions within the Scheme boundary and surrounding area relevant to each of the individual topics is reported in chapters 5 to 14 of the Environmental Statement (APP-044 to APP-053) under the section 'Baseline Conditions'.
Future baseline scenario	2.5.21 - 2.5.23	The future baseline scenarios considered in the ES are defined in ES Chapter 4 Environmental Assessment Methodology (APP-043), and a list of developments included as part of the future baseline is provided.
Structures	2.4.54 - 2.4.70	The Scheme includes seven new structures. These structures comprise Mattishall Lane Link Road underbridge (S16), Wood Lane junction underbridge (S03), Hall Farm underpass (S04), River Tud Crossing (S05), Honingham Church underpass (S18), Norwich Road junction underbridge (S07) and Easton footbridge (S17). The structure parameters are the maximum worst case parameters used for the environmental assessment needs to reflect the Rochdale Envelope approach. The design option considerations for each structure is provided in the Scheme Design Report, Rev.1 (AS-009).
Lighting	2.4.73 – 2.4.79	The current lighting design proposes 10m height lighting columns with LED luminaires located in verges (or at the back of footways where applicable) and oriented perpendicular to the carriageway. Luminaires would be mounted with zero-degree tilt and a minimum as installed luminous intensity of G4, to ensure glare and upward light spill is minimised Electrical supply to the lighting columns would be connected to a feeder pillar with a private cable network routed through ducting that is buried in verges and beneath the carriageway where applicable.
Construction programme	2.6.6 – 2.6.8	Construction is anticipated to take approximately 23 months. This would be carried out in construction phases, so not all sections of the Proposed Scheme would be under construction for the full period. Enabling and site preparation work would be largely carried out during Phase 0, with the main works carried out during Phases 1 to 7 before final compound removal in Phase 8.
Construction compounds and site access	2.6.9 – 2.6.12	The main construction compound is proposed off the existing Honingham roundabout, with three satellite compounds. Each compound would include temporary site offices, parking, and welfare facilities. Table 2-2 in ES Chapter 2 The Proposed Scheme (APP-041) indicates indicative timings of use of each of the compound locations.
Construction traffic	2.6.20 – 2.6.25	The outline traffic management plan (APP-144) defines the measures used to reduce the impacts from construction traffic, including measures to reduce worker vehicle movements and to reduce heavy good vehicle movements, particularly at peak periods. This will be implemented by the Principal Contractor.
Plant and equipment	2.6.31 – 2.6.36	Plant numbers and usage would be determined by the chosen construction methodology although for the purposes of assessment, preliminary plant lists have been used.
Utilities	2.6.37 – 2.6.41	For the purpose of the preliminary design, utility corridors on the Works Plans (APP-007) have been developed to provide spatial provision for utilities within the Scheme footprint.
Demolition	2.6.42 – 2.6.43	Easton roundabout would be demolished as a result of the Scheme. The existing walking, cycling and horse riding route at Easton, connecting Ringland Road and Ringland Lane (known as Dog Lane), would be stopped up and demolished to prevent further unsafe crossings of the A47.
Excavated materials	2.6.18 - 2.6.19	Construction of the Scheme would require excavation in places to form cuttings for the highway and this material would then be used to form embankments.

## ANNEX B - ADDITIONAL INFORMATION FOR 1.0.8

Phase	Activity	Approximate Programme	Key Construction Activities	dDCO Schedule 1 Work Number
0	Compound construction and National Grid gas main diversion	One month (month 1)	<p>Compound and welfare areas constructed for main works. Hardstanding areas will be constructed, topsoil stripped and sub-base installed. Areas for car parking will be surfaced as required.</p> <p>Clearance of vegetation undertaken as required to enable the works.</p> <p>National Grid to undertake high pressure gas main diversion before main works commence. Works are estimated to take up to 6 months, so therefore activity will also feature in Phase 1.</p>	<p><b>58 to 72</b> = compounds and material storage areas set-up and use until month 23.</p> <p><b>1 to 57 and 73 to 99</b> = vegetation clearance, where required.</p> <p><b>84</b> = National Grid Gas diversion works.</p>
1	Offline construction, including overbridges, culverts, retaining walls	Eighteen months (month 1 - 18)	<p>Construction of carriageway offline from existing A47. Activities including topsoil strip, cut / fill earthworks, drainage installation, carriageway construction including capping, sub-base and the bitumen bound layers.</p> <p>Construction of offline structures including new overbridges and retaining walls. Sheet piling, bored piling and concrete works will be undertaken as part of the structure construction works.</p> <p>Traffic management to side roads as required to enable offline A47 construction works.</p>	<p><b>1 to 55</b> = all new Scheme works associated with mainline dual carriageway creation, including parts of works to be completed during Phases 2 to 4 works.</p> <p><b>73 to 93 and 95</b> = all other utility diversion, installation removal or alteration works.</p> <p><b>56, 57, 96 and 97</b> = flood compensation, ecological and environmental mitigation work.</p> <p><b>94</b> = Orsted cabling (if needed).</p> <p><b>98</b> = NWL connection (if confirmed).</p>
2	<p>Norwich Road junction - New A47 carriageway tie-in across existing A47</p> <p>Traffic using new side roads to the south of the new Norwich Road junction before joining back into the existing A47</p>	Two months (month 19 - 20)	<p>Construction of 'tie-in' plug sections of the new A47 carriageway where it crosses over the existing A47 to join the newly constructed offline sections together.</p> <p>Activities include excavation of existing carriageway, earthworks, drainage installation, carriageway construction including capping, subbase and the bitumen bound layers.</p>	<b>39, 40 and 42 to 50</b> = completion of Scheme works on existing and new A47 connections to the proposed Norwich Junction and existing Honingham roundabout.
2A	Eastern tie-in - during Phase 2 – Traffic to use outside lanes only of existing Easton roundabout	One month (Month 19)	<p>Works undertaken to construct carriageway through the existing Easton roundabout.</p> <p>Activities include excavation of existing roundabout, earthworks, drainage installation, carriageway construction including capping, subbase and the bitumen bound layers.</p>	<p><b>50 to 53</b> = Easton roundabout, footbridge and works to connect Church Lane and Dereham Road.</p> <p><b>99</b> – temporary haul route from realigned Taverham Road to land parcels between the River Tud, Taverham Road, the A47 mainline dual carriageway and Church Lane, Easton.</p>
2B	Eastern tie-in - during Phase 2 – traffic to travel through previous roundabout on new carriageway construction	One month (Month 19)	<p>Works undertaken to remove existing outer lanes of roundabout and complete new through A47 carriageway construction.</p> <p>Activities include excavation of existing roundabout, earthworks, drainage installation, carriageway construction including capping, subbase and the bitumen bound layers.</p>	
3	<p>Wood Lane junction – new A47 carriageway tie-in across existing A47</p> <p>Traffic using new A47 carriageways from Easton to Wood Lane junction, then the at Wood Lane junction on / off new slip road to use new side road that that ties into the existing A47 to the east of Hockering</p>	One month (month 20 - 21)	<p>Activities include excavation of existing carriageway, earthworks, drainage installation, carriageway construction including capping, subbase and the bitumen bound layers.</p>	<b>17 to 25 and 28</b> = completion of Scheme works on existing and new A47 connections to the proposed Wood Lane Junction and existing B1353 Wood Lane and Dereham Road, Honingham.
4	Western tie-in	One month (month 21 - 23)	<p>Cross-overs will be constructed through the existing central reservation to enable phase 4a and 4b works.</p>	<b>2, 4 and 5</b> = completion of Scheme works on existing and new A47 works west of Hockering.
4A	Western tie-in, traffic using existing alignment with contraflow to existing dual carriageway section	One month (month 21 - 22)	<p>New eastbound alignment tied in. Activities include excavation of existing carriageway, earthworks, drainage installation, carriageway construction including capping, subbase and the bitumen bound layers.</p>	

Phase	Activity	Approximate Programme	Key Construction Activities	dDCO Schedule 1 Work Number
4B	Western tie-in, traffic moved to use new carriageway	One month (month 22 - 23)	New westbound alignment tied in. Activities include excavation of existing carriageway, earthworks, drainage installation, carriageway construction including capping, subbase and the bitumen bound layers.	
5	Compound removal	One month (month 23)	Compounds and site welfare will be removed. Hardstanding areas will be removed and the site re-topsoiled. Area will be re-landscaped as required.	<b>58 to 72</b> = compounds and material storage areas removal.

## ANNEX C – ADDITIONAL INFORMATION FOR Q5.0.3

### 1. Summary

As required by the Planning Act 2008 (the Planning Act), Highways England is required to identify individuals in one or more of the categories set out in Section 44 and 57 for the purposes of consultation and notification under Sections 42 and 56. This includes undertaking “diligent inquiry” to identify parties with an interest in land within Categories 1, 2 and 3.

- Category 1 includes owners, lessees, tenants (whatever the tenancy period) or occupiers of the land within Order limits
- Category 2 includes parties that have an interest in the land or who have the power to sell, convey or release the land within Order limits
- Category 3 includes parties that the applicant thinks that, if the order sought by the application were made and fully implemented, the person would or might be entitled to make a relevant claim for compensation under section 10 of the Compulsory Purchase Act 1965 and/or Part 1 of the Land Compensation Act 1973 and/or section 152(3) of the Act.

In addition, it is necessary to identify

- Crown Interests; and
- Special Category Land

Carter Jonas's Land Referencing team have undertaken diligent inquiry to identify interests in one or more of the categories set out in sections 44 and 57 of the Act.

We conducted a land ownership information refresh (17 January 2020) and further contact referencing exercises to ensure that all information was sufficient diligent inquiry for the purposes of statutory consultation conducted in February. Prior to producing the book of reference and order plan post-statutory consultation we conducted a second refresh (01 October 2020) of land ownership information to ensure all land interests (Categories 1, 2 and 3) were included in the BOR)

After developing our own book of reference post the consultation review and land information review, we identified further affected parties which required further consultation this included those which are affected by the scheme and were not consulted previously, and those who were affected differently in regard to land take, further targeted consultation was conducted in November 2020 to ensure they were adequately consulted with by the applicant.

In the build up to submission we conducted a Third refresh (4th January 2021) of land ownership information exercise to ensure that all those affected by the scheme were identified prior to submission of the application for development consent.

The methods for developing our book of reference are set out below.

### 2. Desktop Referencing

#### 2.1 HM Land Registry

Upon receiving the land referencing limits from the design/construction team, we conducted a search of the index map and refreshed at key design changes, to locate all registered land registry titles which featured within the red line boundary.

Land Registry data was received in the form of a digital shape file (a GIS layer and a pdf). Digital copies of the Official Copy Registers and Title Plans were downloaded and interrogated to find all relevant freehold, leasehold, mortgagee, beneficiary, other charges and restrictive covenant information, this was extracted and stored in our land referencing database (“LAND System”).

From this data, landownership parcels were created. The landownership parcels were drawn to reflect unique ownership information and stored spatially on a GIS application. Where land was not registered, additional parcels to complete these gaps were created based on OS mapping and site data. As a result, all land within the identified land referencing limits was parcelled and each parcel was given a unique reference number.

Periodic updates were provided by HM Land Registry and this ensured that any changes that occurred to title information was captured.

Whilst, generally such updates would be obtained bi-annually, they were specifically timed to occur prior to key milestones, such as the issue of further section 42 consultation letters, and prior to the submission of the application version of the Book of Reference (APP-023).

#### 2.2 Major Landowners (MLOs)

Land interest information was requested from MLOs, including local authorities, statutory undertakers e.g. utilities and other landowners with multiple land ownership interests.

Requests to the Norfolk County Council and to North Tuddenham, Hockering, Honingham, Easton and Ringland Parish Council were also made, to access the councils' land ownership mapping data for; information regarding public highways and private roads; information about special category land (including open space, commons, fuel and field garden statutory allotments); and any information relating to extant planning permissions which may alter the ownership of a land parcel; and known future public and privately funded developments, where relevant.

Information was received in a variety of formats and entered into the LAND System and our GIS application as appropriate. Where necessary, further enquiries were made to address any changes, anomalies, or gaps.

#### 2.3 Other Desktop Activities

Desktop studies including publicly available online mapping, were used to check for open spaces and rights of way within the land referencing limits and further research was carried out to identify ownership in relation to such interests. The information obtained through this diligent inquiry was incorporated into the LAND System and our GIS application.

Additional desktop research and checks were undertaken to confirm information received through direct site inquiries and from HM Land Registry. For instance, Companies House searches and LexusNexus TracIQ were undertaken to ensure registered companies' details were verified and updated where necessary, ensuring appropriate addresses for service of statutory notices and other correspondence.

#### 2.4 Observational Site Visits

Observational site visits were also made as part of the land referencing process, to inform our understanding of the nature and current use of the land within the Order limits. Physical features on the ground were recorded, such as infrastructure e.g. highways, as well as commercial premises and industrial land. In addition, the site team examined potentially complicated sites such as land with multiple ownership / occupancy interests, unregistered land, or land with multiple rights of access. All information obtained was recorded in the LAND System and our GIS application.

### 3. Potential part 1 compensation claimants' identification

The Land Referencing Approach for identifying part 1 claimants (Land Compensation Act 1973) for Tuddenham is a precautionary one taking into account geographic principles, the proximity of land outside the red line boundary, significant design change/impacts in the existing network and exercising professional judgement regarding where land value may depreciate because of the significant impacts of the relevant physical factors:

- Noise
- Vibration
- Smell

- Fumes
- Smoke
- Artificial Lighting
- Discharge of any solid or liquid substance on to land

Once potential part 1 claimants were identified for the purpose of the book of reference this information was kept up to date and was included in the land ownership information refreshes on 17 January 2020, 01 October 2020 and 04 January 2021.

#### 4. Contact Referencing

##### 4.1 Request for Information (RFIs)

Information obtained through desktop research was supplemented and verified through the use of 'requests for information' ("RFIs"), which included requests for information about a recipient's own interests, associated third party interests and the spatial extent of land or property. Where RFIs were returned with updated information regarding an owner, tenant/lessee, occupier or other party, the information provided was used to update the LAND System and our GIS application.

Where returns to RFIs were not provided (despite having been requested), follow-up site visits were made. Two separate site visits were conducted to make direct contact with the owner or occupier of the property. Recipients of the RFIs were also offered the means to respond to or ask questions about the project via a dedicated project email and hotline. The land referencing team recorded all correspondence and communication in the LAND System.

##### 4.2 Contact Site Visits

Contact site visits were undertaken to confirm land ownership and identify the occupation details for properties e.g. leaseholders, tenants, occupiers etc. These site visits were initially targeted at properties where no RFI had been returned by the recipient, however these were also conducted at properties where recipients had returned the RFI, to clarify any gaps in information.

The site referencing team also used this opportunity to confirm any information which may have been gathered through desktop referencing methods. During the site visits, where there was no response at a property, a calling card was left in the letterbox detailing the date and time of the attempted visit, along with the telephone number for the land referencing team.

This calling card instructed owners / occupiers of the property to call to arrange a suitable time for our site team to visit their property. If no response was received, the property was visited a minimum of two further times to make direct contact with the owner or occupier of the property. On each occasion, a calling card was left at the property encouraging the owner / occupier to respond to the RFI or contact the land referencing team to arrange a visit. The date and time of all attempted site visits to a property are recorded in the LAND System.

##### 4.3 Unknown Owner - Erection of On-Site Notices

Where land ownership could not be ascertained through desktop or site referencing methods, the land referencing team erected notices on site, requesting information about the ownership of the land to which the notices were affixed. The notices showed the land ownership boundary in question and provided details of how to contact the land referencing team with any relevant information. Any information received was added to the LAND System and our GIS application.

#### 5. Data Management

All information on land interests within the referencing limits was stored in Pinpoint. This included the nature of their interest and contact details. All communication and correspondence with landowner and occupiers were recorded and uploaded to the LAND System against the relevant party.

This included:

- RFIs issued and received by post
- RFIs completed on site
- Date and time of site visits (successful and unsuccessful)
- Incoming and outgoing emails
- Records of telephone conversations
- Incoming and outgoing letters
- Statutory Notices
- Details of landowner / stakeholder negotiations LAND System also stored all Land Registry titles and plans.

These were uploaded against the relevant land parcel and related to the relevant interest(s). This ensures a clear audit trail of the land ownership investigations and also serves as an instant source for all land and property information.

#### 6 Deliverables for DCO Application Submission

The land referencing information was compiled into a Book of Reference and associated Land Plans. The Book of Reference is in five parts as prescribed by Regulation 7(1) of the Infrastructure Planning (Applications: Prescribed Forms and Procedures) Regulations 2009.

- Part 1 lists all Category 1 interests (owners, lessees, tenants and occupiers) and Category 2 interests (parties that have an interest in the land or who have the power to sell, convey or release the land within Order limits)
- Part 2 lists all Category 3 interests (those with a relevant claim for compensation. There is precedence for this Part to be split into two sections (Part 2A and Part 2B). Part 2A lists parties with a relevant claim within Order limits, and Part 2B identifies parties with a relevant claim outside of Order limits
- Part 3 lists all parties entitled to enjoy easements or other private rights over land within Order limits
- Part 4 lists all Crown interests in land within Order limits
- Part 5 lists all Special Category Land to be affected within Order limits

In parallel with the production of the Book of Reference (**APP-023**) and Land Plans (**APP-006**) for the DCO application, the information is also incorporated within the Order schedules, listing plots over which powers of compulsory acquisition are limited to:

- Permanent Acquisition of Land
- Permanent Acquisition of New Rights
- Temporary use and possession of

In addition, Annex A to the Statement of Reasons (**APP-021**) lists the purpose(s) for applying for compulsory acquisition powers over each plot within the Book of Reference and Land Plans.