

# A47/A11 Thickthorn Junction

**Scheme Number: TR010037**

## **Volume 9** **9.2 Applicant's Response to** **Relevant Representations**

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

Planning Act 2008

October 2021

Infrastructure Planning

Planning Act 2008

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

A47/A11 Thickthorn Junction  
Development Consent Order 202[x]

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**9.2 APPLICANT'S RESPONSE TO RELEVANT REPRESENTATIONS**

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## CONTENTS

<b>1</b>	<b>INTRODUCTION</b> .....	<b>1</b>
	<b>COMMON RESPONSE A</b> .....	<b>2</b>
	<b>COMMON RESPONSE B</b> .....	<b>3</b>
	<b>COMMON RESPONSE C</b> .....	<b>3</b>
	<b>COMMON RESPONSE D</b> .....	<b>4</b>
	<b>COMMON RESPONSE E</b> .....	<b>5</b>
	<b>COMMON RESPONSE F</b> .....	<b>5</b>
	<b>COMMON RESPONSE G</b> .....	<b>6</b>
	<b>COMMON RESPONSE H</b> .....	<b>7</b>
	<b>COMMON RESPONSE I</b> .....	<b>8</b>
	<b>COMMON RESPONSE J</b> .....	Error! Bookmark not defined.
	<b>COMMON RESPONSE K</b> .....	Error! Bookmark not defined.
	<b>COMMON RESPONSE L</b> .....	Error! Bookmark not defined.
	<b>RR-001 NORFOLK COUNTY Council</b> .....	<b>10</b>
	<b>RR-002 ANGLIAN WATER</b> .....	<b>10</b>
	<b>RR-003 CADENT GAS LIMITED</b> .....	<b>12</b>
	<b>RR-004 ENVIRONMENT AGENCY</b> .....	<b>14</b>
	<b>RR-005 HISTORIC ENGLAND</b> .....	<b>30</b>
	<b>RR-006 MINISTRY OF DEFENCE DIO SAFEGUARDING TEAM</b> .....	<b>31</b>
	<b>RR-007 NATIONAL GRID</b> .....	<b>32</b>
	<b>RR-008 Addleshaw Goddard LLP on behalf of Network Rail Infrastructure Limited</b> ...	<b>33</b>
	<b>RR-009 Brown &amp; Co on behalf of Big Sky Developments Ltd</b> .....	<b>34</b>
	<b>RR-010 climate Emergency Planning and Policy (CEPP) (Climate Emergency Planning and Policy (CEPP))</b> .....	<b>36</b>
	<b>RR-011 Bidwells LLP on behalf of the Trustees of The CM Wattt Residual Trust</b> .....	<b>38</b>
	<b>RR-012 Bidwells LLP on behalf of The Trustees of The Mackintosh Trust</b> .....	<b>43</b>
	<b>RR-013 Bidwells on behalf of M P Kemp Limited</b> .....	<b>50</b>
	<b>RR-014 New Anglia LEP</b> .....	<b>51</b>
	<b>RR-015 Norfolk Constabulary</b> .....	<b>52</b>
	<b>RR-016 Technical Support Officer for the Norfolk Local Access Forum on behalf of Norfolk Local Access Forum</b> .....	<b>52</b>
	<b>RR-017 Norwich Cycling Campaign</b> .....	<b>53</b>
	<b>RR-018 Norwich Green Party Group of City and County Councillors</b> .....	<b>53</b>

<b>RR-019 Norwich &amp; Norfolk Friends of the Earth .....</b>	<b>55</b>
<b>RR-020 Orsted Hornsea Project Three (UK) (Orsted Hornsea Project Three (UK)).....</b>	<b>56</b>
<b>RR-021 PUBLIC HEALTH ENGLAND.....</b>	<b>58</b>
<b>RR-022 BNP Paribas Real Estate on behalf of Royal Mail Group.....</b>	<b>63</b>
<b>RR-023 Tim Hancock Associates on behalf of Shell U.K. Limited.....</b>	<b>64</b>
<b>RR-024 stop wensum link .....</b>	<b>65</b>
<b>RR-025 transport action network .....</b>	<b>66</b>
<b>RR-026 vattenfall wind power ltd .....</b>	<b>69</b>
<b>RR-027 the woodland trust.....</b>	<b>71</b>
<b>RR-028 adrian holmes .....</b>	<b>72</b>
<b>RR-029 alyson lee.....</b>	<b>72</b>
<b>RR-030 andrew m cawdron .....</b>	<b>73</b>
<b>RR-031 anne robinson.....</b>	<b>75</b>
<b>RR-032 emily scott bolton.....</b>	<b>76</b>
<b>RR-033 gil murray .....</b>	<b>76</b>
<b>RR-034 Birketts LLP on behalf of Mr &amp; Mrs Graham Thompson.....</b>	<b>77</b>
<b>RR-035 jamie osborn.....</b>	<b>79</b>
<b>RR-036 jan davis.....</b>	<b>79</b>
<b>RR-037 Brown &amp; Co on behalf of Janet Grint.....</b>	<b>81</b>
<b>RR-038 Brown &amp; Co on behalf of jason graver .....</b>	<b>81</b>
<b>RR-039 john elbro.....</b>	<b>82</b>
<b>RR-040 richard hawker .....</b>	<b>84</b>
<b>RR-041 SOUTH NORFOLK COUNCIL.....</b>	<b>85</b>

## **1 INTRODUCTION**

- 1.1.1 The Development Consent Order (DCO) application for the A47/A11 Thickthorn Junction scheme was submitted on 31 March 21 and accepted for examination on 28 April 21.
- 1.1.2 The purpose of this document is to set out Highways England's (the Applicant) response to the Relevant Representations (RR) from interested parties submitted to the Planning Inspectorate.

## **1 MULTIPLE COMMON RELEVANT REPRESENTATIONS**

- 1.1.1 There were 41 separate relevant representations and each has been allocated a reference code (RR-001 to RR-040 and AS-007) with an individual response presented in this report.
- 1.1.2 However, many relevant representations use the same or very similar comments. In order to avoid repeating the same answers, to help the Examining Authority see those relevant representations which have a common theme, a set of Common Responses A to I has been created and cross referred to.

## **2 KEY ABBREVIATIONS**

- 2.1.1 The following abbreviations have been used in the Applicant's responses to the relevant representation for commonly used terms:
- dDCO = draft Development Consent Order.
  - ES = Environmental Statement
  - ExA = Examining Authority
  - NWL = Norwich Western Link
  - the Scheme = A47/A11 Thickthorn Junction

## COMMON RESPONSE A

Relevant Representation	Highways England Response
<p>The Scheme will lead to more traffic, accelerating the risk of climate induced societal collapse and increasing premature deaths from air pollution.</p> <p>The case for the scheme says that it will increase capacity, ie allow more traffic.</p> <p>This Scheme therefore breaches national policies for climate change and modal shift towards walking, cycling and public transport.</p>	<p>The Case for the Scheme (<b>APP-125</b>) acknowledges traffic is forecast to grow in this area due to over 50,000 new jobs and 100,000 new homes planned for the area over the next 15 years. There are growth hotspots at several locations along the A47 corridor, including Norwich, and several major proposed housing developments close to the A47, Hethersett, Cringleford, Attleborough and Wymondham as well as within the Greater Norwich Area.</p> <p>The A47/A11 Thickthorn Junction experiences high levels of congestion during peak hours, acting as a bottleneck and leading to longer and more unreliable journey times.</p> <p>Between 2016 and 2018, the collision data for the A11 and A47 dual carriageways and collisions on or associated to the traffic approaching the Thickthorn roundabout showed a total of 24 collisions, of which none were fatal, two were serious and 22 were slight. These 24 collisions resulted in 35 casualties of which 4 were serious and 31 were slight. The high rate of accidents in the area is a justification for the Scheme, since the A47 is currently the second worst A road nationally for fatalities and the accident severity ratio is above average. Improving this junction would address the current levels of congestion experienced; which would reduce the number of accidents and will remove an obstruction to greater economic growth in the area.</p> <p>In developing this Scheme, the Applicant addresses these safety, congestion and journey time issues by diverting traffic approaching the existing Thickthorn Junction Interchange via the A11 onto the A47. The Scheme will provide additional capacity for future regional traffic growth up to 2040 and manage the forecast traffic more safely and efficiently. The improved journey times will support employment and housing growth in the local area as well as across the A47 corridor linking Peterborough and Norwich.</p> <p>ES Chapter 5 Air Quality (<b>APP-042</b>) presents the air quality assessment and concludes there would be no significant effects on air quality at human and ecological receptors as a result of the Scheme.</p> <p>ES Chapter 14 Climate (<b>APP-051</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 National Networks National Policy Statement (NNNPS) 2014, and Design Manual for Roads and Bridges 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>A detailed assessment of the embodied carbon through the construction, operation and maintenance has been undertaken using the Highways England Carbon Tool and following the methodology within the associated guidance document. The Department for Transport's Transport Appraisal Guidance Green House Gas 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>Section 4.14 'Walking, Cycling and Horse-riding (WCH) Assessment' of the Case for the Scheme (<b>APP-140</b>) demonstrates how the Scheme would provide new WCH facilities, improve accessibility for users in the local area and provide the opportunity to choose active travel modes (e.g. walking, cycling, etc.). Section 5.4 of the Case for the Scheme also reports neutral impacts on public transport.</p>

Relevant Representation	Highways England Response
	<p>On this basis the Applicant does not agree that the Scheme breaches national policies for climate change and modal shift towards walking, cycling and public transport.</p>

## COMMON RESPONSE B

Relevant Representation	Highways England Response
<p>The scheme employs modelling data, assumptions and projections from before the Covid 19 pandemic, e.g. for traffic and economic projections.</p> <p>Recent and future levels of home-working, the shift towards Internet-based meetings, and strong reductions of traffic on the roads due to COVID impacts need to be assessed against the supposed need for “increased capacity”.</p> <p>This is particularly true when considered against the overriding policy imperatives to reduce emissions and pollution and thus enhance not undermine these traffic reducing trends.</p>	<p>The traffic modelling and economic appraisal for the Scheme were undertaken in accordance with the Department for Transport (DfT) Transport Appraisal Guidance.</p> <p>The traffic modelling used to support the economic and environmental assessments accounts for predicted proportions of the vehicle types, fuel type, forecast fuel consumption parameters and emission factors according to the 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 in accordance with TAG guidance for calculating end-user (traffic) greenhouse gas emissions.</p> <p>No updates have been published by the DfT with regards to the impact on the traffic growth caused by COVID-19. As reported in Chapter 4 of the Case for the Scheme (<b>APP-125</b>), in assessing the value for money of the Scheme, the analysis includes high and low growth traffic and economic scenarios. Under the low growth scenarios (which potentially acts as a proxy for uncertainties such as the impact of COVID-19) the Scheme still represents medium value for money.</p> <p>Further sensitivity testing will be undertaken during PCF stage 4 and 5, upon the release of the revised DfT Transport Appraisal Guidance in line with industry standard processes.</p> <p>However, the need for the Scheme is more than just improving capacity and economic growth. This section of the A47 also has a poor safety record. The A47 is the second worst A road nationally for fatalities and the accident severity ratio is above average. Between 2016 and 2018, the collision data for the A11 and A47 dual carriageways and collisions on or associated to the traffic approaching the Thickthorn Junction showed a total of 24 collisions, of which none were fatal, two were serious and 22 were slight. These 24 collisions resulted in 35 casualties of which 4 were serious and 31 were slight. Improving this junction would address the current levels of congestion experienced; would reduce the number of accidents and will allow economic growth in the area</p>

## COMMON RESPONSE C

Relevant Representation	Highways England Response
<p>The environmental statement should start from the current situation, not, as this application currently does, from an</p>	<p>For the majority of the ES chapters, the assessments use the 2019 baseline which does not include the Scheme or the NWL. It is only those assessments that use the traffic modelling data which have with or without the NWL within their baseline scenarios.</p> <p>As described in Section 4.4 of ES Chapter 4 Environmental Assessment Methodology (<b>APP-041</b>), the traffic modelling dependent assessments were given both the NWL and without NWL modelling outputs and used the most relevant dataset to</p>

Relevant Representation	Highways England Response
<p>assumption that the Norwich Western link is already built.</p> <p>The application and traffic modelling thus fail to comply with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, by failing to take the current environmental and infrastructure context as the starting point.</p> <p>As is clear throughout the planning system we must avoid planning by stealth and anything that smacks of corruption and failure to uphold the highest standards of probity and process.</p>	<p>demonstrate a worst case assessment outcome. Consequently, the air quality and noise assessments used the no NWL scenario to provide a worst case assessment of traffic using the proposed Scheme.</p> <p>The traffic modelling for the Scheme was undertaken in accordance with the Department for Transport (DfT) Transport Appraisal Guidance (TAG), dated May 2019. In July 2019, Norfolk County Council announced the preferred route for their NWL (a new 3.8 mile dual carriageway road) and in May 2020, the DfT approved the Strategic Outline Business Case for NWL.</p> <p>In accordance with DfT TAG 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 TAG guidance, the schemes included in the Do-Minimum (DM) scenario have a likelihood of at least 'near certain' or 'more than likely'. The NWL is listed in the uncertainty log as 'near certain' or 'more than likely' and so it is included in the core scenario.</p> <p>The Scheme is not dependent on the NWL and would still proceed without the NWL coming forward. Therefore, sensitivity scenarios were completed to compare traffic modelling with and without NWL.</p> <p>However, the Applicant is working with Norfolk County Council as it is important to understand how the two schemes would interact. In this way 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.</p>

## COMMON RESPONSE D

Relevant Representation	Highways England Response
<p>Need to avoid planning by stealth, also relates to the A47 dualling's links with the Norwich Western link.</p> <p>The application fails to adequately explore the relationship between the two road proposals, and such relationships and, why they have thus far been largely ignored, needs to be fully examined.</p>	<p>As reported in the Scheme Design Report, Rev.1 (<b>APP-127</b>), the Applicant is working collaboratively with Norfolk County Council as it is important to understand the relationship with regards 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.</p>

## COMMON RESPONSE E

Relevant Representation	Highways England Response
<p>The traffic modelling is based on the NATS 2015 (baseline year 2015) model. Recent modelling by Norfolk County Council based on the newer NATS 2019 (baseline year 2019) model reports substantially lower (c. -30%) vehicle kilometres within the scheme area.</p> <p>The discrepancies need to be examined, and the models fully reconciled.</p>	<p>The 2019 NATS model has not yet been approved by the Department for Transport. On that basis, NATS 2015 remains the approved model and so was used in the Applicant's assessment.</p> <p>However, the Applicant has undertaken a comparison between the NATS 2015 and 2019 traffic models based on the total annual average daily traffic (AADT) summed across the major links within the nearby A47 North Tuddenham to Easton scheme area. In summary, the comparison indicates that there is a difference of 3.3% AADT between the NATS 2015 model and the NATS 2019 model. Whilst the Applicant expects the results to be very similar for this Scheme, a traffic modelling exercise is being undertaken to confirm the position. The results of this will be presented at Deadline 2.</p> <p>The 30% variation cited in the representation relates to a comparison of traffic models used by the Norwich Western Link scheme at different stages of its development. That model uses a different combination of road network links and will therefore give a different result.</p> <p>An increase in traffic of 3.3% is broadly in line with the expected traffic growth over a four-year period (2015-2019).</p>

## COMMON RESPONSE F

Relevant Representation	Highways England Response
<p>Given that we are in a nature, or ecological emergency as well as a climate emergency, as noted by parliament in 2019 and the loss of nature alone threatens human extinction, the scheme's destruction and fragmentation of rare habitats such as wet grazing meadows and those home to protected species, notably bats, needs careful examination.</p> <p>As has been well established in the literature and practice associated developments risk exacerbating this scheme's tendency to detrimentally urbanise mature, rare and biodiverse countryside.</p>	<p>Effects on biodiversity, including habitats and impacts on protected species, including bats, have been assessed in ES Chapter 8 Biodiversity (<b>APP-045</b>). The assessment was informed by extensive habitat and species surveys, plus consultation with key stakeholders including Natural England, the Environment Agency, Norfolk Wildlife Trust, Norfolk County Council and local wildlife groups.</p> <p>Section 8.9 of ES Chapter 8 outlines the measures proposed to minimise effects on and maximise opportunities for biodiversity, and to mitigate impacts on protected species.</p> <p>Section 8 of the Scheme Design Report, Rev.1, (<b>APP-125</b>) presents an overview of the environmental considerations that have influenced and form an embedded part of the Scheme design. These include:</p> <ul style="list-style-type: none"> <li>• Ecological measures to reduce habitat fragmentation through provision of: safe mammal crossing points through mammal ledges in culverts and protecting the flight and foraging routes of bats.</li> <li>• Riparian planting along the realigned section of Cantley Stream.</li> <li>• Sustainable drainage systems design.</li> <li>• Landscaping with sensitive planting, native plant species and wildflowers.</li> </ul> <p>The provisional design of the proposed ecological mitigation is presented in the Environmental Masterplan, Rev.1 (<b>AS-007</b>) and all mitigation detailed in Section 8.9 of ES Chapter 8 will be detailed and implemented as part of the record of environmental actions and commitments (REAC), which forms Table 3.1 in the Environmental Management Plan (EMP) (<b>APP-128</b>). Additional detail regarding the mitigation design will be presented in Annex B5 'Landscape and Ecology Management Plan (LEMP)' of the</p>

Relevant Representation	Highways England Response
	<p>EMP, to be produced by an appointed Landscape Architect and Ecologist prior to construction. The LEMP will describe the proposed management and monitoring of the landscape and ecological mitigation and compensation features of the Scheme. Delivery of these commitments, including consulting the relevant local planning authority on the final landscaping design and Environmental Management Plan, are secured through the draft DCO Requirements 4 'Environmental Management Plan' and 5 'Landscaping' (<b>APP-017</b>).</p>

## COMMON RESPONSE G

Relevant Representation	Highways England Response
<p>It is urged that this inspection exercise take the larger view and avoid piecemeal planning by stealth.</p> <p>In-combination, and cumulative impacts, for biodiversity, ecology, air quality, noise and carbon emissions have not been assessed with at least six other road infrastructure schemes near to Norwich and East Norfolk.</p> <p>Carbon emissions need to be cumulatively assessed both locally within this area, and nationally with up to 100 other schemes planned. The recent judgement of <i>Pearce v Secretary of State BEIS</i> [2021] demonstrates that the Courts accept the importance of cumulative environmental impact assessment.</p>	<p>Cumulative impacts for all the disciplines considered in the environmental impact assessment, including biodiversity, ecology, air quality, noise and carbon emissions, are considered in ES Chapter 15: Cumulative Effects Assessment (<b>APP-052</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 (DfT) 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 are included in the core scenario.</p> <p>The Scheme is also assessed against legislated carbon budgets in Chapter 14 (<b>APP-051</b>), which are also inherently cumulative as they consider emissions across all sectors in the economy. The assessment of climate effects has been provided in accordance with the National Networks National Policy Statement (NNNPS). The Applicant has provided sufficient information on likely significant environmental effects to enable the Secretary of State to evaluate such effects and take them into account in the determination of the DCO application. Neither the NNNPS or the Applicant propose that a further assessment of likely significant effects should take place at a later stage and so the circumstances considered in <i>Pearce v Secretary of State for Business, Energy and Industrial Strategy</i> [2021] EWHC 326 do not arise.</p>

## COMMON RESPONSE H

Relevant Representation	Highways England Response
<p>Carbon emissions should be tested against inter/national legislation and guidance including the Paris agreement, the legally binding target under the Climate Change Act 2008 to meet net-zero carbon emissions by 2050, the UK Sixth Carbon Budget (6CB), science-based carbon budgets from the Tyndall Centre, NPPF 148 which requires the planning system contribute to "radical reductions of greenhouse gas emissions".</p>	<p>ES Chapter 14 Climate (<b>APP-051</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 National Networks National Policy Statement (NNNPS) 2014, and Design Manual for Roads and Bridges 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. The Applicant can only undertake an assessment of the likely significant effect of carbon against published Government policy. The Applicant is not responsible for producing the UK carbon budgets, which are set by the Government in response to recommendations from the UK Climate Change Committee. The Committee's recommendations informed the development of the Sixth Carbon Budget. Government has an array of policy tools and levers available to meet current and future carbon budgets.</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 recognised that in 2050 people will still drive on improved roads, but increasingly in zero emission cars.</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 TAG (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-051</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 provide an updated ES Chapter 14 (<b>APP-051</b>) for Deadline 3 to allow consideration before the November Hearings.</p>

## COMMON RESPONSE I

Relevant Representation	Highways England Response
<p>Norfolk County Council has identified that the area north of the scheme has a nationally significant breeding barbastelle colony of bats, recently found, which although not yet afforded SSSI or SAC status would otherwise qualify as such (see: page 85 in NCC submission to PINS on the A47/A11 Thickthorn Junction, June 3rd, at <a href="http://bit.ly/NCC_PlanDeleg_Jun_e2021">http://bit.ly/NCC_PlanDeleg_Jun_e2021</a>).</p> <p>The in-combination, and cumulative impacts, of the A47 dualling with the Norwich Western link road on this European protected species should be assessed under Part 3, Section 40 of the Natural Environment and Rural Communities Act 2006</p>	<p>Effects on barbastelle bats <i>Barbastella barbastellus</i> have been considered in ES Chapter 8 Biodiversity (<b>APP-047</b>) and the Report to Inform Habitats Regulations Assessment (<b>APP-124</b>). Section 8.4 of ES Chapter 8 outlines that no in-combination effects have been anticipated with the other A47 corridor improvement schemes due to the distance involved between Thickthorn Junction and the other schemes which are located between 10 km north west (North Tuddenham to Easton), 16 km east (Blofield) and 80 km west (Guyhirn), of the Order limits</p> <p>Section 8.4 of ES Chapter 8 also outlines that Norfolk County Council (<b>NCC</b>) has been consulted 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>1</sup>.</p> <p>The Applicant is also part of the NWL Ecology Liaison Group, which includes WSP (NWL ecological consultants); Norwich Bat Group; NCC; Toadwatch; The Wildlife Trust; Norfolk and Norwich Naturalists Society; and Wensum Valley Birdwatching Society. These meetings are still ongoing.</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); and</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>Although it is claimed there is a potentially nationally significant bat colony 10km 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. As this colony does not currently have statutory designated status, any bats from this colony have been considered on the same basis as all other non-designated bat colonies. The cumulative effects assessment only considered non statutory bat roosts within 50m of the Order Limits. This is because 50m is considered to be a suitable zone of influence of the Scheme on local bat populations, with the exception of crossing points and commuting and foraging routes which are then surveyed separately to bat roosts. Results of bat surveys undertaken as part of the environmental assessment are included in ES Chapter 8.8 Bat roost and crossing point survey report (<b>APP-094</b>)-Morton-on-the-Hill, where NCC states the colony is located, is several kilometres north of the</p>

<sup>1</sup> Data was also exchanged for GCN, reptiles, birds, fungi and invertebrates.

Relevant Representation	Highways England Response
	<p>nearest point on the Scheme Order Limits.</p> <p>At a meeting of NCC's Planning and Highways Delegations Committee on Thursday 3 June 2021, the committee considered a report by the Executive Director of Community and Environmental Services which included a recommendation to agree NCC's initial written representation in relation to the Scheme, as set out in relevant sections of the report (see <a href="http://bit.ly/NCC_PlanDeleg_June2021">http://bit.ly/NCC_PlanDeleg_June2021</a>). This included text relating to the colony of barbastelle bats.</p> <p>At a subsequent meeting of the committee, on 27 August 2021, the committee was asked to consider a report by the Director of Growth and Development which recommended agreeing a written representation in relation to the Scheme which suggested changes to the proposed written representation which had been agreed at the June committee meeting. The report included at Appendix B a tracked changed updated written representation which was intended to "correct a number of factual errors and omissions in relation to commentary relating to bats, specifically:</p> <ul style="list-style-type: none"> <li>• <i>To make it clear that it is Dr Charlotte Packman (of Wild Wings Ecology), as distinct from the county council, who "believes that there is a nationally significant breeding barbastelle colony of over 150 bats in this area";</i></li> <li>• <i>To explain that, to date, no survey data has been shared with NCC or otherwise published by Dr Packman to provide supporting evidence which would substantiate Dr Packman's belief that there is a nationally significant breeding barbastelle bat colony in the area;</i></li> <li>• <i>To confirm that, currently, the area is not formally designated as an SSSI or SAC on the basis of the presence of barbastelle bats, and nor has it been selected for assessment by the Joint Nature Conservation Committee and, as such, it does not have the status of a notified SSSI or a possible SAC."</i></li> </ul> <p>The committee resolved to agree the amended written representation.</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 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 would need to review the relevant research in order to provide any further comment.</p> <p>A record of the NCC Planning and Highways Delegations Committee meeting held on 27 August 2021 can be found at the following link  <a href="https://bit.ly/3lySDAL">https://bit.ly/3lySDAL</a></p>

## RR-001 NORFOLK COUNTY COUNCIL

Reference	Relevant Representation	Highways England Response
RR-001.1	<p>While the County Council supports the principle of upgrading the existing A47/A11 Thickthorn Junction, there are a number of detailed issues in respect of, amongst other things, local highway and access matters, flood risk and environmental management, and potential impact on delivery of council services that will need to be resolved ahead of any final decision on the DCO. The most significant item of concern relates to unresolved issues around the county council taking on responsibilities for assets including significant new infrastructure comprising a link from the B1172, across the A11 trunk road and Norwich-Cambridge railway line, to Cantley Lane south and the proposed classification of this new link as a B class road. In summary the County Council supports the principle of upgrading the existing A47/A11 Thickthorn Junction subject to the implementation of appropriate highway, historic environment, and surface water conditions / requirements being resolved through the DCO process. NB the County Council will be submitting a full detailed statement to the Planning Inspectorate highlighting all issues it wishes to be resolved through the above process, through the Local Impact Report.</p>	<p>The Applicant welcomes Norfolk County Council's support in principle for the Scheme, and will seek to resolve any issues raised in the Local Impact Report.</p> <p>Engagement with the Council is ongoing with regards to handover of new assets.</p> <p>In accordance with the DfT Statutory guidance 'Guidance on Road classification and the primary route network 2012' it is the Local Highway Authority's responsibility to manage local road classifications, which in the case of Cantley Lane Link Road, is Norfolk County Council. Therefore the Applicant will liaise with NCC in relation to classification of the Cantley Lane Link Road.</p>

## RR-002 ANGLIAN WATER

Reference	Relevant Representation	Highways England Response
RR-002.1	<p>Anglian Water Services Limited (Anglian Water) has been in active discussion with Highways England regarding the form of modified protective provisions within the DCO. We note that Book of Reference identifies some 56 plots of land where Anglian Water assets will need to be moved or protected during construction of the project. Anglian Water is submitting this Relevant Representation in agreement with Highways England to ensure clarity on our position as a utility provider and occupier affected by the proposed scheme and so to assist the Examining Authority. Anglian Water has no in principle objection to the scheme and seeks to ensure that through the agreement of protective</p>	<p>Land interests are adequately protected, to comply with relevant safety standards.</p> <p>The Applicant is in discussions with Anglian Water in relation to the contents of the protective provisions and the 12 points raised, with a view to agreeing the terms and will submit progress of this throughout the Examination.</p>

Reference	Relevant Representation	Highways England Response
	<p>provisions we continue to provide customers with uninterrupted water and waste water services during construction and then the operation of the scheme. The issues on which we are in discussion with Highways England on this and other Highways England applications include:</p> <ol style="list-style-type: none"> <li>1. Definitions, in particular "apparatus".</li> <li>2. The application of NRSWA and specifically were it applies, notification(s) to Anglian Water.</li> <li>3. Anglian Water's facilities and rights when alternative apparatus has been constructed and is in operation to our reasonable satisfaction.</li> <li>4. Step in rights for approved works and notification.</li> <li>5. Clarity regarding the undertakers works near to or which affect Anglian Water apparatus in part to assist the undertaker in flagging and so minimise the risk of damage by Highways England's contractors.</li> <li>6. Time limits being able to be altered by written agreement between the undertaker and Anglian Water.</li> <li>7. Safeguards to ensure emergency works on our apparatus by the undertaker are carried using best endeavours to keep the impact of those emergency works on Anglian Water's apparatus and network on end-users/Anglian Water customers to a minimum.</li> <li>8. Tightening up references so that paragraphs are self contained were possible including when we incur expense on the undertaker's behalf.</li> <li>9. Costs as a result on the undertaker's scheme which necessitate the provision of new Anglian Water infrastructure.</li> <li>10. Ensuring definitions provide for adequate compensation following damage to Anglian Water's network by the undertaker.</li> <li>11. The processes for exchange of documentation and requests by Anglian Water</li> <li>12. Pre - construction surveys and a Memorandum of Understanding on stage payments to Anglian Water with reconciliation at the end or works.</li> </ol>	
<p><b>RR-002.2</b></p>	<p>With reference to the project timescales set out in Environmental Management Plan, Anglian Water would welcome these steps - to assist scheme collaboration and to reduce potential abortive costs - being included with the scheme Implementation Plan developed during the NSIP determination process.</p>	<p>The Applicant welcomes the support of Anglian Water to the project timescales set out in the Environmental Management Plan and will continue to engage with Anglian Water throughout the examination process.</p>

Reference	Relevant Representation	Highways England Response
RR-002.3	Anglian Water notes that there is no intention in the scheme to construct or require new waste water recycling infrastructure or connections.	The only foul water generated on site will relate to the construction welfare facilities and this will be treated by a bio/wastewater package plant or be removed from the welfare facilities by a tanker.
RR-002.4	Anglian Water welcomes the inclusion of SuDS as part of the drainage design and which have also been sought by the Environment Agency and Norfolk County Council (NCC).	The Applicant welcomes the support of Anglian Water towards the drainage design.
RR-002.5	Anglian Water also support the request by NCC that the scheme delivers Biodiversity Net Gain including improvements in blue infrastructure links and habitats.	<b>Refer to RR 12.14 for response.</b>

## RR-003 CADENT GAS LIMITED

Reference	Relevant Representation	Highways England Response
RR-003.1	Cadent wishes to make a relevant representation to the A47/A11 Thickthorn Junction DCO in order to protect its position in light of infrastructure which is within or in close proximity to the proposed DCO boundary. Cadent's rights to retain its apparatus in situ and rights of access to inspect, maintain, renew and repair such apparatus located within or in close proximity to the order limits including should be maintained at all times and access to inspect such apparatus must not be restricted.	<p>The Applicant will update the draft DCO (<b>APP-017</b>) to include protective provisions for the benefit of Cadent at Deadline 2.</p> <p>The Applicant is continuing to work with Cadent to ensure adequate protective provisions are included in the DCO to ensure that it's apparatus and land interests are adequately protected, to comply with relevant safety standards.</p>
RR-003.2	Protective Provisions The documentation and plans submitted for the above proposed scheme have been reviewed in relation to impacts on Cadent's existing apparatus located within this area, and Cadent has identified that it will require adequate protective provisions to be included within the DCO to ensure that its apparatus and land interests are adequately protected and to include compliance with relevant safety standards. Cadent will require its protective provisions to be included within the DCO. This is	<p>The draft DCO (<b>APP-017</b>) includes protective provisions for the benefit of gas undertakers (Schedule 10 Part 1), but bespoke protective provisions are currently being negotiated with Cadent. The Applicant will update on the progress of these discussions during the course of the Examination.</p> <p>The Applicant is continuing to work with Cadent to ensure adequate protective provisions are included in the DCO to ensure that it's apparatus</p>

Reference	Relevant Representation	Highways England Response
	<p>the position with all of the Applicant's NSIP projects. Cadent's protective provisions are appended at Appendix 1. Cadent has been in detailed discussion with the Applicant over the form of protective provisions in relation to a number of schemes. These are substantially agreed, save for three points of dispute which Cadent and the Applicant have not yet agreed. These three points have been the subject of detailed submissions on the Applicant's M25 J28 Scheme, and the Examining Authority for the Applicant's M25 J28 Scheme has adopted Cadent's preferred form of protective provisions (see Appendix 2). Cadent's protective provisions reflect the Examining Authority's recommended draft on the Applicant's M25 J28 Scheme. As a responsible statutory undertaker, Cadent's primary concern is to meet its statutory obligations and ensure that any development does not impact in any adverse way upon those statutory obligations.</p>	<p>and land interests are adequately protected and to comply with relevant safety standards.</p>
<p><b>RR-003.3</b></p>	<p><b>Diversions &amp; Land Rights</b>            Cadent has low and medium pressure gas pipelines and associated apparatus located within the order limits which are affected by works proposed and for which the DCO proposes two diversions referenced as work numbers 40 and 46. Having reviewed the draft DCO documents Cadent is not satisfied that the DCO includes adequate land rights for work number 40 (the diversion of a low pressure main) over plots 7/1a, 7/7b and 7/7d and is currently in discussion with the Promoter to resolve concerns. Schedule 5 'Land in Which Only New Rights etc May be Acquired' as currently drafted includes the following rights to "Divert, install, underground, alter, retain, use, monitor and maintain and remove gas mains and associated infrastructure". Cadent has experience of promoters securing insufficient rights in land within DCOs for necessary diversions of its apparatus or securing rights for the benefit of incorrect entities. It's important that sufficient rights are granted to Cadent to allow Cadent to maintain its gas distribution network in accordance with its statutory obligations. Cadent will not decommission its existing apparatus and/or commission new apparatus until sufficient land rights are in place (to its satisfaction) whether pursuant to the DCO or otherwise. The land rights that Cadent will require are set out at Appendix 3. Cadent wishes to reserve the right to make further representations as part of the examination process but in the meantime will seek to engage with the promoter with a view to reaching a satisfactory agreement.</p>	<p>The Applicant is continuing to work with Cadent in relation to providing adequate land rights to facilitate the diversion.</p>

## RR-004 ENVIRONMENT AGENCY

Reference	Relevant Representation	Highways England Response
RR-004.1	<p>The Role of the Environment Agency The Environment Agency is a statutory consultee on all applications for development consent orders. We have a responsibility for protecting and improving the environment, as well as contributing to sustainable development. We have three main roles: (i) We are an environmental regulator – we take a risk-based approach and target our effort to maintain and improve environmental standards and to minimise unnecessary burdens on business. We issue a range of permits and consents. (ii) We are an environmental operator – we are a national organisation that operates locally. We work with people and communities across England to protect and improve the environment in an integrated way. We provide a vital incident response capability. (iii) We are an environmental advisor – we compile and assess the best available evidence and use this to report on the state of the environment. We use our own monitoring information and that of others to inform this activity. We provide technical information and advice to national and local governments to support their roles in policy and decision-making. One of our specific functions is as a Flood Risk Management Authority. We have a general supervisory duty relating to specific flood risk management matters in respect of flood risk arising from Main Rivers or the sea. Overview and issues of concern Our relevant representation outlines where we consider further work, clarification or mitigation is required to ensure that the proposal has no detrimental impact on the environment. We have highlighted that we are generally satisfied with the assessment of, and proposed approach to managing fluvial flood risk across the scheme. Some additional detailed survey and modelling work is being undertaken by the Applicant, which we will need to review and approve. There are also some outstanding actions for the Applicant to address in respect of the flood model which supports the flood risk assessment. Our position is therefore subject to a satisfactory review of this further work. We are broadly satisfied with the proposed Cantley Stream realignment, subject to some points of clarification and a future review of the detailed design. In general we are also satisfied with the overall approach taken to date and the mitigation</p>	<p>The Applicant notes the general satisfaction of the Environment Agency, recognising that consultation remains ongoing. The dDCO has been amended to include the Environment Agency as a consultee in requirements 4 and 8 and an amendment has been made to requirement 6.</p>

	<p>proposed in respect of protecting surface water quality and groundwater resources. We have made a number of observations in respect of these issues and have highlighted that we will need to review further assessments and the detailed proposals prior to development commencing. We have requested an amendment to Requirement 6, and that we are added as a named consultee to Requirements 4 and 8. Please do not hesitate to contact me if you require any further information. We look forward to continuing to work with the applicant to resolve the matters outlined within our relevant representation to ensure the best environmental outcome for the project. Yours faithfully Martin Barrell Planning Specialist Environment Agency.</p>	
<p><b>RR-004.2</b></p>	<p>1.0 Document 3.1 Draft Development Consent Order (DCO) 1.1 Requirement 4 requires the preparation of an Environmental Management Plan (EMP) and associated documents. The EMP is a mechanism to ensure the delivery of mitigation measures during the construction phase, as outlined in the Environmental Statement, including those in Chapter 13 Road drainage and the water environment. Although we are generally satisfied with the approach taken in identifying the potential adverse effects of the proposed scheme on surface water quality and groundwater resources, and with the mitigation outlined to date, the Environment Agency should have the opportunity to review and comment on the detailed proposals prior to construction.</p>	<p>The Environment Agency will be a named consultee under dDCO (<b>APP-017</b>) Requirement 4 'Environmental Management Plan' (EMP) and will be consulted on the Second Iteration of EMP. The detailed design will be made available to the Environment Agency for review and comment. Requirement 4 of the dDCO will be updated at Deadline 2 as follows:          4.—(1) No part of the authorised development, except for the ecological works, is to commence until an EMP (Second Iteration) for that part, substantially in accordance with the EMP (First Iteration) has been submitted to and approved in writing by the Secretary of State, following consultation by the undertaker with the relevant planning authority, local highway authority and the Environment Agency to the extent that the content of the EMP (Second Iteration) relates to matters relevant to their functions.</p>
<p><b>RR-004.3</b></p>	<p>1.2 The Environment Agency should be included as a named consultee in respect of Requirement 4, for matters relevant to our remit.</p>	<p><b>Please refer to RR-004.2</b></p>
<p><b>RR-004.4</b></p>	<p>1.3 We support the inclusion of Requirement 6 Contaminated land and groundwater, and we welcome the inclusion of the Environment Agency as a named consultee. However, the proposed wording should be amended. The determination of the need for remediation in part (2) should be based on a consideration of the risk assessment by all parties, rather than determined solely by the undertaker. Additionally, and also in respect of part (2), remedial measures should be taken to render the land fit for its intended purpose and to prevent any impacts on controlled waters.</p>	<p>Requirement 6 of the dDCO will be updated at Deadline 2 as follows:          (2) Where the risk assessment prepared in accordance with sub-paragraph (1) determines that remediation of the contaminated land is necessary, a written scheme and programme for the remedial measures to be taken to render the land fit for its intended purpose and to prevent any impacts on controlled waters must be submitted to and approved in writing by the Secretary of State, following consultation by the undertaker with the relevant planning authority on matters related to its function and the Environment Agency.</p>

<b>RR-004.5</b>	1.4 Requirement 8 is concerned with Surface and foul water drainage. As detailed below, we are generally satisfied with the approach proposed to date. However, work on the detailed drainage design is ongoing. It will be important for us to review and confirm that the detailed proposals are acceptable.	The dDCO will be amended to include the Environment Agency as a consultee in requirement 8, <b>see response to RR-004.6.</b>
<b>RR-004.6</b>	1.5 The Environment Agency should therefore be a named consultee in respect of Requirement 8 Surface and foul water drainage system.	Requirement 8 of the dDCO will be amended at Deadline 2 as follows:  (1) No part of the authorised development is to commence until, for that part, written details of the surface and foul water drainage system, reflecting the mitigation measures set out in the REAC including means of pollution control, have been submitted and approved in writing by the Secretary of State following consultation by the undertaker with the Environment Agency and the relevant planning authority on matters related to its function.
<b>RR-004.7</b>	1.6 Regarding the procedure for discharge, we note that Requirement 17 Details of consultation, states that parties will be given not less than 10 business days to respond to any consultation. We would request that this be amended to 21 days, to allow us sufficient time to consult internally and provide a comprehensive response.	The dDCO will be updated to refer to fifteen business days instead of ten business days at Deadline 2.
<b>RR-004.8</b>	2.0 Document 3.3 Consents and Licences Position Statement 2.1 We note the inclusion of Appendix A - Table of Consents and Agreements as required from consenting authorities, including the Environment Agency. We welcome early discussions on these authorisations and note that progress is to be reported in a Statement of Common Ground. 2.2 With reference to the section concerning 'Diversion of watercourses', we would highlight that works to realign Cantley Stream may require a transfer licence from the Environment Agency. An impoundment licence may also be necessary if a structure is required that restricts flow. 2.3 On the issue of 'Waste and Materials', it should be noted that an Environmental Permit will be required for the importation and treatment of waste material falling outside the scope or limits detailed in either a Regulatory Position Statement or a waste exemption. In respect of 'Waste Materials', the consenting authority for certain mobile plant permits such as concrete crushers is the relevant local authority, and therefore they should be listed along with the Environment Agency.	The dDCO does not override the need for these consents and the Applicant acknowledges the requirement to apply for, and have in place, all necessary permits prior to any works commencing.  The Applicant will begin this process by start of 2022 and will consult with the Environment Agency on the permit requirements.

<p><b>RR-004.9</b></p>	<p>3.0 Document 6.1 Environmental Statement Chapter 8 - Biodiversity 3.1 We are satisfied, for matters within our remit, that the ecological surveys are complete and correct in terms of their timings, and that an adequate number of surveys were completed during the survey season by a suitably qualified and experienced ecologist. 3.2 This chapter highlights that ecological enhancements are to be incorporated as part of the realignment of Cantley Stream, including the provision of additional habitat suitable for water voles. We note that all mitigation will be detailed and implemented as part of the Record of Environmental Actions and Commitments (REAC) within the Environmental Management Plan (EMP). The EMP falls under Requirement 4, and as highlighted in 1.2 (above) we would wish to be consulted on the relevant sections of the EMP. 3.3 Further comments on the proposed realignment of the Cantley Stream are included below in section 7 in response to the first iteration EMP.</p>	<p><b>Please refer to RR-004.2.</b></p>
<p><b>RR-004.10</b></p>	<p>4.0 Document 6.1 Environmental Statement Chapter 9 – Geology and Soils 4.1 We recognise the rationale for the classifications regarding the sensitivity of receptors and magnitude of impacts presented in Table 9-4 and 9-5 (and repeated in Table 13.1 &amp; 13.2 of Chapter 13 Road drainage and the water environment). However, it will be essential for the project to apply the principle that no private drinking water supplies can be derogated, even temporarily, without the prior consent of the owner and the provision of mitigation measures. 4.2 With reference to paragraph 9.4.27, we would highlight that locating a drainage pond over an infilled gravel pit would not be appropriate unless the fill can be proved to be inert. We therefore welcome the commitment to a full investigation of the landfill and infilled pit, to better inform Tables 9-10 (Determination of magnitude of potential impact), 9-12 (Determination of residual effects significance) and the Materials Management Plan. 4.3 We also welcome and support the undertaking of further assessments of linkages and mitigation for potential on-site and off-site contaminated land sources proposed in Section 6.11 of ES Appendix 9.3 – Preliminary Sources Study Report Part 1 of 2. 4.4 As highlighted above, we support the inclusion within the draft DCO of Requirement 6 Contaminated land and groundwater, but have suggested two amendments to the proposed wording. We welcome the inclusion of the Environment Agency as a named consultee in respect of that Requirement.</p>	<p>The Applicant is grateful for the feedback from the Environment Agency with regards the proposals for further supplementary ground investigation.</p> <p>The Applicant is continuing to liaise with the Environment Agency to provide the information required in response to their observations. The outcome of these discussions will be recorded in a Statement of Common Ground.</p> <p>The dDCO has been amended to reflect these comments, <b>please see the response to RR-004.2.</b></p>

<p><b>RR-004.11</b></p>	<p>5.0 Documents under 6.3 Environmental Statement Appendices relating to ES Chapter 10 – Material Assets and Waste 5.1 6.3 ES Appendix 10.2 – Waste disposal assessment.</p> <p>In respect of Table 1: Preliminary waste assessment summary, we would highlight the following in relation to the Cantley Lane landfill and the classification included under Domestic household waste: Reference has been made to LoW codes 17 05 03* and 17 05 04 for excavated waste soil. Based on the description provided from TP11, TP27 and TP29, once assessed in accordance with Technical Guidance WM3, some excavated waste may be more appropriately classified under additional Chapter 17 codes, such as, but not limited to the following examples: o 17 01 06* mixtures of, or separate fractions of concrete, bricks, tiles and ceramics containing hazardous substances o 17 01 07 mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06 o 17 09 03* other construction and demolition waste (including mixed waste) containing hazardous substances o 17 09 04 mixed construction and demolition wastes other than those mentioned in 17 0 9 01, 17 09 02 and 17 09 03 We would highlight that, along with the LoW code, the Duty of Care paperwork is to provide an accurate description of any waste removed from the site.</p>	<p>In preparation for the detailed design of the A47 Thickthorn Improvement scheme, supplementary ground investigation (GI) work has been carried out in the vicinity of the Cantley Lane Landfill site. The data from this GI work will be used to inform the detailed design, including the further assessment referenced in Table 1 Appendix 10.2 (<b>APP-106</b>). The technical comments made in the representation above will be taken into consideration when carrying out the further assessment.</p>
<p><b>RR-004.12</b></p>	<p>5.2 6.3 ES Appendix 10.3 – Outline site waste management plan (SWMP). With reference to paragraph 10.1.29 (anticipated waste types), we would recommend that the final SWMP includes a section on managing excavated waste from the Cantley Lane landfilled waste area and the infilled gravel pit east of Cantley Lane South. We would expect this section to reference the further waste assessments required on the landfilled/infilled waste identified in</p>	<p>These comments are acknowledged and will be addressed during the production of the SWMP during the scheme detailed design phase (as required by paragraph 10.1.5 of Appendix 10.3) (<b>APP-107</b>). As part of the scheme detailed design, it is our intention to develop engineered geotechnical solutions which minimise the impact of the works on the Cantley Lane Landfill and Infilled Gravel Pit sites. Therefore through design, we will be endeavouring to:</p> <ul style="list-style-type: none"> <li>• keep as much of the existing materials in-situ or moving none if possible to avoid having to dispose elsewhere</li> <li>• minimise/avoid creating additional or new pollutant linkages</li> <li>• avoid onerous waste management arrangements with unnecessary disposal at landfill off-site.</li> </ul> <p>The principles of leaving materials in-situ will be primarily based on an appropriately developed and calibrated Conceptual Site Model (CSM) and assessment of applicable plausible pollutant linkages under CLR11 which will in itself be based on the specific characteristics of the materials and site</p>

		<p>conditions in respect of land, air and water. The current cited waste classification coding is instructive in terms of identifying the likely disposal options and to a degree the nature of the hazard presented with these materials but will not form the basis for the SWMP or the MMP. Moreover it is implicit that the SWMP will follow the necessary procedures set out in WFD as enabled in UK regulation including assessment and characterisation (with additional testing to confirm geo-chemical characteristics as necessary), material tracking and chain of custody, and applicable duty of care under WFD.</p> <p>Any materials that are excavated will be subject to the SWMP which in turn will be based where applicable on the CL:aire DOWCoP and any MMP that evolves from this will ensure that the management of excavated ground materials is fully compliant with the principles set out in DOWCoP applying the "Site of Origin" approach as applicable, CLR11, and other applicable guidance and codes of practice.</p> <p>The primary objective of the SWMP and the application of DOWCoP is to ensure that the materials which are encountered and handled are suitable for use or are otherwise managed and disposed of appropriately and in a codified and auditable framework compliant with applicable regulations, with consultation and regulatory input</p>
<p><b>RR-004.13</b></p>	<p>5.3 Regarding paragraph 10.1.39 of the outline SWMP, we recommend that the final SWMP refers to an accurate description of the waste when referring to Duty of care documentation, such as transfer or consignment notes rather than the type of waste.</p>	<p>This comment is acknowledged and will be addressed during the production of the SWMP during the scheme detailed design phase (as required by paragraph 10.1.5 of Appendix 10.3).</p>
<p><b>RR-004.14</b></p>	<p>5.4 We note that the SWMP will be included as part of the Second Iteration of the EMP. We would wish to be consulted on the SWMP, and therefore, as highlighted above we should be included as a named consultee in respect of Requirement 4.</p>	<p>This requirement is acknowledged and agreed.</p>
<p><b>RR-004.15</b></p>	<p>Table 1 of Appendix 10.2 Waste Disposal Assessment, and how this activity will be managed to protect the environment and prevent harm to human health. Factors such as, but not limited to, those listed below should be considered:</p> <ul style="list-style-type: none"> <li>o Preventing the creation of pathways from any contaminated land to sensitive environmental receptors,</li> <li>o managing to minimise impact on amenity and</li> <li>o ensuring that the remaining waste is left in a manner that prevents and</li> </ul>	<p><b>Please refer to RR-004.12</b></p>

	minimises pollution.	
<b>RR-004.16</b>	<p>6.0 Document 6.1 Environmental Statement Chapter 13 – Road Drainage and Water Environment and Appendices 6.1</p> <p>6.1 In respect of surface water quality, we are satisfied with the consideration of potential issues to date and with the general principles of the proposed mitigation measures for both the construction and operational phases.</p>	This comment is acknowledged.
<b>RR-004.17</b>	<p>6.2 As previously highlighted, we would want to review the detailed proposals. 6.2 With regards to water quality and the water framework directive (WFD), we agree with the waterbodies considered and support the mitigation measures referenced in section 13.9 to protect water quality. The WFD considerations included in this section and elsewhere in Chapter 13 are fairly comprehensive. However there is often mention of effects on the 'overall WFD status of the waterbodies'. This is the case, for example, in Table 13.2 Estimating the magnitude of an impact on an attribute. A key WFD requirement is for no deterioration in any of the individual elements that make up the waterbody classification, as well as no deterioration in the overall classification. It should therefore be ensured that the individual elements are also assessed and considered during the detailed design process.</p>	<p>The individual elements have been discussed in section 13.9 of the ES Chapter 13 (<b>APP-050</b>). The Water Framework Directive assessment is provided in ES Chapter 13 (<b>APP-050</b>). The status of the ecological and chemical quality elements were considered in the assessment. Construction and operational activities affecting the Intwood Stream and Yare (Tiffey to DS Norwich) water bodies are considered to cause no deterioration in the status of any of the quality elements and should not prevent future attainment of WFD water body targets.</p> <p>Mitigation and enhancement measures are set out in the Record of Environmental Actions and Commitments which forms Table 3-1 in the Environmental Management Plan (<b>APP-128</b>). Delivery of these commitments, including consultation with the Environment Agency, will be secured through dDCO (<b>APP-017</b>) Requirements 4 'Environmental Management Plan' and 8 'Surface and foul water drainage' and the Environment Agency will be listed as a consultee in both these requirements in the revised dDCO submitted at Deadline 2.</p>
<b>RR-004.18</b>	<p>6.3 We note that paragraph 13.9.44 states that for the Cantley Stream realignment, the detailed design including water vole enhancements will be agreed in consultation with the Environment Agency, Norfolk County Council and other stakeholders. We welcome this, although the mechanism for this consultation should be confirmed. As highlighted above, the realignment works may also require water resources licences from the Environment Agency.</p>	The Applicant is aware of the requirement to apply for, and have in place, all necessary permits and licenses prior to any works commencing.

<p><b>RR-004.19</b></p>	<p>6.4 In respect of groundwater resources and quality, and Table 13.1 &amp; 13.2 (importance of an attribute and magnitude of impact), we would repeat our comment under 4.1 above. No private water supply can be derogated as a result of the works or operation of the scheme, even temporarily, without the prior written consent of the owner and the provision of mitigation measures.</p>	<p>The Broadland Rivers Chalk and Crag groundwater body has been assigned a high to very high importance in Table 13.7 of ES Chapter 13 (<b>APP-050</b>) due to the presence of licensed and unlicensed abstractions. Mitigation measures include water features surveys to identify and confirm the locations of the unlicensed abstractions and monitoring before, during and following construction to prevent the derogation of the private water supplies.</p>
<p><b>RR-004.20</b></p>	<p>6.5 Regarding section 13.8 and potential impacts during construction, we have specific requirements for any proposed horizontal directional drilling (HDD). A detailed prior assessment of the strata to be encountered should be undertaken. Inert drilling muds (as approved by the Environment Agency), should be used and drilling mud monitoring put in place and breakout plans prepared. HDD works must be undertaken in a way that precludes any alteration to the existing degree of hydraulic continuity between strata or surface water features. We would want to review the HDD method statements.</p>	<p><u>Measures to be undertaken during completion of any proposed method statements will be included in future iterations of the</u> in the Environmental Management Plan (<b>APP-128</b>). Delivery of these commitments will be secured through the dDCO (<b>APP-017</b>) Requirements 4 and further to the amendment listed in <b>RR-004.2</b>, the Environment Agency will be consulted on the appropriate method statements.</p>
<p><b>RR-004.21</b></p>	<p>6.6 With reference to paragraph 13.8.26, we note that the A11 – A47 connector road may intercept and expose the top of the chalk bedrock. We welcome the undertaking in paragraph 13.9.19 to avoid infiltration to ground in this area and the commitment to complete construction method statements and consult on HDD works (paragraph 13.9.21). We also welcome the commitment to prepare piling risk assessments (13.9.24), and the undertaking to monitor at water features at risk (13.9.26).</p>	<p><b>Please refer to RR-004.2 and RR-004.20.</b></p>
<p><b>RR-004.22</b></p>	<p>6.7 We welcome the use of carrier drains in sensitive areas, as outlined in paragraphs 13.9.28 &amp; 29. We would like the opportunity to review the areas where both carrier drains and filter drains are proposed after further ground investigation works have been completed. We would like further information on the risk to groundwater from hydrocarbon spills, in terms of both free product and dissolved phases. We would also like the opportunity to review further details on the operational subsurface drainage when available, as referred to in paragraph 13.9.49.</p>	<p>A supplementary ground investigation is to focus on collection on additional information to inform groundworks and detailed design. Hydrogeological impact assessments, for inclusion in the drainage strategy, will therefore be updated at the detailed design stage. A revised drainage strategy report (or an addendum) will be provided for review by the Environment Agency under Requirement 4 'Environmental Management Plan' (<b>APP-128</b>).</p>

<b>RR-004.23</b>	6.8 With reference to paragraph 13.9.50, the minimum thickness of unsaturated zone for areas where infiltration is shown to be acceptable will be 1.2 metres, not 1m as stated. A thickness of 2 – 5 m is preferable.	This will be taken into consideration in hydrogeological impact assessment updates and the detailed design at Stage 5.
<b>RR-004.24</b>	6.9 With reference to paragraph 13.9.51, we are pleased to note that baseline groundwater quality monitoring will continue.	This comment is acknowledged.
<b>RR-004.25</b>	6.10 We also welcome the proposals to undertake a water features survey along with hydrogeological risk assessments (HRA) for any abstractions and groundwater dependent terrestrial ecosystems down gradient of dewatering, HDD or other intrusive works.	This comment is acknowledged.
<b>RR-004.26</b>	6.11 Overall, we are generally satisfied with the proposals and information outlined in the Drainage Strategy Report (Document 6.3, ES Appendix 13.2). But as indicated, we will need to review and confirm that further assessments and the detailed proposals for both the construction and operational stages are acceptable. As highlighted above with regards to the draft DCO, the Environment Agency should therefore be a named consultee in respect of Requirement 8 (Surface and foul water drainage system), and, for matters relevant to our remit, Requirement 4 (Environmental Management Plan).	<b>Please refer to RR-004.2 and RR-004.20.</b>
<b>RR-004.27</b>	6.12 In respect of the Groundwater Assessment (Document 6.3, ES Appendix 13.2), we welcome the full assessment of potential impacts in Table 3.1.	This comment is acknowledged.
<b>RR-004.28</b>	6.13 The drainage in catchment B is of concern given the thin unsaturated zone and the presence of proximal abstractions, as noted in the Table 4.2. We welcome the proposed ground investigations (GI) to fully assess potential impacts.	The supplementary ground investigation is to focus on collection of additional information to inform groundworks and detailed design. Hydrogeological impact assessments, for inclusion in the drainage strategy, will therefore be updated at the detailed design stage. Where risks are identified, mitigation set out in paragraph 13.9.50 of the ES chapter 13 ( <b>APP-050</b> ) will be implemented (that is, the use of carrier drains in place of unlined drainage). A revised drainage strategy report (or an addendum) will be provided for review by the Environment Agency under Requirement 4 'Environmental Management Plan' ( <b>APP-128</b> ).

<p><b>RR-004.29</b></p>	<p>6.14 As highlighted within the Groundwater assessment document, further consultation with the Environment Agency on the potential impacts on groundwater will be required.</p>	<p><b>Please refer to RR-004.2</b>          In addition, all mitigation to address groundwater risks is included in the Environmental Management Plan (<b>APP-128</b>). The Environment Agency will be a named consultee in respect of dDCO (<b>APP-017</b>) Requirement 4 'Environmental Management Plan' (<b>APP-128</b>).</p>
<p><b>RR-004.30</b></p>	<p>6.15 Regarding the Water Quality Assessment (Document 6.3, ES Appendix 13.4), we are satisfied with the assessment for surface water and details of the measures to mitigate risks. We look forward to reviewing the detail.</p>	<p><b>Please refer to RR-004.2</b></p>
<p><b>RR-004.31</b></p>	<p>6.16 In respect of fluvial flood risk, we note that paragraph 13.9.40 of the ES states that current assessments have shown that there is an increase in flood risk to a residential property of up to 15mm, and that property level protection is proposed as mitigation. It is highlighted that further survey work and flood modelling is being carried out to confirm the flood risk impacts and inform the required mitigation. This further work should form part of an updated Flood Risk Assessment, which we should be given the opportunity to review and approve.</p>	<p>Following the collection of additional survey and modelling to better predict the flood risk impacts in the vicinity of Intwood Road, the Applicant can confirm that the updated flood modelling predicts the impact is negligible at this property. <b>In addition, please see Common Response L.</b></p>
<p><b>RR-004.32</b></p>	<p>6.17 Paragraph 13.9.42 states that "changes in the floodplain level ranged from a reduction of up to 250mm and an increase of up to 100mm" and "The magnitude of impact ranges from major adverse to major beneficial". This point then goes on to state that other than the residential property discussed in the point above, the receptors impacted are "classified as 'less vulnerable' (agricultural land) and 'water compatible' (amenity) under the NPPF". In concluding this point it is stated that "Overall, given the majority of areas are of moderate magnitude it is considered the significance of effect is classed as moderate rather than major under DMRB LA104".</p> <p>6.18 We also note that point 13.10.6 of chapter 13 of the Environmental Statement also states "The effects range from moderate beneficial to moderate adverse significance depending on the location within the floodplain". Table 13.1 provides the criteria for estimating the importance of water environment attributes and Table 13.2 provides the criteria for Estimating the magnitude of an impact on an attribute. These tables have been used in assessing the impact of the changes to flood risk.</p>	<p>The Applicant confirms these points stated in ES Chapter 13 (<b>APP-050</b>).</p>

<p><b>RR-004.33</b></p>	<p>6.19 The standalone Flood Risk Assessment (FRA) is included as document 6.3 Appendix 13.1. We are generally satisfied with the FRA and with the proposed approach to managing fluvial flood risk across the scheme. However, this position is subject to a satisfactory review of the further information due to be provided, as outlined below.</p> <p>6.20 Section 4.4.2 of the FRA states “Agreement that the proposed new larger culvert beneath Cantley Lane removes the throttling effect on flows / levels and, due to the negligible changes in downstream flood risk, removes the requirement to provide any compensatory flood storage”. We agree that no compensatory storage will be required, providing that any further assessments continue to show that the project has no significant adverse impacts on flood risk.</p>	<p>The Applicant notes that the Environment Agency is generally satisfied with the FRA and the proposed approach. Following the collection of additional survey and modelling to better predict the flood risk impacts in the vicinity of Intwood Road, the Applicant can confirm that the updated flood modelling predicts the impact is negligible at this property. The Applicant considers therefore that no compensatory storage will be required.</p> <p>The revised model and the updated hydraulic modelling report (Annex B of <b>APP-111</b>) was reissued to the Environment Agency on 15 July 2021. The Flood Risk Assessment (<b>APP-111</b>) will be updated to reflect the revised modelling output and will be sent to Norfolk County Council and the Environment Agency for review and comment. A revised Flood Risk Assessment (<b>APP-111</b>) has been prepared and will be submitted to the ExA in due course.</p>
<p><b>RR-004.34</b></p>	<p>6.21 As highlighted above, the FRA indicates that there may be increased flood risk to a dwelling (classified as ‘more vulnerable’) as a result of the proposed scheme. We note that various options to mitigate the increase in flood risk have been considered, including whether compensatory flood storage could be provided. Our understanding is that the assessment concluded that compensatory flood storage did not appear to be an appropriate solution, but that property level protection may be proposed if required.</p>	<p><b>Please refer to RR-004.33.</b></p>
<p><b>RR-004.35</b></p>	<p>6.22 Sections 8.2.6 &amp; 8.2.11 of the FRA state that “Confirmation of the impact and, therefore the mitigation, is subject to additional survey and modelling to better predict the impacts in this location”. As mentioned above, the outcome of this additional work will should form an update to this FRA, which should be reviewed and approved by us.</p>	<p>Following the collection of additional survey and modelling to better predict the flood risk impacts in the vicinity of Intwood Road, the Applicant can confirm that the updated flood modelling predicts the impact is negligible at this property. <b>In addition, please refer to RR-004.33.</b></p>
<p><b>RR-004.36</b></p>	<p>6.23 Section 8.2.12 of the FRA states “Due to the proposed removal of the existing Cantley Lane South culvert and the realigned stream there are changes in the patterns of flood risk within the floodplain affecting agricultural land and amenity areas (classed as ‘less vulnerable’ and ‘water compatible’ under the NPPF). Following the initial impact assessment of removing the existing Cantley Lane South culvert throttle, it was agreed with Norfolk County Council and the Environment Agency in August 2020 that there is no requirement to provide compensatory flood storage upstream of Cantley Lane South culvert.” As above,</p>	<p>The updated flood modelling has been shared with the Environment Agency and predicts the impact is negligible at the property close to Intwood Road. In addition, the revised modelling does not materially change the patterns of flood risk within the floodplain affecting agricultural land and amenity areas (classed as ‘less vulnerable’ and ‘water compatible’ under the NPPF) arising from the replacement of the Cantley Lane South culvert and the stream realignment. The significance of effect remains as moderate. <b>In addition, please refer to RR-004.33.</b></p>

	agreement is based on further assessments continuing show no significant adverse effects on flood risk.	
<b>RR-004.37</b>	6.24 The Environment Agency has previously reviewed the flood modelling work completed by the Applicant to inform this FRA. At the time of submission, there remained some outstanding model review actions needing to be resolved before the suitability of the assessment could be confirmed. A demonstration that these required actions have been addressed should be submitted along with the details and conclusions of the additional survey and modelling work currently being undertaken.	The Applicant has addressed the outstanding model review actions (issued by the Environment Agency on 4 <sup>th</sup> March 2021) whilst undertaking the additional survey and modelling work associated with the Intwood Road property flood risk. The revised model and the updated hydraulic modelling report (Annex B of <b>APP-111</b> ) was reissued to the Environment Agency for comment in August 2021 on [20 August 2021]. Further comments were received from the Environment Agency on 19 August 2021 and these have been addressed and resubmitted. The Applicant is awaiting the Environment Agency's response.
<b>RR-004.38</b>	6.25 Following the further survey and flood modelling work, if any increases in flood risk as a result of the scheme are identified, it should be clearly documented as to why the increase cannot be prevented and how any impacts will be managed. Where decisions on the significance of any flood risk impacts on receptors have been made, it should be clear how the assessment was undertaken and why the conclusion on significance was reached.	The updated flood modelling predicts the impact is negligible at the property close to Intwood Road. In addition, the revised modelling does not materially change the patterns of flood risk within the floodplain affecting agricultural land and amenity areas (classed as 'less vulnerable' and 'water compatible' under the NPPF) arising from the replacement of the Cantley Lane South culvert and the stream realignment. <b>In addition, please refer to RR-004.33.</b>
<b>RR-004.39</b>	7.0 Document 7.4 Environmental Management Plan (First Iteration) 7.1 With reference to paragraphs 1.1.5 and 1.1.6, we note that there is no reference to a Temporary surface water drainage plan being prepared as part of the EMP. However, it is listed as a plan to be prepared in the draft DCO under Requirement 4, and is referred to elsewhere within the EMP.	A Temporary Surface Water Drainage Plan will be prepared as part of the Environmental Management Plan (Second Iteration) as set out in requirement 4.
<b>RR-004.40</b>	7.2 As highlighted above, the Environment Agency should be included as a named consultee in respect of Requirement 4, to enable us to review and comment on relevant documents.	<b>Please refer to RR-004.2</b>
<b>RR-004.41</b>	7.3 Plans and strategies forming part of the EMP that we would wish to review include: the Landscape and ecology management plan, Temporary surface water drainage plan, Water monitoring and management plan, Site waste management plan, Soil management plan and Materials management plan.	<b>Please refer to RR-004.2</b>

RR-004.42	7.4 We have reviewed Section 3 and Table 3.1: Record of Environmental Actions and Commitments (REAC). We have the following comments at this time:	-
RR-004.43	7.5 B15 – we support the approach proposed to protect fish caught up in the de-watering of the old channel of the Cantley stream, which include netting and electrofishing to remove fish. We note that full details will be included in the Second Iteration EMP and we would wish to review those details. As highlighted above, consents may be required from the Environment Agency for works associated with the diversion of Cantley Stream.	Please refer to <b>RR-004.40</b> for EMP consultation and <b>RR-004.8</b> for a response on consents.
RR-004.44	7.6 Currently, we would highlight that additional checks will be required as water levels are lowered, with individual fish removed and transported upstream. We would like to see the use of a silt curtain or coffer dam at the downstream extent of the old channel to prevent fish kills further downstream as a result of the silt released during fish removal, and in particular as the channel is de-watered. Use of a dissolved oxygen monitor would also be recommended to monitor changes in levels during this activity.	<p>Recommendations for silt curtain, coffer dam, and dissolved O2 monitoring will be considered for inclusion in the second iteration of the Environmental Management Plan (<b>APP-128</b>).</p> <p>The Applicant acknowledges the recommended mitigation measures to reduce silt entrainment and the requirements for dissolved oxygen monitoring. Action RD4 of Table 3-1: Record of Environmental Actions and Commitments in the Environmental Management Plan (<b>APP-128</b>) requires that monitoring of Cantley Stream must be carried out prior to, during the construction phase and post construction.</p>
RR-004.45	7.7 When the water is diverted into the new channel for the first time, there is likely to be some release of loose surface sediment in to the channel immediately downstream. We would like to see that there are measures in place to prevent silt and sediment from being flushed downstream from the new channel. This could include constructing the new stream bed from locally sourced gravels, cobbles, or any gravels that can be retrieved from the original stream bed. We would wish to review this detail in further consultations.	<b>Please refer to RR-004.20.</b>
RR-004.46	7.8 RD1, RD2 & B3 – we note the measures outlined in relation to pollution prevention and sediment management. As highlighted above, the Environment Agency should be consulted on the water monitoring plans and temporary surface water drainage strategy.	<b>Please refer to RR-004.2</b>

RR-004.47	7.9 RD2 – in respect of flood risk, the potential need for property level protection is highlighted. It is not currently clear how the EMP would secure the implementation of such measures. This should be confirmed.	Following the collection of additional survey and modelling to better predict the flood risk impacts in the vicinity of Intwood Road, the Applicant can confirm that the updated flood modelling predicts the impact is negligible at this property and no property level protection is needed. <b>In addition, please refer to RR-004.33.</b>
RR-004.48	7.10 RD4 – we note the inclusion of the statement that the design of the realigned Cantley Stream will be undertaken in consultation with the Environment Agency, Norfolk County Council and other stakeholders. The mechanism for that consultation should be clarified.	<b>Please refer to RR-004.2</b>
RR-004.49	7.11 The full distance of the existing channel being re-aligned and subject to water vole displacement should be compared with the new length of enhanced/restored habitat. It must be ensured that there is adequate provision of alternative habitat for the displaced individuals, especially if there is a delay between displacement activities and establishment of vegetation in the new re-aligned channel.	Mitigation measures for protected species are secured by requirement 7 of the dDCO ( <b>APP-017</b> ), the measures proposed in the Environmental Management Plan ( <b>APP-128</b> ) include obtaining a European protected species licence. The mitigation licence method statement for water vole, to be approved by Natural England, will detail creation of compensatory habitat to be undertaken ahead of licensable activities taking place. This would be guided by the Water Vole Mitigation Handbook [1]. A licence will only be granted if Natural England is satisfied with the Applicant's proposals for compensatory water vole habitat. This will ensure that habitat compensation is adequate to support the maximum number of animals that may be translocated.
RR-004.50	7.12 The construction period for the proposed scheme seems to offer a relatively short time period in which to establish suitable alternative habitat for displaced water vole, if required. The detailed design must take this into account.	Created habitat will likely require an entire growing season to be suitable to receive translocated animals, though can be ready over a shorter period with transfer of plug plants and turves. The Environmental Management Plan, Table 3-1 states that "Riparian planting in water vole receptor areas will be undertaken at least one growing season before the water voles are dispersed or translocated." Therefore there will be sufficient time for habitat to establish.
RR-004.51	7.13 How the new re-aligned section of channel will be colonised with aquatic and marginal plants has not yet been clarified. The Applicant may be intending to divert some of the flow from the original channel, or bring water in from elsewhere, to wet the new section prior to the final diversion. In that scenario water resource licences may be required from the Environment Agency as highlighted above. Alternatively, the Applicant may be intending to demonstrate that there will be sufficient alternative water vole habitat available to displace/ trap and release into	The intended approach of wetting and colonising the realigned section of Cantley Stream will be determined during detailed design.

	while the new channel re-vegetates. The chosen approach will need to be fully assessed and approved at the detailed design stage.	
<b>RR-004.52</b>	7.14 RD4 – we also note that the Environment Agency and Norfolk County Council are to agree monitoring requirements for the realigned Cantley Stream as part of the EMP Water monitoring and management plan. We welcome this and look forward to reviewing the plan. Currently, we would highlight that during the process of planning and construction, the water quality of the Cantley Stream should be monitored for changes to pH, turbidity and dissolved oxygen as a minimum.	The Applicant acknowledges the minimum monitoring requirements of pH, turbidity and dissolved oxygen for Cantley Stream construction works. Action RD4 of Table 3-1: Record of Environmental Actions and Commitments in the Environmental Management Plan ( <b>APP-128</b> ) requires that monitoring of Cantley Stream must be carried out prior to, during the construction phase and post construction.
<b>RR-004.53</b>	7.15 RD5 – we note that required WFD mitigation is to be agreed with the Environment Agency. Will this be through consultation on aspects of the EMP, or via other means?	<b>Please refer to RR-004.2</b>
<b>RR-004.54</b>	7.16 RD7 to RD10, and RD14 are concerned with the protection of groundwater resources during construction. We are satisfied with the measures proposed, subject to the review of further assessments and details, as outlined. The mechanism for further consultation with the Environment Agency should be clarified.	<b>Please refer to RR-004.2 and RR-004.20.</b>
<b>RR-004.55</b>	7.17 We would highlight that the dewatering exemptions noted here; in Table 4-1; and elsewhere in the ES, are only applicable if the works will take less than 6 months. For works over a longer time period, an abstraction licence will be required for any dewatering at rates over 20 m <sup>3</sup> /d.	Table 4-1 Consents and Permissions will be updated in the Environmental Management Plan ( <b>APP-128</b> ).
<b>RR-004.56</b>	7.18 We welcome the proposals to undertake a water features survey along with hydrogeological risk assessments (HRA) for any abstractions and groundwater dependent terrestrial ecosystems down gradient of dewatering, HDD or other intrusive works.	Hydrogeological risk assessments are included in Appendix 13.3 Groundwater assessment ( <b>APP-113</b> ). These will be updated following the water features surveys and supplementary GI, to inform the detailed design.
<b>RR-004.57</b>	7.19 RD11 – while we are generally supportive of the measures outlined to protect groundwater during operation, we would highlight that the minimum thickness of unsaturated zone for areas where infiltration is shown to be acceptable will be 1.2 metres, not 1m as stated. A thickness of 2 – 5 m is preferable.	The preferable thickness and minimum thickness is noted and will be taken into consideration in hydrogeological impact assessment updates and the detailed design. The 1m reference is taken from the CIRIA C753 SuDS Manual (2015), which specifies that there should be at least 1m separation between the base of any proposed infiltration system and maximum anticipated groundwater levels (i.e. unsaturated zone thickness).

<p><b>RR-004.58</b></p>	<p>7.20 RD15 – we note that this section states that: “Drainage Strategy and Flood Risk Assessment including hydraulic modelling to be approved by the Environment Agency, Lead Local Flood Authority (Norfolk County Council) and Norfolk Rivers Internal Drainage Board”. We welcome this but would highlight that consultation should be progressed and approval obtained as part of the DCO process and not through permit and consent requirements. Cantley Stream is an ordinary watercourse, not a designated main river, and as such the LLFA is the consenting authority for works affecting flows. However, the Environment Agency has reviewed and commented on the FRA due to the presence of fluvial flood risk associated with the Cantley Stream. We should review and approve the FRA to ensure that fluvial flood risk is appropriately managed, and review and approve the drainage strategy to ensure the protection of controlled waters.</p>	<p><b>Please refer to RR-004.33.</b></p>
<p><b>RR-004.59</b></p>	<p>7.21 RD17 – as highlighted above, the Environment Agency should review and approve the detailed drainage design. We should be a named consultee in respect of Requirement 8 (Surface and foul water drainage system), and, for matters relevant to our remit, Requirement 4 (Environmental Management Plan).</p>	<p><b>Please refer to RR-004.2 and RR-004.20.</b></p>
<p><b>RR-004.60</b></p>	<p>7.22 Regarding Table 4-1, it should also be noted that the consenting authority in the case of certain mobile plant permits such as concrete crushers is the local authority, and therefore they should be listed along with the Environment Agency</p>	<p>This Applicant will ensure the permit is sought from the relevant consenting authority.</p>
<p><b>RR-004.61</b></p>	<p>7.23 With reference to Annex C, we would highlight that we would want to review the Construction method statement for water.</p>	<p>The construction method statement for water can be issued to the Environment Agency for review once prepared. <b>In addition, please refer to RR-004.2</b></p>

## RR-005 HISTORIC ENGLAND

Reference	Relevant Representation	Highways England Response
RR-005.1	<p>The Historic Buildings and Monuments Commission for England (HBMCE) is better known as Historic England, and we are the Government's adviser on all aspects of the historic environment in England - including historic buildings and areas, archaeology and historic landscape. We have a duty to promote conservation, public understanding and enjoyment of the historic environment. We are an executive Non-Departmental public body and we answer to Parliament through the Secretary of State for Digital Culture, Media and Sport. We summarise our representation regarding this proposed project as follows. Please note we do not intend to attend the preliminary hearing. However, we will be submitting full written representation at a later date. Representation: 1. Introduction Historic England's written representation will comment more fully on the key historic environment issues in due course, however for the purposes of this representation they are summarised below.</p> <p>2. Designated Heritage Assets Historic England's advice on designated heritage assets will be limited to the scheduled monument of 'Two tumuli in Big Wood' (1003977) which lies immediately adjacent to the DCO boundary. Advice on grade II listed structures will be provided by South Norfolk District Council's Conservation Team. We note from Section 6.7.16 of the Chapter 6.1 of the ES that the trial trenching proposed adjacent to the scheduled monument was not carried out. Historic England would welcome the opportunity to hold further discussions about the proposed trial trenching adjacent to the scheduled monument with the applicant's heritage consultant and Norfolk County Council. Section 6.10.7 of the ES identifies that the proposed scheme would have a 'significant residual adverse effect' on the scheduled monument. This would arise through a permanent change to the setting of the monument and the severance of the barrows from their landscape context overlooking a small valley to their south. We consider that the change to the setting of the 'Two tumuli in Big Wood' scheduled monument would result in harm to the significance of this designated heritage asset. The level of harm will need to be weighed against the public benefit of the proposed scheme.</p>	<p>Trial trenching initially planned adjacent to the scheduled monument could not be undertaken in 2020 due to the presence of dense vegetation. Supplementary trial trenching is proposed to commence Q4 2021. This will include a series of hand dug trial pits in the area adjacent to the scheduled monument.</p> <p>The applicant acknowledges the significant adverse residual effect on the scheduled monument. The Case for the Scheme (<b>APP-125</b>) presents the basis for considering the wider benefits of the scheme against this residual effect. The final assessment of harm and the weighting of public benefits against that harm is the prerogative of the decision-maker."</p>

Reference	Relevant Representation	Highways England Response
RR-005.2	3. Non-Designated Heritage Assets Chapter 6 of the ES identifies a wide range of non-designated heritage assets within the DCO application boundary and wider study area. The archaeological surveys already undertaken have identified previously unrecorded buried archaeological remains and a high potential for further such heritage assets to be present within the application site boundary. We note that further field survey would be necessary to fully establish the archaeological potential of the proposed development area. A 'Compound/Material Storage Area' is shown southeast of the existing A11 on Figure 2.1. This area was not included in the archaeological surveys and we are concerned that it could impact on as yet unidentified heritage assets. We request clarification regarding the potential impact in this area, and whether archaeological surveys are proposed for this.	Supplementary archaeological trial trenching is proposed to be commenced Q4 2021. The supplementary survey covers areas that were not surveyed during the 2020 trial trenching.  In consultation with the county archaeologist, trial trenching only is proposed at the location of the Compound/Material Storage Area shown southeast of the existing A11 on Figure 2.1 ( <b>APP-054</b> )
RR-005.3	4. Summary We intend to expand on these matters more fully in our written representation. We are broadly satisfied with the baseline data and overall assessment methodology used in the Cultural Heritage chapter of the submitted Environmental Statement. In the event that the development is consented, we would be concerned to ensure that the historic environment is adequately and appropriately considered, and that the DCO is appropriately worded to ensure appropriate mitigation would be delivered.	All proposed mitigation to ensure the historic environment is protected is set out in the REAC table of the Environmental Management Plan ( <b>APP-128</b> ). Compliance with these commitments is secured in the dDCO ( <b>APP-017</b> ) by requirement 4 and requirement 9 ensures a written scheme of investigation is submitted, approved and complied with.

## RR-006 MINISTRY OF DEFENCE DIO SAFEGUARDING TEAM

Reference	Relevant Representation	Highways England Response
RR-006.1	Proposal: the creation of one new connector road between the A11 and A47 with the aim of rerouting traffic away from the existing Thickthorn Junction, relieving congestion, improving the environment, and improving journey times. Notice of section 56 issue. Location: A47/A11 Thickthorn junction, Norwich Grid Ref's: E 618495 N 305473 E 619073 N 304843 E 617762 N 304708 Thank you for consulting the Ministry of Defence (MOD) on the above proposed development which was received by on the 27/05/2021. I can confirm the MOD has no safeguarding objections to this proposal as received on 27/05/2021	The Applicant acknowledges the Ministry of Defence DIO Safeguarding Team has no objections to the proposed Scheme.

## RR-007 NATIONAL GRID

Reference	Relevant Representation	Highways England Response
RR-007.1	<p>Representation by National Grid Electricity Transmission Plc in relation to the A47/A11 Thickthorn Junction Project ("the Project") National Grid Electricity Transmission Plc ("NGET") wishes to make a relevant representation to the Project in order to protect its position in relation to infrastructure which is within and in close proximity to the proposed Order limits. NGET's rights to retain its apparatus in situ and rights of access to inspect, maintain, renew and repair such apparatus located within or in close proximity to the Order limits must be maintained at all times and access to inspect and maintain such apparatus must not be restricted. The documentation and plans submitted for the Project have been reviewed in relation to impacts on NGET's existing apparatus and land interests located within this area. The following assets, which form an essential part of the electricity transmission network in England and Wales are within, or in close proximity to, the Order limits: Overhead Lines • 4VV (400kV) overhead line route - Norwich Main to Walpole Towers 4VV209 to 4VV213 and associated span. NGET requires protective provisions to be included within the DCO to ensure that its interests are adequately protected and to ensure compliance with relevant safety standards. NGET is liaising with the Promoter in relation to the protective provisions for inclusion within the DCO, along with any supplementary agreements which may be required. National Grid will keep the Examining Authority updated in relation to these discussions. As a responsible statutory undertaker, NGET's primary concern is to meet its statutory obligations and ensure that any development does not impact in any adverse way upon those statutory obligations. NGET reserves the right to make further representations as part of the examination process but in the meantime will negotiate with the Promoter with a view to reaching a satisfactory agreement.</p>	<p>The draft DCO (<b>APP-017</b>) includes protective provisions for National Grid as an electricity undertaker (Schedule 9 Part 3).</p> <p>The Applicant is continuing to work with National Grid to ensure that its apparatus and land interests are adequately protected, to comply with relevant safety standards.</p>

## RR-008 ADDLESHAW GODDARD LLP ON BEHALF OF NETWORK RAIL INFRASTRUCTURE LIMITED

Reference	Relevant Representation	Highways England Response
RR-008.1	<p>APPLICATION BY HIGHWAYS ENGLAND FOR THE A47/A11 THICKTHORN JUNCTION DEVELOPMENT CONSENT ORDER 202[X] PLANNING INSPECTORATE REFERENCE: TR010037 SECTION 56 PLANNING ACT 2008: RELEVANT REPRESENTATION OF NETWORK RAIL INFRASTRUCTURE LIMITED This is the section 56 representation of Network Rail Infrastructure Limited (Network Rail) provided in respect of Highways England's (Promoter) application for a development consent order (Order) for the A47/A11 Thickthorn Junction Scheme (Scheme). Network Rail is a statutory undertaker and owns, operates and maintains the majority of the rail infrastructure of Great Britain, including the Breckland Line which crosses the A47 to the south east of Fishing Lake, Keswick and Intwood (Railway). The Order sought by the Promoter includes consent and powers to improve the junction between the A47 and the A11 by adding 2 new link roads to ease congestion in the area. The Promoter seeks authority and powers in the draft Order for works to be carried out to the section of the A47 which passes over the Cringleford Rail Bridge and intends to acquire all interests and rights in the overbridge to the extent owned by Network Rail. The Promoter also seeks to acquire temporary rights to use Network Rail owned land for the purposes of carrying out works. Network Rail wishes to ensure that the Scheme will not have a detrimental impact on the operation of the Railway and that the safety of the Railway is maintained during the construction, operation and ongoing maintenance requirements of the Scheme. As the Promoter proposes to carry out works to the Cringleford Rail Bridge and in close proximity to the Railway, Network Rail wishes to object to the making of the Order on the ground that the proposed works might interfere with the safe and efficient operation of the Railway. In order for Network Rail to be in a position to withdraw its objection Network Rail will require adequate protective provisions and/or requirements to be included within the Order and an agreement with the Promoter to ensure that the works for the Scheme are carried out in regulated manner to prevent adverse impacts to the Railway and which regulate the following:</p>	<p>The Applicant has engaged with and will continue to engage with Network Rail Infrastructure Limited (NRIL) in relation to ensuring prevention of any adverse impacts to the railway as a result of the Scheme.</p>

Reference	Relevant Representation	Highways England Response
	<p>a) the protection of the Railway from adverse impacts during construction of the Scheme;</p> <p>b) the liability of the Promoter for any necessary repairs and upgrades to the Railway as a result of its use by construction and operational traffic associated with the Scheme, including terms which protect Network Rail's statutory undertaking;</p> <p>c) a safe system of work for large vehicles working adjacent to the Railway.</p> <p>Network Rail is continuing to review the Promoter's plans, draft Order and application documents, and will continue to work constructively with the Promoter to clarify any issues raised. The Examining Authority and the Secretary of State will need to be satisfied that railway safety and operations will not be compromised by the making of the Order. Network Rail requests that the Examining Authority treats Network Rail as an Interested Party for the purposes of the Examination, and reserves the right to produce additional and further grounds of concern when further details of the Scheme and its effects on Network Rail's assets are available.</p>	

## RR-009 BROWN & CO ON BEHALF OF BIG SKY DEVELOPMENTS LTD

Reference	Relevant Representation	Highways England Response
RR-009.1	<p>Although discussions continue, the owners wish to be represented to ensure that the impact of the scheme is mitigated. As the affected property is an active residential housing development site for 350 houses, the owners need reassurance that: 1. as the works will remove the land required for playing fields and public open space. The owners need to be sure the loss of the recreation area and playing field is replaced either with an alternative site suitable to South Norfolk Council and Cringleford Parish Council, or more likely that a commuted sum is agreed with the relevant authorities and paid by the acquiring authority.</p>	<p>The Applicant is continuing to work with Big Sky and South Norfolk Council in relation to providing a suitable alternative for the potential on-site public open space allocation, which will be lost as a result of the scheme.</p> <p>The Applicant is continuing to work with Big Sky and expects to inform the ExA of any progress at Deadline 2.</p>

Reference	Relevant Representation	Highways England Response
RR-009.2	2. the boundaries are protected to prevent residents and the public being at risk from access to the highway cutting and works.	<p>The Applicant confirms that continuous highway boundary post and rail fencing will be provided at the boundary between the publicly accessible areas east of the A47 and the areas maintained by the Highways England. During the construction phase, the extent of the site works will be secured using temporary fencing and other security measures to prevent public access.</p>
RR-009.3	3. that noise mitigation measures are installed to ensure the new properties are not detrimentally affected by the increased noise from the works.	<p>ES Chapter 11: Noise and Vibration (<b>APP-042</b>) considers the potential effects that are expected to arise due to noise and vibration from the construction and operation of the Scheme, including at the Cringleford development. The approach to this assessment follows the Scoping Report (February 2018) and subsequent agreed Scoping Opinion (March 2018) (<b>APP-121</b>), in combination with DMRB LA 111.</p> <p>The potential effects resulting from noise and vibration associated with the construction of the Scheme are considered and Receptor R6 was selected to represent the potentially worst-affected dwellings within the Cringleford development. The assessment at this location identified the potential for moderate or major construction noise impacts due to some of the works phases unless further mitigation is considered. This construction noise impacts could result in significant effects without further mitigation. For this reason additional mitigation against construction noise is identified in Section 11.9 and Table 11-12 in the form of temporary noise barriers. With this further mitigation, no significant effects are expected to occur due to construction noise. The above is controlled through an Environmental Management Plan (<b>APP-128</b>) that requires the construction Contractor to limit construction noise to below the SOAEL (Significant Observed Adverse Effect Level) values, demonstrated through on-site noise monitoring.</p> <p>The assessment of operational road traffic noise requires a three-dimensional road traffic noise to be constructed accounting for the ground profile and 3D alignment of the Scheme (including height). An assessment of changes in road traffic noise was then carried out comprising a comparison of the level of road traffic noise at each receptor in the 'Do Minimum Opening Year' scenario versus the 'Do Something scenario' in both Opening and Future Year. The conclusion of the assessment for the Scheme was that significant effects due to operational road traffic noise</p>

Reference	Relevant Representation	Highways England Response
		<p>with the Scheme (including incorporated mitigation measures) are not expected to occur at noise-sensitive receptors within the study area.</p> <p>In relation to the Cringleford development, eight dwellings within the development were expected to experience a minor adverse impact with a change in road traffic noise of 1.0 to 1.2 dB LA10,18hour on scheme opening, while the noise changes elsewhere within the Cringleford development are negligible. Through applying the DMRB LA111 methodology, the change in road traffic noise at the above eight dwellings is not expected to result in any significant effects and no additional mitigation of operational noise was deemed appropriate or necessary in this location.</p> <p>Mitigation in the form of a noise-reducing road surface has been incorporated within the design of the Scheme. The proposed surfacing on the new A11 to A47 link road, and the Cantley Lane Link Road will be low noise surfacing, with the exception of the overbridges carrying the Cantley Lane Link Road across the A11. The bridge deck in this location is proposed to be surfaced with hot rolled asphalt. This type of material is durable and provides better long term protection to the waterproofing course directly on top of the concrete structure deck.</p>
RR-009.4	4. that the Cantley Lane pedestrian over-bridge is screened on the north side of the works to prevent over-looking of the nearest houses.	Hedgerows will be planted on top of the 2m high bunding east of the A47 in the vicinity of the proposed WCH footbridge to provide screening for the Cringleford residential development. This is detailed in the Environmental Masterplan Sheet 4 of 5 ( <b>APP-123</b> ).

## RR-010 CLIMATE EMERGENCY PLANNING AND POLICY (CEPP) (CLIMATE EMERGENCY PLANNING AND POLICY (CEPP))

Reference	Relevant Representation	Highways England Response
RR-010.1	Dr Andrew Boswell, Climate Emergency Planning and Policy As an independent environmental consultant specialising in science, policy, and law, I object to the A47/A11 Thickthorn Junction (A47THI) scheme: A. In combination with the Norwich Western link (NWL) road, two other RIS2 schemes (A47 North Tuddenham to Easton (A47NTE) and the A47	<b>Please see Common Response A and G</b>

Reference	Relevant Representation	Highways England Response
	Blofield to North Burlingham), the scheme would increase capacity and traffic growth contrary to national policies for climate change, air quality and modal shift towards walking, cycling and public transport.	
RR-010.2	B. Data, assumptions and projections in the traffic and economic modelling do not take account of the impact of the Covid 19 pandemic on travel patterns and road capacity need.	<b>Please see Common Response B</b>
RR-010.3	C. Environmental assessment requires rework with an EIA baseline that expresses the *current* environmental situation which is NO_NWL and none of the RIS2 schemes.	<b>Please see Common Response C</b>
RR-010.4	D. Do-Minimum (DM) traffic model should codify the *current* situation (ie: NO_NWL + none of the RIS2 schemes). Sensitivity testing should then look at all possible options in a mathematical orthogonal sense.	<b>Please see Common Response C</b>
RR-010.5	E. Major traffic reductions are observed between Norfolk County Council (NCC) NATS traffic models run 2015 and 2019 baseline years. A47THI capacity requirement needs greater assessment as it is based on the 2015 baseline year.	<b>Please see Common Response C</b>
RR-010.6	F. The scheme fragments and displaces nature and wildlife habitats, and has a “large adverse” effect with impacts on veteran trees, deciduous woodland, hedgerows, bats and barn owls. The cumulative impacts on biodiversity with NWL and other RIS2 schemes has not been assessed.	<b>Please see Common Response G</b>
RR-010.7	G. NCC identify a nationally significant breeding colony of barbastelle bats, which would qualify for SSSI or SAC status ( <a href="http://bit.ly/NCC_PlanDeleg_June2021">http://bit.ly/NCC_PlanDeleg_June2021</a> , PDF page 85). The in-combination impacts of A47NTE, NWL and this scheme on this European protected species have not been assessed.	<b>Please see Common Response I</b>
RR-010.8	H. In-combination, and cumulative impacts, for biodiversity, ecology, and air quality have not been assessed with at least six other road infrastructure schemes near to Norwich and East Norfolk. The recent judgement of <i>Pearce v Secretary of State BEIS</i> [2021] demonstrates that the Courts accept the importance of cumulative environmental impact assessment. I. Carbon emissions need to be cumulatively assessed *both* locally within the Norwich area (in combination effects with the six other possible schemes identified above), and nationally with up to 100 other schemes planned by Government, including under RIS2.	<b>Please see Common Response G</b>

Reference	Relevant Representation	Highways England Response
RR-010.9	I. Carbon emissions need to be cumulatively assessed *both* locally within the Norwich area (in combination effects with the six other possible schemes identified above), and nationally with up to 100 other schemes planned by Government, including under RIS2.	Please see Common Response G
RR-010.10	J. Carbon emissions should be tested against the UK obligations under the Paris agreement including the UK's Nationally Determined Contribution (NDC), the legally binding target under the Climate Change Act 2008 to meet net-zero carbon emissions by 2050, the UK Sixth Carbon Budget (6CB), science-based carbon budgets from the UK Tyndall Centre, the NPPF 148 planning requirement to "radical reductions of greenhouse gas emissions", the statutory duty on Highways England under the Infrastructure Act 2015 section 5(2) to have regard for the environment, and the NCC Environmental Policy.	Please see Common Response H
RR-010.11	K. The NPS requires that the scheme is assessed against national carbon red	Please see Common Response H

## RR-011 BIDWELLS LLP ON BEHALF OF THE TRUSTEES OF THE CM WATT RESIDUAL TRUST

Reference	Relevant Representation	Highways England Response
RR-011.1	<p>As the key highway junction, providing access to and around the City of Norwich, investment to improve the Thickthorn Junction's efficiency is important to the City and wider County. The Trustees of The CM Watt Residual Trust (The Trustees) believe improvements to the Thickthorn Junction should be welcomed but whilst Highways England's current design addresses a number of the Trustee's concerns, there are still outstanding issues which the Planning Inspectorate should give due regard to within their assessment of the application.</p> <p>1. Highways England are aware of the existence of planning obligations in respect of a previously approved development proposal, which were required to mitigate the impact of traffic upon the Thickthorn Junction. These obligations can be summarised as the securing of land to expand the existing Park &amp; Ride site and for construction of a new slip road from the A11 to the Park &amp; Ride to reduce the impact of Park &amp; Ride traffic on</p>	<p>The Applicant welcomes the support of the CM Watt Residual Trust with regards to the overall proposals for the Scheme.</p> <p>The relevant planning obligations have been requested from Bidwells for consideration.</p>

Reference	Relevant Representation	Highways England Response
	<p>the Thickthorn Junction. Highways England's proposals do not include any provision for the envisaged Park &amp; Ride slip road to be delivered and the physical constraints imposed by the proposed works mean the future delivery of a differently designed Park &amp; Ride slip road is rendered impossible. The improvement proposals make it impossible to implement the terms of the legally binding planning obligations, thus Highways England should be responsible for the costs and liabilities associated with varying the terms of the planning obligations in relation to the Park &amp; Ride slip road and unpicking the land agreements related to that now undeliverable obligation.</p>	
<p><b>RR-011.2</b></p>	<p>2. An extension to the Park &amp; Ride remains a key objective of Norfolk County Council. Highways England have assured NCC the proposed improvements will free up the requisite capacity at the Thickthorn Junction and connected network for the Park &amp; Ride extension to go ahead with access via the existing Park &amp; Ride access route. The Trustees believe the Planning Inspectorate should be similarly assured.</p>	<p>The increased capacity of the Thickthorn Park and Ride has been allowed for in the NATS traffic model, details of which can be found in the Case for the Scheme Chapter 4 (<b>APP-125</b>). The modelling shows that the Scheme operates without any large excess queues building on the roundabout or its approach arms.</p> <p>The Applicant engaged with Norfolk County Council during the Statutory Consultation phase of the application for the Scheme and is satisfied that no additional routes for vehicular access to the Park and Ride are required.</p>
<p><b>RR-011.3</b></p>	<p>3. In the expectation that further mitigation measures will be required by Highways England to reduce the impact of the anticipated increase in carbon emissions during the construction and operational phases of the junction improvement scheme, the Trustees believe the first place where Highways England should aim to deliver this mitigation is on the Trustee's retained property, in partnership with them, and suggest such measures should include features to encourage travel by alternative modes and to create access to outdoor spaces for recreation and leisure.</p>	<p>The impacts of the Scheme have been assessed and all necessary environmental mitigation is detailed in the submitted Environmental Statement and Environmental Management Plan (<b>APP-128</b>). Please see also common response H.</p>
<p><b>RR-011.4</b></p>	<p>4. In the expectation that further mitigation measures will be required to reduce the anticipated impacts of the proposed improvement scheme on the local community, the Trustees believe the first place where Highways England should aim to deliver this mitigation is on the Trustee's retained property, in partnership with them, and suggest that improvements to the landowner's historic parkland, that will otherwise be blighted by this scheme, is the correct place to start.</p>	<p>The impacts of the Scheme have been assessed and all necessary mitigation is detailed in the submitted Environmental Statement and Environmental Management Plan (<b>APP-128</b>).</p>

Reference	Relevant Representation	Highways England Response
RR-011.5	5. The proposed land take should be minimised. Where Highways England will require future access across the Trustee's property to reach their infrastructure this should be provided by the granting of the appropriate rights rather than the acquisition of freehold title.	As stated in Section 5.3.3 in the Statement of Reasons ( <b>APP-020</b> ) the land identified as part of the Application has been limited to the minimum required to safely construct, operate and maintain the Scheme.
RR-011.6	6. For the primary reasons of improving safety and controlling noise pollution, the road speed on the Cantley Lane link road should be a maximum of 30mph instead of the 40mph proposed.	<p>The 40mph speed limit for the Cantley Lane Link Road has been developed in consultation with Norfolk County Council, which will be the local highway authority for the road following construction, and is appropriate for the proposed road cross section and intended use.</p> <p>The design of the link road meets the safety standards appropriate to this speed of road and means there is a consistency in speed limits with the adjoining B1172 Norwich Road, which will also have a 40mph speed limit.</p> <p>An independent Stage 1 Road Safety Audit has been undertaken in relation to the Scheme and has not highlighted any safety concerns. The Cantley Lane Link Road will be surfaced with low-noise surfacing to reduce operational noise.</p>
RR-011.7	7. Noise will be a major issue when the improvements are constructed and there will be a detrimental impact on the Trustees property as a result. The surface of any new roads to be constructed should be low noise tarmac or similar, concrete should not be used and Highways England should engage with the Trustees over a scheme for planting/bunding and acoustic fencing to minimise the negative impacts of their improvements.	<p>Noise is not assessed to be a major issue. ES Chapter 11: Noise and Vibration (<b>APP-048</b>) considers potential impacts of the Scheme. The approach to this assessment follows the Scoping Report (February 2018) and subsequent agreed Scoping Opinion (March 2018) (<b>APP-075</b>), in combination with DMRB LA 111.</p> <p>The potential effects resulting from noise and vibration associated with the construction and operation of the Scheme are considered within ES Chapter 11: Noise and Vibration of the EIA (<b>APP-048</b>). The assessment of operational road traffic noise requires a three-dimensional road traffic noise to be constructed accounting for the ground profile and 3D alignment of the Scheme (including height). This was carried out as part of the EIA. An assessment of changes in road traffic noise was then carried out comprising a comparison of the level of road traffic noise at each receptor in the 'Do Minimum Opening Year' scenario versus the 'Do Something scenario' in both Opening and Future Year. The conclusion of the assessment for the Scheme was that significant effects due to operational road traffic noise with the Scheme (including incorporated</p>

Reference	Relevant Representation	Highways England Response
		<p>mitigation measures) are not expected to occur.</p> <p>Mitigation in the form of a noise-reducing road surface has been incorporated within the design of the Scheme. The proposed surfacing on the new A11 to A47 link road, and the Cantley Lane Link Road will be low noise surfacing, with the exception of the overbridges carrying the Cantley Lane Link Road across the A11. The bridge deck in this location is proposed to be surfaced with hot rolled asphalt. This type of material is durable and provides better long term protection to the waterproofing course directly on top of the concrete structure deck.</p> <p>The ES includes a forecast of whether properties qualify for secondary insulation under the Noise Insulation Regulations. It was forecast that no properties are eligible for secondary insulation under these Regulations.</p>
RR-011.8	<p>8. The Trustees request the light pollution associated with the improvement scheme is reduced through the rejection of any new street lighting. Where new lighting is unavoidable, it should be the minimum required and designed with the appropriate screening in place to ensure the lowest possible impact upon the surrounding property and local environment. This could be managed through a Lighting Environmental Impact Assessment to be agreed with the Trustees.</p>	<p>A Lighting Assessment has been submitted as part of Chapter 7 of the Environmental Statement (Landscape and Visual) <b>(APP-044)</b>.</p> <p>Item G2 of Table 3-1 of the REAC contained within the EMP <b>(APP-128)</b> sets out how lighting during construction will be reduced to avoid disturbance to sensitive receptors.</p>
RR-011.9	<p>9. To address the loss of mature trees, the impact of the proposed scheme on the character of the landscape and ensure an environmental net gain, a planting scheme should be agreed with the Trustees by Highways England.</p>	<p>ES Chapter 7 Landscape and Visual <b>(APP-044)</b> presents the findings of the Landscape and Visual Impact Assessment (LVIA) including baseline conditions, the potential impacts of the Scheme upon surrounding landscape and visual receptors and identification of appropriate mitigation. A layout of existing/replacement planting (including woodland) is presented in the Environmental Masterplan <b>(APP-123)</b>. An indicative species list is also included as part of the Environmental Masterplan <b>(APP-123)</b>.</p> <p>An indicative species list is also included as part of the Environmental Masterplan <b>(APP-123)</b> Specific heights/species are included as a requirement where necessary for mitigation identified in the Environmental Statement. This is noted in the REAC of the EMP <b>(APP-128)</b>.</p>

Reference	Relevant Representation	Highways England Response
		<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 CIEEM, in developing its landscaping and biodiversity proposals. These incorporate high biodiversity (or priority habitats) including grasslands, hedgerows and woodland as shown in the Environmental Masterplan (<b>APP-123</b>).</p> <p>Appendix B.5 of the Environmental Management Plan (EMP) (<b>APP-128</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 Requirement 4 of the draft DCO (<b>APP-017</b>)</p> <p>There is currently no mandated framework for calculating and reporting on biodiversity net gain (BNG). Any such calculation is subject to the commencement of the Environment Act and its associated secondary legislation, which is expected to set out the SoS 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 overall BNG or indicate the extent of BNG.</p>
<p><b>RR-011.10</b></p>	<p>10. The Trustees await additional detail regarding the construction phase of the improvement scheme.</p>	<p>At this stage, the Applicant is unable to provide a detailed construction phasing plan. However, the Applicant will endeavour to continue to engage with the Trustees and provide an update when additional information becomes available.</p>
<p><b>RR-011.11</b></p>	<p>11. The Trustees await additional detail regarding the rerouting of Cantley Stream, specifically the works which will be undertaken to reprofile what will then be the old course of this stream prior to it being handed back.</p>	<p>The Environmental Masterplan (<b>APP-123</b>) shows the proposed realignment of Cantley Stream and the proposed mitigation for the proposed realignment is described in ES Chapter 8 (<b>APP-045</b>) and 13 (<b>APP-050</b>). Part of the existing stream will be retained downstream of the Cantley Lane South culvert to provide mitigation for the loss of riparian habitat and to provide additional water vole habitat. Apart from this reach,</p>

Reference	Relevant Representation	Highways England Response
		the rest of the existing watercourse to be realigned will be filled. The detailed design and the construction method statement to show how the proposed stream realignment will be constructed (including the works on the old watercourse to be filled) will be undertaken at detailed design stage.
RR-011.12	12. The Trustees note the Land Take plans include sections of public highway which Highways England propose to acquire permanently. It is the Trustees understanding these areas are included on the plans because the land was previously in their ownership and the subsoil remains so. The Trustees do not believe it should be necessary for Highways England's proposed works to forever change the existing structure of ownership in relation to these areas.	The Applicant has applied for compulsory acquisition powers for the land and rights necessary to secure the delivery of the Scheme.  However, the Applicant continues to seek to reduce land take where it becomes possible.

## RR-012 BIDWELLS LLP ON BEHALF OF THE TRUSTEES OF THE MACKINTOSH TRUST

Reference	Relevant Representation	Highways England Response
RR-012.1	As the key highway junction, providing access to and around the City of Norwich, investment to improve the Thickthorn Junction's efficiency is important to the City and wider County. The Trustees of The Mackintosh Trust (The Trustees) believe improvements to the Thickthorn Junction should be welcomed but whilst Highways England's current design addresses a number of the Trustee's concerns, there are still outstanding issues which the Planning Inspectorate should give due regard to within their assessment of the application. 1. Highways England are aware of the existence of planning obligations in respect of a previously approved development proposal, which were required to mitigate the impact of traffic upon the Thickthorn Junction. These obligations can be summarised as the securing of land to expand the existing Park & Ride site and for construction of a new slip road from the A11 to the Park & Ride to reduce the impact of Park & Ride traffic on the Thickthorn Junction. Highways England's proposals do not include any provision for the envisaged Park & Ride slip road to be delivered and the physical constraints imposed by the proposed works mean the future delivery of a	The Applicant welcomes the support of the CM Watt Residual Trust with regards to the overall proposals for the Scheme. The relevant planning obligations have been requested from Bidwells for consideration.

Reference	Relevant Representation	Highways England Response
	<p>differently designed Park &amp; Ride slip road is rendered impossible. The improvement proposals make it impossible to implement the terms of the legally binding planning obligations, thus Highways England should be responsible for the costs and liabilities associated with varying the terms of the planning obligations in relation to the Park &amp; Ride slip road and unpicking the land agreements related to that now undeliverable obligation.</p>	
<p><b>RR-012.2</b></p>	<p>2. An extension to the Park &amp; Ride remains a key objective of Norfolk County Council. Highways England have assured NCC the proposed improvements will free up the requisite capacity at the Thickthorn Junction and connected network for the Park &amp; Ride extension to go ahead with access via the existing Park &amp; Ride access route. The Trustees believe the Planning Inspectorate should be similarly assured.</p>	<p>The increased capacity of the Thickthorn Park and Ride has been allowed for in the NATS traffic model, details of which can be found in the Case for the Scheme Chapter 4 (<b>APP-125</b>). The modelling shows that the Scheme operates without any large excess queues building on the roundabout or its approach arms.</p> <p>The Applicant engaged with Norfolk County Council during the Statutory Consultation phase of the application for the Scheme and is satisfied that no additional routes for vehicular access to the Park and Ride are required.</p>
<p><b>RR-012.3</b></p>	<p>3. Highways England's design provides two points of agricultural access to the Trustees property on either side of the proposed Cantley Lane link road, north of the A11. The Trustees need to be consulted regarding the detailed design for these accesses and, following advice from transport consultants, request the precise location of the access points is amended to better meet the Trustee's requirement for easy access to their farmland.</p>	<p>The points of access shown are for use during construction. The Applicant will endeavour to liaise with the landowner during the detailed design phase of the project regarding the design of the two field accesses provided along the new Cantley Lane Link Road. Any requested changes to the location of access tracks must be submitted by Deadline 3 for consideration by the Applicant but will be subject to safety and design standard based assessments and environmental constraints.</p>
<p><b>RR-012.4</b></p>	<p>4. Highways England's design provides additional new points of access to the Trustee's property about which the Trustees need to be consulted.</p>	<p>The new points of access are set out on the Rights of Way and Access Plans (<b>APP-008</b>) any required amendments to these will need to be presented by Deadline 3 for consideration.</p>
<p><b>RR-012.5</b></p>	<p>5. Due to the volume of traffic on the Norwich Road B1172 during peak periods, it will be too difficult for vehicles to gain access onto this road from the proposed Cantley Lane link road if this junction takes the form of the proposed T junction. To guarantee this junction works safely for its users and ensure congestion (i.e. traffic backing up) on the proposed Cantley Lane link road does not impede the Trustee's ability to travel across it, the Trustees again request that a roundabout is used at this junction.</p>	<p>Based on the traffic modelling, overall Annual Average Daily Traffic (AADT) flows on the B1172 will increase in the Do Minimum (without scheme) and Do Something (with scheme) from the base year scenario. However, there is a slight decrease in B1172 AADT in the Do Something opening year (2025) compared to the Do Minimum and no change between Do Minimum and Do Something in the design year of 2040. The slight decrease on B1172 in the Do Something is due to traffic diverting on to the A11, which will see less congestion on approach to the Thickthorn Junction. The traffic model takes account of the local planned</p>

Reference	Relevant Representation	Highways England Response
		<p>developments and the increased capacity at the Thickthorn Park and Ride.</p> <p>The new Cantley Lane Link is forecasted to carry 900 AADT in 2025 and 1100 AADT in 2040. The operational modelling undertaken at this junction shows that the ghost island junction at Cantley Lane/B1172 works satisfactorily without significant delays on Cantley Lane in the 2040 design year.</p> <p>For that reason a roundabout is both unnecessary and would be over-designed in this location.</p>
RR-012.6	6. For security, the boundaries of the proposed Cantley Lane link road with the Trustee's retained land should be defined with timber post and rail fencing with gated accesses. Highways England need to engage with the Trustees on the design and specification of the fencing to be employed.	The Applicant will endeavour to share specification of fencing and gates with the trustees in advance of its installation, but all fencing is subject to requirement 11 of the dDCO ( <b>APP-017</b> ).
RR-012.7	7. In the expectation that further mitigation measures will be required by Highways England to reduce the impact of the anticipated increase in carbon emissions during the construction and operational phases of the junction improvement scheme, the Trustees believe the first place where Highways England should aim to deliver this mitigation is on the Trustee's retained property, in partnership with them, and suggest such measures should include features to encourage travel by alternative modes and to create access to outdoor spaces for recreation and leisure.	<b>Please see common responses A and H.</b> In addition, the impacts of the Scheme have been assessed and all necessary environmental mitigation is detailed in the Environmental Management Plan ( <b>APP-128</b> ).
RR-012.8	8. In the expectation that further mitigation measures will be required to reduce the anticipated impacts of the proposed improvement scheme on the local community, the Trustees believe the first place where Highways England should aim to deliver this mitigation is on the Trustee's retained property, in partnership with them, and suggest that improvements to the landowner's historic parkland, that will otherwise be blighted by this scheme, is the correct place to start.	In addition, the impacts of the scheme have been assessed and all necessary environmental mitigation is detailed in the submitted Environmental Statement and Environmental Management Plan ( <b>APP-128</b> ).
RR-012.9	9. The proposed land take should be minimised. Where Highways England will require future access across the Trustee's property to reach their infrastructure this should be provided by the granting of the appropriate rights rather than the acquisition of freehold title. The Trustee's particularly request that they should retain the freehold title of: the low meadows to the east of the existing A11 and south of Cantley Stream; the current track and verge that runs from Cantley Lane South to	Where possible the Applicant is committed to reducing the amount of land to be acquired permanently, and is actively engaging in discussions with the landowner via an appointed Land Agent

Reference	Relevant Representation	Highways England Response
	<p>the north of Cantley Stream and provides access to The Sycamores; and the land under the underpass for the new northern free flow link road. All of these areas are currently being shown on Highways England's plans as land to be acquired permanently and the Trustees are not content with Highways England's assurances that these areas should be changed to being temporarily acquired as the DCO application and design process progresses. Highways England will not manage these areas to the same standard as the Trustees are capable and the Trustees can see no reason why these areas should be lost.</p>	
<p><b>RR-012.10</b></p>	<p>10. With regards to the land adjoining the Sycamores, referenced above, the Trustees insist the existing hedge to the front of this property should be retained for the benefit of that property.</p>	<p>The Applicant will consider at detailed design stage the possibility of retaining the hedgerow along the southern boundary of the property in the vicinity of the new proposed vehicular access. The Environmental Masterplan (<b>APP-128</b>) submitted as part of the Environmental Statement shows the additional screening features proposed in this area, which include the planting of new hedgerows and individual trees in the verge of the new Cantley Lane Link Road</p>
<p><b>RR-012.11</b></p>	<p>11. For the primary reasons of improving safety; controlling noise pollution; and minimising the difficulty of moving agricultural vehicles between the Trustee's retained property, the road speed on the Cantley Lane link road should be a maximum of 30mph instead of the 40mph proposed.</p>	<p>The 40mph speed limit for the Cantley Lane Link Road has been developed in consultation with Norfolk County Council, who will be the adopting highway authority of the road post construction, and is appropriate for the proposed road cross section and intended use. The design of the link road meets the safety standards appropriate to this speed of road and means there is a consistency in speed limits with the adjoining B1172 Norwich Road, which will also have a 40mph speed limit. An independent Stage 1 and 2 Road Safety Audit has been undertaken based on the scheme proposals and has not highlighted any safety issues.</p>
<p><b>RR-012.12</b></p>	<p>12. Noise will be a major issue when the improvements are constructed and there will be a detrimental impact on the Trustees property as a result. The surface of any new roads to be constructed should be low noise tarmac or similar, concrete should not be used and Highways England should engage with the Trustees over a scheme for planting/bunding and acoustic fencing to minimise the negative impacts of their improvements.</p>	<p>Noise is not assessed to be a major issue in respect of the Trustees' property. ES Chapter 11: Noise and Vibration (<b>APP-048</b>) considers potential impacts of the Scheme. The approach to this assessment follows the Scoping Report (February 2018) and subsequent agreed Scoping Opinion (March 2018) (<b>APP-121</b>), in combination with DMRB LA 111.</p> <p>The potential effects resulting from noise and vibration associated with the construction and operation of the Scheme are considered within ES Chapter 11: Noise and Vibration of the EIA (<b>APP-048</b>). The assessment of operational road traffic noise requires a three-dimensional road traffic noise model to be constructed accounting for the ground profile and 3D</p>

Reference	Relevant Representation	Highways England Response
		<p>alignment of the Scheme (including height). This was carried out as part of the EIA. An assessment of changes in road traffic noise was then carried out comprising a comparison of the level of road traffic noise at each receptor in the 'Do Minimum Opening Year' scenario versus the 'Do Something scenario' in both Opening and Future Year. The conclusion of the assessment for the Scheme was that significant effects due to operational road traffic noise with the Scheme (including incorporated mitigation measures) are not expected to occur at the Trustee's property.</p> <p>Mitigation in the form of a noise-reducing road surface has been incorporated within the design of the Scheme. The proposed surfacing on the new A11 to A47 link road, and the Cantley Lane Link Road will be low noise surfacing, with the exception of the overbridges carrying the Cantley Lane Link Road across the A11. The bridge deck in this location is proposed to be surfaced with hot rolled asphalt. This type of material is durable and provides better long term protection to the waterproofing course directly on top of the concrete structure deck.</p> <p>The ES includes a forecast of whether properties qualify for secondary insulation under the Noise Insulation Regulations. It was forecast that no properties are eligible for secondary insulation under these Regulations.</p>
<p><b>RR-012.13</b></p>	<p>13. The Trustees request the light pollution associated with the improvement scheme is reduced through the rejection of any new street lighting. Where new lighting is unavoidable, it should be the minimum required and designed with the appropriate screening in place to ensure the lowest possible impact upon the surrounding property and local environment. This could be managed through a Lighting Environmental Impact Assessment to be agreed with the Trustees.</p>	<p>A Lighting Assessment has been submitted as part of Chapter 7 of the Environmental Statement (Landscape and Visual) (<b>APP-044</b>).</p> <p>The lighting design will be in accordance with British Standard BS 5489-1:2020 and the Institution of Lighting Professional's GN01:2021. Through the application of the British Standards and industry guidance, lighting will be designed to ensure that light with the potential to adversely affect sensitive receptors complies with the relevant Environmental Zone criteria. Item G2 of Table 3-1 of the REAC contained within the EMP (<b>APP-128</b>) sets out how lighting during construction will be reduced to avoid disturbance to sensitive receptors.</p>
<p><b>RR-012.14</b></p>	<p>14. To address the loss of mature trees, the impact of the proposed scheme on the character of the landscape and ensure an environmental net gain, a planting scheme should be agreed with the Trustees by Highways England.</p>	<p>ES Chapter 7 Landscape and Visual (<b>APP-044</b>) presents the findings of the Landscape and Visual Impact Assessment (LVIA) including baseline conditions, the potential impacts of the Scheme upon surrounding landscape and visual receptors and identification of appropriate mitigation.</p>

Reference	Relevant Representation	Highways England Response
		<p>A layout of existing/replacement planting (including woodland) is presented in the Environmental Masterplan (<b>APP-123</b>). An indicative species list is also included as part of the Environmental Masterplan (<b>APP-123</b>). Specific heights/species are included as a requirement where necessary for mitigation identified in the Environmental Statement. This is noted in the REAC of the EMP (<b>APP-128</b>).</p> <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 <u>CIEEM</u>, in developing its landscaping and biodiversity proposals. These incorporate high biodiversity (or priority habitats) including grasslands, hedgerows and woodland as shown in the Environmental Masterplan (<b>APP-123</b>).</p> <p>Appendix B.5 of the Environmental Management Plan (EMP) (<b>APP-128</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 Requirement 4 of the draft DCO (<b>APP-017</b>).</p> <p>There is currently no mandated framework for calculating and reporting on biodiversity net gain (BNG). Any such calculation is subject to the commencement of the Environment Act and its associated secondary legislation, which is expected to set out the SoS 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 overall BNG or indicate the extent of BNG.</p>

Reference	Relevant Representation	Highways England Response
RR-012.15	15. The Trustees await additional detail regarding the construction phase of the improvement scheme.	<p>The construction communication strategy will set out how further details will be communicated to residents and stakeholders following the grant of the DCO. This is secured as part of the Environmental Management Plan (EMP) (APP-128), Appendix B.5 .</p> <p>The Applicant will continue to engage with the Trustees and update them when additional information becomes available.</p>
RR-012.16	16. The Trustees await additional detail regarding the rerouting of Cantley Stream, specifically the works which will be undertaken to reprofile what will then be the old course of this stream prior to it being handed back.	<p>The Environmental Masterplan (<b>APP-123</b>) shows the proposed realignment of Cantley Stream and the proposed mitigation for the proposed realignment is described in ES Chapter 8 (<b>APP-045</b>) and 13 (<b>APP-050</b>). Part of the existing stream will be retained downstream of the Cantley Lane South culvert to provide mitigation for the loss of riparian habitat and to provide additional water vole habitat. Apart from this reach, the rest of the existing watercourse to be realigned will be filled. The detailed design and the construction method statement to show how the proposed stream realignment will be constructed (including the works on the old watercourse to be filled) will be undertaken at detailed design stage.</p>
RR-012.17	17. The Trustees note the Land Take plans include sections of public highway which Highways England propose to acquire permanently. It is the Trustees understanding these areas are included on the plans because the land was previously in their ownership and the subsoil remains so. The Trustees do not believe it should be necessary for Highways England's proposed works to forever change the existing structure of ownership in relation to these areas.	<p>The Applicant has applied for the compulsory acquisition powers deemed necessary to secure the delivery of the development.</p> <p>However, the Applicant will seek to reduce land take where possible and will continue to engage with the land owner in this regard.</p>
RR-012.18	18. As a consequence of the positioning of the Cantley Lane link road, the Trustees will lose the use of their current farm track which is well secured and provides access to their field located south of the A11 and north of Cantley Stream and Wood. The track being lost is in good order and sufficiently short and wide for two vehicles to pass side by side along it. Highways England's design shows a new access track to be provided which will turn off Cantley Lane where it runs parallel with the A47. The Trustees should be provided with the freehold title to this new track just as they have the freehold title of the track which Highways England are	<p>The Applicant is currently engaged with the respondents appointed Land Agent with regards to the ownership of the access track and the associated rights of access. The usage of the track by Highways England will be limited to accessing the land to the north of the access track to be retained by Highways England for landscaping maintenance, and is expected to be infrequent. The current width of the proposed access track is 3.5m which the Applicant deems appropriate for the intended use of the track. The Applicant is willing to engage with the respondent during the detailed design stage to provide appropriately spaced passing places</p>

Reference	Relevant Representation	Highways England Response
	<p>rendering unusable. Furthermore, whilst the Trustees accept Highways England's proposal may be the only feasible design for the track, its greater length and the fact they will be required to share the use of it with Highways England, means it must have two lanes. Finally, the new track should be secured and surfaced to a high standard and the Trustees should be consulted with on the detail thereof.</p>	<p>along the access track. The access track is proposed to be unbound compacted type 1 sub base and will be secured by the means of a gated entrance at the junction with Cantley Lane South.</p>

## RR-013 BIDWELLS ON BEHALF OF M P KEMP LIMITED

Reference	Relevant Representation	Highways England Response
<p><b>RR-013.1</b></p>	<p>The existing B1172 road is a busy stretch of road which is becoming busier, particularly as further development takes place in the Wymondham area. Therefore, it will be very difficult and dangerous for traffic to join the B1172 road from the proposed Cantley Lane link road via a T junction. We note that there are no proposals for a roundabout or signalised junction, but that a 'Ghost Island' junction form has been proposed. The safest and most sensible solution to deal with traffic at this junction is by way of a roundabout as previously suggested and M P Kemp Limited would request this be included in the plans for the A47/A11 Thickthorn junction improvements.</p>	<p>Based on the traffic modelling, overall annual average daily traffic (AADT) flows on the B1172 will increase in both the Do Minimum (without the Scheme) and Do Something (with the Scheme) from the base year scenario.</p> <p>However, there is a slight decrease in AADT on the B1172 in the opening year (2025) for the Do Something compared to the Do Minimum, and no change between the Do Minimum and the Do Something in the design year (2040). The slight decrease in AADT on B1172 in the Do Something is due to traffic diverting on to the A11, which will see less congestion on approach to the Thickthorn Junction. The traffic model takes account of the local planned developments and the increased capacity at the Thickthorn Park and Ride.</p> <p>The new Cantley Lane Link is forecast to carry 900 AADT in 2025 and 1100 AADT in 2040. The operational modelling undertaken at this junction shows that the ghost island junction proposed at Cantley Lane/B1172 works satisfactorily without significant delays on Cantley Lane in the design year (2040). For that reason, a roundabout is both unnecessary and would be over-designed in this location.</p>

## RR-014 NEW ANGLIA LEP

Reference	Relevant Representation	Highways England Response
RR-014.1	<p>Dear Inspector New Anglia Local Enterprise Partnership fully supports the delivery of the Thickthorn junction improvement as part of Highways England's Roads Investment Strategy. The improvement will help deliver the Economic Strategy for Norfolk and Suffolk, which sets out ambitious targets to grow our economy by £17.5 billion, creating 88,000 new jobs and 140,000 new homes and increasing GVA by £39 per hour by 2036. The junction is one of the most important in the region and suffers consistently from congestion, impacting on productivity and increasing pollution. The scheme will support the ambitions of the Norfolk and Suffolk Economic Strategy and our emerging Economic Renewal Plan by improving connectivity and journey reliability to economic opportunities in the County. It will also encourage further investment in Norwich and Greater Norwich, a Priority Place in the Norfolk and Suffolk Economic Strategy, covering Broadland District Council, Norwich City Council and South Norfolk Council areas. The city has a long tradition of creative, radical thinking, and has a fast growing digital and creative hub as well as an established cultural scene. The city also has a successful financial and insurance cluster, home to Aviva, Marsh and Virgin Money and a growing number start-ups and fin-tech companies. The Thickthorn improvement presents the opportunity to add to the benefits that will be realised by the other A47 improvements, connecting to the centres of global excellence in food and health at Norwich Research Park, the Food Enterprise Zone at Easton and the Cambridge Norwich Tech Corridor. Finally, the Thickthorn improvement is also identified by Transport East in their Investment and Delivery Plan as a measure within one of six strategic corridors where investment is necessary to delivering an ambitious and cohesive transport strategy. In summary, we can confirm that we fully support the proposal being put forward and look forward to continuing working closely with partners to see the improvement scheme delivered. Yours, Ellen Goodwin (on behalf of Chris Starkie - CEO, New Anglia LEP)</p>	<p>The Applicant welcomes the supportive representation.</p>

## RR-015 NORFOLK CONSTABULARY

Reference	Relevant Representation	Highways England Response
RR-015.1	I am the Traffic Management Officer for Norfolk Constabulary and in this respect I am keen to ensure that the roads of Norfolk are made as safe as possible for all road users. This includes improved road safety, reduction in road collisions and casualties on the road network. Also, increased driver/traveller journey time reliability and reduce driver stress and fatigue levels. I would look to support this application to increase the safety aspects on this part of the Norfolk road network.	The Applicant notes the support of Norfolk Constabulary for the Scheme.

## RR-016 TECHNICAL SUPPORT OFFICER FOR THE NORFOLK LOCAL ACCESS FORUM ON BEHALF OF NORFOLK LOCAL ACCESS FORUM

Reference	Relevant Representation	Highways England Response
RR-016.1	The Norfolk Local Access Forum recommends that the bridge joining the two parts of Cantley Lane (Work 35) should be at least one car's width wide, have high meshed sides with a height of 60 inches for safety. If roofed for safety, the roof must be high enough for a horse and rider (11ft with further allowance for head clearance). Additionally, to prevent horses being 'spooked' as they enter the roofed area (when their footfall noise changes) the surface needs to be one they are confident with i.e. soil or tarmac. Ideally also please do provide a mounting block at either end for riders who dismount and then have to get back up - 12 Breeze blocks in	As shown on Engineering Drawing HE551492-GTY-LSI-000-DR-CH-36018 'S45 Cantley Lane Footbridge' ( <b>APP-010</b> ), the WCH bridge has a minimum clearance of 3.5m between the parapets. The parapets are 1.8m high (71 inches) and the minimum headroom through the structure is 3.7m (12ft). The surfacing on the steel deck plate is to be a rubber compound that is suitable for cyclists and equestrian users.  The Applicant will consider the request for mounting blocks at the extents of the bridge during the detailed design phase of the Scheme.

Reference	Relevant Representation	Highways England Response
	step fashion - away from the over-head part or hazard. (If a mounting block is not used any wooden railing will be used by the riders which would result in wear.) There are some cushioned anti-slip surfaces which would be ideal	

## RR-017 NORWICH CYCLING CAMPAIGN

Reference	Relevant Representation	Highways England Response
RR-017.1	We have concerns about the provision for cyclists. We will consider the project in detail as soon as the following become available: * The final engineering diagrams *The Walking cycling and Horse-riding assessment and review *Local representations *Road Safety Audit stages 1 and 2 We will also consider the project in light of the official policy documents, including: *Gear Change *LTN 1/20 *Relevant sections of the Design Manual for Roads and Bridges *Greater Norwich Local Cycling and Walking Infrastructure Plan Anthony Clarke	Final engineering drawing are will not be available until the completion of the detailed design, which is currently programmed for late 2023. However the DCO application includes a number of drawings sets that the Respondent can review. This includes Public Right of Way drawings ( <b>APP-008</b> ), Engineering drawings ( <b>APP-010</b> ) and General Arrangement drawings ( <b>APP-005</b> ). A Walking Cycling and Horse-riding assessment is included in the Case for the Scheme Chapter 4 ( <b>APP-128</b> ). The Stage 2 Road Safety Audit has not been undertaken, as this is required at the detailed design stage.

## RR-018 NORWICH GREEN PARTY GROUP OF CITY AND COUNTY COUNCILLORS

Reference	Relevant Representation	Highways England Response
RR-018.1	Norwich City Council and Norfolk County Council Green Party Groups (12 councillors) object: Scheme is over-engineered at considerable loss to the local and global environment. There is for example, no justification for new link roads, junctions and bridges between Cantley Lane and Cantley Lane South and between Cantley Lane South and B1172 and the significant environmental impacts that would result. Opening up Cantley Lane South to vehicular traffic would turn a quiet, attractive rural road for safe cycling between Norwich and Wymondham into a fast route for drivers. Trip length distribution analysis conducted on all approaches of the Thickthorn interchange in 2040 DS show 30% of journeys are between 10 -20 km in	<b>Please see Common Response A and B</b>

Reference	Relevant Representation	Highways England Response
	<p>the AM Peak whilst 6% are less than 10km. This high number of short trips indicates the potential for modal shift. Current trip length distribution analysis is requested. Government policy seeks to make public transport and active travel the natural first choice for daily activities. Traffic surveys pre-date covid-19 and the traffic model and traffic growth forecasts do not factor in pandemic impacts on future travel demand and other uncertainties such as the impact of digital technology on travel and the economy and new policy levers to cut carbon. It is likely that the scheme has over-estimated future traffic growth, time savings and economic benefits.</p>	
<p><b>RR-018.2</b></p>	<p>The scheme would increase greenhouse gas emissions. Highways England estimate is an underestimate as it excludes several associated sources of emissions such as vegetation removal, induced traffic and traffic from consequential development. Norfolk's transport carbon emissions are substantial and growing. This scheme would increase emissions still further and make it harder to achieve legally-binding targets and Norfolk County Council's ambition of carbon neutrality by 2030. The scheme would concrete over and fragment ancient countryside around Norwich. It would strip away complex wildlife habitats and protected species would be displaced or suffer mortality as acknowledged by the Large Adverse impact assessment for biodiversity. This road scheme is one of four planned for construction around Norwich within the next five years. The synergistic effect of building a large amount of new road capacity on induced traffic and consequential development and the cumulative impact on greenhouse gas emissions and biodiversity loss has not been considered. This scheme as part of road expansion around Norwich would make the city region more hostile for biodiversity and a hotter place to live and make worse the climate and biodiversity emergencies. The alternatives considered all involve road building. Prior to 2010, as part of Joint Core Strategy preparations, Highways England proposed a bus priority scheme for Thickthorn junction to assist bus rapid transit, with the aim of serving housing growth along the A11 corridor. However, Norfolk County Council demanded a major traffic upgrade of the junction whilst failing to deliver public transport improvements along the A11. Non-road building alternatives must be explored in place of this major scheme, particularly in view of the high number of vehicles making short local trips that pass through the junction.</p>	<p><b>Please see Common Responses F, G and H</b></p>

## RR-019 NORWICH & NORFOLK FRIENDS OF THE EARTH

Reference	Relevant Representation	Highways England Response
RR-019.1	I object to the A47/A11 Thickthorn (A47/THI) scheme: Norfolk County Council: NCC 1. The scheme, in conjunction with the Norwich Western Link and two other RIS2 schemes A47 North Tuddenham to Easton & A47 Blofield to North Burlingham, would increase capacity, traffic growth and air pollution, all contrary to national policies for climate change. Also detracts from encouragement for walking, cycling and public transport.	<b>Please see Common Responses A and G</b>
RR-019.2	2. Data, out of date due to lack of change to travel patterns and road capacity need post pandemic	<b>Please see Common Response B</b>
RR-019.3	3. Environmental assessment requires rework with an EIA baseline that expresses the 'current' environmental situation which is NO_NWL and none of the RIS2 schemes.	<b>Please see Common Responses C and D.</b>
RR-019.4	4. Do-Minimum (DM) traffic model should codify the 'current' situation - NO-NWL + no RIS2 schemes. Sensitivity testing should then look at all possible options in mathematical orthogonal sense.	<b>Common Response C</b>
RR-019.5	5. Major traffic reductions are observed between NCC NATS traffic models run 2015 and 2019 baseline years. A47THI capacity requirements needs greater assessment as it is based on 2015 baseline year.	<b>Common Response E</b>
RR-019.6	6. The scheme disrupts and destroys wildlife habitats and severely damages habitat of nationally significant breeding colony of barbastelle bats a European protected species which would qualify for SSSI or SAC status. Immense loss of veteran woodland and hedgerows The combined impact of NWL and other RIS2 schemes has not been assessed.	<b>Please see Common Responses F, G and I</b>
RR-019.7	7. Combined impact on biodiversity, ecology and air quality have not been assessed with other road infrastructure schemes near to Norwich and East Norfolk. The recent judgement of Pearce v Secretary of State BEIS 2021 demonstrates that the Courts accept the importance of cumulative environmental impact assessment.	<b>Please see Common Response G</b>
RR-019.8	8. Carbon emissions need to be cumulatively assessed within the Norwich area in combination with other schemes as above (7) and nationally with 100 other schemes planned by Government, including other RIS2.	<b>Please see Common Responses G</b>

Reference	Relevant Representation	Highways England Response
RR-019.9	9. Carbon emissions should be tested against the dUK obligations under the Paris Agreement including the UK's Nationally Determined Contribution (NDC), the legally binding target under the Climate Change Act 2008 to meet net-zero carbon emissions by 2050, the UK Sixth Carbon Budget (6CB), science-based carbon budgets from the UK Tyndall Centre, the NPPF 148 planning requirement to 'radical reductions of greenhouse gas emissions', the statutory duty on Highways England under the Infrastructure Act 2015 section 5 (2) to have regard for the environment, and the NCC Environmental Policy.	Please see Common Response H
RR-019.10	10. The NPS requires that the scheme is assessed against national carbon reduction targets and the UK's international commitments in place at the time when a DCO application is determined.	Please see Common Response H

## RR-020 ORSTED HORNSEA PROJECT THREE (UK) (ORSTED HORNSEA PROJECT THREE (UK))

Reference	Relevant Representation	Highways England Response
RR-020.1	This relevant representation is made by Ørsted Hornsea Project Three (UK) Limited ("Hornsea Three") and sets out the potential interaction and issues to be resolved between Hornsea Three and the Highways England A47/ A11 Thickthorn Junction (the 'A47 Thickthorn DCO') development. The A47 Thickthorn DCO will interact with Hornsea Three in the following main ways: 1. Potential impacts on access for Hornsea Three's construction vehicles during construction and operation phases along the B1172 (Norwich Road), and along the A11;	The Applicant is aware of the potential interaction with the Hornsea Three project and has been liaising with the Hornsea project team to discuss the impacts on construction vehicles and routes. The Applicant will continue to engage with the Hornsea project team throughout the Examination.
RR-020.2	2. Overlap of works along the B1172 (Norwich Road), and along and adjacent to the A11 which has the potential for impacting the construction and operation of Hornsea Three. Hornsea Three considers that the two schemes can co-exist and therefore does not have an in-principle objection to the A47 Thickthorn DCO. However, as Hornsea Three is a consented nationally significant infrastructure project, it is crucial that the A47 Thickthorn DCO does not prohibit or delay the construction and/or operation of Hornsea Three or result in Hornsea Three being in breach of	The Applicant is aware of the potential interaction with the Hornsea Three project and has been liaising with the Hornsea project team to discuss the impacts on construction vehicles and routes. The Applicant will continue to engage with the Hornsea project team throughout the Examination

Reference	Relevant Representation	Highways England Response
	<p>the Hornsea Three Order. Hornsea Three has identified a number of issues that need to be resolved to ensure that no serious detriment is caused to Hornsea Three. A summary of the issues, and the measures that Hornsea Three requires to resolve them, is set out below. Technical issues:</p> <ul style="list-style-type: none"> <li>• Access for Construction - Hornsea Three requires unfettered access along the B1172 (Norwich Road), A11 Hethersett Bypass, A47, Cantley Lane South (including links onto A47 &amp; access from A11 Hethersett Bypass), and Station Lane for the full duration that Hornsea Three is in construction in order to facilitate the construction activities associated with the development.</li> <li>• Access for Operations – Hornsea Three requires operational access off the B1172 (Norwich Road), and adjacent to the A11 (off Station Cottages Service Road).</li> <li>• Overlap between the A47 Thickthorn DCO and the Hornsea Three Order Limits at B1172 (Norwich Road), and along the A11 (Hethersett Bypass) – It is not clear what this land might be used for, and therefore Hornsea Three would like to engage further to understand potential impacts and subsequent requirements that might be required for Hornsea Three.</li> </ul> <p>Legal issues:</p> <ul style="list-style-type: none"> <li>• Highways England to provide confirmation that it will procure (either by agreement or compulsory acquisition) adequate permanent access rights for Hornsea Three to the Hornsea Three cable corridor for operational purposes if these are fettered by the A47 Thickthorn DCO.</li> <li>• Any other issues which may arise due to the overlap between the A47 Thickthorn DCO and the Hornsea Three Order Limits at B1172 (Norwich Road), and along the A11 (Hethersett Bypass). Hornsea Three will continue to work with Highways England to facilitate agreement between the parties so that both projects can co-exist. Hornsea Three looks forward to further engagement with Highways England on these and any other matters that may arise. Sincerely, Karma Leyland Consents Project Manager, Hornsea Three</li> </ul>	

## RR-021 PUBLIC HEALTH ENGLAND

Reference	Relevant Representation	Highways England Response
RR-021.1	<p>Thank you for your consultation regarding the above development. Public Health England (PHE) welcomes the opportunity to comment on your proposals at this stage of the project. PHE notes that we have replied to earlier consultations as listed below and this response should be read in conjunction with that earlier correspondence: Request for Scoping Opinion 8 February 2018 Section 42 11 July 2019 We can confirm that we have assessed the submitted documentation and wish to make the following recommendations with respect to the areas that were addressed at the Section 42 stage. Overall, better characterisation and assessment of impacts on human health both before and after mitigation is required across the Environmental Statement (ES), in the Population and Human Health chapter for the general population and vulnerable groups; with particular reference to the air quality assessments. In the assessment scenarios, further justifications are required regarding the choice of the baseline, construction and operational opening and design years; (for example, the construction year 2019 is no longer applicable) and whether these capture the worst-case/peak scenarios.</p>	<p>This comment is acknowledged.</p>
RR-021.2	<p>Topic specific comments are as follows:</p> <p><b>Air Quality</b></p> <ul style="list-style-type: none"> <li>The air quality assessment only considers long-term impacts through changes in annual means. It is recommended that short-term impacts on air quality are considered for both construction and operational activities for all potential pollutants (PM10, PM2.5 and NOx), as there are no safe limits of exposure in relation to health risk. Reducing public exposures to non-threshold pollutants (such as particulate matter and nitrogen dioxide) below air quality standards has potential public health benefits. We support approaches which minimise or mitigate public exposure to non-threshold air pollutants, address inequalities (in exposure), and maximise co-benefits (such as physical exercise) and encourage their consideration during development design, environmental and health impact assessment, and development consent.</li> </ul>	<p>The implications for air pollution as a result of the Scheme are considered in ES Chapter 5: Air Quality (<b>APP-042</b>), which was undertaken in accordance with DMRB LA105.5.</p> <p>In accordance with LAQM.TG(16) the exceedance of the 1-hour mean objectives is likely to occur where annual mean concentrations are breached. For the Scheme, there is no risk of exceedance of NO2 nor PM10. If there is no risk of exceedance with PM10, then this can be used to demonstrate the PM2.5 air quality threshold will not be impacted - in accordance with DMRB LA105.5. The air quality assessment doesn't need to consider short term NO2 or PM10 objectives as the long-term objectives for these pollutants is not at risk of being breached therefore it is highly unlikely the short term objective will be exceeded.</p> <p>The assessment of the Scheme includes both human and ecological receptors and considers the cumulative impact with other committed</p>

Reference	Relevant Representation	Highways England Response
		<p>developments. All designated sites within 200m of the Affected Road Network which were sensitive to nitrogen deposition were assessed. The results concluded that the impact on air quality would not be significant.</p> <p>The air quality assessment concludes that there are no significant effects of the Scheme on the local air quality, and therefore no mitigation is proposed over and above that listed in the REAC Table 3-1 in the EMP (<b>APP-128</b>)</p>
RR-021.3	<ul style="list-style-type: none"> <li>Clarity and justifications are required regarding the choice of study area and the zone of influence for the air quality assessment of the construction and operational phases; and the choice of Cringleford, Hethersett, Mulbarton and Stoke Holy Cross only, for the assessment of health impacts. Residential areas are also noted within 2km to the north east, for example Eaton, it is unclear why these have not been included. Further details regarding these points and the assessment of cumulative impacts should be provided.</li> </ul>	<p>The study area for the air quality assessment is taken from the traffic screening criteria contained within DMRB LA 105.5, and the air quality assessment for the Scheme doesn't deviate from this. For the residential areas noted, there were triggered links in these areas which have receptors on the traffic screening link. The receptors chosen represent the maximum or worst case impact (see section 5.4 of ES Chapter (<b>APP-042</b>)).</p>
RR-021.4	<ul style="list-style-type: none"> <li>It is recommended that the assessment of receptors include those within 25m of a junction.</li> </ul>	<p>See response RR-021.3</p>
RR-021.5	<p><i>Construction Phase</i></p> <ul style="list-style-type: none"> <li>Limited details have been provided regarding overall air emissions that would be expected from the construction phase, including the presence of any non-road mobile machinery and cumulative impacts from these. It is recommended that further details are provided, including those regarding monitoring and worst-case assessments.</li> </ul>	<p>The construction phase of the Scheme is assessed qualitatively as it is less than two years in duration. This is in accordance with the DMRB LA105.5. All monitoring requirements are set out in the Environmental Management Plan (EMP) (<b>APP-128</b>).</p> <p>Measures to minimise impacts on air quality during construction (e.g. dust, vehicle emissions) would be delivered through draft Development Consent Order (<b>APP-017</b>) Requirement 4 'Environmental Management Plan' (EMP) (<b>APP-128</b>), which requires the final version to be approved by the Secretary of State following consultation with the relevant planning authority.</p> <p>The EMP (APP-128) includes action AQ1 in Table 3-1 (REAC) and Annex B.3 'Construction Noise and Dust Management Plan' in the EMP (<b>APP-</b></p>

Reference	Relevant Representation	Highways England Response
		<p><b>128)</b> to manage the risks to air quality and limit and control emissions to air during construction on sensitive receptors. The EMP (<b>APP-128</b>) will be supported by controls on construction traffic movements through the traffic management plan, secured through Requirement 10 'Traffic Management' of the draft Development Consent Order (<b>APP-017</b>).</p>
<p><b>RR-021.6</b></p>	<ul style="list-style-type: none"> <li>• Consideration should be given within the air quality assessment to the impact of any proposed road closures, traffic management, or further restrictions that may be encountered during the construction phase, both on the roads to be developed as part of the scheme and roads in the surrounding area, including the Affected Road Networks. It is noted that Construction and Traffic Management Options 1 and 2 both lead to an increase in the zone of influence up to 4km. It is recommended that this be taken into account in the cumulative and population health assessments and further detailed assessment regarding the impact on the AQMA located approximately 3km to the northeast.</li> </ul>	<p>See RR-021.5.</p>
<p><b>RR-021.7</b></p>	<ul style="list-style-type: none"> <li>• It is unclear why construction impacts have been screened out on the basis of the construction phases lasting less than two years; whilst potential air quality impacts on human health from this phase are acknowledged in Chapter 12 (section 12.8.9).</li> </ul>	<p>See RR-021.5</p>
<p><b>RR-021.8</b></p>	<p><i>Operational Phase</i></p> <ul style="list-style-type: none"> <li>• It is recommended that short term and long-term modelling be undertaken for PM10 and PM2.5 for the Do-minimum and Do-something scenarios to define areas of deterioration of air quality where further mitigation could be required.</li> </ul>	<p>See RR-021.2</p>
<p><b>RR-021.9</b></p>	<ul style="list-style-type: none"> <li>• PM10 concentrations have been used to demonstrate the Proposed Scheme does not impact on the PM2.5 air quality objectives. Where scoping out is recommended by the applicant, the public health impact assessment should be supported with reliable data, including modelling and predictions.</li> </ul>	<p>The health assessment undertaken as part of ES Chapter 12 Population &amp; Human Health (APP-049) uses information produced as part of the air quality assessment, therefore PM2.5 has already been scoped out automatically. The remaining data used in the health assessment contained within ES Chapter 12 (APP-049) comes from a number of referenced sources including: Public Health England, ONS, MAGIC, Norfolk County Council and South Norfolk District Council.</p>

Reference	Relevant Representation	Highways England Response
RR-021.10	<ul style="list-style-type: none"> <li>• There are several areas where clearer justifications are required:               <ul style="list-style-type: none"> <li>o The choice of baseline year (2015) and the need to back cast when more recent data could be available.</li> <li>o The choice of opening year (2025) for worst-case assessment. It has not been demonstrated that this is the worst-case year when compared to other years, for example during the construction phase where there is the potential for a number of cumulative impacts.</li> <li>o Whether the choice of locations for the scheme specific monitoring is representative of worst-case scenario for sensitive receptors (for example, taking into account weather conditions).</li> <li>o The location of colocation sites 1-3 relative to the scheme monitoring, how findings (which show close to or an exceedance in AQS) inform the risk assessment and whether there is an impact on these locations from the proposed works (see comment regarding the zone of influence).</li> </ul> </li> </ul>	<p>For baseline year and opening year responses, <b>please see Common Response E.</b></p> <p>Co location for Scheme specific monitoring is for model verification purposes only (in accordance with local air quality management technical guidance LAQM TG 16). The air quality assessment doesn't model the impact of the Scheme on those co-locations.</p>
RR-021.11	<ul style="list-style-type: none"> <li>• The modelling for NO<sub>2</sub> showed that 50 of the 155 receptors are expected to show a deterioration in air quality, which is of concern.               <ul style="list-style-type: none"> <li>o It is noted that for each triggered road link only one receptor representing the closest receptor was chosen, which may preclude the identification of a greater number of receptors with a deterioration in air quality. It is recommended that details of results for individual receptors be included.</li> <li>o It is recommended that further details are provided regarding additional mitigation measures to be incorporated into the development to prevent this deterioration. This deterioration and the corresponding health impacts should also be acknowledged and assessed in Chapter 12 (Population and Human Health) for the general population and vulnerable groups, i.e. the impacts on respiratory diseases, hospital admissions and other chosen health indicators. Justification for the methodology should be provided and where necessary, monitoring should be recommended.</li> </ul> </li> </ul>	<p>Only one receptor per triggered link was chosen as DMRB LA105.5 is only concerned with exceedances of the national air quality objective where NO<sub>2</sub> is above 40 ug/m<sup>3</sup>. The air quality assessment does note a slight worsening of air quality around a number of receptors, however the model results are still below the air quality objective of 40 ug/m<sup>3</sup> NO<sub>2</sub>, in accordance with DMRB LA105.5. Should the concentrations be below the air quality objective then no further mitigation is required.</p> <p>In addition, see RR-021.1</p>
RR-021.12	<p><b>Health and Wellbeing</b></p> <ul style="list-style-type: none"> <li>• Chapter 5 (Air Quality) identifies the local road network screened into the affected road network (ARN), however, Chapter 12 does not identify the impacts of effects from these on population and human health more widely. Further information is required in relation to the screening process</li> </ul>	<p>A Highways England six-month monitoring study was conducted to inform the environmental assessment by supplementing current available monitoring data and identify pollutant conditions. There were no exceedances of the annual mean NO<sub>2</sub> Air Quality Objective observed from</p>

Reference	Relevant Representation	Highways England Response
	<p>and subsequent effects.</p> <ul style="list-style-type: none"> <li>• There is little assessment in the Health Chapter regarding impacts from water pollution and flooding on health outcomes on the population and any vulnerable groups.</li> </ul>	<p>the monitoring study.</p> <p>Section 5.11 of Environmental Statement Chapter 5 – Air Quality (<b>APP-042</b>) concludes that as no significant effects on human health receptors have been identified due to the Scheme, additional air quality monitoring is not required.</p>
<p><b>RR-021.13</b></p>	<p><b>Water, Geology and Soils</b></p> <ul style="list-style-type: none"> <li>• In view of areas of potential contamination and the presence of a number of sensitive groundwater abstraction points, it is recommended that further details are included regarding the potential impacts of piled foundations within the conceptual model to ensure any risks to human health are minimised.</li> </ul>	<p>In preparation for the detailed design of the A47 Thickthorn Improvement scheme, supplementary ground investigation (GI) work has been carried out in the vicinity of the Cantley Lane Landfill site. The data from this GI will be used to inform the detailed design of which piled foundations are included. The GI data will also be reviewed against the conceptual model and the human health assessment.</p>
<p><b>RR-021.14</b></p>	<p><b>Electric and Magnetic Fields</b></p> <p>The current documentation makes no reference to EMF emissions from the development. We recommend that the proposer:</p> <ol style="list-style-type: none"> <li>1. Identify if the proposed development has electricity generation and/or distribution infrastructure that may result in the emission of electric and/or magnetic fields such that there is the potential for an adverse impact on public health. Where electricity generation and/or distribution equipment is identified an assessment of potential EMF exposures should be included;</li> <li>2. Should the proposer believe that EMF can be scoped out of the assessments they should clearly state their assumptions and rationale in the application for DCO submission.</li> </ol> <p>We can confirm that we have registered an interest on the Planning Inspectorate Website. Please do not hesitate to contact us if you have any questions or concerns.</p>	<p>The proposed scheme design does not include electricity generation or distribution infrastructure and therefore EMF is not included in the environmental assessment.</p>

## RR-022 BNP PARIBAS REAL ESTATE ON BEHALF OF ROYAL MAIL GROUP

Reference	Relevant Representation	Highways England Response
RR-022.1	<p>Royal Mail does not have an in principle objection to this proposed road scheme but is seeking to secure mitigations to protect its road based operations during the construction phase. Under section 35 of the Postal Services Act 2011 (the "Act"), Royal Mail has been designated by Ofcom as a provider of the Universal Postal Service. Royal Mail is the only such provider in the United Kingdom. The Act provides that Ofcom's primary regulatory duty is to secure the provision of the Universal Postal Service. Ofcom discharges this duty by imposing regulatory conditions on Royal Mail, requiring it to provide the Universal Postal Service. The Act includes a set of minimum standards for Universal Service Providers, which Ofcom must secure. The conditions imposed by Ofcom reflect those standards. Royal Mail is under some of the highest specification performance obligations for quality of service in Europe. Its performance of the Universal Service Provider obligations is in the public interest and should not be affected detrimentally by any statutorily authorised project. Royal Mail's postal sorting and delivery operations rely heavily on road communications. Royal Mail's ability to provide efficient mail collection, sorting and delivery to the public is sensitive to changes in the capacity of the highway network. Royal Mail is a major road user nationally. Disruption to the highway network and traffic delays can have direct consequences on Royal Mail's operations, its ability to meet the Universal Service Obligation and comply with the regulatory regime for postal services thereby presenting a significant risk to Royal Mail's business. Royal Mail has five operational facilities within 6 miles of this junction, which is heavily used every day by both mail / parcel processing and delivery vehicles and is critical to its operations. In exercising its statutory duties, Royal Mail vehicles use all main roads that may be impacted by any additional traffic arising / delays during construction of this scheme. Any periods of road disruption / closure, night or day, have the potential to impact operations. Therefore, the scheme presents risk of construction phase impact / delays to Royal Mail's operations. Royal Mail does not wish to stop or delay this scheme from being constructed. However, Royal Mail does wish to ensure the protection of its future ability to provide an efficient mail sorting and delivering service. In order to do this, Royal Mail requests that:</p>	<p>The Applicant proposes to adopt a similar approach as that agreed for the A1 Northumberland: Morpeth – Ellingham improvements scheme and will update the Outline Traffic Management Plan [APP-129] to include Royal Mail as a stakeholder in Table 1. The following wording will also be added:</p> <p>Advanced notification of programmed diversions and closures will be issued to major road users in the vicinity of the Scheme including Royal Mail. This will include providing major road users with not less than 7 working days' notice of any road closures, diversions or alternative access arrangements that may affect travel on those routes and (if available) the agreed hours of working. This will form part of a wider communications plan associated with the Scheme. the method of communication will be agreed as part of the final TMP. Highways England will consult with Royal Mail on the content of the final TMP.</p>

Reference	Relevant Representation	Highways England Response
	<p>1. the DCO includes specific requirements that during the construction phase Royal Mail is consulted by Highways England or its contractors at least one month in advance on any proposed road closures / diversions / alternative access arrangements, hours of working, and on the content of the final CTMP, and</p> <p>2. the final CTMP includes a mechanism to inform major road users (including Royal Mail) about works affecting the local highways network (with particular regard to Royal Mail's distribution facilities near the DCO application boundary as identified above). Royal Mail reserves its position to object to the DCO application if the above requests are not adequately addressed</p>	

## RR-023 TIM HANCOCK ASSOCIATES ON BEHALF OF SHELL U.K. LIMITED

Reference	Relevant Representation	Highways England Response
RR-023.1	<p>Dear Sir I confirm that I am instructed by Shell U.K. Limited in relation to its fuel filling station property, known as Shell Cringleford ("the Service Station"), located immediately to the west of and adjoining Thickthorn Interchange at the junction of the A47 and A11 trunk roads, near Norwich. My client operates the Service Station which provides roadside facilities to motorists using the A47, A11 and other local routes. The Service Station forms part of a service area with an adjoining restaurant and motorists hotel. The service area is a key facility occupying a transient location, serving the needs of both motorists using these routes and local traffic travelling in the vicinity of Norwich. Under the current scheme proposals, motorists travelling north-east on the A11 and then east on the A47 will no longer directly pass the service area and will not therefore be able to conveniently make use of the facilities. I would like to hold discussions with the promoting authority to discuss measures for mitigating the adverse effects of the scheme on the site, including the provision of advanced warning signs. In my experience of developing and managing service areas, sites whose access is controlled by traffic lights tend to be less successful, as motorists over time will avoid sites where access is</p>	<p>The Applicant welcomes a discussion regarding the proposals and suggested mitigation measures which may be secured within the terms of the draft Order and will be having further discussions with the landowner and/or their agents.</p>

Reference	Relevant Representation	Highways England Response
	<p>inconvenient. The introduction of traffic light controlled junctions at the intersection of the B1172 with the roundabout junction is likely to adversely affect the trading performance of the Service Station. In the circumstances, my client reserves the rights to make further representations against the effects of the scheme on its property. Without prejudice to this position, my client would welcome to opportunity to discuss the proposals in more detail. Yours sincerely Tim Hancock</p>	

## RR-024 STOP WENSUM LINK

Reference	Relevant Representation	Highways England Response
<p><b>RR-024.1</b></p>	<p>David Pett Solicitor advising Stop Wensum Link (SWL) Road campaign group.            On behalf of SWL , I object to the A47/A11 Thickthorn Junction (A47THI) scheme on the following grounds:            Generally The Scheme will, when viewed along side other planned projects within Norfolk [Norwich Western link (NWL) road, two other RIS2 schemes (A47 North Tuddenham to Easton (A47NTE) and the A47 Blofield to North Burlingham)], increase capacity and traffic growth contrary to national policies for climate change, air quality and modal shift towards walking, cycling and public transport.</p> <p>Carbon Emissions Carbon emissions need to be cumulatively assessed both locally within the Norwich area (in combination effects with the six other possible schemes identified above), and nationally with up to 100 other schemes planned by Government, including under RIS2. They also need to be tested against the UK obligations under the Paris agreement including the UK's Nationally Determined Contribution (NDC), the legally binding target under the Climate Change Act 2008 to meet net-zero carbon emissions by 2050, the UK Sixth Carbon Budget (6CB), science-based carbon budgets from the UK Tyndall Centre, the NPPF 148 planning requirement to "radical reductions of greenhouse gas emissions", the statutory duty on Highways England under the Infrastructure Act 2015 section 5(2) to have regard for the environment, and the NCC</p>	<p><b>Please see Common Responses A, G and H</b></p>

Reference	Relevant Representation	Highways England Response
	Environmental Policy. Furthermore, the NPS requires that the scheme is assessed against national carbon reduction targets and the UK's international commitments in place at the time when a DCO application is determined. It is important to view the above against the message issue by the UK Committee on Climate Change ('CCC') in June 2021 to the effect "building back better" must include climate adaptation considerations, and not attempt to integrate these later when, given the trajectory, it may be too late.	
RR-024.2	Covid 19 Data, assumptions and projections in the traffic and economic modelling fail to have regard to the impact Covid 19 pandemic will inevitably have on future travel patterns and road capacity requirements Environmental Looking at the environmental impact in isolation and without regard to the other local based projects listed above will inevitably lead to incorrect and highly misleading assessments making it difficult if not impossible to provide effective mitigation and compensatory measures.	Please see Common Response B
RR-024.3	In turn this could result in the unnecessary loss of veteran trees, deciduous woodland, hedgerows, bats and barn owls. The recent judgement of Pearce v Secretary of State BEIS [2021] demonstrates that the Courts accept the importance of cumulative environmental impact assessment. In particular, Norfolk County Council has identified the presence of a nationally significant breeding colony of barbastelle bats, which would qualify for SSSI or SAC status ( <a href="http://bit.ly/NCC_PlanDeleg_June2021">http://bit.ly/NCC_PlanDeleg_June2021</a> , PDF page 85). The in-combination impacts of A47NTE, NWL and this scheme on this European protected species have yet to be assessed.	Please see Common Responses G and I

## RR-025 TRANSPORT ACTION NETWORK

Reference	Relevant Representation	Highways England Response
RR-025.1	Transport Action Network wishes to register our objection to the Development Consent Order for this proposed scheme. We object on the grounds of: 1. Climate change The proposed scheme would increase carbon emissions at a time of climate emergency this will make meeting the UK's target of a 78% reduction in emissions by 2035 even more	Please see Common Response H

Reference	Relevant Representation	Highways England Response
	<p>challenging than it already is. We are also concerned that not all carbon emissions have been included in this calculation, including loss of land, trees and other carbon sinks.</p>	
<p><b>RR-025.2</b></p>	<p>2. Cumulative impacts. There is significant roadbuilding planned in this area, including two other A47 schemes that are at the Examination stage (A47 North Tuddenham to Easton and the A47 Blofield to North Burlingham), and the Norwich Western link road (promoted by Norfolk County Council).</p> <p>The cumulative impacts of these schemes needs to be assessed thoroughly as all these schemes will increase road capacity which will increase traffic growth. This is counter to national policies to tackle climate change and air pollution, and to promote switching car journeys to public transport and active travel.</p>	<p><b>Please see Common Responses A, B and G</b></p>
<p><b>RR-025.3</b></p>	<p>3. Air and noise pollution. As the proposed scheme will increase traffic, there will be an increase in air and noise pollution.</p>	<p>The implications for air pollution as a result of the Scheme are considered in ES Chapter 5: Air Quality (<b>APP-042</b>), which was undertaken in accordance with DMRB LA105.5. The transport model was used to inform the air quality assessment. The assessment of the Scheme includes both human and ecological receptors and considers the cumulative impact with other committed developments. All designated sites within 200m of the Affected Road Network which were sensitive to nitrogen deposition were assessed. The results concluded that the impact on air quality would not be significant.</p> <p>The potential effects resulting from noise and vibration associated with the construction and operation of the Scheme are considered within Chapter 11: Noise and Vibration of the ES (<b>APP-042</b>) in accordance with DMRB guidance. This assessment process is in accordance with current UK government policy on environmental noise.</p> <p>A construction traffic assessment has been undertaken. It is concluded that, provided that vehicle movements and routes are restricted as described in Chapter 11: Noise and vibration of the ES (<b>APP-048</b>) and as defined in the Outline Traffic Management Plan [<b>APP-129</b>], potential significant effects are unlikely. The results of the noise and vibration assessment concluded that during operation, no significant adverse or significant beneficial noise effects were expected due to changes in road</p>

Reference	Relevant Representation	Highways England Response
		<p>traffic noise. This applies at all receptors within the study area and the Noise Important Areas (NIAs). On that basis, no mitigation is necessary in respect of operational traffic noise effects.</p>
<p><b>RR-025.4</b></p>	<p>4. Biodiversity and Landscape The proposed scheme has a “large adverse” impact on biodiversity including veteran trees, water voles, bats and barn owls. The scheme will also significantly impact on the water environment due to the culverting of the natural alignment of the Cantley Stream, and the habitat of water voles.</p>	<p><b>Please see Common Response F</b></p>
<p><b>RR-025.5</b></p>	<p>5. Cultural Heritage The scheme introduces a new road into a landscape with a Scheduled Ancient Monument - two barrows at Big Wood.</p>	<p>ES Chapter 6: Cultural Heritage (<b>APP-043</b>) <b>Sections 6.7, 6.9, 6.10 and 6.12</b> adequately and appropriately considers the historic environment in accordance with DMRB LA 106.</p>
<p><b>RR-025.6</b></p>	<p>6. Severance to Non-Motorised Users (NMUs) The scheme will make active travel (walking and cycling) less likely, and will cause severance to the local population.</p>	<p>Section 4.13 'Walking, Cycling and Horse-riding (WCH) Assessment' of the Case for the Scheme (<b>APP-125</b>) demonstrates how minimising the impacts of the Scheme on WCH is an integral part of the Scheme design.</p> <p>This has been achieved by maintaining connectivity and incorporating both new and improved facilities to enhance existing networks. In particular, the replacement of the existing footbridge, which links Cantley Lane with Cantley Lane South, with a new over bridge suitable for all WCH users would result in reduced journey times for both cyclists and equestrians thereby overcoming the severance effect of the A47 for these users.</p> <p>In summary, the Scheme would provide new WCH facilities, improve accessibility for users in the local area and provide increased opportunities to choose active travel modes (e.g. walking, cycling, etc.). Table 5.4 of the Case for the Scheme also reports that the scheme has a slight beneficial effect on severance with the overall number of amenities that note a positive change in severance marginally outweighing those that note a negative change.</p>

## RR-026 VATTENFALL WIND POWER LTD

Reference	Relevant Representation	Highways England Response
RR-026.1	<p>Vattenfall Wind Power Limited (VWPL) welcomes the chance to respond to Highways England's (HE) A47/A11 Thickthorn Junction Improvement Scheme application. VWPL is currently developing the Norfolk Vanguard and Norfolk Boreas offshore windfarm projects. Each project has been subject to a separate DCO examination and both are currently awaiting the outcome of separate determination processes, expected toward the end of 2021. This response reflects the position of both projects (collectively referred to as the Norfolk Projects). The Norfolk Projects rely on the A47 corridor for the transport of materials and personnel to the landfall, onshore cable route, onshore substations and National Grid extension works. Construction is anticipated to commence in 2022 for Norfolk Vanguard. The most intense construction activity is forecast to occur between 2022 and the end of 2023, during this period, the project's A47 traffic demand would peak at 693 daily movements of which 312 would be HGVs. Construction is anticipated to commence in 2023 for Norfolk Boreas (Scenario 2 - should Norfolk Vanguard not proceed) or 2027 (Scenario 1 – should Norfolk Vanguard proceed). The most intense construction activity is forecast to occur between 2023 (or 2026 for Scenario 1) and the end of 2024 (or 2027 for Scenario 1), during this period, the project's A47 traffic demand would peak at 691 (or 181 for Scenario 1) daily movements, of which 291 (or 70 for Scenario 1) would be HGVs. The A47/A11 Thickthorn Junction Improvement Scheme has a construction duration of 23 months, which (noting construction commencement early 2023) has the potential for cumulative impacts with the Norfolk Projects associated with HE's proposed temporary traffic management proposals and construction traffic demand. VWPL has regularly engaged with HE during the development of the Norfolk Projects culminating with agreement on the approach to managing cumulative impacts as follows: "To manage potential cumulative traffic impacts, it has been agreed with HE that the management of the potential cumulative impacts can be addressed in the final submitted Traffic Management Plan (post consent) when there is greater certainty with regard to RIS scheme construction traffic data. VWPL commits to engage with HE to establish opportunities to co-ordinate activities and avoid significant impacts resulting from cumulative peak traffic is captured in the OCoCP (document</p>	<p>The Applicant is aware of the potential interaction with the VWPL projects and has been liaising with the VWPL project team to discuss the impacts on construction vehicles and routes.</p> <p>The Applicant will continue to engage with the VWPL project team throughout the examination.</p>

Reference	Relevant Representation	Highways England Response
	<p>reference 8.1) through the development of a Communication Plan.” VWPL would expect this regular engagement to continue with HE throughout the development and implementation lifecycle of the A47/A11 Thickthorn Junction Improvement Scheme, and be secured within the respective parties’ communication plans.</p>	
<p><b>RR-026.2</b></p>	<p>VWPL has reviewed the application documents and draw attention to the following specific matters: 6.1 Environmental Statement Chapter 15 – Cumulative Effects Assessment (APP- 052) Section 15.5 identifies The Norfolk Projects and contains an assessment of cumulative effects. With regard to traffic and transport and the assessment concludes that the cumulative effects of the A47/ A11 Thickthorn Junction Scheme construction traffic in combination with the Norfolk Projects’ construction traffic would be neutral. VWPL agree with this statement in principle but would expect the implementation of a communication plan that maximises opportunities to co-ordinate roadworks and manage peak construction traffic.</p>	<p>The Applicant acknowledges the comments of VWPL on ES Chapter 15: Cumulative Effects Assessment. A communications plan will be prepared and shared with VWPL prior to and during the construction phase of the Scheme to ensure that the co-ordination of roadworks and management of peak construction traffic is maximised.</p>
<p><b>RR-026.3</b></p>	<p>7.5 Outline Traffic Management Plan (APP – 129) The Outline Traffic Management Plan identifies options for traffic management during the construction phase of the A47/A11 Thickthorn Junction Scheme, including contraflow working, lane closures and full overnight closures. These measures could potentially lead to significant delays to the A47 corridor, which could be exacerbated by the Norfolk Projects’ construction traffic. It is unclear from the construction phasing (APP-039, Table 2-3) the likely timing of these measures and therefore, it is difficult to determine the potential for disruption to construction traffic associated with the Norfolk Projects. For example, the diversion outlined could potentially induce delays of over an hour in journey time. There is also the need to consider additional management processes to ensure diverted traffic does not utilise inappropriate alternative local routes (a matter which was raised by Parish Councils during the Norfolk Projects’ examinations). However, VWPL consider that any potential cumulative impacts between the A47/A11 Thickthorn Junction Scheme and the Norfolk Projects would be mitigated by regular engagement and alignment of the respective traffic management plans. VWPL seek formal engagement with HE to gain a better understanding of the A47/A11 Thickthorn Junction Improvement Scheme roadworks proposals and to jointly formulate traffic management plans to minimise disruption to the travelling public, local communities and the respective project’s construction programmes. VWPL would seek to</p>	<p>The Applicant understands VWPL position in terms of managing the cumulative effects of traffic management and welcomes future continued engagement on this matter.</p>

Reference	Relevant Representation	Highways England Response
	capture an agreed position on these items through a Statement of Common Ground.	

## RR-027 THE WOODLAND TRUST

Reference	Relevant Representation	Highways England Response
RR-027.1	<p>The Woodland Trust welcomes the opportunity to register a representation to the following project. We hold significant concerns with regards to the removal of T13 and T14, two oak trees recognised as veteran specimens within the applicant's Arboricultural Impact Assessment (AIA) Report [APP-085], alongside likely detrimental impact to a number of other veteran trees adjacent to the scheme boundary. The Trust asks that all trees displaying veteran characteristics are retained, and adequately protected during construction in line with Natural England's Standing Advice which states: "A buffer zone around an ancient or veteran tree should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5m from the edge of the tree's canopy if that area is larger than 15 times the tree's diameter." We also note that Cantley Wood (grid reference: TG18290488) is referred to as potentially unmapped ancient woodland within the Botanical Survey Report [APP-087]. Natural England's opinion on the antiquity of this site should be sought, to ensure ancient woodland is appropriately considered as part of the Examination Process. In summary, the Woodland Trust objects to the proposed development on the grounds of direct loss of veteran trees. We hope our comments are of use to you.</p>	<p><b>See response to AS -007.6</b> and additional text below</p> <p>Item B10 of Table 3.1 (Record of Environmental Actions and Commitments) in the Environmental Management Plan (<b>APP-123</b>) notes that all veteran and mature trees to be retained that are within close proximity to the works will be protected with a suitable buffer zone to ensure they are not damaged during the construction phase. This buffer zone will be protected by the use of tree protection barriers. The Arboricultural Method Statement will also be adhered to during construction.</p> <p>The same item B10 also notes that any trees removed as part of the works will be relocated to nearby suitable woodland parcels to provide suitable habitat for invertebrates.</p>

## RR-028 ADRIAN HOLMES

Reference	Relevant Representation	Highways England Response
RR-028.1	Along with the Norwich Western link (NWL) road, two other RIS2 schemes (A47 North Tuddenham to Easton (A47NTE) and the A47 Blofield to North Burlingham), the scheme would increase capacity and traffic growth contrary to national policies for climate change, air quality and modal shift towards walking, cycling and public transport. Norfolk County Council has admitted the opening of the Northern Distributor Road (Broadland Northway) has led to a significant traffic increase on the North Walsham B1150.	<b>Please see Common Responses A and G</b>
RR-028.2	The cumulative impact of this scheme on biodiversity, ecology, and air quality have not been assessed with at least six other road infrastructure schemes near to Norwich and East Norfolk. The recent judgement of Pearce v Secretary of State BEIS [2021] demonstrates that the Courts accept the importance of a cumulative environmental impact assessment.	<b>Please see Common Response G</b>

## RR-029 ALYSON LEE

Reference	Relevant Representation	Highways England Response
RR-029.1	I would like to register as an interested party for the A47/A11 Thickthorn Junction scheme for the following reasons. The cumulative effect of this road scheme, along with the many other proposed road schemes in the Norwich area, has not been assessed. This is the case for carbon emissions, biodiversity and air pollution. Carbon emissions have not been cumulatively assessed along with the other RIS2 national road schemes.	<b>Please see Common Response G</b>
RR-029.2	<ul style="list-style-type: none"> <li>This road scheme has not been assessed against the new emission reduction targets set by the government earlier this year.</li> </ul>	<b>Please see Common Response H</b>

Reference	Relevant Representation	Highways England Response
RR-029.3	This road scheme, along with the other proposed road schemes in the area (Norwich Western link road and the other two A47 RIS2 schemes) will cause significant induced traffic which goes against the current policies to reduce carbon emissions and air pollution and to promote a shift towards active travel.	Please see Common Response A
RR-029.4	Assessments are based on out-of-date data – particularly in the light of the Covid pandemic. All traffic assessments should be re-assessed with post Covid data.	Please see Common Response B
RR-029.5	I am very concerned with the adverse effects on biodiversity with the loss of woodland (including veteran trees) and other vegetation. We are in an ecological emergency – the last thing we need is to destroy more natural habitat.	Please see Common Response F
RR-029.6	<ul style="list-style-type: none"> <li>The effect of this road scheme on the local population of Barbastelle bats (a European protected species) also needs to be properly assessed – this also needs to be assessed on a cumulative basis with the other proposed schemes in the area.</li> </ul>	Please see Common Response I

## RR-030 ANDREW M CAWDRON

Reference	Relevant Representation	Highways England Response
RR-030.1	One is concerned about the road building proposals in the County on the grounds of (a) cumulative effect of the combined scheme proposals and their impact upon eco systems and the environment including all forms of pollution, the loss of habitat, vegetation and agricultural land.	Please see Common Response G
RR-030.2	(b) the disruption and modifications proposed to the watercourse.	Please see Common Responses F & H
RR-030.3	(c) the lack of any planned, positive attempt to reduce transporation movements when this is one of the larger generators of carbon emissions.	Please see Common Response H
RR-030.4	(d) the lack of any appraisal which seriously addresses "growth" as the accepted idea, when the planet is a finite resource and our County is similarly part of it.	Please see Common Response A

Reference	Relevant Representation	Highways England Response
RR-030.5	(e) the failure of "mitigation" that cannot prevent disruption to ecosystems during the years of survey, construction and after for generations to come.	<p>As part of the Development Consent Order (DCO) application, an Environmental Impact Assessment (EIA) was undertaken for the Scheme. EIA is a process that identifies the likely environmental effects (both adverse and beneficial) of a proposed development.</p> <p>As part of the EIA, the water environment (including the chalk and river environments specifically noted) was considered as a sensitive receptor and the effects of construction and operation impacts on such was fully assessed in Environmental Statement Chapter 13 Road Drainage and the Water Environment (<b>APP-050</b>) and Chapter 8 Biodiversity (<b>APP-045</b>).</p> <p>Mitigation measures together with good construction practice in relation to pollution prevention and water management during construction have been identified in this respect and the commitments of such are reflected in the Record of Environmental Actions and Commitments (REAC), which forms Table 3.1 in the Environmental Management Plan (EMP)(<b>APP-128</b>). The REAC also details the measures that have been incorporated into the Scheme design to minimise any operational impacts, such as highway run-off to the water environment. The design and mitigation also includes a period of aftercare monitoring following construction to ensure that the design and mitigation is effective.</p> <p>Appendix B.5 of the EMP (<b>APP-128</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 detail how the proposed landscape and ecological mitigation and compensation measures, pre, during and post construction, would be implemented to minimise disruption to the eco-system (e.g. creation or enhancement of habitats as receptor areas for species; and implementing measures to continue habitat connectivity during construction). The LEMP will also define how these measures would be managed and monitored to achieve the required new habitat creation as soon as possible, and optimise benefits for protected and notable species. The commitment to deliver the LEMP will be secured through Development Consent Order Requirement 4 'Environmental Management Plan'.</p> <p>Finally, construction works near, in or over a watercourse or affecting a</p>

Reference	Relevant Representation	Highways England Response
		<p>protected species will be managed by detailed construction methodologies and mitigation measures to be agreed as part of licence, consent and permit applications to key stakeholders (e.g. the relevant Council, Environment Agency and Natural England); compliance with such will be required. Extensive consultation with these key stakeholders has been undertaken throughout the process to ensure that site survey methodologies are appropriate and that the assessment and mitigation is proportionate for the sensitive receptors mentioned.</p> <p>The environmental actions and commitments specified in the EMP will be secured by the requirements in draft Development Consent Order Requirement 4 (<b>APP-017</b>).</p>

## RR-031 ANNE ROBINSON

Reference	Relevant Representation	Highways England Response
RR-031.1	1. The scheme would generate traffic growth. New roads generate new traffic by up to 47% increases, as conclusively shown by CPRE's scrutiny of Highways England's own schemes (The End of the Road? Challenging the road building consensus - Report for CPRE, March 2017, Sloman et al). Such traffic growth would increase carbon emissions and air pollution and undermine modal shift to more sustainable modes.	<b>Please see Common Response A</b>
RR-031.2	2.The Paris agreement, the legally binding 2050 net-zero carbon emissions target set by the UK's Climate Change Act 2008, the UK's Sixth Carbon Budget, science-based carbon budgets from the Tyndall Centre, and NPPF 148 all require radical reductions of greenhouse gas emissions. How the scheme would contribute to such reductions must be scrutinised through the examination.	<b>Please see Common Response H</b>
RR-031.3	3. Carbon emissions need to be cumulatively assessed with the 100 other schemes planned by the Government, including under RIS2, and with the schemes Norwich CC plans to bring forward.	<b>Please see Common Response G</b>

## RR-032 EMILY SCOTT BOLTON

Reference	Relevant Representation	Highways England Response
RR-032.1	I object to the A47/A11 Thickthorn Junction (A47THI) scheme: A) We need to invest in the public transport system before building the road infrastructure	The need case is assessed in Case for the Scheme ( <b>APP-125</b> )
RR-032.2	B) After Covid-19 less people are travelling by car to work - therefore a review of all planned roads should be made	<b>Please see Common Response B</b>
RR-032.3	C) There will be large adverse effects with impacts on ancient trees, deciduous woodland, hedgerows, bats and barn owls identified in application itself	<b>Please see Common Response F</b>
RR-032.4	D) We should be working towards reducing our carbon footprint not increasing it. If you build more roads you will get more traffic.	<b>Please see Common Response H</b>

## RR-033 GIL MURRAY

Reference	Relevant Representation	Highways England Response
RR-033.1	1. The UK has legislated to be carbon neutral by 2050. Expanding our road capacity is not compatible with this legally binding commitment. 2. According to the National Academy of Sciences of the USA in 50 years 12% to 30% of the world will be uninhabitable. Two of the countries most affected, India and Pakistan, are nuclear powers. At the upper figure our fair share of refugees would be 43% of our population. (theGuardian.com/environment/2020/may/05 3. The recent extreme heatwave in British Columbia and the record drought in southwest USA indicate that climate models may have underestimated the effects of climate change.	<b>Please see Common Response A</b>

## RR-034 BIRKETTS LLP ON BEHALF OF MR & MRS GRAHAM THOMPSON

Reference	Relevant Representation	Highways England Response
RR-034.1	<p>Mr &amp; Mrs Thompson own and occupy property adjoining and affected by the proposed Development. They wish to OBJECT to the application in its current form due to the extent of the proposed new access to their property which is insufficient, lack of lawful means of access and lack of rights for services which will be required as a result of the Development. Negotiations are ongoing with Highways England in this regard to resolve the objection. So far as they are not resolved full details will be confirmed in Written Representations. Subject to resolution of the access issues affecting their property the following amendments and conditions are requested in the interests of highway safety and amenity, further details and reasoning of which will be confirmed in Written Representations:</p> <p>1) Point H on Sheet 3 of the Traffic Regulation Plans, drawing number HE551492-GTY-LSI-000-DR-CH-35003 to be moved south of the Development at the junction with Cantley Lane South to the point south of the Railway Bridge. This would involve extending the Order Limits on the plan from the point marked G south to the other side of the bridge.</p>	<p>Article 17 provides the power to stop up the existing access to the property, but this is subject to Article 17(2) which requires a permanent or temporary substitute to be in place before the private access can be stopped up. The Applicant confirms that access to the property will be provided throughout construction and post construction.</p> <p>The Applicant is not able to agree to an extension of the Order Limits.</p> <p>The 40mph speed limit for the Cantley Lane and Cantley Lane Link Road have been developed in consultation with Norfolk County Council, who will be the adopting highway authority of the road post construction, and is appropriate for the proposed road cross section and intended use. The design of the realigned Cantley lane and Cantley Lane link road meets the safety standards appropriate to this speed of road and means there is a consistency in speed limits with the adjoining B1172 Norwich Road, which will also have a 40mph speed limit. A 20mph speed limit on a rural through route is not considered to be appropriate. The proposed 20mph was provided at a point on Cantley Lane where the road becomes a no through route and will be subject to local access only.</p>
RR-034.2	<p>2) Amendment of the Scheme to allow retention of the hedge along the southern boundary of The Sycamores in the interests of biodiversity and screening.</p>	<p>The Applicant will consider at detailed design stage the possibility of retaining the hedgerow along the southern boundary of the property in the vicinity of the new proposed vehicular access. The Environmental Masterplan (<b>APP-123</b>) submitted as part of the Environmental Statement shows the additional screening features proposed in this area, which include the planting of new hedgerows and individual trees in the verge of the new Cantley Lane Link</p>
RR-034.3	<p>3) Conditions being imposed to ensure that construction working hours and large vehicle movements in close proximity to their property (and any other residential properties) are restricted to specified hours during the week in the interests of amenity.</p>	<p>Hours of working during construction of the Scheme are set out at action G1 in the Record of Environmental Actions (REAC) and Commitments (Table 3-1) within the Environmental Management Plan (<b>APP-128</b>). Delivery of this commitment will be secured through the Development Consent Order Requirement 4 'Environmental Management Plan'.</p>

Reference	Relevant Representation	Highways England Response
		<p>Communication with local residents will take place during construction to highlight potential periods of disruption. This will be agreed in advance but could be undertaken via newsletters, the Highways England scheme webpage, or an appointed Community Liaison Officer. This is set out at action G7 in the Record of Environmental Actions (REAC) and Commitments (Table 3-1) within the Environmental Management Plan (<b>APP-128</b>). Delivery of this commitment will be secured through the dDCO (<b>APP-017</b>) Requirement 4 'Environmental Management Plan'. commitment will be secured through the Development Consent Order Requirement 4 'Environmental Management Plan'.</p>
<p><b>RR-034.4</b></p>	<p>4) Conditions being imposed to ensure suitable sound proofing and temporary screening is used to reduce the impact of construction noise and dust on the amenity of the area.</p>	<p>Measures to control and mitigate the impact of noise and vibration are set out at actions N1, N2 and N3 in the REAC (Table 3-1) of the Environmental Management Plan (<b>APP-128</b>). Delivery of these commitments will be secured through the Development Consent Order Requirement 4 'Environmental Management Plan'.</p>
<p><b>RR-034.5</b></p>	<p>5) Conditions being imposed to ensure roads are kept clear of construction debris in the interests of amenity.</p>	<p>Measures to control construction debris on roads are set out in the Entry G10 of Table 3.1 (Record of Environmental Actions and Commitments) in the Environment Management Plan (<b>APP-128</b>). Delivery of these commitment will be secured through Development Consent Order Requirement 4 'Environmental Management Plan'.</p>
<p><b>RR-034.6</b></p>	<p>6) A condition requiring a Scheme for noise mitigation in the form of barriers and boundary treatments in the vicinity of their property to ensure noise generated by the scheme is reduced so far as is possible and those measures are retained in the interests of amenity.</p>	<p>128 Cantley Lane was included in the Noise and Vibration assessment undertaken as part of the Scheme's Environmental Impact Assessment. (Figure 11.1 – Noise Location Plan (<b>APP-071</b>)).            A comparison between modelled operational noise levels for Do Minimum (without proposed scheme) and Do Something (with proposed scheme) was undertaken for short term and long term scenarios, these are shown in "Figure 11.7 – Noise difference contours short-term noise change with the proposed scheme" (<b>APP-071</b>) and "Figure 11.8 - Noise difference contours long-term noise change with the proposed scheme" (<b>APP-071</b>).            These figures illustrate the noise difference at this location is between -0.9Db to 0.9Db in the short term scenario and -2.9DB and +2.9Db in the</p>

Reference	Relevant Representation	Highways England Response
		long term scenario. This magnitude of change is deemed to be negligible, therefore no noise mitigation is proposed.
RR-034.7	7) A condition requiring the installation of light barriers between the highway and their property to reflect lights from oncoming vehicles turning onto the new link road away from their property in the interests of amenity.	The Environmental Masterplan ( <b>APP-123</b> ) submitted as part of the Environmental Statement shows the screening features proposed in this area, which include the planting of new hedgerows and individual trees in the verge of the new Cantley Lane Link
RR-034.8	8) A condition restricting the use of lighting in the vicinity of their property without express permission in the interests of amenity.	Measures to reduce light disturbance during construction are set out at action G2 in the REAC (Table 3-1) within the Environmental Management Plan ( <b>APP-123</b> ). Delivery of this commitment will be secured through the Development Consent Order Requirement 4 'Environmental Management Plan'

## RR-035 JAMIE OSBORN

Reference	Relevant Representation	Highways England Response
RR-035.1	In combination with other planned road schemes, this scheme would increase traffic growth contrary to national policies for climate change, air quality and modal shift towards walking, cycling and public transport.	<b>Please see Common Responses A and G</b>

## RR-036 JAN DAVIS

Reference	Relevant Representation	Highways England Response
RR-036.1	It is a well-established fact that traffic expands to fill the road space available and that with the climate crisis we should not be building more roads. The Department for Transport and Highways England are ignoring the government's promises and policies on climate. In particular, it is acknowledged the scheme will have a "large adverse effect" with an accumulation of impacts on biodiversity including veteran trees, deciduous woodland, hedgerows, bats, and barn owls.	<b>Please see Common Response A and F</b>

Reference	Relevant Representation	Highways England Response
RR-036.2	<p>This scheme cannot be considered in isolation from other road schemes planned for Norfolk and planned nationally. Cumulative carbon emissions and adverse impact on biodiversity are required to be taken into account and this application fails to do so.</p>	<p><b>Please see Common Response G</b></p>
RR-036.3	<p>My objections to the A47/A11 Thickthorn Junction scheme include: • The scheme would increase capacity and traffic growth contrary to national policies for climate change, air quality, and modal shift towards walking, cycling, and public transport. This is particularly so when taken in combination with the Norwich Western link road, and the A47 North Tuddenham to Easton, and the A47 Blofield to North Burlingham schemes. Carbon emissions need to be cumulatively assessed within the Norwich area and Norfolk as a whole, not as single, isolated, road projects.</p>	<p><b>Please see Common Responses A, G and H</b></p>
RR-036.4	<p>The A47 capacity requirement needs to be re-assessed as it is based on the 2015 baseline year which has been superseded by the 2019 modelling. This is crucial because there are major traffic reductions observed between the 2015 and 2019 Norfolk County Council traffic model baseline years. In addition, the impacts of Covid have not been taken into account and it is well known that this has impacted traffic flows.</p>	<p><b>Please see Common Response E</b></p>
RR-036.4	<p>As with carbon emissions, the cumulative impacts on biodiversity of the various road projects in and around Norwich need to be assessed collectively. They cannot be simply viewed in isolation. It is acknowledged there will be large adverse effects on nature and wildlife which need to be assessed along with other major infrastructure projects locally and nationally since each project contributes to the fragmentation of wildlife corridors and a greater adverse impact on biodiversity generally.</p>	<p><b>Please see Common Response G</b></p>

## RR-037 BROWN & CO ON BEHALF OF JANET GRINT

Reference	Relevant Representation	Highways England Response
RR-037.1	We wish to make representations on behalf of Mrs Janet Grint with regard to the design and impact of this scheme on the amenity of her dwelling. The scheme will strip the dwelling of screening that provides privacy and protection from light, noise and airborne pollutants. The removal of the screening on the north and west boundary combined with the significant increase in traffic flow around the property, notably because of the link road running north to south situation to the rear/south west of the dwelling. Highways England need to take greater account for this level of disruption and provide a greater level of accommodation works.	<p>The Environmental Masterplan (<b>APP-123</b>) shows the vegetation to be retained across the Scheme to the east, west and south of East Lodge.</p> <p>The vegetation to the north of East Lodge forms a part of the East Lodge land parcel, and therefore removal of vegetation in this area is not required, as the East Lodge land parcel doesn't form a part of the Order Limits.</p>

## RR-038 BROWN & CO ON BEHALF OF JASON GRAVER

Reference	Relevant Representation	Highways England Response
RR-038.1	On behalf of Mr Graver, we wish to consolidate the issues that need to be resolved including: 1. Boundary The attenuation lagoon will be retained by Highways England but we need to agree that the roadway between Cantley Lane South and the lagoon will be owned by Jason Graver. We need confirmation that there will be a highways boundary fence line on the north side of the access roadway as far as the lagoon. This needs to be a replacement for the green metal mesh fencing that exists on Mr Graver's current boundary. Being grazing land, albeit a little grazed recently we would like confirmation that Highways England will relocate Mr Graver's post and rail fence to the south side of the roadway with gates on both entrances. We need to confirm the gate specification on Cantley lane South.	<p>The current design proposes accommodation works fencing on the south side of the proposed access track, with gated access into Mr Graver's land. This is based on ownership of the access track being retained by the Applicant, and as such no additional fencing is proposed on the northside of the access track.</p> <p>The Applicant will endeavour to share the specification of gates and fences with the landowner.</p>
RR-038.2	2. Landscaping We need confirmation that Highways England will plant a hedge on Mr Graver's retained land south of the post and rail fence.	There are currently no proposals to plant a hedge along the extent of the fence line along the access track, however, the area to the north of the track is being landscaped with woodland planting, both on the embankment of the footbridge ramp and the area between the footbridge and the drainage basin.

Reference	Relevant Representation	Highways England Response
RR-038.3	3. Lagoon works We need to know the phasing for the lagoon works and the drainage connection so we can assess and manage the disturbance to the fishing.	At this stage, the Applicant is unable to provide a detailed construction phasing plan. However, the Applicant will endeavour to continue to engage with the landowner and provide an update when additional information becomes available.
RR-038.4	4. The holiday cottage We need to understand the phasing for the works to the stream so we can work out when the cottage will be occupiable.	The phasing plan of works is currently at high level draft and will become more detailed as the detailed design is developed. The contractor will liaise with the landowner to inform of works to the stream.
RR-038.5	5. New farm access We are concerned that an area to be used for a new farm access is huge, presumably because it is for unrestricted HGV use. We question whether it is possible to create an access around the overhead powerlines with enough room to manoeuvre having entered the site. Having unrestricted access at the moment from the north, Mr Graver is keen to retain unrestricted access and we imagine this is what has led to the road improvement works along Cantley Lane South as far as the new entrance. We consider moving the entrance further north would give more room to avoid the overhead power lines and create a better entrance, even if it is slightly further away from the buildings. We would like to meet on site with the engineers to arrange a sensible proposal.	Development of the new farm access has been progressed following discussion with the landowner during the preliminary design stage. The Applicant will endeavour to continue to engage with the landowner.
RR-038.6	6. Entrance, gate posts and gates For Mr Graver's existing entrance he used reclaimed bricks with reinforced pillars. Although Highways England has agreed to replicate these, we need confirmation that they propose the same specification. The alternative is for HE to meet Mr Graver's costs to do the work himself. Although we have had reasonable communication, we need to settle these practical details as soon as possible.	Entrance gate posts and gates will be relocated from their current location or rebuilt on a like for like basis.

## RR-039 JOHN ELBRO

Reference	Relevant Representation	Highways England Response
RR-039.1	I support • A speed limit of 40mph or less on the new link road connecting Cantley Lane South with the B1172 Norwich Road to the north. It is a necessary safeguard if walkers and cyclists on the segregated pathway are not to be intimidated by traffic travelling at excessive speeds. It will also slow traffic travelling towards Cantley Lane in preparation for the	The Applicant welcomes the supportive representation.

Reference	Relevant Representation	Highways England Response
	<p>lower speed limit on Cantley Lane and its more difficult driving conditions – narrow and winding with cyclists and pedestrians in the road. • The 40mph speed limit on the B1172 Norwich Road. The limit should help to improve safety at the new junction connecting to Cantley Lane Link Road. • Access to the Park and Ride from the Cantley Lane link road for walkers and cyclists. Its provision should help encourage cycling and walking and use of public transport. • The new footbridge over the A47 for walkers, cyclists and horse riders, provided it is carefully graded and has smooth bends to ensure easy passage for mounted cyclists. • The paths for walking and cycling proposed along the new Cantley Lane link road. These give access to local amenities and provide a link to other recreational routes. They are essential if local cycling and walking is to be encouraged.</p>	
<p><b>RR-039.2</b></p>	<p>I object to • A 30mph speed limit on Cantley Lane South. 30mph is too high. It is also not clear where it is supposed to begin and end. Cantley Lane is a popular route for cyclists. There is a danger that, with the improved access provided by the Cantley Lane South to Cantley Lane link road, there will be a significant increase in vehicular traffic on Cantley Lane, south of the junction with the link road. This is a winding road in part sunken where it descends to pass under a railway, in other parts there is insufficient space for vehicles to pass one another, or pass a cyclist or walker. A safe speed on any of these sections is certainly less than 30 mph. If this road is to remain in use by safety conscious cyclists and walkers the speed limit will need to be reduced to 20 mph. • The lack of green landscaping plans. In particular there should be substantial green screen planting to shield the proposed recreational open space (in the Cringleford development adjacent to the A47) from the noise, pollution and visual intrusion of traffic on the A47 and the new free flow link road emerging from the underpass.</p>	<p>Proposed speed limits are shown on the Traffic Regulation Plans (<b>APP-009</b>) submitted as part of the DCO. Cantley Lane South is 20mph east of the junction with the Cantley Lane Link Road and 40mph from this point southwards. Beyond the Order Limits Cantley Lane South will remain derestricted and therefore the National Speed Limit will apply.</p> <p>As detailed in the Case for the Scheme Chapter 4 (<b>APP-125</b>) the results of the NATS traffic model indicate that the Scheme has a relatively minor impact on traffic flows on Cantley Lane South, with an increase of around 40 to 140 PCUs in the AM and PM peaks. It should be noted that the Applicant does not have the power to amend any speed limits outside the Order Limits, in this case, Cantley Lane South falls under the ownership of the local highway authority, so any requests for speed restrictions should be pursued through the relevant process.</p> <p>The Environmental Masterplan (<b>APP-123</b>) submitted as part of the DCO application details the Applicants proposed landscaping mitigation within the Order Limits. The Applicant can confirm that hedgerows will be planted to provide visual screening between the A47 and the Cringleford Residential Development.</p>

## RR-040 RICHARD HAWKER

Reference	Relevant Representation	Highways England Response
RR-040.1	<p>1) Need for scheme – justification by traffic pressure. Simple AADT traffic numbers are useful, but of limited value. I can find no turning movements figures, nor origin and destination data. There is no information on the 'detailed zoning system' (para 4.2.4). If these are available, they should be accessible in this DCO, as part of the justification. The data given is a mix of 6-year-old data and later (2015 NATS, plus some 2016, some 2019), none post-COVID. For this large project and others nearby, an up-to-date comprehensive area survey is surely essential. There are several anomalies with the figures and projections for 2025 and 2040. In-depth discussion would be beneficial.</p>	<p><b>Please see Common Response B</b></p>
RR-040.2	<p>2) There appears to be no reasoned Justification for the specific scheme design offered. Only a 'single option' was offered originally. I can find no documentation of the possibly cheaper and less damaging alternatives which correspondents have offered. The large-radius links from A11S arm to A47E arm, with removal of the connections to Cantley Lane, have necessitated the resultant environmental and economic cost of the Cantley Lane Link. Why was there no discussion of retaining the connections and the existing footbridge by modifying the link design? Also, moving Cantley Stream will have inevitable environmental damage, and I believe this can and should be avoided.</p>	<p>A Case for Scheme (<b>APP-125</b>) outlines the development of the Scheme and the options which were considered.          A number of options were considered to maintain the connectivity of Cantley Lane South to the wider network. These options are detailed in Chapter 2 of the Case for the Scheme along with the justification for the chosen option.          The proposed Scheme design has been through an iterative process and delivery of the required modern highway standards has necessitated realignment of a section of Cantley Stream and the creation of a wider, standard highway junction at Cantley Lane South (currently a narrow rural lane) to facilitate junction visibility and vehicle manoeuvres.</p>
RR-040.3	<p>3) The Park and Ride carpark is to be expanded yet the usage appears to be a small percentage of the available places. Why is there no analysis of this, nor about NCC's wish for expansion? If the road project is needed due to congestion of the roundabout, and this expansion will increase its usage, other routes to access the carpark should be looked at.</p>	<p>The increased capacity of the Thickethorn Park and Ride has been allowed for in the NATS traffic model, details of which can be found in the Case for the Scheme Chapter 4 (<b>APP-0128</b>). The modelling shows that the Scheme operates without any large excess queues building on the roundabout or its approach arms.          The Applicant engaged with Norfolk County Council during the Statutory Consultation phase of the application process for the Scheme and is satisfied that no additional routes for vehicular access to the Park and Ride are required. The Scheme provides additional access for pedestrians and cyclists to the Park and Ride, via the proposed Cantley Lane Link Road.</p>
RR-040.4	<p>4) A stated aim of government is to encourage modal shift to more healthy modes of travel, and those producing less CO2. How can this scheme can do anything other than encourage more car-usage ?</p>	<p><b>Please see Common Response A.</b></p>

Reference	Relevant Representation	Highways England Response
<b>RR-040.5</b>	5) Administrative and clerical. It is stated that there was a statutory consultation in June/July 2019, though nowhere did the 2019 brochure state this. I responded to this, yet I did not know about a consultation Feb/Mar 2021. Perhaps no-one else did, as no responses were received. Elsewhere it states that there was a statutory consultation in 2018. I can find no other record of this. Much duplication of the background to the scheme and its possible funding, in several sections. Surely once is adequate; the DCO is a huge document to read. It is also quite difficult to locate required documents. The Examination library is a huge help, but one cannot then use the PINS 'APP-xxx' numbers in the search function. It is a little confusing that HE also uses APP for its own document references. The 6.3 section on Environment includes a tremendous number of documents, which could usefully be split into other sections.	Targeted statutory consultation was undertaken in February/March 2021 with newly identified affected land owners only. Details of all consultation undertaken can be found in the Consultation report ( <b>APP-023</b> )

## AS-007 SOUTH NORFOLK COUNCIL

Reference	Relevant Representation	Highways England Response
<b>AS-007.1</b>	The District Council fully supports the principle of the scheme to upgrade the Thickthorn junction.	The Applicant notes the support of South Norfolk Council for the Scheme.
<b>AS-007.2</b>	Impact on Heritage Assets - The Council is broadly happy with Cultural Heritage Statement. Our main concern is the protection of the grade II listed milestone along Norwich Road. The submitted statement indicated the scheme has been designed around this to stay in place and it will be protected during construction, this approach is endorsed.	The Applicant notes the support of South Norfolk Council for the Scheme and the Scheme's Cultural Heritage Statement.
<b>AS-007.3</b>	The scheduled ancient monument to the south is close to the new link road between Norwich Road and Cantley Lane South, however the Council is aware that the applicant has been liaising directly with Historic England and so we would defer to Historic England's view on the matter. Likewise, other archaeological features potentially impacted upon that require assessment, mitigation and consideration in the planning balance in determining the application are being picked up by Norfolk County Council in their representations on the application.	The Applicant acknowledges the points raised by South Norfolk Council in relation to the Scheduled Ancient Monument.
<b>AS-007.4</b>	There are some former estate houses next to the lodge on Norwich Road and along Cantley Road South (the latter quite altered) which have not	As per the requirement of para 194 of the National Planning Policy Framework (NPPF), Norfolk County Council Historic Environment Record

Reference	Relevant Representation	Highways England Response
	<p>been identified as non-designated heritage assets. The Council does not consider that the impact will be that significant on these properties in terms of heritage significance to make changes to the scheme, however we would question why these are not identified as Non designated heritage assets (NDHAs) at least potential NDHAs as these too have heritage connections to the house.</p>	<p>(HER) data was gathered to aid the cultural heritage assessment in August 2018, November 2019, and updated again in July 2020.            The reason that the former estate houses next to the lodge on Norwich Road and along Cantley Road South buildings are not identified in the environmental assessment is because they are not identified in the HER as NDHAs</p>
<p><b>AS-007.5</b></p>	<p>land and Visual Impact - The ES includes a Landscape and Visual Impact Assessment and this is fit for purpose; the viewpoints used within this are as agreed with the Council. It was our suggestion that, as the likely master plan was known for the emerging ST Giles Park development, that viewpoint 5 might be better positioned on the known extremity of the housing area, but it remained at the PRoW. We do not consider that this has significantly affected the findings of the study. I do not dispute the findings of the LVIA in terms of the significance of the anticipated landscape and visual effects.</p>	<p>The Applicant acknowledges South Norfolk District Council's acceptance of methodology of the landscape and visual assessment.</p>
<p><b>AS-007.6</b></p>	<p>There is concern about the proposed losses of veteran trees and would welcome any further evolution of the proposal to avoid these. Notwithstanding the description of themes expressed at 7.3.2 of Chapter 7 of the ES, it will be difficult to replace these trees with ones of a similar amenity. Furthermore, there appears to be some ambiguity regarding the status of woodland W2; whether it is ancient woodland needs to be confirmed and the consideration adapted accordingly</p>	<p>The proposed Scheme design has been through an iterative process and delivery of the required modern highway standards has necessitated realignment of a section of Cantley Stream and the creation of a wider, standard highway junction at Cantley Lane South (which is currently a narrow rural lane).As a result of this, removal of two veteran trees (T13 and T14 north of the A11) has been determined as unavoidable.            Woodland W2 is not shown as ancient woodland, based on mapping information on the Multi Agency Geographic Information for the Countryside (MAGIC) website, <a href="http://www.magic.defra.gov.uk">www.magic.defra.gov.uk</a>, which is managed by Natural England (Natural England is also a partner organisation of MAGIC).</p>
<p><b>AS-007.7</b></p>	<p>The scheme appears to have differentiated between 'important' and other hedgerows (as defined by the Hedgerows Regulations). Seemingly only one short section of 'important' hedgerow is proposed to be removed as part of the current proposals and this is not contested.</p>	<p>The Applicant acknowledges the comment raised by South Norfolk Council in relation to hedgerows.</p>
<p><b>AS-007.8</b></p>	<p>Noise, Pollution and Lighting - The key concerns from an Environmental Heath Viewpoint are the impacts on residents (including future residents of dwellings not yet built/occupied but having a valid planning permission) as a result of the:</p> <ul style="list-style-type: none"> <li>• Construction Phase - particularly:             <ul style="list-style-type: none"> <li>o Air Quality</li> </ul> </li> </ul>	<p>During the Construction phase of the works, the contractor shall follow all Health, Safety and Environmental regulations to ensure any impacts on residents, including future dwellings, are kept to a minimum.</p> <p>The Environmental Management Plan (<b>APP-128</b>) will be updated prior to construction to include Appendix B.4 Construction noise and dust</p>

Reference	Relevant Representation	Highways England Response
	<p>§ Dust from construction operations</p> <p>§ Increased traffic emissions as a result of construction operations e.g. traffic congestion and traffic diversions.</p> <ul style="list-style-type: none"> <li>o Noise and vibration from construction works including traffic congestion and traffic diversions.</li> <li>o Lighting – it is assumed lighting will be required for the construction operations</li> <li>• Operational Phase – particularly:               <ul style="list-style-type: none"> <li>o Air Quality – any increase in traffic emissions at residential premises (including future residents of dwellings not yet built/occupied but having a valid planning permission) as a result of the proposal once completed.</li> <li>o Noise and vibration – any increase in noise and vibration at residential premises (including future residents of dwellings not yet built/occupied but having a valid planning permission) as a result of the proposal once completed.</li> <li>o Lighting – it is assumed lighting will be required for the proposal once completed which could be at a significant height relevant to neighbouring residential premises (including future residents of dwellings not yet built/occupied but having a valid planning permission).</li> </ul> </li> </ul>	<p>management plan, which will set out how noise, air quality and lighting will be managed during construction.</p> <p><b>In addition, please see Common Responses C and G</b></p>
AS-007.9	<p>Requirement 4 of the draft DCO requires an Environmental Management Plan which in turn includes a Construction noise and dust management plan and a Construction communication strategy. This would go some way to addressing concerns regarding the Construction Phase. The Statement Relating to Statutory Nuisance implies lighting will be managed via the lighting plan and thus it would appear sensible for it to be specifically mentioned in Requirement 4 of the draft DCO. Arguably the issues relating to the operational phase need to be resolved up front as they may be difficult / impracticable to resolve once any DCO is issued.</p>	<p>Item G2 of Table 3-1 of the REAC contained within the EMP (<b>APP-128</b>) sets out how lighting during construction will be managed to avoid disturbance to sensitive receptors.</p>
AS-007.10	<p>Conclusion: The Council is fully supportive of the principle of the scheme and the economic benefits and planned growth that this supports and unlocks. The Council wishes to continue to work pro-actively with the applicants as the application is progressed through to Examination to try to resolve some of the outstanding matters</p>	<p>The Applicant notes the support of South Norfolk Council for the Scheme.</p>