

A38 Derby Junctions

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8.111 Climate Responses to ISH8 ExA Questions

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Climate Responses to ISH8 ExA Questions

ExA Question	Response
<p>a) The ExA is seeking to understand the Applicant's assessment methodology with respect to the account taken of the updated target and how the assessment allows for revised carbon budgets not being available until 2020. Following this clarification, please could the Applicant review its previous response [REP12-007, item 3.3] and update accordingly?</p> <p>A response to this question was presented at ISH8, however the ExA requested a written summary of the oral submission.</p>	<p>In line with the requirements of National Policy Statement for National Networks (NPSNN) paragraph 5.17, ES Chapter 14: Climate [APP- 052] presents an assessment of the carbon impact of the Scheme against the UK Government's current carbon budgets set to achieve an 80% reduction in carbon emissions by 2050 relative to 1990. The assessment has identified that the emissions arising as a result of the Scheme represent less than 0.005% of the total emissions in any five-year UK carbon budget during which they would arise. Consequently, the climate assessment has concluded that the GHG emissions impact of the Scheme will not have a material impact on the UK Government meeting its carbon reduction targets (refer to ES Chapter 14: Climate [APP- 052] for details – note that in the chapter at para. 14.10.16 this figure was rounded up to two decimal places i.e. 0.01%).</p> <p>ES Chapter 14: Climate [APP- 052] was written prior to the publication of the new Government carbon reduction target set within the Climate Change Act 2008 (2050 Target Amendment) Order 2019 (i.e. the net zero target). Carbon budgets provide a five-year, legally binding cap on total GHG emissions, which should not be exceeded, if the UK is to meet its emission reduction commitments. Until revised carbon budgets setting out the pathway for the UK to achieve net zero emissions are published by the Committee on Climate Change, and adopted into law through the Climate Change Act, it is not possible to quantitatively assess the impact of this Scheme on the UK meeting its carbon reduction target.</p> <p>However, Highways England considers that even if the budgets become more stringent with net zero, it will not change the magnitude of impact (not significant as set out in Section 14.12 of ES Chapter 14: Climate [APP- 052]) nor result in any risk of the Scheme having a material impact on the ability of the Government to meet its carbon reduction targets. Therefore, conclusion of the assessment</p>

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	does not change in the context of the revised targets.
<p>b) In its response to Further Written Question 3.2(a) [REP12-007], the Applicant stated that the Department for Transport has confirmed that the programme of schemes described in the RIS1 have been cumulatively assessed and included in the UK Government's carbon budgets. In response to Question 3.3 (a and b) the Applicant states that RIS2 has been subject to impact assessments and complies with the Paris agreement obligations. Please would the Applicant provide details of Department for Transport's confirmation and the impact assessments?</p> <p>A response to this question was presented at ISH8, however, the ExA requested a written summary regarding what information is available to Highways England regarding DfT impact assessments, and if such information is not available, why not?</p>	<p>The basis for this response from Highways England is the response from the Minister for Transport who confirmed on 12 March 2020 that the roads programme (in RIS2) was subject to rigorous environmental assessment and complies with the UK's obligations in the Paris Agreement – see the link to Hansard provided below.</p> <p>https://hansard.parliament.uk/Commons/2020-03-12/debates/6995523A-F812-4EA1-B642-C25C15DB8831/AirportExpansionParisClimateChangeAgreement?highlight=paris%20agreement#contribution-54B1066E-5909-47CC-AC47-C0557EF43B34</p> <p>In terms of information or assessments being available to Highways England from the Department for Transport, as Highways England noted during ISH8, the only information made available to it to date was as part of the M4 Junction 3-12 smart motorway inquiry where RIS1 was considered and where the ExA sought clarification on this issue from DfT directly. Highways England appreciates the ExA's comment that it is incumbent on Highways England to provide it with the necessary detail and on this question it considers that the confirmation from the Minister for Transport, noted above, is sufficient. Highways England does not, however, have detailed internal assessments undertaken by the DfT available to it as it is a separate body to the DfT. Highways England considers that the Secretary of State, when considering the ExA's recommendation, will have this information available as they are within the SoS's Department.</p>
<p>Following discussions regarding carbon footprint targets at ISH8, the ExA asked the Applicant to provide a written response and clarification as to why the Scheme GHG footprint is "<i>not unnecessarily high</i>".</p>	<p>NPS Assessment Requirements & Summary of ES Results</p> <p>Highways England is required to undertake an assessment of their road schemes defined as Nationally Significant Infrastructure Projects (NSIPs) in line with the policy requirements as presented in the National Policy Statement for National Networks (NPSNN). Paragraph 3.8 of the NPSNN requires that the impacts of road development need to be</p>

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	<p>seen against projected reductions in carbon emissions as a result of current and future policies to meet the Government’s legally binding carbon budgets.</p> <p>Paragraph 5.17 of the NPSNN states that “<i>for road projects applicants should provide evidence of the carbon impact of the project and an assessment against the Government’s carbon budgets</i>”. As such, ES Chapter 14: Climate [APP-052] presents an assessment of the Scheme on the climate and provides evidence of the carbon impact of the Scheme against the UK Government’s current carbon budgets. The assessment identifies that the emissions arising as a result of Scheme construction equate to approximately 130,858tCO_{2e}, less than 0.005% of the total emissions in any five-year UK carbon budget during which they would arise. Consequently, the climate assessment has concluded that the GHG emissions impact of the Scheme are not significant and will not have a material impact on the UK Government meeting its carbon reduction targets.</p> <p>The NPSNN clarifies at paragraph 5.18 that “<i>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</i>”. As detailed in ES Chapter 14: Climate [APP-052], whilst the Scheme will increase carbon emissions, such emissions will not have a material impact on the UK Government’s ability to meet its carbon reduction targets.</p> <p>DMRB LA114 Climate presents Highways England’s approach to assessing the climate impact of an NSIP scheme in line with the requirements of the NPSNN. The ES for the Scheme was prepared prior to the publication of DMRB LA114, however, the assessment as reported in ES Chapter 14: Climate [APP-052] complies with LA114 requirements.</p> <p>NPSNN at paragraph 5.19 states that evidence of appropriate mitigation measures in both design and construction should be presented, and that “<i>The Secretary of State will consider the effectiveness of such mitigation measures in order to ensure that, in relation to design and construction, the carbon</i></p>

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	<p><i>footprint is not unnecessarily high. The Secretary of State’s view of the adequacy of the mitigation measures relating to design and construction will be a material factor in the decision making process”.</i> Details of carbon mitigation measures are presented below, together with commentary to illustrate that the Scheme’s carbon footprint will be “<i>not unnecessarily high</i>”.</p> <p>Carbon Emissions Mitigation and the Outline Environmental Management Plan (OEMP)</p> <p>Highways England’s approach to minimising the carbon impacts from construction activities is set out in paragraph 3.22 of the DMRB LA114 which requires that “<i>Projects shall seek to minimise GHG emissions in all cases to contribute to the UK’s target for net reduction in carbon emissions</i>”.</p> <p>Table 14.12 within ES Chapter 14: Climate [APP-052] presents a series of measures identified to mitigate the greenhouse gas (GHG) impact of the Scheme as follows:</p> <ul style="list-style-type: none"> • Construction: The construction contractor will develop and implement a plan to reduce energy consumption and associated carbon emissions. This could include the consideration of renewable and/or low or zero carbon energy sources and record percentage of savings implemented. Highways England is committed to reducing carbon emissions and works closely with suppliers to reduce emissions from network related activity. Energy consumption and materials use will be recorded and reported on an ongoing basis during the construction phase of the Scheme using the Highways England Carbon Reporting Tool. • Construction: Where practicable, measures will be implemented to manage the use of material resources during Scheme construction including: <ul style="list-style-type: none"> – Using materials with lower embedded greenhouse gas emissions and water consumption. – Using sustainably sourced materials. – Using recycled or secondary materials. • Construction: Trees, shrubs and hedgerows planted as part of the landscape design will offset some of the carbon emissions associated

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	<p>with land use change and subsequent loss of carbon sink (refer to Chapter 7: Landscape and Visual Impact Assessment [REP2-008], for details of the Scheme landscape planting design).</p> <ul style="list-style-type: none"> Operation: Lighting of new and improved sections of road within the Scheme has been confined to locations where road safety is a priority. It was the original intention to provide lighting columns throughout Little Eaton junction – however, as indicated in Chapter 3: Scheme History and Assessment of Alternatives [APP-041], Table 3.5, given the comments received at statutory consultation, an assessment was carried out to determine whether an alternative lighting solution at Little Eaton junction could be used or whether the lighting could be removed altogether. A safety assessment determined that this section of road could operate with an acceptable level of safety if the lighting along the new A38 mainline was removed. To ensure drivers are aware of the bend in the road at this location, appropriate signing will be installed along with the provision of solar powered studs integrated within the road pavement. This approach has been integrated within the Scheme design and avoids the need to install approximately 56 lighting columns, thus reducing operational energy use and GHG emissions. <p>Taking into account the above, mitigation measures that aim to reduce carbon emissions during the Scheme construction phase have been defined within the Outline Environmental Management Plan (OEMP) ([REP12-002], noting that an updated version of the OEMP is being submitted at Deadline 14). OEMP Table 3.2b at MW-CC1 states the following:</p> <p>“Climate change GHG mitigation: <i>Highways England will implement measures to reduce emissions during the construction of the Scheme, for example through materials specification and the management and minimisation of energy use.</i> <i>Highways England will develop and implement an Energy and Carbon Plan to reduce energy consumption and associated carbon emissions. This</i></p>

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	<p><i>could include the consideration of renewable and/or low or zero carbon energy sources and record percentage of savings implemented.</i></p> <p><i>Where practicable, measures will be implemented to manage material resource use during construction including:</i></p> <ul style="list-style-type: none"> • <i>Using materials with lower embedded greenhouse gas emissions and water consumption.</i> • <i>Using sustainably sourced materials.</i> • <i>Using recycled or secondary materials.</i> <p><i>Energy consumption and materials use will be recorded and reported on an ongoing basis during the construction phase of the Scheme using Highways England Carbon Reporting Tool’.</i></p> <p>The use of the term ‘where practicable’ has been used in the OEMP to allow for flexibility in environmental, engineering and design requirements as the Scheme transitions from the DCO stage to detailed design and construction. For example, it is not always possible to determine the specification and supply of construction materials and products until the Scheme detailed design has been finalised and the construction contractor is appointed. Proposed additions to the OEMP carbon mitigation requirements are detailed below.</p> <p>It is also worth pointing out that once a Highways England scheme is approved, the Highway England’s contractor has a contractual requirement to report on cost and carbon performance to Highways England until the road is open to traffic. The contractor will report on carbon emissions from the Scheme on a quarterly basis using the Highways England Carbon Tool. Through the Collaborative Performance Framework (CPF), the Highways England contractor will be scored on their carbon performance based on ‘tonnes of carbon per £’. The CPF is used to measure contractor performance and has commercial implications if the performance is poor.</p> <p>The Highways England contractor will also evaluate the use of low emission carbon products and methods against more traditional higher emissions</p>

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	<p>methods to demonstrate the reduction in carbon per every additional £ spent.</p> <p>Highways England requires all Service Providers to report the carbon dioxide equivalents (CO₂e) generated. Following opening of the road to traffic, carbon will continue to be reported at an area/ regional level by collating carbon tool returns from suppliers, who report to areas, who then report their aggregated carbon data for maintenance of the road. To enable this, quantities of materials, transport, energy and water use is recorded in the Highways England Carbon Calculation Tool.</p> <p>Benchmarking Against Other Schemes</p> <p>To demonstrate that the carbon footprint of the Scheme is not unnecessarily high, estimated construction phase GHG emissions from the Scheme have been benchmarked against construction emissions from a number of other Highways England schemes, including the A46, the M54 and the A303 – such benchmarking information was submitted in response to the ExA’s second written questions (question 9.2 [REP4-024]). To allow for a transparent and meaningful comparison, carbon emissions for each scheme were normalised based on tonnes of construction emissions per km of road built (tCO₂e/km). This analysis indicates that carbon intensity of the Highways England highway schemes as detailed above ranges from 19,054 tCO₂e/km to 35,915 tCO₂e/km. The carbon intensity of the A38 Scheme as reported in ES Chapter 14: Climate [APP-052] is 23,793 tCO₂e per km which falls within the range of benchmarks calculated. On this evidence, it is concluded that the Scheme will not give rise to unnecessarily high carbon emissions.</p> <p>It is not useful or appropriate to benchmark operational carbon emissions from highways schemes. Operational emissions are highly variable, driven largely by the geographical location of a scheme, and the scheme’s impact on the wider road network. They therefore do not present a useful comparison.</p> <p>Proposed OEMP changes</p> <p>In addition to the carbon mitigation and management commitments already included in the</p>

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	<p>OEMP (see section above), further text is being added to give the ExA and DCiC further comfort that the Scheme’s GHG footprint will not be unnecessarily high. The final version of the OEMP being submitted at Deadline 14 includes the following additional commitment in MW-CC1 (new text is underlined): “<i>Energy consumption and materials use will be recorded and reported on an ongoing basis during the construction phase of the Scheme using Highways England Carbon Reporting Tool. <u>As part of this reporting process, the contractor will reduce their construction phase GHG emissions to be below the levels as reported in ES Chapter 14: Climate</u>”.</i> Such additional OEMP text has been communicated to DCiC and we understand that they consider that this is an appropriate way forward that will ensure that the Scheme’s GHG footprint is appropriately managed and is not unnecessarily high as required by the NPSNN.</p> <p>Carbon Targets</p> <p>It is Highways England’s view that it is unnecessary and unreasonable to set carbon reduction targets for the Scheme. There are currently no specific requirements for setting carbon reduction targets at either a national level or a local level for the construction of road schemes. Furthermore, DCiC do not set carbon reduction targets for projects within their administrative boundary. As such, there is no approved method for the setting of carbon reduction targets for the construction of strategic road network schemes and Highways England has not set specific construction carbon reduction targets for their other highway schemes. Drawing on targets from different sources would be arbitrary and would not provide a robust or meaningful target against which the Scheme could be measured.</p> <p>During Specific Hearing 8 DCiC referenced several sources of information that might be suitable for assisting with the setting of carbon targets including resources from the Building Research Establishment (BRE) and the Environment Agency. It is noted that the resources provided by these organisations are tools to assist with the calculation of carbon emissions of a project and not methods for the setting of carbon reduction targets. The</p>

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	<p>Highways England Carbon Tool, specifically designed for use on road schemes, has been used to calculate construction phase GHG emissions for this Scheme (as reported in ES Chapter 14: Climate [APP-052]) and will be used during the Scheme construction phase as detailed in the OEMP.</p> <p>During the Scheme construction phase, the Highways England contractor is committed to continually look for opportunities to reduce GHG emissions from the Scheme and reduce their construction phase GHG emissions to be below the levels as reported in ES Chapter 14: Climate [APP-052].</p> <p>It is considered that commitment secured in OEMP as detailed above is the appropriate approach and achieves the NPSNN policy requirements, rather than the setting of a specific and necessarily arbitrary carbon target.</p> <p>Summary</p> <p>Highways England is committed to playing its part in helping the UK meeting the net zero carbon emissions target by 2050. Through benchmarking the Scheme against other Highways England schemes, it has been demonstrated that the Scheme's carbon footprint is not unnecessarily high. Furthermore, through the carbon management, mitigation and reduction activities secured through the OEMP and supply chain contracts, Highways England and their contractors will continue to identify measures to minimise GHG emissions and contribute to the UK's target for net reduction in carbon emissions as the Scheme's construction progresses. Such provisions are secured through the commitments as detailed in the OEMP and are considered appropriate and to meet the requirements of the NPSNN.</p>