

M60/M62/M66 Simister Island Interchange

TR010064

ENVIRONMENTAL STATEMENT CHAPTER 7 LANDSCAPE AND VISUAL

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ENVIRONMENTAL STATEMENT CHAPTER 7 LANDSCAPE AND VISUAL

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7 Landscape and visual

7.1 Introduction

- 7.1.1 This chapter presents the information required by the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 to be provided in the Environmental Statement for the M60/M62/M66 Simister Island Interchange (the 'Scheme') in respect of landscape and visual. Landscape and visual impact assessment (LVIA) is defined in the Guidelines for Landscape and Visual Impact Assessment, Third Edition (GLVIA3) (Landscape Institute and Institute of Environmental Management and Assessment (IEMA), 2013) as '*a tool used to identify and assess the significance of and the effects of change resulting from development*'.
- 7.1.2 LVIA addresses two separate but related matters, as defined by the Design Manual for Roads and Bridges (DMRB) LA 107 Landscape and Visual Effects, (Highways England, 2020a), paragraph 1.4, namely:
- '*effects on the landscape as a resource; and*
 - '*effects on views and visual amenity.*'
- 7.1.3 This chapter is supported by the following Environmental Statement Figures (TR010064/APP/6.2):
- Figure 7.1: Zone of Theoretical Visibility
 - Figure 7.2: Zone of Theoretical Visibility with Screening Features
 - Figure 7.3: Key Landscape Designations and Features
 - Figure 7.4: Landscape and Townscape Character Areas
 - Figure 7.5: Representative Viewpoints and Photomontage Locations
 - Figure 7.6: Representative Viewpoint Photosheets
 - Figure 7.7: Photomontages.
- 7.1.4 This chapter is supported by the following Environmental Statement Appendices (TR010064/APP/6.3):
- Appendix 7.1: Landscape and Visual Impact Assessment Methodology
 - Appendix 7.2: Landscape and Townscape Character Baseline and Sensitivity Assessment
 - Appendix 7.3: Schedule of Landscape and Townscape Effects
 - Appendix 7.4: Schedule of Visual Effects
 - Appendix 7.5: Arboricultural Impact Assessment

7.2 Competent expert evidence

- 7.2.1 The assessment has been led and reported by a team of competent landscape and visual specialists who are Chartered Members of the Landscape Institute (CMLI). The competent expert with overall responsibility for the assessment is a Principal Landscape Architect with a degree in Landscape Architecture and a postgraduate Bachelor of Landscape Architecture (BLA) diploma.
- 7.2.2 The photomontage development has been undertaken by a team of competent landscape and visual specialists. The competent expert with overall responsibility for the photomontages is an Associate Director with a degree in Landscape Architecture and a postgraduate BLA diploma.
- 7.2.3 The team have over 30 years of combined experience of undertaking LVIA's for major infrastructure and linear schemes, including highways.

7.3 Legislative and policy framework

Legislation

- 7.3.1 The LVIA has been undertaken in accordance with the legislation set out in Table 7.1.

Table 7.1 Legislation relevant to the landscape and visual assessment

Legislation	Relevance to the Scheme	How this legislation is addressed in the assessment
European Landscape Convention (ELC), 2000	<p>The Landscape Institute website provides the following information about the ELC: The ELC <i>'provides a people-centred and forward looking way to reconcile management of the environment with the social and economic challenges of the future and aims to help people reconnect with place.'</i></p> <p>The ELC contains 18 articles which, collectively, <i>'promote landscape protection, management and planning, and organising European cooperation on landscape issues.'</i></p>	<p>The assessment has considered the changes to local landscape character and changes to people's views resulting from the Scheme. The environmental design includes mitigation measures for the Scheme.</p>
Countryside and Rights of Way Act 2000 (CROW) (as amended)	<p>The Act makes new provision for public access to the countryside; the 'right to roam' and amends the law relating to public rights of way.</p>	<p>The assessment has taken account of the relevant public rights of way (PRoW) for the study area in assessing the significance of visual effects on walkers and other footpath users.</p>

- 7.3.2 For UK legislation relating to heritage assets, including Heaton Park Registered Park and Garden, Conservation Areas and important hedgerows, refer to Table 6.1 in Chapter 6: Cultural Heritage of this Environmental Statement (TR010064/APP/6.1). For UK legislation relating to species protection, sites of ecological importance and ecological regulation refer to Table 8.1 in Chapter 8: Biodiversity of this Environmental Statement (TR010064/APP/6.1). For legislation relating to PRow, refer to Table 12.4 in Chapter 12: Population and Human Health of this Environmental Statement (TR010064/APP/6.1).

Policy

National Policy Statement for National Networks

- 7.3.3 The National Policy Statement for National Networks (NPS NN) (Department for Transport (DfT), 2014) sets out the Government's policies relating to the development of Nationally Significant Infrastructure Projects (NSIPs) on the national road and rail networks in England. The Secretary of State uses the NPS NN as the primary basis for making decisions on Development Consent Order (DCO) applications.
- 7.3.4 Table 7.2 summarises the policy requirements from the NPS NN relating to the applicant's assessment and mitigation requirements for landscape and visual and how these requirements have been addressed in the assessment. See also the NPS NN Accordance Tables (TR010064/APP/7.2) for an assessment of the Scheme's compliance with the NPS NN.

Table 7.2 NPS NN requirements for landscape and visual

Paragraph reference	Applicant's assessment / mitigation requirement	How this is addressed in the assessment
5.144	<i>'Where the development is subject to EIA, the applicant should undertake an assessment of any likely significant landscape and visual impacts in the environmental impact assessment and describe these in the environmental assessment. A number of guides have been produced to assist in addressing landscape issues. The landscape and visual assessment should include reference to any landscape character assessment and associated studies, as a means of assessing landscape impacts relevant to the proposed project. The applicant's assessment should also take account of any relevant policies based on these assessments in local development documents in England.'</i>	<p>The LVIA considers likely significant landscape and visual effects within Section 7.10 of this chapter.</p> <p>The assessment of landscape effects has been made on Landscape Character Areas (LCAs) defined within the Greater Manchester Landscape Character and Sensitivity Assessment (Greater Manchester Combined Authority (GMCA), 2018).</p> <p>An assessment of townscape effects has been made on Townscape Character Areas (TCAs) following the Bury UDP (1997) Policy.</p> <p>The Bury Unitary Development Plan (UDP) (1997) Policy EN9/1 Special Landscape Area is within LCA 26: Prettywood, Pilsworth and Unsworth Moss. The Special Landscape Area has been considered in the LVIA.</p>
5.145	<i>'The applicant's assessment should include any significant effects during construction of the project and/or the significant effects of the completed development and its operation on landscape components and landscape character (including historic landscape characterisation).'</i>	<p>Section 7.10 of this chapter considers likely significant landscape effects during both construction and operation as required in DMRB LA 107 paragraph 2.6.</p> <p>In accordance with DMRB LA 107 paragraph 3.17, landscape character assessment has considered the effect of the Scheme on a combination of the constituent landscape features and elements/components, although not on those individual components. Effects on landscapes of historical, cultural and archaeological significance are assessed in Chapter 6: Cultural Heritage of this Environmental Statement (TR010064/APP/6.1).</p>

Paragraph reference	Applicant's assessment / mitigation requirement	How this is addressed in the assessment
5.146	<p><i>'The assessment should include the visibility and conspicuousness of the project during construction and of the presence and operation of the project and potential impacts on views and visual amenity. This should include any noise and light pollution effects, including effects on local amenity, tranquillity and nature conservation.'</i></p>	<p>Section 7.10 of this chapter considers likely significant visual effects during both construction and operation, as required in DMRB LA 107 paragraph 2.6.</p> <p>In accordance with DMRB LA 107 paragraph 2.6, both day and night-time changes for landscape and visual receptors are considered.</p> <p>Effects relating to noise are included within Chapter 11: Noise and Vibration of this Environmental Statement (TR010064/APP/6.1). Effects relating to nature conservation are included within Chapter 8: Biodiversity of this Environmental Statement (TR010064/APP/6.1). The interrelationship of effects on human health is included within Chapter 12: Population and Human Health (TR010064/APP/6.1).</p> <p>Effects on aesthetic and perceptual qualities, including effects on dark skies and tranquillity, are acknowledged within the assessment of landscape effects.</p> <p>Figure 2.3: Environmental Masterplan of the Environmental Statement Figures (TR010064/APP/6.2) identifies mitigation measures to address adverse effects from a combination of environmental topics/aspects. Mitigation is described in Section 7.9 of this chapter and included in the Register of Environmental Actions and Commitments (REAC) contained within the First Iteration Environmental Management Plan (EMP) (TR010064/APP/6.5).</p>
5.147	<p><i>'Any statutory undertaker commissioning or undertaking works in relation to, or so as to affect land in a National Park or Areas of Outstanding Natural Beauty, would need to comply with the respective duties in section 11A of the National Parks and Access to Countryside Act 1949 and section 85 of the Countryside and Rights of Way Act 2000.'</i></p>	<p>As stated in paragraph 7.7.3 of this chapter, there are no nationally designated National Parks or National Landscapes (formerly known as Areas of Outstanding Natural Beauty (AONBs)) within 5km of the Scheme.</p>

Paragraph reference	Applicant's assessment / mitigation requirement	How this is addressed in the assessment
5.148	<i>'For significant road widening or the building of new roads in National Parks and the Broads applicants also need to fulfil the requirements set out in Defra's English national parks and the broads: UK government vision and circular 2010 or successor documents. These requirements should also be complied with for significant road widening or the building of new roads in Areas of Outstanding Natural Beauty.'</i>	As stated in paragraph 7.7.3 of this chapter, there are no nationally designated National Parks or National Landscapes (formerly known as AONBs) within 5km of the Scheme.
5.159	<i>'Reducing the scale of a project or making changes to its operation can help to avoid or mitigate the visual and landscape effects of a proposed project. However, reducing the scale or otherwise amending the design or changing the operation of a proposed development may result in a significant operational constraint and reduction in function. There may, be exceptional circumstances, where mitigation could have a very significant benefit and warrant a small reduction in scale or function. In these circumstances, the Secretary of State may decide that the benefits of the mitigation to reduce the landscape effects outweigh the marginal loss of scale or function.'</i>	To avoid, reduce or remediate (offset) potential effects on the landscape, embedded mitigation measures and essential mitigation measures for this aspect have been developed as presented within Section 7.9 of this chapter. Further design considerations and landscape objectives have been defined as part of an overarching set of Scheme-specific design principles presented within Section 2.2 of the Chapter 2: The Scheme of this Environmental Statement (TR010064/APP/6.1), which have been used to inform development of the Scheme design, including both the highway alignment and Figure 2.3: Environmental Masterplan of the Environmental Statement Figures (TR010064/APP/6.2). Further details regarding the Scheme design principles can be found in the Scheme Design Report (TR010064/APP/7.6).
5.160	<i>'Adverse landscape and visual effects may be minimised through appropriate siting of infrastructure, design (including choice of materials), and landscaping schemes, depending on the size and type of proposed project. Materials and designs for infrastructure should always be given careful consideration'</i>	

Paragraph reference	Applicant's assessment / mitigation requirement	How this is addressed in the assessment
5.161	<i>'Depending on the topography of the surrounding terrain and areas of population it may be appropriate to undertake landscaping off-site, although if such landscaping was proposed to be consented by the development consent order, it would have to be included within the order limits for that application. For example, filling in gaps in existing tree and hedge lines would mitigate the impact when viewed from a more distant vista'.</i>	All landscape mitigation, presented within Section 7.9 of this chapter and included in the REAC contained within the First Iteration EMP (TR010064/APP/6.5), is incorporated within the extents of the Order Limits.

Draft National Policy Statement for National Networks

7.3.5 The Government has published a draft replacement of the NPS NN in March 2023 (DfT, 2023). The consultation closed in June 2023 and the draft NPS NN has not yet been designated. However, it is potentially capable of being an important and relevant consideration in the decision-making process. The Environmental Statement continues to reference the 2014 NPS NN though, as it remains the relevant Government policy. Notwithstanding that position, Table 7.3 summarises the policy requirements from the draft NPS NN relating to the applicant's assessment and mitigation requirements for landscape and visual and how these have been addressed in the assessment. There are no substantial changes to requirements in the draft NPS NN for landscape and visual. See also the Draft NPS NN Accordance Tables (TR010064/APP/7.3) for an assessment of the Scheme's compliance with the draft NPS NN.

Table 7.3 Draft NPS NN requirements for landscape and visual

Paragraph reference	Applicant's assessment / mitigation requirement	How this is addressed in the assessment
5.153	<p><i>'The applicant should carry out a landscape and visual impact assessment. A number of guides have been produced to assist in addressing landscape issues. The landscape and visual assessment for the proposed project should include the impacts during construction and operation, and reference to any operational landscape character assessment and associated studies. The applicant's assessment should also take account of any relevant policies based on these assessments in local development documents in England. For seascapes, applicants should consult the Seascape Character Assessment and the Marine Plan Seascape Character Assessments, and any successors to them.'</i></p>	<p>The LVIA considers likely significant landscape and visual effects within Section 7.10 of this chapter.</p> <p>Section 7.10 of this chapter considers likely significant landscape effects during both construction and operation as required in DMRB LA 107 paragraph 2.6.</p> <p>The assessment of landscape effects has been made on LCAs defined within the Greater Manchester Landscape Character and Sensitivity Assessment (GMCA, 2018).</p> <p>An assessment of townscape effects has been made on townscape areas defined by the competent expert for landscape and visual assessment following the Bury UDP (1997) Policy.</p> <p>The Bury UDP (1997) Policy EN9/1 Special Landscape Area is within LCA 26: Prettywood, Pilsworth and Unsworth Moss. The Special Landscape Area policy requirements and NPS NN requirements to address locally highly valued landscapes are addressed below in paragraphs 5.167 and 5.169.</p>

Paragraph reference	Applicant's assessment / mitigation requirement	How this is addressed in the assessment
5.154	<p><i>'The assessment should include the visibility and conspicuousness of the project during construction and of the presence and operation of the project, potential impacts on views (including protected views) and visual amenity. This should include any noise and light pollution effects, including on local amenity, tranquillity, and nature conservation. The assessment should also demonstrate how noise and light pollution from construction and operational activities on residential amenity and on sensitive locations, receptors, and views will be minimised.'</i></p>	<p>Zones of Theoretical Visibility (ZTVs) have been modelled for the LVIA. These are shown on Figure 7.1: ZTV and Figure 7.2: ZTV with Screening Features of the Environmental Statement Figures (TR010064/APP/6.2). Section 7.10 of this chapter considers likely significant visual effects during both construction and operation, as required in DMRB LA 107 paragraph 2.6. In accordance with DMRB LA 107 paragraph 2.6, both day and night-time changes for landscape and visual receptors are considered.</p> <p>Effects relating to noise are included within Chapter 11: Noise and Vibration of this Environmental Statement (TR010064/APP/6.1). Effects relating to nature conservation are included within Chapter 8: Biodiversity of this Environmental Statement. The interrelationship of effects on human health is included within Chapter 12: Population and Human Health (TR010064/APP/6.1).</p> <p>Effects on aesthetic and perceptual qualities, including effects on local amenity and tranquillity, are acknowledged within the assessment of landscape and visual effects. Measures to reduce these effects are described in Section 7.9 of this chapter and included in the REAC, contained within the First Iteration EMP (TR010064/APP/6.5).</p> <p>Figure 2.3: Environmental Masterplan of the Environmental Statement Figures (TR010064/APP/6.2) indicates mitigation measures to address adverse effects from a combination of environmental topics/aspects.</p>

Paragraph reference	Applicant's assessment / mitigation requirement	How this is addressed in the assessment
5.155	<p><i>'Any statutory undertaker commissioning or undertaking works in relation to, or so as to affect land in England's National Parks and the Broads, or Area of Outstanding Natural Beauty, would need to comply with the respective duties in section 11A of the National Parks and Access to Countryside Act 1949, and section 85 of the Countryside and Rights of Way Act 2000. The policy paper titled English national parks and the broads: UK government vision and circular 2010 states that major development in or adjacent to the boundary of a National Park, Area of Outstanding Natural Beauty or the Broads can have a significant impact on the qualities for which they were designated. Government planning policy advises that major development should not take place within them apart from exceptional circumstances. For significant road widening or the building of new roads or railways in England's National Parks and the Broads or Area of Outstanding Natural Beauty, applicants also need to fulfil the requirements set out in circular 2010 or successor documents. Management Plans should also be considered for National Parks and Area of Outstanding Natural Beauty, especially on identified special qualities of the area and any proposals for enhancement.'</i></p>	<p>As stated in paragraph 7.7.3 of this chapter, there are no nationally designated National Parks or National Landscapes (formerly known as AONBs) within 5km of the Scheme.</p>

Paragraph reference	Applicant's assessment / mitigation requirement	How this is addressed in the assessment
5.156	<i>'The scale of a project should be minimised to avoid or mitigate the visual and landscape effects, during construction and operation, so far as is possible while maintaining the operational requirements of the scheme. In exceptional circumstances a reduction in operational requirements might be warranted, and the Secretary of State may decide that the benefits to reduce the landscape effects outweigh the marginal loss of scale or function.'</i>	<p>Section 3.4 of Chapter 3: Assessment of Alternatives of this Environmental Statement (TR010064/APP/6.1) describes the process of changes to the highway design and benefits of change to the design.</p> <p>To avoid, reduce or remediate (offset) potential effects on the landscape, embedded mitigation measures and essential mitigation measures for this aspect have been developed, as presented within Section 7.9 of this chapter and included in the REAC, contained within the First Iteration EMP (TR010064/APP/6.5).</p>
5.157	<i>'Projects need to be designed carefully, taking account of the potential impact on the landscape.'</i>	<p>Figure 2.3: Environmental Masterplan of the Environmental Statement Figures (TR010064/APP/6.2)) indicates mitigation measures to address adverse effects from a combination of environmental topics/aspects.</p>
5.158	<i>'Adverse landscape and visual effects may be minimised through appropriate siting of infrastructure, design (including choice of materials), and topographical interventions (for example, creation of bunds or lowering of ground level). Also, landscaping schemes (including screening options and design elements that soften the built form such as green or brown roofs, or living walls), depending on the size and type of the proposed project. Materials and designs for infrastructure should always be given careful consideration in terms of environmental standards.'</i>	<p>Further design considerations and landscape objectives have been defined as part of an overarching set of Scheme-specific design principles presented within Section 2.2 of Chapter 2: The Scheme of this Environmental Statement (TR010064/APP/6.1), which have been used to inform development of the Scheme design, including both the highway alignment and Figure 2.3: Environmental Masterplan of the Environmental Statement Figures (TR010064/APP/6.2).</p>

Paragraph reference	Applicant's assessment / mitigation requirement	How this is addressed in the assessment
5.159	<i>'Depending on the topography of the surrounding terrain and areas of population, it may be appropriate to undertake landscaping off-site, although if such landscaping was proposed to be consented by the Development Consent Order, it would have to be included within the order limits for that application. For example, filling in gaps in existing tree and hedge lines would mitigate the impact when viewed from a more distant vista.'</i>	All landscape mitigation, presented within Section 7.9 of this chapter and included in the REAC, contained within the First Iteration EMP (TR010064/APP/6.5), is incorporated within the extents of the Order Limits and no off-site landscaping is required.
5.160	<i>'Applicants should consider how landscapes can be enhanced using landscape management plans, as this will help to enhance environmental assets where they contribute to landscape and townscape quality, and can reinforce or enhance landscape features and character.'</i>	An Outline Landscape and Ecology Management Plan (OLEMP) is included in Appendix N of the First Iteration EMP (TR010064/APP/6.5). The OLEMP has been prepared to help ensure the protection and management of landscape and ecological features, such as vegetation and habitats, during construction of the Scheme and the successful establishment of landscape and ecological mitigation including planting and seeding associated with the Scheme. The OLEMP would be updated to a Landscape and Ecology Management Plan (LEMP) by the Principal Contractor and included within the Second Iteration EMP, as appropriate and necessary, prior to commencement of works in accordance with Requirement 4 of the draft DCO (TR010064/APP/3.1).

Other relevant policy

7.3.6 In addition to the NPS NN, other relevant policy has been reviewed as part of the LVIA. Table 7.4 sets out policy relevant to this aspect and how these have been considered or addressed.

Table 7.4 Other national, regional and local policy relevant to landscape and visual

Plan / Policy document	Key requirements and objectives	How this has been considered/addressed in the assessment
National		
<p>National Planning Policy Framework (NPPF) (Department for Levelling Up, Housing and Communities (DLUHC), 2023).</p> <p>The NPPF sets out the Government's planning policies for England and how these should be applied.</p>	<p>Paragraph 15.174 states that, '<i>Planning policies and decisions should contribute to and enhance the natural and local environment by: a) protecting and enhancing valued landscapes.</i>'</p>	<p>Section 7.9 of this chapter sets out the embedded and essential mitigation measures to reduce the impacts on the Special Landscape Area (Bury UDP (1997) Policy EN9/1). The Scheme has been carefully sited and designed so as not to have any serious detrimental effects on surrounding areas, buildings and views, or create built skyline ridges.</p>
<p>National Planning Policy Guidance (NPPG): Natural Environment (DLUHC and Ministry of Housing, Communities and Local Government (MHCLG), 2016, updated 2019).</p> <p>The NPPG provides guidance on how planning can take into account the consideration of landscape.</p>	<p><u>How can planning policies conserve and enhance landscapes?</u></p> <p>The NPPF is clear that plans should recognise the intrinsic character and beauty of the countryside, and that strategic policies should provide for the conservation and enhancement of landscapes. This can include nationally and locally-designated landscapes but also the wider countryside.</p> <p>Where landscapes have a particular local value, it is important for policies to identify their special characteristics and be supported by proportionate evidence. Policies may set out criteria against which proposals for development affecting these areas will be assessed. Plans can also include policies to avoid adverse impacts on landscapes and to set out necessary mitigation measures, such as appropriate design principles and visual screening, where necessary. The cumulative impacts of development on the landscape need to be considered carefully.</p>	<p>The assessment of landscape effects has been made on LCAs defined within the Greater Manchester Landscape Character and Sensitivity Assessment (GMCA, 2018).</p> <p>Section 7.9 of this chapter sets out the embedded and essential mitigation measures to reduce the impacts on the Special Landscape Area (Bury UDP (1997) Policy EN9/1). The Scheme has been carefully sited and designed so as not to have any serious detrimental effects on surrounding areas, buildings and views, or create built skyline ridges.</p>

Plan / Policy document	Key requirements and objectives	How this has been considered/addressed in the assessment
	<p><u>How can the character of landscapes be assessed</u></p> <p>To help assess the type and scale of development that might be able to be accommodated without compromising landscape character, a Landscape Sensitivity and Capacity Assessment can be completed.</p> <p>To demonstrate the likely effects of a proposed development on the landscape, a Landscape and Visual Impact Assessment can be used.</p>	<p>The LVIA considers likely significant landscape effects within Section 7.10 of this chapter.</p> <p>The assessment of landscape effects has been made on LCAs defined within the Greater Manchester Landscape Character and Sensitivity Assessment (GMCA, 2018).</p> <p>An assessment of townscape effects has been made on townscape areas defined by the competent expert for landscape and visual assessment following the Townscape Character Assessment Technical Information Note 05/2017 (Landscape Institute, 2018).</p>
Regional and Local		
<p>Saved policies of the Bury UDP (Adopted August 1997)</p>	<p><u>Policy EN1/1: Visual Amenity</u></p> <p>Development will not be permitted where proposals would have a detrimental effect on:</p> <ul style="list-style-type: none"> • <i>'the visual amenity both within, or viewed from, areas of environmental interest such as the Green Belt, Special Landscape Areas or the river valleys'</i>. 	<p>Section 7.9 of this chapter sets out the embedded and essential mitigation measures to reduce the impacts on the Special Landscape Area (Bury UDP (1997) Policy EN9/1). The Scheme has been carefully sited and designed so as not to have any serious detrimental effects on surrounding areas, buildings and views, or create built skyline ridges.</p>

Plan / Policy document	Key requirements and objectives	How this has been considered/addressed in the assessment
	<p><u>Policy EN8: Woodland and Trees</u></p> <p>The Council will support and encourage new woodland and tree planting in the Borough. In considering development proposals, the Council will encourage the planting of hedges, trees and woodlands using locally native species.</p>	<p>Section 7.9 of this chapter sets out the embedded mitigation measures and essential mitigation measures included within the Scheme. Figure 2.3: Environmental Masterplan of the Environmental Statement Figures (TR010064/APP/6.2) shows the location of these measures within the Scheme. The environmental design includes planting of woodland, linear trees belts, hedgerows with hedgerow trees within the Order Limits to reflect the existing character and landscape pattern.</p>
	<p><u>Policy EN8/2: Woodland and Tree Planting</u></p> <p>The Council will support the retention of trees, woods, copses and hedgerows and encourage natural regeneration and new and replacement tree planting throughout the Borough.</p>	<p>An Arboricultural Impact Assessment (AIA) (Appendix 7.5 of the Environmental Statement Appendices (TR010064/APP/6.3)) has been undertaken to BS: 5837 2012 Trees in relation to design, demolition and construction – Recommendation. An iterative process has been undertaken to refine the Scheme to avoid or prevent tree loss where practicable. The AIA has undertaken an assessment of trees, hedgerow and woodland within the Scheme, and includes a Tree Constraints Plan (Annex A) and Tree Removals Plan (Annex B). The AIA includes recommendations for tree protection measures during the construction phase.</p>

Plan / Policy document	Key requirements and objectives	How this has been considered/addressed in the assessment
		<p>Section 7.9 of this chapter sets out the embedded mitigation measures and essential mitigation measures included within the Scheme. Figure 2.3: Environmental Masterplan of the Environmental Statement Figures (TR010064/APP/6.2) shows the location of these measures within the Scheme. The environmental design includes planting of woodland, linear trees belts, hedgerows with hedgerow trees within the Order Limits to reflect the existing character and landscape pattern.</p>
	<p><u>Policy EN9: Landscape</u> The Council will seek to protect, conserve and improve the landscape quality of the Borough, and will encourage the enhancement of landscapes, where appropriate.</p>	<p>Section 7.9 of this chapter sets out the embedded mitigation measures and essential mitigation measures included within the Scheme. Figure 2.3: Environmental Masterplan of the Environmental Statement Figures (TR010064/APP/6.2) shows the location of these measures within the Scheme. The environmental design has been developed to improve integration of the existing M60 J18 junction layout and the Northern Loop, and includes planting of woodland, linear trees belts, hedgerows with hedgerow trees within the Order Limits to reflect the existing character and landscape pattern. New ponds and areas of wet woodland are also included.</p>

Plan / Policy document	Key requirements and objectives	How this has been considered/addressed in the assessment
		<p>An AIA (Appendix 7.5 of the Environmental Statement Appendices (TR010064/APP/6.3)) has been undertaken and an iterative process has been undertaken to refine the Scheme to avoid or prevent tree loss where practicable. The AIA has undertaken an assessment of trees, hedgerow and woodland within the Scheme, and includes a Tree Constraints Plan (Annex A) and Tree Removals Plan (Annex B). The AIA includes recommendations for tree protection measures during the construction phase.</p>
	<p><u>Policy EN9/1: Special Landscape Areas</u> In those areas identified on the Proposals Map as Special Landscape Areas, <i>'any development which is permitted will be strictly controlled and required to be sympathetic to its surroundings in terms of its visual impact. High standards of design, siting and landscaping will be expected. Unduly obtrusive development will not be permitted in such areas'</i>.</p>	<p>Section 7.9 of this chapter sets out the mitigation measures to reduce the impacts on the Special Landscape Area (Bury UDP (1997) Policy EN9/1). The Scheme has been carefully sited and designed so as not to have any serious detrimental effects on surrounding areas, buildings and views, or create built skyline ridges.</p>

7.4 Assessment methodology

Assessment scope

- 7.4.1 The scope of the LVIA is consistent with the scope defined in the Environmental Scoping Report (TR010064/APP/6.6), taking into consideration feedback received within the Scoping Opinion (TR010064/APP/6.7), as set out in Table 7.5.

Scoping Opinion

- 7.4.2 Table 7.5 summarises the key requirements from the Planning Inspectorate's Scoping Opinion (TR010064/APP/6.7) as relevant to the scope of the LVIA, and identifies any matters scoped out of the assessment as agreed with the Planning Inspectorate. This table also explains any changes to the assessment methodology as a result of this engagement.

Table 7.5 Scoping Opinion feedback for landscape and visual

Stakeholder	Comment	Response
Planning Inspectorate	<p><u>ID 4.3.1</u> – <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>	<p>It is noted that the Inspectorate agrees with scoping out of conservation areas beyond 2km.</p> <p>Detail on the conservation area study area for the cultural heritage assessment can be found at paragraph 6.6.3 of Chapter 6: Cultural Heritage of this Environmental Statement (TR010064/APP/6.1), which states that <i>‘After consultation with the competent expert for the landscape and visual assessment, it was recognised that significant effects on the value of heritage assets arising from changes to setting are unlikely beyond 1km, and this was confirmed by the landscape and visual ZTV, the site walkover survey and the landscape and visual assessment (see Chapter 7: Landscape and Visual of this Environmental Statement (TR010064/APP/6.1)). This indicated that no designated assets outside the 1km study area have any visual relationship with the Scheme.’</i></p>
	<p><u>ID 4.3.2</u> – <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>	<p>It is noted that the Inspectorate agrees that an assessment of effects on the night skies is not required.</p> <p>Following DMRB LA 107 paragraph 2.6, the LVIA competent experts have undertaken an assessment of the <i>‘potential effects of both day and night-time situations with or without the project’</i>. The assessment has considered the lighting baseline described in paragraph 7.7.20 of this chapter, and its influence on landscape character and visual amenity. The influence from vehicle headlights using the Scheme and operational lighting required are considered in the assessment of landscape and visual effects.</p>

Stakeholder	Comment	Response
	<p><u>ID 4.3.3</u> – ‘Figure 8.2 details that the Proposed development is partially located within an area of Green Belt, however the approach to the assessment of greenbelt is not referenced anywhere within Chapter 8 of the Scoping Report (other than paragraph 8.3.4). The Inspectorate considers that the effect of increased urbanisation / built form on the Green Belt should be considered within the ES.’</p>	<p>It is noted that the Inspectorate requires that Green Belt is considered within the Environmental Statement. The competent expert has acknowledged in the assessment of landscape character both the Green Belt designation and the effects of increased urbanisation on landscape character. As Green Belt is a policy designation rather than a landscape designation, it is assessed separately in the Chapter 6 of the Case for the Scheme (TR010064/APP/7.1).</p>
	<p><u>ID 4.3.4</u> – ‘Paragraph 8.4.11 of the Scoping Report identifies the loss of mature vegetation. The ES should clarify the definition of mature vegetation, and confirm whether any Ancient Woodland or veteran trees are to be affected by the Proposed Development (with cross reference to any arboricultural assessment) plus any assumptions made in that regard in relation to year 1 and year 15 assessments of effects. The legend on figure 8.2 shows sub-categories of woodland within “Existing Significant Woodland Belts”, there are no categories showing Ancient Woodland or veteran trees.’</p>	<p>It is noted that the Inspectorate requires clarity of the definition of ‘mature vegetation’.</p> <p>The competent expert has referred to the AIA (Appendix 7.5 of the Environmental Statement Appendices (TR010064/APP/6.3)) to inform the LVIA and Figure 2.3: Environmental Masterplan of the Environmental Statement Figures (TR010064/APP/6.2).</p> <p>Arboricultural mitigation measures intended to avoid, reduce or prevent impacts are described in the AIA (Appendix 7.5 of the Environmental Statement Appendices (TR010064/APP/6.3)), Section 7.9 of this chapter, and included in the REAC contained within the First Iteration EMP (TR010064/APP/6.5).</p>

Stakeholder	Comment	Response
		<p>The study area for the AIA (Appendix 7.5 of the Environmental Statement Appendices (TR010064/APP/6.3)) extends to 15m beyond the Order Limits to include the root protection area of trees outside the Order Limits. Chapter 3 of the AIA states that no trees are protected by a Tree Preservation Order (TPO) within the AIA study area. The Scheme does not overlap with conservation areas, which themselves provide protection to trees. The AIA study area contains no veteran trees, or registered ancient trees and none have been identified by this survey. The study area does not include areas of ancient woodland.</p>
	<p><u>ID 4.3.5</u> – <i>‘Justification should be provided as the validity of the assumption that the screening or filtering effect of existing vegetation outside the Proposed Development boundary will be as per its ‘current condition’, and at what point the ‘current condition’ will be defined for the purposes of the assessment. Whilst the Inspectorate appreciates that the management and retention of such vegetation is outside the control of the Applicant, key assumptions in this respect should be clearly set out such that the implications for the assessment of effects of the Proposed Development can be understood.’</i></p>	<p>It is noted that the Inspectorate requires clarity of the ‘current condition’ of vegetation cover and implications for the assessment of landscape and visual effects.</p> <p>The LVIA methodology describes the baseline date for the LVIA as winter and summer 2021 and winter and summer 2022, the year at which data gathering and site visits were undertaken to determine the ‘current condition’.</p> <p>Key assumptions regarding management and retention of vegetation outside the control of the Applicant are described in Section 7.5 of this chapter.</p> <p>Chapter 15: Assessment of Cumulative Effects of this Environmental Statement (TR010064/APP/6.1) has helped to determine potential change to the current and future baseline.</p>

Stakeholder	Comment	Response
<p>Natural England (Appendix 2 of the Scoping Opinion)</p>	<p><i>'Natural England would wish to see details of local landscape character areas mapped at a scale appropriate to the development site, any relevant management plans or strategies pertaining to the area. The EIA should include assessments of visual effects on the surrounding area and landscape together with any physical effects of the development, such as changes in topography.</i></p> <p><i>The EIA should include a full assessment of the potential impacts of the development on local landscape character using landscape assessment methodologies. We encourage the use of Landscape Character Assessment, based on the good practice guidelines produced jointly by the Landscape Institute and Institute of Environmental Assessment in 2013.'</i></p>	<p>The assessment of effects on landscape character has relied on LCAs defined within the Greater Manchester Landscape Character and Sensitivity Assessment (2018). An assessment of townscape effects has been made on townscape areas defined by the competent experts following the Townscape Character Assessment Technical Information Note 05/2017 (Landscape Institute, 2018).</p> <p>The LVIA describes the likely impacts on visual amenity in accordance with standards set out in DMRB LA 104 (Highways England, 2020b) and DMRB LA 107 (Highways England, 2020a).</p> <p>The LVIA describes the baseline character in Section 7.7 of this chapter and considers likely significant landscape and visual effects within Section 7.10 of this chapter.</p>

Stakeholder	Comment	Response
	<p><i>‘Natural England encourages all new development to consider the character and distinctiveness of the area, with the siting and design of the proposed development reflecting local design characteristics and, wherever possible, using local materials. The Environmental Impact Assessment process should detail the measures to be taken to ensure the building design will be of a high standard, as well as detail of layout alternatives together with justification of the selected option in terms of landscape impact and benefit.’</i></p>	<p>Design considerations and landscape objectives have been defined as part of an overarching set of Scheme-specific design principles presented within Section 2.2 of the Chapter 2: The Scheme of this Environmental Statement (TR010064/APP/6.1), which have been used to inform development of the Scheme design, including both the highway alignment and Figure 2.3: Environmental Masterplan of the Environmental Statement Figures (TR010064/APP/6.2). Further details regarding the Scheme design principles can be found in the Scheme Design Report (TR010064/APP/7.6).</p>
	<p><i>‘The assessment should also include the cumulative effect of the development with other relevant existing or proposed developments in the area. In this context Natural England advises that the cumulative impact assessment should include other proposals currently at Scoping stage. Due to the overlapping timescale of their progress through the planning system, cumulative impact of the proposed development with those proposals currently at Scoping stage would be likely to be a material consideration at the time of determination of the planning application.’</i></p>	<p>It is noted that Natural England requires an assessment of cumulative effects. Chapter 15: Assessment of Cumulative Effects of this Environmental Statement (TR010064/APP/6.1) helps to determine potential change to the current and future baseline.</p>
<p>Rochdale Borough Council (Appendix 2 of the Scoping Opinion)</p>	<p><i>‘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’ and that the Council ‘will make available any relevant information and provide direct feedback and correspondence with the applicant where this aids the preparation of the Environmental Statement.’</i></p>	<p>No further detailed responses have been received with regard to landscape and visual.</p>

Statutory consultation

- 7.4.3 All comments raised during the statutory consultation, as well as the Applicant's responses, are included in Annex Q of the Consultation Report Annexes (TR010064/APP/5.2). No responses were received from statutory bodies that would require consideration for the landscape and visual aspect.

General approach

- 7.4.4 The methodology for the LVIA complies with the requirements set out in DMRB LA 104 and DMRB LA 107.
- 7.4.5 The technical methodology detailing the LVIA approach is included in Appendix 7.1: LVIA Methodology of the Environmental Statement Appendices (TR010064/APP/6.3).
- 7.4.6 The LVIA comprises an assessment to identify likely significant effects based on the design described in Chapter 2: The Scheme of this Environmental Statement (TR010064/APP/6.1) and shown on Figure 2.2: Scheme Design of the Environmental Statement Figures (TR010064/APP/6.2), and survey information. A description of the Scheme components and the potential impacts on landscape as a resource, and people's views and visual amenity are included in Section 7.8 of this chapter.
- 7.4.7 Mitigation measures are described in Section 7.9 of this chapter. Figure 2.3: Environmental Masterplan of the Environmental Statement Figures (TR010064/APP/6.2) includes locations of embedded mitigation measures and essential mitigation measures that have been considered in the assessment of landscape and visual effects.

Zone of theoretical visibility

- 7.4.8 A ZTV has been generated for the LVIA (see Figure 7.1: ZTV of the Environmental Statement Figures (TR010064/APP/6.2)) and is modelled on the design shown on Figure 2.2: Scheme Design of the Environmental Statement Figures (TR010064/APP/6.2). The ZTV is based on a 'bare earth' scenario to illustrate the theoretical extent of visibility to 5km from the Order Limits. The ZTV has been prepared using digital terrain modelling to display the areas from which the Scheme would be theoretically visible.
- 7.4.9 Following requirements in DMRB LA 107 paragraph 3.35, a further ZTV has been generated and shown on Figure 7.2: ZTV with Screening Features of the Environmental Statement Figures (TR010064/APP/6.2). The ZTV with screening features incorporates buildings and significant woodland blocks to help demonstrate the potential screening effects of these existing features. Modelling for buildings has been derived from OS MasterMap, and woodland blocks from the National Forest Inventory Woodland Map. Further information describing how the ZTV has been used to inform the study area is described in Section 7.6. The methodology detailing the development of both ZTVs is included in Appendix 7.1: LVIA Methodology of the Environmental Statement Appendices (TR010064/APP/6.3).

Site surveys

- 7.4.10 Data gathered from site surveys in March 2021 and December 2022 (winter surveys) and September 2021 and October 2022 (summer surveys), together with aerial photography and Google Street View have been used to inform potential impacts. The winter survey data has enabled the assessment to be undertaken based on a worst-case situation when existing vegetation was not in leaf.

Landscape assessment

- 7.4.11 Landscape character assessments identify and describe the elements and features that make landscape distinctive by mapping and describing character types and mapping character areas.
- 7.4.12 Bury Metropolitan Borough Council and Rochdale Borough Council have produced Landscape Character Assessments which comprise a framework of Landscape Character Types (LCTs) and their component LCAs. However, the Greater Manchester Landscape Character and Sensitivity Assessment (GMCA, 2018) covers the whole of the Greater Manchester Combined Authority. It consolidates previously published Landscape Character Assessments into a single assessment with continuity across district boundaries which provides a baseline to inform the analysis of landscape. The Greater Manchester Landscape Character and Sensitivity Assessment (GMCA, 2018) divides the Greater Manchester area into a series of LCTs, and within these are smaller and recognisable units of character described as LCAs.
- 7.4.13 LCTs are typically more uniform units of landscape with a distinct and recognisable pattern of elements that occur consistently throughout the LCT. They provide a spatial framework for landscape character and can occur in more than one geographical location. Their component LCAs are more place-specific and generally only occur in one distinct geographical location. LCTs often include a number of distinct LCAs.
- 7.4.14 The assessment of landscape effects has, therefore, been made on the local LCAs. LCTs have been excluded from this assessment due to their broader geographical extent and occurrence across multiple geographical locations.
- 7.4.15 The Greater Manchester Landscape Character and Sensitivity Assessment (GMCA, 2018) provides detail of the typical characteristics found within the LCTs and has typically not provided characteristics for each of the component LCAs. Therefore, this landscape character assessment has drawn on characteristics described for the broader LCTs that are relevant to each LCA and informed by desk study and field surveys conducted in 2021 and 2022.
- 7.4.16 The LVIA study area (see Section 7.6 of this chapter for further details regarding the LVIA study area) extends over the local planning authority areas of Bury Metropolitan Borough Council, Rochdale Borough Council and Manchester City Council. The majority of the study area is within the administration of Bury Metropolitan Borough Council.

- 7.4.17 The extent to which the published documents are representative of the assessment areas has been considered during field surveys and the description of the LCAs are consistent with judgements made and are appropriate for the assessment of landscape effects.
- 7.4.18 A list of the relevant LCAs within the assessment areas is provided in Section 7.7 of this chapter. For full details of the LCAs, refer to Appendix 7.2: Landscape and Townscape Character Baseline and Sensitivity Assessment of the Environmental Statement Appendices (TR010064/APP/6.3) and Figure 7.4: Landscape and Townscape Character Areas of the Environmental Statement Figures (TR010064/APP/6.2).
- 7.4.19 In line with DMRB LA 107, the effect on the constituent landscape/townscape features and elements/components of the LCAs and TCAs, such as trees, woods, hedgerows, hedgerow trees, landform and landscape/townscape pattern, are considered in combination as part of the effects on landscape/townscape character and not on the individual components. The assessment of impacts on perceptual and aesthetic aspects, is also considered in the assessment of impacts on landscape character and townscape character.

Local townscape character assessments

- 7.4.20 TCAs are described in GLVIA3 as '*the landscape within the built-up area, including the buildings, the relationship between them, the different types of urban open spaces, including green spaces and the relationship between buildings and open spaces.*' There are no published townscape character assessments for the study area. Therefore, a desk-based townscape character assessment with verification on site has been undertaken for the parts of the study area not within an LCA and described in Appendix 7.2: Landscape and Townscape Character Baseline and Sensitivity Assessment of the Environmental Statement Appendices (TR010064/APP/6.3).
- 7.4.21 The townscape character assessment has been informed by GLVIA3, An Approach to Landscape Character Assessment (Natural England, 2014), and the Townscape Character Assessment Technical Information Note 05/2017 (Landscape Institute, 2018).
- 7.4.22 The townscape baseline is described in Section 7.7 of this chapter. The assessment of townscape effects is described in Section 7.10 of this chapter. For full details of the townscape character areas, refer to Appendix 7.2: Landscape and Townscape Character Baseline and Sensitivity Assessment of the Environmental Statement Appendices (TR010064/APP/6.3) and Figure 7.4: Landscape and Townscape Character Areas of the Environmental Statement Figures (TR010064/APP/6.2).

Visual assessment

- 7.4.23 The assessment of visual effects is based on a selection of representative viewpoints for different receptor types within the study area. DMRB LA 107 paragraph 3.32 defines representative viewpoints as '*represent[ing] the experience of different types of visual receptors, where large numbers of viewpoints cannot be included individually, with similar (unlikely to differ) significant effects.*'

- 7.4.24 Representative viewpoints have been selected through a review of the ZTV mapping shown on Figure 7.1: ZTV and Figure 7.2: ZTV with Screening Features of the Environmental Statement Figures (TR010064/APP/6.2), a study of aerial photography, topographical mapping and winter and summer field surveys.
- 7.4.25 The visual impact assessment does not identify effects on every potential individual receptor, and the number and locations of representative viewpoints are considered appropriate for the nature of likely effects. Where representative viewpoints are located close to receptors of varying sensitivities, an assessment of each receptor type has been undertaken to establish the effects where it is considered that the view would differ.
- 7.4.26 Representative viewpoint locations are shown on Figure 7.5: Representative Viewpoints and Photomontage Locations of the Environmental Statement Figures (TR010064/APP/6.2).

Photomontages

- 7.4.27 Photomontages have been prepared in accordance with the Visual Representation of Development Proposals Technical Guidance Note 06/19 (TGN 06/19) (Landscape Institute, 2019).
- 7.4.28 The type of photomontage, or visualisation, considered both appropriate and proportionate is Type 3, as defined in TGN 06/19 (Landscape Institute, 2019). This type of visualisation is suggested to offer an appropriate level of detail and accuracy for a range of EIA projects. TGN 06/19 (Landscape Institute, 2019) paragraph 4.4.3 states that, '*Type 3 visualisations are intended to represent design, form and context to a reasonable degree of objectivity and accuracy, one which can be understood and relied on by competent authorities and others.*' The Type 3 visualisations include an indication of the mitigation for the Scheme. A detailed methodology is provided in Appendix 7.1: LVIA Methodology of the Environmental Statement Appendices (TR010064/APP/6.3).
- 7.4.29 Photomontage locations have been selected where a visualisation would help understand a complex changed view or the change in view is difficult to fully describe. Locations also represent views from a range of receptor types and view locations. Table 7.7 in Section 7.7 of this chapter summarises the selected representative viewpoints and photomontage locations. Representative viewpoints and photomontage locations are shown on Figure 7.5: Representative Viewpoints and Photomontage Locations of the Environmental Statement Figures (TR010064/APP/6.2).

Assessment criteria and assessment timeframes

- 7.4.30 In accordance with DMRB LA 104 paragraphs 3.23 to 3.24.2, the magnitude of effects and significance of effect have been assessed taking into consideration the embedded and essential mitigation measures described in Section 7.9 of this chapter.

Value (sensitivity) of receptors

- 7.4.31 Landscape sensitivity (susceptibility and value) has been assigned to receptors according to the typical descriptions outlined in DMRB LA 107 Table 3.22. Table 3.22 is reproduced in Table 1.1 of Appendix 7.1: LVIA Methodology of the Environmental Statement Appendices (TR010064/APP/6.3).
- 7.4.32 Visual sensitivity (susceptibility and value) has been assigned to receptors according to the typical descriptions outlined in DMRB LA 107 Table 3.41. Table 3.41 is reproduced in Table 1.2 of Appendix 7.1: LVIA Methodology of the Environmental Statement Appendices (TR010064/APP/6.3).
- 7.4.33 Note that DMRB LA 104, Table 3.2N Environmental value (sensitivity) and descriptions, describes the value (sensitivity) of a receptor/resource for determining sensitivity. DMRB LA 107, Table 3.22 Landscape sensitivity (value) and typical descriptions, describes landscape 'sensitivity' by incorporating judgements on 'value' and 'susceptibility'. The sensitivity criteria described in LA 107 Table 3.22 is referred to for the LVIA.

Magnitude of effect (change)

- 7.4.34 Magnitude of effect (change) on landscape receptors has been assessed according to the typical descriptions outlined in Table 3.24 from DMRB LA 107. Table 3.24 is reproduced in Table 1.3 of Appendix 7.1: LVIA Methodology of the Environmental Statement Appendices (TR010064/APP/6.3).
- 7.4.35 Magnitude of effect (change) on visual receptors has been assessed according to the typical descriptions outlined in Table 3.43 from DMRB LA 107. Table 3.43 is reproduced in Table 1.4 of Appendix 7.1: LVIA Methodology of the Environmental Statement Appendices (TR010064/APP/6.3).

Significance of effect

- 7.4.36 Significance of effect is derived by combining the sensitivity (value and susceptibility) of a receptor and the magnitude of effect (change) (described as magnitude of impact in DMRB LA 104 Table 3.8.1) on the receptor.
- 7.4.37 The significance matrix used for the landscape and visual assessment can be found at Table 1.5 in Appendix 7.1: LVIA Methodology of the Environmental Statement Appendices (TR010064/APP/6.3). The significance matrix is consistent with the significance matrix in DMRB LA 104, but includes the minor amendments suggested in DMRB LA 107. The significance matrix has been used to assist professional judgement when determining the likely significance of landscape and visual effects. DMRB LA 107 paragraph 3.27 states that '*significant effects comprise of effects that are/remain within the moderate, large or very large categories once design development has identified the necessary mitigation to be taken into account.*'
- 7.4.38 The descriptions for significance set out in DMRB LA 104 Table 3.7 is applied to the Scheme. Table 3.7 is reproduced in Table 1.6 of Appendix 7.1: LVIA Methodology of the Environmental Statement Appendices (TR010064/APP/6.3).

- 7.4.39 Landscape and visual effects have been assessed at the following timeframes, in accordance with DMRB LA 107 paragraphs 3.19 and 3.42, to consider the magnitude of effect (change) during construction, at year 1 (Opening Year, assumed to be 2029) and year 15 (Design Year, assumed to be 2044) including summer and winter, and considers the day and night-time scenarios:
- Construction phase: Considers construction activities, temporary works (including compounds and haul roads) and construction traffic during the construction period. Assessments for each landscape and visual receptor considers a worst-case scenario at a time of peak construction activity when there is likely to be the greatest change for an individual receptor. The assessment of effects during construction has assumed the worst-case during winter, when existing vegetation is not in leaf.
 - Operation year 1 (Opening Year): Considers impacts on a winter's day during year 1 following completion of all construction, but before mitigation planting would have sufficiently established to provide landscape integration or visual screening, or both. Other vegetation, which may interrupt, filter or otherwise influence the view is considered in the assessment of effects including the seasonal differences in summer with foliage when views tend to be more enclosed. The completed Scheme and traffic using the Scheme is considered.
 - Operation year 15 (Design Year): Considers the impacts on a summer's day in the fifteenth year after opening, when mitigation planting becomes sufficiently established to provide beneficial integration and screening. Other vegetation, which may interrupt, filter or otherwise influence the view is considered in the assessment of effects including the seasonal differences in winter without foliage when views tend to be more open. Both the completed Scheme and the traffic using it is considered.
- 7.4.40 The LVIA includes a brief assessment of '*both day and night-time situations with or without the project*', in accordance with DMRB LA 107 paragraph 2.6. The assessment is based on information on the lighting design described in Section 2.5 of Chapter 2: The Scheme of this Environmental Statement (TR010064/APP/6.1).

Arboricultural impact assessment

- 7.4.41 Arboricultural surveys were carried out between July 2021 and February 2022.
- 7.4.42 The NPPF (DLUHC, 2023) gives ancient and veteran trees the same status as Ancient Woodland (i.e. loss of irreplaceable habitat). An AIA (Appendix 7.5 of the Environmental Statement Appendices (TR010064/APP/6.3)) has been undertaken following BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations (British Standards Institution, 2012). The findings from the surveys and assessment have guided the design, aiming for retention of tree features, where practicable, that might be directly affected by the Scheme. The findings have also determined if trees would meet the criteria to be included in the Ancient Tree Inventory (Woodland Trust's web-based database).

- 7.4.43 Tree data has been collected following the guidance of BS 5837:2012 with a focus on ancient, veteran and notable tree features. The full AIA methodology is included in Appendix 7.5: AIA of the Environmental Statement Appendices (TR010064/APP/6.3).
- 7.4.44 The Ancient Tree Inventory includes a small number of notable trees within Philips Park, although these are located approximately 600m outside the Order Limits and would not be affected by the Scheme. With regard to local planning policy, Policy EN8 – Woodland and Trees (Bury UDP) states that it *'will support the retention of trees, woodland, copses and hedgerows'*.
- 7.4.45 The AIA (Appendix 7.5: AIA of the Environmental Statement Appendices (TR010064/APP/6.3)) includes a Tree Removal Plan (Annex A) and a Tree Constraints Plan (Annex B).

7.5 Assessment assumptions and limitations

- 7.5.1 Assessment of receptors and viewpoints has been undertaken from publicly accessible areas (e.g. the road network, a public footpath or a public open space). It would be impractical to visit all residential properties that might be affected and is considered appropriate, following Landscape Institute guidance. Descriptions of baseline views and the assessment of changes to views from private and inaccessible viewpoints, including upper storey views from properties and Pike Fold Golf Course, has therefore been made using the professional judgement of the competent expert, based on an assessment from a nearby publicly accessible location.
- 7.5.2 The change in views from within Pike Fold Golf Course has been assessed from two locations outside its boundary. There are certain locations where effects might be higher due to closer proximity, or less noticeable due to distance to the Scheme or intervening vegetation. The assessment of the two locations in Section 7.10 therefore reflects the range of visual change that is likely to occur from within the golf course.
- 7.5.3 Visual effects tend to diminish with distance. Where a receptor, such as the user of a PRoW, could view the Scheme from a range of distances, the assessment of visual effects likely to be experienced is generally based on the worst-case situation. This may vary depending on the existing views that include the road or more distant views which may be impacted by a larger area of new road infrastructure. Viewpoint locations from footpaths have been selected to consider both scenarios.
- 7.5.4 The assessment of effects during construction has been based on the construction information included in Section 2.6 of Chapter 2: The Scheme of this Environmental Statement (TR010064/APP/6.1) and shown on Figure 2.4: Temporary Works of the Environmental Statement Figures (TR010064/APP/6.2), and has included consideration of information such as locations of compounds, temporary working areas, storage areas and haulage routes.

- 7.5.5 The screening or filtering effect of existing vegetation within the study area has been taken into account when reviewing baseline characteristics and people's views. Growth or other changes to this vegetation would potentially alter the baseline conditions. However, the management and retention of existing vegetation is outside the control of the Applicant. The evolving design over time has meant that the baseline view for visual receptors is described either for winter 2021 or for winter 2022.
- 7.5.6 Conservation areas are scoped out of the assessment. The conservation areas are located away from the Scheme, within dense urban areas, and would not be influenced by the Scheme (see Chapter 6: Cultural Heritage of this Environmental Statement (TR010064/APP/6.1) for further details regarding conservation areas).
- 7.5.7 Trees and groups of trees protected by TPOs that are located more than 15m beyond the Order Limits would not be affected and are also scoped out of the assessment. Refer to Appendix 7.5: AIA of the Environmental Statement Appendices (TR010064/APP/6.3).
- 7.5.8 The Bury Metropolitan Borough Council Landscape Character Assessment and the Rochdale Borough Council Landscape Character Assessment have also been scoped out as the Greater Manchester Landscape Character and Sensitivity Assessment (GMCA, 2018) consolidates previously published Landscape Character Assessments for GMCA.
- 7.5.9 Developments considered as part of the future baseline are described in the 'Future baseline' section of Section 7.7, and include all development that could potentially influence future character or people's views. Following a review of the other reasonably foreseeable developments included in the longlist of other developments for the cumulative effects assessment (see Chapter 15: Assessment of Cumulative Effects of this Environmental Statement (TR010064/APP/6.1) for further details) for consideration in the future baseline some have not been included where the development is not guaranteed to be built or detail is unavailable. This occurs where details are in outline and the design, form and layout, and date of completion of future development is unknown, as this makes it difficult to accurately incorporate in the assessment of landscape and visual effects. Bury Metropolitan Borough Council's site allocations sets out specific policy for sites where development might go ahead. However, site allocations are not considered as no detail is typically available.
- 7.5.10 Where development has been approved, it has largely been assumed that the development would be *in situ* at all assessment timeframes. Where it is likely that construction would coincide with the construction and operation of the Scheme, assumptions have been made on the status of development at each of the assessment timeframes.

- 7.5.11 The assessment has assumed that all temporary works areas shown on Figure 2.4: Temporary Works of the Environmental Statement Figures (TR010064/APP/6.2) are to be made good by the contractor to the existing condition, as determined by the Applicant. This also includes reinstatement of garden trees and plants for 1 to 19 Barnard Avenue (odd numbers) and 79 Warwick Avenue. For the purposes of the assessment, it is assumed that new plants would be of a similar size to those planted elsewhere within the Scheme and would establish to provide similar levels of filtering or screening of the motorway by year 15 of operation as before the Scheme.
- 7.5.12 This assessment has been undertaken for the Scheme design (as shown on Figure 2.2: Scheme Design of the Environmental Statement Figures (TR010064/APP/6.2)) and assumes a reasonable worst-case basis afforded 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). While the limits of deviation (as shown on the Works Plans (TR010064/APP/2.2)) could potentially result in slightly reduced land available for mitigation planting, professional judgement by the competent expert for the LVIA concludes that moving the road or other road infrastructure within the limits of deviation would not affect predicted likely significant effects reported in this assessment.
- 7.5.13 The viewpoint photos shown on Figure 7.6: Representative Viewpoint Photosheets of the Environmental Statement Figures (TR010064/APP/6.2) were taken during a number of visits and every effort was made to revisit the exact location and represent the same view in winter and summer. COVID-19 restrictions and parked vehicles have occasionally restricted access to locations although professional judgement and review of similar photo locations has been used to reasonably reflect the level of change that might occur.

7.6 Study area

- 7.6.1 DMRB LA 107 paragraph 3.11 (abbreviated here) states that the study area for the landscape aspect should be '*proportionate*' in terms of the '*project boundary*', '*wider landscape setting*', '*extent of the area visible*' and '*the full extent of adjacent or affected landscape receptors of special value*'.
- 7.6.2 DMRB LA 107 paragraph 3.31 (abbreviated here) states that the study area for the visual aspect should be '*proportionate*' in terms of the '*project/construction visual footprint*', '*the wider visual envelope*', '*the extent of representative viewpoints visible*', and '*the extent of adjacent or affected visual receptors and the visual amenity of the area*'.

- 7.6.3 The overarching study area for the Scheme has initially covered a radius up to 5km from the Order Limits. This distance includes the more defined topographical features at a higher elevation within the wider area, the extent of directly affected LCAs and the extent of the Special Landscape Area (Bury UDP (1997) Policy EN 9/1) (hereafter named Special Landscape Area). The 5km radius also considers the potential for views of the Scheme, the nature of the Scheme, the lack of tall structures and its context with similar developments and infrastructure. Desk-based study, including interrogation of topographic mapping, determining the extents of urban areas and significant woodland, and including highway woodland belts has also been considered in the identification of the initial 5km study area.
- 7.6.4 Through site work and review of the ZTVs in Figure 7.1: ZTV and Figure 7.2: ZTV with Screening Features of the Environmental Statement Figures (TR010064/APP/6.2), it was found that topography, vegetation and built form limit the influence of the Scheme and the study area reduced to 2km from the Order Limits (as stated in paragraphs 8.2.10 and 8.2.11 of the Environmental Scoping Report (TR010064/APP/6.6)).
- 7.6.5 To the north and east of the study area, areas within the very gently rising landform to the north of Pilsworth Road and Moss Hall Road, near the Heywood Distribution Centre are mostly screened by intervening gently undulating topography, belts of vegetation and intervening buildings. Topography and vegetation similarly screen views from areas east of Moss Hall Lane and Whittle Lane in the vicinity of the Birch Industrial Park.
- 7.6.6 To the south and east of the M62 areas around Simister, Middleton West and Langley are at a slightly higher elevation than the M62 although dense intervening belts of vegetation, including along the M60 corridor typically screen views to and from the M60 J18 and motorway network.
- 7.6.7 To the south and west of the study area, west of M60 and M60 J18, the relatively flat landform and the density of residential housing and other buildings within Prestwich, Whitefield and Unsworth limits the existing motorway infrastructure. Occasional short or medium distance views are available across the pastoral landscape in the vicinity of M60 J18.

7.7 Baseline conditions

Baseline sources

- 7.7.1 The following sources have been used to inform the baseline:
- NPPF (DLUHC, 2023)
 - Adopted Bury UDP (Bury Metropolitan Borough Council, 1997)
 - Greater Manchester Landscape Character and Sensitivity Assessment (GMCA, 2018)
 - England's Light Pollution and Dark Skies (Campaign for the Protection of Rural England (CPRE), 2019)
 - Tranquillity Map England (CPRE, 2007)

- Multi-Agency Geographic Information for the Countryside (MAGIC) (Department for Environment, Food and Rural Affairs (Defra), 2023)
- Ancient Tree Inventory (Woodland Trust, 2021).

Baseline conditions

7.7.2 Key designations and features relevant to landscape and visual effects are illustrated on Figure 7.3: Key Landscape Designations and Features of the Environmental Statement Figures (TR010064/APP/6.2).

National Parks and National Landscapes

7.7.3 There are no nationally designated National Parks or National Landscapes (formerly known as AONBs) within 5km of the Scheme.

Green Belt

7.7.4 A large proportion of the study area is located within the Green Belt, as defined in the Bury UDP (1997) Policy OL1 Green Belt. The purpose of Green Belt, as set out in the NPPF (DLUHC, 2023) paragraph 138, is *'to check the unrestricted sprawl of large built-up areas'* seeking *'to assist in safeguarding the countryside from encroachment'* including the maintenance of open character.

7.7.5 The LVIA acknowledges in the assessment of landscape character both the Green Belt designation and the effects of increased urbanisation on landscape character. As Green Belt is a policy designation rather than a landscape designation, it is assessed separately in Chapter 6 of the Case for the Scheme (TR010064/APP/7.1).

Special Landscape Area

7.7.6 A local landscape designation is identified in the Bury UDP (1997) as a Special Landscape Area. Policy EN9/1 states that, *'any development which is permitted will be strictly controlled and required to be sympathetic to its surroundings in terms of its visual impact. High standards of design, siting and landscaping will be expected. Unduly obtrusive development will not be permitted in such areas'*. It explains that this is to protect and enhance the character of areas where the landscape is of high quality and help safeguard the pleasant environment of the area.

7.7.7 The Northern Loop, Simister Pike Fold Bridge, Pond 1 and Pond 2 would be located within the Special Landscape Area. However, the Special Landscape Area is already heavily influenced by motorway infrastructure which is both visually and audibly prominent.

Registered Parks and Gardens

7.7.8 Heaton Park, a Registered Park and Garden, is located in the south of the study area adjacent to the M60 between J18 and J19. The southern extent of the Order Limits border a short section of the park boundary which comprises broad areas of woodland within the parkland and along the parkland boundary. Effects on Heaton Registered Park and Garden are addressed in Chapter 6: Cultural Heritage of this Environmental Statement (TR010064/APP/6.1).

Statutory listed buildings

- 7.7.9 There are a number of statutory listed buildings and features located within the study area including several within Heaton Park, the Grade II Listed Church of St George at Simister and the Grade II Listed Brick Farmhouse at Unsworth, all of which fall outside the Order Limits. Effects on listed buildings are addressed in Chapter 6: Cultural Heritage of this Environmental Statement (TR010064/APP/6.1).

Ancient Woodland and Tree Preservation Orders

- 7.7.10 The nearest Ancient Woodland Inventory site is Mere Clough, located approximately 470m from the Order Limits. Effects on Ancient Woodland Inventory sites are addressed in Chapter 8: Biodiversity of this Environmental Statement (TR010064/APP/6.1).
- 7.7.11 There are a number of TPOs within the study area, although these are all located outside the AIA study area (which is 15m around the Order Limits), and none would be affected by the Scheme. Refer to Appendix 7.5: AIA of the Environmental Statement Appendices (TR010064/APP/6.3) and Figure 7.3: Key Landscape Designations and Features of the Environmental Statement Figures (TR010064/APP/6.2).

Landscape character

- 7.7.12 National and local landscape character assessment areas are illustrated on Figure 7.4: Landscape and Townscape Character Areas of the Environmental Statement Figures (TR010064/APP/6.2). The existing landscape character of the study area is summarised below. The National Character Areas (NCAs) cover the whole study area and describe the broad landscape context.

National character

- 7.7.13 The greater part of the study area lies within the eastern part of NCA 54: Manchester Pennine Fringe. This is described as a transitional zone between the densely populated urban areas of the Manchester conurbation and the wild open moorland of the Pennines to the east. The study area extends into NCA 55: Manchester Conurbation within Heaton Park.
- 7.7.14 Due to their broad geographical coverage the effects on character of the NCAs have not been considered as part of the LVIA. The regional-level Greater Manchester Landscape Character and Sensitivity Assessment (GMCA, 2018) described below is more related to the scale and extent of the landscape character in the assessment area.

Local landscape and townscape character

- 7.7.15 Three LCAs and one TCA fall within the area which would potentially be affected by the Scheme. The baseline for local LCAs and the TCA are described in Appendix 7.2: Landscape and Townscape Character Baseline and Sensitivity Assessment of the Environmental Statement Appendices (TR010064/APP/6.3). Table 7.6 lists the LCAs and TCA and describes the characteristics most susceptible to change from the Scheme. The boundary of LCA 16: River Irwell (south Bury) and River Croal is close to the Order Limits, although it is neither directly nor indirectly affected by the Scheme and has been scoped out. The local LCAs and TCA are illustrated on Figure 7.4: Landscape and Townscape Character Areas of the Environmental Statement Figures (TR010064/APP/6.2).
- 7.7.16 The following LCAs and TCA would be either directly or indirectly affected by the Scheme:
- LCA 19: Heaton, Prestwich, Whitefield and Stand Parklands
 - LCA 26: Prettywood, Pilsworth and Unsworth Moss (LCA 26 falls within two LCTs)
 - LCA 27: Simister, Slattocks and Healds Green
 - TCA Prestwich, Whitefield, Radcliffe and Unsworth Residential.

Table 7.6 Local landscape and townscape character areas

Landscape and townscape character area	Landscape and townscape characteristics most susceptible to the Scheme
LCA 19: Heaton, Prestwich, Whitefield and Stand Parklands	<p>Elevated hills and ridges, which form a backdrop to lower-lying river valleys and urban / suburban areas.</p> <p>16th to 19th century estate landscapes with open parkland, plantation woodland and small lakes, some of which are of national importance (Heaton Park Registered Park and Garden) and the numerous Listed Buildings.</p> <p>Deep, steep-sided wooded valleys or ‘cloughs’ and a network of streams, ponds and lakes, which are often recognised for their ecological importance as Sites of Biological Importance (SBIs) or Local Nature Reserves (LNRs).</p> <p>A strong landscape structure of broadleaved estate woodland, including some small areas of Ancient Woodland.</p> <p>The sense of naturalness and tranquility which can be experienced from some areas of parkland and woodland, away from major transport corridors and the urban fringe.</p>
LCA 26: Prettywood, Pilsworth and Unsworth Moss	Landform generally flat to gently undulating overall, with some locally distinctive artificial landforms as a result of past mineral extraction and landfill (e.g. Pilsworth).

Landscape and townscape character area	Landscape and townscape characteristics most susceptible to the Scheme
	<p>Mainly medium scale, rectangular fields delineated by a network of drainage ditches and species poor hedgerows.</p> <p>Network of lowland wetland habitats surrounded by a matrix of mixed farmland (pasture and cereal crops).</p> <p>Some recreational provision including golf courses (e.g. Pike Fold Golf Club).</p> <p>A landscape profoundly influenced by its industrial past, which includes surface coal mining, sand and clay extraction and peat extraction, providing a sense of time-depth.</p> <p>Road, motorway corridors and railway lines bisect the landscape, often on raised embankments. Motorways are audibly and visually dominant in some areas, reducing tranquility.</p> <p>A network of public footpaths mainly follows tracks and lanes, occasionally crossing fields.</p> <p>In lower-lying areas views tend to be restricted by landform, although there are some distant views from higher open ground (e.g. Prettywood towards the West Pennines).</p>
<p>LCA 27: Simister, Slattocks and Healds Green.</p>	<p>Locations of elevated, open character with some prominent rural skylines forming a backdrop to views from adjacent urban areas.</p> <p>Intact lengths of hedgerows and tree clumps along field boundaries forming ecological networks and bringing definition to the 18th and 19th century and post-medieval field patterns.</p> <p>Opportunities to access and enjoy the rural landscape, cycle routes and a public rights of way network crossing the farmland and emanating from adjacent urban areas.</p> <p>The LCT's role as an immediate rural backdrop to development and its important function in separating discrete urban areas, preventing coalescence.</p>
<p>TCA Prestwich, Whitefield, Radcliffe and Unsworth Residential</p>	<p>Landform ranges between 80m and 110m Above Ordnance Datum with very gradual changes between levels.</p> <p>Waterbodies include the River Roch, River Irwell which define the northern edge of the TCA, and also the local Parr Brook which weaves through Unsworth.</p> <p>The underlying solid geology is carboniferous sandstones of the Millstone Grit and the Pennine Coal Measures of Greater Manchester.</p> <p>Buildings often use a local material palette of red brick and Millstone Grit.</p> <p>Settlement pattern is dominated by mixture of Victorian terraces and post-war suburban estates.</p> <p>The post-war suburban estates are the dominant housing type, although there is a wide variety of styles and sizes.</p>

Landscape and townscape character area	Landscape and townscape characteristics most susceptible to the Scheme
	<p>Industrial and commercial buildings are clustered together and noticeable for the difference in scale and usually the modern building style.</p> <p>The area contains three conservation areas and numerous listed buildings that are mostly concentrated within the conservation areas. The Grade I listed Church of All Saints, Stand and the Parish Church of St Mary are notable heritage features.</p> <p>Local landmarks include the Whitefield Methodist Church, Church of All Saints in Stand and the Greater Manchester Police, Sedgley Park Training Centre.</p> <p>Open spaces include pocket parks, playing fields, gardens, civic spaces, cemeteries, churchyards and golf courses.</p> <p>High levels of disturbance from major transport routes, including the A56 Bury New Road, Metrolink, M60 and M66.</p>

7.7.17 Landscape planning and land management guidelines for the local landscape described in the Greater Manchester Landscape Character and Sensitivity Assessment (GMCA, 2018) of relevance to the Scheme include:

- To consider additional woodland planting to screen existing industrial areas and motorway corridors as appropriate (LCA 19: Heaton, Prestwich, Whitefield and Stand Parklands).
- Ensure any new development respects the character and historic qualities of the Registered Parks and Gardens (Grade II Heaton Park) and their settings (LCA 19: Heaton, Prestwich, Whitefield and Stand Parklands).
- Ensure that any development is in keeping with the mainly rural character of the landscape in terms of form, density and vernacular (LCA 26: Prettywood, Pilsworth and Unsworth Moss).
- Utilise areas of existing woodland to integrate new development into the landscape, avoiding sites designated for their nature conservation importance (LCA 26: Prettywood, Pilsworth and Unsworth Moss).
- Consider additional woodland planting to enhance landscape structure, soften the urban fringe, screen industrial areas and reduce the noise and visual impacts of motorway corridors, where appropriate (LCA 26: Prettywood, Pilsworth and Unsworth Moss).
- Restore and enhance areas of deteriorating farmland including additional, species-rich, hedgerow planting to fill gaps and replace post and wire fencing. Reintroduce hedgerow trees where appropriate (LCA 26: Prettywood, Pilsworth and Unsworth Moss).

- Design-in the introduction of SuDS to any new development (LCA 26: Prettywood, Pilsworth and Unsworth Moss and LCA 27: Simister, Slattocks and Healds Green).
- Utilise dips in the landform, including valley slopes, and existing tree/woodland cover to integrate new development into the landscape (LCA 27: Simister, Slattocks and Healds Green).
- Encourage woodland creation Schemes on areas of low-grade agricultural land, including through the Northern Forest initiative. Woodland planting along motorways and staggered blocks of planting should be used to help screen views of traffic and reduce noise (LCA 27: Simister, Slattocks and Healds Green).

Perceptual qualities

7.7.18 CPRE has undertaken a study of tranquillity in England and has mapped and published the results. CPRE highlights new roads as one of the greatest threats to remaining levels of tranquillity. The Tranquillity Map for England (CPRE, 2007) identifies tranquillity zones based on sources of noise and visual intrusion and the zones over which intrusion may be felt. Within the study area, Bury and north Manchester urban areas are indicated to be among the least tranquil areas, whilst the rural parts of the study area are indicated to be more tranquil, although even here tranquillity levels are influenced by noise and visual intrusion.

7.7.19 The CPRE mapping of England's light pollution and dark skies illustrates the influence of light pollution on the night skies within the study area. The study area is affected by night-time light pollution, especially associated with the urban areas of Bury, Rochdale and Prestwich, as well as the M60 corridor and J18. The night skies within the more rural part of the study area to the north-east of M60 J18 are darker. However, there are no dark skies located within the study area, with the darkest skies located over the Pennines, approximately 20km to the north-east. The Planning Inspectorate agreed that an assessment of effects on the night skies in their own right is not required (comment ID 4.3.2 of the Scoping Opinion (TR010064/APP/6.7)) (see Table 7.5 of this chapter for further details).

Lighting baseline

7.7.20 The night-time landscape is heavily influenced by the lighting of the existing M60 J18 and mainline M60, M62 and M66. The surrounding area is predominantly residential with lit residential streets. The darkest areas within the study area are in the vicinity of the Pike Fold Golf Course although even here, the influence of existing motorway lighting is noticeable.

Visibility and potential visual receptors

7.7.21 Transport corridors are dominant within the area, with M60 J18 being the intersection of the M60, M62 and M66. Urban areas also have a substantial influence on the views within the study area.

- 7.7.22 The landscape within the study area to the west, north and east is generally low-lying and relatively flat, with very gentle undulations and very gently rising landform to the east. To the south, including within Heaton Park and the settlement of Simister, the topography becomes more undulating allowing opportunities for longer distance views to the north.
- 7.7.23 To the west of the study area around Whitefield/Prestwich, adjacent to the M60 corridor, there is a high density of residential areas. However, a combination of highways fencing and woodland belts within the highway boundary reduces the visibility of the nearby motorway corridor. Visibility of the motorway network quickly reduces with distance from the highway boundary due to the density of residential development enclosing the corridor. As such, the range of available views is generally near distance within the more developed urban areas.
- 7.7.24 The woodland belts within the highway boundary, and occasional highways fencing, continue to the east and south of M60 J18 along the M62 and M60 respectively. Woodland belts are also in place approximately 750m to north of M60 J18 on the M66. These provide some screening of the M60, M62 and M66 for surrounding residential areas within Prestwich, Simister, Whitefield and Unsworth.
- 7.7.25 At M60 J18, the motorway becomes more visually prominent with near and middle-distance views from the eastern fringes of Whitefield and Prestwich. To the north-east of M60 J18, where the M62 and M66 are predominantly at grade or on low embankment, the landscape is more open, comprising pastoral land with fewer tree belts. While there are open views within these areas towards the motorway network, intervening hedgerows, tree belts and woodlands limit some near and middle-distance views from rural properties.
- 7.7.26 The study area includes several PRow on overbridges crossing the M60/M62/M66 north, west and east of the M60 J18. West of M60 J17, footpaths crossing Whitefield Golf Course and Prestwich Country Park afford views to the M60, although visibility quickly reduces with distance due to intervening topography and vegetation. Elevated areas within Heaton Park allow views to the M60, although woodland within Heaton Park and along the highway boundary provides a high level of screening. Footpaths within open areas to the north-west and north-east of M60 J18, including within Pike Fold Golf Course, provide more open views to the motorway network.
- 7.7.27 The proximity of the parks and footpaths to urban areas suggests that their levels of use would be high.
- 7.7.28 Motorway lighting is visually prominent from urban areas located near the motorway corridors and M60 J18 and from the more undeveloped rural area to the east.
- 7.7.29 Potential visual receptors within the study area include:
- Residents within settlements of Prestwich, Simister, Whitefield and Unsworth
 - Residents within the rural area to the north of M60 J18 between the M66 and M62

- Walkers on the PRow network, cyclists on the local cycle routes and equestrian users on a bridleway
- Visitors to Heaton Park Registered Park and Garden, Prestwich Country Park (including Prestwich Forest Park)
- Visitors to Public Open Spaces – Thatch Leach Lane Playground, Fusilier’s Meadow, Boz Park
- Visitors to private open space including schools playing fields, Pike Fold Golf Course
- People at their places of work, such as within nearby school and businesses on the peripheries of the motorway corridor
- Travellers on the road network, including the M60, M62, M66 and the surrounding local road network.

7.7.30 Representative viewpoint and photomontage locations included in the Environmental Statement are presented in Table 7.7 and illustrated on Figure 7.5: Representative Viewpoints and Photomontage Locations of the Environmental Statement Figures (TR010064/APP/6.2).

7.7.31 Representative viewpoint photosheets are included in Figure 7.6: Representative Viewpoint Photosheets of the Environmental Statement Figures (TR010064/APP/6.2) and photomontages are included in Figure 7.7: Photomontages of the Environmental Statement Figures (TR010064/APP/6.2).

7.7.32 As described in Section 7.4 selected representative viewpoints represent a number of local and similar individual receptors of varying sensitivities, the receptor with the highest sensitivity at each representative viewpoint has been assessed to represent the potential worst-case change to visual amenity.

Table 7.7 Summary of representative viewpoints and photomontage locations

Reference - Representative viewpoint (VP), Photomontage location (PM)	Representative viewpoints and location	Receptor type
VP1	Broom Hill Farm, Higher Barn Farm, Footpath 4WHI	Residential, recreational
VP2	Castlebrook Farm, Whitegate Bungalow on Castle Road, Restricted Byway 85BUR	Residential, recreational
VP3	Brickhouse Farm, four residential properties on Killy Lane, Footpath 6WHI, Footpath 7WHI, users of Pike Fold Golf Course	Residential, recreational
VP4	Hesketh Villa, Whittle Fold Farm, Whittle Smallholdings, off Whittle Lane, Footpath MidRupp110a	Residential, recreational

Reference - Representative viewpoint (VP), Photomontage location (PM)	Representative viewpoints and location	Receptor type
VP5	Unsworth Moss Farm, Unsworth Moss Bungalow, Moss Top Farm, Footpath 8WHI, Footpath 9WHI	Residential, recreational
VP6	Footpath 9WHI and local road on Hills Lane	Recreational, transient
VP7 and PM01	Footpath 9WHI, Footpath 46WHI, road users along Egypt Lane, users of Pike Fold Golf Course	Recreational, transient
VP8	Simister Green residential properties, Simister	Residential
VP9	Droughts Lane residential properties, Simister	Residential
VP10	Heywood Road, M60 overbridge, travellers on the M60 motorway network	Transient
VP11	Roch Crescent, Douglas Walk east of Douglas Close	Residential
VP12	Boz Park public open space	Recreational
VP13	Mersey Drive, Oak Lane residential properties, Boz Park public open space	Residential, recreational
VP14	Cowl Gate Farm, Footpath 12WHI	Residential, recreational
VP15 and PM02	Residential properties on Marston Close. Representative of views from residential properties on Mode Hill Lane	Residential
VP16	Residential properties on Rothay Close. Representative of views from Brathay Close and Heybrook Close. Representative of views for road users on Heybrook Close and Rothay Close	Residential, Transient
VP17 and PM03	Residential properties on Derwent Avenue. Representative of views from Duddon Close, Leven Walk, permissive path via Haweswater Aqueduct underpass and road users on Derwent Avenue	Residential, transient, recreational
VP18	Representative of Eastview (residential property) and No. 7, 9 and 11 Corday Lane	Residential
VP19 and PM04	Parrenthorn High School, Heywood Road, St. Margaret's Church of England Primary School. On-road cycle route.	Community, cycle, transient
VP20	Bridleway 27aPRE on the Heaton Park Registered Park and Garden boundary	Recreational
VP21	Residential properties on Parrenthorn Road	Residential

Reference - Representative viewpoint (VP), Photomontage location (PM)	Representative viewpoints and location	Receptor type
VP22	Residential properties on Sandgate Road, St. Joseph's Avenue, Prestwich Heys Football Club, Footpath 18WHI	Residential, recreational
VP23	Residential properties on Warwick Avenue	Residential
VP24	Footpath 18WHI, local road users on Sandgate Road, travellers on the M60 eastbound	Recreational, transient
VP25	Fusiliers Memorial Meadow, Thatch Leach Lane Play Area	Recreational
VP26	Residential properties on Thatch Leach Lane, Conisborough Place and Glendevon Place	Residential
VP27 and PM05	Residential properties 1, 3, 5, 7, 9, 11, 13, 15 and 17 Barnard Avenue and 76 Warwick Avenue	Residential
VP28	Residential properties 1 and 2 Warwick Close, 51, 53, 55, 57, 59 and 61 Kenilworth Avenue, 2 and 4 Barnard Avenue	Residential, transient
VP29	Residential properties 16, 18, 20, 25, 27, 29, 31, 33, 35, 37 and 39 Kenilworth Avenue	Residential
VP30	Visitors to Boz Park public open space	Recreational

Future baseline

- 7.7.33 Proposed developments surrounding the Scheme are considered in Chapter 15: Assessment of Cumulative Effects of this Environmental Statement (TR010064/APP/6.1).
- 7.7.34 Proposed developments are considered as part of the future baseline. Of relevance to the location of representative viewpoints illustrated on Figure 7.5: Representative Viewpoints and Photomontage Locations of the Environmental Statement Figures (TR010064/APP/6.2) and assessment of visual effects is the development at Prestwich Heys Football Club, Sandgate Road, Whitefield, Manchester, M45 6W comprising a covered stand of 50 seats for spectators (planning application reference 59412).
- 7.7.35 The planning application for a new link road between Junction 19 of the M62 and Pilsworth Road and the widening of part of Pilsworth Road, (planning application reference 16/01399/HYBR) (a part of the wider Atom Valley masterplan) has been reviewed and would not alter the future baseline relevant to the landscape and visual aspect.

- 7.7.36 The existing landscape is dynamic and constantly changing due to natural and human influences such as erosion, agriculture, forestry and development. It is not possible to accurately predict how the landscape is likely to change over time, for example, there could be changes in future farming practices, the condition of existing landscape elements could change due to changing management practices and climate change could alter the composition of vegetation as a result of changing weather patterns.
- 7.7.37 Where existing vegetation has the potential to substantially alter the views e.g. a new establishing woodland plantation, this has been considered in the assessment of visual impacts at year 15.
- 7.7.38 Climate change is likely to result in increased extreme weather events within the United Kingdom, including periods of both increased and reduced precipitation. This is likely to place further stress on vegetation within the landscape which forms part of the existing baseline. However, it is not yet known how changing weather would affect vegetation. Climate is considered within Chapter 14: Climate of this Environmental Statement (TR010064/APP/6.1).

Value and sensitivity of receptors

- 7.7.39 DMRB LA 107 considers landscape and visual 'sensitivity' which incorporates judgements on 'value' and 'susceptibility'. Landscape and visual sensitivity are established by assessing the value attached to a receptor and its susceptibility to the particular form of change likely to result from the individual development.

Landscape

- 7.7.40 Landscape sensitivity has been established by assessing the value attached to specific landscape receptors and its susceptibility to the particular form of change likely to result from the individual development. Assessing Landscape Value Outside National Designations Technical Guidance Note 02/21 (Landscape Institute, 2021) has been used to help inform judgements on landscape value for the Special Landscape Area located within LCA 26: Prettywood, Pilsworth and Unsworth Moss and LCA 25: River Roch.
- 7.7.41 Landscape and townscape susceptibility and value are evaluated in Appendix 7.3: Schedule of Landscape and Townscape Effects of the Environmental Statement Appendices (TR010064/APP/6.3). Table 7.8 of this chapter lists the LCAs and landscape sensitivity.
- 7.7.42 Landscape features identified in the baseline have been used to inform the value and the overall landscape sensitivity of each local LCA and TCA in accordance with DMRB LA 107. It is recognised that localised areas of landscape are of high sensitivity, including Heaton Park Registered Park and Garden and the Special Landscape Area, and these have been considered when assessing the overall landscape sensitivity of local LCAs.
- 7.7.43 The Greater Manchester Landscape Character and Sensitivity Assessment has determined the sensitivity of LCAs based on two scenarios: residential development and commercial/industrial development.

- 7.7.44 An assessment of sensitivity has not been made for major road Schemes; therefore, a judgement of sensitivity has been made by considering sensitivity described in DMRB LA 107 which is replicated in Table 1.1 of Appendix 7.1: LVIA Methodology of the Environmental Statement Appendices (TR010064/APP/6.3).

Table 7.8 Value (sensitivity) of receptors in the study area for landscape

Landscape or townscape character area	Landscape sensitivity of receptor/resource	Description (from DMRB LA 107 Table 3.22)	Justification
LCA 19: Heaton, Prestwich, Whitefield and Stand Parklands	High	Landscapes of high national importance containing distinctive features/elements with limited ability to accommodate change without incurring substantial loss/gain (i.e. designated areas, areas of strong sense of place - registered parks and gardens, country parks).	High sensitivity reflects the national recognition of Heaton Park Registered Park and Garden, listed buildings and conservation areas, country parks and ancient woodland within the LCA. High sensitivity also reflects the contribution valued features to local landscape quality and sense of place, and also the limited ability to accommodate the Scheme due to the susceptibility those features described above to the development. The Order Limits adjoin the boundary with Heaton Park along a short section in the vicinity of the M60.

Landscape or townscape character area	Landscape sensitivity of receptor/resource	Description (from DMRB LA 107 Table 3.22)	Justification
<p>LCA 26: Prettywood, Pilsworth and Unsworth Moss</p> <p>LCA 27: Simister, Slattocks and Healds Green</p>	<p>Medium</p>	<p>Landscapes of local or regional recognition of importance able to accommodate some change (i.e. features worthy of conservation, some sense of place or value through use/perception)</p>	<p>Medium sensitivity reflects that there is no national recognition of these landscapes, with the exception of heritage assets including listed buildings and conservation areas, designated sites including Special Areas of Conservation, Sites of Special Scientific Interest, Sites of Biological Importance and Local Nature Reserves, within the study area. Medium sensitivity also reflects the ability to accommodate the nature of the Scheme to some extent due to the presence of the existing motorway network and other existing development within the landscape. The Special Landscape Area is located entirely within LCA 26: Prettywood, Pilsworth and Unsworth Moss. The policy notes that it is a landscape of high quality, and the policy is designed to help safeguard the pleasant environment of the area. However, over time, the Special Landscape Area has been influenced by expanding adjacent industrial development including the Heywood Distribution Park, Birch Industrial Park and the Viridor Pilsworth South Landfill. The motorway corridor also has an influence on the special qualities of the Special Landscape Area.</p>
<p>TCA Prestwich, Whitefield, Radcliffe and Unsworth Residential</p>	<p>Low</p>	<p>Local landscape areas or receptors of low to medium importance with ability to accommodate change (i.e. non-designated or designated areas of local recognition or areas of little sense of place).</p>	<p>Townscape characteristics are of medium importance with ability to accommodate the type of change as the existing motorway already has an influence on the TCA. There are three conservation areas and a number of listed buildings and few other notable features within the broad TCA which consists largely of 20th century housing, and commercial and industrial development.</p>

Visual

- 7.7.45 Visual sensitivity is established by assessing the value attached to a receptor's view and its susceptibility to the particular form of change likely to result from the individual development. Refer to Table 7.9 of this chapter which includes visual sensitivity.
- 7.7.46 The viewpoints are representative of views from residential properties, PRow, public open spaces, public buildings and road users. The value of views from PRow and public open spaces is considered to be high, as views are often valued for their rural character, which contributes to the visual amenity enjoyed by people using these areas. The value of views from residential properties is also considered to be high because residents generally value views from their homes which are typically experienced for a large part of the time.
- 7.7.47 The susceptibility of users of PRow and public open space and residential receptors to the Scheme varies depending on a range of factors including the distance between the receptor and the Scheme, the character and components of the existing view and the extent of intervening features between the viewpoint and the Scheme.
- 7.7.48 Based on the consideration of value and susceptibility residential receptors, users of PRow and public open spaces, and road users have been assessed regarding the criteria presented in Table 7.9 of this chapter for visual receptors which are of high or moderate sensitivity.

Table 7.9 Sensitivity (susceptibility and value) of visual receptors within the study area

Representative viewpoint / Photomontage location (VP/PM)	Representative viewpoints and location	Sensitivity (susceptibility and value)
VP1	Broom Hill Farm, Higher Barn Farm, Footpath 4WHI	Residents: High Footpath users: Moderate
VP2	Castlebrook Farm, Whitegate Bungalow on Castle Road, Restricted Byway 85BUR	Residents: High Footpath users: Moderate
VP3	Brickhouse Farm, four residential properties on Killy Lane, Footpath 6WHI, Footpath 7WHI, users of Pike Fold Golf Course	Residents: High Footpath users, visitors to Pike Fold Golf Course: Moderate
VP4	Hesketh Villa, Whittle Fold Farm, Whittle Smallholdings, off Whittle Lane, Footpath MidRupp110a	Residents: High Footpath users: Moderate
VP5	Unsworth Moss Farm, Unsworth Moss Bungalow, Moss Top Farm, Footpaths 8WHI and 9WHI	Residents: High Footpath users: Moderate

Representative viewpoint / Photomontage location (VP/PM)	Representative viewpoints and location	Sensitivity (susceptibility and value)
VP6	Footpath 9WHI and local road on Hills Lane	Footpath users, local road users: Moderate
VP7 (PM01)	Footpath 9WHI, Footpath 46WHI, road users along Egypt Lane, users of Pike Fold Golf Course	Footpath users, local road users, users of Pike Fold Golf Course: Moderate
VP8	Simister Green residential properties, Simister	Residents: High
VP9	Droughts Lane residential properties, Simister	Residents: High
VP10	Heywood Road, M60 overbridge, travellers on the M60 motorway network	Road users: Low
VP11	Roch Crescent, Douglas Walk east of Douglas Close	Residents: High
VP12	Boz Park public open space	Boz Park visitors: Moderate
VP13	Mersey Drive, Oak Lane residential properties, Boz Park public open space	Residents: High Boz Park visitors: Moderate
VP14	Cowl Gate Farm, Footpath 12WHI	Residents: High Footpath users: Moderate
VP15 (PM02)	Residential properties on Marston Close	Residents: High
VP16	Residential properties on Rothay Close. Representative of views from Brathay Close and Heybrook Close. Representative of views for road users on Heybrook Close and Rothay Close	Residents: High Road users: Low
VP17 (PM03)	Residential properties on Derwent Avenue, Duddon Close, Leven Walk, permissive path via Haweswater Aqueduct underpass	Residents: High Permissive path users, local road users: Low
VP18	Eastview (residential property) and No. 7, 9 and 11 Corday Lane	Residents: High
VP19 (PM04)	Parrenthorn High School, Heywood Road. St. Margaret's Church of England Primary School	School visitors, cyclists, local road users: Moderate

Representative viewpoint / Photomontage location (VP/PM)	Representative viewpoints and location	Sensitivity (susceptibility and value)
VP20	Bridleway 27aPRE on the Heaton Park Registered Park and Garden boundary	Bridleway users: Moderate
VP21	Residential properties on Parrenthorn Road	Residents: High
VP22	Residential properties on Sandgate Road, St. Joseph's Avenue, Prestwich Heys Football Club, Footpath 18WHI	Residents: High Footpath users, users of the sports field: Low
VP23	Residential properties on Warwick Avenue	Residents: High
VP24	Footpath 18WHI, local road users on Sandgate Road, travellers on the M60 eastbound	Footpath users, road users: Low
VP25	Fusiliers Memorial Meadow, Thatch Leach Lane Play Area	Park visitors: Moderate
VP26	Residential properties on Thatch Leach Lane, Conisborough Place and Glendevon Place	Residents: High
VP27 (PM05)	Residential properties 1, 3, 5, 7, 9, 11, 13, 15 and 17 Barnard Avenue and 76 Warwick Avenue	Residents: High
VP28	Residential properties 1, 2 Warwick Close, 51, 53, 55, 57, 59 and 61 Kenilworth Avenue, 2 and 4 Barnard Avenue	Residents: High Road users: Low
VP29	Residential properties 16, 18, 20, 25, 27, 29, 31, 33, 35, 37 and 39 Kenilworth Avenue	Residents: High
VP30	Visitors to Boz Park public open space	Boz Park visitors: Moderate

7.8 Potential impacts

7.8.1 The following section describes the features of the Scheme that could result in potential impacts on landscape and visual receptors. The Scheme is described in Section 2.5 of Chapter 2: The Scheme of this Environmental Statement (TR010064/APP/6.1).

Construction

7.8.2 The principal elements which would result in landscape and visual effects at the construction stage include:

- Widening of the existing M60 Mainline J17-J18 from four lanes to five lanes in both directions and installation of a hard shoulder resulting in alterations to landform and loss of vegetation, and opening up people's views to the motorway
- Construction of the Northern Loop resulting in alterations to landform from excavation, soil stripping and earthworks across a wide area
- Construction of the M66 southbound diverge resulting in alterations to landform and loss of vegetation, and opening up people's views to the motorway
- Widening from one lane to two lanes of the M60 northbound to M60 westbound free flow link resulting in alterations to landform and loss of vegetation and the opening up of people's views to the motorway corridors
- Construction of golf ball netting and supporting structures along the boundary with Pike Fold Golf Course
- Construction of the Simister Pike Fold Viaduct and Simister Pike Fold Bridge.

7.8.3 Other construction activities which would result in landscape and visual effects include:

- Temporary soil stockpiles
- Temporary compounds
- Movement of vehicles on temporary haul routes
- Construction activity and operation of plant such as excavators, cranes and site vehicles with beacons visible to nearby receptors
- Night-time closures including temporary lighting and traffic management operation.

Operation

7.8.4 The principal elements which would result in landscape and visual effects at the operational stage include:

- Operation of the widened M60 Mainline J17-J18, bringing moving traffic nearer to residential properties
- Further encroachment of the motorway infrastructure into the local landscape, eroding the rural character, and increasing the prominence of M60 J18 in people's views
- Simister Pike Fold Viaduct and Simister Pike Fold Bridge. New, large scale motorway infrastructure within the urban edge landscape

- Operation of the M66 southbound diverge, eroding the rural character, and increasing the prominence of M60 J18 in people's views from the rural area to the north of M60 J18.
- Operation of the M60 northbound to M60 westbound diverge, increasing the prominence of M60 J18 in people's views.

7.8.5 Other elements associated with the operational stage which would result in landscape and visual effects include:

- New lighting columns, gantries, road signals and signage
- New retaining walls along motorway cuttings and embankments
- Ponds, swales and maintenance access routes
- Golf ball netting and supporting structures (25m high) along the boundary with Pike Fold Golf Course
- Residual effects from required vegetation clearance for construction of new structures
- Permanent fencing and areas of temporary tree guards to protect planting
- Infrequent access for maintenance operations, including maintenance of landscape Scheme.

7.9 Design, mitigation and enhancement measures

7.9.1 Landscape objectives have been defined as part of an overarching set of Scheme-specific design principles presented within Section 2.2 of Chapter 2: The Scheme of this Environmental Statement (TR010064/APP/6.1)), which has been used to inform development of the Scheme, including both the highway alignment and the Environmental Masterplan (Figure 2.3 of the Environmental Statement Figures (TR010064/APP/6.2)). The landscape objectives that seek to mitigate adverse landscape and visual effects have been developed in accordance with DMRB LD 117 Landscape Design (Highways England, 2020c).

7.9.2 The Environmental Masterplan (Figure 2.3 of the Environmental Statement Figures (TR010064/APP/6.2)) identifies the spatial extent and location of the environmental mitigation measures to help mitigate and integrate the Scheme into the surrounding landscape, including planting plots. The Environmental Masterplan also identifies the environmental function of each planting plot. Detailed descriptions of embedded and essential mitigation measures are provided in this section.

- 7.9.3 The Environmental Masterplan (Figure 2.3 of the Environmental Statement Figures (TR010064/APP/6.2)) should be viewed in conjunction with the First Iteration EMP (TR010064/APP/6.5). The First Iteration EMP (TR010064/APP/6.5) is secured through Requirement 4 of the draft DCO (TR010064/APP/3.1). An OLEMP is included in Appendix N of the First Iteration EMP (TR010064/APP/6.5). The OLEMP has been prepared to help ensure the protection and management of landscape and ecological features, such as vegetation and habitats, during construction of the Scheme and the successful establishment of landscape and ecological mitigation including planting and seeding associated with the Scheme. The OLEMP would be updated to a LEMP by the Principal Contractor and included within the Second Iteration EMP, as appropriate and necessary, prior to commencement of works in accordance with Requirement 4 of the draft DCO (TR010064/APP/3.1).
- 7.9.4 The design of the mitigation measures shown in the Environmental Masterplan (Figure 2.3 of the Environmental Statement Figures (TR010064/APP/6.2)) would be further refined through detailed design. The detailed landscape design, which would be submitted to the Secretary of State following consultation with the relevant planning authority, would include planting plans, schedules and a specification developed in accordance with the Manual of Contract Documents for Highway Works (MCDHW) Volume 1, Series 3000 Landscape and Ecology (Highways Agency, 2001). The landscaping design is secured through Requirement 5 of the draft DCO (TR010064/APP/3.1).
- 7.9.5 DMRB LA 104, paragraph 3.23 describes a hierarchical approach to environmental assessment and design. Firstly, through avoidance and prevention, then reduction (and mitigation) where avoidance is not possible. Where it is not possible to avoid or reduce a significant adverse effect, remediation measures are used to offset the effect.
- 7.9.6 DMRB LA 107 paragraph 3.48 states that the hierarchical approach '*outlined in DMRB LA 104 shall be applied to avoid, reduce or remediate (offset) potential effects on the landscape, views and visual amenity*'.
- 7.9.7 DMRB LA 107 paragraph 3.49 states, '*Landscape design shall seek to:*
- 1) *reflect the beauty of the natural, built and historic environment through which it passes; and*
 - 2) *avoid likely significant effects by taking account of the importance and sensitivity of the landscape resource, of views and the visual amenity, their susceptibility and value, to avoid likely significant effects.*'
- 7.9.8 These landscape design principles, adopted to avoid or prevent adverse environmental effects, are described in DMRB LA 104 paragraph 3.24 as follows, '*Embedded mitigation: project design principles adopted to avoid or prevent adverse environmental effects*'.
- 7.9.9 DMRB LA 107 paragraph 3.49.1 further states that, '*Where effects cannot be avoided through alignment/design choices, a mitigation strategy should be developed to reduce the potential effects.*'

7.9.10 This is reiterated in DMRB LD 117 paragraph 3.8 which states, '*Where impacts of a proposed road cannot be avoided through alignment or design choices, a mitigation strategy shall be developed early in the design stage to reduce any potential significance of the effects of the proposed design.*' These measures are described as essential mitigation which are identified through the EIA process and which DMRB LA 104 paragraph 3.24 defines as follows, '*Essential mitigation: 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.*'

7.9.11 The embedded and essential mitigation measures shown on the Environmental Masterplan (Figure 2.3 of the Environmental Statement Figures (TR010064/APP/6.2)) adhere to the DMRB standards described above and guided by the design principles. Embedded mitigation and essential mitigation measures are described in this section. The environmental design aims to integrate the road into the local context, reducing the need for essential mitigation measures where possible, in line with DMRB LD 117.

Embedded mitigation

7.9.12 The environment team has worked in close collaboration with the infrastructure design team to avoid or reduce environmental impacts through the Scheme design. This is referred to as embedded (or design) mitigation. Chapter 3: Assessment of Alternatives of this Environmental Statement (TR010064/APP/6.1) details the design alternatives that have been considered, including the environmental factors which have influenced the decision-making.

7.9.13 In line with DMRB LD 117, embedded mitigation relevant to this aspect aims to integrate the road into the local context and minimise the impact of the Scheme on the landscape. 'Good design' principles have been directly incorporated into the Scheme as embedded mitigation measures. Design measures to help safeguard the environment and reduce visual impact include easing of engineered slopes to provide a more 'natural' looking profile and retention of some areas of vegetation. The use of the existing high earth mound for part of the Northern Loop has reduced the requirement of a new purpose-built structure and provides greater opportunity for landscape integration and screening by locating mitigation planting on embankments.

7.9.14 Embedded mitigation measures are included in the REAC, contained within the First Iteration EMP (TR010064/APP/6.5). The First Iteration EMP would be developed into the Second Iteration EMP to be implemented during construction and secured by Requirement 4 in the draft DCO (TR010064/APP/3.1).

7.9.15 Embedded mitigation for this aspect includes the following measures included in the REAC, contained within the First Iteration EMP (TR010064/APP/6.5):

- Commitment LV1 – The Northern Loop eastern embankment is constructed in accordance with the preliminary design.
- Commitment LV2 – The ponds will be designed to provide landscape integration and planting opportunities.

- Commitment LV3 – Existing vegetation clearance within the temporary works areas will be minimised as far as practicable. Particular attention will be given to the retention of mature vegetation including individual trees, linear tree belts and woodlands.
- Commitment LV4 – All planting and seeding will use native species as appropriate to the location and design, overseen by Ecologists and Arboriculturists.
- Commitment LV5 – Hedgerow planting will be delivered in areas adjacent to the environmental areas, along the new highway boundaries and around ponds.
- Commitment LV6 – Hedgerow tree planting will be delivered to strengthen new and existing hedgerows and further help integrate the motorway infrastructure into the local landscape.
- Commitment LV7 – Planting will be delivered to link existing field boundary vegetation with other areas of existing vegetation in areas around the Northern Loop to improve habitat links and strengthen the local landscape pattern and character.
- Commitment LV8 – Aquatic and marginal planting will be delivered at the ponds and swales to improve landscape integration and biodiversity.

Essential mitigation

- 7.9.16 The Environmental Masterplan (Figure 2.3 of the Environmental Statement Figures (TR010064/APP/6.2)) has been developed, guided by the design principles and embedded mitigation measures described above. The Environmental Masterplan aims to integrate the road into the local context, reducing the need for essential mitigation measures where possible, in line with DMRB LD 117.
- 7.9.17 Essential mitigation measures include native tree and shrub planting on and adjacent to highway earthworks to reinstate linear tree belts, create woodlands, copses and shelterbelts to break up the scale of the new Scheme elements, integrate the existing motorway infrastructure and the Scheme into the existing landscape pattern, help screening of new highways structures, traffic and lighting.
- 7.9.18 Essential mitigation measures to reduce likely significant adverse environmental effects for this aspect are included in the REAC, contained within the First Iteration EMP (TR010064/APP/6.5), and comprise:
- Commitment LV9 – Planting along the Simister Pike Fold Viaduct embankment west of the M66 for landscape integration, and visual screening or filtering for viewers within nearby residential areas of Whitefield.

- Commitment LV10 – Planting on the Simister Pike Fold Bridge embankments and Northern Loop embankments and within the Northern Loop will be delivered for landscape and visual integration; and visual screening or filtering for viewers along Pole Lane footpath and to break up the scale of the Scheme elements for motorway travellers.
- Commitment LV11 – Planting will be delivered along Pole Lane to strengthen the existing hedgerow, and along the nearby northbound M66 verge, to provide visual screening or filtering of traffic, the Simister Pike Fold Bridge and Northern Loop from within Whitefield and from Footpath 12WHI along Pole Lane.
- Commitment LV12 – Planting of linear tree belts will be delivered along the M60 northbound to M60 westbound on-slip to provide landscape and visual integration; and screening or filtering for viewers on Heywood Road and Simister Lane.
- Commitment LV13 – Existing linear tree belts necessitating removal for carriageway widening will be reinstated with a higher percentage of feathered trees and evergreen species to improve visual screening in the early years.
- Commitment LV14 – Planting will be delivered along the eastbound and westbound M60 mainline verges and embankments between M60 J17 and M60 J18 to provide townscape and visual integration; and screening and filtering for adjacent residential areas.
- Commitment LV15 – Planting of trees and shrubs, and species rich grassland creation, will be delivered within land east of the Northern Loop to provide landscape and visual integration; and screen views from footpaths 8WHI and 9WHI.
- Commitment LV16 – Planting of shrubs will be delivered along Warwick Close to provide amenity value.
- Commitment LV17 – Provision of temporary arboricultural mitigation and fencing for the protection of retained vegetation during construction.

7.9.19 There is no opportunity to reinstate vegetation removed from the M60 verge adjacent to Warwick Close due to the close proximity of the new hard shoulder. Shrub planting will be delivered along Warwick Close (commitment LV16 in the REAC, contained within the First Iteration EMP (TR010064/APP/6.5)) and maintained no higher than 1.5m to follow requirements of utilities companies for planting near existing underground utilities. The planting would provide some amenity value although it would not be tall enough to provide any filtering or screening above the highway fencing.

7.9.20 The Principal Contractor will implement measures to minimise impacts on receptors from construction lighting, including directed lighting to minimise light pollution/glare, and keeping lighting levels to the minimum necessary for security and safety by the Principal Contractor (commitment G6 in the REAC, contained within the First Iteration EMP (TR010064/APP/6.5)).

7.10 Assessment of likely significant effects

- 7.10.1 All effects have been qualitatively assessed based on the application of professional judgement to the significance criteria outlined in Section 7.4 of this chapter. Appendix 7.3: Schedule of Landscape and Townscape Effects and Appendix 7.4: Schedule of Visual Effects of the Environmental Statement Appendices (TR010064/APP/6.3) detail the assessment of effects.
- 7.10.2 Where effects have been identified, these would be reduced where practicable by implementing the mitigation measures outlined in Section 7.9 of this chapter and included in the REAC, contained within the First Iteration EMP (TR010064/APP/6.5). The residual effects detailed in this section assume the implementation of this mitigation.
- 7.10.3 This section summarises significant landscape and visual effects. Tables 7.10 and 7.11 below list the landscape receptors and visual receptors experiencing significant effects, respectively. Further details, including a description of the landscape and the magnitude and significance of effect on each receptor, and information where effects are not significant, is located in Appendix 7.3: Schedule of Landscape and Townscape Effects of the Environmental Statement Appendices (TR010064/APP/6.3). Information on the assessment of visual effects is located in Appendix 7.4: Schedule of Visual Effects of the Environmental Statement Appendices (TR010064/APP/6.3). Photography from the representative and illustrative viewpoints is provided in Figure 7.6: Representative Viewpoint Photosheets of the Environmental Statement Figures (TR010064/APP/6.2) and photomontages are presented in Figure 7.7: Photomontages of the Environmental Statement Figures (TR010064/APP/6.2).
- 7.10.4 The Northern Loop utilises an existing high earth mound to reduce the requirement for new obtrusive embankments and will be planted to further integrate the mound itself into the landscape. The visual change is addressed through extensive landscaping that would be provided, comprising woodland planting, new hedgerows, and ecological mitigation areas which include scattered trees and shrubs, species-rich grassland and ponds with aquatic planting. These are considered to provide effective screening and integration of the new infrastructure by year 15.

Construction

Landscape and townscape effects

- 7.10.5 In line with DMRB LA 107, the assessment of impacts on landscape components, such as trees and woodland, and perceptual and aesthetic aspects, are considered within the assessment of impacts on landscape character. No verified veteran, ancient or notable trees, as defined by the Woodland Trust, have been identified within the arboricultural study area for the Scheme. Further detail relating to impacts on trees is included within the AIA (Appendix 7.5 of the Environmental Statement Appendices (TR010064/APP/6.3)).

Significant landscape and townscape effects

- 7.10.6 Table 7.10 summarises likely significant landscape and townscape effects during construction. Figure 7.3: Key Landscape Designations and Features of the Environmental Statement Figures (TR010064/APP/6.2) shows the LCAs and TCAs referenced in this section.
- 7.10.7 LCA 26: Prettywood, Pilsworth and Unsworth Moss would be directly impacted by construction of the Northern Loop, Simister Pike Fold Viaduct and Simister Pike Fold Bridge and the construction of Pond 1 and Pond 7.
- 7.10.8 Construction activity would be within a small area on the south-western edge of this LCA, a part of which is a Special Landscape Area, with activities perceptible within the wider area. The LCA would also be indirectly affected by the presence of construction activity within the adjoining LCA 27: Simister, Slattocks and Healds Green.
- 7.10.9 Landscape quality within a small part of the LCA would be impacted by the removal of highway vegetation, most notably north-east of M60 J18 on the M66 southbound verge. The removal of vegetation would alter the relatively enclosed character of this part of the LCA making the construction of the Northern Loop, Simister Pike Fold Viaduct and Simister Pike Fold Bridge and new embankments, material stockpiles, construction of ponds and golf ball netting, and the existing motorway infrastructure more perceptible. Land reprofiling for the Northern Loop, Simister Pike Fold Viaduct and Simister Pike Fold Bridge would substantially alter local landform to the north-west and north-east of M60 J18.
- 7.10.10 The nature and disturbance from construction plant within the compounds and movement along haulage routes would also be a noticeable change, although vehicle movement is a characteristic of the study area. The construction of embankments and presence of material stockpiles would result in alterations to the landscape's relatively flat lowland landform character.
- 7.10.11 There would be limited perceived change in the night-time environment as a result of construction activity and construction light sources as the works would be in close proximity to M60 J18.
- 7.10.12 Together, these elements would introduce change by virtue of localised alterations to the landform, landcover, character and pattern of the landscape resulting in physical disruption and the presence of uncharacteristic elements within LCA 26: Prettywood, Pilsworth and Unsworth Moss and the Special Landscape Area. There would be a moderate adverse magnitude of effect on the medium sensitivity LCA 26: Prettywood, Pilsworth and Unsworth Moss resulting in a **moderate adverse (significant) effect**.

Non-significant landscape and townscape effects

- 7.10.13 There would be **no significant landscape effects** during construction on the following LCAs and TCA:
- LCA 19: Heaton, Prestwich, Whitefield and Stand Parklands (high sensitivity) (**neutral effect**)

- LCA 27: Simister, Slattocks and Healds Green (medium sensitivity) (**slight adverse effect**)
- TCA Prestwich, Whitefield, Radcliffe and Unsworth Residential (low sensitivity) (**slight adverse effect**).

7.10.14 Small areas of these broad LCAs would be directly impacted by the widening of the M60 Mainline J17-J18 to dual five-lane motorway; the construction of the M60 northbound to M60 westbound free flow link and the construction of ponds and their associated access tracks.

7.10.15 The removal of vegetation, disturbance from construction plant within compounds and movement along haulage routes, land reprofiling for the ponds would alter the characteristics of a small part of each of the LCA and TCA.

Visual effects

Significant visual effects

7.10.16 Table 7.11 summarises likely significant visual effects during construction.

7.10.17 Views and visual receptors within the detailed study area which would be subject to significant short-term effects during the construction stage are described below. Viewpoint locations are shown on Figure 7.5: Representative Viewpoints and Photomontages Locations of the Environmental Statement Figures (TR010064/APP/6.2). The detailed visual assessment can be found in Appendix 7.4: Schedule of Visual Effects of the Environmental Statement Appendices (TR010064/APP/6.3). Representative viewpoint photographs are shown on Figure 7.6: Representative Viewpoint Photosheets of the Environmental Statement Figures (TR010064/APP/6.2).

7.10.18 Whilst construction activity would largely be set within the context of the existing motorway infrastructure, the presence of construction elements, such as construction compounds and satellite compounds, extensive earthworks for the construction of the Northern Loop, Simister Pike Fold Viaduct, Simister Pike Fold Bridge and online widening, would be prominent in people's views close to the Scheme. Visual disturbance from the movement of construction plant on haul routes and working areas, temporary construction lighting and the removal of highway vegetation belts on the M60 and M66 would also change the nature of views.

7.10.19 The greatest change in people's views would be along the residential settlement edges adjoining the M60 between the A665 Bury Old Road and M60 J18, at individual residential properties within the rural area to the east of M60 J18, within Pike Fold Golf Course, Boz Park and also from footpaths and that run close to, or cross, the Scheme.

7.10.20 Of the 30 representative viewpoint locations included in the assessment of visual effects, the Scheme would result in **significant visual effects** in 18 of the representative viewpoint locations during construction.

- 7.10.21 Visual receptors in the following representative viewpoint locations – VP7, VP14, VP15, VP16, VP17, VP18, VP19, VP20, VP21, VP23, VP26, VP27 and VP28 – are assessed as having a **very large or large adverse (significant) effect**, as these receptors would be close to construction work with views to construction activity seen across a large part of short and medium distance views. Vegetation clearance along motorway verges and other areas required for construction of the Northern Loop, Simister Pike Fold Viaduct, Simister Pike Fold Bridge would open up views of the construction activities and increase visibility of the existing motorway infrastructure. Visual disruption, including within the main construction compound and satellite compounds, would also be notable from nearby locations. Construction activity would become the dominant feature in the view and would result in a substantial change to the character of the view. These high and medium sensitivity visual receptors would therefore experience a major magnitude of effect, resulting in a **very large or large adverse (significant) effect**. Refer to Chapter 12 Population and Human Health of the Environmental Statement (TR010064/APP/6.1) for details of access to footpaths during construction.
- 7.10.22 Visual receptors in following the representative viewpoint locations – VP3, VP5, VP6, VP12, VP14, VP17, VP28 and VP30 – are assessed as having a **moderate adverse (significant) effect** as views of the construction activity described above would be limited by intervening vegetation, buildings or landform, for instance from within rural areas east of M60 J18, or, construction activity would be would not be the main focus of the view or would form a part of the view in the medium or long distance.
- Non-significant visual effects***
- 7.10.23 Apart from within slightly higher elevations in land to the north-east of M60 J18 near Heywood, visibility of the Scheme would quickly decrease with distance. This is due mainly to screening by dense urban development, by linear tree belts along highway verges which are being retained, and by other woodland/vegetation. The very gently undulating topography as well as woodland within the Heaton Park and Simister area substantially limit views from the south-east towards M60 J18 as described in Section 7.6 of this chapter and shown on the ZTV in Figure 7.2: ZTV with Screening Features of the Environmental Statement Figures (TR010064/APP/6.2).
- 7.10.24 People's views would not be significantly affected during construction from east of M60 J17 to Thatch Leach Lane Playground on Thatch Leach Lane; from north of Hills Lane on the M66 and within the village of Simister. This is due to the work being undertaken within on-line sections of the existing motorway corridor or being mostly screened by intervening retained highway woodland belts, close boarded highway fencing or the motorway corridor being within cuttings and less visible.

- 7.10.25 Visual receptors at the following the representative viewpoint locations – VP1, VP2, VP4, VP6, VP8, VP9, VP10, VP11, VP13, VP16, VP17, VP19, VP22, VP24 and VP25 – are assessed as having a **slight adverse effect**, which is **not significant**, as views of the construction activity described above would be substantially limited by intervening vegetation, buildings or landform, for instance from within rural areas east of M60 J18, or construction activity would not be the main focus of the view or would form a part of the view in the long distance, for instance from rural locations east of the Scheme.

Operation

Landscape and townscape effects

Year 1 (Opening Year)

Non-significant effects

- 7.10.26 Once construction activity has ceased and reinstated grass sward has established sufficiently to soften the earthworks, the effects on LCA 26: Prettywood, Pilsworth and Unsworth Moss would reduce to a **slight adverse effect** by year 1 of operation, which is **not significant**.
- 7.10.27 There would continue to be a **slight adverse effect**, which is **not significant**, on LCA 27: Simister, Slattocks and Healds Green and TCA Prestwich, Whitefield, Radcliffe and Unsworth Residential during year 1 of operation as the operational Scheme would form a very small part of each LCA and TCA. There would be a **neutral effect** on LCA 19: Heaton, Prestwich, Whitefield and Stand Parklands.

Year 15 (Design Year)

Non-significant effects

- 7.10.28 Mitigation planting would have sufficiently established to integrate the Scheme into the receiving LCAs and TCA. However, there would be a permanent slight alteration to landscape character resulting in a **slight adverse effect**, which is **not significant**, on LCA 26: Prettywood, Pilsworth and Unsworth Moss, LCA 27: Simister, Slattocks and Healds Green and on TCA Prestwich, Whitefield, Radcliffe and Unsworth Residential by year 15. There would be a **neutral effect** on LCA 19: Heaton, Prestwich, Whitefield and Stand Parklands.

Visual effects

Year 1 (Opening Year)

Significant visual effects

- 7.10.29 Table 7.11 summarises the likely significant visual effects during operation in year 1.

- 7.10.30 The mitigation planting described in Section 7.9 and in the REAC, contained within the First Iteration EMP (TR010064/APP/6.5), would not have established at this stage and would not provide any contribution to screening or reducing visibility at operation year 1. However, during operation summer year 1 the effects assessed during winter in year 1 of operation are likely to reduce due to leaf cover on existing vegetation reducing visibility of the Scheme.
- 7.10.31 Whilst the Scheme would largely be set within the context of the existing M60 J18, linear tree belt removal from highway verges and other areas of vegetation clearance would increase the visual prominence of new and existing highway infrastructure, including day and night-time effects from lighting, headlights, signage and traffic flow. The extent of highway infrastructure would be increased and major new structures, including the Northern Loop and Simister Pike Fold Viaduct, Simister Pike Fold Bridge and M66 southbound diverge, and also the golf ball netting, would be prominent within the relatively flat landscape, particularly where above surrounding levels. Scheme elements within the broader landscape surrounding the M60 J18, including ponds and access tracks, would also be perceptible.
- 7.10.32 There would be **significant visual effects** during operation in winter year 1 for visual receptors at 17 of the 30 representative viewpoints assessed. These are set out in Table 7.11. The visual receptors at these viewpoints are of high or moderate sensitivity and would experience a significant change in view as a result of the Scheme. During year 1 in summer the assessed effects are likely to reduce further due to leaf cover on existing vegetation reducing the visibility of the Scheme.
- 7.10.33 Visual receptors in the following representative viewpoint locations – VP14, VP15, VP16, VP17, VP23 and VP26 – are assessed as having a **large adverse (significant) effect** as these receptors would have open, close or medium distance open views of the operational road Scheme described above and would be a prominent feature of the view. For VP14 and VP17, only residential receptors would experience a large adverse effect.
- 7.10.34 Visual receptors in the following representative viewpoint locations – VP3, VP5, VP7, VP12, VP14, VP17, VP18, VP19, VP20, VP21, VP27, VP28 and VP30 – are assessed as having a **moderate adverse (significant) effect**, as views of the operational road Scheme would be limited by intervening vegetation, fencing, buildings or landform, for instance from within rural areas east of M60 J18. Or the Scheme would not be the main focus of the view or would form a part of the view in the medium or long distance. For VP14 and VP17, only footpath users would experience a moderate adverse effect.

Non-significant visual effects

- 7.10.35 There would be **no significant effects** on people's views during operation in winter year 1 in following the representative viewpoint locations during operation in winter year 1 – VP1, VP2, VP4, VP6, VP8, VP9, VP10, VP11, VP13, VP16 (road users), VP17 (road users), VP19 (visitors to St. Margaret's Church of England Primary School, residents), VP22, VP24, VP25 and VP29. This is due to several factors, including distance from the Scheme, the influence of topography and vegetation which lessens visibility of the Scheme and the nature of existing views, some of which include views of the existing motorway corridor where the level of change is likely to be similar to the view without the Scheme.

Year 15 (Design Year)

Significant visual effects

- 7.10.36 Table 7.11 summarises the likely significant visual effects during operation in year 15.
- 7.10.37 A **moderate adverse (significant) effect** would remain for residents at addresses 1 and 2 Warwick Close, 51, 53, 55, 57, 59 and 61 Kenilworth Avenue, and 2 and 4 Barnard Avenue (VP28). Vegetation removed would not be reinstated in the M60 verge due to the narrowness of the remaining verge, and close proximity of the hard shoulder and drainage. Shrub planting would be reinstated along Warwick Close and maintained no higher than 1.5m to follow requirements of utilities companies for planting near existing underground utilities. The planting would provide some amenity value although it would not be tall enough to provide any filtering or screening above the highway fencing. The highway fence would provide screening of the motorway from the ground level although open views would remain from the upper storeys.

Non-significant visual effects

- 7.10.38 In summer year 15, mitigation planting would have established to help integrate the Scheme into the landscape and to help screen views of the Scheme. By the summer of year 15, 29 of the 30 representative viewpoints would experience a **slight adverse, slight beneficial or neutral effect**, which is **not significant**. This would be due to the effectiveness of established mitigation planting combined with other surrounding vegetation during the summer of year 15 when vegetation is in full leaf. Without leaf cover during the winter months of Year 15 there are likely to be some remaining views of the Scheme and moving traffic. However, the structure of mitigation planting would provide some filtering to reduce views of the road and moving traffic.
- 7.10.39 **Slight beneficial effects** on people's views would occur at the following locations – VP11, VP12, VP14, VP15, VP18, VP19, VP20, VP21 and VP30 – where a combination of embedded and essential mitigation measures comprising woodland and hedgerow planting would have developed sufficiently to reduce views of the road network compared to the views without the Scheme.

Combined outcome of the landscape and visual assessment

- 7.10.40 The overall long-term magnitude and residual significance of effect of the Scheme on local landscape character and visual amenity is considered to be **slight adverse** and, therefore, **not significant**. This is typically due to the location of the Scheme, the influence of the existing motorway infrastructure on landscape and visual receptors and landscape mitigation measures set out in Section 7.9. **Significant effects** would remain at one representative viewpoint (VP28) out of the 30 representative viewpoints assessed.

Table 7.10 Summary of significant landscape effects

Receptor	Significance of effect		
	Construction	Year 1 (Opening Year)	Year 15 (Design Year)
LCA 26: Prettywood, Pilsworth and Unsworth Moss	Moderate adverse (significant)	Slight adverse (not significant)	Slight adverse (not significant)

Table 7.11 Summary of significant visual effects

Receptor	Significance of effect		
	Construction	Year 1 (Opening Year)	Year 15 (Design Year)
VP3: Brickhouse Farm, four residential properties on Killy Lane, Footpath 6WHI, Footpath 7WHI, Pike Fold Golf Course	Residents, footpath users and visitors to Pike Fold Golf Course: Moderate adverse (significant)	Residents, footpath users and visitors to Pike Fold Golf Course: Moderate adverse (significant)	Residents, footpath users and visitors to Pike Fold Golf Course: Slight adverse (not significant)
VP5: Unsworth Moss Farm, Unsworth Moss Bungalow, Moss Top Farm, Footpaths 8WHI and 9WHI	Residents and footpath users: Moderate adverse (significant)	Residents and footpath users: Moderate adverse (significant)	Residents and footpath users: Slight adverse (not significant)
VP6: Footpath 9WHI and local road on Hills Lane	Footpath users: Moderate adverse (significant) Local road users: Slight adverse (not significant)	Footpath users and local road users: Slight adverse (not significant)	Footpath users and local road users: Slight adverse (not significant) Local road users: Slight adverse (not significant)

Receptor	Significance of effect		
	Construction	Year 1 (Opening Year)	Year 15 (Design Year)
VP7 (PM01): Footpath 9WHI, Footpath 46WHI, road users along Egypt Lane, users of Pike Fold Golf Course	Footpath users, local road users and visitors to Pike Fold Golf Course: Large adverse (significant)	Footpath users, local road users and visitors to Pike Fold Golf Course: Moderate adverse (significant)	Footpath users, local road users and visitors to Pike Fold Golf Course: Slight adverse (not significant)
VP12: Boz Park public open space	Park visitors: Moderate adverse (significant)	Park visitors: Moderate adverse (significant)	Park visitors: Slight beneficial (not significant)
VP14: Cowl Gate Farm, Footpath 12WHI	Residents: Moderate adverse (significant) Footpath users: Large adverse (significant)	Residents: Moderate adverse (significant) Footpath users: Large adverse (significant)	Residents and footpath users: Slight beneficial (not significant)
VP15 (PM02): Residential properties on Marston Close. Representative of views from residential properties on Mode Hill Lane	Residents: Very large adverse (significant)	Residents: Large adverse (significant)	Residents: Slight beneficial (not significant)
VP16: Residential properties on Rothay Close. Representative of views from Brathay Close and Heybrook Close. Representative of views for road users on Heybrook Close and Rothay Close	Residents: Very large adverse (significant) Road users: Slight adverse (not significant)	Residents: Large adverse (significant) Road users: Slight adverse (not significant)	Residents and road users: Slight adverse (not significant)

Receptor	Significance of effect		
	Construction	Year 1 (Opening Year)	Year 15 (Design Year)
VP17 (PM03): Residential properties on Derwent Avenue. Representative of views from Duddon Close, Leven Walk, permissive path via Haweswater Aqueduct underpass and road users on Derwent Avenue	Residents: Very large adverse (significant) Footpath users: Moderate adverse (significant) Road users: Slight adverse (not significant)	Residents: Large adverse (significant) Footpath users: Moderate adverse (significant) Road users: Slight adverse (not significant)	Residents, footpath users and road users: Slight adverse (not significant)
VP18: Representative of Eastview (residential property) and No. 7, 9 and 11 Corday Lane	Residents: Very large adverse (significant)	Residents: Moderate adverse (significant)	Residents: Slight beneficial (not significant)
VP19 (PM04): Parrenthorn High School, Heywood Road, St. Margaret's Church of England Primary School. On-road cycle route.	Parrenthorn High School visitors, cyclists, local road users: Large adverse (significant) St. Margaret's Church of England Primary School: Slight adverse (not significant)	Parrenthorn High School visitors, cyclists, local road users: Moderate adverse (significant) St. Margaret's Church of England Primary School, residents: Slight adverse (not significant)	Parrenthorn High School visitors, cyclists, local road users, St. Margaret's Church of England Primary School: Slight beneficial (not significant)
VP20: Bridleway 27aPRE on the Heaton Park Registered Park and Garden boundary	Bridleway users: Large adverse (significant)	Bridleway users: Moderate adverse (significant)	Bridleway users: Slight beneficial (not significant)
VP21: Residential properties on Parrenthorn Road	Residents: Very large adverse (significant)	Residents: Moderate adverse (significant)	Residents: Slight beneficial (not significant)

Receptor	Significance of effect		
	Construction	Year 1 (Opening Year)	Year 15 (Design Year)
VP23: Residential properties on Warwick Avenue	Residents: Very large adverse (significant)	Residents: Large adverse (significant)	Residents: Slight adverse (not significant)
VP26: Residential properties on Thatch Leach Lane, Conisborough Place and Glendevon Place	Residents: Very large adverse (significant)	Residents: Large adverse (significant)	Residents: Slight adverse (not significant)
VP27 (PM05): Residential properties 1, 3, 5, 7, 9, 11, 13, 15 and 17 Barnard Avenue and 76 Warwick Avenue	Residents: Very large adverse (significant)	Residents: Moderate adverse (significant)	Residents: Slight adverse (not significant)
VP28: Residential properties 1 and 2 Warwick Close, 51, 53, 55, 57, 59 and 61 Kenilworth Avenue, and 2 and 4 Barnard Avenue	Residents: Very large adverse (significant) Road users: Moderate adverse (significant)	Residents: Moderate adverse (significant) Road users: Slight adverse (not significant)	Residents: Moderate adverse (significant) Road users: Slight adverse (not significant)
VP30: Visitors to Boz Park public open space	Park visitors: Moderate adverse (significant)	Park visitors: Moderate adverse (significant)	Park visitors: Slight beneficial (not significant)

7.11 Monitoring

- 7.11.1 The First Iteration EMP (TR010064/APP/6.5) would be developed into the Second Iteration EMP for implementation during construction, secured by Requirement 4 of the draft DCO (TR010064/APP/3.1). Appendix N: OLEMP of the First Iteration EMP (TR010064/APP/6.5) presents the objectives of landscape and ecological mitigation measures, how they would be implemented, monitored, and maintained, as well as setting out responsible parties.
- 7.11.2 Significant adverse residual effects on landscape and visual amenity are predicted as a result of the construction and operation of the Scheme. Therefore, monitoring must be undertaken in line with the requirements of the EIA Regulations. Monitoring requirements during construction and operation are set out below.

Construction

- 7.11.3 An Environmental Clerk of Works would ensure the Scheme's construction is delivered in accordance with the measures set out within the REAC, contained within the First Iteration EMP (TR010064/APP/6.5). This would ensure implementation of environmentally protective measures pertaining to protected species, species of principal importance, habitats of principal importance, statutory and non- statutory designated sites and non- native invasive species.
- 7.11.4 In addition, establishment of appropriate vegetation protection measures and areas for removal would be inspected by an Environmental Clerk of Works to ensure compliance with the Arboricultural Method Statement (to be produced at the detailed design stage) and the Tree Protection Plans (see Appendix 7.5: AIA of the Environmental Statement Appendices (TR010064/APP/6.3) for further details).
- 7.11.5 The Environmental Clerk of Works would also monitor and advise on the implementation of the landscape mitigation planting, in order to ensure that best practice is followed and the planting is implemented in accordance with the detailed design.

Operation

- 7.11.6 The Specification for Highways Works Series 3000, Landscape and Ecology (Highways Agency, 2001) developed at detailed design stage would set out requirements for the overseeing organisation during the first five years of vegetation establishment, known as the establishment aftercare period, and replacement of any failed stock during this period.
- 7.11.7 During the establishment aftercare period and beyond, environmental features (including soft landscape features) would be routinely monitored and inspected in accordance with the requirements stipulated in the Specification for Highways Works Series 3000, Landscape and Ecology (Highways Agency, 2001).

- 7.11.8 Monitoring of the establishment, growth and maintenance of landscape planting and seeding during the establishment aftercare period is described in Appendix N: OLEMP of the First Iteration EMP (TR010064/APP/6.5). For trees and shrubs, monitoring would be undertaken on a quarterly basis; for plants and grasslands, it would be as described dependent on type of plant or grass seed, and the specific objective for grasslands and pond areas.
- 7.11.9 The frequency of monitoring beyond the establishment aftercare period would be set out in the Third Iteration EMP, which is produced following completion of the Scheme to set out and to secure commitments required during operation of the Scheme. The Third Iteration EMP is also secured through Requirement 4 of the draft DCO (TR010064/APP/3.1).

7.12 Summary

Construction

- 7.12.1 The assessment has concluded that there would be a **significant adverse effect** on LCA 26: Prettywood, Pilsworth and Unsworth Moss during construction due to the partial loss of existing landscape features and addition of new noticeable features.
- 7.12.2 The assessment has also concluded that **significant adverse visual effects** would occur at 18 of the 30 representative viewpoints as the Scheme would become the dominant feature or would form a noticeable feature of the view. These representative viewpoints are VP3, VP5, VP6, VP7, VP12, VP14, VP15, VP16, VP17, VP18, VP19, VP20, VP21, VP23, VP26, VP27, VP28 and VP30.
- 7.12.3 For the remaining receptors the effects on the landscape and visual aspect would be **not significant**.

Operation

Year 1 (Opening Year)

- 7.12.4 The assessment has also concluded that **significant adverse visual effects** would occur at 17 of the 30 representative viewpoints as the Scheme would continue to be the dominant feature or would form a noticeable feature of the view. These representative viewpoints are VP3, VP5, VP7, VP12, VP14, VP15, VP16, VP17, VP18, VP19, VP20, VP21, VP23, VP26, VP27, VP28 and VP30.
- 7.12.5 For the remaining landscape and visual receptors the effects would be **not significant** after the application of the mitigation measures outlined in Section 7.9 of this chapter and included in the REAC, contained within the First Iteration EMP (TR010064/APP/6.5).

Year 15 (Design Year)

- 7.12.6 The assessment has concluded that **significant adverse visual effects** would remain by year 15 for residents at addresses 1 and 2 Warwick Close, 51, 53, 55, 57, 59 and 61 Kenilworth Avenue, and 2 and 4 Barnard Avenue (VP28) as open views across the M60 would remain from upper storeys.

7.12.7 For the remaining landscape and visual receptors there would be **slight adverse, neutral or slight beneficial effects** after the application of mitigation measures outlined in Section 7.9 of this chapter and included in the REAC, contained within the First Iteration EMP (TR010064/APP/6.5). Based on the DMRB LA 104 significance criteria, this would result in **no significant effects**, that is effects that are not material in the decision-making process.

Summary

7.12.8 The design and assessment of the Scheme has had regard to, and is considered to be compliant with, the NPS NN (DfT, 2014) and the draft NPS NN (DfT, 2023) assessment and mitigation requirements for the landscape and visual aspect.

7.12.9 Table 7.12 summarises residual significant effects identified for the landscape and visual aspect.

Table 7.12 Summary of residual significant effects for landscape and visual

Summary of residual significant effects	
Construction	Operation
Landscape: <ul style="list-style-type: none"> Moderate adverse effect on LCA 26: Prettywood, Pilsworth and Unsworth Moss 	Landscape: <ul style="list-style-type: none"> No significant effects identified during Year 1 (Opening Year) or Year 15 (Design Year).
Visual: <ul style="list-style-type: none"> Very large adverse effect on visual receptors at VP15, VP16 (residents), VP17 (residents), VP18, VP21, VP23, VP26, VP27, VP28 (residents). Large adverse effect on visual receptors at VP7, VP14 (footpath users), VP19 (Parrenthorn High School visitors, cyclists and local road users), VP20. Moderate adverse effect on visual receptors at VP3, VP5, VP6 (footpath users), VP12, VP14 (residents), VP17 (footpath users), VP28 (road users), VP30. 	Visual: <ul style="list-style-type: none"> Year 1 (Opening Year): <ul style="list-style-type: none"> Large adverse effect on visual receptors at VP14 (footpath users), VP15, VP16 (residents), VP17 (residents), VP23, VP26. Moderate adverse effect on visual receptors at VP3, VP5, VP7, VP12, VP14 (residents), VP17 (footpath users), VP18, VP19 (Parrenthorn High School visitors, cyclists and local road users), VP20, VP21, VP27, VP28 (residents), VP30. Year 15 (Design Year): <ul style="list-style-type: none"> Moderate adverse effect on visual receptors at VP28 (residents).

Acronyms and initialisms

Acronym or initialism	Term
AIA	Arboricultural Impact Assessment
DCO	Development Consent Order
Defra	Department for Environment, Food and Rural Affairs
DfT	Department for Transport
DMRB	Design Manual for Roads and Bridges
EIA	Environmental Impact Assessment
GLVIA3	Guidelines for Landscape and Visual Impact Assessment, 3rd Edition
GMCA	Greater Manchester Combined Authority
LCA	Landscape Character Area
LCT	Landscape Character Type
LDF	Local Development Framework
LEMP	Landscape and Ecology Management Plan
LNR	Local Nature Reserve
LVIA	Landscape and Visual Impact Assessment
MCDHW	Manual of Contract Documents for Highway Works
MHCLG	Ministry of Housing, Communities and Local Government (now called the Department for Levelling Up, Housing and Communities)
NCA	National Character Areas
NPPF	National Planning Policy Framework
NPPG	National Planning Practice Guidance
NPS NN	National Policy Statement for National Networks
NSIP	Nationally Significant Infrastructure Project
OLEMP	Outline Landscape and Ecology Management Plan
PM	Photomontage location
SBI	Site of Biological Importance
SPD	Supplementary Planning Document
UDP	Unitary Development Plan
VP	Representative viewpoint
ZTV	Zone of Theoretical Visibility

Glossary

Term	Definition
Assessment of effects	The assessment of changes arising from the development that is being assessed
Baseline studies	Work to provide an outline, understanding of landscape and visual conditions before or without implementation of the project requiring a mix of desk study consultation and field work. DMRB LA 107
Characteristics	Elements or combination of elements, which make a particular contribution to distinctive character. DMRB LA 107
Effect	Term used to express the consequence of an impact (expressed as the 'significance of effect'). DMRB LA 107
Embedded mitigation	Mitigation measures which are embedded into the project design and have been developed through an iterative design process
Enhancement	A beneficial measure that is over and above what is required to mitigate the adverse effects of a project. DMRB LA 107
Features	Particularly prominent, "eye-catching" elements or characteristic components (i.e. tree clumps, church towers, or wooded skylines). DMRB LA 107
GLVIA3	Guidelines for Landscape and Visual Assessment, 3 rd Edition
Impact	This distinguishes between the 'impact', defined as the action being taken, and the 'effect', defined as the change resulting from that action (GLVIA3). For consistency within LVIA "impact" cannot be used interchangeably with "effect" nor to mean a combination of several effects. DMRB LA 107
Landscape	An area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors. European Landscape Convention 2000
Landscape and visual impact assessment (LVIA)	A "... tool used to identify and assess the significance of and the effects of change resulting from..." a project on both the landscape as a resource and on people's views and visual amenity. GLVIA3
Landscape character	A distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse. GLVIA3
Landscape character area	Single unique areas which are the discrete geographical areas of a particular landscape type. Each will have its own individual character and identity, even though it shares the same generic characteristics with other areas of the same type. Natural England, 2014
Landscape character type	Distinct types of landscape that are relatively homogeneous in character. They are generic in nature in that they may occur in different areas in different parts of the country, but wherever they occur they share broadly similar combinations of geology, topography, drainage patterns, vegetation, historical land use, and settlement pattern. Natural England, 2014

Term	Definition
Landscape effects	The consequence of an impact (expressed as the 'significance of effect') on the landscape as a resource in its own right. GLVIA3
Landscape receptors	Defined aspect of the landscape resource that potentially could be affected by the project. GLVIA3
Landscape sensitivity	Applied to specific landscape receptors, combining judgements of the susceptibility of the receptor to the specific type of change proposed and the value related to the receptor LVIA: Landscape and Visual Assessment. GLVIA3
LCTs and LCSTs - Landscape character types	Distinct types of landscape that are relatively homogeneous in character. These are generic in nature, in that they may occur in different areas in different parts of the country, but wherever they occur they share similar characteristics
Magnitude of effects	Combines judgements about size and scale of effect, extent of area it occurs over, whether reversible or irreversible and whether short or long term in duration. GLVIA3
National Character Assessment	Natural England has divided England into 159 distinct natural areas which are called National Character Areas (NCA). Each is defined by a unique combination of landscape, biodiversity, geodiversity, history, and cultural and economic activity. Their boundaries follow natural lines in the landscape rather than administrative boundaries
Photomontage	Visualisation which superimposes an image of a proposed development upon a photograph following Landscape Institute Guidelines or the Highland Council, July 2016 guidelines
Sensitivity	A term applied to specific receptors, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed, and the value related to the receptor. GLVIA3
Significance of effect	A measure of the importance or gravity of the environmental effect
Susceptibility	The ability of a defined landscape or visual receptor to accommodate the specified proposed development without negative consequences. GLVIA3
Townscape	The landscape within the built-up area, including the buildings, urban open spaces, including green spaces and the relationship between buildings and between buildings and open spaces. GLVIA3
Tranquil areas	Places which are sufficiently away from visual or noise intrusion of development or traffic to be considered unspoilt by urban influences
Value	Relative value or importance of a landscape's quality, special qualities including perceptual aspects such as scenic beauty, tranquility, or wildness, cultural associations or other conservation issues. GLVIA3
Visual amenity	Overall enjoyment of a particular area, surroundings, or views in terms of people's activities - living, recreating, travelling through, visiting, or working. GLVIA3
Visual effects	Effects on specific views and on the general visual amenity experienced by people

Term	Definition
Visual receptor	Individuals and / or defined groups of people who have the potential to be affected by a project. GLVIA3
Visual sensitivity	Visual experience be it sensitivity to light or visual clutter. DMRB LA107
Zone of theoretical visibility (ZTV)	Map produced (usually digitally) to specific criteria to illustrate the area(s) from which a project can theoretically be visual. Note: For cumulative visual effects assessment it is the areas of overlap with the ZTV which can prove significant. DMRB LA107

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