

A1 in Northumberland: Morpeth to Ellingham

Scheme Number: TR010041

6.3 Environmental Statement – Chapter 7 Landscape and Visual

Part B

APFP Regulation 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed
Forms and Procedure) Regulations 2009

June 2020

Infrastructure Planning

Planning Act 2008

**The Infrastructure Planning
(Applications: Prescribed Forms and
Procedure) Regulations 2009**

**The A1 in Northumberland: Morpeth to Ellingham
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Environmental Statement

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7 LANDSCAPE AND VISUAL

7.1 INTRODUCTION

7.1.1. This chapter presents the assessment of likely significant landscape and visual effects as a result of Part B: Alnwick to Ellingham (Part B).

7.1.2. The Landscape and Visual Impact Assessment (LVIA) considers the two separate (but linked) topics of:

- a. Landscape: landscapes take their character from a combination of elements, including landform, land use and pattern, land cover (vegetation and built form), open space and the influence of heritage features
- b. Visual Effects: effects on specific views and on the general visual amenity experienced by people, such as:
 - i. The direct effects of Part B on the context and character of view
 - ii. The overall effect of the change on visual amenity

7.1.3. This chapter also identifies, where appropriate, proposed mitigation measures to prevent, minimise or control the likely adverse landscape and visual effects arising from the construction and operation of Part B, and the subsequent residual effects.

7.1.4. A full description of Part B, along with the Scheme as a whole is set out in **Chapter 2: The Scheme, Volume 1** of this ES (**Application Document Reference: TR010041/APP/6.1**). An assessment of combined effects of Part B is set out in **Chapter 15: Assessment of Combined Effects** of this ES and combined and cumulative effects of the Scheme are set out in **Chapter 16: Assessment of Cumulative Effects, Volume 4** of this ES (**Application Document Reference: TR010041/APP/6.4**). This assessment covers the Part B Main Scheme Area including Charlton Mires Site Compound, Lionheart Enterprise Park Compound (eastern site and western site) and Main Compound.

7.1.5. This chapter should also be read alongside the following appendices (**Volume 8** of this ES (**Application Document Reference: TR010041/APP/6.8**)):

- a. **Appendix 7.1: Arboricultural Report**
- b. **Appendix 7.2: Visual Effects Schedule**
- c. **Appendix 7.3: Landscape Effects Schedule**
- d. **Appendix 7.4: Landscape and Visual Sensitive Receptors**
- e. **Appendix 7.5: Landscape Character**

7.1.6. **Section 4.3 of Chapter 4: Environmental Assessment Methodology, Volume 1** of this ES (**Application Document Reference: TR010041/APP/6.1**) identifies any differences in the assessment methodology employed for Part A: Morpeth to Felton (Part A) and Part B. Further to this, there are other differences between the chapters for Part A and Part B. All key differences include:

- a. There are differences between Part A and Part B that relate to the scoping process, for example elements that are scoped in and out of the assessment. Refer to the **Scoping Report (Application Document Reference: TR010041/APP/6.10)** and **Scoping Opinion (Application Document Reference: TR010041/APP/6.12)** for Part A, and the **Scoping Report (Application Document Reference: TR010041/APP/6.11)** and **Scoping Opinion (Application Document Reference: TR010041/APP/6.13)** for Part B.
- b. A different approach has been used with the use of viewpoints for assessments for Part A and Part B, to reflect the nature of the receptors in the different Study Areas (fewer receptors for Part B and within a more enclosed online corridor). For Part A, assessment was undertaken for every receptor and viewpoint. For Part B, assessment was undertaken for receptors only. These assessments are directly comparable in terms of assessment approach as the users / occupiers of all sensitive visual receptors have been assessed to an appropriately detailed level for both Part A and Part B, but with some broader additional viewpoints included for Part A. The more limited range of the viewpoints for the Part B assessment was decided on the basis that there are very few dwellings and other receptors within the Study Area, including highways and commercial development.
- c. Footpaths were split into sections for Part A, whereas for Part B the worst case section of the footpath was assessed on the assumption that users would generally walk the whole footpath rather than a particular section so would experience the footpath as a whole. This is due to the broader network of Public Rights of Way (PRoW) for Part A that allows a more varied walking route selection, whereas the PRoW network associated with Part B is less well connected and therefore opportunities to vary routes are reduced and it is anticipated that walkers would use the whole PRoW route. However, these assessments are directly comparable and the assessments both identify the users of PRoW as the highest order of sensitivity. Whilst the figures on Part A differentiate the sections of PRoW where lower orders of impact are anticipated to arise, these are not specifically differentiated within the assessment schedule.
- d. National Character Areas (NCAs) were scoped out of the Part B assessment because the scale of Part B (and the extent and the degree to which landscape change would arise is less than for Part A) in relation to the scale of the NCA would be such that there would be no possibility of Part B having a significant effect on the NCAs. Additionally, Part B would be predominantly online widening of an existing trunk road, whereas Part A would comprise an extensive offline section.
- e. Part A and Part B both use a 2 km visual assessment Study Area (Part A was reduced from 5 km to 2 km during the assessment process). However, the Study Area for the landscape character assessment is 5 km for Part A and 2 km for Part B. This is due to the more open nature of the landscape for Part A affording wider appreciation of Part A in the landscape, and therefore requiring a wider Study Area. The Study Areas have been agreed through consultation (refer to **Section 7.4**).
- f. The Part A assessment refers to The Landscape Institute, Technical Guidance Note 02/17 Visual Representation of Development Proposals (March 2017) (**Ref. 7.1**). However, this was replaced by Technical Guidance Note 06/19, Visual Representation of Development Proposals (September 2019) (**Ref. 7.2**), by which time the Part A assessment was complete. However, the Part A assessment also referred to the emerging guidance published by the Landscape Institute, which was formally adopted in September 2019 (**Ref. 7.3**) in the undertaking of photographs for the photomontages presented in **Figure 7.13: Photomontages, Volume 6** of this ES (**Application**

Document Reference: TR010041/APP/6.6). Therefore, the information presented reflects the current guidance provided in Technical Guidance Note 06/19, Visual Representation of Development Proposals (September 2019) (**Ref. 7.2**).

- g.** Part A refers to the Northumberland Landscape Character Assessment; Part B Landscape Classification (**Ref. 7.4**) in identifying and assessing the local landscape character baseline, whereas Part B identifies regional character areas from the Northumberland Landscape Character Assessment; Part B Landscape Classification (**Ref. 7.4**) and local landscape character from the Alnwick Landscape Character Assessment Supplementary Planning Document (SPD) (**Ref. 7.5**). This is simply a reflection of the scale at which the Northumberland Landscape Character Assessment; Part B Landscape Classification (**Ref. 7.4**) was prepared, covering the whole of the county. The Alnwick Landscape Character Assessment Supplementary Planning Document (SPD) (**Ref. 7.5**) referred to in the assessment of Part B refers to broadly similar landscape character areas in terms scale, extent and nature of the character areas. Therefore, comparable assessments of local landscape character of Parts A and B have been undertaken. Furthermore, much of the detail for Part B is presented in an appendix. However, this does not change the approach to, or outcome of, the assessment.
- h.** A night time assessment has been undertaken for Part A to determine potential impacts from vehicle headlights, particularly associated with the proposed junctions and the proposed offline section. A night time assessment was not undertaken for Part B as there is no lighting proposed and the impact of traffic headlights would not substantially increase the effect on currently unlit landscape areas.

7.2 COMPETENT EXPERT EVIDENCE

7.2.1. **Table 7-1** below demonstrates that the professionals contributing to the production of this chapter have sufficient expertise to ensure the completeness and quality of this assessment.

Table 7-1 – Relevant Experience

Name	Role	Qualifications and Professional Membership	Experience
Sophie Lewis	Author	BA (Hons) Landscape Architecture MA Landscape Architecture CMLI (Chartered member of the Landscape Institute)	Senior Landscape Architect Chartered member of the Landscape Institute, with over five years of project experience. Project experience includes responsibility for LVIA and design inputs for a diverse range of schemes including: <ul style="list-style-type: none"> – Spalding Western Relief Road, Sections 1 and 5 – M1 Junction 19 Improvement scheme

Name	Role	Qualifications and Professional Membership	Experience
			<ul style="list-style-type: none"> – Botany Bay, Mixed Use Developments, Chorley – Future Carrington Village, Carrington
Clare Horner	Reviewer	BA (Hons) MLA Landscape Architecture CMLI (Chartered member of the Landscape Institute)	Associate Director Over 20 years' experience in LVIA in the energy and minerals sectors, and townscape and visual impact assessment.
Andy Follis	Reviewer	BSc Hons Geography MPhil Landscape Architecture CMLI (Chartered member of the Landscape Institute)	Technical Director Over 35 years' experience, including over 25 years in LVIA of major linear infrastructure. Assessments include: <ul style="list-style-type: none"> – A82 Crianlarich bypass – A90 Balmedie-Tipperty – A830 Arisaig – Beaully-Denny 400kV OHL
Andrew Williams	Approver	BA (Hons) Landscape Architecture Grad Dip (Landscape Architecture) CMLI (Chartered member of the Landscape Institute)	Technical Manager 24 years' experience preparing landscape and visual impact assessments for numerous highways schemes including: <ul style="list-style-type: none"> – A9 Dualling Tomatin to Moy (statutory Environmental Impact Assessment EIA) – Oxon Link Road (statutory EIA) – East Leeds Orbital Road (statutory EIA)

7.3 LEGISLATIVE AND POLICY FRAMEWORK

LEGISLATION

- 7.3.1. This assessment has taken into account the legislative and policy framework as summarised below.

International Legislation

- 7.3.2. The UK is a signatory to the European Landscape Convention (ELC) (**Ref. 7.6**) which was ratified in 2006 and became binding in the UK from 1 March 2007. The Convention is not an EU Directive, rather countries that ratify the Convention make a commitment to upholding the principles it contains in the context of their own domestic legal and policy frameworks.
- 7.3.3. Within the ELC (**Ref. 7.6 page 4**), landscape is defined as: “*an area, as perceived by people, whose character is the result of the action and interaction of natural and / or human factors.*” Furthermore, it recognises that all landscapes are potentially important, irrespective of location or condition – signatories acknowledge “... *that the landscape is an important part of the quality of life for people everywhere: in urban areas and in the countryside, in degraded areas as well as in areas of high quality, in areas recognised as being of outstanding beauty as well as everyday areas*” (**Ref. 7.6 page 3**).
- 7.3.4. The spirit of the ELC is carried through in planning policy and Natural England guidance; An Approach to Landscape Character Assessment (**Ref. 7.7**).

National Legislation

- 7.3.5. In addition to the above, specific legislation relating to individual landscape elements, which contribute to an area’s sense of place and character are listed below.

Wildlife and Countryside Act 1981 (As Amended) (Ref. 7.8)

- 7.3.6. This Act is the primary legislation that protects animals, plants and habitats in the UK. Detailed requirements are set out within **Chapter 9: Biodiversity** of this ES. **Figure 7.10: Landscape Mitigation Plan, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**) considers the ecological and biodiversity objectives that are driven by Wildlife and Countryside Act.

Hedgerow Regulations 1997 (Ref. 7.9)

- 7.3.7. Certain hedgerows are offered protection under The Hedgerows Regulations 1997. These Regulations determine the legal value of hedgerows and the penalties for their loss, where removed or lost to a scheme or development.

Countryside and Rights of Way Act 2000 (Ref. 7.10)

- 7.3.8. The Countryside and Rights of Way Act 2000 (CROW Act) contains measures to improve public access to the open countryside and registered common land while recognising the legitimate interests of those who own and manage the land concerned; it amends the law relating to rights of way and it amends the law relating to nature conservation by strengthening protection for Sites of Special Scientific Interest (SSSI); it provides for access (and limitations to access) for the general public and statutory undertakers. Additionally, the CROW Act is the legislative framework for Areas of Outstanding Natural Beauty (AONB), providing powers for Local Authorities to conserve and enhance these areas.

Natural Environment & Rural Communities Act 2006 (Ref. 7.11)

- 7.3.9. The Natural Environment and Rural Communities Act 2006 (NERC Act) established Natural England as an independent body responsible for conserving, enhancing and managing England's natural environment. The Act also identified the Commission for Rural Communities as an independent advocate, watchdog and expert adviser for rural England with a focus on deprived areas and the law on rights of way.

Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (EIA Regulations) (Ref. 7.12)

- 7.3.10. These regulations (implementing a European Directive) require an EIA to be carried out, before planning permission can be granted for certain types of major road schemes which are judged to have likely significant environmental effects.

Tree Preservation Orders (Ref. 7.13)

- 7.3.11. The law on Tree Preservation Orders is derived from Part VIII of the Town and Country Planning Act 1990 (**Ref. 7.13**) as amended and in the Town and Country Planning (Tree Preservation) (England) Regulations 2012 (**Ref. 7.14**) which came into force on 6 April 2012. Section 192 of the Planning Act 2008 (**Ref. 7.15**) made further amendments to the 1990 Act which allowed for the transfer of provisions from within existing Tree Preservation Orders to regulations. Part 6 of the Localism Act 2011 (**Ref. 7.16**) amended Section 210 of the Town and Country Planning Act 1990 concerning time limits for proceedings regarding non-compliance with Tree Preservation Order regulations. This is discussed in detail in **Appendix 7.1: Arboricultural Report, Volume 8** of this ES (**Application Document Reference: TR010041/APP/6.8**).

POLICY

National

- 7.3.12. National planning policy is laid down within the National Policy Statement for National Networks (NPS NN) (**Ref.7.17**) published in December 2014 and the National Planning Policy Framework (NPPF) (**Ref. 7.18**), published in March 2012, revised February 2019. The overall strategic aims of the NPS NN and the NPPF are consistent, however they have differing, but equally important roles to play.
- 7.3.13. The NPPF makes clear that it is not intended to contain specific policies relating to NSIPs, relying on the NPS NN to fulfil this role.
- 7.3.14. National policy relevant to landscape and visual effects and the significance of Part B on the policy objectives is outlined in **Table 7-2** below. The NPS NN represents the national policy applicable for this Scheme.

Local

7.3.15. For the purpose of this chapter, those policies located within 2 km of Part B's centre line, the Study Area (refer to **Section 7.6**), have been considered with respect to landscape character and visual amenity.

Emerging Northumberland Local Plan – Publication Draft (January 2019)

7.3.16. The Emerging Northumberland Local Plan (**Ref. 7.19**), is intended to replace all current District and County Council Local Plans and Core Strategy documents into a single document. Neighbourhood Plans would not be replaced by the Emerging Northumberland Local Plan and would remain of relevance when determining planning applications.

7.3.17. The overarching vision of the Emerging Northumberland Local Plan states *“Northumberland's physical and cultural identity would be conserved and nurtured; its resources would be utilised in a sustainable way. The breadth, scale and quality of its special, varied landscapes and biodiversity would be conserved, enhanced and increased. The quality of its buildings and spaces would be conserved and improved. New development would be well designed, minimise environmental harm and reduce the effects of climate change”* (**Ref. 7.19 page 35**).

7.3.18. Once adopted, the Emerging Northumberland Local Plan, would supersede the following documents, applicable to the subject specific Study Area:

a. Alnwick Core Strategy (October 2007) (**Ref. 7.20**).

b. Alnwick District Wide Local Plan (April 1997) – saved policies (**Ref. 7.21**).

7.3.19. Local policy relevant to landscape and visual issues and the significance of Part B on the policy objectives is outlined in **Table 7-3** below.

Table 7-2 – National Planning Policy Relevant to Landscape and Visual

Policy	Relevant Policy Objectives	Significance of Part B on Policy Objective
National Policy Statement for National Networks 2014 (Ref. 7.17)		
Para 4.29	Visual appearance should be a key factor in considering the design of new infrastructure, as well as functionality, fitness for purpose, sustainability and cost. Applying 'good design' to national network projects should therefore produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction, matched by an appearance that demonstrates good aesthetics as far as possible.	Consideration has been given to the visual appearance of Part B and how it sits within the receiving environment. This includes the slackening of earth embankments, the careful placement of screen bunds, reducing the requirement to dispose of material off site, and the nature of the proposed planting retaining long distance views where possible and/or appropriate.
Para 5.145	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).	The LVIA addresses this requirement in paragraphs 7.10.3 to 7.10.6 of this chapter and Section 8.10 of Chapter 8: Cultural Heritage of this ES.
Para 5.146	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 on local amenity, tranquillity and nature conservation.	The methodology is set out in paragraphs 7.4.20 to 7.4.65 of this chapter. This methodology has been agreed with the relevant consultees as set out in Table 7-4 of this chapter.
Para 5.156	Outside nationally designated areas, there are local landscapes that may be highly valued locally and protected by local designation. Where a local development document in England has policies based on landscape character assessment, these should be given particular consideration. However, local landscape designations should not be used in themselves as reasons to refuse consent, as this may unduly restrict acceptable development.	Within the Study Area there are two 'Areas of High Landscape Value' (AHLV) and one 'Intermediate Area of Landscape Value', which are policy led designations. These have been taken into consideration when judging the sensitivity of the Landscape Character Areas (LCAs) affected by Part B.
Para 5.157	In taking decisions, the Secretary of State should consider whether the project has been designed carefully, taking account of environmental effects on the landscape and siting, operational and other relevant constraints, to avoid adverse effects on landscape or to minimise harm to the landscape, including by reasonable mitigation.	Section 7.9 of this chapter details the mitigation measures proposed in order to reduce significant adverse impacts as a result of Part B upon the receiving environment.
Para 5.158	The Secretary of State would have to judge whether the visual effects on sensitive receptors, such as local residents, and other receptors, such as visitors to the local area, outweigh the benefits of the development. Coastal areas are particularly vulnerable to visual intrusion because of the potential high visibility of development on the foreshore, on the skyline and affecting views along stretches of undeveloped coast, especially those defined as Heritage Coast.	Part B is located c.7.5 km west of Northumberland's coastline. Figure 7.1: Zone of Theoretical Visibility (ZTV), Volume 6 of this ES (Application Document Reference: TR010041/APP/6.6) illustrates the distance between Part B and coastline receptors. During the site visit the extent of the ZTV was surveyed and sensitive receptors therein defined. Individual assessments on visual receptors likely to be significantly affected by Part B are included in Appendix 7.2: Visual Effects Schedule, Volume 8 of this ES (Application Document Reference: TR010041/APP/6.8).
Para 5.160	Adverse landscape and visual effects to be minimised through the 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.	The design process has sought to avoid significant effects and identify appropriate measures to mitigate potentially significant impacts where they arise, such as maintaining slope profiles of an appropriate gradient to plant screening vegetation.

Policy	Relevant Policy Objectives	Significance of Part B on Policy Objective
Para 5.32	Irreplaceable habitats including veteran trees. The Secretary of State should not grant development consent for any development that would result in the loss or deterioration of irreplaceable habitats including loss of aged or veteran trees found outside ancient woodland, unless the national need for and benefits of the development, in that location, clearly outweigh the loss. Aged or veteran trees found outside ancient woodland are also particularly valuable for biodiversity and their loss should be avoided. Where such trees would be affected by development proposals, the applicant should set out proposals for their conservation or, where their loss is unavoidable, the reasons for this.	This chapter and Figure 7.10: Landscape Mitigation Plan, Volume 6 of this ES (Application Document Reference: TR010041 /APP/6.6) details the mitigation proposed in order to reduce adverse impacts created by Part B on the Study Area. There are no veteran trees or Ancient Woodland affected by Part B. Information on the location of veteran trees is given in Appendix 7.1: Arboricultural Report, Volume 8 of this ES (Application Document Reference: TR010041/APP/6.8)
National Planning Policy Framework 2019 (Ref. 7.18)		
Para 20	The NPPF requires that strategic policies should set out an overall strategy for the pattern, scale and quality of development and make sufficient provision for conservation and enhancement of the natural, built and historic environment, including landscapes and green infrastructure, and planning measures to address climate change mitigation and adaptation.	The emerging Northumberland Local Plan sets out the policies at a local level and are discussed in Table 7-3 below.
Para 98	This paragraph states that planning policies and decisions should protect and enhance public rights of way and access, including taking opportunities to provide better facilities for users, for example by adding links to existing rights of way networks including National Trails.	As part of Part B, permanent diversions and enhancements would be made to existing PRoW so that a network of PRoW is maintained during operation and effects on views experienced by users of these routes are mitigated where significant effects are identified. Refer to Chapter 12: Population and Human Health of this ES.
Section 15, paras 170 to 183	These paragraphs address the importance of the natural environment through the protection and enhancement of valued landscapes; recognising the intrinsic character and beauty of the countryside; maintain the character of the undeveloped coast, while improving public access to it where appropriate; minimising impacts on and providing net gains for biodiversity.	A review of the existing landscape character has been carried out to identify those features that contribute to the current sense of place. This has been used to develop the proposed Landscape Mitigation Plan (Figure 7.10, Volume 6 of this ES, (Application Document Reference: TR010041/APP/6.6)), reinstating landscape elements in keeping with the existing environment. Part B has been developed to avoid or reduce impacts on landscape and develop mitigation and enhancement measures in keeping with the existing setting and biodiversity no net loss requirements as set out in Chapter 9: Biodiversity of this ES.
Para 180	This paragraph notes the importance of tranquillity and requires that planning policies and decisions aim to identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.	During the site visit, the Study Area was walked, and photography undertaken. The Study Area is relatively tranquil, with the exception of the areas immediately adjacent to the existing A1, given the absence of significant built form. The principal land use in the area is agriculture, resulting in large areas of open countryside, which is appreciated by walkers and visitors for its amenity value.
Para 175 (c)	This paragraph addresses the importance of ancient woodland, development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists.	No loss of ancient woodland or veteran trees is anticipated as a result of Part B.

Table 7-3 – Local Planning Policy Relevant to Landscape and Visual

Policy	Relevant Policy Objectives	Significance of Part B on policy objective
Alnwick District Local Development Framework, Core Strategy DPD, (October 2007) (Ref. 7.20)		
Policy 13: Landscape Character	<i>“All proposals for development and change would be considered against the need to protect and enhance the distinctive landscape character of the district. All proposals would be assessed in terms of their impact on landscape features and should respect the prevailing landscape quality, character and sensitivity of each area as defined in the Alnwick District Landscape Character Assessment Supplementary Planning Document.”</i>	When determining the sensitivity of the relevant baseline landscape (within the former Alnwick District area), reference would be made to the landscape character and sensitivity ratings of the Alnwick District Landscape Character Assessment Supplementary Planning Document, as set out in paragraph 7.7.21 of this chapter.
Policy S16: General Design Principles	<i>“All development would be expected to achieve a high standard of design, reflecting local character and distinctiveness in traditional or contemporary design and materials. Proposals should take full account of the need to protect and enhance the local environment having regard to their layout, scale, appearance, access and landscaping...”</i>	Attention has been placed on the setting of Part B within the receiving environment, in terms of landform, planting and green infrastructure connectivity. This is illustrated in Figure 7.10: Landscape Mitigation Plan, Volume 6 of this ES (Application Document Reference: TR010041/APP/6.6). Where possible, vegetation clearance would be kept to a minimum as shown in Figure 7.11: Vegetation Clearance Plan, Volume 6 of this ES.
Alnwick District Wide Local Plan (April 1997) Saved Policies (Ref. 7.21)		
RE17 Protection of Areas of High Landscape Value (AHLV)	<i>“Planning permission would not normally be granted for development which would have a significant and adverse effect on the appearance of the Area of High Landscape Value, Registered Parks and Gardens of Special Historic Interest or the fringe of the Northumberland National Park. Where development is to be permitted, the proposal would be required to demonstrate high standards of design and landscaping consistent with functional requirements.”</i>	The northern extent of the Study Area includes an AHLV, located within the former Alnwick District. The location of the AHLV is illustrated in Figure 2.2: Environmental Constraints Plan: Part B, Volume 1 of this ES (Application Document Reference: TR010041/APP/6.1). The AHLV falls within a number of LCAs and these have informed the overall value of the LCAs, which contribute to the overall sensitivity for the landscape assessment. No direct landscape effects are anticipated on the AHLV.
Northumberland Local Plan: Draft Plan for Consultation (January 2019) (Ref. 7.19)		
Policy STP 1 Spatial Strategy (Strategic Policy)	To deliver sustainable development which enhances the vitality of communities across Northumberland, supports economic growth, and which respects the County’s unique environment assets:	The baseline assessment, as described within this LVIA, identifies those unique environmental assets of relevance to those topics covered within this chapter, which require consideration when identifying potential effects posed by Part B.
Policy STP 2 Presumption in favour of sustainable development (Strategic Policy)	This policy promotes a presumption in favour of sustainable development.	Refer to Policy STP 3 below.
Policy STP 3 Principles of sustainable development (Strategic Policy)	Expanding on Policy STP 2, this policy sets out principles for sustainable development, those relevant to landscape and visual issues include to: – <i>“Contribute to the conservation and enhancement of Northumberland’s natural, historic, water and built environment assets, and contribute to increasing the natural capital resource”;</i>	Where feasible, Part B has looked to enhance those landscape elements retained and to provide connectivity to severed habitats, providing wildlife corridors through the inclusion of linear features, principally species rich native hedgerows. Where appropriate, existing vegetation would be retained with replacement landscape elements being proposed of equal or better quality where vegetation would be lost. Proposed species mixes are in keeping with species mixes found locally, in accordance with biodiversity recommendations.

Policy	Relevant Policy Objectives	Significance of Part B on policy objective
	<ul style="list-style-type: none"> – “Minimise their impact upon local amenity for new or existing residents and businesses, adjoining premises and land uses; – “Demonstrate high quality sustainable design which is accessible to all, and which respects and enhances the local distinctiveness of the natural, historic and built environment, helps promote a sense of place, reduces the need for energy, and facilitates flexible and adaptable buildings and environments; – “Anticipated impacts, including those from climate change, on the historic and natural environment, including landscape, biodiversity, ecosystems and water resources should be avoided by locating development elsewhere, adequately mitigated, or as a last resort, adequately compensated for.” 	<p>Refer to Chapter 8: Cultural Heritage, Chapter 9: Biodiversity and Chapter 10: Road Drainage and the Water Environment of this ES. Landscape mitigation measures are described in Section 7.9 of this chapter.</p>
<p>Policy STP 4 Climate change mitigation and adaptation (Strategic Policy)</p>	<p>This policy provides considerations for development proposals to mitigate climate change, landscape and visual considerations, including to:</p> <ul style="list-style-type: none"> – “Incorporate multi-functional green infrastructure, which can provide carbon storage and provide environments that encourage walking and cycling; – Protect and enhance habitats that provide important carbon sinks, including peat habitats and woodland; – Incorporate design features to ensure that they provide resilience to climate change; – Are designed to reduce demand on water resources; – Incorporate the use of sustainable drainage systems, to minimise and control surface water run-off; and – Incorporate, where feasible, multi-functional green infrastructure, which can help species adapt to climate change through preventing fragmentation or isolation of habitats, reduce the heating of the urban environment, and manage flooding.” 	<p>The landscape mitigation design, and in particular the location of woodland and tree planting, has been informed by recommendations from relevant specialists including ecology, drainage and cultural heritage. Refer to Landscape Mitigation Plan (refer to Figure 7.10, Volume 6 of this ES (Application Document Reference: TR010041/APP/6.6)).</p>
<p>Policy STP 5 Health and wellbeing (Strategic Policy)</p>	<p>This policy sets out the Council’s aims to improve health and wellbeing of the public, those relevant to landscape and visual issues and Part B are:</p> <ul style="list-style-type: none"> – “Safe, comfortable, inclusive and attractive and prioritise pedestrian and cycle movement; – Include appropriate green and blue infrastructure wherever possible, responding to opportunities to contribute positively towards urban greening; – Designed to promote and facilitate physical activity, and healthy lifestyles; and – Prevent negative impacts on amenity.” 	<p>The Landscape Mitigation Plan has been developed in consultation with local residents and has incorporated environmental measures (refer to Policy STP 4) to create a Scheme, which responds positively to the local environment (refer to Figure 7.10: Landscape Mitigation Plan, Volume 6 of this ES (Application Document Reference: TR010041/APP/6.6)).</p> <p>The movement of walkers, cyclists and horse riders (WCH) is considered in Chapter 12: Population and Human Health of this ES.</p>
<p>Policy STP 6 Green infrastructure (Strategic Policy)</p>	<p>This policy promotes the protection, retention and enhancement of Northumberland’s green infrastructure; this policy states that developments should:</p> <ul style="list-style-type: none"> – “Protect and enhance strategic and/or local green infrastructure assets, provide high quality links between existing assets including links with green 	<p>Where feasible, Part B has looked to enhance those landscape elements retained and to provide connectivity to severed habitats by providing wildlife corridors through the inclusion of linear features, principally species rich native hedgerows. Where appropriate, existing vegetation would be retained with</p>

Policy	Relevant Policy Objectives	Significance of Part B on policy objective
	<p><i>infrastructure networks in adjacent authority areas and/or provide additional uses for multi-functionality;</i></p> <ul style="list-style-type: none"> – <i>Secure improved access to green infrastructure, including rights of way, the network of cycle routes and high-quality provision for the widest possible range of ages, abilities and interests where this would not have an unjustified adverse effect on biodiversity and environmental and heritage assets;</i> – <i>Secure net-gains for biodiversity through the protection, creation and enhancement of coherent ecological networks;</i> – <i>Improve the potential green infrastructure to support economic growth and sustainable tourism without adverse effects on environmental and heritage assets;</i> – <i>Create a sense of place by fully integrating high quality, green infrastructure into the plan or proposal design to reflect locally distinctive character having regard to rural and urban character, open space, connective corridors and links with the wider countryside; and</i> – <i>Integrate green infrastructure with sustainable drainage and the management of flood risk.”</i> 	<p>replacement landscape elements being proposed of equal or better quality where vegetation would be lost.</p> <p>Figure 7.10: Landscape Mitigation Plan, Volume 6 of this ES (Application Document Reference: TR010041/APP/6.6) has been developed alongside ecological and arboricultural recommendations set out in Chapter 9: Biodiversity of this ES and Appendix 7.1: Arboricultural Report, Volume 8 of this ES (Application Document Reference: TR010041/APP/6.8).</p>
<p>Policy QOP 1 Design principles (Strategic Policy)</p>	<p>This policy sets out design considerations for new development with Northumberland, including that the development:</p> <ul style="list-style-type: none"> – <i>“Makes a positive contribution to local character and distinctiveness and contributes to a positive relationship between built and natural features, including landform and topography;</i> – <i>Creates or contributes to a strong sense of place and integrates the built form of the development with the site overall, and the wider local area;</i> – <i>Incorporates high quality aesthetics, materials and detailing;</i> – <i>Respects and enhances the natural and built environment, including heritage, environmental and ecological assets, and any significant views or landscape setting;</i> – <i>Good design and amenity;</i> – <i>Protects general amenity;</i> – <i>Incorporates, where possible, green infrastructure and opportunities to support wildlife, and contributes to net environmental gains, including for biodiversity; and</i> – <i>Responds to the climatic conditions of the location and avoids creation of adverse local climatic conditions.”</i> 	<p>A review of the existing landscape character has been carried out to identify those features that contribute to the current sense of place. This has been used to develop the proposed Landscape Mitigation Plan (Figure 7.10, Volume 6 of this ES (Application Document Reference: TR010041/APP/6.6)), reinstating landscape elements in keeping with the existing environment and climatic conditions.</p> <p>The design has been developed to reduce impacts on landscape and develop mitigation and enhancement measures in keeping with the existing setting. Species selection have been considered in line with ecologist and arboriculturalist recommendations set out in Chapter 8: Cultural Heritage, Chapter 9: Biodiversity, Chapter 10: Road Drainage and the Water Environment of this ES and Appendix 7.1: Arboricultural Report, Volume 8 of this ES (Application Document Reference: TR010041/APP/6.8).</p>
<p>Policy QOP 2 Good design and amenity</p>	<p>This policy states that <i>“Development will be required to provide a high standard of amenity for existing and future users of the development itself and preserve the amenity of those living in, working in or visiting the local area.”</i></p>	<p>Figure 7.10: Landscape Mitigation Plan, Volume 6 of this ES (Application Document Reference: TR010041/APP/6.6) illustrates the planting proposals for Part B. The proposals have been developed in consultation with local residents and incorporate environmental measures (refer to Policy STP 4) to ensure they relate to the existing sense of place.</p>

Policy	Relevant Policy Objectives	Significance of Part B on policy objective
Policy QOP 4 Landscaping and trees	<p>This policy provides guidance for soft landscaping within new development, including:</p> <ul style="list-style-type: none"> – “Existing features which contribute towards the character of the area, or amenity, are retained wherever possible and sympathetically incorporated into the overall design of the scheme; – Any hard or soft landscaping is appropriate, functional and well-integrated into the design of the development; – Trees, and other spaces and features that provide green and blue infrastructure, are preserved, enhanced and introduced into the landscaping scheme wherever possible; – There is no loss of existing trees which are valuable in terms of amenity, biodiversity or the landscape; – Any tree lost is replaced on-site or at a suitable location in the local area; – Any protected vegetation, including trees within Conservation Areas, trees with TPOs, protected habitats and important hedgerows, are preserved in accordance with the relevant national legislation, policy and guidance; – Planting schemes are compatible and appropriate to the site and its use; – species that may damage other vegetation or wildlife should be avoided; – There will be no unacceptable damage to vegetation which is to be retained as part of the landscaping scheme during construction; and – Provision is made for the long-term maintenance of new landscaped areas.” 	<p>Figure 7.10: Landscape Mitigation Plan, Volume 6 of this ES (Application Document Reference: TR010041/APP/6.6) illustrates the planting proposals for Part B. The proposals have been developed in consultation with local residents and incorporate environmental measures (refer to Policy STP 4) to ensure they relate to the existing sense of place. Anticipated tree loss and existing habitats are set out in Chapter 9: Biodiversity of this ES, Figure 7.11: Vegetation Clearance Plans, Volume 6 of this ES and Appendix 7.1: Arboricultural Report, Volume 8 of this ES (Application Document Reference: TR010041/APP/6.8) and species selection have been considered in line with ecological and arboricultural recommendations.</p>
Policy ENV 1 Approaches to assessing the impact of development on the natural, historic and built environment	<p>The character and significance of Northumberland’s distinctive and valued natural, historic and built environments, would be conserved, protected and enhanced by appropriate weight being assigned to the special qualities of the hierarchy of designated and non-designated sites, and applying an ecosystem approach that demonstrates an understanding of the significance and sensitivity of the natural resource. Such an approach should result in a neutral impact on, or net benefit for those ecosystems.</p>	<p>Consideration has been given to the avoidance of impacts on landscape and visual receptors where appropriate through the design approach and development of mitigation. This is demonstrated on Figure 7.10: Landscape Mitigation Plan, Volume 6 of this ES (Application Document Reference: TR010041/APP/6.6) which illustrates the planting proposals for Part B and described in Section 7.9 of this chapter.</p>
Policy ENV 3 Landscape	<p>Development proposals should consider, conserve and enhance landscape character in accordance with Northumberland Landscape Character Assessment.</p>	<p>In establishing the baseline, reference has been made to current published landscape character studies of the affected area, as set out at paragraph 7.7.17 of this chapter.</p>
Policy ENV 4 Tranquillity, dark skies and a sense of rurality	<p>In order to limit the urbanising effects on open countryside landscapes, natural habitats and to conserve or enhance tranquillity, development proposals would be required to demonstrate:</p> <ul style="list-style-type: none"> – The level of noise, traffic and light generated as a result of the development during construction and thereafter are minimised and dark skies maintained. – Intrusive external features, such as hard surfaces, car parking and urban-style boundary treatments are minimised. 	<p>With the exception of temporary light pollution from the construction compounds (and potentially short-term safety lighting of some work areas) when it is dark during working hours, there is no lighting proposed for Part B, thereby retaining the current night time situation.</p> <p>Intrusive external features including laybys and urban style boundary treatments would be kept to a minimum, with hedgerows being favoured as the primary boundary treatment, where space allows. Urban-style fencing would be minimised due to the rural nature of Part B.</p>

Policy	Relevant Policy Objectives	Significance of Part B on policy objective
	<ul style="list-style-type: none"> - Where a sense of openness of the open countryside is a key quality of the local landscape character, that this would not be reduced. - The quiet enjoyment of the landscape is maintained. 	<p>Screen planting has been restricted to around new junctions, earthworks and detention basins to create screen planting for residential properties. Some are identified for specific ecological benefit.</p> <p>The effects on historic and cultural assets are set out in Chapter 8: Cultural Heritage of this ES.</p>
<p>Policy ENV 7 Historic environment and heritage assets</p>	<p>Development proposals should consider, conserve and enhance heritage assets and their settings.</p>	<p>The Historic Landscape Characterisation Study (Ref. 7.22) identifies Part B and Study Area as a historic fieldscape. The soft landscape proposals are shown on Figure 7.10: Landscape Mitigation Plan, Volume 6 of this ES (Application Document Reference: TR010041/APP/6.6). Effects on heritage assets and their setting is provided in Chapter 8: Cultural Heritage of this ES.</p>

- 7.3.20. Compliance with planning policy is addressed further in the **Case for the Scheme (Application Document Reference: TR010041/APP/7.1)** and **National Policy Statement for National Networks (NPS NN) Accordance Table (Application Document Reference: TR010041/APP/7.2)**.

Supplementary Planning Documents

- 7.3.21. The Alnwick Landscape Character Assessment SPD (**Ref. 7.5**) has been considered as part of establishing the landscape character and visual amenity baseline. This SPD is considered in more detail at **paragraph 7.7.21** of this chapter.

7.4 ASSESSMENT METHODOLOGY

SCOPE OF ASSESSMENT

- 7.4.1. This section sets out the scope of the assessment which has been determined via the **Scoping Report (Application Document Reference: TR010041/APP/6.11)** and **Scoping Opinion (Application Document Reference: TR010041/APP/6.13)**.
- 7.4.2. **Appendix 4.1: Scoping Opinion Response Tracker, Volume 1** of this ES (**Application Document Reference: TR010041/APP/6.1**) provides a summary of the Scoping Opinion comments received from the Planning Inspectorate, which have informed the scope, methodology and assessment in this chapter.
- 7.4.3. The LVIA assesses two related topics during construction and operation:
- a. Landscape: they are an important component of the distinctiveness of any local area; they take their character from a combination of elements, including landform, land use and pattern, land cover/vegetation, open space and cultural heritage influences.
 - b. Visual amenity: A view, its components and context can have a great effect on the quality of peoples' lives.
- 7.4.4. The scope of the assessment is based on the following timescales:
- a. 2018 / 2019 is the baseline year
 - b. 2023 would be the opening year when Part is in operation (Year 1)
 - c. 2038 would be the design year (Year 15)

GUIDANCE

- 7.4.5. The following guidance documents have been used during the preparation of this chapter:
- a. Design Manual for Roads and Bridges (DMRB), Interim Advice Note (IAN) 135/10 Landscape and Visual Effects Assessment (**Ref. 7.23**)
 - b. Guidelines for Landscape and Visual Assessment (Third Edition) (GLVIA3) (2013) (**Ref. 7.24**)
 - c. Natural England's, An Approach to Landscape Character Assessment (October 2014) (**Ref. 7.7**)
- 7.4.6. Where required, accompanying photography follows guidance as outlined within industry best practise guidance including:

- a. The Landscape Institute, Technical Guidance Note 06/19, Visual Representation of Development Proposals (September 2019) (**Ref. 7.2**)
- b. The Landscape Institute, Advice Note 1/11 Advice on Photography and Photomontage (amended 2013) (**Ref. 7.25**).

7.4.7. The methodology has been informed by the guidance provided in IAN 135/10 (**Ref. 7.23**), supported and updated as appropriate by GLVIA3 (**Ref. 7.24**), in particular where the latter places greater emphasis on professional judgement in the explanation and justification for assessment criteria and conclusions that are appropriate to Part B being assessed. Throughout this chapter narrative has been provided to describe where professional judgement has been used.

Updated DMRB Guidance

7.4.8. Since the assessment reported in this ES were completed, a number of DMRB guidance documents have been superseded and replaced with revised guidance. For the Landscape and Visual Assessment, the following guidance documents, which were used in the preparation of this assessment, have been superseded:

- a. DMRB IAN 135/10 Landscape and Visual Effects Assessment (**Ref. 7.23**), which has been replaced by DMRB LA 107 Landscape and Visual Revision 2 (**Ref. 7.26**), which was released in February 2020.
- b. DMRB Manual of Contract Documents for Highway Works Volume 10 Environmental Design and Management – Environment Objectives – Part 3 88/01 Landscape Elements (**Ref. 7.27**), which has been replaced by DMRB LD 117 Landscape Design (**Ref. 7.28**). The information presented within the old guidance remains relevant, although less detail is presented in the updated guidance.

7.4.9. In order to determine the implications of the updated guidance to the conclusions of the ES, a sensitivity test has been undertaken to identify key changes in the assessment methodology and determine whether there would be changes to the significant effects reported in this ES if the updated guidance had been used for the assessment.

7.4.10. The findings of the sensitivity test are presented in **Appendix 4.5: DMRB Sensitivity Test, Volume 1** of this ES (**Application Document Reference: TR010041/APP/6.1**) and are summarised in **Section 7.10** below.

CONSULTATION

7.4.11. **Table 7-4** below provides a summary of the consultation undertaken in support of the preparation of this chapter. Further information is available in **Appendix 4.2: Environmental Consultation, Volume 1** of this ES (**Application Document Reference: TR010041/APP/6.1**).

Table 7-4 – Summary of Consultation

Consultee	Date and Type of Consultation	Summary of Consultation Response	Action
Historic England	12/09/2018 Email	Historic England deferred to local knowledge of NCC landscape and heritage officers. However, Historic England suggested a viewpoint within the Rock Conservation Area.	The Rock Conservation Area was visited during the Summer 2018 site visit and the Rock Farm Trail was walked to consider likely effects and to determine a potential viewpoint location. It was found that the extent of woodland immediately around the village, the copses and hedgerow trees between Rock and the A1 as well as the screening effect of buildings in views from within the village were such that there was no visibility of the A1 or traffic on it and thus no potential for effect. No viewpoint could be found, and the receptor was therefore scoped out.
NCC – Landscape Planner	12/09/2018 Email	Broadly agreed with the viewpoints chosen for receptors identified. Requested further assurances that Part B would not have an adverse impact on the Area of Outstanding Natural Beauty (AONB).	Areas of the AONB shown to have theoretical visibility of Part B in the ZTV were visited during October 2018. Due to intervening landform and layering of field boundary vegetation views to the A1 are limited. Where long distance views are available the proposed construction activities and Scheme would be a feature in the backdrop of wider landscape views. As such, Part B would not affect the character or special qualities of the Northumberland Coast AONB and visual receptors

Consultee	Date and Type of Consultation	Summary of Consultation Response	Action
			in the AONB are not anticipated to experience significant effects. The AONB has therefore been scoped out of the landscape and visual assessment.
NCC – AONB Officer	12/09/2018 Email	“Content that the Alnwick to Ellingham Improvement Scheme would not have a significant effect on the special qualities of the Northumberland Coast AONB and so have no further comments.”	N/A
Natural England	12/09/2018 Email	Agreed with the proposed methodology and selected viewpoint locations.	N/A
Northumberland National Park	12/09/2018 Email	Agreed with the proposed viewpoint locations.	N/A

METHODS OF BASELINE DATA COLLECTION

Desk Study

- 7.4.12. A desk-based review of existing information including planning documents, character assessments, aerial photographs and Ordnance Survey data was undertaken to determine landscape pattern, existing landscape features and landscape character.

Zone of Theoretical Visibility

- 7.4.13. The ZTV shows the area within which there may theoretically be views of Part B, refer to **Figure 7.1: Zone of Theoretical Visibility, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**). The ZTV has been computer generated using OS Terrain 5 digital terrain model (DTM), with an observer height of 1.5 m. It shows the extent of theoretical visibility of a line 4.5 m above Part B centreline (to allow for views of high-sided vehicles) and of the high points of the proposed Heckley Fence Accommodation Overbridge and Charlton Mires Junction.

- 7.4.14. The ZTV is described as ‘theoretical’ because it is based on computer modelling, using a digital terrain model. It is called ‘bare ground’ because it only considers a bare earth scenario, it does not allow for any above-ground elements (woodland, hedges and individual trees, buildings, fences and walls) that may block or filter views.
- 7.4.15. The inclusion of an area within the ZTV is not an indicator that all receptors in this area would experience views of Part B, but rather establishes the area from where there would theoretically be a view in the absence of any above-ground features. Many views from potential receptors within the ZTV, particularly more distant ones, would be screened or filtered by features such as buildings and walls, hedgerows, copses and woodland. The ZTV is based on a computer-generated DTM; there may also be localised variations in landform not covered by the model. There may therefore be limited locations out of the ZTV from which there is a view of Part B.

Field Visit

- 7.4.16. The extents of the computer generated ZTV were walked and reviewed on Site to understand the likely extent of actual visibility. This took into account features affecting visibility such as built form and vegetation which would potentially filter or screen views. This analysis determined the visibility of Part B and allowed the identification of visual receptors and the refinement of the proposed Study Area as shown on **Figure 7.2: Visual Receptors Plan, Volume 6** of this ES (**Application Document Reference: TR010041 /APP/6.6**).

Photography

- 7.4.17. All the viewpoint locations were noted, and photographs of each view taken. Photographs were taken using a Nikon D3200 digital camera with a 35 mm lens¹.
- 7.4.18. The photographs were combined into panoramas using ‘Photoshop CS6’ software and for each receptor the key features of the existing view were described. Viewpoints are shown on an OS plan as illustrated on **Figure 7.3: Viewpoint Location Plan, Volume 6** of this ES (**Application Document Reference: TR010041 /APP/6.6**).

DATA SOURCES

- 7.4.19. The following data sources were used to inform this assessment:
- a. Northumberland Consolidated Planning Policy Framework and saved policy documents from the previous authorities;
 - i. Alnwick Landscape Character Assessment Supplementary Planning Document (SPD) (**Ref. 7.5**)
 - ii. Alnwick District Wide Local Plan (**Ref. 7.21**)
 - iii. Alnwick District Local Development Framework (LDF) Core Strategy (**Ref. 7.20**)

¹ ‘normal’ or ‘standard’ lens, equivalent to a ‘full frame’ camera with a 50 mm lens, considered to give an image close to that perceived by the human eye.

- iv. Berwick-Upon-Tweed Local Plan (**Ref. 7.29**)
- b. National Character Areas, Natural England
 - i. NCA 1 – North Northumberland Coastal Plain (**Ref. 7.30**)
 - ii. NCA 2 – Northumberland Sandstone Hills (**Ref. 7.31**)
- c. Northumberland Landscape Character Assessment; Part B Landscape Classification (**Ref. 7.4**)

METHODOLOGY

Stages in the Assessment Process

- 7.4.20. There are four key stages (derived from IAN 135/10 and GLVIA3) when carrying out assessments on the effects of landscape character and visual amenity. These are listed below:
- a. **Stage 1:** Assessment of the existing situation (environmental baseline), analysing the existing landscape and visual context of the receiving environment, within the defined Study Area. This is done to understand the sensitivity of the identified receptors.
 - b. **Stage 2:** Identify potential impacts associated with Part B, including mitigation measures incorporated as part of the design during all stages of development (construction and operational), and assigning a magnitude of impact to identified changes to landscape character and visual amenity.
 - c. **Stage 3:** Identify the need for any further mitigation measures where the assessment identifies potentially significant effects.
 - d. **Stage 4:** Describe residual impacts (i.e. incorporating additional mitigation) and assess the significance of effect.
- 7.4.21. In assessing the landscape effects, consideration has been given to the way in which Part B would:
- a. Alter the existing landscape components that form the characteristics of the wider environment e.g. changes to boundaries and patterns, loss of existing trees/woodland, changes to scale and form.
 - b. Changes to the layout of the local road network which may introduce new elements into the existing landscape setting, e.g. traffic movements, junctions.
 - c. Changes to the existing land uses that contribute to the local landscape.
 - d. Introduction of new soft landscape features e.g. replacement hedgerows or boundaries, roadside planting.
- 7.4.22. In assessing the visual effects, consideration has been given to the way in which Part B would change the views available in the Study Area and the effect of those changes on the people who may enjoy those views, including:
- a. The direct effects of Part B, through intrusion or obstruction in the view.
 - b. The overall effect on visual amenity, be it degradation or enhancement.

7.4.23. The following sections describe in detail the processes of assessing both landscape and visual effects; whilst similar in approach each subject matter has its own set of criteria by which to assess against.

Assessment Criteria for Landscape Effects

7.4.24. Landscape effects describe the likely nature and scale of changes (impacts) imposed on a geographical area's character by a scheme. Impacts can be either direct or indirect. The magnitude of the impact relates to the scale of these changes.

7.4.25. In accordance with the European Landscape Convention, the term landscape applies equally to natural, rural, urban and peri-urban areas. It concerns landscapes that might be considered outstanding as well as every day or degraded landscapes.

7.4.26. GLVIA 3 describes landscape character as "*A distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another.*" The following sections review the statutory designations and landscape context to understand the existing landscape features, pattern, grain, scale and their overall contribution to landscape character.

7.4.27. Landscape effects are a combination of the physical changes to the fabric of the landscape arising from a scheme. The landscape appraisal considers the effect of a scheme on the landscape in its entirety, effects on individual elements of the landscape, and effects on characteristic combinations or patterns of the elements and how these are seen to affect its character and quality.

7.4.28. Landscape sensitivity is derived from the consideration of the value of the landscape and the degree to which the particular element or characteristic can be replaced or substituted. The determination of the sensitivity of the landscape resource is based on an evaluation of a landscape's key characteristics that are likely to be affected by a scheme (susceptibility).

7.4.29. The significance of effect is determined by considering the sensitivity of the landscape and the magnitude of the change anticipated.

7.4.30. The effects of Part B on landscape character vary over time, due to daily changes in light level, seasonal variation and maturing of the mitigation planting. When considering the effects of Part B on the landscape, the following scenarios have been assessed:

- a. Construction:** During the construction phase, assuming a maximum perceived change situation (i.e. when construction activity is at its peak) and noting how long that phase is likely to last.
- b. Winter (Year 1):** A winter's day in the year that Part B would open to traffic or be fully operational (i.e. with noise/visual screens and bunds in place but before any planted mitigation has begun to take effect). With the leaves off the trees in the wider landscape and no effective mitigation from the planting, this represents the worst-case scenario.
- c. Summer (Year 15):** A summer's day in the fifteenth year after opening, when the planted mitigation measures can be assumed to be substantially effective and trees in the wider

landscape provide additional screening. This is usually a reflection of the near fully mitigated scenario under normal conditions.

7.4.31. The temporary construction compounds would be lit, however the potential impacts are not anticipated to give rise to significant effects as a result of existing lighting in the landscape and / or existing landscape features that provide screening. Whilst some sections of the construction works may also be lit for safety reasons when it is dark during site working hours, within the context of the existing A1 these potential impacts are not anticipated to give rise to significant effects. No operational lighting along the A1 corridor is proposed and Part B is considered as an online improvement scheme, therefore the impact of traffic headlights would not substantially increase the effect on the currently unlit existing A1 corridor. A night time assessment has therefore not been undertaken.

Landscape Quality

7.4.32. Quality relates to the intrinsic aesthetic appeal demonstrated by a character area or feature including its condition and contribution to defining an area’s ‘sense of place’.

7.4.33. A five-point scale has been adopted, based on GLVIA3 (Ref. 7.24) and the IAN 135/10 (Ref. 7.23) methodologies, to assist in describing landscape quality as shown in Table 7-5 below.

Table 7-5 – Landscape Quality

Rating	Criteria
Outstanding	Areas comprising a clear composition of valued landscape components in robust form and health, free of disruptive visual detractors and with a strong sense of place. Areas containing a strong, balanced structure with distinct features worthy of conservation.
Very Attractive	Areas primarily of valued landscape components combined in an aesthetically pleasing composition and lacking prominent disruptive visual detractors. Areas containing a strong structure with noteworthy features or elements, exhibiting a sense of place.
Good	Areas primarily of valued landscape components combined in an aesthetically pleasing composition with low levels of disruptive visual detractors, exhibiting a recognisable landscape structure.
Ordinary	Areas containing some features of landscape value but lacking a coherent and aesthetically pleasing composition with frequent detracting visual elements, exhibiting a distinguishable structure often concealed by mixed land uses or development. Such areas would be commonplace at the local level and would generally be undesignated, offering scope for improvement.

Rating	Criteria
Poor	Areas lacking valued landscape components or comprising degraded, disturbed or derelict features, lacking any aesthetically pleasing composition with a dominance of visually detracting elements, exhibiting mixed land uses which conceal the baseline structure. Such areas would generally be restricted to the local level and identified as requiring recovery.

Landscape Value

7.4.34. Value relates to areas of particular scenic quality or those displaying important historic and cultural associations. Landscape value is frequently addressed by reference to international, national, regional and local designations. An absence of a formal designation does not, however, determine that an area is necessarily of low value; factors such as accessibility and local scarcity can render areas of unremarkable quality highly valuable as a local resource.

Susceptibility to Change

7.4.35. There is a further consideration when determining sensitivity, which is susceptibility to change. A high quality or high value landscape (highly sensitive) should not, by definition, infer that it has a high susceptibility to future change. Similarly, an area considered to be low quality or value (low sensitivity) does not automatically have a lower susceptibility to change.

7.4.36. Within GLVIA3 (**Ref. 7.24 page 88 to 89**) susceptibility is defined as “*The ability of the landscape receptor to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape policies and strategies*”. Susceptibility of the landscape to change arising from any development is specific to the type and nature of the proposed development and the changes it would bring about. Susceptibility to change has been described within a three point scale of high – moderate – low and forms an intrinsic part of the assessment of sensitivity as outlined below. The sensitivity, based on quality value and susceptibility, along with the magnitude of impact arising as a result of a proposed development are used in determining significance of effects.

Sensitivity to Change

7.4.37. In line with IAN 135/10 Annex 1 Table 2 (**Ref. 7.23**), three orders of landscape sensitivity have been adopted for this assessment, as outlined below in **Table 7-6**.

Table 7-6 – Landscape Sensitivity

Rating	Criteria
High	<p>Landscapes which by nature of their character would be unable to accommodate change of the type proposed. Typically, these landscapes would be:</p> <ul style="list-style-type: none"> – Of high quality (very attractive or outstanding) with distinctive elements and features making a positive contribution to character and sense of place. – Likely to be designated, but the aspects which underpin such value may also be present outside designated areas, especially at the local scale. – Areas of special recognised value through use, perception or historic and cultural associations. – Likely to contain features and elements that are rare and could not be replaced.
Moderate	<p>Landscapes which by nature of their character would be able to partly accommodate change of the type proposed. Typically, these landscapes would be:</p> <ul style="list-style-type: none"> – Comprised of commonplace elements and features creating generally unremarkable character but with some sense of place (good quality). – Locally designated, or their value may be expressed through non-statutory local publications. – Containing some features of value through use, perception or historic and cultural associations. – Likely to contain some features and elements that could not be replaced.
Low	<p>Landscapes which by nature of their character would be able to accommodate change of the type proposed. Typically, these landscapes would be:</p> <ul style="list-style-type: none"> – Comprised of some features and elements that are discordant, derelict or in decline, resulting in indistinct character with little or no sense of place (ordinary or poor quality). – Not designated. – Containing few, if any, features of value through use, perception or historic and cultural associations. – Likely to contain few, if any, features and elements that could not be replaced.

Magnitude of Impact

7.4.38. The magnitude of impact is determined through a process of quantification, such as loss of and severance or modification to key landscape components (woodland, hedgerows, boundaries landform, and culturally significant structures) and evaluation of the extent to which Part B would emerge as a new component in the landscape setting or change the balance between components that currently constitute baseline character. An impact can be either adverse or beneficial. The criteria used to determine the magnitude of impact are listed below in **Table 7-7**, adapted from IAN 135/10 Annex 1 Table 1 (**Ref. 7.23**).

Table 7-7 – Landscape Magnitude of Impact

Rating	Criteria
Major	Total loss or large-scale damage to existing character or distinctive features and elements, and / or the addition of new but uncharacteristic conspicuous features and elements; or Large scale improvement of character by the restoration of features and elements, and / or the removal of uncharacteristic and conspicuous features and elements, or by the addition of new distinctive features.
Moderate	Partial loss or noticeable damage to existing character or distinctive features and elements, and/or the addition of new but uncharacteristic noticeable features and elements; or Partial or noticeable improvement of character by the restoration of existing features and elements, and / or the removal of uncharacteristic and noticeable features and elements, or by the addition of new characteristic features.
Minor	Slight loss or damage to existing character or features and elements, and/or the addition of new but uncharacteristic features and elements; or Slight improvement of character by the restoration of existing features and elements, and / or the removal of uncharacteristic features and elements, or by the addition of new characteristic elements.
Negligible	Where the development would appear as a barely perceptible component in the landscape and result in very minor alteration to the existing balance of components in the baseline context.
No Change	Where the development would have no effect on the components in the landscape resulting in no alteration to the existing balance of components in the baseline context. No noticeable loss, damage or alteration to character or features or elements.

Assessment Criteria for Visual Effects

- 7.4.39. Visual effects are changes in the composition and character of views in the area affected by Part B. The visual impact appraisal considers the response of the people who experience these effects, who may be living or working in the area, enjoying recreational activities or simply passing through. The assessment considers the overall consequence of the effects on the visual amenity - the pleasantness of the view or outlook – that the people affected enjoy.
- 7.4.40. Visual effects relate to changes in available views and how this is perceived by receptors. Changes include:
- a. The direct effects of Part B on the content and character of view.
 - b. The overall effect on the change to visual amenity.
- 7.4.41. The evaluation of the significance of the visual effects of Part B is derived by assessing the sensitivity of the receptor against the magnitude of impact on the view.
- 7.4.42. Over time, views within the landscape change due to seasonal variation, changes in light level, human intervention and variation between night and day. With respect of this, and in accordance with IAN 135/10, when considering the impacts of Part B (magnitude of impact) upon the respective views the following scenarios have been assessed:
- a. **Construction:** During the construction phase, assuming a maximum perceived change situation (i.e. when construction activity is at its peak for any given view) and noting how long that phase is likely to last.
 - b. **Winter (Year 1):** A winter's day in the year that Part B would open to traffic or be fully operational (i.e. with noise and visual screens and bunds in place but before any planted mitigation has begun to take effect).
 - c. **Summer (Year 15):** A summer's day in the fifteenth year after opening (i.e. when the planted mitigation measures can be assumed to be substantially effective). This is usually a reflection of the near fully mitigated scenario under normal conditions.
- 7.4.43. The temporary construction compounds would be lit; however the potential impacts are not anticipated to give rise to significant effects as a result of existing lighting in the landscape and / or existing landscape features that provide screening. Whilst some sections of the construction works may also be lit for safety reasons when it is dark during site working hours, within the context of the existing A1 these potential impacts are not anticipated to give rise to significant effects. No operational lighting along the A1 corridor is proposed and Part B is considered as an online improvement scheme, therefore the impact of traffic headlights would not substantially increase the effect on the currently unlit existing A1 corridor. A night time assessment has therefore not been undertaken.
- 7.4.44. The assessment assumes that the visual context applicable at the year of opening is that which would be experienced during winter months when the degree of visual exposure is potentially greatest, due to a lack of foliage in the wider landscape and prior to the establishment of mitigation planting, representing a worst-case scenario. The analysis at 15

years into operation demonstrates the effectiveness following maturation of any landscape and mitigation proposals for Part B. The analysis relates to each visual receptor and concludes with an evaluation of the significance of effect.

- 7.4.45. The following methodology has been developed in line with current best practice guidance (refer to **Section 7.3**) in order to best describe the impacts imposed by Part B on the visual amenity of the Study Area.

Viewpoint Locations

- 7.4.46. Viewpoints have been selected to represent the nature and type of visual amenity from a given area or direction of view. They are not offered as the 'only view' but are used to inform a greater understanding of the extent of visibility and the nature of change.
- 7.4.47. For the purpose of this assessment, and in agreement with NCC, those viewpoints proposed to be representative of the range of visual receptor types found within the visual effects Study Area are shown on **Figure 7.3: Viewpoint Location Plan, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**). It was agreed that 20 representative viewpoint locations would be assessed in order to identify the range of receptors likely to be affected by Part B.
- 7.4.48. GLVIA3 page 109, paragraph 6.19 (**Ref. 7.19**) recognises three types of viewpoint:

- a. Representative:** *“selected to represent the experience of different types of visual receptor, where large numbers of viewpoints cannot all be included individually and where significant effects are unlikely to differ – for example, certain points may be chosen to represent the views of users of particular public footpaths and bridleways.”*
- b. Specific:** *“chosen because these are key and sometimes promoted viewpoints within the landscape, including for example specific local visitor attraction, viewpoints in areas of particularly noteworthy visual and/or recreational amenity such as landscapes with statutory landscape designations, or viewpoints with particular cultural landscape associations.”*
- c. Illustrative:** *“chosen specifically to demonstrate a particular effect or specific issues, which might, for example, be the restricted visibility at certain locations.”*

- 7.4.49. The frequency, range and duration of the view, may however, vary. In many cases, the viewpoints selected are representative of more than one type of receptor, and these elements (particularly duration of view) would vary depending on whether the receptor is static (such as a resident) or moving (such a road or public right of way user).
- 7.4.50. By definition of the ZTV, views beyond its extent should not be possible given the nature, location and scale of Part B.

Visual Sensitivity

- 7.4.51. As noted in GLVIA3, visual sensitivity is a function of the susceptibility of the different visual receptors to changes in the view and the value attached to particular views. This in turn is

dependent upon a number of factors including the viewer’s activity, their reasons for being there, and their expectations and the duration of view.

7.4.52. Certain views are highly valued for either their cultural or historical associations, which can increase the sensitivity of the viewer. However, whilst a valued view may serve to increase the overall visual receptor sensitivity, a low value would not necessarily reduce sensitivity.

7.4.53. Least sensitive receptors are considered, for example, to be people engaged in work whose primary focus would not necessarily be on the surrounding landscape views. Conversely, more emphasis is placed upon receptors whose change in view or visual amenity is either the prime focus, or potentially covers a wider area.

7.4.54. **Table 7-8** below sets out criteria for the judgement of visual sensitivity that has been used in the visual assessment. The proposed sensitivity criteria have drawn upon that presented within IAN 135/10 (**Ref. 7.23**) and takes account of guidance as presented within GLVIA3 (**Ref. 7.24**) (which supersedes IAN 135/10 given its date of publication). It is considered that the criteria set out below are appropriate to the scale and nature of Part B.

Table 7-8 – Visual Sensitivity

Rating	Criteria
High	Residents at home (views from principal aspects) and communities or settlements where views are an important contribution to the landscape setting. People enjoying outdoor recreation where the view is important to the experience e.g. users of long-distance trails and scenic public rights of way and cycle routes, walkers on National Trust or other access land, and visitors to Country Parks. Visitors to recognised attractions where views of the surroundings are an important contributor to the experience. Users of scenic roads, railways or waterways identified as designated tourist routes.
Moderate	People enjoying outdoor recreation where the view is secondary to the activity e.g. people playing outdoor sports, users of public rights of way where the main activity is exercise or getting from A to B. Schools and other institutional buildings, and their outdoor areas. Users of local roads and rail passengers, where views form an intrinsic part of the experience. People at work and commercial premises where the view is an important contribution to the quality of the workplace e.g. certain business parks, hotels and restaurants designed to take advantage of a scenic setting.

Rating	Criteria
Low	<p>People at work and commercial premises, except where noted above, where work activities are undertaken.</p> <p>Users of recreational facilities where the purpose of that recreation is not related to the view e.g. indoor sports facilities, football pitches and stadia.</p> <p>Users of trunk roads and main railway routes where highly transient views are afforded.</p>

Magnitude of Visual Impact

7.4.55. Magnitude of impact considers the scale and nature of change in the view, taking into consideration the duration of change, the distance of the receptor from Part B, the direction of view, the receptors speed of movement, screening (both proposed or removal of existing vegetation) and embedded mitigation measures included as part of the design. During the assessment, consideration has been given to whether there is a need for further mitigation measures intended to further avoid, reduce or where possible reverse those impacts caused by Part B. The scale of magnitude used for carrying out the visual assessment is based on the Table 2 of Annex 2 within IAN 135/10, reproduced below as **Table 7-9**.

Table 7-9 - Magnitude of Visual Impact

Rating	Criteria
Major	The Project, or a part of it, would become the dominant feature or focal point of the view.
Moderate	The Project, or a part of it, would form a noticeable feature or element of the view which is readily apparent to the receptor.
Minor	The Project, or a part of it, would be perceptible but not alter the overall balance of features and elements that comprise the existing view.
Negligible	Only a very small part of the Project work, or activity would be discernible or being at such a distance it would form a barely noticeable feature or element of the view.
No Change	No part of the Project, or work or activity associated with it, is discernible.

SIGNIFICANCE OF EFFECTS

7.4.56. The evaluation of effects involves consideration of the sensitivity to change, derived during the baseline assessment, and the predicted magnitude of the impact that would occur during the construction and subsequent operation of Part B. The predicted effects take into

consideration the embedded and additional mitigation measures incorporated as part of the preliminary design of Part B (such as screening bund or agreed specific screen planting or a combination of the two) and the temporal or permanent nature of that change.

Significance of Landscape Effects

7.4.57. An indication of the interactions between sensitivity and magnitude of impact and the likely resulting significance of effects are outlined in **Table 7-10** (IAN 135/10 Annex 1 Table 3) (**Ref. 7.23**) below.

7.4.58. For the purpose of this LVIA, all ‘Moderate, Large, and Very Large’ landscape effects are considered to be significant (highlighted bold in the table below). All other effects (Neutral to Slight) are considered not to be significant.

Table 7-10 - Significance of Landscape Effects Matrix

		Magnitude				
		No Change	Negligible	Minor	Moderate	Major
Sensitivity	High	Neutral	Slight	Slight / Moderate	Moderate / Large	Large / Very Large
	Moderate	Neutral	Neutral / Slight	Slight	Moderate	Moderate / Large
	Low	Neutral	Neutral / Slight	Neutral / Slight	Slight	Slight / Moderate

7.4.59. Effects can be either adverse or beneficial. Whilst **Table 7-10** above provides a framework by which to aid consistency in reporting likely effects arising from Part B, professional judgement is applied both in evaluating magnitude and sensitivity and in how these are combined to judge significance. Given that the significance criteria major / moderate / minor / negligible / no change represents levels on a continuum or continuous gradation, awareness of the relative balance between sensitivity and magnitude is required. Where there is a choice in the matrix between the levels of effects, further narrative is provided in **Appendix 7.3: Landscape Effects Schedule, Volume 8** of this ES (**Application Document Reference: TR010041/APP/6.8**) to explain the judgement made.

7.4.60. The findings of the assessment have been represented using a descriptive, descending scale ranging from large - moderate - slight (adverse) through neutral to an ascending scale of slight - moderate - large (beneficial). There is a further effect rating of very large used to indicate (adverse) effects on a very high-quality landscape or (beneficial) for the creation of an iconic, high quality feature and / or series of elements. Typically, landscape effects

identified as being of moderate adverse or greater are considered to be significant. Explanation of the significance of effect ratings is provided below in **Table 7-11** (IAN 135/10 Annex 1 Table 4) (**Ref. 7.23**).

Table 7-11 - Significance of Landscape Effects

Rating	Criteria
Very Large Beneficial Effect	The Project would: <ul style="list-style-type: none"> – Greatly enhance the character (including quality and value) of the landscape. – Create an iconic high-quality feature and/or series of elements. – Enable a sense of place to be created or greatly enhanced.
Large Beneficial Effect	The Project would: <ul style="list-style-type: none"> – Enhance the character (including quality and value) of the landscape. – Enable the restoration of characteristic features and elements lost as a result of changes from inappropriate management or development. – Enable a sense of place to be enhanced.
Moderate Beneficial Effect	The Project would: <ul style="list-style-type: none"> – Improve the character (including quality and value) of the landscape. – Enable the restoration of characteristic features and elements partially lost or diminished as a result of changes from inappropriate management or development. – Enable a sense of place to be restored and it fits very well in to the landscape.
Slight Beneficial Effect	The Project would: <ul style="list-style-type: none"> – Complement the character (including quality and value) of the landscape. – Maintain or enhance characteristic features and elements. – Enable some sense of place to be restored.
Neutral Effect	The Project would: <ul style="list-style-type: none"> – Maintain the character (including quality and value) of the landscape. – Blend in with characteristic features and elements. – Enable a sense of place to be retained.

Rating	Criteria
Slight Adverse Effect	The Project would: <ul style="list-style-type: none"> – Not quite fit the character (including quality and value) of the landscape. – Be at variance with characteristic features and elements. – Detract from a sense of place.
Moderate Adverse Effect	The Project would: <ul style="list-style-type: none"> – Conflict with the character (including quality and value) of the landscape. – Have an adverse impact on characteristic features or elements. – Diminish a sense of place.
Large Adverse Effect	The Project would: <ul style="list-style-type: none"> – Be at considerable variance with the character (including quality and value) of the landscape. – Degrade or diminish the integrity of a range of characteristic features and elements. – Damage a sense of place.
Very Large Adverse Effect	The Project would: <ul style="list-style-type: none"> – Be at complete variance with the character (including quality and value) of the landscape. – Cause the integrity of characteristic features and elements to be lost. – Cause a sense of place to be lost.

Significance of Visual Effects

- 7.4.61. The evaluation of the significance of effects involves consideration of the sensitivity to change, derived during the baseline assessment, and the predicted magnitude of the impact that would occur during the construction and subsequent operation of Part B. The predicted effects take into consideration the mitigation measures incorporated as part of the preliminary design of Part B and the temporal or permanent nature of that change. Effects can be either adverse or beneficial.
- 7.4.62. In line with the approach set out in GLVIA3, professional judgement is applied both in evaluating magnitude and sensitivity and in how these are combined to judge significance. Professional judgement forms part of the qualitative assessment, which follows the agreed methodology to define significance.

7.4.63. Table 4 in IAN 135/10, Annex 2 (**Ref. 7.23**) sets out the proposed significance categories for use within the assessment. The findings of the assessment have been represented using a descriptive narrative to explain the significance of effect rating as detailed in **Table 7-12** below.

Table 7-12 –Significance of Visual Effect Rating

Rating	Criteria
Very Large Beneficial Effect	This would typically apply where the Project would create an iconic new feature that would greatly enhance the view.
Large Beneficial Effect	This would typically apply where the Project would lead to a major improvement in a view from a highly sensitive receptor.
Moderate Beneficial Effect	This would typically apply where the Project would cause obvious improvement to a view from a moderately sensitive receptor, or perceptible improvement to a view from a more sensitive receptor.
Slight Beneficial Effect	This would typically occur where the Project would cause limited improvement to a view from a receptor of medium sensitivity or would cause greater improvement to a view from a receptor of low sensitivity.
Neutral Effect	This would typically occur where there would be no perceptible change in the view.
Slight Adverse Effect	This would typically occur where the Project would cause limited deterioration to a view from a receptor of medium sensitivity or cause greater deterioration to a view from a receptor of low sensitivity.
Moderate Adverse Effect	This would typically apply where the Project would cause obvious deterioration to a view from a moderately sensitive receptor, or perceptible damage to a view from a more sensitive receptor.
Large Adverse Effect	This would typically apply where the Project would cause major deterioration to a view from a highly sensitive receptor and would constitute a major discordant element in the view.
Very Large Adverse Effect	This would typically apply where the Project would cause the loss of views from a highly sensitive receptor and would constitute a dominant discordant feature in the view.

7.4.64. As with the assessment of landscape effects, **Table 7-13** (IAN 135/10, Annex 2, Table 3) provides a framework to aid consistency in reporting likely effects arising from Part B. However, as above, professional judgement should still be applied. Where there is a choice

in the matrix between the levels of effects, further narrative is provided in **Appendix 7.2: Visual Effects Schedule, Volume 8** of this ES (**Application Document Reference: TR010041/APP/6.8**) to explain the judgement made.

7.4.65. For the purpose of this LVIA, all ‘Moderate, Large, and Very Large’ visual effects are considered to be significant (highlighted bold in the table below). Significant effects are highlighted in **bold**. All other effects (Neutral to Slight) are considered not to be significant.

Table 7-13 - Significance of Visual Effects Matrix

		Magnitude				
		No Change	Negligible	Minor	Moderate	Major
Sensitivity	High	Neutral	Slight	Slight / Moderate	Moderate / Large	Large / Very Large
	Moderate	Neutral	Neutral / Slight	Slight	Moderate	Moderate / Large
	Low	Neutral	Neutral / Slight	Neutral / Slight	Slight	Slight / Moderate

SENSITIVE RECEPTORS

7.4.66. The criteria for identifying sensitive landscape receptors is set out in **Table 7-6** and for visual receptors in **Table 7-8**, above. The receptor locations were initially identified from desk-based review of reports, maps and air photos, then reviewed in the field when the extents of the computer generated ZTV were walked. The initial receptor list and viewpoint locations were agreed with the relevant consultees as set out in **Table 7-4**. The receptor list and viewpoint locations were reviewed again as part of the statutory consultation when an additional viewpoint location was proposed due to Scheme changes relating to the location of the accommodation overbridge. More information regarding Scheme development is set out in **Chapter 3: Assessment of Alternatives, Volume 1** of this ES (**Application Document Reference: TR010041/APP/APP/6.1**). Consideration of features affecting visibility such as built form and vegetation that potentially filter, or screen views helped determine the likely actual visibility of Part B and thus to define the Study Area as well as confirming the location of sensitive receptors.

7.4.67. The sensitive receptors identified for the Landscape and Visual Assessment are detailed in **Appendix 7.4: Landscape and Visual Sensitive Receptors, Volume 8** of this ES (**Application Document Reference: TR010041/APP/6.8**) and illustrated on **Figure 7.2: Visual Receptor Plan, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**).

FUTURE BASELINE

- 7.4.68. The future baseline describes the baseline conditions that are expected to develop and evolve by 2038 (Design Year) if Part B were not to proceed. The future baseline could change due to the passage of time, including:
- a. Growth of any vegetation to assist with mitigating views (reducing effects) or form part of landscape character considerations.
 - b. Additional visual receptors (Completed housing developments, new recreational routes etc.), which would need to be considered and assessed.
 - c. Updates to local policy - relevant to landscape and visual issues.
- 7.4.69. It is not anticipated that the baseline conditions as described above and within **Section 7.7** below would be significantly different to those encountered today, or within the 15-year phase assessed in this chapter.
- 7.4.70. As such, for the purpose of this assessment, the future baseline (2038) is considered as being comparable to the present day.

7.5 ASSESSMENT ASSUMPTIONS AND LIMITATIONS

ASSUMPTIONS

- 7.5.1. The following assumptions have been made in undertaking the assessment:
- a. The assessment is based on the assumption that the construction of Part B would commence in December 2021, with Part B opening in November 2023 (year 1). As a result, it is considered that the design year would be 2038.
 - b. The baseline site work was carried out between 1 and 4 October 2018 (when leaves were still on the trees, reducing visibility and giving a 'best-case' scenario for screening) and on 5 February, 18 March and 19 March 2019 (when the trees were bare, giving maximum visibility and the 'worst-case' scenario for screening). The baseline situation does not consider any additional (newly built) visual receptors or vegetation growth after these dates.
 - c. Proposed landscape mitigation measures would be implemented as indicated on **Figure 7.10: Landscape Mitigation Plan, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**), with average growth rates achieved during the 15-year design phase. For the purpose of this assessment, it is assumed that by the design year all hedgerows would have reached a height of 2 m and be subject to ongoing management to maintain this height, with woodland blocks reaching a minimum height of 6 m.
 - d. If a PRoW is being permanently closed, it is assumed that this would occur during construction and continue throughout the operation period. Where a permanent diversion is to be provided, it is assumed that this would be undertaken early in the construction period in order to maintain public use. However, it would be necessary to temporarily close some PRoW during construction and these closures would be communicated in an appropriate manner, with alternative routes identified.

- e. There is no permanent lighting proposed for Part B. The temporary construction compounds would be lit (during the construction phase), and some sections of the works lit for safety reasons when it is dark during site working hours.
- f. The assessment assumes that the screening benefit provided by existing and proposed vegetation is reduced in winter months, as a result of the absence of foliage. Typically, visual effects would therefore be greater during winter months and where planting depth is not sufficient to obscure views.
- g. Cultural Heritage assets are assessed only in terms of their potential as a point of interest and the visitor experience, effects on the assets itself and/or its setting are addressed in **Chapter 8: Cultural Heritage** of this ES.
- h. Assumptions using professional judgement have been made as to the nature of the view and the associated receptor that might contribute towards sensitivity, based on information gathered as part of desk top studies, aerial photography and site surveys, using comparable receptors with similar orientation, distance and nature where appropriate.
- i. Assumptions have been made as to the nature of the view and associated receptor based on information gathered as part of the desk top study, aerial photography and site surveys. It does not take into consideration the orientation of the viewer i.e. when travelling in a vehicle.
- j. Temporary stockpiles of topsoil would be stored to a maximum height of 2 m, with a gradient no greater than 1:2, and stacked no closer than canopy spread of boundary vegetation i.e. without the tree canopy areas. The soil within the storage areas would be stripped and stored for re-use and restored to the previous land use following the works.
- k. At this time there is no proposed off site or advance work to be carried out in association with landscape character and visual amenity, which would include advance landscape planting, or mitigation planting.
- l. It is assumed that all temporary haul roads would be located within the Order Limits. Where possible, material would be transported throughout the site by dump truck. The use of road-going vehicles would be avoided wherever possible. Bulk materials would be delivered using the existing A1 to distribute through the site. Haul routes would be cleaned or swept regularly, preventing the build-up of mud through the use of wheel washers or mechanical sweepers where necessary.
- m. Upon completion, areas used as construction compounds would be returned to their original use.
- n. The assumption adopted in drafting the ZTV have been that the observer height is 1.5 m and that the tallest moving component associated with Part B would be a 4.5 m Heavy Goods Vehicle (HGV), in line with GLVIA3 (**Ref. 7.24**).
- o. The ZTV, shows the anticipated extent of the visual influence of Part B, based on bare ground modelling (i.e. no account is taken of the screening or filtering of views by intervening structures and elements such as buildings, walls, trees and hedgerows). However, significant effects would not be anticipated beyond 2 km of the centre line.

- p. Part B is due to commence in December 2021, with planned opening for traffic in November 2023. The works shall be phased such that two-way traffic is maintained on the A1 at all times.
- q. It is assumed that a minimal topsoil depth of 300 mm would be achieved across all planting areas identified upon the **Figure 7.10: Landscape Mitigation Plan, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**) which would be reduced to a minimum depth of 100 mm within those areas of grassland habitat creation (non-species rich). At the time of the assessment it was estimated that a topsoil strip would generate approximately 26,000 m³ of material and 18,000 m³ of topsoil placement, leaving a potential surplus of 8,000 m³.
- r. Where planting is proposed on cutting slopes and embankments these would not exceed a gradient of 1:2.5, allowing the slopes to remain capable of providing suitable growing conditions for native trees where a suitable depth of topsoil can be achieved, and long-term maintenance access is viable.

LIMITATIONS

7.5.2. The following limitations have been identified during the assessment:

- a. The landscape and visual assessment was undertaken from publicly accessible locations. Professional judgement was used in determining the extent and changes in views where access was limited.

7.5.3. The ZTV has the following limitations:

- a. It is 'bare ground', therefore the ZTV does not take into consideration the screening or filtering of views by intervening structures and elements such as buildings, walls, trees and hedgerows.
- b. It does not take into consideration the orientation of the viewer i.e. when travelling in a vehicle.
- c. There are a number of areas within the ZTV, where there are potential views of Part B, but which comprise land where the general public do not have access.

7.6 STUDY AREA

7.6.1. The Study Area for the assessment was initially defined by the extent to which Part B would be visible from the findings of the ZTV. This is shown on **Figure 7.1: Zone of Theoretical Visibility, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**).

7.6.2. The significance of both landscape and visual effects generally reduces with distance. However, the Zone of Theoretical Visibility (refer to **Figure 7.1: Zone of Theoretical Visibility, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**)) shows theoretical visibility over a large area, particularly to the north east where it extends to the coast and beyond.

7.6.3. Fieldwork completed ahead of statutory consultation (as set out in **paragraph 7.4.11**) determined that significant landscape and visual effects are unlikely to occur beyond 2 km.

This is partly due to the reduction of effects with distance and partly due to the screening effect of intervening vegetation and built form. This distance was therefore agreed as the Study Area limit for landscape and visual effects.

- 7.6.4. As visual effects can, by definition, only occur where there is visibility Part B. The Visual Assessment considered the area covered by the ZTV within 2 km of Part B, as beyond this threshold visual effects are not anticipated to be significant.
- 7.6.5. Perceptual elements (such as road noise altering tranquillity) can affect the perceived character of a landscape even where there is no visibility, so the Landscape Assessment considers the whole of the area within 2 km.
- 7.6.6. The 2 km Study Area limit for the landscape and visual assessment is illustrated on **Figure 7.2: Visual Receptor Plan, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**).
- 7.6.7. As fieldwork progressed it became clear that significant visual effects out to 2 km were limited to receptors of the highest sensitivity: residential receptors. During assessment work ahead of statutory consultation, no significant effects were identified on the visual amenity of public rights of way or to visual receptors of moderate or low sensitivity beyond 1 km.
- 7.6.8. As described within the scoping report, the Study Area was refined further to 1 km and this was adopted as the limit for these categories of receptor, in order to ensure a focus on reporting potentially significant effects.

7.7 BASELINE CONDITIONS

- 7.7.1. The baseline field work and desk study which was carried out in October 2018, and February and March 2019 identified the landscape and visual receptors and the baseline situation which stood at this time and forms the basis of this assessment.
- 7.7.2. **Figure 2.2: Environmental Constraints Plan: Part B, Volume 1** of this ES (**Application Document Reference: TR010041/APP/6.1**) shows the location of environmental designations and constraints.
- 7.7.3. For the purpose of this ES, Part B consists of the following components:
- a. **Part B Main Scheme Area:** A1, including Charlton Mires Temporary Construction Compound
 - b. **Lionheart Enterprise Park Compounds (eastern site and western site):** Temporary Construction Compound within the Lionheart Enterprise Park, to the south of Alnwick.
- 7.7.4. The Main Compound, which would be located within Part A, is also considered in the assessment.

LANDSCAPE

Landscape Description

- 7.7.5. Part B lies approximately 7.5 km west of the Northumberland Coast. The A1 is a large linear feature which dissects the gently rolling landscape. To the east, the land rises gradually to

approximately 100 m Above Ordnance Datum (AOD) near Rennington Moor. To the west, the land is slightly hillier with more undulations and a high point of approximately 140 m AOD near White House Folly.

- 7.7.6. The River Aln meanders through the south of the Study Area. The A1 is a noticeable, straight feature which cuts across the irregular grain of the landscape, whilst minor roads weave through the landscape. Settlement pattern consists of sparsely scattered farmsteads and small self-contained villages across most of the Study Area with the larger town of Alnwick to the south-west. A number of PRowWs are present in the Study Area, connecting farmsteads and small settlements (refer to **Figure 2.2: Environmental Constraints Plan: Part B, Volume 1** of this ES (**Application Document Reference: TR010041/APP/6.1**)).
- 7.7.7. Wind turbines of Middlemoor and Wandylaw Wind Farms are a noticeable skyline feature of the landscape to the west as shown in **Figure 7.4: View to the West Across the A1** below. Field boundaries are defined by low hedgerows, which enable long expansive views across the majority of the landscape. In localised areas, near Alnwick and along sections of PRowW, views towards the A1 are filtered by the undulating landform and woodland and plantation tree planting.
- 7.7.8. With the exception of the landscape immediately adjacent to the existing A1, the landscape is relatively tranquil in nature. The main sources of noise associated with the Study Area, come from vehicle movement along the A1, further east towards the coast the landscape becomes more tranquil.

Figure 7-4 - View to the West Across the A1



Statutory Designated Sites

- 7.7.9. The Part B Main Scheme Area lies approximately 3 km to the west of the Northumberland Coast AONB at its closest point. Alnwick Castle Registered Park and Garden is located approximately 900 m to the south-west of the Part B Main Scheme Area.
- 7.7.10. Cultural Heritage designations contribute to sense of place but do not directly relate to landscape. Designations include Conservation Areas, Listed Buildings and Scheduled Monuments, the settings of which are discussed in detail in **Chapter 8: Cultural Heritage** of this ES. However, the LVIA considers the present-day visual effects of Part B for visitors to heritage assets.

Non-statutory Designations

- 7.7.11. **Figure 2.2: Environmental Constraints Plan: Part B, Volume 1** of this ES (**Application Document Reference: TR010041/APP/6.1**) illustrates the location of Areas of Landscape Value, which are designated in local policy and set out below:
- a. The Kyloe Hills and Glendale AHLV, located to the north and west of the Part B Main Scheme Area near Glanton and Brownieside (approximately 320 m from the Part B Main Scheme Area), designated in the former Berwick-upon-Tweed Borough Local Plan (**Ref. 7.29**) (saved policy).
 - b. An unnamed Area of High Landscape Value is close (within the Order Limits) to the west and south of the Part B Main Scheme Area, designated in the former Alnwick District Wide Local Plan (**Ref. 7.21**) (saved policy).
 - c. An unnamed Intermediate Area of Landscape Value (IALV), located to the north of the Part B Main Scheme Area near Brownieside (approximately 250 m from the Part B Main Scheme Area), designated in the former Berwick-upon-Tweed Borough Local Plan (**Ref. 7.29**).
- 7.7.12. Further non-statutory designations that contribute to sense of place, but do not directly relate to landscape, are shown on **Figure 2.2: Environmental Constraints Plan: Part B, Volume 1** of this ES (**Application Document Reference: TR010041/APP/6.1**). Designations include Ancient Woodlands located approximately 250 m from the Main Compound Area would not be directly affected by Part B. Further information is provided in **Appendix 7.1: Arboricultural Report, Volume 8** of this ES (**Application Document Reference: TR010041/APP/6.8**).

Landscape Character

- 7.7.13. For the purpose of this assessment, landscape character is described at a national, regional and local level.

National Character Areas

- 7.7.14. NCAs which have been developed by Natural England, divide England into 159 areas of broadly consistent character, reflecting natural boundaries in the landscape. The NCA

profiles provide information relating to landscape, wildlife, cultural and geological features, forces for change and environmental opportunities.

7.7.15. Part B lies partly within NCA: Northumberland Sandstone Hills (**Ref. 7.31**) to the west and partly within NCA: North Northumberland Coastal Plain (**Ref. 7.30**), to the east.

7.7.16. The key characteristics of both NCAs relevant to the Study Area are set out in **Table 7-14** below.

Table 7-14 - National Character Areas within the Study Area

NCA	Description
<p>NCA 1: North Northumberland Coastal Plain</p>	<p>The North Northumberland Coastal Plain is a narrow, windswept strip that runs from the Anglo-Scottish border south to the mouth of the River Coquet, bounded by the sea to the east and the Northumberland Sandstone Hills to the west. The gently undulating inland plain is dominated by arable farming, with large, regular fields bounded by gappy hedgerows and in some places grey sandstone walls, with some pasture for beef cattle and sheep. Woodland cover is sparse and predominantly confined to the river valleys that meander across the coastal plain and the estate woodlands around Howick. (Ref. 7.30).</p> <p>Tourism is a key economic driver within the NCA given the areas views, tranquillity and natural beauty.</p> <p>The dramatic coastline is exceptionally varied, with rocky headlands and cliffs contrasting with long, sweeping sandy beaches backed by dunes, and extensive intertidal mudflats and salt marsh around Lindisfarne. Further south, sandy beaches backed by sand dunes extend along Alnmouth Bay to the Coquet Estuary. The latter forms the extent of the Study Area.</p> <p>In recognition of the area's high quality of coastline and landscape value, at both a national and local scale the coastline has been designated as an Area of Outstanding Natural Beauty and Heritage Coast.</p> <p>In taking account of the NCA description above, the NCA has been assessed as comprising:</p> <ul style="list-style-type: none"> - Landscape value – High - Landscape quality – Very Attractive - Susceptibility to change – Low - Landscape sensitivity - High
<p>NCA 2: Northumberland Sandstone Hills</p>	<p>The Northumberland Sandstone Hills NCA extends north-east in an arc from the Border Moors and Forests NCA, with the Tyne Gap and Hadrian's Wall NCA to the south and the Mid Northumberland NCA to the south-east. It encircles the lowland plains of the Cheviot Fringe to the west, separating them from the lowlands of the North</p>

NCA	Description
	<p>Northumberland Coastal Plain and Mid Northumberland NCAs to the east. (Ref. 7.30).</p> <p>The broad hill tops undulate in a series of ridges, characterised by dramatic escarpments, sandstone boulders and craggy outcrops, including that at Lamb Crag. They are pierced by a number of rivers and streams including the Grasslees Burn and the rivers Coquet and Aln. The ridgetops and upper slopes are dominated by heather and grass moorland which is managed as rough grazing for hardy sheep and some cattle, and a small number of estates manage their land for red grouse. The chain of moorland is interrupted by a number of extensive conifer plantations including Harwood and Rothbury forests and Harbottle, Thrunton and Kyloe woods. Below the moorland improved pasture dominates with some cropping on the lower and dip slopes.</p> <p>In taking account of the NCA description above, the NCA has been assessed as comprising:</p> <ul style="list-style-type: none"> – Landscape value – Moderate – Landscape quality – Very Attractive – Susceptibility to change – Low – Landscape sensitivity - Moderate

Regional Landscape Character Areas

7.7.17. The Northumberland Landscape Character Assessment (**Ref. 7.4**) provides detail about Regional LCAs² and Landscape Character Types (LCTs)³. Part B lies within a number of LCAs and LCTs as set out below:

Part B Main Scheme Area and Charlton Mires Compound

- a. 8c Charlton Ridge LCA (Outcrop Hills and Escarpments LCT)
- b. 3c Rock LCA (Farmed Coastal Plain LCT)

Lionheart Enterprise Park Compound (eastern site and western site)

- a. 2a Lower Aln LCA (Coastal Incised Valley LCT)

² LCAs “are geographically discrete examples of a particular LCT. Landscape character areas share the same elements as the landscape character type, but also have their own individual character and identity.”

³ LCTs “are groups of landscapes with broadly similar combinations of geology, landform, vegetation, land use, and settlement patterns. Landscapes belonging to a particular LCT may or may not be contiguous.”

b. 38a Longframlington LCA (Lowland Rolling Farmland LCT)

Main Compound

7.7.18. The Main Compound lies in the following LCA:

a. 38b Longhorsley LCA (Lowland Rolling Farmland LCT)

7.7.19. The following Regional Landscape Character Areas are also present in the Study Area:

a. 10a Rosebrough Moor LCA (Smooth Moorland LCT)

b. 7a Hulne Park LCA (Estate Valley LCT)

7.7.20. The key characteristics of these Regional LCTs and LCAs are detailed in **Appendix 7.5: Landscape Character, Volume 8** of this ES (**Application Document Reference: TR010041/APP/6.8**). The location of the LCAs listed above and others in close proximity to Part B are shown on **Figure 7.5: Landscape Character Areas, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**).

Local Landscape Character Assessment

7.7.21. The key characteristics of the Local LCAs identified in the Alnwick LCA SPD (**Ref. 7.17**) are set out in **Appendix 7.3: Landscape Effects Schedule, Volume 8** of this ES (**Application Document Reference: TR010041/APP/6.8**). The following LCAs have been included in the assessment:

Part B Main Scheme Area and Charlton Mires Compound

a. 6 North East Farmed Coastal Plain LCA

b. 11 Charlton Ridge LCA

Lionheart Enterprise Park Compound (eastern site and western site)

a. 7 Lower Aln Valley LCA

b. 18 Longframlington / Shilbottle Rolling Farmland LCA.

Main Compound

7.7.22. The Main Compound lies in the former Castle Morpeth District area, which is not covered in the landscape character study. The Local LCAs covering this district are no longer recognised in policy and have been superseded by the Regional LCAs set out at **paragraph 7.7.17** above.

7.7.23. The information contained in the Alnwick Local Landscape Character Assessment (**Ref. 7.5**) has been used to inform the assessment and mitigation proposals to ensure Part B responds at a local scale.

7.7.24. The Local LCAs are illustrated on **Figure. 7.6: Local Landscape Character, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**).

Scheme Specific Landscape Character

Part B Main Scheme Area including Charlton Mires Site Compound

- 7.7.25. Part B lies north of the built-up area of Alnwick, west of the Northumberland Coast AONB (over 5 km), south of Brownieside and east of Middlemoor Windfarm. The landscape is gently undulating with a highpoint along the existing A1 alignment of approximately 112 m AOD (representative view shown in **Figure 7.7: View from Layby Looking to the South Along the A1** below). To the west, the landform within the Study Area continues to rise to a high point of approximately 140 m AOD near White House Folly and to the east a highpoint of approximately 100 m AOD near Rennington Moor.

Figure 7.7 - View from Layby Looking to the South Along the A1



- 7.7.26. The undulating landform contains fields of arable pasture and improved grassland bordered by a variety of treatment types (walls, fences and hedgerows) as shown in **Figure 7.8: View Towards the Existing A1 from The Avenue, Illustrating the Variety of Land Uses in the Study Area** (photograph below) and **Figure 9.3: Phase 1 Habitat Survey, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**). A number of plantation woodlands and waterbodies have also been identified in the Study Area.

Figure 7.8 - View Towards the Existing A1 from The Avenue, Illustrating the Variety of Land Uses in the Study Area



Lionheart Enterprise Park Compound

7.7.27. The Lionheart Enterprise Park Compound (eastern site and western site) is located approximately 2 km to the south of Alnwick. Current land use is partly a Highways England salting and gritting depot with an area of grassland located to the south. The site is bordered by an existing hedgerow to the south, existing industrial estate to the north, PRoW to the north east which runs adjacent to the industrial estate and through Cawledge Burn and an existing PRoW to the west adjacent to the site boundary. **Table 7-15** below lists the LCAs considered in the assessment. Following the site visit and refinement of the Study Area, the below character areas are anticipated to experience direct or indirect effects on character due to inter visibility with Part B.

Table 7-15 – List of Receptors for Landscape Assessment

Landscape Character Area
8c Charlton Ridge LCA (Outcrop Hills and Escarpments LCT)
3c Rock LCA (Farmed Coastal Plain LCT)

Landscape Character Area

2a Lower Aln LCA (Coastal Incised Valley LCT)

38b Longhorsley LCA (Lowland Rolling Farmland LCT)

6 North East Farmed Coastal Plain LCA

11 Charlton Ridge LCA

7 Lower Aln Valley LCA

Main Compound

7.7.28. The Main Compound is located further south (approximately 16 km from the Part B Main Scheme Area) off the B6345. The Main Compound is located east of the A1 and north of Eshott Airfield off the B6345. Currently the site is an arable field bordered by existing tree and hedgerow planting on all boundaries.

Night Time Baseline

- 7.7.29. In general, the Study Area is devoid of light pollution given the landscape's lack of built development and the main land use being for agricultural uses.
- 7.7.30. Sources of light pollution within the 2 km Study Area are limited to that of Alnwick. When viewed from the surrounding landscape character areas, the visual prominence of these light sources is not clearly discernible and appear relatively self-contained, causing minimal light spill into the surrounding area.
- 7.7.31. At a more local scale, sources of noticeable light pollution beyond that of individual residential properties, discernible over short distances are associated with:
- a. Lighting columns and uplighters at Lionheart Enterprise Park.
 - b. Vehicle headlights from cars using the existing road network. This is most noticeable along the existing A1 which is much busier than the smaller side roads.
- 7.7.32. At a local level, the sources of light pollution contribute to the character area's sense of human interaction, reducing their sensitivity to change. However, as noted above, light spill from these areas into the wider landscape setting is minimal being relatively contained by intervening landscape features.
- 7.7.33. As such those receptors currently impacted by light pollution include:
- a. Properties located immediately adjacent to the existing road network
 - b. Properties located within Alnwick
 - c. Properties located within the villages of Rennington, Rock, South Charlton and Denwick

VISUAL BASELINE

7.7.34. The A1 is a large linear feature which dissects the gently rolling landscape. To the east, the land rises gradually to approximately 100 m Above Ordnance Datum (AOD) near Rennington Moor. To the west, the land is slightly hillier with more undulations and a high point of approximately 140 m AOD near White House Folly. Part B lies approximately 7.5 km west of the Northumberland Coast.

7.7.35. The ZTV (**Figure 7.1: Zone of Theoretical Visibility, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**)) illustrates that theoretical views of Part B would be discernible from a limited geographical area, given the local topography.

7.7.36. With the exception of the road corridor itself, manmade structures are limited within views throughout the Study Area. The majority of views comprise of open countryside, with woodland blocks scattered in and amongst the irregular field pattern.

Visual Receptors

7.7.37. Four main receptor types have been identified within the Study Area, as follows (refer to **Figure 7.2: Visual Receptor Plan, Volume 6** of this ES (**Application Document Reference: TR010041 /APP/6.6**)):

- a. Residential receptors: Occupants of residential properties, encompassing individual and groups of properties
- b. Recreational receptors: Users of PRow, including footpaths, bridleways, byways, long-distance trails and regionally promoted routes
- c. Commercial receptors: People at commercial properties, including local business and visitor attractions
- d. Transport receptors: Road users, and users of the existing road network within the Study Area

Viewpoints

7.7.38. Twenty viewpoints, all from publicly accessible locations, illustrate the range and type of views available within the Study Area. **Table 7-16** (below) describes the viewpoint locations, notes the visual receptors that benefit from that view and the sensitivity of those receptors. The initial 18 viewpoints (Viewpoints 1 -18) were agreed with the relevant consultation bodies (refer to **Table 7-4**). A further two viewpoints were added during the site visits to capture representative views, taking account of changes made to Part B.

7.7.39. Following consultation with the consultees and statutory consultation, four photomontages were produced for selected viewpoint locations. These are presented in **Figure 7.13: Photomontages, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**) and noted in **Table 7-16**.

7.7.40. The location of the viewpoints is shown on **Figure 7.3: Viewpoint Location Plan, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**) and the photos from each viewpoint are presented in **Figure 7.9: Viewpoint Photography, Volume 6** of this ES.

Appendix 7.4 Landscape and Visual Sensitive Receptors, Volume 8 sets out the description and sensitivity of the receptors, whilst **Appendix 7.2: Visual Effects Schedule, Volume 8** of this ES (**Application Document Reference: TR010041/APP/6.8**) sets out the visual effects from all receptors considered.

Table 7-16 – Viewpoint Locations and Sensitivity

Viewpoint	Receptor Ref	Viewpoint Description	Sensitivity
Viewpoint 1	17	View looking south-east from North Charlton, representative of nearby properties	The sensitivity of residential receptors in this location is high.
Viewpoint 2 (Photomontage)	10, 20, 25 and 26	View looking east from West Linkhall, representative of nearby properties and walkers travelling along PRow 112/008 and PRow 112/009	The sensitivity of residential and recreational receptors in this location is high.
Viewpoint 3	18, 26 and 38	View east from South Charlton, representative of nearby properties	The sensitivity of residential receptors in this location is high.
Viewpoint 4	6, 7, and 39	View looking south east from Rock Lodge and Rock Nab, representative of nearby properties	The sensitivity of residential receptors in this location is high.
Viewpoint 5	5, 31 and 39	View looking east from Heiferlaw Bank, representative of nearby properties and walkers travelling along PRow 110/010 and PRow 110/018	The sensitivity of residential and recreational receptors in this location is high.
Viewpoint 6	4, 8, 30 and 39	View looking east from Heckley Fence, representative of nearby properties and walkers travelling along PRow 110/019	The sensitivity of residential and recreational receptors in this location is high.
Viewpoint 7 (Photomontage)	3, 33, 34 and 39	View looking east from Heckley House, representative of nearby properties and walkers travelling along PRow 110/013	The sensitivity of residential and recreational receptors in this location is high.
Viewpoint 8	1, 2, 34	View looking north east along PRow 110/004 and representative of nearby residential properties	The sensitivity of residential and recreational receptors in this location is high.
Viewpoint 9	9, 32 and 35	View looking west along PRow 110/013, representative of adjacent PRow (129/022 and 129/014) and close proximity residents at Broxfield and Silvermoor	The sensitivity of residential and recreational receptors in this location is high.
Viewpoint 10	12, 28 and 29	View looking west from PRow 129/009, representative of nearby properties at Rock South Farm	The sensitivity of residential and recreational receptors in this location is high.
Viewpoint 11	11 and 27	View looking south-west along PRow 129/004 and representative of close proximity residential properties at Rock Midstead.	The sensitivity of residential and recreational receptors in this location is high.
Viewpoint 12	13 and 38	View looking west, Charlton Mires from the B6347	The sensitivity of residential receptors in this location is high.
Viewpoint 13 (Photomontage)	11, 27 and 14	View looking north-west from B6347, representative of nearby residents at Drythrople and Rock Moor House.	The sensitivity of residential receptors in this location is high, and the users of the local road network are of a medium sensitivity.
Viewpoint 14	15 and 16	View west from Chipperton Bridge, representative of nearby residential receptors at Chipperton Bridge and East Linkhall	The sensitivity of residential receptors in this location is high.
Viewpoint 15	42 and 43	View looking north along PRow 141/013	The sensitivity of recreational receptors in this location is high.
Viewpoint 16	41 and 45	View looking south – eastward from unnamed road and commercial development at Lionheart Enterprise Park	The sensitivity of the users of the local road network is medium.

Viewpoint	Receptor Ref	Viewpoint Description	Sensitivity
Viewpoint 17	12, 28 and 36	View looking west from PRow 129/005 and representative of adjacent PRow (129/010, 129/012 and 129/025) and nearby residents at West Farm	The sensitivity of residential and recreational receptors in this location is high.
Viewpoint 18	22, 23 and 40	View looking north-west from B1340	The sensitivity of the users of the local road network is medium.
Viewpoint 19	12 and 36	View looking north west from PRow 129/006	The sensitivity of recreational receptors in this location is high.
Viewpoint 20 (Photomontage)	4 and 39	View looking north east from B6341	The sensitivity of the users of the local road network is medium.

Residential

- 7.7.41. Residents are typically considered as being of high sensitivity due to the importance that individuals place on the view from their homes.
- 7.7.42. The nature of the agricultural land use and pattern has led to the development of a scattering of low density farm housing and agricultural buildings. The Study Area contains small villages including Denwick, Rock, South Charlton, North Charlton, Rennington and the larger town of Alnwick.
- 7.7.43. The following paragraphs give an overview of the degree to which Part B would be visible. They describe the different receptors that would have a view of Part B and thus whose visual amenity may be affected, they describe where relevant what factors might affect the degree of visibility, and they reference the relevant representative viewpoints (refer to **Table 7-16**).
- 7.7.44. To the north, the view towards the Part B Main Scheme Area would extend to the rear of properties at the southern edge of North Charlton (**Viewpoint 1**). Further north, visibility is restricted by intervening vegetation along Charlton Burn and local landform.
- 7.7.45. To the east, views would be available in close proximity to the Part B Main Scheme Area and Charlton Mires Compound from the residential properties at East Linkhall and West Lodge (**Viewpoint 14**), Drythrople (**Viewpoint 12**), Rock Midstead Cottages and Farmhouse (**Viewpoint 11** and **13**), Broxfield (**Viewpoint 9**).
- 7.7.46. To the southeast, views towards the Part B Main Scheme Area would be available in close proximity from properties at Goldenmoor and the north-western edge of Denwick (**Viewpoint 18**). Further to the south-east of the Study Area where gaps in vegetation allow.
- 7.7.47. To the southwest, views would be available residential properties at Greenfield Moorhouse over intervening field boundary vegetation (**Viewpoint 16**).
- 7.7.48. To the west, the undulating landscape lends itself to longer range views such as at properties at Brockley Hall, South Charlton, South Charlton Farm and the Whinny (**Viewpoint 3**). Close proximity views would be available towards the Part B Main Scheme Area for residents at West Linkhall (**Viewpoint 2**), Rock Nab, Rock Lodge (**Viewpoint 4**), Heiferlaw Bank (**Viewpoint 5**), Holywell Cottage, Holywell, Heckley Fence (**Viewpoint 6** and **20**), Heckley House (**Viewpoint 7**), Loaning Head and Broom House Farm (**Viewpoint 8**). The properties at Rock Nab and Rock Lodge would also experience views of the Charlton Mires Compound at close proximity.
- 7.7.49. To the south of the Study Area, views would be available towards the Main Compound Area from nearby residential properties (The Boarding House, Hemelspeth, Glenshotton, Cahore Cottage, Tithemans Cottage, Thirston New Houses and Thirston New House).
- 7.7.50. A description of the residential receptors and their baseline view can be found in **Appendix 7.4: Landscape and Visual Sensitive Receptors, Volume 8** of this ES (**Application Document Reference: TR010041/APP/6.8**).

Recreational (Public Rights of Way (PRoW))

- 7.7.51. The locations of PRoW are illustrated on **Figure 7.1: Zone of Theoretical Visibility, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**). There are 14 PRoWs within 1 km of Part B, with the majority located to the east of the A1. These principally consist of footpaths with occasional bridleways and byways open to all traffic. Views from the PRoW in the Study Area are detailed above and further information is available in **Appendix 7.4: Landscape and Visual Sensitive Visual Receptors** **7.2: Visual Effects Schedule, Volume 8** of this ES (**Application Document Reference: TR010041/APP/6.8**).
- 7.7.52. To the east, where gaps in vegetation and rise in ground levels allow, longer range views are available from PRoW 129/044, PRoW 129/005, PRoW 129/006, PRoW 129/009, PRoW 129/022 and PRoW 129/014 (**Viewpoint 9, 10, 17 and 19**).
- 7.7.53. To the southwest, views toward the Lionheart Enterprise Park Compound would be available in close proximity for walkers travelling along PRoW 141/013 over the western site boundary (**Viewpoint 15**).
- 7.7.54. To the west, views would be available from close proximity on PRoW 110/004, PRoW 110/013, PRoW 110/019, PRoW 110/010, PRoW 112/009, and PRoW 112/008.
- 7.7.55. To the south of the Study Area views would be available for people travelling along PRoW 422/020 and recreational users of Eshott Airfield.

Commercial

- 7.7.56. There are several commercial and visitor attractions within 1 km of Part B, as set out in **Table 7-17**.

Table 7-17 - Commercial Receptors

Name	Receptor Type
Part B Main Scheme Area	
The Old Stables	Commercial
The Rocking Horse Café (formerly The Art Rock Café and Gallery)	Commercial
Rock Moor House Bed and Breakfast.	Commercial – temporary residents
Charlton Hall	Commercial – temporary residents
Blossom Plantation pods	Commercial – temporary residents
Grahamslaw JEG & Sons	Commercial

Name	Receptor Type
Middlemoor Holiday Cottage	Commercial – temporary residents
Reading Rooms Cottage and The Armstrong Household and Farming Museum	Commercial – temporary residents
Rock Lodge Holiday Lets	Commercial – temporary residents
Lionheart Compound	
Lionheart Enterprise Park	Commercial
Main Scheme Compound	
Eshott Airfield	Commercial – temporary visitors

7.7.57. Due to the nature of these receptors the relative sensitivity can be highly variable. In accordance with **Table 7-8**, commercial premises are normally considered to be of low sensitivity and recreational or leisure premises to be of moderate sensitivity. Holiday lets are considered to be less sensitive than residential receptors because they are used on a short-term basis.

7.7.58. To the south west, views would be available from the commercial receptors at Lionheart Enterprise Park in the middle distance

7.7.59. A description of the commercial receptors can be found in **Appendix 7.4: Landscape and Visual Sensitive Receptors, Volume 8** of this ES (**Application Document Reference: TR010041/APP/6.8**).

Transport (Road Users)

7.7.60. Views of the existing A1 from local roads tend to be transient, with views being variable in nature depending upon the combination of elements located along them. Within the surrounding area, local roads are predominately lined either side by hedgerows with scattered trees and narrow grass verges, such that the focus of attention of the traveller tends to be on the road ahead.

7.7.61. When travelling along the existing A1 road corridor itself, the experience of the users varies from south to north, with longer views of the wider landscape available at the northern end of Part B towards North Charlton. Elsewhere, longer distance views are obscured by changes in ground level and roadside vegetation.

7.7.62. To the south east views towards the Part B Main Scheme Area would be available for road users travelling along the B1340.

7.7.63. Visual assessment of transport receptors within 1 km of Part B has been undertaken. The assessment of the potential effects on these routes has been assisted by the use of site

assessment and ZTV mapping. Due to the principal focus being on the road ahead, sensitivity of road users is considered as being low.

7.7.64. The sensitivity of visual receptors taken forward for the assessment is set out in **Appendix 7.4: Landscape and Visual Sensitive Receptors, Volume 8** of this ES (**Application Document Reference: TR010041/APP/6.8**).

Summary of Visual Receptors Scoped In and Out

7.7.65. The visual receptors considered in the assessment have been agreed with the consultees (refer to **Table 7-4** above) and are set out in **Figure 7.2: Visual Receptor Plan, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**) and **Table 7-18** below:

Table 7-18 – Receptors for Visual Assessment

Receptor Type	Ref	Representative Viewpoint	Receptor
Part B Main Scheme Area and Charlton Mires Compound			
Residential	1	8	Broom House (5 properties)
	2	8	Loaning Head (1 property)
	3	7	Heckley House and Heckley Cottage (2 properties)
	4	6 and 20	Heckley Fence (1 property)
	5	5	Heiferlaw Bank (1 property)
	6	4	Rock Lodge (1 property)
	7	4	Rock Nab (1 property)
	8	6	Holywell Cottage, Holywell (4 properties)
	9	9	Broxfield and surrounding properties (2 properties)
	10	2	West Linkhall Farmhouse and surrounding properties including Patterson Cottage and properties to the west
	11	11 and 13	Rock Midstead Cottages and Rock Midstead Farmhouse (6 properties)
	12	10, 17 and 19	Rock South Farm (7 properties)
	13	12	Drythrople (1 property)

Receptor Type	Ref	Representative Viewpoint	Receptor
	14	13	Rock Moor House (1 property)
	15	14	West Lodge
	16	14	Properties at East Linkhall (2 properties)
	17	1	Properties at North Charlton
	18	3	Properties at South Charlton
	19	No viewpoint	Whinny
	20	2	Brockley Hall Cottages and Brockley Hall
	21	No viewpoint	South Charlton Farm
	22	18	Silvermoor
	23	18	Goldenmoor
	24	No viewpoint	Properties at Denwick
Recreational	25	2	PRoW 112/008
	26	2 and 3	PRoW 112/009
	27	11 and 13	PRoW 129/004
	28	10 and 17	PRoW 129/005
	29	10	PRoW 129/009 and 110/003
	30	6	PRoW 110/019
	31	5	PRoW 110/010
	32	9	PRoW 129/022
	33	7	PRoW 110/013
	34	7 and 8	PRoW 110/004
	35	9	PRoW 129/014
	36	17 and 19	PRoW 129/006
	56	No viewpoint	PRoW 112/045

Receptor Type	Ref	Representative Viewpoint	Receptor
Transport	37	No viewpoint	Road users travelling along the A1
	38	3 and 12	Road users travelling along the B6347
	39	4, 5, 6, 7 and 20	Road users travelling along the B6341
	40	18	Road users travelling along the B1340
Lionheart Enterprise Park Compound			
Residential	41	16	Greensfield Moor Farm
Recreational	42	15	PRoW 141/013
	43	15	PRoW 141/022
Transport	44	No viewpoint	Road users travelling along the unnamed road
Commercial	45	16	Lionheart Industrial Estate
Main Compound			
Residential	46	No viewpoint	The Boarding House (6 Properties)
	47	No viewpoint	Hemelspeth (8 Properties)
	48	No viewpoint	Glenshotton
	49	No viewpoint	Cahore Cottage (3 Properties)
	50	No viewpoint	Tithemans Cottage (2 Properties)
	51	No viewpoint	Thirston New Houses
	52	No viewpoint	Thirston New House
Recreational	53	No viewpoint	PRoW 422/020
	54	No viewpoint	Recreational users of Eshott Airfield
Transport	55	No viewpoint	Road users travelling along the unnamed local road

7.8 POTENTIAL IMPACTS

RECEPTORS SCOPED OUT

7.8.1. The following sections set out those receptors scoped out of the assessment following the site visits and desk study because significant effects are not anticipated:

Landscape

7.8.2. The following character areas have been scoped out because significant effects are not anticipated:

- a. NCA 1: North Northumberland Coastal Plain
- b. NCA 2: Northumberland Sandstone Hills
- c. 10a Rosebrough Moor LCA within Smooth Moorland LCT
- d. 38a Longframlington LCA within Lowland Rolling Farmland LCT
- e. 7a Hulne Park LCA within Estate Valley LCT
- f. 18 Longframlington / Shilbottle Rolling Farmland LCA

7.8.3. The regional and local LCAs listed above have been scoped out of the assessment because they are not anticipated to experience significant effects due to the lack of intervisibility created by intervening vegetation, topography and interrelationship with Part B.

7.8.4. The NCAs are scoped out because the size of Part B, and the scale of landscape change arising from it, in relation to the size of the NCAs is such that Part B could not have a significant effect on the character of these areas considered as a whole.

7.8.5. The Northumberland Coast AONB has been scoped out of the assessment due to the lack of intervisibility between the AONB and Part B. This approach has been agreed with the AONB officer as detailed in **Table 7-4** above. There would be no anticipated visual effects on receptors within the AONB, nor effects on the landscape character of the AONB arising from Part B. However, as the AONB lies within the 3c Rock and 2a Lower Aln LCAs (set out in **Table 7-14** above) it has raised the sensitivity of these character areas for the assessment.

Visual

7.8.6. **Table 7-19** below lists receptors that were reviewed during the development of the Preliminary Environmental Information Report (PEIR) for statutory consultation, site visits, desk study and following design changes that are not anticipated to experience any significant visual effects. They have therefore been scoped out of the assessment.

Table 7-19 – List of Visual Receptors Scoped Out of the Assessment

Receptor	Justification
Charlton Mires (two properties)	These properties would be demolished as part of Part B. The effects of the removal of these properties have been considered in the assessment of Landscape Character.
The Old Stables	Low sensitivity commercial receptor with limited views of Part B. Note for information, adjacent residential receptor Broom House (Ref 1) which is slightly nearer Part B has been assessed.
The Rocking Horse Café (formerly The Art Rock Café and Gallery)	Low sensitivity commercial receptor with limited views of Part B. Note for information, proximity residential receptors Rock Midstead Cottages and Rock Midstead Farmhouse (Ref 11) which are of a higher sensitivity and a similar outlook of the Part B Main Scheme Area have been assessed.
Rock Moor House Bed and Breakfast	Low sensitivity commercial receptor with limited views of Part B. Note for information, adjacent residential receptor Rock Moor House (Ref 14) is of a higher sensitivity and has similar views of Part B and has been assessed.
Charlton Hall	Low sensitivity commercial receptors with limited views of Part B. Note for information, adjacent residential receptors West Lodge (Ref 15) and Properties at East Linkhall (Ref 16), which are slightly nearer Part B have been assessed.
Blossom Plantation pods	
Grahamslaw JEG and Sons	
Patterson's Cottage Boarding Kennels	Low sensitivity commercial receptor with limited views of Part B. Note for information, adjacent residential receptor at West Linkhall (Ref 10), which is slightly nearer Part B has been assessed.
Middlemoor Holiday Cottage	Low sensitivity commercial receptors with limited views of Part B. Note for information, adjacent Residential Receptors at North Charlton (Ref 17), which are slightly nearer Part B have been assessed.
Reading Rooms Cottage	
The Armstrong Household and Farming Museum	
Rock Lodge Holiday Lets	Low sensitivity commercial receptor not anticipated to experience significant effects. Note for information, adjacent residential receptors Rock Nab (Ref 6) and Rock Lodge (Ref

Receptor	Justification
	7), which experience similar views of Part B have been assessed.
18, 19, 20 and 21 People living in properties with long distance eastern facing views	These residential receptors are located just over 1 km from Part B, as a result views of the Part B Main Scheme Area are available in the background of the view. These receptors have been scoped out as significant effects are not anticipated due to the majority of the views towards the Part B Main Scheme Area being obscured by intervening built form, vegetation and topography. Note for information, residential receptor Rock Lodge (Ref 7) and West Lodge (Ref 10) are closer to the Part B Main Scheme Area and have been assessed.
22 People living in properties with south western facing views	Limited views of the Part B Main Scheme Area would be available in the background of the view where changes in topography and gaps in the intervening vegetation allow. Due to the distance from the Part B Main Scheme Area and limited inter-visibility this receptor is not anticipated to experience significant effects and has been scoped out of the assessment.
23 and 24 People living in properties with north western facing views	These receptors have limited visibility towards the Part B Main Scheme Area due to changes in topography and existing intervening vegetation. Due to the distance from the Part B Main Scheme Area and limited inter-visibility these receptors are not anticipated to experience significant effects and has been scoped out of the assessment
41 People living in properties with views of the Lionheart Enterprise Park Compound	These receptors have long distance oblique views towards the Lionheart Enterprise Park Compound area. Background views are limited to above and where gaps in the intervening vegetation allow. Due to the distance from the Lionheart Enterprise Park Compound and Part B Main Scheme Area and limited inter-visibility these receptors are not anticipated to experience significant effects and has been scoped out of the assessment.
29 People travelling along PRoW 129/009 and 110/003	The receptors travelling along this route would experience filtered views towards the Part B Main Scheme Area at limited locations along the route. Due to the limited availability of the views this receptor is not anticipated to experience significant effects and has been scoped out of the assessment.

Receptor	Justification
30 People travelling along PRoW 110/003	The receptors travelling along these routes would experience views towards the Part B Main Scheme Area at limited locations along the routes. Due to the limited availability of the views these receptors are not anticipated to experience significant effects and has been scoped out of the assessment,
31 People travelling along PRoW 110/010	
32. Public Right of Way Ref: 129/022	The receptors travelling along these routes have not been assessed as these routes are to be stopped up as part of Part B.
35. Public Right of Way Ref: 129/014	
38, 39 and 40 People travelling along local roads with views of the Charlton Mires Site Compound	The receptors would experience close proximity views of the Part B Main Scheme Area. However, as the receptors would be travelling at speed and would be focussed on their route rather than the wider landscape. Significant effects are not anticipated, and these receptors have been scoped out of the assessment.
44 People travelling along local roads with views of the Lionheart Enterprise Park Compound	This receptor would experience close proximity views of the Lionheart Enterprise Park Compound. However, as the receptors would be travelling at speed and would be focussed on their route rather than the wider landscape. Due to the speed of travel receptors would experience glimpsed and fleeting views of the landscape. Significant effects are not anticipated, and these receptors have been scoped out of the assessment.
45 People working or visiting Lionheart Industrial Estate	This receptor would experience views above site hoarding in, however due to the nature of the receptor being focussed on their indoor facing activities. Significant effects are not anticipated, and these receptors have been scoped out of the assessment.

Main Compound

- 7.8.7. The Main Compound would be used by both Part A and Part B and is located within the Order Limits of Part A. As detailed in **Section 2.8 in Chapter 2: The Scheme, Volume 1** of this ES (**Application Document Reference: TR010041/APP/6.1**), the use of the Main Compound for Part B would lead to additional activities. However, due to the limited number of additional onsite construction and welfare facilities associated with using the Main

Compound for Part B, there would no additional impacts upon the receptors identified in **Table 7-18** surrounding the Main Compound.

- 7.8.8. The introduction of additional activities at the Main Compound would raise the magnitude of impact for the identified receptors however the raised impacts would not be sufficient to raise the overall significance of effect reported in Part A **Chapter 7: Landscape, Volume 2** of this ES (**Application Document Reference TR010041/APP/6.2**). As there would be a negligible effect on landscape and visual receptors as a result of using the Main Compound for Part B, this is not discussed further within this chapter. The effects of the Main Compound on landscape and visual receptors are reported in Part A **Chapter 7: Landscape, Volume 2** of this ES.

CONSTRUCTION

- 7.8.9. The following potential impacts have been identified in relation to landscape character and visual amenity, during the construction phase of Part B.
- 7.8.10. The construction of Part B would include temporary works such as vegetation removal, soil stripping, material storage mounds, plant movements, temporary lighting and machine activity to build structures, earthworks and the road surfaces.
- 7.8.11. There would be temporary construction compounds required. These are the: Main Compound; Lionheart Enterprise Park Compound (eastern site and western site); and Charlton Mires Site Compound.

Landscape Character

- 7.8.12. Part B is anticipated to have potential adverse effects on the following LCAs during construction (refer to **Figure 7.5: Landscape Character Areas** and **Figure 7.6: Local Landscape Character, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**)):
- a. 8c Charlton Ridge LCA
 - b. 3c Rock LCA
 - c. 2a Lower Aln LCA
 - d. 6 North East Farmed Coastal Plain LCA
 - e. 11 Charlton Ridge LCA
 - f. 7 Lower Aln Valley LCA
- 7.8.13. Within these LCAs, potential adverse impacts to landscape character during construction are likely to arise from:
- a. Direct loss of landscape features such as hedges, trees and agricultural land adjacent to the existing route of the A1 through the construction of Part B.
 - b. Demolition of properties at Charlton Mires Farm and East Cottage to facilitate construction of the Charlton Mires junction.
 - c. Alteration to topography due to the proposed raised junction embankment (Charlton Mires Junction and construction of Heckley Fence Accommodation Overbridge).

- d. Temporary alteration to field boundaries including vegetation loss.
- e. Temporary alteration to the setting of natural or cultural heritage features of interest.
- f. Reduction of tranquillity in those areas associated with the construction works (including vehicle movements along haulage roads and between construction compounds).
- g. Temporary localised landscape impacts from the presence of construction compounds and temporary spoil heaps.

7.8.14. For construction phase impacts on specific landscape character areas, refer to **Appendix 7.3: Landscape Effects Schedule, Volume 8** of this ES (**Application Document Reference: TR010041/APP/6.8**).

7.8.15. The extent of vegetation clearance associated with Part B is illustrated on **Figure 7.11: Vegetation Clearance Plans, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**).

Visual Amenity

7.8.16. Visual receptors could experience potential adverse impacts during the construction of Part B as a result of:

- a. Temporary presence of construction compounds, reducing visual amenity and restricting views of open skyline in close proximity.
- b. Temporary traffic management, movement and activity of construction plant likely to be visible above intervening vegetation and site hoarding.
- c. Temporary spoil heaps and introduction of embankments which are bare earth prior to plant establishment, reducing visual amenity.
- d. Temporary lighting of works areas in areas previously unlit.
- e. Temporary artificial lighting of areas for night time working (it is currently anticipated that the construction compounds would be lit at all times for security and welfare use).
- f. Permanent vegetation clearance that leads to the opening of new views.
- g. Alteration to topography due to the raised junction embankment at Charlton Mires Junction and works to construct the Heckley Fence Accommodation Overbridge, restricting visibility for close proximity receptors.

OPERATION

7.8.17. The following potential impacts have been identified in relation to landscape character and visual amenity during the operational phase (year 15) of Part B.

7.8.18. At this stage of Part B, it is anticipated that the widening of the road, junction improvements and bridge works would result in operational effects for landscape and visual receptors as detailed below.

Landscape Character

7.8.19. Part B would indirectly and adversely impact on the following LCAs within the Study Area (refer to **Figures 7.5: Landscape Character Areas** and **Figure 7.6: Local Landscape**

Character, Volume 6 of this ES (**Application Document Reference: TR010041/APP/6.6**):

- a. 8c Charlton Ridge LCA
- b. 3c Rock LCA
- c. 2a Lower Aln LCA
- d. 6 North East Farmed Coastal Plain LCA
- e. 11 Charlton Ridge LCA
- f. 7 Lower Aln Valley LCA

7.8.20. The following permanent adverse direct impacts to landscape characters are anticipated as a result of Part B during operation:

- a. Permanent alteration to existing landform (cuttings and embankments), a raised junction (Charlton Mires Junction) and the Heckley Fence Accommodation Overbridge.
- b. Permanent loss of mature woodland.
- c. The widening of the existing A1 carriageway to the east, increasing its prominence in the landscape.
- d. Permanent alteration to field boundaries.
- e. Alteration to natural or cultural heritage features of interest. Refer to **Chapter 8: Cultural Heritage** of this ES.
- f. Reduction of tranquillity in those areas associated with Part B through the introduction of movement and noise.

7.8.21. For operational phase impacts on specific landscape character areas, refer to **Appendix 7.3: Landscape Effects Schedule, Volume 8** of the ES (**Application Document Reference: TR010041/APP/6.8**).

Visual Amenity

7.8.22. Visual receptors could experience potential adverse impacts during the operation of Part B as a result of:

- a. Increased visual presence of the road due its widening into a dual carriageway and the addition of Heckley Fence Accommodation Overbridge and Charlton Mires Junction.
- b. Change to the nature of the view associated with those properties looking towards Charlton Mires Junction.
- c. Increase in light pollution from vehicles travelling along the A1, Charlton Mires Junction and Heckley Fence Accommodation Overbridge at night.

7.9 DESIGN, MITIGATION AND ENHANCEMENT MEASURES

DESIGN

7.9.1. Through an iterative design process, and consultation with NCC and Natural England, a Landscape Mitigation Plan for Part B has been developed (**Figure 7.10: Landscape Mitigation Plan, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**)).

Construction

7.9.2.

An **Outline Construction Environmental Management Plan (Outline CEMP)** (**Application Document Reference: TR010041/APP/APP/7.3**) has been prepared and accompanies the Development Consent Order (DCO) application, and contains the following measures:

- a. Avoidance and retention or protection of existing mature vegetation wherever possible as identified on **Figure 7.10: Landscape Mitigation Plan, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**). The roots of vegetation that enter the construction corridor would be protected in accordance with BS5837 Trees in relation to design, demolition and construction – Recommendations.
- b. No works, including temporary works such as the creation of topsoil mounds would be carried out within the canopy spread of existing retained trees.
- c. Construction compounds would be laid out such that temporary soil mounds would be utilised to screen views of construction activities and light pollution in the surrounding area.
- d. Upon completion areas used as site compounds would be returned to their original use.
- e. The construction programme would be kept to the minimum practicable time to reduce the duration of any landscape and visual impacts. Areas would be cleared for construction as close as possible to works commencing and top soiling, reseeding and planting would be undertaken during the next available season after sections of work are complete.
- f. As far as practicable, plant and material storage areas would be sited to avoid landscape and visual impact.
- g. Construction compounds and working areas would be kept tidy (e.g. free of litter and debris) through robust construction compound management.
- h. Work during hours of darkness would be avoided as far as practicable, and where unavoidable, directed lighting would be used to minimise light pollution and glare. Lighting levels around construction compounds would be kept to the minimum necessary for security and safety.
- i. To protect soil quality for the purposes of landscape planting, the following measures would be implemented:
 - i. Uncontaminated topsoil for re-use would be stored in un-compacted mounds no more than 2 m high and stored separately from subsoil material.
 - ii. Stripped topsoil would be used in areas of similar proposed vegetation type to utilise the existing natural seed bank.
 - iii. Subsoil in planting areas would be replaced where appropriate following construction and appropriately treated, this may include being ripped to reduce compaction (depending on underlying soil type and conditions), before top soiling and planting.
 - iv. Proposed planting areas in existing arable and pasture land, subject to construction activity, would be ripped to 600 mm to alleviate compaction, where required.

- j.** It is assumed that a minimal topsoil depth of 300 mm would be achieved across all planting areas. Topsoil depth would be reduced to a minimum depth of 100 mm in areas of amenity grassland areas. Topsoil would not be used for species rich grassland areas.
- k.** Construction would be managed such that the loss of any existing woodland, scrub, heath, grassland vegetation, and isolated trees and shrubs not affected by the permanent works is avoided as far as practicable. Refer to **Appendix 7.1: Arboricultural Report, Volume 8** of this ES (**Application Document Reference: TR010041/APP/6.8**) for further details.
- l.** All existing trees and shrubs not affected by the construction of the permanent works would be fenced off with a suitable type of temporary fencing in accordance with BS5837. Fencing would be erected prior to construction activities in that area and would remain for the entire construction period.
- m.** Maintaining existing pedestrian routes as far as reasonably practical with traffic management measures.
- n.** Surrounding roads and pavements to be maintained free of excessive dust and mud.

7.9.3. No off-site planting is proposed as part of Part B. Advanced planting is proposed to the south west of the proposed Charlton Mires junction, to provide screening to the occupants of the nearby residential property.

Operation

7.9.4. Embedded mitigation has been developed through the design process and forms an integral part of the landscape design of Part B, and includes the following measures:

- a.** Existing vegetation within the Order Limits would be retained as identified on **Figure 7.10: Landscape Mitigation Plan, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**), to reduce potential impacts relating to screening and landscape integration. Where replacement planting is carried out it would be in keeping with the existing landscape.
- b.** Ash (*Fraxinus excelsior*) has been omitted from all planting mixes at this time due to the biosecurity risk (Ash dieback *Hymenoscyphus fraxinea* formally *Chalara fraxinea*) which is associated with this species. Further information about Ash dieback in the area is available in **Appendix 7.1: Arboricultural Report, Volume 8** of this ES (**Application Document Reference: TR010041/APP/6.8**).
- c.** Where hedgerows are shown as being retained on the landscape mitigation masterplan, but are subsequently removed to construct Part B, replacement hedgerow planting would be required, using a species mix to match the existing hedgerow lost to Part B.
- d.** Throughout the extent of the Order Limits, where existing vegetation has been lost to facilitate the construction of Part B (including vegetation clearance works to accommodate the construction compounds), replacement woodland blocks, hedgerows, agricultural land use, and individual trees would be required for the restoration of the land, with the aim of conserving landscape character and associated views. This would be in accordance with **Figure 7.10: Landscape Mitigation Plan, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**).

- e. Further to the above, the proposed hedgerows identified in the **Landscape Mitigation Plan (Figure 7.10, Volume 6 of this ES (Application Document Reference: TR010041/APP/6.6))**, located on either side of the Part B Main Scheme Area alignment, would be supported by linear belts of woodland block planting, and they are intended to act as a wind break, to enable successful hedgerow establishment.
- f. Retention of views to local landmarks (Heiferlaw Tower to the east, and Middlemoor and Wandylaw Moor Windfarms to the north-west) to help create a sense of place for drivers.
- g. Replace existing woodland blocks, hedgerows and individual trees lost during construction with native tree and shrub planting appropriate to character.

MITIGATION

- 7.9.5. In addition to the embedded mitigation a number of further specific mitigation measures relating to landscape and/or visual effects have been identified during the assessment phase (refer to **Landscape Mitigation Plan (Figure 7.10, Volume 6 of this ES (Application Document Reference: TR010041/APP/6.6))**).
- 7.9.6. The removal of some existing landscape features to facilitate the construction of Part B would result in a high magnitude of impact upon the local landscape. The subsequent establishment of the mitigation measures identified within the landscape mitigation masterplan would result in a reduction in the potential for significant landscape effects.
- 7.9.7. Where replacement of removed planting would be carried out it would be in keeping with the existing landscape, avoiding the extensive use of mass planting of woodland trees (which over time would screen longer views) in order to retain an open, permeable character to the wider landscape.
- 7.9.8. Shrub planting along Part B would be restricted to those areas on either side of culverts and mammal underpasses, in order to encourage usage of the structures by the respective species. This would be extended to include sections of shrub planting on either side of the bridges which cross the mainline in and around the junctions to discourage flight paths of bats too close to vehicle updrafts. This is discussed in more detail within **Chapter 9: Biodiversity** of this ES.
- 7.9.9. Replacement grassland habitat is identified throughout the Order Limits. In total there are seven suggested grass types proposed as part of Part B, taking into consideration the specific characteristics of each environment, and to improve the biodiversity of Part B (detailed below).
- 7.9.10. Grassland habitat across Part B has been broken down into the following categories (refer to **Ref. 7.32**):
 - a. Amenity Grassland (LE 1.1).
 - b. Species Rich (Conservation) Grassland (LE 1.3).
 - c. Open Grassland (LE1.6), applied to all other areas.
 - d. Marsh Wet Grassland (LE 6.4).
 - e. Arable Field Margins (LE1.6).

- 7.9.11. Within the areas of Species Rich (Conservation) Grassland (LE1.3) mitigation, three distinct grass types would be required, each with their own set of unique management practices. These are:
- a. Junctions / grass verge – suitable for low frequency grass cut areas.
 - b. General grassed areas – suitable for cutting slopes and embankments.
 - c. Arable field margins – suitable for the encouragement of pollinators.
- 7.9.12. Where land is not permanently required for mitigation (refer to **Chapter 9: Biodiversity** of this ES), land would be returned to former land use.
- 7.9.13. The development of the landscape mitigation masterplan, and the mitigation principles adopted, include:
- a. Where existing vegetation is removed by the construction of Part B, appropriate planting in the form of woodland, hedgerows, arable field margins and individual trees would be planted in line with the landscape mitigation design (refer to **Landscape Mitigation Plan (Figure 7.10, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**)), in order that the vegetative framework of the landscape is replaced/restored.
 - b. Planting of native tree and shrub species would be in keeping with local landscape character, refer to **Appendix 7.1: Arboricultural Report, Volume 8** of this ES (**Application Document Reference: TR010041/APP/6.8**).
 - c. Provision of planting belts would provide visual links between existing and proposed vegetation, restoring landscape pattern and land cover as outlined in the (**Figure 7.10: Landscape Mitigation Plan, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**)).
 - d. Inclusion of appropriate screen planting to mitigate views of Part B by the Design Year and beyond.
 - e. Screen planting around significant road embankments and around Charlton Mires junction to break up the scale of the road and screen structures, traffic and lighting, where it occurs.
 - f. Plant stock would be planted using a combination of whips and transplants. All mitigation planting would comprise of native species mixes in keeping with local landscape character. Plant stock would be of local provenance, which in this instance is defined as being Area 109 in accordance with the Forestry Commission Practice note ‘Using Local Stock for Planting Native Trees and Shrubs’ 1999 (**Ref. 7.33**) Plant stock would be planted using a combination of whips and transplants.
 - g. Retention and replacement of the existing hedgerow to the west of Rock South Farm access track. Bunds subject to planting would have a minimum depth of 300 mm of topsoil laid over formation layers, subject to topsoil availability and to make best use of available topsoil. Topsoil depth will be reduced to a minimum depth of 100 mm in areas of amenity grassland areas. Topsoil will not be used for species rich grassland areas. This depth may be increased and would be confirmed once material quantities are known at detailed design.

ENHANCEMENT MEASURES

7.9.14. No enhancement measures have been proposed.

7.10 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

7.10.1. This section sets out the anticipated effects on receptors as a result of Part B and their significance, taking into account the mitigation described above.

7.10.2. For the purpose of this assessment effects identified as being of moderate significance or greater are assessed as significant.

PREDICTED LANDSCAPE EFFECTS

Construction

7.10.3. The following effects likely to result on the perception of landscape character and of those character areas directly affected during construction of Part B:

- a. The loss of landscape features, including hedges, trees and woodland would temporarily open up broader awareness of the A1 within the landscape. Specifically, in the areas surrounding the proposed Charlton Mires Junction and the Heckley Fence Accommodation Overbridge.
- b. Vegetation clearance to facilitate construction is anticipated to occur during the initial mobilisation and subsequent stages, requiring the removal of landscape features that currently contribute to the vegetation cover. Areas of tree clearance may occur as a result of potential safety concerns relating to the windthrow effect. This would be limited to areas of vegetation on the fringes of woodland. The clearance would result in newly exposed views across the landscape and the construction activity.
- c. Temporary spoil heaps, material storage, construction vehicle movement, and construction compounds would occur throughout the construction stage, which would generate frequent changes to the perception of the existing A1 and the broader landscape associated with the corridor.
- d. Construction of Part B and associated built elements including new structures, embankments, signage etc would result in a reduction in the settled appearance of the landscape.

7.10.4. There would be a substantial amount of temporary change to the corridor and immediate setting as a result of the construction activities. The landscape effects of Part B are detailed in **Appendix 7.3: Landscape Effects Schedule, Volume 8** of this ES (**Application Document Reference: TR010041/APP/6.8**) which set out the following:

- a. Sensitivity of landscape receptor
- b. Magnitude of Impact
- c. Significance of landscape Effect

7.10.5. The effects on landscape character during construction, taking into account the construction mitigation measures outlined in **Section 7.9** are summarised in **Table 7-20**, below.

Table 7-20 - Landscape Character Residual Effects - Construction

Receptor	Sensitivity	Magnitude of Impact	Significance of Effect
8c Charlton Ridge LCA	Moderate	Moderate	Moderate Adverse Short-term, direct, temporary
3c Rock LCA	High	Minor	Moderate Adverse Short-term, direct, temporary
2a Lower Aln LCA	Low	Minor	Slight Adverse (not significant) Short-term, direct, temporary
6 North East Farmed Coastal Plain LCA	High	Minor	Moderate Adverse Short-term, direct, temporary
11 Charlton Ridge LCA	Moderate	Minor	Slight Adverse (not significant) Short-term, direct, temporary
7 Lower Aln Valley LCA	Low	Minor	Slight Adverse (not significant) Short-term, direct, temporary

Operation

Landscape Character Effects

- 7.10.6. The effects on landscape character during operation, taking into account the mitigation measures outlined in **Section 7.9** are summarised in **Table 7-21** below.

Table 7-21 – Landscape Character Residual Effects - Operation

Receptor	Sensitivity	Magnitude of Impact		Significance of Effect	
		Year 1	Year 15	Year 1	Year 15
8c Charlton Ridge LCA	Moderate	Negligible	Negligible	Slight Adverse (not significant) Short-term, direct, temporary	Neutral (not significant) Long-term, direct, permanent
3c Rock LCA	High	Negligible	Negligible	Slight Adverse (not significant) Long-term, direct, permanent	Slight Adverse (not significant) Long-term, direct, permanent
2a Lower Aln LCA	Low	Negligible	No Change	Neutral (not significant) Long-term, direct, permanent	Neutral (not significant) Long-term, direct, permanent
6 North East Farmed Coastal Plain LCA	High	Negligible	Negligible	Slight Adverse (not significant) Long-term, direct, permanent	Slight Adverse (not significant) Long-term, direct, permanent
11 Charlton Ridge LCA	Moderate	Negligible	Negligible	Neutral (not significant) Long-term, direct, permanent	Neutral (not significant) Long-term, direct, permanent
7 Lower Aln Valley LCA	Low	Negligible	No Change	Neutral (not significant)	Neutral (not significant)

Receptor	Sensitivity	Magnitude of Impact		Significance of Effect	
				Long-term, direct, permanent	Long-term, direct, permanent

PREDICTED VISUAL EFFECTS

- 7.10.7. Visual effects are the effect of Part B on views experienced by people and their general visual amenity. The assessment of effects outlines the predicted effects on those receptors identified in the baseline.
- 7.10.8. There would be a substantial amount of change to views surrounding the corridor as a result of the construction activities. The visual effects of Part B are detailed in **Appendix 7.2: Visual Effects Schedule, Volume 8** of this ES (**Application Document Reference: TR010041/APP/6.8**) and summarised in **Tables 7-22 to 7-27**, which lists the names of the receptors and provides a summary of the visual analysis.
- 7.10.9. Changing weather patterns and local climatic conditions would influence the visibility of Part B varying from periods of low visibility (fog, low cloud, and bright sunny conditions that are accompanied by haze generated by temperature inversions) to periods of high visibility in clear weather.
- 7.10.10. The assessment has identified potential significant visual effects during construction and operation of Part B as described in detail in **Appendix 7.2: Visual Effects Schedule, Volume 8** of this ES (**Application Document Reference: TR010041/APP/6.8**), and summarised in **Table 7-22** below.

Visual Effects on Occupants of Residential Properties

- 7.10.11. All residents and visitors to settlements and residential properties within the 1 km Study Area are considered to be of high sensitivity which is in accordance with the IAN 135/10 (**Ref. 7.23**).
- 7.10.12. Individual and specific observations are made concerning views or potential views in the direction of Part B in respect of the relevant properties, and these are set out in **Appendix 7.2: Visual Effects Schedule, Volume 8** of this ES (**Application Document Reference: TR010041/APP/6.8**). This assessment takes all relevant factors into account which could include: the various potential views from the house; the surrounding amenity ground; the access and egress points; and the immediately adjacent highway, taking the views in the direction of Part B into account along with alternative views which may be available.

Construction

7.10.13. **Table 7-22** below summarises the findings of the visual effects assessment when considering the mitigation measures outlined in **Section 7.9** above during construction (refer to **Figure 7.3: Viewpoint Locations Plan, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**)).

Table 7-22 – Visual Residual Effects on Occupants of Residential Receptors - Construction

Receptors	Sensitivity	Magnitude of Impact	Significance of Effect
Residential Receptors			
People living in properties with north east facing views (Receptors 1 & 2)	High	Moderate	Moderate Adverse Short-term, direct, temporary
People living in properties with eastern facing views (Receptors 3, 4, 5 & 8)	High	Major	Large Adverse Short-term, direct, temporary
People living in properties with close proximity eastern facing views (Receptors 6, 7 & 10)	High	Major	Large Adverse Short-term, direct, temporary
People living in properties with western facing views (Receptors 9)	High	Moderate	Moderate Adverse Short-term, direct, temporary
People living in properties with filtered western facing views (Receptors 11 & 14)	High	Moderate	Moderate Adverse Short-term, direct, temporary
People living in properties with close proximity views (Receptors 12)	High	Moderate	Moderate Adverse Short-term, direct, temporary
People living in properties with close proximity western facing views (Receptors 13)	High	Major	Large Adverse Short-term, direct, temporary

Receptors	Sensitivity	Magnitude of Impact	Significance of Effect
People living in properties with close proximity south western facing views (Receptors 15 & 16)	High	Moderate	Moderate Adverse Short-term, direct, temporary
People living in properties with south eastern facing views (Receptors 17)	High	Moderate	Moderate Adverse Short-term, direct, temporary

Operation

7.10.14. **Table 7-23** below summarises the findings of the visual effects assessment when considering the mitigation measures outlined in **Section 7.9** above at Operation Year 1 and Year 15 (refer to **Figure 7.3: Viewpoint Locations Plan, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**)).

Table 7-23 - Visual Residual Effects on Occupants of Residential Receptors - Operation

Receptor	Sensitivity	Magnitude of Impact		Significance of Effect	
		Year 1	Year 15	Year 1	Year 15
Residential Receptors					
People living in properties with north east facing views (Receptors 1 & 2)	High	Moderate	Minor	Moderate Adverse Short-term, direct, temporary	Slight Adverse (not significant) Long-term, direct, permanent
People living in properties with eastern facing views (Receptors 3, 4, 5 & 8)	High	Major	Moderate	Large Adverse Short-term, direct, temporary	Moderate Adverse Long-term, direct, permanent

Receptor	Sensitivity	Magnitude of Impact		Significance of Effect	
		Major	Moderate	Large Adverse	Moderate Adverse
People living in properties with close proximity eastern facing views (Receptors 6, 7 & 10)	High	Major	Moderate	Short-term, direct, temporary	Long-term, direct, permanent
People living in properties with western facing views (Receptor 9)	High	Moderate	Minor	Long-term, direct, permanent	Slight Adverse (not significant) Long-term, direct, permanent
People living in properties with filtered western facing views (Receptor 11 & 14)	High	Moderate	Minor	Long-term, direct, permanent	Slight Adverse (not significant) Long-term, direct, permanent
People living in properties with close proximity views (Receptor 12)	High	Minor	Negligible	Long-term, direct, permanent	Slight Adverse (not significant) Long-term, direct, permanent
People living in properties with close proximity western facing views (Receptor 13)	High	Moderate	Minor	Long-term, direct, permanent	Slight Adverse (not significant) Long-term, direct, permanent
People living in properties with close proximity south western facing views (Receptors 15 & 16)	High	Moderate	Minor	Long-term, direct, permanent	Slight Adverse (not significant) Long-term, direct, permanent

Receptor	Sensitivity	Magnitude of Impact		Significance of Effect	
People living in properties with south eastern facing views (Receptor 17)	High	Minor	Negligible	Slight Adverse (not significant) Short-term, direct, temporary	Neutral (not significant) Long-term, direct, permanent

Visual Effects on Users of Public Rights of Way

- 7.10.15. Visual assessment of PRow within the Study Area of 1 km (refer to **paragraph 7.6.8**) has been undertaken.
- 7.10.16. There are many public footpaths in the local landscape (refer to **Figure 7.2: Visual Receptor Plan, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**)).
- 7.10.17. The visual effects that would be experienced by the WCH using these routes are described below in **Table 7-24** and **Table 7-25** (also refer to **Figure 7.3: Viewpoint Locations Plan, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**)). The assessment of the effects on these receptors has been undertaken through site work, desk study, ZTV mapping and professional judgement based on knowledge and experience of similar schemes. The associated sensitivity of these receptors is considered to be high. Significant effects have been identified below in '**bold**' in **4** below. Effects identified as being **slight adverse or less** are considered **not significant**.

Construction

- 7.10.18. Where a PRow would be severed by Part B, it is assumed that the PRow would be closed at the commencement and for the duration of the construction works. Where a PRow is being permanently closed, the closure would occur at the commencement of the construction stage.

Table 7-24 - Significant Effects on Users of Public Rights of Way – Construction

Receptors	Sensitivity	Magnitude of Impact	Significance of Effect
Recreational Receptors			
People travelling along PRoW 112/008 and PRoW 112/009 (Receptor 25 and 26)	High	Moderate	Moderate Adverse Short-term, direct, temporary
People travelling along PRoW 129/004 (Receptor 27)	High	Major	Large Adverse Short-term, direct, temporary
People travelling along PRoW 129/005 (Receptor 28)	High	Major	Large Adverse Short-term, direct, temporary
People travelling along PRoW 110/013 (Receptor 33)	High	Minor	Moderate Adverse Short-term, direct, temporary
People travelling along PRoW 110/004 (Receptor 34)	High	Minor	Slight Adverse (not significant) Short-term, direct, temporary
People travelling along PRoW 129/006 (Receptor 36)	High	Moderate	Moderate Adverse Short-term, direct, temporary
People travelling along Public Rights of Way Ref: 112/045 (Receptor 56)	High	Moderate	Moderate Adverse Short-term, direct, temporary
People travelling along PRoW 141/013 and PRoW 141/002 (Receptors 42 and 43)	High	Major	Large Adverse Short-term, direct, temporary

Operation

7.10.19. **Table 7-25** below summarises the findings of the visual effects assessment when considering the mitigation measures outlined in **Section 7.9** above at Operation Year 1 and Year 15.

Table 7-25 - Visual Residual Effects on Users of Public Rights of Way - Operation

Receptor	Sensitivity	Magnitude of Impact		Significance of Effect	
		Year 1	Year 15	Year 1	Year 15
Recreational Receptors					
People travelling along PRow 112/008 and PRow 112/009 (Receptors 25 and 26)	High	Moderate	Minor	Moderate Adverse Short-term, direct, temporary	Slight Adverse (not significant) Long-term, direct, permanent
People travelling along PRow 129/004 (Receptor 27)	High	Moderate	Minor	Moderate Adverse Short-term, direct, temporary	Slight Adverse (not significant) Long-term, direct, permanent
People travelling along PRow 129/005 (Receptor 28)	High	Moderate	Minor	Moderate Adverse Short-term, direct, temporary	Slight Adverse (not significant) Long-term, direct, permanent
People travelling along PRow 110/013 (Receptor 33)	High	Minor	Negligible	Slight Adverse (not significant) Long-term, direct, permanent	Slight Adverse (not significant) Long-term, direct, permanent

Receptor	Sensitivity	Magnitude of Impact		Significance of Effect	
		Year 1	Year 15	Year 1	Year 15
People travelling along PRow 110/004 (Receptor 34)	High	Minor	Negligible	Slight Adverse (not significant) Long-term, direct, permanent	Slight Adverse (not significant) Long-term, direct, permanent
People travelling along PRow 129/006 (Receptor 36)	High	Minor	Negligible	Slight Adverse (not significant) Long-term, direct, permanent	Slight Adverse (not significant) Long-term, direct, permanent
People travelling along Public Rights of Way Ref: 112/045 (Receptor 56)	High	Minor	Negligible	Slight Adverse (not significant) Short-term, direct, temporary	Neutral (not significant) Long-term, direct, permanent
People travelling along PRow 141/013 and PRow 141/002 (Receptors 42 and 43)	High	Negligible	No Change	Slight Adverse (not significant) Short-term, direct, temporary	Neutral (not significant) Long-term, direct, permanent

Visual Effects on Users of Transport Receptors

- 7.10.20. Significant visual effects would generally occur for those transport receptors close to Part B. These receptors would be subject to impacts associated with the construction of Part B and prior to the establishment of appropriate mitigation planting.
- 7.10.21. By the summer of the Year 15 when mitigation planting measures would be well established, no transport receptors are anticipated to experience significant effects.

7.10.22. **Table 7-26** (and **Figure 7.3: Viewpoint Locations Plan, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**)) below summarises the findings of the visual effects' assessment during construction.

Table 7-26 - Visual Residual Effects on Users of Transport Receptors - Construction

Receptors	Sensitivity	Magnitude of Impact	Significance of Effect
Transport Receptors			
People travelling along main roads (Receptor 37)	Low	Major	Moderate Adverse Short-term, direct, temporary

7.10.23. **Table 7-27** (and **Figure 7.3: Viewpoint Locations Plan, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**)) below summarises the findings of the visual effects assessment when considering the mitigation measures outlined in **Section 7.9** at Operation Year 1 and Year 15.

Table 7-27 - Visual Residual Effects – Transport Receptors - Operation

Receptor	Sensitivity	Magnitude of Impact		Significance of Effect	
		Year 1	Year 15	Year 1	Year 15
Transport Receptors					
People travelling along main roads (Receptor 37)	Low	Moderate	Minor	Slight Adverse (not significant) Long-term, direct, permanent	Slight Adverse (not significant) Long-term, direct, permanent

Visual Effects at Night time

7.10.24. As noted at **paragraph 7.4.31**, a night time assessment was not carried out because no roadside lighting is proposed for Part B, and as an online improvement no substantial additional effects from vehicle headlights is anticipated. The paragraphs below summarise the effects that may be anticipated at night.

7.10.25. The temporary construction compounds would include lighting. There may also be lighting of construction areas when it is dark during site working hours to ensure site safety.

However, as they are of a temporary nature, effects on nearby receptors are not anticipated to be significant.

- 7.10.26. No additional highway lighting is proposed for Part B. At a very local level illumination from car headlights may result in some additional light spill due to the widened route, the loss of some existing roadside vegetation and the introduction of overbridges. However, the degree of change would be very slight and as such it is anticipated that there would be no significant night time visual effects arising from Part B, during operational Year 1 and Year 15.

ASSESSMENT PARAMETERS

- 7.10.27. The Assessment Parameters are presented in **Chapter 2: The Scheme, Volume 1** of this ES (**Application Document Reference: TR010041/APP/6.1**). The implications for Part B design and this assessment are set out in **Table 7-28** below.

Table 7-28 - Consideration of Assessment Parameters

Assessment Parameter	Brief Description	Justification
Parameter 1	Up to a 650 mm increase or 250 mm decrease in height for Heckley Fence Accommodation Overbridge has been considered in order to accommodate a 400 mm increase in the depth of the structural beam and a 250 mm increase or decrease in the finished road levels on the A1.	The change in height is relatively minor and would result in a barely perceptible change for visual receptors and on landscape character.
Parameter 2	Up to a 900 mm increase or 500 mm decrease in height of Charlton Mires Junction Overbridge has been considered in order to accommodate a 400 mm increase in the depth of the structural beam and a 500 mm increase or decrease in the finished road levels on the A1.	The change in height is relatively minor and would result in a barely perceptible change for visual receptors and on landscape character.
Parameter 3	Realignment of the Northern Powergrid Circuit 7.5 km of 66 kV EHV transmission cable may be provided within the new highway boundary, which would entail a greater amount of permanent land take but remove the need to interfere with private land after completion of the works as a result of the operation	The realignment of the Northern Powergrid Circuit 66 kV cable would result in changes to the Landscape Mitigation Plan along the eastern edge of Part B as a result of the change in cable location. It is anticipated that the changes to the landscape mitigation would be relatively

Assessment Parameter	Brief Description	Justification
	or maintenance of the cable. This option would mean a slightly different landscaping treatment within the wider highway boundary. Refer to Figure 7.14: Landscape Mitigation Plan including Parameter 3, Volume 6 of this ES.	minor. As a result, the change would be barely perceptible for visual receptors and on landscape character, and therefore not change the conclusions of this chapter for both construction and operation.

UPDATED DMRB GUIDANCE

- 7.10.28. The DMRB sensitivity test as described in **Section 7.4** has determined that the application of the updated guidance (**Ref. 7.26**) would not change the likely significance of effects and therefore the conclusions of the assessment remain unchanged. The findings of the sensitivity test are set out in detail in **Appendix 4.5: DMRB Sensitivity Test, Volume 1** of this ES (**Application Document Reference: TR010041/APP/6.1**).
- 7.10.29. The updated guidance, has been revised so that it now, corresponds more closely with industry best practise guidance as outlined within GLVIA3 (**Ref. 7.24**). Terminology has been updated to include Zone of Theoretical Visibility, where plans have been produced digitally. While the methodology approach as described within this report predominantly relates to (IAN) 135/10 (**Ref. 7.23**), where relevant, the methodology was brought in line with GLVIA3 (**Ref. 7.24**), due to being printed post IAN 135/10. As such the ZTV within the report has already been described as ‘theoretical’ due to being computer generated.
- 7.10.30. Those more significant changes relating to methodology as noted within LA 107 (**Ref. 7.23**) include:
- a. The addition of a new level of very high sensitivity specifically related to views from and of major tourist attractions, very important national/international landscapes and cultural/historical sites and for receptors engaged in specific activities for enjoyment of dark skies.
 - b. Removes consideration of individual residential receptors and replaces it with “residential areas” and, in doing so reduces the level of sensitivity to be assigned to ‘less populated residential areas” (LA 107 moderate, where in IAN 135/10 all residential receptors were deemed to be of high sensitivity).
- 7.10.31. There are no visual receptors associated with Part B, that would fall under this classification of ‘very high’ sensitivity and thus the assessment remains unaltered as a result.
- 7.10.32. A strict interpretation of LA 107 could lead to a lower level of significance of effect being found for individual scattered residential receptors and small settlements. However, this is unlikely to change the findings of the overall assessment.

7.10.33. Overall, it is considered unlikely that these revisions to the guidance would change the overall findings of the assessment.

7.11 MONITORING

- 7.11.1. In order to ensure that the Landscape Elements identified on **Figure 7.10: Landscape Mitigation Plan, Volume 6** of this ES (**Application Document Reference: TR010041/APP/6.6**) fulfil their Environmental Function, as specified in **Section 7.9**; the proposed planting would be supplied, planted and maintained in accordance with:
- a. Manual of Contract Documents for Highways Works, Series 3000 planting specification, as amended to suit site-specific conditions.
 - b. Construction Environmental Management Plan.
 - c. Landscape Management Plan.
 - d. Where applicable, information contained in the species-specific method statements to accompany the project specific European Protected Species Licenses (refer to **Chapter 9: Biodiversity** of this ES).
- 7.11.2. Maintenance inspections would be undertaken on a regular basis during the maintenance period following Scheme completion, to review the effectiveness of the proposed Landscape Elements in meeting their Environmental Functions.
- 7.11.3. Inspection visits would review plant and seeding maintenance and establishment. During each inspection, records would be made of the standard of work undertaken, general plant health and obvious signs of disease or plant stress. At the autumn inspection the number of plant failures would be recorded, and the extent of replacement planting agreed with the main contractor. Where plants have failed, replacement planting would be carried out in the following planting season.
- 7.11.4. In accordance with Manual of Contract Documents for Highways Works (MCHW), Volume 1 Specification for Highways Works, Series 3000 Landscape and Ecology (**Ref. 7.34**) and MCHW, Volume 2 Notes for Guidance on the Specification for Highways Works, Series 3000 Landscape and Ecology (**Ref. 7.32**), a five year maintenance and establishment period is considered appropriate for a scheme of this scale, where planting is considered as being essential mitigation.
- 7.11.5. For the remainder of the 15-year design phase, monitoring surveys would be undertaken to review the success of the landscape mitigation and identify any areas where mitigation commitments have not been met. The reviews should identify any management works required to ensure the longer-term success of the landscape elements and identify measures or develop proposals to rectify any areas where a commitment is not being met, such as through any replacement planting.
- 7.11.6. As part of this, the following viewpoints should be revisited to confirm that the effects on views arising from Part B have been adequately mitigated:

- a. Viewpoint 2: View looking east from West Linkhall, illustrative of nearby properties and PRow 112/008 and PRow 112/009).
- b. Viewpoint 4: View looking north from Rock Lodge and Rock Nab, illustrative of nearby properties.
- c. Viewpoint 6: View looking east from Heckley Fence, illustrative of nearby properties and walkers travelling along PRow 110/019.
- d. Viewpoint 7: View looking east from Heckley House, illustrative of nearby properties and walkers travelling along PRow 110/013.
- e. Viewpoint 9: View looking west along PRow 110/013, illustrative of adjacent PRow (PRow 129/022 and PRow 129/014) and close proximity residents at Broxfield and Silvermoor.
- f. Viewpoint 11: View looking south west along PRow 129/004 and illustrative of close proximity residential properties at Rock Midstead.

7.11.7. The above viewpoints have been selected on the basis that they are representative of the occupants for residential properties, users of Public Rights of Way, or visitor attractions where the view and setting are intrinsic to the visitor's experience; and where the view would be mitigated as a result of the establishment of vegetation.

7.11.8. It is recommended that these surveys should be undertaken at approximately five yearly intervals as follows:

- a. **Operational Year 5 (Summer)** – at the end of the establishment phase, when the initial growth of the proposed mitigation planting has occurred, and an initial review of the speed by which plant establishment is taking effect, can be assessed, in order to meet the required levels of screening.
- b. **Operational Year 10 (Summer)** – midway interval, between the initial review and the proposed final assessment.
- c. **Operational Year 15 (Summer)** – end of the design period considered within the assessment. To review and confirm findings of the assessment.

7.11.9. Planting would not provide substantial screening in year 5, as the majority of nursery stock would be planted at transplant size (less than 1m in height) and would have grown to less than 3 metres tall in five years. The above five yearly surveys would allow for the replanting of any mitigation planting that is missing, has died or in the opinion of the Applicant, is failing to make satisfactory extension growth to be replaced. Replanting would take place in the next growing season and should be same as original stock at the time of planting.

7.11.10. The requirement for these surveys and the undertaking of any necessary management or remedial work would be included in the Handover Environmental Management Plan (HEMP) which would be developed from the CEMP. The HEMP would address any mitigation planting / replacement beyond the 5-year establishment period (years to 6 to 15). As a result, there is a high degree of confidence that the mitigation would be secured by year 15 and the impacts would be in line with those predicted within this chapter.

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