

A47/A11 Thickthorn Junction

Scheme Number: TR010037

Volume 9

9.11 Applicant's Written Summary of Oral Submissions at ISH1

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

November 2021
Deadline 3

Infrastructure Planning

Planning Act 2008

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

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

**APPLICANT'S WRITTEN SUMMARY OF
ORAL SUBMISSIONS AT ISH1**

Rule Number:	8(1)(c)
Planning Inspectorate Scheme Reference	TR010037
Application Document Reference	TR010037/EXAM/9.11
BIM Document Reference	HE551492-GTY-LSI-000-RP-ZL-40302
Author:	A47/A11 Thickthorn Junction Project Team, Highways England

Version	Date	Status of Version
Rev 0	November 2021	Deadline 3

CONTENTS

1	INTRODUCTION.....	1
2	THE APPLICANT'S SUBMISSIONS IN RESPONSE TO MATTERS RAISED AT ISH1	2
3	ANNEX A: CLIMATE SUBMISSIONS.....	31

1 INTRODUCTION

- 1.1. The Development Consent Order (**DCO**) application for the A47 – A11 Thickthorn Junction scheme was submitted on 31 March 2021 and accepted for examination on 28 April 2021.
- 1.2. The first Issue Specific Hearing (**ISH1**) for the A47 – A11 Thickthorn Junction (DCO) application was held virtually on Microsoft Teams on Wednesday 17 November 2021 at 10.00am.
- 1.3. The Examining Authority (**ExA**) invited the Applicant to respond to the matters raised and the Applicant confirmed it would respond in writing after the hearing.
- 1.4. This document seeks to fully address the representations made by Interested Parties at the ISH1.
- 1.5. The Applicant has responded to the issues raised by each attending party and provided cross-references to the relevant application or examination documents in the text below. The document is supported by the following Annex:

Annex A – Climate submissions

2 THE APPLICANT'S SUBMISSIONS IN RESPONSE TO MATTERS RAISED AT ISH1

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
Agenda Item 2: Transport and Traffic			
1.1	<p>The ExA asked the Applicant to set the scene of the range of suggested benefits being cited, including those proposed from traffic, public rights of way and cycle route perspectives, within the category of traffic and transport.</p>	<p>Chapter 2 of the Scheme Design Report (APP-127) describes scheme development. This outlines how feasibility assessment, consultation on options and the preferred route announcement took place. 26 options were assessed.</p> <p>Further information is contained in section 2.2 of the Case for the Scheme (APP-125). A single option was taken forward for public consultation in March-April 2017. Section 3.1 of the Case for the Scheme shows there is high congestion causing a bottleneck at the junction, which results in longer and unreliable journey times (section 4.5). Collision data between 1 April 2012 and April 2017 shows 39 collisions in total (non were fatal and three were serious). There is a key safety challenge for the Scheme.</p> <p>Additionally, improving the junction would improve current levels of congestion experienced and allow for economic growth in the area. The Scheme supports economic growth, providing a safer and more reliable network, an accessible integrated network and value for money.</p> <p>The Scheme will provide additional capacity, improve journey times and contribute to sustainable economic growth by supporting employment and residential opportunities.</p> <p>The Scheme also improves road safety. Operational traffic modelling shows traffic congestion reduced with increased growth proposed by 2040. The Environmental Statement (ES) (APP-038 to APP-124) assessed and proposes mitigation to combat impact on biodiversity and cumulative effects.</p>	<p>The Applicant has no further comments.</p>

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
		<p>The Scheme plays a vital role in supporting the economy due to the strong transport links along A47 and A11. The Scheme promotes safer routes between villages for Walking, Cycling and Horse Riding.</p> <p>Plans for Walking Cycling and Horse Riding (WCH) were undertaken in accordance with DMRB GG 142 and identified a need for new facilities. Section 4.13 in the Case for the Scheme and ES chapter 12 (APP-049) demonstrate how the Scheme will provide new WCH facilities and provide an opportunity for locals to choose active travel modes. WCH facilities provided are shown on the Rights of Way and Access Plans (APP-008). Currently, the Scheme will stop-up and divert Cringleford footpath to the new overbridge. This will have bridleway status and be suitable for pedestrians, cyclists and horse riders. This slightly increases journey length by 70m, but will result in a large reduction in journey lengths for cyclists and equestrians, remove a redundant Pegasus crossing and provide a cycle track on the eastern frontage of Cantley Lane Link Road. New infrastructure provides an alternative route between Cantley Lane and the B1172 Norwich Road. An uncontrolled crossing facility included on B1172 will facilitate safe crossing between shared footway and existing facility. This has been designed in accordance with CD143 DMRB standard and is supported by Norfolk County Council (NCC).</p> <p>A section of Cantley Lane south will become a cul-de-sac so traffic flows will be reduced.</p> <p>On this basis, the Applicant believes a reasonable proportionate package of new WHC facilities to mitigate the social and environmental effects of the Scheme have been proposed.</p>	

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
1.2	The ExA questioned the baseline modelling position and pointed to NCC's Local Impact Report, which appears to query or imply some question as to what growth factors have been applied to background traffic. The ExA asked what the Applicant's response is to that in terms of what growth factors have been taken into account.	The Applicant has a base year strategic model which is the Norwich Area Traffic Study (NATS) Model representing 2015. The Scheme's proposed opening year is 2025 with a design year of 2040 and after that, in terms of growth of traffic, there is a process where the Applicant creates a core scenario with an uncertainty log backing up assumptions in the core scenario. From NCC the Applicant derives all developments in the area, both housing development as well as transport, and creates an uncertainty log, which informs the core scenario. That derives the 'do minimum'/do something' scenarios. The Applicant has taken development assumptions and tempo growth derived from the Department for Transport. The modelling covers local area traffic from local area development assumptions as well as tempo growth covering the wider area.	The Applicant has no further submissions to make in relation to this question.
1.3	The ExA would like to focus on the St Giles' Park Cringleford residential development – anticipated for completion by 2023 – and seeks clarification that in the modelling described and in the application, this development has this been factored in?	The Applicant points to the Case for the Scheme (APP-125) where the Applicant outlines six development sites, covering a large number of dwellings. The Applicant cannot in the Hearing answer specifically which of these cover the St Giles' Park Development (clarified as also being named the 'Big Sky development') but will make written submissions on this.	As noted in Case for the Scheme (APP-125) Section 4.3.21, Table 4.2 provides details of the local planned developments which have been included in the forecast modelling assessment. As per Table 4.1, all developments are attributed a status regarding their likelihood in the uncertainty log. The local planned developments included in Table 4.2 are all regarded as 'near certain' or 'more than likely'. The Applicant can confirm that the St Giles Park Development is included in Table 4.2, under the description 'West of Cringleford development (south of A11)' Site Reference 885, as shown in Figure 4.10: Local planned developments.
1.4	Mr Richard Hawker referred to the Case for the Scheme and the Applicant's response to	In terms of the Case for the Scheme, Chapter 4, outlines locations, durations and the nature of traffic surveys undertaken. Because there were a large number of surveys	Section 4.2 in the Case for the Scheme details the Baseline data collection for the traffic modelling assessment. The baseline dataset includes the collection of volumetric

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
	<p>written representations regarding traffic modelling and mentions of manual classified turning counts. Mr Hawker cannot see the results from this survey (carried out back in June 2015). Bearing in mind the main raison d'etre of the Scheme is congestion, Mr Hawker advised it would seem basic that we should know where vehicles are currently going from and coming to so this can be dealt with. Mr Hawker asked if other means of taking traffic from the roundabout have been looked at (for example taking A11 traffic to that area and improving link going west)?</p>	<p>undertaken, individual results aren't included in the documentation.</p> <p>The Applicant will confirm whether it is possible to provide the data.</p>	<p>traffic count, network and vehicle journey time data sources. This information is used in the model development process to calibrate and validate the baseline model. The fully calibrated and validated base year model then provides a stable basis to undertake the future year assessment of the Scheme. As such the applicant does not deem it necessary to release the collected traffic data. Figure 4.13 presents the Average Annual Daily Traffic flows for the scheme at the Baseline Year and in the Do Minimum and Do Something modelling scenarios.</p> <p>Chapter 2 of the Scheme Design Report (APP-127) describes scheme development. This outlines how feasibility assessment, consultation on options and the preferred route announcement took place.</p>
1.5	<p>The ExA referred to the impacts of the Scheme in terms of the A11 approach from Norwich, which is identified as the 'worst performing arm of scheme' in NCC's Local Impact Report (REP1-008). The ExA draws on responses from NCC's Local Impact Report at Deadline 1 and</p>	<p>The Applicant is discussing the A11 approach from Norwich with NCC.</p> <p>In terms of safety benefits, the Applicant is reducing the total number of accidents and has undertaken cobalt analysis. The situation modelled (including the Scheme) would look at resulting benefits – improvements of 242 accidents and 26 KSIs. In terms of traffic growth and delays on that arm of the junction, from the Applicant's analysis, the Case for the Scheme (section 4.8) doesn't show a significant amount of</p>	<p>The performance of the A11 Westbound approach link will be improved by the implementation of the scheme based on the strategic NATs modelling shown in Case for the Scheme (APP-127) Table 4.9. In summary, traffic delay and volume over capacity ratios are improved on the A11 Westbound approach to the Thickthorn Junction when comparing the 'Do Minimum' and 'Do Something' scenarios for both opening year 2025 and design year 2040.</p>

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
	<p>Applicant's response at Deadline 2 (REP2-008). There appears to be agreement that the A11 approach is the worst performing in terms of future capacity and delay. The ExA is seeking clarification on whether that is post-the Scheme and what changes are being applied?</p> <p>ExA queried if any safety concerns or just delays?</p>	<p>delays on the A11 westbound as part of that analysis post-delivery of the Scheme.</p>	<p>Section 4.8.12 outlines the journey time savings forecasted along the A11 Westbound route between the A11/Poplar Ave and the A11/B1135. The modelling assessment shows an overall decrease in journey time across this route.</p> <p>It should also be noted that the A11 Westbound approach is a Norfolk County Council asset.</p>
1.6	<p>The ExA clarified, whether there would be any significant effects?</p>	<p>According to the 'do something' analysis, we get reduction from 'do minimum' to 'do something' and those results are highlighted in section 4.8 of the Case for the Scheme.</p>	<p>The Applicant has no further comments.</p>
1.7	<p>The ExA pointed out that NCC have highlighted discussions as ongoing in terms of future capacity of the A11 approach from Norwich, just in terms of the Applicant's views on that, are there any designs that could be used to improve this situation?</p>	<p>A key point arising from the Local Impact Report (REP1-008) is that NCC is not recommending an objection to the Scheme and it follows on that, based on the assessment the A11 is the worst performing arm, not that it performs badly or that it isn't an improvement because of the Scheme.</p> <p>The Applicant's case is that there is an improvement and improvements to safety as a result of the Scheme. The Applicant will consider what can be done in respect of improving that if possible, but if there were improvements that could easily have been made in respect of that arm, they would likely have been included as part of the proposal for the Scheme. If NCC could clarify what they would wish to arise from these discussions, that would be helpful.</p>	<p>The Applicant is not proposing any additional improvements to the A11 westbound approach above what is currently included in the scheme. Please see the Applicant's written response to Ref 1.5 with regards to improvements in the performance of the A11 approach link.</p>

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
		<p>It is understood that the ExA would like, as part of that, the issue discussed, just in terms of whether there could or may be any enhancements to the worst performing arm, how the function for the new overbridge would relate to that and whether there is an enhancement there to cover that in any response given to the Examination.</p>	
1.8	<p>The ExA would like the Applicant's response on proposed classification of the new link road as a class B road, how the Applicant would deal with a mechanism for dealing with road signage and to point to a provision which secures this and whether there is a traffic/uplift issue in that way.</p>	<p>This issue is dealt with in section 4.4.2 of the Applicant's Comments on Local Impact Reports (REP2-008). Classification is a matter for NCC. The Applicant is discussing matters with NCC and will essentially follow NCC's lead in respect of that and it will be captured in the Statement of Common Ground (SoCG).</p> <p>The Applicant has been working with NCC through the preliminary design of signage and development of a signage strategy report and will continue to work with NCC throughout detailed design development of the road signage strategy and details of road signs.</p> <p>The Applicant does not consider this will form part of examination process but can respond to any follow-up questions if needed.</p>	<p>The Applicant is content to be guided by NCC on classification and appropriate signing for their network.</p>
1.9	<p>The ExA would like to discuss questions on asset transfer issues, which were raised in examination. NCC raised this issue and have mentioned seeking a data exchange in terms of maintenance provision. From the Applicant's perspective, is there any</p>	<p>The Applicant is not aware of any update that can be given now. The matter is being discussed and will included in the SoCG in due course.</p>	<p>The Applicant has no further comments.</p>

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
	further update or detail to give on that topic?		
1.10	The ExA would like some understanding of, in the event of an impasse with regards transfer of assets, what effect this would have on the DCO and whether the Applicant would retain assets?	The Applicant confirmed it will write to the ExA on this.	The Applicant refers to the response provided to the question/issue raised at Issue Specific Hearing (ISH) 2 on Article 12 (Ref 1.5) and submitted at Deadline 3.
Agenda Item 3: Design/ Landscape/ Visual Impact			
2.1	The ExA asked for and explanation on the approach to design and how this includes good design principles.	<p>The Scheme was developed by a professional independent engineering design consultancy and the design applied industry approved standards and good design principles.</p> <p>Chapter 3 of the Scheme Design Report (APP-127) describes how the Scheme considers each of the requisite principles and additional considerations on how the Scheme sought to reduce carbon emissions. Ten principles of good design were applied as can be found in the Highways England publication 'the road to good design'.</p> <p>A hierarchical approach to carbon management has been applied as described in PAS 2080. Further information on this can be found in sections 3.2-3.12 of the Scheme Design Report.</p> <p>Therefore the Scheme has been developed in accordance with principles of good design. These cover principal objectives in the National Policy Statement for National Networks (NNNPS) and further information on accordance with the NNNPS is</p>	The Applicant has no further comments.

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
		contained in the National Policy Statement for National Networks Accordance Tables (APP-126).	
2.2	The ExA asked the Applicant to explain the differences between the existing and proposed footbridge?	As noted in the 2018 Scheme Assessment Report, the existing footbridge accommodates a 1.8m wide footway with 1.1m high parapets and this is stepped (with a ramp provided on the right hand side to allow cyclists to wheel across). This current footbridge is not suitable for equestrians and is not compliant with the Equalities Act 2010. WCH surveys confirmed that the existing footbridge is regularly used by cyclists and the occasional equestrian. The new bridge being proposed will be located approximately 40m south of existing bridge so the detour is approximately 70m. It has been designed to keep the span of the structure to a minimum and to use the existing topography to reduce visual impacts. REP2-006 explains how the new footbridge is compliant with CD 143 designing for walking, cycling and horse riding, with maximum gradients of 5%, together with a 3.5m width to facilitate users in both directions. The Applicant has been cognisant of the advice provided by the British Horse Society and its advice leaflet on bridges, gradients and steps in England and Wales. A 1.8m high parapet will be provided and surfacing will be rubber compound or similar. The footbridge will be formed of a single span steel truss infrastructure, so that it can be prefabricated offsite and installed during a single road closure to minimise the impact on the road network.	The Applicant has no further comments.
2.3	The ExA asked for an indication of how local design and local considerations have been taken into account in the footbridge design or whether it is a standard	The footbridge has been designed to be functional and, in terms of local siting, bunding has been provided to the east of the A47, which screens the footbridge from the Cringleford development. There are not many other receptors in the local area apart from the users of the A47 so design is functional and there hasn't been a local design review at this point.	The Applicant has no further comments.

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
	design that could be built in any location?	The landscape and visual impact assessment undertaken for the footbridge demonstrates that it is not widely visible and that is one of the reasons why there was no requirement to consider design in further detail.	
2.4	<p>The ExA asked, if there was a request for a local design review, how this would be dealt with in the DCO?</p> <p>The ExA asked, if there were any requests for tweaks to design at a local level, how this would generally be dealt with?</p>	<p>It is difficult to deal with that in the DCO but there are provisions for detailed design to proceed as the Scheme moves forward if it gets consent. The Applicant will take into account representations made throughout the process for design.</p> <p>In the Good Design for Motorways heading of the NPS (paragraphs 4.28 onwards) there is acceptance by the government that, in essence, it is hard to make motorway and road structures pretty.</p> <p>The Applicant seeks to be sympathetic to the local area but ultimately the function and purpose is the most important aspect of design. The structures are all detailed in the engineering drawings have been provided and there is also detailed design stage but the Applicant can write further on this.</p>	It is the Applicant's opinion that a local design review would not be applicable to a scheme of this type. The Applicant will provide a more detailed response at Deadline 4.
2.5	<p>The ExA asked, in relation to lighting, what lighting would be present on the bridge?</p> <p>The ExA asked if there is still discussion to be had on this at local level from the Applicant's side or if this was now completed in terms of the consultation side of things</p>	<p>There is a lighting plan.</p> <p>The Applicant has consulted with NCC, who will maintain the footbridge and realigned footpath, and currently no lighting is proposed on the footbridge or approach ramps. This is in line with fact that footpath on either side is not lit either.</p> <p>The Applicant confirmed that consultation had completed and that no lighting is proposed on the footbridge or approach ramps.</p>	The Applicant has no further comments.

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
2.6	<p>The ExA queried if the existing bridge provision provides lighting on entry and exit points because when he visited the local area it seemed there was lighting.</p>	<p>The Applicant is not aware of any lighting on actual structure or on the approaches but can take this away.</p>	<p>The Applicant can confirm that whilst there are some isolated lighting columns on the footpath approach to the existing footbridge, these are not currently operational. There is no lighting on the footbridge.</p>
2.7	<p>The ExA asked for an overview of the Environmental Masterplan (EM), including clarifying the relationship between the EM and the scheduled monument, and a snapshot of any potential harm being referred to together with benefits and also covering some of the cultural heritage perspectives in saying that?</p>	<p>The Environmental Masterplan (APP-123) production was coordinated by a professional landscape architects team. This is the same team undertaking the Landscape and Visual Impact Assessment.</p> <p>If you drill down in the Landscape and Visual Impact Assessment (LVIA)(APP-044), you see the assessment on the Yare Tributary Farmland with Parkland character area, the entire Scheme falls within that character area and that shows character within the EM.</p> <p>A useful description can be found at Table 7.2 (of document APP-044) and then the EM sought to achieve landscape integration and where necessary, visual screening in responding to assessed effects. The EM was informed by context. Paragraphs 7.3.2 to 7.3.5 of Chapter 7 of the Environmental Statement (ES) sets out exactly what the policy context was and the need for Applicant to maintain distinction between the town and country context. Objectives of the LVIA (paragraphs 7.9.2 and 7.9.3 of APP-044) summarise objectives of the Environmental Masterplan.</p> <p>This was an iterative process to minimise adverse effects and one that focused heavily on the rural character of Cantley Lane South – one main objective being to maintain this rural character.</p>	<p>The Applicant has no further comments.</p>

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
		<p>One of main functions of the Environmental Masterplan was to identify opportunities for tree planning across the whole scheme, subject to constrains and other considerations. Response to BIO3.2 in REP2-006 sets out in some detail on the various constraints to the Applicant delivering tree planting within the Environmental Masterplan. Driven by the ES, this also captures other requirements, such as ecology and cultural heritage. Ecological considerations included bat accommodations, design of Cantley stream and a reptile habitat enhancement area immediately to the south of the area. In particular the Applicant has considered the location of the adjacent new link road between Cantley Road South regarding the two tumuli in Cantley Wood. These were identified in the ES as being subject to significant effects. The Applicant liaised with a heritage team to focus strategy for setting of these scheduled monuments.</p> <p>Paul Bennett for Applicant on heritage: Didn't do the assessment but has been briefed:</p> <p>The Applicant's approach was taken with Historic England. They do have the appropriate authority to deal with this. The Environmental Masterplan shows the location of the tumuli.</p> <p>The first measure was treatment of the embankment in that area. On the south west embankment there is planting but none on northeast side closest to the scheduled monument. Retained planting outside the Order limits. There was a discussion about whether that should be taken down but you will see that the document refers to 'potential' and 'if'. Visibility is not as important as stability of the monument.</p> <p>There is no screening planting and the Applicant appreciates this is seen as the 'go to' response to there being something put into setting of a scheduled heritage asset. In this case, that is not a valid thing to put in as mitigation. The Applicant's impact assessment is based on shortening of the notional</p>	

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
		<p>southwest down slope. Putting in trees should impact them more. HGV impacts would only be temporal but trees would be almost permanent. The Applicant is seeking to retain as much of setting as possible.</p> <p>There is a slight discrepancy of what is shown on the Environmental Masterplan and the cross section shown on Figure 6.4 (APP-057) – cross section 2 shows retained existing trees right up to the base of the embankment. This is based on an earlier version of the design. There is to be grassland between base of the slope and the Order Limits.</p> <p>The Environmental Masterplan sets out possibilities rather than 'definites'. People are on site performing works. There might be seasonal views where foliage dies back but we cannot guarantee views. Further content is to be confirmed at Stage 5 Detailed Design.</p> <p>The firm intent is to have a broad but exact outcome which will be subject to detailed design in consultation.</p>	
2.8	<p>The ExA would like to touch upon references made to historic parkland and where the boundary of any historic parkland associated with Thickthorn Hall broadly finishes in relation to the Environmental Masterplan.</p>	<p>Thickthorn Hall is located to the north of the A11 and the parkland (former parkland of that hall) is locally recorded. The area affected is essentially the area next to A11 and the park and ride services. This is not a nationally registered park and garden.</p> <p>The Parkland is not locally listed, it is a non-designated heritage asset recorded on the local historical record. The location is referred to in the Heritage chapter of the ES as Thickthorn mark 'MNF33732'. The extent is shown on Figure 6.2 in the ES (APP-057).</p> <p>The LVIA is based on assessment that a single character area contains whole scheme, that is the Yare Tributary Farmland with Parkland. This acknowledges presence of parkland so the assessment in the LVIA captures that in terms of the landscape</p>	<p>The Applicant has no further comments.</p>

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
		value and sensitivity and the Applicant was mindful of this in preparing the Environmental Masterplan.	
Agenda Item 4: Tree Impacts			
3.1	<p>The ExA asked the Applicant to briefly outline what trees would be impacted upon, (the plot numbers being referred to) and what trees are intended for removal and those intended for retention. Specifically attempts to reduce tree loss in Cantley Wood.</p>	<p>In order to establish which trees might be impacted by the proposals a tree survey was carried out in accordance with British Standard 5837:2012 'Trees in relation to design, demolition and construction: recommendations'. This is contained in the Arboricultural Impact Report (APP-085). The Applicant carried out a preliminary tree survey of the proposed scheme area on the 1 and 2 August 2018, and additional areas between 13 and 17 July 2020.</p> <p>The preliminary survey collected data on 61 features (a feature being either an individual tree, group of trees, woodland or hedgerow) and the survey collected data on 99 features, so data was collected on a total of 160 features across both surveys.</p> <p>These features consist of 67 individual trees, 89 groups of trees, 2 woodlands and 2 hedgerows. As part of the data collected for each feature, they were categorised based on the cascade chart for tree quality assessment (Table 1 within BS5837:2012). The quality assessment allows for features to be categorised as either Category U (unsuitable for retention), category A (high quality), Category B (moderate quality) or Category C (low quality). Across all features 1 was considered unsuitable for retention (Category U), 24 were awarded a Category A, 43 awarded Category B, and 92 awarded Category C.</p> <p>The Applicant hasn't linked trees to plot numbers but this is in Appendix 2 of the Agricultural Report (APP-085).</p>	<p>In reference to the Examining Authority's question on plot numbers, the Applicant hasn't specifically linked tree retention and removal to plot numbers however, the Applicant has plotted tree features on the arboricultural impact assessment plans contained in Appendix 2 to APP-085 (Arboricultural Impact Assessment)</p>

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
		<p>The footprint of the design doesn't fall within conservation area but a tree preservation order is within G80, G81 and Woodland 2. This is documented in section 2.851 of APP-085. No ancient woodland in boundary of the scheme.</p> <p>This survey data was then used to inform and assist with the design of the scheme so as to minimise the impact on trees. Of the 160 features recorded, 103 features will be unaffected by the proposals. Table two of the Arboricultural Impact Report shows the scheme will require the complete removal of 17 individual trees and 11 groups of trees, consisting of 5 Category A, 7 Category B, 16 Category C and 1 Category U features. A further 27 groups of trees and 2 woodlands will be partial affected, consisting of 13 Category B and 16 Category C features.</p> <p>It is also proposed that 28 features, consisting of 14 individual trees, 13 groups of trees and 1 hedgerow, will require special construction methods employing to ensure these features are safeguarded (such as a cellular confinement system to avoid compaction from load bearing activities within root protection areas or alternative installation methods for services or fences through root protection areas).</p> <p>A detailed Tree Retention and Removal Plan will be produced as part of an Arboricultural Method Statement that would be produced prior to construction. It may also be possible to scope out the need for special construction methods around some of the trees during the detailed design too.</p>	
3.2	The ExA commented that the Magic website that has been utilised, it does seem as though that only picks up areas of land less than two hectares in size and	The Applicant has consulted Natural England and the Forestry Commission which is referred to in BIO 3.1 and none have raised concerns on ancient woodland to date.	In relation to the Examining Authority's query on data sources used, the Applicant notes that Government guidance on ancient woodland, as included on the Gov.UK website is an ' <i>area that's been wooded continuously since at least 1600AD</i> '. The Applicant has reviewed mapping of

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
	<p>wanted to gather the Applicant's response to that on whether it is definitely able to provide information that any of trees involved don't involve ancient woodland given that less than two hectares is often not picked up. Were any other data sources used?</p>		<p>Norwich and the surrounding area via the Old Maps Online website (managed by the National Library of Scotland). Maps viewed show the following: 1659, Nortfolcia vernacule Norfolk shows no woodland in the area known as Cantley Wood. An Ordnance Survey (OS) map from 1836 (old series sheet 66, surveyed 1815-16, revised 1836-37) show woodland partly present around the area now known as Cantley Wood. An OS 6 inch map from 1881 – 1886 presents 'Big Wood' in the same area as Cantley Wood. An OS map from 1926-1928 Norfolk LXXV.5 Revised: 1926, Published: 1928 shows the area known as Cantley Wood as having being cleared, instead scrub is present. Environmental Statement Appendix 8.1, Botanical Survey Report (APP-087) identifies the presence of ancient woodland indicators in one section of Cantley Wood, comprising common bluebell and wood avens. However, these are not suggestive of the woodland being ancient. Therefore, given the overall lack of evidence provided, the Applicant is of the opinion that Cantley Wood is not considered ancient woodland.</p>
3.3	<p>The ExA raised that the ES mentions that the Appendix 8.1 of the ES highlights 'B grade woodland W2' which is</p>	<p>The Applicant is not aware of anywhere else it can resort to in order to identify further woodland beyond Magic, Natural England and the Forestry Commission.</p>	<p>The Applicant has no further comments.</p>

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
	<p>potentially ancient woodland. Based on consultation responses, the ExA would like clarification that there is no other information source to suggest that these would be ancient wooded areas.</p>	<p>No consultees have brought forward evidence that there is ancient woodland and there is nothing further the Applicant could have done to try and identify particular trees or bits of woodland.</p>	
3.4	<p>The ExA referred to reference by the Applicant that some trees to be removed might be relocated to suitable woodland parcels and will provide a suitable habitat to invertebrates or existing species. The ExA asked, in the experience of the Applicant, what are the known risks of moving trees in terms of the tree health?</p>	<p>The intent is to take the timber arising from felling of certain trees and for this to be relocated in the interests of the invertebrates, rather than to retain the tree as a living thing.</p>	<p>The Applicant can confirm that Item B10 in Table 3-1 (Record of Environmental Actions and Commitments) (REAC) contained in the Environmental Management Plan (APP-128) details the proposals for the felled trees.</p>
3.5	<p>The ExA asked, with regards trees T13 and T14 on the AIA, whether there any design scope to retain those or if there is no avoidable way of those being lost through the scheme?</p>	<p>The Applicant confirmed that there is no way to retain these veteran trees: one is affected by alignment of Cantley Lane Link Road and one by A11 and A47 connector road. This is driven by site constraints in local area and DMRB design and safety standards in terms of alignment geometry.</p> <p>The constraints in the area that would affect the alignment of the roads are the scheduled monument, the park and ride and the proposed extension, significant existing utility infrastructure</p>	<p>The Applicant has no further comments.</p>

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
		<p>(namely overhead power lines), existing residential properties and the railway line.</p> <p>The Applicant retaining other areas of trees and is committed to retaining the trees in the field to the north of the A11 that has been identified for site compound storage, which are being integrated into the design and layout of those two facilities. The Applicant is also looking to retain the mature trees and hedgerows situated in area south of the A11/A47 connector road behind Cantley Lane South properties.</p>	
Agenda Item 5: Biodiversity			
4.1	<p>The ExA asked the Applicant to set out the names, proximity, and context of the Special Area of Conservation (SAC) and Ramsar Site depicted in the submitted No Significant Effects Report as context.</p>	<p>The technical approach to the Environmental Impact Assessment is outlined in Chapter 4 of the Environmental Statement, reference APP-041, and is also further detailed in Chapter 9 – Biodiversity (APP-045).</p> <p>An EIA Scoping Report, written in accordance with the DMRB Volume 11 and The Planning Inspectorate Advice Note 7, was submitted to the Planning Inspectorate in February 2018 in order to request a Scoping Opinion, with consultee responses being received from the Planning Inspectorate in March 2018. Responses received from the Scoping Opinion and statutory consultation were then taken into consideration and incorporated into the design and assessment process, where appropriate.</p> <p>The EIA reports the likely significance of environmental effects using the significance criteria presented within DMRB, LA 104 Environmental assessment and monitoring. The significance of an effect is based on an assessment of each receptor's environmental value or sensitivity, and the magnitude of change or scale of impact. Each effect is assigned to one of five significance categories, as set out in Table 4.1 of Chapter 4 of the ES (APP-041). These range from 'very large', meaning</p>	<p>The Applicant has no further comments.</p>

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
		<p>effects that are material in the decision-making process, to 'neutral', meaning that there is no effect, or the effect is beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.</p> <p>In terms of biodiversity, as stated in APP-045, the assessment and reporting of impacts on biodiversity was undertaken in line with the most recent Highways England standards: Ecological survey and design measures were undertaken in line with DMRB, LD 118 Biodiversity Design; assessment and reporting of effects was undertaken in line with DMRB, LA 108 Biodiversity; and assessment and reporting of the implications on European (now National Site Network) sites was undertaken in line with DMRB, LA 115 Habitats Regulations assessment.</p> <p>The assessment has also been undertaken in reference to the Chartered Institute of Ecology and Environmental Management's Ecological Impact Assessment Guidance, published in 2018.</p> <p>As described in the NSER (AS-005), for the screening stage of the Habitats Regulations Assessment, a study area of 2 km from the Proposed Scheme was used to identify international sites likely to be affected, and a study area of 30 km from the Proposed Scheme was used to identify international sites designated for bats. These search areas for designated sites were in line with those defined in DMRB LA 115 Habitats Regulations Assessment.</p> <p>Three National Site Network sites were screened in: The Broads Special Area of Conservation (SAC); Broadland Special Protection Area (SPA); and Broadland Ramsar. There are no NSN sites designated for bats within 30 km of the Proposed Scheme.</p> <p>Full descriptions of all three sites are presented in the NSER (AS-005), but can be summarized as follows:</p>	

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
		<p>The Broads SAC</p> <p>The Broads SAC lies 11.5 km east of the Proposed Scheme but is hydrologically linked.</p> <p>The SAC is a diffuse site covering an area of 5,885 ha that is made up of a number of component Sites of Special Scientific Interest (SSSI), some of which are in 'favourable' condition for the qualifying features, and some of which are classed as 'unfavourable but recovering'.</p> <p>The SAC contains several naturally nutrient-rich lakes that support relict vegetation of the original fenland flora such that collectively this site contains one of the richest assemblages of rare and local aquatic species in the UK. The site is also the richest area for stoneworts in Britain.</p> <p>The complex of sites contains large blocks of alder woodland and exhibits complete successional sequences from open water to reedswamp to alder woodland on fen peat. The site also contains calcareous fens and transition mires.</p> <p>In terms of Annex II species for which the site is designated, the SAC is a stronghold for the lesser whirlpool ramshorn snail, Desmoulin's whorl snail and fen orchid.</p> <p>Whilst otters are also present, these are not a qualifying feature of the SAC.</p> <p>Broadland SPA</p> <p>Broadland SPA is a diffuse site made up of a number of SSSIs, many of which overlap with the Broads SAC. It covers an area of 5,508 ha and lies 11.5 km east of the Proposed Scheme, to which it is hydrologically linked.</p> <p>The Broads are a series of flooded medieval peat cuttings and they lie within the floodplains of five principal river systems, known as Broadland. The area includes the river valley</p>	

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
		<p>systems of the Bure, Yare and Waveney and their principal tributaries. The open landscape comprises a complex and interlinked mosaic of wetland habitats including open water, reedbeds, carr woodland, grazing marsh and fen meadow. The differing types of management of the vegetation for reed, sedge and marsh hay, coupled with variations in hydrology and substrate support a diverse range of plant communities.</p> <p>The site is designated for wintering populations of ruff, hen harrier, wigeon, shoveler, gadwall, Bewick's swan and whooper swan; and is designated for breeding populations of bittern and marsh harrier.</p> <p>Broadland Ramsar</p> <p>The Ramsar designation is coincident with the boundary of the SPA and as such supports the wetland habitats already discussed for the SPA, is located 11.5 km from the Proposed Scheme and is hydrologically linked.</p> <p>The site qualifies under Ramsar criterion 2 whereby it supports a number of rare Annex 1 habitats and species including calcareous and alkaline fens, alluvial forest, Desmoulin's whorl snail, otter and fen orchid.</p> <p>The site also qualifies under Ramsar criterion 6, as it supports species and populations occurring at levels of international importance. Birds with peak counts in winter include Bewick's swan, wigeon, gadwall and shoveler.</p> <p>Populations identified subsequent to designation of the Ramsar site, for possible future consideration under criterion 6, include those of pink-footed goose and greylag goose.</p>	
4.2	The ExA raised the issue of bats in Cantley Wood that may be travelling to	None of the sites described are designated for bat interest. As the Scheme is not affecting a qualifying feature of the site, then the outcome of the Habitats Regulations Assessment would be	The Applicant has no further comments.

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
	<p>the area or other areas and asked for an indication of the likelihood for bats in relation to the sites described.</p>	<p>there are no significant effects. Therefore, in terms of those sites, there would be no likely effect from the proposed Scheme.</p>	
<p>4.3</p>	<p>The ExA raised the fact that the Environment Act has now become law and wanted to know whether there is any update on the approach in relation to the passing of the Environment Act from the Applicant?</p>	<p>The Scheme seeks to maximise biodiversity delivery in accordance with the current statutory and policy requirements. This will be achieved through considered planting to create new or extend landscaping and biodiversity elements, including species rich grassland, hedgerows, trees, woodland and biodiversity wetlands as shown in the Environmental Masterplan (APP-123).</p> <p>Appendix B.6 of the Environmental Management Plan (APP-128) will contain a Landscape and Ecology Management Plan ("LEMP") to be produced by the appointed Landscape Architect and Ecologist prior to construction. The LEMP will describe the proposed management and monitoring, including durations, of the landscape and ecological mitigation and compensation features of the Scheme. The commitment to deliver the LEMP will be secured through DCO Requirement 4 'Environmental Management Plan'.</p> <p>Overall biodiversity net gain ("BNG") is not considered to be an appropriate metric by which to examine the Scheme. In particular, Defra Metric 2.0 was replaced by 3.0 when the Environment Act came into force, but it remains subject to variation and is expected to be consulted upon in 2022. To satisfy the requirements of Defra Metric 3.0, additional surveys would be necessary. As Defra Metric 3.0 was published on 7 July 2021 and post-dates the ecological surveys carried out to inform the Biodiversity assessment, the scope of these surveys did not extend to capturing and recording the necessary condition information required as input data into the metric. Accordingly, it would not be possible for the Applicant to</p>	<p>The Applicant has no further comments.</p>

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
		<p>present a meaningful, accurate and comparable calculation in the absence of this survey information.</p> <p>For this reason, the Applicant cannot commit to providing overall BNG or indicate the extent of BNG.</p> <p>Presently, the NPS NN (particularly paras. 5.20 – 36) provides that the Scheme must show that it has taken advantage of opportunities to conserve and enhance biodiversity, and should seek to mitigate any harms. As a last resort, the Scheme must compensate for any harms which cannot be mitigated. There is no requirement, or method of calculation available, within the NPS NN for the calculation of BNG.</p> <p>The ExA will be aware that the NPS NN is to be reviewed, and that work is expected to be completed by Spring 2023. However, while that review is undertaken, the current NPS NN remains the relevant government policy and has effect for the purposes of the Planning Act 2008 and this Examination.</p> <p>The NPPF must also be considered as an important and relevant consideration. NPPF Paragraph 174 includes more explicit support for providing BNG as part of development projects than the NPS NN by stating that planning decisions should:</p> <p>“...contribute to and enhance the local environment by:... minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures”</p> <p>Although the Environment Act 2021 contains provision to give the Government the power to make a BNG statement requiring BNG to be achieved for NSIPs, that BNG statement and any regulations remain subject to consultation. It follows that whilst the Government's intention is to have the ability to make BNG</p>	

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
		<p>mandatory for NSIPs in the future, those provisions are currently not applicable to NSIP applications.</p> <p>On that basis, whilst delivering BNG is desirable, there is no requirement for a NSIP such as the Scheme to deliver overall BNG in the NPS NN. This reduces the weight to be applied to policies in the NPPF on BNG as relevant and important matters in decision making on the Application.</p> <p>However, against this statutory and policy background, the Applicant is nevertheless committed to minimising environmental impacts and protecting and enhancing the quality of the surrounding environment. That accords with the obligation in section 40 of the Natural Environment and Rural Communities Act 2006 to have regard to the purpose of conserving biodiversity. This is written into the terms of the Highways England Licence which binds the Applicant. The guidance section of the Licence indicates that Highways England should, where appropriate, work with others to develop solutions that can provide increased environmental benefits over those that can be delivered alone, where this delivers value for money.</p> <p>Furthermore, protecting biodiversity is entrenched within the Government's Road Investment Strategy. The RIS1 states that the company must achieve no net loss of biodiversity during the second road period and deliver net gain in the longer term.</p>	
4.4	The ExA highlighted the LEMP and asked, if there are any unexpected or expected releases in secondary legislation, is there flexibility in DCO to pick this up if there were any improvements to be	If the statutory provision were to change, the assumption is that the Government would, in implementing that legislation, include transitional provisions. If these were to apply to national infrastructure, the Applicant would be required to comply with them. If the Government were to bring forward a BNG statement having retrospective effect, then it would be something the Applicant would need to take into account.	The Applicant has no further comments.

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
	made in light of changing legislation?	The current position is that the NNNPS has effect and is the current basis upon which the Scheme is assessed. If that position changes over the course of Examination then the Applicant would have to update the ExA on that. However, the Applicant is not anticipating any changes during the course of Examination, and if during the course of the development of the Scheme there are legislative provisions which the Applicant must take account of, then it must take account of that and that would take priority over any clause in the DCO.	
Agenda Item 6: Climate Change			
5.1	The ExA raised that the Applicant is intending to update ES Chapter 14 at deadline 4. With that in mind the ExA would like the Applicant's current views on Cumulative Impacts, Cumulative Carbon Assessments and the presence of other national infrastructure projects?	<p>The update will be in line with the 6th Carbon Budget (6CB).</p> <p>The current approach is in line with DMRB LA114 and the NNNPS. Assessment on climate concentrates on 2 main areas:</p> <ul style="list-style-type: none"> - effects on climate (carbon emissions); and - vulnerability of proposed scheme to climate change. <p>Regarding vulnerability, assessment has been done using UK Climate Protections produced by the Met Office. Through that the assessment looks at areas, such as changes to temperatures, storms and precipitation.</p> <p>In terms of effects on climate from proposed scheme, this has been done looking at construction, operation and use of the scheme. The Highways England Carbon Tool has been used to focus on emissions – the Embodied Carbon Report (APP-116) details more on this. This has been done by estimating the carbon and assessing carbon associated with materials, transportation and construction. Operational energy has been assessed looking at lighting for the scheme. End user emissions have been assessed using the traffic model outlined earlier and taking account of the change in emissions associated with end user vehicles on the affected road network,</p>	The Applicant has no further comments to make.

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
		<p>using traffic data used from the core scenario to assess this. The assessment includes emissions from cars and heavy duty vehicles.</p> <p>Chapter 14 of the ES currently includes the 4th and 5th Carbon Budgets but the period of assessment is from 2023-2087 so the Applicant's plan is to submit update taking into account the 6CB as was enshrined in law over the summer.</p> <p>With regard to cumulative impacts, this has been assessed in accordance with DMRB104 – looking at impact of the single scheme, through construction, operation and use, and in-combination with different schemes by assessing end user emissions in the affected road network. Assessment has been with other road projects such as the A47 Blofield to North Burlingham, A47 North Tuddenham to Easton and the Norwich Western Link. These have been put within the 'do minimum' baseline. The assessment does not just look at end user emissions from vehicles on the Proposed Scheme but across a broader network. As such, the ES highlights the impact the Proposed Scheme will have cumulatively with other schemes in the area.</p>	
5.2	<p>The ExA asked the Applicant to confirm whether court judgements on the RIS2 will form any part of the update proposed in ES Chapter 14?</p>	<p>This is not at present anticipated to form part of the Chapter 14 update.</p> <p>The Applicant considers it would be best to submit all comments in writing because Dr Boswell is not present at the Hearing and has indicated that he would like to make submissions in December.</p> <p>The only point the Applicant would seek to make in connection with RIS2 is in connection with the approach to be taken in terms of the carbon budgets but the Applicant will put that in writing.</p>	<p>The Applicant has prepared written submissions on climate and these are attached at Appendix A.</p> <p>Further to the judgment in R (on the application of Transport Action Network Ltd) v Secretary of State for Transport [2021] EWHC 2095 (Admin), the following two paragraphs are of note because they make it clear that no cumulative targets for the road transport sector (or any other sector) exist and so such a cumulative assessment</p>

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
		<p>The Applicant is also aware that further representations are likely to be made to the effect that the ES climate assessment does not comply with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. However, the Applicant is very clear that it does comply and is happy to elaborate within written submission if this would assist.</p>	<p>against targets at a level lower than the national one is not possible on the basis of current knowledge:</p> <p>"127. RIS 2 was not the first document of its kind. It followed on from RIS 1 adopted in December 2014. It was formulated so as to provide continuity, where appropriate, with that earlier document. In setting RIS 2, the SST must be treated as having had knowledge of RIS 1, the NPS and the policy documents referred to in [53 to 54] and [82 to 92] above. He must also be taken to have known about the framework of, and relevant targets in, the CCA 2008 (i.e. the net zero target in 2050 and CB4 and CB5). He must have been aware of the challenges facing the road transport sector regarding climate change, the 16 MtCO₂e difference between the department's central projection and the 2032 Clean Growth Strategy, the matters not taken into account by the central projection (see [89] and [91] above), and the policy commitment to reduce GHG emissions in the transport sector overall "further, faster." The SST must also have been aware that there is no sectoral target for transport, or any other sector, and that emissions in one sector, or in part of one sector, may be balanced against better performance in others. A net increase in emissions from a particular policy or project is managed</p>

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
			<p>within the government's overall strategy for meeting carbon budgets and the net zero target as part of "an economy-wide transition" (see Dr Moran's WS at para.32; Packham at [85]- [87]; and [86] above)." (emphasis added)</p> <p>"129. The SST will also have been aware of the approach taken in the NPS and RIS 1 to increases in carbon emissions from new projects for the SRN. The policy in paragraph 3.8 of the NPS states that the impact of road development on aggregate levels of emissions is "likely to be very small." These impacts "need to be seen against significant projected reductions in carbon emissions... as a result of current and future policies to meet the government's legally binding carbon budgets". The programme envisaged in "Investing in Britain's Future" would add well below 0.1% of average annual carbon emissions allowed in CB4. Two points should be noted. First, the policy approved by Parliament considers it appropriate to compare the emissions from a roads programme with the UK as a whole, rather than a smaller sector. Second, the percentage given is an indicator of what may be considered as "very small" and not a matter of concern in terms of the UK's climate change policy." (emphasis added)</p>

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
			<p>The Applicant understands that an application for permission to appeal the High Court judgment has been made but that the Court of Appeal has not yet decided whether permission to appeal should be granted. Under current Court timetables, the application for permission is unlikely to be heard until early 2022 and if permission to appeal is granted, any subsequent hearing is unlikely to be held before the end of the examination period. The judgment of the High Court therefore remains the legal view of the Court at this time and it would be inappropriate to consider further what view the Court of Appeal might take on the application for permission to appeal.</p>
5.3	<p>The ExA asked what the Applicant's approach would be to any changes or developments in innovation that are beneficial to any climate change matters, for example, if a better use of materials could be introduced, what is the flexibility in the DCO and the Applicant's approach to that?</p>	<p>The Applicant is looking at low carbon materials and design options where applicable and appropriate. The Applicant would propose this goes forward in line with past updates. Any design updates would have a carbon assessment done looking at whether this would increase or minimise emissions and an update made to show how that had been changed from the baseline. This would be the approach in the alternative to an updated Chapter 14. Consequently, this would set a baseline to reduce and monitor that.</p> <p>Additionally, flexibility is built into Requirements 3 and 4.</p>	<p>The Applicant has no further comments.</p>
<p>Agenda Item 7: Noise/ other matters</p>			

Ref	Questions / Issues Raised at ISH1 and Hearing Action Points	Summary of Applicant's Response at ISH1	Applicant's Written Response
6.1	The ExA asked for a short overview of the approach taken to potential noise impacts and the receptor context as detailed in the application, particularly in relation to the Mackintosh Trust submission.	<p>The Applicant has reviewed the Mackintosh Trust submission and is preparing written response for the next deadline.</p> <p>In summary, the Applicant's assessment looks at the receptors deemed most affected by the construction or operation of the proposed Scheme. For example, for construction the assessment looks at representative locations rather than every single dwelling. The Applicant will provide more detail on the specific receptors identified, but this does not change the conclusion of the ES and there are no significant effects expected at the two receptors identified by the Mackintosh Trust.</p>	The Applicant has provided a response to the Mackintosh Trust submission in the comments to the Applicant's comments on responses to the Examining Authority's First Written Questions (ExAQ1s) submitted at Deadline 3.
Agenda Item 8: AOB			
7.1	No issues raised by the ExA.	<p>The Applicant is considering four proposed non material minor amendments to the Scheme. It is anticipated there will be no material change to the environmental assessment, which is why they are considered to have no material change to the Scheme. The Applicant is raising this as soon as possible but understands that the ExA preference would be a written submission on this.</p> <p>The Applicant will do an update at the next deadline.</p>	The Applicant intends to present the details of the changes at Deadline 4.
Agenda Item 9: Review of any actions/ issues arising			
8.1	The ExA does intend a further round of written questions.	No comments given.	The Applicant has no further comments.

ANNEX A OF THE APPLICANT'S ORAL SUBMISSIONS OF ISH1

A47/A11 THICKTHORN JUNCTION CONSENT ORDER APPLICATION

ANNEX TO APPLICANT'S WRITTEN SUBMISSIONS FOLLOWING ISH1 CLIMATE SUBMISSIONS

To assist the Examination, the Applicant has structured written responses to the Climate matters in the way that the Secretary of State is required to approach the determination of the DCO Application in accordance with section 104 of the Planning Act 2008

1. The approach to be taken to the consideration of carbon emissions and impacts in the determination of applications for development consent for national networks infrastructure is set out in paragraphs 5.16 – 5.19 of the NNNPS, which was approved by Parliament. As confirmed in the Ministerial Statement of 22 July 2023, pending the outcome of the announced review of the NNNPS

"...the NPS remains relevant government policy and has effect for the purposes of the Planning Act 2008. The NPS will, therefore, continue to provide a proper basis on which the Planning Inspectorate can examine, and the Secretary of State can make decisions on, applications for development consent." The statutory basis for the designation and review of a national policy statement is set out in sections 5 and 6 of the Planning Act 2008.

2. In respect of the assessment of carbon emissions, the Introduction at NNNPS paragraph 5.16 states that *"The Government has a legally binding framework to cut greenhouse gas emissions by at least 80% [now 100%] by 2050. As stated above, the impact of road development on aggregate levels of emissions is likely to be very small. Emission reductions will be delivered through a system of five year carbon budgets that set a trajectory to 2050. Carbon budgets and plans will include policies to reduce transport emissions, taking into account the impact of the Government's overall programme of new infrastructure as part of that."*

As legislated for in section 1 of the Climate Act 2008 (as amended), the Secretary of State is required to ensure attainment of the net zero 2050 target. Section 4 Act requires the Secretary of State to ensure attainment of the carbon budgets at the relevant carbon budget period dates. Therefore, delivery of the emissions reductions necessary to achieve net zero by 2050 is measured through the pathway provided by interim targets of the carbon budgets.

The Net Zero Strategy: Build Back Greener (published October 2021): https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1028157/net-zero-strategy.pdf) was presented to Parliament pursuant to Section 14 of the Climate Change Act 2008. It sets out the next steps to be taken to cut carbon emissions in order to meet the Sixth Carbon Budget (2033 – 2037) and also the UK's 2030 Nationally Determined Contribution for the purposes of the Paris Agreement on Climate Change (described in the Technical Appendix to the Net Zero Strategy publication at pp 309 – 310). The Net Zero Strategy builds on the findings in the latest report by the Intergovernmental Panel on Climate Change (IPCC (2021), 'Sixth Assessment Report', [redacted] and references the role of the DfT's Transport Decarbonisation Plan, which the Applicant referred to in its Response to the Examining Authority's First Written Questions (ExQ1) (**REP2-014**).

The Climate Change Committee's Independent Analysis: The UK's Net Zero Strategy

[redacted]

[redacted]

(October 2021) states "Our overall assessment is that it is an ambitious and comprehensive strategy that marks a significant step forward for UK climate policy, setting a globally leading benchmark to take to COP26. Further steps will need to follow quickly to implement the policies and proposals mapped out in the Net Zero Strategy if it is to be a success.". The Climate Change Committee notes

that "A zero emission vehicle mandate will be the key delivery tool for electric vehicles, as recommended by the Committee" and "The Transport Decarbonisation Plan is a reasonably comprehensive strategy for transitioning to a system in which almost all journeys are zero-carbon." Since the majority of operational GHG emissions from the Scheme will be from tail pipes rather than the infrastructure for which development consent is sought, it is material that there are up-to-date Government policies and strategies that seek to provide the pathway to delivering net zero by 2050. The Climate Change Committee's green/yellow/orange/red analysis of UK Climate Policy – State of Play (Table 2 at page 28 of the independent Analysis – link above) identifies that in respect of domestic transport, including domestic aviation and shipping, green (signalling "good plans") applies to publishing of the plans to achieve net zero, sufficient ambition and proper funding and/or incentives. It has allocated yellow ("generally good plans with some risks") to credible delivery policies, balanced mix of options and timelines for implementation. There are no orange ("more risks") or red ("significant risks") classifications identified in respect of domestic transport.

The Climate Change Committee describes the key actions in the coming years in respect of implementing the Transport Decarbonisation Plan as follows "This [Transport Decarbonisation Plan] included a clear roadmap for delivering the transition to electric vehicles, based on a zero-emission vehicle mandate. Phase-out dates for other types of non-zero-emission road vehicles have also been proposed, sending clear signals to the market. Alongside this, there is recognition of the need to reduce road traffic growth, supported by spending commitments on active travel and public transport. These now need to be turned into measurable targets and clear delivery policies to achieve this ambition."

Neither a reduction in road traffic growth or achieving net zero are incompatible with the need for the proposed Scheme. Indeed, the Transport Decarbonisation Plan provides clear policy recognition that there is a need for further road investment: "In 2019, our roads handled 88 per cent of all passenger travel by distance, the vast majority of it by car or van. Even doubling rail use across the country would only reduce this proportion to 75 per cent, assuming that overall demand did not rise. The roads also carry more than three-quarters of freight traffic, and of course nearly all pedestrian, cycling, bus and coach journeys. Continued high investment in our roads is therefore, and will remain, as necessary as ever to ensure the functioning of the nation and to reduce the congestion which is a major source of carbon." (page 103)

The Net Zero Strategy and the Transport Decarbonisation Plan set out a wide range of mechanisms outside of the planning system that are proposed to be utilised to deliver the net zero by 2050 target and the shift to zero emission road transport. In considering whether or not to grant consent for a development, a decision maker is entitled to assume that other regimes will operate effectively: *Gateshead MBC v Secretary of State for the Environment* [1995] Env. L.R. 37.

The Transport Decarbonisation Plan recognises that there are uncertainties and a need to continue to develop and refine the range of policies and proposals to ensure that the transport sector fulfils its contribution to the legally binding climate targets, with Government taking such additional targeted action as is needed to enable the targets to be met "We will regularly review progress against our targets, and continue to adapt and take further action if needed"(page 92).

In accordance with section 104 of the Planning Act 2008 the Secretary of State is required to determine the application in accordance with the NNNPS unless one or more of subsections (4) to (8) apply. Subsection (4) "applies if the Secretary of State is satisfied that deciding the application in accordance with any relevant national policy statement would lead to the United Kingdom being in breach of any of its international obligations". It is relevant in this respect to note that:

The UK confirmed its Nationally Determined Contribution (NDC) under the Paris Agreement to the United Nations Framework Convention on Climate Change (UNFCCC) in December 2020. The NDC commits the UK to reducing economy-wide greenhouse gas emissions by at least 68% by 2030, compared to 1990 levels.

The NDC aligns with the legislated UK carbon reduction target in the 6th Carbon Budget, which, by setting a carbon budget for the period 2033 to 2037 of 965 MtCO_{2e}, will achieve an emissions reduction of 78% by 2035 compared to 1990 levels.

As presented in ES Chapter 14 **APP-051** the climate assessment will not impact the UK achieving its carbon reduction targets. In turn it can therefore be concluded that there are no implications of the development in relation to the Paris Agreement and the UK's Nationally Determined Contribution under the Paris Agreement.

This conclusion is consistent with the Climate Change Committee's independent analysis, which states that the Net Zero Strategy "sets out sectoral ambitions that add up to a quantified pathway to meet the UK's Nationally Determined Contribution (NDC) for 2030 and the Sixth Carbon Budget covering the mid-2030s." Accordingly, the Applicant does not consider that there is a reasonable basis on which it could be concluded that the climate effects of the Scheme would invoke section 104(4).

3. The approach that the Applicant is required to take to the assessment of carbon impacts and climate factors is set out at NNNPS paragraph 5.17: "Carbon impacts will be considered as part of the appraisal of scheme options (in the business case), prior to the submission of an application for DCO. Where the development is subject to EIA, any Environmental Statement will need to describe an assessment of any likely significant climate factors in accordance with the requirements in the EIA Directive. It is very unlikely that the impact of a road project will, in isolation, affect the ability of Government to meet its carbon reduction plan targets. However, for road projects applicants should provide evidence of the carbon impact of the project and an assessment against the Government's carbon budgets." For the purposes of the assessment, DMRB LA 114 – Climate sets out the requirements for assessing and reporting the effects of climate on highways (climate change resilience and adaptation), and the effect on climate of greenhouse gas from construction, operation and maintenance projects. The methodology followed in ES Chapter 14 (APP-051) for assessing the impact of the Scheme on climate is that set out in DMRB LA 114 section 3. In particular:

- Study areas: ES Chapter 14 (APP-051) uses the study areas identified in DMRB LA 114 :

3.8 For construction and operational maintenance, the study area shall comprise GHG emissions associated with project construction related activities/materials and their associated transport.

3.9 For operational road user GHG emissions, the study area shall be consistent with the affected road network defined in a project's traffic model.

- Baseline scenario: ES Chapter 14 (APP-051) complies with the requirements in DMRB LA 114 paragraph 3.10 that GHG emissions without the project shall be identified for current and future GHG emissions, that the boundary of the baseline GHG emissions should include current operational maintenance GHG emissions and operational user GHG emissions, and that the baseline GHG emissions should be consistent with the study area outlined for the project.
- Data collection: ES Chapter 14 (APP-051) presents the information identified in DMRB LA 114 paragraph 3 Table 3.11.1 on sources and lifecycle stages for project GHG emissions that should be obtained to inform the assessment. Construction of the Scheme has been calculated using the Highways England Carbon Tool (v2.3), whilst maintenance and operational emissions have been calculated over a 60-year appraisal period. To calculate end-user emissions, the traffic model and affected road network (ARN) utilised for PCF stage 3 has been developed in line with the Department for Transport (DfT) Transport Appraisal Guidance (TAG). In following this approach, the Scheme has taken account of other planned developments within this area.

As discussed in Section 4 of the Case for the Scheme (**APP-125**), the strategic Norwich Area Transport Strategy Model (referred to as the NATS Model) is used as the basis to derive forecasted traffic impacts of the Scheme's performance across the wider area. The traffic

model and ARN utilised for PCF stage 3 has been developed in line with the Department for Transport (DfT) Transport Appraisal Guidance (TAG). In accordance with TAG guidance, developments and transport schemes identified in the uncertainty log with the likelihood of at least 'near certain' or 'more than likely' were included in the core scenario forecasts (please see the Case for the Scheme section 4.3 for further details (**APP-125**). Accordingly, the assessment presented in Chapter 14 is compatible with DMRB LA 114.

- Significance criteria: DMRB LA 114 paragraph 3.18 requires that an assessment of project GHG emissions against UK government or overseeing organisation carbon budgets shall be undertaken and presented. In accordance with NNNPS paragraph 5.17 and DMRB LA 114 paragraphs 3.18 – 3.20 and Table 3.18 "Project GHG emissions against relevant carbon budgets", the assessment provided in ES Chapter 14 (APP-051) is against the relevant Government carbon budgets.

4. The NNNPS sets out the approach that the Secretary of State should take when considering carbon emissions in decision-making at paragraph 5.18: "The Government has an overarching national carbon reduction strategy (as set out in the Carbon Plan 2011) which is a credible plan for meeting carbon budgets. It includes a range of non-planning policies which will, subject to the occurrence of the very unlikely event described above, ensure that any carbon increases from road development do not compromise its overall carbon reduction commitments. The Government is legally required to meet this plan. Therefore, any increase in carbon emissions is not a reason to refuse development consent, unless the increase in carbon emissions resulting from the proposed scheme are so significant that it would have a material impact on the ability of Government to meet its carbon reduction targets."

A number of policy documents have been published by Government since the Carbon Plan 2011, most recently the transport decarbonisation plan "Decarbonising transport: a better, greener Britain" (14 July 2021) and the Net Zero Strategy: Building Back Greener (October 2021). All follow the approach legislated for in the Climate Change Act 2008 (as amended) and described at paragraph 2 above. Reducing emissions in the transport sector is the subject of Chapter 3v of the Net Zero Strategy (at pages 152 – 166), which includes the indicative domestic transport emissions pathway to 2037 at Figure 21 and the key commitments to achieve this: "The policies and proposals for transport in the Net Zero Strategy will... remove all road emissions at the tailpipe..." (page 24). The Applicant recognises that they have a key role in the development and maintenance of a strategic road network that will facilitate the journey to net zero emissions. The Highways England Roadmap to net zero by 2050 sets out commitments to develop a blueprint for EV charging and energy storage by 2023 and to report to government on global HGV technology trials and set out proposals for trials in the UK in 2022.

Accordingly, Government policy and strategies on the delivery of net zero in the domestic transport sector is up-to-date, has been independently analysed by the Climate Change Committee and is found to provide a credible path to achievement of net zero by 2050 and to compliance with the UK's international obligations under the Paris Agreement.

5. The NNNPS requires that the assessment of significance of effects on climate for DCO applications should be undertaken at the national level, which is the basis of the UK Government carbon budgets. The methodology set out in DMRB LA 114 (Climate) follows this approach. It should be noted that paragraph 2.6 of DMRB 114 advises that the assessment and reporting of the effects of climate shall be undertaken in accordance with the requirements in four over-arching environmental assessment documents. The ES for the proposed Scheme complies with the requirements set out in these documents, which themselves align with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (EIA Regulations). In particular, one of the four over-arching environmental assessment documents is DMRB LA 104 Environmental assessment and monitoring. DMRB LA 104 includes a series of definitions and requirements relating to cumulative assessment that have direct application to each of the individual environmental factors, including climate.

The LA104 standard provides a definition of cumulative assessment as:

Impacts that result from incremental changes caused by other present or reasonably foreseeable actions together with the project. NOTE: For the purposes of this guidance, a cumulative impact can arise as the result of: a) the combined impact of a number of different environmental factors - specific impacts from a single project on a single receptor/resource; and/or b) the combined impact of a number of different projects within the vicinity (in combination with the environmental impact assessment project) on a single receptor/resource.

It sets out the expectation that “*Environmental assessments shall assess cumulative effects which include those from: 1) a single project (e.g. numerous different effects impacting a single receptor); and 2) different projects (together with the project being assessed).*”

With regards to the first point (cumulative effects from a single project), this has been looked at through the carbon emissions within the spatial boundary of the receptor. This is to be looked at on a national level, but as a single project, the cumulative assessment is inherent within the DMRB LA 114 climate methodology as it considers those emissions from construction use and end user emissions.

With regards to the second point (cumulative assessment with other projects in the area), the Norwich Western Link and other A47 schemes, together with the proposed Scheme here have been assessed, through inclusion in the traffic models and the end user carbon assessment. ES Chapter 14, APP-051 Table 14-10 is the change in emissions (DS-DM) for the ARN. This is not just emissions from the proposed Scheme, but changes across the whole network as a result of the Scheme. Therefore, this is showing the total (cumulative) change in a broader area than just the proposed Scheme; but highlighting the difference to the ARN that is contributable to the proposed Scheme. The project emissions from this cumulative assessment are then assessed for likely significance of effects in terms of the carbon budgets, in accordance with the NNNPS and DMRB LA 114.

The assessment in the ES at Chapter 14: Climate (APP-051) has included such information as is reasonably required to assess the environmental effects of the development and which the Applicant could reasonably be required to compile having regard to current knowledge. Since only Government is in the position to identify cumulative targets, the current knowledge available to the Applicant comprises the national targets set out in the carbon budgets. No sectoral target has been set by Government for road transport. As a result there is no target for the road transport sector against which the Applicant can carry out a cumulative assessment that aggregated GHG emissions from the Scheme with those from any particular category of developments. Accordingly, a cumulative assessment against a target for the road transport sector is not a matter which the Applicant could reasonably be expected to be required to compile having regard to current knowledge. Further, it is not possible to attribute a specific local emission of carbon to effects on a local receptor so, unlike other cumulative impact assessments, there is no logical study area capable of definition by the nature of the effect itself. The approach in LA114 and in ES Chapter 14: Climate (APP-051) of assessment against the national Carbon Budget targets, which span cumulative economic sectors, is correct.