

M60/M62/M66 Simister Island Interchange

TR010064

ENVIRONMENTAL STATEMENT CHAPTER 4 ENVIRONMENTAL ASSESSMENT METHODOLOGY

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ENVIRONMENTAL STATEMENT CHAPTER 4 ENVIRONMENTAL ASSESSMENT METHODOLOGY

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4 Environmental assessment methodology

4.1 Environmental scoping

Scoping methodology

- 4.1.1 An Environmental Scoping Report (TR010064/APP/6.6) was produced to document the proposed scope of the environmental assessment, including a description of the aspects and matters to be included in the Environmental Statement. The Environmental Scoping Report (TR010064/APP/6.6) was submitted to the Planning Inspectorate on 2 July 2021.
- 4.1.2 The Planning Inspectorate reviewed and consulted on the Environmental Scoping Report (TR010064/APP/6.6) and published a Scoping Opinion (TR010064/APP/6.7) on 12 August 2021.
- 4.1.3 Appendix 4.1: Scoping Opinion Response Table of the Environmental Statement Appendices (TR010064/APP/6.3) signposts to where the comments made in the Scoping Opinion (TR010064/APP/6.7) have been responded to in the Environmental Statement (TR010064/APP/6.1).
- 4.1.4 Table 4.1 summarises the Planning Inspectorate's comments in Chapters 1 to 3 of the Scoping Opinion (TR010064/APP/6.7) regarding general considerations, the description of the Scheme, description of reasonable alternatives considered, design flexibility, and the assessment approach. Responses to each of the comments have been provided in Table 4.1. Responses to the aspect-based scoping tables (Chapter 4 of the Scoping Opinion (TR010064/APP/6.7)) are provided within the relevant aspect chapters of the Environmental Statement (Chapters 5-14) (TR010064/APP/6.1).
- 4.1.5 Table 4.1 also provides the Applicant's responses to the consultation bodies who replied by the statutory deadline (Appendix 2 of the Scoping Opinion (TR010064/APP/6.7)). Bury Metropolitan Borough Council's (BMBC) response was not included within the published Scoping Opinion (TR010064/APP/6.7), however BMBC subsequently provided their comments, in combination with their statutory consultation responses, directly to the Applicant. These comments are summarised in Table 4.2, together with the Applicant's response. Further details on how the Applicant had regard to the responses received during the statutory consultation can be found in Annex Q of the Consultation Report (TR010064/APP/5.2).
- 4.1.6 The Environmental Statement has been based on the Scoping Opinion, which was issued by the Planning Inspectorate in August 2021 (TR010064/APP/6.7). There have been changes to the Scheme description and Order Limits since the Environmental Scoping Report (TR010064/APP/6.6) was submitted to the Planning Inspectorate. The main changes are:
- Changes to the Order Limits to allow access during construction and to fit with the current design
 - M60 northbound to M60 westbound changed from an offline link to widening of the existing online link road

- Additional land incorporated for ponds (Pond 2 and Pond 5)
- Incorporation of a hard shoulder between M60 J17 and J18
- Incorporation of environmental mitigation areas
- Inclusion of Egypt Lane for initial access to the Northern Loop area to allow construction.

4.1.7 The Scheme remains materially the same as the Scheme which was subject to the Scoping Opinion (TR010064/APP/6.7).

4.1.8 Where feedback from consultation has influenced the assessment methodology or scope, this has been stated in the individual aspect chapters within this Environmental Statement (TR010064/APP/6.1).

Table 4.1 General Scoping Opinion comments and the Applicant's responses

Comment reference	Comment	Applicant's response
Scoping Opinion, Section 1.1, Background		
1.1.13	In accordance with Regulation 14(3)(a), where a scoping opinion has been issued in accordance with Regulation 10 an ES accompanying an application for an order granting development consent should be based on <i>'the most recent scoping opinion adopted (so far as the proposed development remains materially the same as the proposed development which was subject to that opinion)'</i> .	The Environmental Statement is based on the most recent Scoping Opinion (TR010064/APP/6.7) (dated August 2021).
1.1.14	As set out at paragraphs 5.5.2, 6.3.25 and 9.7.7 – 9.7.8 of the Scoping Report, the Inspectorate notes the potential need to carry out an assessment under The Conservation of Habitats and Species Regulations 2017 ('the Habitats Regulations') (HRA) as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Any HRA must be co-ordinated with the EIA in accordance with Regulation 26 of the EIA Regulations.	A Habitats Regulation Assessment (HRA) has been undertaken for the Scheme and can be found at Appendix 8.13 of the Environmental Statement Appendices (TR010064/APP/6.3), see Section 4.5 of this chapter for further information. The HRA has been coordinated with the EIA.
Scoping Opinion, Section 1.2, The Planning Inspectorate's Consultation		
1.2.1	In accordance with Regulation 10(6) of the EIA Regulations the Inspectorate has consulted the consultation bodies before adopting a scoping opinion. A list of the consultation bodies formally consulted by the Inspectorate is provided at Appendix 1. The consultation bodies have been notified under Regulation 11(1)(a) of the duty imposed on them by Regulation 11(3) of the EIA Regulations to make information available to the Applicant relevant to the preparation of the ES. The Applicant should note that whilst the list can inform their consultation, it should not be relied upon for that purpose.	A summary of responses from consultation bodies and how their responses have been addressed is provided in the relevant aspect chapters of the Environmental Statement (TR010064/APP/6.1). Where not covered in the aspect chapters they are included at the end of this table (Table 4.1).

Comment reference	Comment	Applicant's response
1.2.2	The list of respondents who replied within the statutory timeframe and whose comments have been taken into account in the preparation of this Opinion is provided, along with copies of their comments, at Appendix 2, to which the Applicant should refer in preparing their ES.	
1.2.3	The ES submitted by the Applicant should demonstrate consideration of the points raised by the consultation bodies. It is recommended that a table is provided in the ES summarising the scoping responses from the consultation bodies and how they are, or are not, addressed in the ES.	
1.2.4	Any consultation responses received after the statutory deadline for receipt of comments will not be taken into account within this Opinion. Late responses will be forwarded to the Applicant and will be made available on the Inspectorate's website. The Applicant should also give due consideration to those comments in preparing their ES.	No late responses to the Scoping Opinion (TR010064/APP/6.7) were received by the Applicant from the Planning Inspectorate. However, as stated in paragraph 4.1.7 of this chapter, BMBC subsequently provided their comments on the Environmental Scoping Report (TR010064/APP/6.6) directly to the Applicant. Table 4.2 of this chapter provides BMBC's comments on the Environmental Scoping Report (TR010064/APP/6.6) and the Applicant's responses.

Comment reference	Comment	Applicant's response
Scoping Opinion, Section 2.3, Description of the Proposed Development		
2.3.1	<p>The Inspectorate notes references in section 2.4.3 that “<i>the source of potential material for earthworks has not yet been determined</i>” and that “<i>there is still expected to be a significant shortfall of material, estimated at approximately 163,000m³. Various options will be explored to obtain this material from local sources, including other nearby construction projects which have a surplus of suitable fill, as well as local quarries</i>”. The ES should describe the land use requirement of the Proposed Development and the nature and quantity of materials and natural resources to be used during construction and operation, including water, land, soil and biodiversity. This should include materials to be imported (and their source), exported, excavated or stored on site and a description of any topographical and landscape changes as a result of the Proposed Development.</p>	<p>The Scheme, including earthwork requirements and volumes, is described in Chapter 2: The Scheme of this Environmental Statement (TR010064/APP/6.1), with further information on land use requirements and the nature and quantity of materials and natural resources covered in the following chapters of this Environmental Statement (TR010064/APP/6.1):</p> <ul style="list-style-type: none"> • Chapter 8: Biodiversity • Chapter 9: Geology and Soils • Chapter 10: Material Assets and Waste • Chapter 12: Population and Human Health • Chapter 13: Road Drainage and the Water Environment. <p>Landscape changes are included in Chapter 7: Landscape and Visual of this Environmental Statement (TR010064/APP/6.1).</p>
2.3.2	<p>The Inspectorate also notes the current uncertainty in the locations for the main construction compound and smaller satellite compounds, with the state locations only “<i>likely to be</i>” those stated. The ES should present fixed locations and specifications for these compounds or otherwise present an assessment of effects of specified options that are under consideration and for which consent is sought under the DCO.</p>	<p>Chapter 2: The Scheme of this Environmental Statement (TR010064/APP/6.1) includes information on the main and satellite compounds, which are now fixed in their locations. The exact sizing and specification would be confirmed prior to construction.</p>

Comment reference	Comment	Applicant's response
2.3.3	The Proposed Development “ <i>would result in an additional paved area of approximately 1.27ha, which would require additional attenuation storage to reduce the risk of flooding</i> ”. It is explained that this additional increase would be met by balancing ponds, ditches, swales or online storage in pipes. The description of the Proposed Development in the ES should clearly define and identify the locations and parameters of such features as part of the description of the design so that they can be properly considered across relevant aspects of the ES.	Chapter 2: The Scheme of this Environmental Statement (TR010064/APP/6.1) includes a description of the drainage design, and these have been included in the environmental assessment.
2.3.4	Paragraph 5.2.4 of the ES defines the assumptions around ‘opening year’ and ‘design year’ for the purpose of the construction and operational assessment in the EIA. No reference is made in the EIA scoping report to the design life of the Proposed Development or any approach to the assessment of effects of decommissioning. The Inspectorate understands that the road would likely remain a permanent and integral part of the strategic road network, but the approach to the assessment of decommissioning should be set out in the ES.	It is considered highly unlikely that the Scheme would be decommissioned before the end of its design life of 60 years as the road would have become an integral part of the strategic road network. In the event of the Scheme needing to be demolished, this would conform to the statutory process at that time, including EIA if required. Demolition of the Scheme is not therefore considered further in this Environmental Statement (TR010064/APP/6.1).
Scoping Opinion, Section 2.3, Alternatives		
2.3.5	The EIA Regulations require that the Applicant provide ‘ <i>A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects</i> ’.	Chapter 3: Assessment of Alternatives of this Environmental Statement (TR010064/APP/6.1) provides a description of the alternatives considered at all stages of the development design of the Scheme and includes the main

Comment reference	Comment	Applicant's response
2.3.6	The Inspectorate acknowledges the Applicant's intention to consider alternatives within the ES, and that an outline of such considerations to date is provided in chapter 3 of the Scoping Report. The ES will provide a full description of the alternatives considered and should include justification as to why the preferred options were selected taking into account environmental effects.	reasons for selecting the chosen option/design including consideration of environmental effects.
Scoping Opinion, Section 2.3, Flexibility		
2.3.7	The Inspectorate notes the Applicant's desire to incorporate flexibility into their draft DCO (dDCO) and its intention to apply a Rochdale Envelope approach for this purpose, as set out in section 2.6 of the Scoping Report. Where the details of the Proposed Development cannot be defined precisely, the Applicant will apply a worst case scenario. The Inspectorate welcomes the reference to Planning Inspectorate Advice Note Nine 'Using the 'Rochdale Envelope' in this regard.	The Rochdale Envelope approach has been used. The Scheme is now well defined (see Chapter 2: The Scheme of this Environmental Statement (TR010064/APP/6.1)). However, the Scheme does have limits of deviation which are described in Section 2.5 of Chapter 2: The Scheme of this Environmental Statement (TR010064/APP/6.1).
2.3.8	However, the Applicant should make every attempt to narrow the range of options and explain clearly in the ES which elements of the Proposed Development have yet to be finalised and provide the reasons. At the time of application, any Proposed Development parameters should not be so wide-ranging as to represent effectively different developments. The development parameters should be clearly defined in the dDCO and in the accompanying ES. It is a matter for the Applicant, in preparing an ES, to consider whether it is possible to robustly assess a range of impacts resulting from a large number of undecided parameters. The description of the Proposed Development in the ES must not be so wide that it is insufficiently certain to comply with the requirements of Regulation 14 of the EIA Regulations.	

Comment reference	Comment	Applicant's response
2.3.9	It should be noted that if the Proposed Development materially changes prior to submission of the DCO application, the Applicant may wish to consider requesting a new scoping opinion.	The Environmental Statement is based on the most recent Scoping Opinion (TR010064/APP/6.7) (dated August 2021) as there has been no material change to the Scheme since the Scoping Opinion.
Scoping Opinion, Section 3.1, ES Approach (Introduction)		
3.1.2	Aspects/ matters (as defined in Advice Note Seven) are not scoped out unless specifically addressed and justified by the Applicant, and confirmed as being scoped out by the Inspectorate. The ES should be based on the Scoping Opinion in so far as the Proposed Development remains materially the same as the Proposed Development described in the Applicant's Scoping Report.	Section 4.1 of Chapter 4: Environmental Assessment Methodology of this Environmental Statement (TR010064/APP/6.1) sets out the scope of the assessment and confirms the aspects scoped in or out of the assessment, in line with the Inspectorate's comments in the Scoping Opinion (TR010064/APP/6.7). The Environmental Statement is based on the most recent Scoping Opinion (dated August 2021) as there has been no material change to the Scheme since the Scoping Opinion.
3.1.3	The Inspectorate has set out in this Opinion where it has/ has not agreed to scope out certain aspects/ matters on the basis of the information available at this time. The Inspectorate is content that the receipt of a Scoping Opinion should not prevent the Applicant from subsequently agreeing with the relevant consultation bodies to scope such aspects / matters out of the ES, where further evidence has been provided to justify this approach. However, in order to demonstrate that the aspects/ matters have been appropriately addressed, the ES should explain the reasoning for scoping them out and justify the approach taken.	Where matters have been scoped out following consultation, details of the consultation and reasons for scoping out of matters have been provided in the relevant aspect chapters of this Environmental Statement (TR010064/APP/6.1).

Comment reference	Comment	Applicant's response
3.1.4	Where relevant, the ES should provide reference to how the delivery of measures proposed to prevent/ minimise adverse effects is secured through dDCO requirements (or other suitably robust methods) and whether relevant consultation bodies agree on the adequacy of the measures proposed.	<p>Each aspect chapter (Chapters 5 to 14) of the Environmental Statement (TR010064/APP/6.1) describes the mitigation that has been identified, as well as how this mitigation is secured in the draft DCO (TR010064/APP/3.1).</p> <p>The First Iteration Environmental Management Plan (EMP) (TR010064/APP/6.5) includes the Register of Environmental Actions and Commitments (REAC).</p> <p>Each aspect chapter of the Environmental Statement (TR010064/APP/6.1) details stakeholder engagement undertaken to date, and key responses received from consultation bodies at the scoping stage and the statutory consultation.</p>

Comment reference	Comment	Applicant's response
Scoping Opinion, Section 3.2, Relevant National Policy Statements (NPSs)		
3.2.1	Sector-specific NPSs are produced by the relevant Government Departments and set out national policy for NSIPs. They provide the framework within which the Examining Authority (ExA) will make their recommendation to the SoS and include the Government's objectives for the development of NSIPs. The NPSs may include environmental requirements for NSIPs, which Applicants should address within their ES.	The environmental requirements within the NPS NN (Department for Transport, 2014) and draft NPS NN (Department for Transport, 2023) relating to the applicant's assessment and mitigation requirements, and how the Applicant has addressed those requirements, are detailed in Chapters 5-15 of the Environmental Statement (TR010064/APP/6.1). The NPS NN Accordance Tables (TR010064/APP/7.2) and Draft NPS NN Accordance Tables (TR010064/APP/7.3) provide an assessment of the Scheme's compliance with the NPS NN and draft NPS NN.
3.2.2	The designated NPS in respect of the Proposed Development is the NPS for National Networks (NPS NN).	
Scoping Opinion, Section 3.3, Scope of Assessment		
3.3.1	<p>The Inspectorate recommends that in order to assist the decision-making process, the Applicant uses tables to:</p> <ul style="list-style-type: none"> • Demonstrate how the assessment has taken account of this Opinion; • Identify and collate the residual effects after mitigation for each of the aspect chapters, including the relevant interrelationships and cumulative effects; • Set out the proposed mitigation and/ or monitoring measures including cross-reference to the means of securing such measures (eg a dDCO requirement); • Describe any remedial measures that are identified as being necessary following monitoring; and 	<ul style="list-style-type: none"> • This table (Table 4.1), along with the Scoping Opinion response tables in the aspect chapters of the Environmental Statement (TR010064/APP/6.1), demonstrates how the assessment has taken account of the Scoping Opinion (TR010064/APP/6.7). Appendix 4.1: Scoping Opinion Response Table of the Environmental Statement Appendices (TR010064/APP/6.3) signposts to where responses to each of the Scoping Opinion comments are responded to in the Environmental Statement (TR010064/APP/6.1).

Comment reference	Comment	Applicant's response
	<ul style="list-style-type: none"> Identify where details are contained in the Habitats Regulations Assessment (HRA report) (where relevant), such as descriptions of National Site Network sites and their locations, together with any mitigation or compensation measures, that inform the findings of the ES. 	<ul style="list-style-type: none"> Each aspect chapter of the Environmental Statement summarises in Section 10 the likely significant residual effects. This is also summarised in Chapter 16: Summary of this Environmental Statement (TR010064/APP/6.1). Chapter 15: Assessment of Cumulative Effects of this Environmental Statement (TR010064/APP/6.1) provides an assessment of cumulative effects. Mitigation and monitoring are set out in Chapters 5-15 of the Environmental Statement (TR010064/APP/6.1) and also in the REAC, which is contained within the First Iteration EMP (TR010064/APP/6.5). Where required, remedial measures identified as a result of monitoring are set out in the REAC, which is contained within the First Iteration EMP (TR010064/APP/6.5). Table 8.8 of Chapter 8: Biodiversity of this Environmental Statement (TR010064/APP/6.1) identifies where details are contained in the HRA Report (Appendix 8.13 of the Environmental Statement Appendices (TR010064/APP/6.3)) that have informed the findings of the biodiversity assessment in Chapter 8: Biodiversity of this Environmental Statement (TR010064/APP/6.1).

Comment reference	Comment	Applicant's response
3.3.2	<p>The Inspectorate considers that where a DCO application includes works described as 'Associated Development', that could themselves be defined as an improvement of a highway, the Applicant should ensure that the ES accompanying that application distinguishes between; effects that primarily derive from the integral works which form the proposed (or part of the proposed) NSIP and those that primarily derive from the works described as Associated Development. This could be presented in a suitably compiled summary table. This will have the benefit of giving greater confidence to the Inspectorate that what is proposed is not in fact an additional NSIP defined in accordance with s22 of the PA2008.</p>	<p>The Scheme works, comprising the authorised development, are described in Schedule 1 of the draft DCO (TR010064/APP/3.1).</p> <p>Whilst the draft DCO (TR010064/APP/3.1) includes works described as 'associated development', none of those works could themselves be defined as an 'improvement of a highway' within the meaning of section 22 of the Planning Act 2008.</p> <p>The assessments in the Environmental Statement are based on the preliminary design as described in Chapter 2: The Scheme of this Environmental Statement (TR010064/APP/6.1) and Schedule 1 of the draft DCO (TR010064/APP/3.1).</p>
Scoping Opinion, Section 3.3, Baseline Scenario		
3.3.3	<p>The ES should include a description of the baseline scenario with and without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.</p>	<p>Baseline information is included in each of the Environmental Statement aspect chapters (Chapters 5-14) (TR010064/APP/6.1). They also include information on how the baseline scenario would change without the Scheme going ahead.</p>

Comment reference	Comment	Applicant's response
3.3.4	In light of the number of ongoing developments within the vicinity of the Proposed Development site, the Applicant should clearly state which developments will be assumed to be under construction or operational as part of the future baseline. The Inspectorate makes these comments particularly in respect of the "Significant road developments and improvements" proposed as part of the Manchester North-West Quadrant (MNWQ) scheme and the 55,000 additional homes and 50,000 additional jobs by predicted by 2031 within the Greater Manchester City Region. The ES should distinguish between developments in the future baselines that form part of any cumulative impact assessment or are inherent in traffic forecasting and any other assumptions.	<p>Developments taken into account in the traffic forecast are contained in the Transport Assessment (TR010064/APP/7.4).</p> <p>Chapter 15: Assessment of Cumulative Effects of this Environmental Statement (TR010064/APP/6.1) identifies the following:</p> <ul style="list-style-type: none"> • Developments inherent in the transport forecasting. • Developments considered as part of the cumulative effects assessment.
Scoping Opinion, Section 3.3, Forecasting Methods or Evidence		
3.3.5	The ES should contain the timescales upon which the surveys which underpin the technical assessments have been based. For clarity, this information should be provided either in the introductory chapters of the ES (with confirmation that these timescales apply to all chapters), or in each aspect chapter.	<p>Section 4.2 lists the surveys undertaken which underpin the technical assessments for the Environmental Statement and confirms the time period over which the surveys were undertaken. Further details regarding surveys can be found in each aspect chapter (Chapters 5-14) of the Environmental Statement (TR010064/APP/6.1).</p> <p>Section 4.2 also states the temporal scope for the technical assessments (construction start of works, opening year, and design year).</p>
3.3.6	The Inspectorate expects the ES to include a chapter setting out the overarching methodology for the assessment, which clearly distinguishes effects that are 'significant' from 'non-significant' effects. Any departure from that methodology should be described in individual aspect assessment chapters.	This chapter sets out the overarching methodology for the assessment. Any departure from that methodology is described in Chapters 5-15 of the Environmental Statement (TR010064/APP/6.1).

Comment reference	Comment	Applicant's response
3.3.7	The ES should include details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.	This chapter sets out general assessment assumptions and limitations. Aspect-specific assessment assumptions and limitations are detailed in Chapters 5-15 of the Environmental Statement (TR010064/APP/6.1).
Scoping Opinion, Section 3.3, Residues or Emissions		
3.3.8	The EIA Regulations require an estimate, by type and quantity, of expected residues and emissions. Specific reference should be made to water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of waste produced during the construction and operation phases, where relevant. This information should be provided in a clear and consistent fashion and may be integrated into the relevant aspect assessments.	Estimates, by type and quantity, of expected residues and emissions are provided within the relevant aspect chapters of the Environmental Statement (TR010064/APP/6.1). Table 4.4 of this chapter signposts to where estimates, by type and quantity, of expected residues and emissions can be found within the relevant chapters of the Environmental Statement (TR010064/APP/6.1). Heat and radiation have been scoped out of the assessment (see the 'Aspects and matters scoped out of the assessment' sub-section of this chapter for further details).

Comment reference	Comment	Applicant's response
Scoping Opinion, Section 3.3, Mitigation and Monitoring		
3.3.9	Any mitigation relied upon for the purposes of the assessment should be explained in detail within the ES. The likely efficacy of the mitigation proposed should be explained with reference to residual effects. The ES should also address how any mitigation proposed is secured, with reference to specific dDCO requirements or other legally binding agreements, particularly making clear distinctions between mitigation that is assumed as embedded in the design and any proposed as additional measures in response to significant adverse effects identified.	Mitigation is included in each of the aspect chapters of the Environmental Statement (TR010064/APP/6.1) and also in the REAC, contained within the First Iteration EMP (TR010064/APP/6.5). Each aspect chapter of the Environmental Statement (TR010064/APP/6.1) lists the embedded mitigation separately to the additional mitigation measures required in response to significant adverse effects.
3.3.10	There are also references to a "1st Iteration Environmental Management Plan (EMP)" being provided as part of the Application, containing all measures, including a Register of Environmental Actions and Commitments (REAC). Although the Inspectorate acknowledges that the 1st iteration EMP will provide framework for the future production of a "more detailed 2nd Iteration", the EMP that supports the DCO Application should be sufficiently detailed so as to understand the reliance being placed upon it as mitigation in avoiding potentially significant adverse effects.	The First Iteration EMP (TR010064/APP/6.5) that supports the DCO application is considered sufficiently detailed so as to understand the reliance being placed upon it as mitigation in avoiding potentially significant adverse effects.
3.3.11	The ES should identify and describe any proposed monitoring of significant adverse effects and how the results of such monitoring would be utilised to inform any necessary remedial actions.	Each aspect chapter of the Environmental Statement (TR010064/APP/6.1) includes details of any monitoring required and these are also included in the REAC (TR010064/APP/6.5), which is contained within the First Iteration EMP (TR010064/APP/6.5).

Comment reference	Comment	Applicant's response
Scoping Opinion, Section 3.3, Risks of Major Accidents and/or Disasters		
3.3.12	<p>Paragraphs 5.2.9 – 5.2.13 of the Scoping Report sets out the Applicant's approach to consideration of major accidents and disasters. The Applicant has undertaken a risk assessment in Appendix C to the Scoping Report, concluding that there are two residual risks remaining that would need to be addressed through the design of the Proposed Development;</p> <ul style="list-style-type: none"> • Inland floods; and • Mass movements and ground hazards. 	<p>Consideration of major accidents and hazards relevant to the Scheme is included in Appendix 4.2: Major Accidents and Disasters of the Environmental Statement Appendices (TR010064/APP/6.3), including signposting to the relevant aspect chapters of the Environmental Statement (TR010064/APP/6.1) which cover residual risks identified in the major accidents and disasters risk assessment.</p>
3.3.13	<p>The Inspectorate notes that consideration of these matters will be given in the following proposed chapters within the ES:</p> <ul style="list-style-type: none"> • Chapter 10: Geology and Soils • Chapter 13: Population and Human Health • Chapter 14: Road Drainage and the Water Environment; and • Chapter 15: Climate. 	
3.3.14	<p>The Inspectorate acknowledges the assessment provided in Appendix C of the Scoping Report and is content that the ES does not need to include a standalone major accidents and/or disaster aspect chapter, on the basis that such impacts which have the potential for significant effects are to be assessed in the relevant aspect chapters.</p>	
3.3.15	<p>The ES should ensure that the consideration of major accidents and/or events reflects the Proposed Development for which development consent is being sought, acknowledging that some of these matters will be addressed through further design iteration post-EIA scoping.</p>	

Comment reference	Comment	Applicant's response
3.3.16	The Applicant should make use of appropriate guidance (e.g. that referenced in the Health and Safety Executives (HSE) Annex to the Inspectorate's Advice Note 11) to better understand the likelihood of an occurrence and the Proposed Development's susceptibility to potential major accidents and hazards. The description and assessment should consider the vulnerability of the Proposed Development to a potential accident or disaster and also the Proposed Development's potential to cause an accident or disaster. Any measures that will be employed to prevent and control significant effects should be presented in the ES.	Consideration of major accidents and hazards relevant to the Scheme is included in Appendix 4.2: Major Accidents and Disasters of the Environmental Statement Appendices (TR010064/APP/6.3). Appropriate guidance and information was used to prepare this appendix, including the HSE Scoping Opinion response (Appendix 2 of the Scoping Opinion (TR010064/APP/6.7)), the HSE Control of Major Accidents and Hazards Regulations (COMAH) establishment online search (2015), and the National Risk Register (Cabinet Office, 2020).
3.3.17	Relevant information available and obtained through risk assessments pursuant to national legislation may be used for this purpose. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.	
Scoping Opinion, Section 3.3, Climate and Climate Change		
3.3.18	The ES should include a description and assessment (where relevant) of the likely significant effects the Proposed Development has on climate (for example having regard to the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change. This is acknowledged by the Applicant at Chapter 15 of the Scoping Report. Where relevant, the ES should describe and assess the adaptive capacity that has been incorporated into the design of the Proposed Development. This may include, for example, alternative measures such as changes in the use of materials or construction and design techniques that will be more resilient to risks from climate change. Further comments on this aspect are provided in section 4.10 of this Scoping Opinion.	Relevant information is provided in Chapter 14: Climate of this Environmental Statement (TR010064/APP/6.1) and includes both the effect of the Scheme on climate and the vulnerability of the Scheme to climate change.

Comment reference	Comment	Applicant's response
Scoping Opinion, Section 3.3, Transboundary Effects		
3.3.19	Schedule 4 Part 5 of the EIA Regulations requires a description of the likely significant transboundary effects to be provided in an ES.	The transboundary effects screening matrix that was provided in the Scoping Report (TR010064/APP/6.6) has been reviewed and updated (see Appendix 4.3: Transboundary Effects Screening Matrix of the Environmental Statement Appendices (TR010064/APP/6.3)). The conclusion remains that the Scheme is not likely to have significant effects on an EEA state.
3.3.20	Paragraphs 5.2.16 – 5.2.18 and Appendix D of the Scoping Report set out the Applicant's position that the Proposed Development is not likely to have significant effects on a European Economic Area (EEA) State.	
3.3.21	Having considered the nature and location of the Proposed Development as set out in the Scoping Report, the Inspectorate is not aware that there are potential pathways of effect to any EEA states.	
Scoping Opinion, Section 3.3, A Reference List		
3.3.22	A reference list detailing the sources used for the descriptions and assessments must be included in the ES.	A reference list of sources has been provided at the end of each chapter of the Environmental Statement (TR010064/APP/6.1).
Scoping Opinion, Section 3.4, Coronavirus (COVID-19) Environmental Information and Data Collection		
3.4.1	The Inspectorate understands government enforced measures in response to COVID-19 may have consequences for an Applicant's ability to obtain relevant environmental information for the purposes of their ES. The Inspectorate understands that conducting specific surveys and obtaining representative data may be difficult in the current circumstance.	Where COVID-19 restrictions have impacted on surveys and assessments, these limitations and revised approaches have been discussed within the relevant aspect chapters of the Environmental Statement (TR010064/APP/6.1).
3.4.2	The Inspectorate has a duty to ensure that the environmental assessments necessary to inform a robust DCO application are supported by relevant and up to date information. Working closely with consultation bodies, the Inspectorate will seek to adopt a flexible approach, balancing the requirement for suitable rigour and scientific certainty in assessments with pragmatism in order to support the preparation and determination of applications in a timely fashion.	

Comment reference	Comment	Applicant's response
3.4.3	Applicants should make effort to agree their approach to the collection and presentation of information with relevant consultation bodies. In turn the Inspectorate expects that consultation bodies will work with Applicants to find suitable approaches and points of reference to allow preparation of applications at this time. The Inspectorate is required to take into account the advice it receives from the consultation bodies and will continue to do so in this regard.	
3.4.4	The ES should include information to demonstrate how such further engagement has been undertaken and how it has influenced the scope of the assessments reported in the ES. The Applicant recognises these needs in paragraph 5.3.5 of the Scoping Report. The ES should clearly state where restrictions have impacted on proposed survey effort, the revised approach and any limitations to the assessment of likely significant effects.	
Scoping Opinion, Section 3.5, Confidential and Sensitive Information		
3.5.1	In some circumstances it will be appropriate for information to be kept confidential. In particular, this may relate to personal information specifying the names and qualifications of those undertaking the assessments and / or the presence and locations of rare or sensitive species such as badgers, rare birds and plants where disturbance, damage, persecution or commercial exploitation may result from publication of the information.	Where documents are intended to remain confidential these documents have been provided as separate documents with their confidential nature clearly indicated in the title and watermarked as such on each page, and a narrative as to the particular nature of sensitivity of the information. The information has not been incorporated within other documents that are intended for publication or which the Inspectorate would be required to disclose under the Environmental Information Regulations 2004.
3.5.2	Where documents are intended to remain confidential the Applicant should provide these as separate documents with their confidential nature clearly indicated in the title and watermarked as such on each page, and a narrative as to the particular nature of sensitivity of the information. The information should not be incorporated within other documents that are intended for publication or which the Inspectorate would be required to disclose under the Environmental Information Regulations 2004.	

Comment reference	Comment	Applicant's response
3.5.3	The Inspectorate adheres to the data protection protocols set down by the Information Commissioners Office. Please refer to the Inspectorate's National Infrastructure privacy notice for further information on how personal data is managed during the Planning Act 2008 process.	
Scoping Opinion, Appendix 2, Responses from Consultation Bodies		
Blackburn with Darwen Borough Council	Blackburn with Darwen Borough Council has no comment to make in relation to this consultation.	Noted.
Cadent Gas Limited	<p>Cadent has identified at this stage the following apparatus within the vicinity of the proposed works:</p> <ul style="list-style-type: none"> • Medium pressure gas pipelines and associated equipment • Low Pressure gas pipelines and associated equipment <p>Should any diversions be required to facilitate the scheme, Cadent will require adequate notice and discussions should be started at the earliest opportunity.</p> <p>Where the Promoter intends to acquire land, extinguish rights, or interfere with any of Cadent's apparatus, Cadent will require appropriate protection and further discussion on the impact to its apparatus and rights including adequate Protective Provisions.</p> <p>Where diversions are required to facilitate the scheme, it is essential that adequate temporary and permanent land take, land rights and consents are included within the Order to enable works to proceed in time and to provide appropriate rights for Cadent to access, maintain and protect apparatus in future.</p>	<p>Engagement has been undertaken with Cadent Gas Limited to identify apparatus and identify diversion requirements. Further engagement with Cadent Gas Limited is ongoing. Part 3 of Schedule 9 of the draft DCO (TR010064/APP/3.1) contains protective provisions for the protection of Cadent Gas Limited as gas undertaker.</p>

Comment reference	Comment	Applicant's response
Canal and River Trust	<p>The Canal & River Trust do not own any waterways within the immediate vicinity of the proposed development, our closest waterway is the Manchester Bolton, & Bury Canal which is over 3km from the existing junction. The Rochdale Canal which is a designated Site of Scientific Interest (SSSI) and Special Area of Conservation (SAC) due to the aquatic flora it supports, is over 4km from the junction. We do however note that the report mentions at 9.4.14 that the Rochdale Canal is within 200m of the Stage 2 Affected Road Network and as such would be scoped in as a potential receptor. We have been unable to find any further details/plans showing this within the submitted document. But we would agree with the Rochdale Canal, due to its International and National Designations is scoped into the report for further assessment.</p>	<p>Noted. Rochdale Canal SAC/SSSI has been scoped in as it is located within 200m of the Affected Road Network (ARN). See Chapter 5: Air Quality and Chapter 8: Biodiversity of this Environmental Statement (TR010064/APP/6.1) for further details.</p>
The Coal Authority	<p>Our records indicate that parts of the site fall within the defined Development High Risk area, however this is due to the presence of coal outcrops which lie beneath significant levels of drift below the site. In such cases we do not require submission of a Coal Mining Risk Assessment to support development proposals as these outcrops do not pose a potential risk to surface stability.</p> <p>We note that the submission is supported by an Environmental Scoping Report, dated 29 June 2021 and that this report provides commentary on ground conditions and risks posed by coal mining legacy. This report notes that a ground investigation is programmed to inform an assessment of the ground conditions along the route of the scheme. Any identified risks encountered arising from past coal mining activity at surface or shallow depth during these works should be properly considered and remediated, where necessary, to ensure the safety and stability of the development.</p> <p>However, on the basis of our records, in respect of the route of the scheme as indicated, we would not expect a Coal Mining Risk Assessment to be included as part of the EIA assessment.</p>	<p>Noted. Chapter 9: Geology and Soils of this Environmental Statement (TR010064/APP/6.1) considers ground conditions and risks posed by coal mining legacy, informed by the ground investigations.</p>

Comment reference	Comment	Applicant's response
Environment Agency	The Environment Agency provided comment on the Biodiversity, Geology and Soils, and Road Drainage and the Water Environment chapters of the Environmental Scoping Report (TR010064/APP/6.6), and also Environmental Permitting Requirements and Environment Agency Land Ownership.	Noted. Responses to the Environment Agency's comments have been provided in the following chapters of this Environmental Statement (TR010064/APP/6.1): <ul style="list-style-type: none"> • Chapter 8: Biodiversity • Chapter 9: Geology and Soils • Chapter 13: Road Drainage and the Water Environment
ESP Utilities Group Ltd	ESP Utilities Group Ltd has no gas or electricity apparatus in the vicinity of this site address and will not be affected by your proposed works.	Noted.
Highways England (now National Highways)	We note, of course, that this is a Highways England scheme, and we are familiar with the current proposals. As such, our Planning Team will offer no comment as this time regarding the Simister Island scheme.	Noted.
Historic England	<p>It is for the local authority to determine whether an EIA should be prepared for the proposed development. However, from the information given, we consider that there appears to be minimal impact on the historic environment and therefore an EIA may not be required in relation to the historic environment.</p> <p>We would also recommend that the applicant seeks confirmation from the relevant local authority Historic Environment staff for an informed local opinion of need.</p> <p>If further information becomes available which might result in a change to this, then we would like to be informed and provided with that information so that we can consider the matter further and respond to you as appropriate.</p>	Noted. Responses to Historic England's comments have been provided in Chapter 6: Cultural Heritage of this Environmental Statement (TR010064/APP/6.1).

Comment reference	Comment	Applicant's response
HSE	<p><u>Will the proposed development fall within any of HSE's consultation distances?</u></p> <p>According to HSE's records there are no major accident hazard installations with Hazardous Substances Consent or pipelines in the vicinity of the road improvement scheme (based on the 'Provisional Order Limits' shown in Figure 1.1 'Location Plan and Local Planning Authority Boundaries', Drawing Number: HE548642-JAC-GEN-SII_MLT-SK-LE-001, Revision: P01, Dated: Jun 21) and, therefore, we would not wish to comment on its siting. If in the intervening period we are notified of a change to this situation, the developer would need to seek advice from us.</p> <p><u>Hazardous Substances Consent</u></p> <p>Not applicable to this road improvement scheme.</p> <p><u>Explosives sites</u></p> <p>HSE have no comment to make on the proposed development since there are no licensed explosives sites in the vicinity of the proposed development.</p> <p><u>Electrical Safety</u></p> <p>No comment, from a planning perspective.</p>	<p>Noted. Consideration of major accidents and hazards relevant to the Scheme is included in Appendix 4.2: Major Accidents and Disasters of the Environmental Statement Appendices (TR010064/APP/6.3). Appropriate guidance and information were used to prepare this appendix, including the HSE Scoping Opinion response (Appendix 2 of the Scoping Opinion (TR010064/APP/6.7)), the HSE COMAH establishment online search (2015), and the National Risk Register (Cabinet Office, 2020).</p>
Natural England	<p>Natural England provided comment on the Habitats Regulations Assessment, Air Quality, Biodiversity, Geology and Soils, and Climate aspects of the Environmental Scoping Report (TR010064/APP/6.6). Natural England also provided additional advice on the scope of the Environmental Impact Assessment (EIA) (Annex A to Natural England's response letter).</p>	<p>Noted. Responses to Natural England's comments have been provided in the following chapters of this Environmental Statement (TR010064/APP/6.1):</p> <ul style="list-style-type: none"> • Chapter 5: Air Quality • Chapter 8: Biodiversity • Chapter 9: Geology and Soils • Chapter 14: Climate

Comment reference	Comment	Applicant's response
		<p>Natural England's advice on the scope of the EIA have also been considered and taken into account where appropriate in the relevant aspect chapters of the Environmental Statement (TR010064/APP/6.1).</p>
<p>Public Health England</p>	<p>Public Health England provided comment on environmental public health. Public Health England also attached an appendix to their response letter summarising their requirements and recommendations regarding the content of and methodology used in preparing the Environmental Statement.</p>	<p>Noted. Responses to Public Health England (now the UK Health Security Agency)'s comments have been provided in Chapter 12: Population and Human Health of this Environmental Statement (TR010064/APP/6.1).</p> <p>Public Health England's advice on the scope of the EIA have also been considered and taken into account where appropriate in the relevant aspect chapters of the Environmental Statement (TR010064/APP/6.1).</p>
<p>Rochdale Borough Council</p>	<p>The council, in principle supports the proposal to improve capacity and traffic flows through Simister Island Interchange.</p> <p>The scoping report reviewed is considered to be comprehensive and robust in its approach to topics to be included within the future Environmental Statement and its consideration of the baseline conditions and assessment methodology. Rochdale BC concurs with the report's selected topics to be scoped in and out as set out at Table 17.1 of the report.</p>	<p>Noted.</p>

Comment reference	Comment	Applicant's response
	<p>The council can confirm it has also been contacted separately by the applicant's consultants to provide input on the detailed proposals for preparation of the Landscape and Visual Impact Assessment. In line with Regulation 11(3) of the EIA Regulations, Rochdale will make available any information in our possession which is considered relevant to the preparation of the ES and will provide direct feedback and correspondence with the applicant where this will aid in the preparation of the ES.</p>	<p>Noted. A summary of engagement with local planning authorities regarding the Landscape and Visual assessment is provided in Section 7.4 of Chapter 7: Landscape and Visual of this Environmental Statement (TR010064/APP/6.1).</p>
<p>Royal Mail</p>	<p>Royal Mail and its advisor BNP Paribas Real Estate have reviewed Highways England's Environmental Scoping Report dated 29 June 2021. This scheme has been identified as having potential for impact on Royal Mail operational interests. However, at this time Royal Mail is not able to provide a consultation response due to insufficient information being available to adequately assess the level of risk to its operation and the available mitigations for any risk. Therefore, Royal Mail wishes to reserve its position to submit a consultation response/s at a later stage in the consenting process and to give evidence at any future Public Examination, if required.</p>	<p>Noted.</p>

4.1.9 Subsequent to the publication of the Scoping Opinion (TR010064/APP/6.7) on 12 August 2021 by the Planning Inspectorate, it was identified that BMBC’s response to the Environmental Scoping Report (TR010064/APP/6.6) was not received by the Planning Inspectorate and hence was not included within the published Scoping Opinion (TR010064/APP/6.7). However, BMBC subsequently provided their comments, in combination with their Statutory Consultation responses, directly to the Applicant. Although the scoping-related comments are not material they are summarised in Table 4.2 below for completeness, together with the Applicant’s response.

Table 4.2 BMBC’s comments on the Environmental Scoping Report (TR010064/APP/6.6) and the Applicant’s responses

Scoping comment	Applicant’s response
<p><i>‘The proposed air quality assessment methodology appears acceptable. Please ensure the most recent local authority and TfGM air quality monitoring is used.’</i></p>	<p>The most recent air quality monitoring data, from the Greater Manchester local authorities and TfGM, available at the time of the assessment (prior to June 2023) has been included in the assessment, as discussed in Section 5.7 of Chapter 5: Air Quality of this Environmental Statement (TR010064/APP/6.1). The more recent data that was published after the assessment was completed (summer 2023) has not been included.</p>
<p><i>‘The above (Geology & Soils) assessment appears acceptable, and we look forward to submission of the ground investigation report.’</i></p>	<p>Noted. The Ground Investigation Report (Appendix 9.3 of the Environmental Statement Appendices (TR010064/APP/6.3)) has been submitted with the DCO application.</p>
<p><u>Conclusion</u></p> <p><i>This Section is satisfied that the scoping exercise has identified the information required to be included in the Environmental Statement.</i></p> <p><i>The following will be required to be carried out:</i></p> <ul style="list-style-type: none"> • <i>Detailed Air Quality Assessment and Project Air Quality Plan for the Construction Phase and the Operational Phase.</i> • <i>Ground Investigation Report, Remediation Strategy and Materials Management Plan (if required) and Verification Report.’</i> 	<ul style="list-style-type: none"> • Chapter 5: Air Quality of this Environmental Statement (TR010064/APP/6.1) provides a detailed assessment of air quality. An Outline Air Quality and Dust Management Plan has been submitted with the DCO application in Appendix A of the First Iteration EMP (TR010064/APP/6.5). The management plan sets out the generic and specific measures that would be implemented by the Principal Contractor to manage dust and emissions of pollutants to air generated by the construction of the Scheme. An operational phase air quality plan has not been produced as there are no significant effects.

Scoping comment	Applicant's response
	<ul style="list-style-type: none"> • A Ground Investigation Report (Appendix 9.3 of the Environmental Statement Appendices (TR010064/APP/6.3)) has been submitted with the DCO application. As no unacceptable risks to human health or controlled waters have been identified, a remediation strategy and verification report is not required. An Outline Materials Management Plan has been submitted with the DCO application in Appendix G of the First Iteration EMP (TR010064/APP/6.5). The management plan outlines the procedures and measures that would be implemented by the Principal Contractor to classify, track, store, reuse and dispose of the materials that would be encountered during the construction of the Scheme.

Aspects and matters scoped into the assessment

4.1.10 The Environmental Scoping Report (TR010064/APP/6.6) identified that the following aspects should be scoped into the EIA:

- Air quality
- Cultural heritage
- Landscape and visual
- Biodiversity
- Geology and soils
- Material assets and waste
- Noise and vibration
- Population and human health
- Road drainage and the water environment
- Climate
- Cumulative effects

4.1.11 Further details can be found in the Environmental Scoping Report (TR010064/APP/6.6).

4.1.12 The following matters of environmental aspects were proposed to be scoped out of the assessment (TR010064/APP/6.6) but have been scoped back in following feedback from the Scoping Opinion (TR010064/APP/6.7) and further assessment:

- Air quality effects of changes in road traffic during construction
- Effects on archaeological remains due to new land take associated with the project
- Effects on Rochdale Canal SAC and SSSI during construction
- Effects on the health of site users and the general public during the operational phase (ground gas only)
- Community severance during construction
- Impacts to ponds
- Impacts from construction compounds on groundwater
- Impacts on floodplains

4.1.13 These matters are discussed in the relevant aspect chapters within this Environmental Statement (TR010064/APP/6.1).

Aspects and matters scoped out of the assessment

4.1.14 The matters which have been scoped out of the assessment in line with the Scoping Opinion (TR010064/APP/6.7) are summarised in Table 4.3.

Table 4.3 Summary of the matters scoped out of the assessment and Scoping Opinion responses

Matter scoped out	Justification to scope matter out (Environmental Scoping Report (TR010064/APP/6.6))	Planning Inspectorate's comment in the Scoping Opinion (TR010064/APP/6.7)
Air quality		
Construction dust during operation	The assessment of construction dust effects on human and ecological receptors is, by definition, limited to the construction phase.	ID 4.1.1 – <i>'The Inspectorate agrees that the assessment of construction dust effects on human and ecological receptors is, by definition, limited to the construction phase and that this matter can be scoped out.'</i>
Cultural heritage		
Effects on archaeological remains during the operational phase	Archaeological remains would be sensitive only to the potential for changes in the way in which sound and noise currently contribute to their heritage value. Their value is primarily derived from their physical remains and any intrusion on their setting during operation would have limited to no impact on our understanding and appreciation of these heritage assets. This would not be on a scale that would result in significant effects. Based on this, impacts on archaeological remains during operation are scoped out of further assessment.	ID 4.2.1 – <i>'The Applicant concludes there is limited potential for significant physical impacts on historic buildings and archaeological remains during operation.</i> <i>Previously unknown archaeological assets that may be present within the footprint of the Proposed Development will be assessed as part of the construction phase assessment. Effects on setting of historic buildings will be assessed as part of the operational assessment.</i> <i>On this basis, the Inspectorate agrees that physical impacts on historic buildings and archaeological remains during operation can be scoped out.'</i>

Matter scoped out	Justification to scope matter out (Environmental Scoping Report (TR010064/APP/6.6))	Planning Inspectorate's comment in the Scoping Opinion (TR010064/APP/6.7)
Landscape and visual		
Conservation areas	<p>Conservation Areas are areas of special architectural or historic interest, the character or appearance of which is desirable to preserve or enhance. There are three Conservation Areas within the study area, located between 400m and 900m from the M60. Site surveys have determined that built form and vegetation belts considerably limit the influence of the motorway corridor beyond 200m within the urban areas to the west of M60 J18. The location of the Conservation Areas are beyond the influence of the Proposed Scheme and have therefore been scoped out of the LVIA. Refer also to Chapter 7 Cultural Heritage.</p>	<p>ID 4.3.1 – <i>‘Paragraph 8.3.5 states that “there are three Conservation Areas within the study area, located between 400m and 900m from the M60...The location of the Conservation Areas are beyond the influence of the Scheme and have therefore been scoped out of the LVIA”. Paragraph 8.2.11 explains that the LVIA study area will focus on potentially significant effects within a 2km radius. Figure 8.2 of the Applicant’s interactive Scoping Report appears to show a total of 21 conservation areas as being ‘Scoped In’ on the basis that they are “Located within [the] overarching 5km study area”. This would appear to contradict the Applicant seeking to scope out assessing effects on conservation outside of the 2km study area. Given the nature and location of the Proposed Development, the Inspectorate agrees that conservation areas outside of 2km from the Proposed Development are unlikely to be significantly affected and that this matter can be scoped out.’</i></p>
Effects on the night sky	<p>Day and night-time changes for landscape and visual receptors will be considered against the baseline situation, that is the situation if the Proposed Scheme did not proceed. However, it is not considered that assessment of effects on the night skies in their own right is required due to the surrounding night-time landscape context, as no dark skies have been identified by CPRE within the study area.</p>	<p>ID 4.3.2 – <i>‘Based on the existing environment (ie the presence of the M60 J18, wider motorway network and surrounding urban environments) the Inspectorate agrees that an assessment of effects on the night skies in their own right is not required. In addition, no dark skies have been identified by CPRE [the Campaign for the Protection of Rural England The Countryside Charity] within the study area and that night-time changes for landscape and visual receptors will be considered as part of the construction and operational assessments.’</i></p>

Matter scoped out	Justification to scope matter out (Environmental Scoping Report (TR010064/APP/6.6))	Planning Inspectorate's comment in the Scoping Opinion (TR010064/APP/6.7)
Biodiversity		
European designated ecological sites (SAC, Special Protection Area (SPA) and Ramsar)	There are no SPA or Ramsar sites within 2km of the Scheme or ARN and European sites designated for bats within 30km of the Scheme, therefore SPAs and Ramsar sites are scoped out of further assessment.	<p>ID 4.4.1 – <i>‘There are no European sites or SSSI within 2km of the Proposed Development and no pathways of effect during the construction of the Proposed Development have been identified.</i></p> <p><i>As set out in item 4.1.1 of this Scoping Opinion, the Inspectorate does not agree that air quality effects of changes in road traffic during construction can be scoped out whilst the traffic screening exercise remains to be carried out. On this basis, the Inspectorate considers that there could be effects on the Rochdale Canal SAC and SSSI.</i></p> <p><i>For all other European sites and SSSI and other pathways of effect (with the exception of air quality), the Inspectorate agrees that these can be scoped out of the assessment of effects during construction.’</i></p>
National nature reserves (NNR)	There are no NNRs within 2km of the Scheme or ARN, therefore NNRs are scoped out of further assessment.	ID 4.4.2 – <i>‘No NNR have been identified within the study area or within 2km of the site or ARN. The Inspectorate agrees that these matters can be scoped out of the assessment.’</i>
Invasive and non-native plant and animal species (INNS) during operation	Given the negligible value assigned to INNS, invasive species are scoped out of further assessment during operation, however, they will be considered in relation to legislative compliance during construction.	ID 4.4.3 – <i>‘Paragraphs 9.4.8 and 9.4.24 explain that potential for INNS effects during construction will be considered. However, the Inspectorate agrees that significant effects during operation are not likely and that this matter can be scoped out of the assessment.’</i>

Matter scoped out	Justification to scope matter out (Environmental Scoping Report (TR010064/APP/6.6))	Planning Inspectorate's comment in the Scoping Opinion (TR010064/APP/6.7)
Geology and soils		
Effects on geological receptors during construction and operation	There are no receptors located within the study area, therefore this matter of geology is scoped out of further assessment.	ID 4.5.1 – <i>'Impacts to geology are proposed to be scoped out on the basis that no sensitive geological receptors are identified within the study area. Considering the baseline geological information presented, and the description of the Proposed Development, the Inspectorate is content that this matter can be scoped out.'</i>
Effects on soils during the operational phase	No additional impacts are predicted on soils during the operational phase. The permanent loss of agricultural land occurring during construction would persist during operation but is not considered as an additional effect. Temporary effects arising during construction on soil quality in relation to degradation during handling may extend into operation but should not be persistent assuming that best practice mitigation measures are applied. Operational effects on soils are therefore scoped out of further assessment.	ID 4.5.2 – <i>'On the basis that impacts to soil will be assessed during construction (as permanent and temporary losses), the Inspectorate considers that effects on soils during operation can be scoped out.'</i>

Matter scoped out	Justification to scope matter out (Environmental Scoping Report (TR010064/APP/6.6))	Planning Inspectorate's comment in the Scoping Opinion (TR010064/APP/6.7)
Effects on the health of site users and the general public during the operational phase (except for ground gas)	Contamination within the Scheme extents would have been removed during construction, reducing the potential for contact with contaminated soil. Furthermore, implementing appropriate site-specific risk assessments and method statements would reduce exposure. This is likely to have a negligible magnitude of impact, resulting in a slight effect on human health. Therefore, human health for site users has been scoped out of the assessment.	ID 4.5.3 – <i>'This matter is proposed to be scoped out as contamination is anticipated to be removed during construction therefore, contact with contamination from residents or construction workers during operation is unlikely to occur. Additionally, site-specific risk assessments and method statements will reduce exposure. The Inspectorate agrees to this matter being scoped out, with the exception of ground gas as set out below.'</i>
Effects on groundwater and surface water from contaminated land during operation	During the operational stage, potential contaminated land linkages would have been broken due to the construction of the carriageway, therefore no additional impacts are predicted in relation to water receptors. Operational effects on surface water and groundwater from contaminated land are therefore scoped out of further assessment.	ID 4.5.4 – <i>'Operational effects on surface water and groundwater from contaminated land are scoped out of further assessment on the basis that potential contaminated land linkages would have been assessed as part of the construction phase assessment and contaminated land would only be disturbed during construction. The Inspectorate is content that this matter can be scoped out of the operational assessment.'</i>
Material assets and waste		
Effects on mineral safeguarding sites	There are no mineral safeguarding sites (operational sites or sites identified within strategic planning documents for the extraction of minerals) within the Order Limits, and therefore no likely significant effects would occur as a result of constructing the Scheme. Consultation undertaken with the Greater Manchester Minerals and Waste Planning Unit and Coal Authority, for the Scheme at option selection, also confirms that no significant sterilisation would occur to the sand and gravel or brick clay / surface coal mineral safeguarding areas (MSA).	ID 4.6.1 – <i>'The mineral safeguarding areas (MSA) identified in the study area are not resources that could be worked / extracted and therefore do not meet criteria to be defined as Mineral Safeguarding Sites required to be assessed by definition in DMRB LA 110; this is supported through consultation with Greater Manchester Minerals and Waste Planning Unit and the Coal Authority detailed in Scoping Report paragraph 11.4.10. On this basis, the Inspectorate is content that impacts to MSAs can be scoped out.'</i>

Matter scoped out	Justification to scope matter out (Environmental Scoping Report (TR010064/APP/6.6))	Planning Inspectorate's comment in the Scoping Opinion (TR010064/APP/6.7)
Effects on peat resources	There are no peat resources (existing or potential peat extraction sites) within the Order Limits, and therefore no likely significant effects would occur as a result of constructing the Scheme. Consultation undertaken with the Greater Manchester Minerals and Waste Planning Unit, for the Scheme at option selection, also confirms that no sterilisation (by definition) of peat resources is likely to occur given that the current policy drive is towards carbon sequestration, and subsequently planning authorities do not identify new sites or extensions to existing sites for peat extraction.	<p>ID 4.6.2 – <i>'The Applicant states that peat deposits present within the study area are not existing or potential peat extraction sites in terms of peat as material asset / resource.</i></p> <p><i>On the basis of the information provided, the Inspectorate agrees to scope out impacts to peat deposits as a material asset / resource. Comments have been made elsewhere in this Scoping Opinion about potential impacts on peat in terms of biodiversity, soils, carbon emissions and in terms of drainage.'</i></p>

Matter scoped out	Justification to scope matter out (Environmental Scoping Report (TR010064/APP/6.6))	Planning Inspectorate's comment in the Scoping Opinion (TR010064/APP/6.7)
<p>Effects from material assets and waste during the operational phase</p>	<p>Design Manual for Roads and Bridges (DMRB) LA 110 Material assets and waste standard (Highways England, 2019) specifies that the assessment shall only report on the first year of operational activities (opening year). It has been assumed that no significant maintenance activities would occur during the first year of operational activities on a newly constructed highway asset, and so there is not likely to be significant materials consumption or waste generation. Although the opening year is a time period not necessarily confined to operational effects, any construction phase effects overlapping within this period are captured within the construction phase assessment. Notwithstanding this, the design process would inherently seek to reduce the consumption and use of material assets, and the generation of waste throughout the life cycle of the Scheme. It is also assumed that the assessment of any environmental impacts and effects associated with material assets and waste during any large-scale future maintenance, renewal or improvement works beyond the opening year would be undertaken by National Highways North West Asset Delivery Contractor(s) (or equivalent) in accordance with the requirements of DMRB LA 110 (or any future environmental assessment guidance specified by National Highways).</p>	<p>ID 4.6.3 – <i>‘These matters are proposed to be scoped out of the assessment on the basis that maintenance activities would be undertaken in accordance with the requirements of DMRB LA 110 and are not expected in the first year of operation (timescale defined by DMRB LA 110) or beyond. The Inspectorate is content to agree to scope this matter out on this basis.’</i></p>

Matter scoped out	Justification to scope matter out (Environmental Scoping Report (TR010064/APP/6.6))	Planning Inspectorate's comment in the Scoping Opinion (TR010064/APP/6.7)
Noise and vibration		
Effects from traffic vibration during the operational phase	DMRB LA 111 (Highways England, 2020a) states that operational vibration should be scoped out of the assessment methodology as a maintained road surface will be free of irregularities so operational vibration will not have the potential to lead to significant adverse effects. It is considered that there is nothing within the initial design of the Scheme that would change this assumption.	ID 4.7.1 – <i>'On the basis that the maintained road surface once complete will be free of irregularities under general maintenance provisions, the Inspectorate agrees that operational vibration can be scoped out of the Environmental Statement due to the low likelihood of long-term significant effects. The Inspectorate also notes the presence of the existing road network in terms of future baseline conditions.'</i>
Population and human health		
Effects on employment opportunities during the operation	As a highway project, the Scheme will not generate many direct employment opportunities in operation and so this is not a likely significant effect on human health. Operational effects on employment opportunities are therefore scoped out of the assessment.	ID 4.8.3 – <i>'No clear explanation is provided as to why employment opportunities during operation are scoped out of the assessment, however, due to the nature of the Proposed Development, the Inspectorate is content to scope this matter out.'</i>
<i>Effects on the following wider determinants of health during construction and operation:</i>		
Access to/by public transport	The existing M60, M62 and M66 are not used to access bus services. While there is potential for disruption to bus services during construction due to traffic management, bus providers have the option of re-routing services and overall provision of services would remain unchanged by the Scheme. The Scheme is also unlikely to affect the provision of both bus and tram services within the Study Area. This is therefore not considered a likely significant population health effect.	ID 4.8.4 – <i>'Whilst there is potential for disruption to public transport services, the Applicant considers that these may reroute and the overall provision would remain unchanged by the Proposed Development and ultimately have limited effects on human health. Whilst there is no specific details of potential rerouting of coach and bus services (and there are 4 tram stops are located within the study area), the Inspectorate agrees that effects in terms of population and human health from rerouting and disruption to public transport is are unlikely to be significant given the nature, location and objectives of the scheme.'</i>

Matter scoped out	Justification to scope matter out (Environmental Scoping Report (TR010064/APP/6.6))	Planning Inspectorate's comment in the Scoping Opinion (TR010064/APP/6.7)
Access to good quality affordable housing	The land use and accessibility assessment will assess impacts on residential property. However, the Scheme will not have a significant influence on the availability of good quality affordable housing, which is influenced more by housing policy and market demand, and so no likely significant population level health effects from the Scheme are anticipated.	ID 4.8.5 – <i>'For the reasons given in table 13.7 of the Scoping Report, the Inspectorate agrees that these matters can be scoped out during construction and operation in terms of the Proposed Development's potential effects to population and human health.'</i>
Access to healthy affordable food	It is not anticipated that the Scheme will significantly influence access to healthy affordable food, therefore this is not considered a likely significant effect.	
Local business activity	The Scheme is unlikely to affect local business activity, no businesses are required to be demolished.	
Regeneration	Facilitating regeneration is not a direct objective of the Project, and the population and health baseline has not identified any potential regeneration areas within the study area for land use and access.	
Tourism and leisure industries	The tourism and leisure industry is not identified as a key industry within the study area and the Scheme is unlikely to greatly influence this area of the economy. Therefore, this is not considered a likely significant issue for population health in the study area.	
Community engagement	Consultation and stakeholder engagement will be undertaken as part of the Scheme but it is unlikely that there will be any impacts on community engagement as part of the construction and operation of the Scheme.	

Matter scoped out	Justification to scope matter out (Environmental Scoping Report (TR010064/APP/6.6))	Planning Inspectorate's comment in the Scoping Opinion (TR010064/APP/6.7)
Land use in urban and/or rural settings	The land use and accessibility assessment will assess impacts on existing land use due to the footprint of the Scheme. However, the impacts are likely to be relatively localised to the existing interchange area and not likely to result in a likely significant effect in terms of population health, over and above the issues scoped in above such as access to outdoor recreation for local communities.	
Road drainage and the water environment		
Tidal and coastal flood risk	The Irwell Catchment Flood Management Plan (Environment Agency, 2009) does not identify tidal flooding as a cause of flood risk in the catchment. None of the watercourses within the study area are tidal rivers. The nearest tidal point is the upstream tidal limit of the River Mersey at Howey Weir, approximately 28km downstream from the study area. Therefore, tidal and coastal flood risk is scoped out of the assessment.	ID 4.9.1 – <i>'Tidal flood risk is proposed to be scoped out on the basis that none of the watercourses within the study area are tidal rivers and the Irwell Catchment Flood Management Plan does not identify tidal flooding as a source of flood risk in the catchment; the nearest tidal point is approximately 28km downstream. Based on this information, the Inspectorate is content to scope this matter out.'</i>
Reservoir flood risk	All large raised reservoirs, as defined by the Reservoirs Act, are regularly inspected and maintenance is supervised by reservoir engineers. Therefore, the risk of failure is considered to be very low due to their monitoring and inspection regime and reservoir flood risk will not be considered further.	ID 4.9.2 – <i>'The Applicant highlights that the potential extent of reservoir flooding (in accordance with Environment Agency guidance) reaches residential areas in Prestwich and Whitefield to the west of the M60 J18 but on the basis that the risk of failure is considered to be very low (due to their monitoring and inspection regime), reservoir flood risk should be scoped out. The Inspectorate agrees that this matter can be scoped out on this basis and taking into account the prevailing baseline and future baseline environment in and around the Proposed Development.'</i>

Matter scoped out	Justification to scope matter out (Environmental Scoping Report (TR010064/APP/6.6))	Planning Inspectorate's comment in the Scoping Opinion (TR010064/APP/6.7)
Canal flooding	There are no canals within the study area. The closest canal is the Manchester and Bury Canal located over 3km west of the Scheme to the west of the River Irwell. Therefore, canal flood risk is scoped out of the assessment.	ID 4.9.3 – <i>'Canal flood risk is proposed to be scoped out of the assessment as no canals are identified in the study area with the closest canal located approximated 3km from the Proposed Development. Based on this information, the Inspectorate is content to scope this matter out.'</i>
Climate		
No matters scoped out.		
Cumulative effects		
Cumulative effects on material assets and waste	The assessment reported in the aspect chapter considers the influence of constructing the Scheme on national material recovery targets, regional recycled aggregate targets, sub-regional minerals sterilisation and regional landfill capacity; and therefore does not require further assessment in the cumulative environmental assessment.	ID 4.11.1 – <i>'On the basis that the assessment proposed in the materials and waste aspect chapter will consider the impact of the Proposed Development on national material recovery targets, regional recycled aggregate targets, sub-regional minerals sterilisation and regional landfill capacity, the Inspectorate agrees that relevant consideration of cumulative effects will be inherent in that assessment. The Inspectorate therefore agrees that these can be scoped out of further specific consideration in the cumulative effects assessment.'</i>

Matter scoped out	Justification to scope matter out (Environmental Scoping Report (TR010064/APP/6.6))	Planning Inspectorate's comment in the Scoping Opinion (TR010064/APP/6.7)
Cumulative effects on climate	<p>The assessment reported in the aspect chapter considers the Scheme's potential to affect the global climate (as a result of changes in Greenhouse Gas (GHG) emissions) and the effect of changes in climate on the Scheme itself, and therefore does not require further assessment in the cumulative environmental assessment. Furthermore, the Institute of Environmental Management and Assessment (IEMA) Environmental Impact Assessment Guide to: Climate Change Resilience & Adaptation (2020) advises that the extent to which climate exacerbates or ameliorates the effects of a Scheme on the environment 'in-combination' effects should be considered. The IEMA guidance advises that the 'in-combination assessment' (where climate has the potential to exacerbate or conversely diminish the effect of an existing impact of a Scheme) is best analysed in the existing environmental aspect chapters of an Environmental Statement and is suited to using traditional significance criteria from the respective chapters.</p>	<p>ID 4.11.2 – <i>'The assessment proposed in the climate aspect chapter considers the Proposed Development's effect on the global climate and the effect of changes in climate on the Proposed Development (ie vulnerability to climate change).</i></p> <p><i>On the basis that consideration of the extent to which climate exacerbates or ameliorates the effects of the Proposed Development will be presented in the climate aspect chapter of the ES, the Inspectorate agrees that it can be scoped out of further specific assessment in terms of cumulative effects and this approach accords with industry standard guidance of the Institute of Environmental Management and Assessment (IEMA).'</i></p>

Heat and radiation

- 4.1.15 Schedule 1 (4) (d) of the EIA Regulations requires an estimation, by type and quantity, of heat and radiation produced during the construction and operation of the Scheme.
- 4.1.16 The construction and operation of the Scheme would not introduce any source of radiation and would only generate limited amounts of heat from technology. The assessment of heat and radiation is therefore not considered relevant to the Scheme and has been scoped out of further assessment.

Major accidents and disasters

- 4.1.17 The EIA Regulations require that risks due to accidents and disasters are considered within the EIA. A two-stage qualitative assessment has been undertaken using technical judgement to identify whether the Scheme is at risk from major accidents and disasters (see Appendix 4.2: Major Accidents and Disasters of the Environmental Statement Appendices (TR010064/APP/6.3)).
- 4.1.18 Firstly, a screening matrix has been completed detailing a long list of major accidents and disasters that could occur. Accidents and disasters requiring further consideration were subject to a second more detailed risk assessment. The more detailed risk assessment considered the following:
- The vulnerability of the Scheme to risks of major accidents and disasters.
 - Any consequential changes in the predicted effects of the Scheme on environmental aspects from major accidents and disasters.
- 4.1.19 The risk assessment concluded that there is one residual risk remaining that would need to be addressed through the design of the Scheme, relating to inland floods.
- 4.1.20 Inland floods are partly covered under Chapter 14: Climate of this Environmental Statement (TR010064/APP/6.1), on climate change adaptation, and partly through Chapter 13: Road Drainage and the Water Environment of this Environmental Statement (TR010064/APP/6.1), in terms of reducing future flood risk. Impacts and mitigation associated with these are covered in the respective chapters of this Environmental Statement (TR010064/APP/6.1).
- 4.1.21 Risks relating to ground hazards, extreme weather, transport accidents, and critical infrastructure or industrial accidents could result in environmental impacts if the hazard were to occur. However, these risks are mitigated either through designing to industry or regulatory requirements, or by existing emergency procedures; or are unlikely to result in an event that could reasonably be classed as a 'major' accident or disaster. Risk from these hazards were therefore not considered further within this Environmental Statement (TR010064/APP/6.1) but would be considered in terms of future design development and construction methodology.

Transboundary effects

- 4.1.22 A transboundary effects screening matrix was provided in the Environmental Scoping Report (TR010064/APP/6.6). This concluded that the Scheme is unlikely to give rise to significant effects on any European Economic Area state. Transboundary effects are therefore scoped out of the assessment.
- 4.1.23 The transboundary effects screening matrix has been reviewed during the EIA and included in Appendix 4.3: Transboundary Effects Screening Matrix of the Environmental Statement Appendices (TR010064/APP/6.3). This concluded that the Scheme is unlikely to give rise to significant effects on any European Economic Area state. The Planning Inspectorate will use this to undertake a screening assessment to identify if the Scheme is likely to have significant effects on the environment in a European Economic Area state in accordance with Regulation 32 of the EIA Regulations.

Preliminary Environmental Information Report

- 4.1.24 A Preliminary Environmental Information Report (PEIR) was produced and made available to the public, landowners, prescribed bodies and other stakeholders as part of the statutory consultation (see Section 3.4 of Chapter 3: Assessment of Alternatives of this Environmental Statement (TR010064/APP/6.1) for further details). The PEIR included preliminary environmental information to enable consultees to understand the likely significant environmental effects of the Scheme, and measures identified to mitigate such effects, to help inform their consultation responses. The PEIR is included in Annex L of the Consultation Report Annexes (TR010064/APP/5.2).
- 4.1.25 Consultation responses have been received in response to the PEIR (Annex L of the Consultation Report Annexes (TR010064/APP/5.2)). Where these affect a particular aspect, they are discussed in the aspect chapters of this Environmental Statement (TR010064/APP/6.1). Further details on the consultation and responses are included in the Consultation Report (TR010064/APP/5.1) and Consultation Report Annexes (TR010064/APP/5.2).

Technical engagement

- 4.1.26 In addition to the scoping consultation described earlier in this section, stakeholders have been consulted during the assessment process, in particular:
- Host authority (Bury Metropolitan Borough Council) and other relevant local authorities (Rochdale Borough Council and Manchester City Council)
 - Environment Agency
 - Natural England
 - Historic England
 - Greater Manchester Archaeological Advisory Service
 - UK Health Security Agency and Office for Health Improvement and Disparities (previously Public Health England)

- 4.1.27 Technical engagement included discussion of assessment methodology and scope, potential effects, and mitigation. This engagement took the form of email exchanges, telephone calls, and virtual meetings.
- 4.1.28 Stakeholder feedback relevant to the assessment scope and methodology is provided in the aspect chapters (Chapters 5-14) of this Environmental Statement (TR010064/APP/6.1), where appropriate.

4.2 Surveys, predictive techniques and methods

Design Manual for Roads and Bridges

- 4.2.1 The environmental assessment has been undertaken in line with the general standards set out within DMRB LA 104 Environmental Assessment and Monitoring (Highways England, 2020b), as well as the aspect-specific DMRB standards (as contained within DMRB LA 105 to 115 and 120). DMRB is the established standard for assessing the environmental impacts of highway schemes and has been developed by National Highways (formerly Highways England) in collaboration with relevant stakeholders.
- 4.2.2 Where relevant, the environmental assessments have drawn on relevant topic guidance and best practice. More details on the methods used in the assessments are provided in Chapters 5 to 15 of this Environmental Statement (TR010064/APP/6.1).

Study areas

- 4.2.3 Various study areas have been used to assess the impact on environmental receptors following DMRB standards and aspect-specific guidance. Specific study areas are outlined in Chapters 5 to 15 of this Environmental Statement (TR010064/APP/6.1).

Temporal scope

- 4.2.4 For the purpose of the EIA, it has been assumed that:
- The construction start of works is 2026 (with mobilisation starting in late 2025)
 - The opening year is 2029
 - The design year is 2044 (15 years after opening to traffic).

Future baseline

- 4.2.5 The baseline conditions used for assessment purposes are the predicted future conditions that would exist in the absence of the Scheme either:
- a) At the time that construction is expected to start, for impacts arising from construction;
 - b) At the time that the Scheme is expected to open to traffic, for impacts arising from its operation; or
 - c) The design year, 15 years after opening.

- 4.2.6 The future baseline is considered in each of the Environmental Statement aspect chapters (TR010064/APP/6.1), as relevant to the assessment in question. A general description of the baseline scenario and future baseline is provided in Section 2.4 of Chapter 2: The Scheme of this Environmental Statement (TR010064/APP/6.1).

Surveys and assessment

- 4.2.7 Environmental surveys have been carried out between 2021 and 2023 to inform the environmental assessment. The following environmental surveys have been undertaken:

- Agricultural land classification (ALC) survey
- Air quality monitoring surveys
- Arboriculture surveys
- Baseline noise surveys
- Botanical surveys of designated sites that could be impacted through changes in air quality
- Cultural heritage site walkover survey
- Ground investigation surveys
- Groundwater dependent terrestrial ecosystem (GWDTE) survey
- Hedgerows surveys
- Hydromorphology survey
- Landscape summer and winter surveys
- Protected and notable species surveys:
 - Badger surveys
 - Barn owl surveys
 - Bat surveys (ground-based assessment of trees, emergence re-entry surveys of trees, tree-climbing inspection surveys, and bat activity surveys)
 - Breeding bird surveys
 - Great crested newt surveys (including Habitat Suitability Index (HSI) assessment, presence/absence surveys, population size class assessment, and environmental deoxyribonucleic acid (DNA) (eDNA) surveys)
 - Otter and water vole surveys

- Reptile surveys
- Terrestrial invertebrate surveys
- Wintering bird surveys
- River condition assessment of waterbodies
- Soil resource survey
- UK Habitat Classification System surveys, including invasive species and habitat condition assessment

4.2.8 In addition to surveys, other predictive techniques have been used to inform the EIA, such as air quality, noise and flood risk modelling. Further information on surveys and techniques used is provided in Chapters 5 to 15 of this Environmental Statement (TR010064/APP/6.1).

Traffic modelling

- 4.2.9 Predictions of future traffic levels both with and without the Scheme have been produced using a traffic model. A traffic model was created to represent the transport system in this area of Greater Manchester on a typical weekday. It covers the whole of the UK to capture the actual start and end of every trip but is more detailed in Greater Manchester with a particular focus on the area around M60 J18.
- 4.2.10 The hours modelled in the traffic model are an average 07:00–09:00 in the morning (the morning peak) and average 16:00–18:00 in the evening (the evening peak) as these are the busiest times of day on the motorways in this area, confirmed by using 2018 traffic count data. A typical average hour in the middle of the day from 09:00 to 15:00 is also modelled (the inter-peak).
- 4.2.11 A traffic model known as the ‘base year model’ was developed to represent existing traffic conditions as they were in 2018. The information on where people are travelling to and from has been taken from an analysis of the movement of a vast number of mobile phones. This information is then scaled to match traffic counts and merged with other data sources to provide the travel patterns of cars, vans and heavy goods vehicles across the country.
- 4.2.12 The traffic model was then used to predict how traffic conditions would change in the future. Information on planned future housing and job developments were taken into account, as well as information on predicted growth in population, jobs and traffic provided by the Department for Transport.
- 4.2.13 Traffic models were created for two main future scenarios: the Do-Minimum (i.e. without the Scheme) and the Do-Something (i.e. with the Scheme). Traffic models were developed for 2029 (the expected year of scheme opening) and 2044 (15 years after opening). Traffic flows and speeds on each road in the study area have been provided to inform the environmental assessment.

- 4.2.14 Full details of how the traffic model was developed are provided in the Transport Assessment (TR010064/APP/7.4). A summary of the output of the traffic model (i.e. the key changes in traffic flow as a result of the Scheme) is provided in Section 2.8 of Chapter 2: The Scheme of this Environmental Statement (TR010064/APP/6.1).

Identifying potential effects

- 4.2.15 The aspect chapters identify potential impacts that might occur due to the construction and operation of the Scheme. These impacts in turn can lead to environmental effects (defined as the consequence of an impact). Effects can affect the environment in a variety of ways. Effects may be adverse or beneficial, direct, indirect, secondary or cumulative, temporary or permanent, short, medium or long term.
- 4.2.16 For an effect to occur, there needs to be an impact source, pathway and receptor.
- 4.2.17 In EIA, effects are assessed in terms of their significance to give decision makers a measure of the importance, or gravity, of the environmental effect.

Cumulative effects

- 4.2.18 Chapter 15: Assessment of Cumulative Effects of this Environmental Statement (TR010064/APP/6.1) includes consideration of cumulative effects, comprising the following types of cumulative effects:
- Combined effects – interrelationships between environmental aspects (for example between ecology and the water environment, population and human health), affecting a single resource or receptor.
 - Inter-project cumulative effects – effects arising from other reasonably foreseeable developments in combination with the Scheme.

Mitigation, enhancement and monitoring

- 4.2.19 Mitigation measures aim to avoid, reduce and, where possible, remedy significant adverse environmental effects. The purpose of any mitigation measure is to eliminate the effect or, if not possible, to reduce its significance. Mitigation measures for the Scheme have been developed in accordance with the mitigation hierarchy of avoidance and prevention, reduction and remediation, as described in paragraph 3.23 of DMRB LA 104.
- 4.2.20 For the purposes of the environmental assessment, two types of mitigation are used, in accordance with paragraph 3.24 of DMRB LA 104:
- Embedded mitigation: Scheme design principles adopted to avoid or prevent adverse environmental effects. This forms part of the Scheme description in Chapter 2: The Scheme of this Environmental Statement (TR010064/APP/6.1).

- Essential mitigation: measures critical for the delivery of the Scheme which can be acquired through statutory powers. Measures required to reduce and if possible offset likely significant adverse environmental effects, in support of the reported significance of effects in the environmental assessment.

- 4.2.21 The First Iteration EMP (TR010064/APP/6.5) has been produced in line with DMRB LA 120 Environmental Management Plans (Highways England, 2020c), which contains all measures, including the REAC, to manage environmental effects in construction and operation. This First Iteration EMP has been submitted with the DCO application and provides the framework for the future production of the more detailed Second Iteration EMP prior to construction. A Third Iteration EMP would be produced after construction for the handover stage.
- 4.2.22 The First Iteration EMP (TR010064/APP/6.5) contains in its appendices the following outline topic-specific management plans (note that Appendix M is an environmental constraints plan and has therefore not been included in the list of management plans below):
- Outline Air Quality and Dust Management Plan (Appendix A)
 - Outline Noise and Vibration Management Plan (Appendix B)
 - Outline Site Waste Management Plan (Appendix C)
 - Outline General Ecology Management Plan (Appendix D)
 - Outline Invasive Species Management Plan (Appendix E)
 - Outline Soil Management Plan (Appendix F)
 - Outline Materials Management Plan (Appendix G)
 - Outline Surface and Ground Water Management Plan (Appendix H)
 - Outline Construction Compound Management Plan (Appendix I)
 - Outline Contaminated Land Management Plan (Appendix J)
 - Outline Energy and Resource Use Management Plan (Appendix K)
 - Outline Emergency Procedures and Record of Environmental Incidents (Appendix L)
 - Outline Landscape and Ecology Management Plan (Appendix N)
 - Outline Carbon Management Plan (Appendix O)
- 4.2.23 A separate Outline Traffic Management Plan (TR010064/APP/7.5) has also been included in the DCO application. The Outline Traffic Management Plan (TR010064/APP/7.5) describes the traffic management processes that would be followed to ensure the construction phases of the Scheme are completed safely and efficiently, while minimising the impact on customers and stakeholders.
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- 4.2.24 These specific management plans will be updated and developed into the final management plans prior to construction, in accordance with Requirement 4 of the draft DCO (TR010064/APP/3.1).
- 4.2.25 Where effects cannot be mitigated, compensatory measures have been considered, for example, to provide replacement habitat.
- 4.2.26 Enhancement measures have also been considered. An enhancement is defined as a measure that is over and above what is required to mitigate the adverse effects of the Scheme. Unlike mitigation and compensation measures, enhancements are not factored into the determination of significance; however, the potential benefits of these measures are presented within the relevant aspect chapters, in accordance with the NPS NN (Department for Transport, 2014).
- 4.2.27 Mitigation and enhancement measures have been outlined as required in Chapters 5-15 of this Environmental Statement (TR010064/APP/6.1). Measures have been developed throughout the EIA process in consultation with statutory consultees and key stakeholders, where appropriate.
- 4.2.28 Where likely significant adverse effects on the environment are predicted, consideration has been given to the appropriateness of monitoring measures. The purpose of monitoring measures is to ensure the mitigation measures required to avoid, reduce and offset significant adverse effects are delivered and perform as intended, in accordance with the requirements of the EIA Regulations.
- 4.2.29 Monitoring requirements for mitigation in respect of likely significant adverse effects are detailed in Chapters 5 to 15 of this Environmental Statement (TR010064/APP/6.1) and the First Iteration EMP (TR010064/APP/6.5).

Residues and emissions

- 4.2.30 The EIA Regulations require an estimate, by type and quantity, of expected residues and emissions. This information is provided in the relevant chapters of this Environmental Statement (TR010064/APP/6.1). Table 4.4 sets out the residues and emissions that must be reported on to satisfy the EIA Regulations, as well as the chapters of this Environmental Statement (TR010064/APP/6.1) which cover them.

Table 4.4 Residues and emissions

Residue or emission	Residue or emission reported in Environmental Statement aspect chapter (TR010064/APP/6.1)
Air pollution	Chapter 5: Air Quality
Heat	N/A – scoped out of assessment (see Section 4.1 of this Chapter for further details)
Light	Chapter 7: Landscape and Visual
Loss of soil resource	Chapter 9: Geology and Soils
Noise	Chapter 11: Noise and Vibration

Residue or emission	Residue or emission reported in Environmental Statement aspect chapter (TR010064/APP/6.1)
Radiation	N/A – scoped out of assessment (see Section 4.1 of this Chapter for further details)
Soil and subsoil pollution	Chapter 9: Geology and Soils
Types and quantities of waste	Chapter 10: Material Assets and Waste
Vibration	Chapter 11: Noise and Vibration
Water pollution	Chapter 13: Road Drainage and the Water Environment

4.2.31 A Statement Relating to Statutory Nuisance has been produced and submitted with the DCO application (TR010064/APP/6.8). This explains the impact the Scheme would have on statutory nuisance, as defined in Section 79(1) of the Environmental Protection Act 1990, and how these impacts would be mitigated.

4.2.32 There is crossover between the Statement Relating to Statutory Nuisance (TR010064/APP/6.8) and the residues and emissions set out in Table 4.4.

4.3 General assessment assumptions and limitations

4.3.1 Aspect-specific assumptions and limitations are included within each aspect chapter of the Environmental Statement (TR010064/APP/6.1). This includes information on any data gaps for establishing baseline conditions, and limitations associated with surveys, modelling and assessment techniques.

4.3.2 In addition to aspect-specific assumptions, a number of general assumptions and limitations were encountered when preparing the Environmental Statement, as follows:

- The temporal scope of the Scheme that has been assumed for the purposes of the EIA is stated in paragraph 4.2.4.
- It is assumed that the information provided by third-party public sources is accurate at the time of preparing this report. Data sources have been verified and updated throughout the EIA process. References are included to provide details of relevant sources.
- The Environmental Statement and DCO application are based on a preliminary design. The design would be refined before construction starts through a process of detailed design. As such, the design assessed includes a degree of flexibility as represented by the limits of deviation (see Section 2.5 of Chapter 2: The Scheme of this Environmental Statement (TR010064/APP/6.1) for further details). The Environmental Statement has taken into account the limits of deviation as shown on the Works Plans (TR010064/APP/2.4) and stated in Article 6 of the draft DCO (TR010064/APP/3.1), and the potential impacts of a deviation within the permitted limits have therefore been assessed.

- The construction methodology could change before construction starts, particularly for elements that are dependent on the supply chain (for example the sourcing of materials, plant and equipment, and the construction workforce), or for elements that are dependent on the detailed design. The description of the Scheme, including the Order Limits and the parameters used in the assessments, is sufficiently wide to ensure that any construction methodology within the parameters and description assessed would not give rise to any materially new or materially different significant adverse effects than those assessed. The construction methodology assessed in the Environmental Statement (TR010064/APP/6.1) therefore represents a reasonable worst-case.
- The permanent and temporary works of the Scheme would affect numerous statutory utilities owned and maintained by various statutory undertakers (see Section 2.6 of Chapter 2: The Scheme of this Environmental Statement (TR010064/APP/6.1) for further details). The scope of statutory utility works would continue to be defined in line with the design development and engagement with statutory undertakers. The preliminary design and Order Limits include all land required for diverting utilities, and realistic worst-case assumptions have been made regarding environmental effects, but the ultimate design of the diversions would be decided by the statutory undertakers.

4.4 Significance criteria

- 4.4.1 Tables 4.5 and 4.6 replicate the value (sensitivity) of receptors/resources and magnitude of impact (amount of change) criteria from DMRB LA 104. These criteria have been used to identify the potential impacts that might occur due to the construction and operation of the Scheme.
- 4.4.2 Significance of effect is derived through a combination of the sensitivity of a receptor affected (value or importance) and the magnitude of the impact (amount of change). A typical matrix for these two variables is provided in DMRB LA 104 and replicated in Table 4.7.
- 4.4.3 Certain environmental aspects do not use a matrix-based approach, because they use calculations to assess effects in numerical terms. This includes noise, air quality and flood risk aspects.
- 4.4.4 In all cases, professional judgement is applied to the assessment to underpin the outcomes identified through the matrix or calculation assessments. Where professional judgement is used, this is accompanied by text to explain the reasons and justification.

Table 4.5 Environmental value (sensitivity) and descriptions (taken from DMRB LA 104 Table 3.2N)

Value (sensitivity) of receptor / resource	Typical description
Very high	Very high importance and rarity, international scale and very limited potential for substitution.

Value (sensitivity) of receptor / resource	Typical description
High	High importance and rarity, national scale, and limited potential for substitution.
Medium	Medium or high importance and rarity, regional scale, limited potential for substitution.
Low	Low or medium importance and rarity, local scale.
Negligible	Very low importance and rarity, local scale.

Table 4.6 Magnitude of impact (change) and typical descriptions (taken from DMRB LA 104 Table 3.4N)

Magnitude of impact (change)		Typical description
Major	Adverse	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements.
	Beneficial	Large scale or major improvement of resource quality; extensive restoration; major improvement of attribute quality.
Moderate	Adverse	Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements.
	Beneficial	Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality.
Minor	Adverse	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements.
	Beneficial	Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring.
Negligible	Adverse	Very minor loss or detrimental alteration to one or more characteristics, features or elements.
	Beneficial	Very minor benefit to or positive addition of one or more characteristics, features or elements.
No change		No loss or alteration of characteristics, features or elements; no observable impact in either direction.

Table 4.7 Significance matrix (taken from DMRB LA 104 Table 3.8.1)

		Magnitude of impact (degree of change)				
		No change	Negligible	Minor	Moderate	Major
Environmental value (sensitivity)	Very high	Neutral	Slight	Moderate or large	Large or very large	Very large
	High	Neutral	Slight	Slight or moderate	Moderate or large	Large or very large
	Medium	Neutral	Neutral or slight	Slight	Moderate	Moderate or large
	Low	Neutral	Neutral or slight	Neutral or slight	Slight	Slight or moderate
	Negligible	Neutral	Neutral	Neutral or slight	Neutral or slight	Slight

4.4.5 Significance categories are described in Table 4.8 (taken from DMRB LA 104). This describes effects with a very large or a large significance as being ‘material’ and ‘likely to be material’ in the decision-making process respectively. Therefore, large and very large effects are considered ‘significant’ for the purposes of the EIA Regulations. Moderate effects are described as potentially being material in the decision-making process. Moderate residual effects are therefore also typically considered as ‘significant’.

4.4.6 The significance of effect is only assessed after embedded and essential mitigation have been factored in, in line with DMRB LA 104. This is known as the residual effect. To arrive at a conclusion of significance, the effectiveness of design and mitigation measures must be assessed and described. This can be achieved by, for example, explaining the intended outcomes of the mitigation, and assessing how mitigation affects the magnitude of impacts (including impact probability, duration, scale, frequency and reversibility).

Table 4.8 Significance categories and typical descriptions (taken from DMRB LA 104 Table 3.7)

Significance category	Typical description
Very large	Effects at this level are material in the decision-making process.
Large	Effects at this level are likely to be material in the decision-making process.
Moderate	Effects at this level can be considered to be material decision-making factors.
Slight	Effects at this level are not material in the decision-making process.
Neutral	No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

4.5 Duplication of assessment

Habitats Regulations Assessment

- 4.5.1 Effects on European designated sites for nature conservation have been considered in Chapter 8: Biodiversity of this Environmental Statement (TR010064/APP/6.1).
- 4.5.2 The impact of the Scheme on European sites of nature conservation, as defined by the Conservation of Habitats and Species Regulations 2017, has been assessed in line with the Planning Inspectorate's Advice Note Ten: Habitats Regulations Assessment Relevant to Nationally Significant Infrastructure Projects (Planning Inspectorate, 2022).
- 4.5.3 Stage 1 of the multi-stage HRA process (Screening) has been undertaken. This screening exercise identified possible source-receptor pathways to designated sites, as detailed in Chapter 8: Biodiversity of this Environmental Statement (TR010064/APP/6.1). The conclusions of the Stage 1 HRA screening exercise were that likely significant effects could not be discounted, as a result of the changes in air quality from operational vehicle emissions on the M62, for the Rochdale Canal, when considered alone and in-combination with other plans and projects and therefore the HRA was progressed to Stage 2 Appropriate Assessment.
- 4.5.4 The HRA Report has been submitted with the DCO application as Appendix 8.13: Habitats Regulations Assessment Report of the Environmental Statement Appendices (TR010064/APP/6.3). The report takes the form of an Appropriate Assessment Report.

Water Framework Directive

- 4.5.5 The impact of the Scheme on the Water Framework Directive (WFD) has been assessed under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017. The assessment has been undertaken in line with the Planning Inspectorate's Advice Note Eighteen: The Water Framework Directive (Planning Inspectorate, 2017).
- 4.5.6 A WFD compliance assessment is included in Appendix 13.1: WFD Compliance Assessment of the Environmental Statement Appendices (TR010064/APP/6.3) and the conclusions have been summarised in Chapter 13: Road Drainage and the Water Environment of this Environmental Statement (TR010064/APP/6.1).

Flood Risk Assessment

- 4.5.7 A Flood Risk Assessment (FRA) has been undertaken and reported in Appendix 13.6: FRA Report of the Environmental Statement Appendices (TR010064/APP/6.3) and the conclusions have been summarised in Chapter 13: Road Drainage and the Water Environment of this Environmental Statement (TR010064/APP/6.1).

Health Impact Assessment

- 4.5.8 The impact of the Scheme on health has been considered in Chapter 12: Population and Human Health of this Environmental Statement (TR010064/APP/6.1). A standalone Health Impact Assessment (separate from the EIA) has therefore not been undertaken as health is covered within the Environmental Statement.

Acronyms and initialisms

Acronym or initialism	Term
ALC	Agricultural Land Classification
ARN	Affected Road Network
COMAH	Control of Major Accidents and Hazards Regulations
DCO	Development Consent Order
DMRB	Design Manual for Roads and Bridges
DNA	Deoxyribonucleic acid
eDNA	Environmental DNA
EEA	European Economic Area
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ExA	Examining Authority
FRA	Flood Risk Assessment
GHG	Greenhouse gas
GWDTE	Groundwater dependent terrestrial ecosystem
HRA	Habitats Regulations Assessment
HSE	Health and Safety Executive
HSI	Habitat Suitability Index
IEMA	Institute of Environmental Management and Assessment
MSA	Mineral Safeguarding Area
INNS	Invasive and non-native species
NNR	National Nature Reserve
NPS	National Policy Statement
NPS NN	National Policy Statement for National Networks
PEIR	Preliminary Environmental Information Report
PHE	Public Health England
REAC	Register of Environmental Actions and Commitments
SAC	Special Area of Conservation
SPA	Special Protection Area

Acronym or initialism	Term
SSSI	Site of Special Scientific Interest
WFD	Water Framework Directive

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