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## APPENDICES

None

## 10 Landscape and Visual Effects

### 10.1 Introduction

- 10.1.1 This chapter presents the preliminary Landscape and Visual Impact Assessment (LVIA) findings likely to arise from the construction and operation of the dualling of the remaining single carriageway sections of the A66 between the M6 at Penrith and the A1(M) at Scotch Corner, hereafter referred to as ‘the project’. It includes several separate sections of dualling each referred to hereafter as the ‘scheme’ or ‘schemes’.
- 10.1.2 This preliminary assessment includes a review of the existing baseline conditions and identifies likely significant effects on landscape and visual receptors whilst identifying appropriate mitigation and enhancement. The assessment follows the approach set out in the A66 Northern Trans-Pennine PCF Stage 3 Environmental Scoping Report (Highways England, 2021)<sup>1</sup>(June 2021) and in the *Design Manual for Roads and Bridges (DMRB) LA 107, Landscape and Visual Effects (DMRB LA 107)* (Highways England, 2020)<sup>2</sup> and *DMRB LA 104 Environmental Assessment and Monitoring (DMRB LA 104)* (Highways England, 2019)<sup>3</sup>. It is also informed by *Guidelines for Landscape and Visual Impact Assessment, Third Edition (GLVIA3)* (Landscape Institute and Institute of Environmental Management and Assessment, 2013)<sup>4</sup>.
- 10.1.3 The identified potential landscape and visual effects may be related to the potential effects identified by other disciplines. Therefore, please also refer to the following chapters:
- Chapter 6: Biodiversity
  - Chapter 8: Cultural Heritage
  - Chapter 12: Noise and Vibration.

### Definitions of landscape and visual receptors

- 10.1.4 *DMRB LA 107* defines landscape character and visual amenity as:
- **landscape character:** “a distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse.”
  - **visual amenity:** “overall enjoyment of a particular area, surroundings, or views in terms of people’s activities - living, recreating, travelling through, visiting, or working.”
- 10.1.5 The figures listed below illustrate the context of the project and provide information about landscape designations, landscape character, visual amenity and views.
- Figure 10.1: Zone of Theoretical Visibility and Viewpoints 10km

<sup>1</sup> Highways England (2021a) A66 Northern Trans-Pennine PCF Stage 3 Environmental Scoping Report, available at: [https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010062/TR010062-000025-TR010062%20-%20Scoping%20Report%20\(Part%201%20of%2011%20-%20Main%20Report%20&%20Appendices\).pdf](https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010062/TR010062-000025-TR010062%20-%20Scoping%20Report%20(Part%201%20of%2011%20-%20Main%20Report%20&%20Appendices).pdf) [accessed 28 July 2021]

<sup>2</sup> Highways England (2020) Design Manual for Roads and Bridges LA 107 Landscape and Visual Effects, available at: <https://www.standardsforhighways.co.uk/prod/attachments/bc8a371f-2443-4761-af5d-f37d632c5734?inline=true> [accessed 6 September 2021]

<sup>3</sup> Highways England (2019) Design Manual for Roads and Bridges LA 104 Environmental Assessment and Monitoring, available at <https://www.standardsforhighways.co.uk/prod/attachments/bc8a371f-2443-4761-af5d-f37d632c5734?inline=true> [accessed 6 September 2021]

<sup>4</sup> Landscape Institute and Institute of Environmental Management and Assessment (2013) Guidelines for Landscape and Visual Impact Assessment, Third Edition (GLVIA3)

- Figure 10.2: Zone of Theoretical Visibility and Viewpoints 2km
  - Figure 10.3: Topography
  - Figure 10.4: Designations
  - Figure 10.5: Landscape Character Wider Area
  - Figure 10.6: Landscape Character Areas
  - Figure 10.7: CPRE Dark Skies Mapping
  - Figure 10.8: CPRE Tranquillity Mapping
  - Figure 10.9: Visual Impact Plans (ES only)
  - Figure 10.10: Photosheets
  - Figure 10.11: Landscape Design Approach
- 10.1.6 The competent landscape expert holds a Bachelor's degree in Geography, a Master's degree in Rural and Regional Resources Planning, a Postgraduate Diploma in Landscape Management and is a Chartered Member of the Landscape Institute (CMLI). He has 20 years of experience in LVIA and landscape planning and has worked on numerous large-scale infrastructure projects across the UK, including several highway schemes.

## 10.2 Legislative and Policy Framework

### Legislation

- 10.2.1 The following key legislation is relevant to this assessment:
- The European Landscape Convention (ELC) (Council of Europe, 2016)<sup>5</sup>

### National policy statement for national networks

- 10.2.2 The primary policy basis for deciding whether or not to grant a Development Consent Order (DCO) is the *National Policy Statement for National Networks (NPSNN)* (Department for Transport, 2014)<sup>6</sup>, which sets out policies to guide how DCO applications will be decided and how the effects of national networks infrastructure should be considered by the relevant decision maker. The policies for landscape and visual impacts include statements that:

*"The landscape and visual effects of proposed projects will vary on a case by case basis according to the type of development, its location 101 Guidance on the contents of a written scheme of investigation is set out in the English Heritage guidance PPS5 Practice Guide (or any successor to it). 76 and the landscape setting of the proposed development. In this context, references to landscape should be taken as covering seascape and townscape, where appropriate."* (NPSNN paragraph 5.143)

- 10.2.3 The NPSNN also advises:

*"Landscape effects depend on the nature of the existing landscape likely to be affected and nature of the effect likely to occur. Both of these factors need to be considered in judging the impact of a project on landscape. Projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant constraints, the aim should be to avoid*

<sup>5</sup> Council of Europe (2016) Landscape Convention as amended by the 2016 Protocol, available at: <https://rm.coe.int/16807b6bc7> [accessed 6 September 2021]

<sup>6</sup> Department for Transport (2014) National Policy Statement for National Networks, available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/387222/npsnn-print.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/387222/npsnn-print.pdf) [accessed 06 September 2021]

*or minimise harm to the landscape, providing reasonable mitigation where possible and appropriate.” (NPSNN paragraph 5.149)*

- 10.2.4 **Error! Reference source not found.:** Relevant NPSNN policies for the landscape and visual assessment, **Error! Reference source not found.** identifies the *NPSNN* policies relevant to the landscape and visual assessment methodology.

Table 10-1: Relevant NPSNN policies for the landscape and visual assessment methodology

NPSNN reference	Requirement of the NPSNN (paraphrase)
5.144-145	<p>The applicant should assess any likely significant landscape and visual impacts in the environmental impact assessment and describe these in the environmental assessment. The assessment should include reference to any landscape character assessment and associated studies, as a means of assessing landscape impacts relevant to the proposed project. The assessment should also take account of any relevant policies based on these assessments in local development documents in England.</p> <p>The assessment should include any significant effects during construction of the project and/or the scant effects of the completed development and its operation on landscape components and landscape character (including historic landscape characterisation)</p>
5.146-148	<p>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 noise and light pollution effects, including on local amenity, tranquillity and nature conservation.</p> <p>Any statutory undertaker commissioning or undertaking works in relation to, or affecting land in a National Park or Areas of Outstanding Natural Beauty, would need to comply with the respective duties in section 11A of the National Parks and Access to Countryside Act 1949 and section 85 of the Countryside and Rights of Way Act 2000.</p> <p>For significant road widening or the building of new roads in National Parks and the Broads applicants need to fulfil the requirements set out in Defra’s English national parks and the broads: UK government vision and circular 2010 or successor documents. These requirements should also be complied with for significant road widening or the building of new roads in Areas of Outstanding Natural Beauty.”</p>
5.149	<p>Landscape effects depend on the nature of the existing landscape likely to be affected and nature of the effect likely to occur. Both of these factors need to be considered in judging the impact of a project on landscape. Projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant constraints, the aim should be to avoid or minimise harm to the landscape, providing reasonable mitigation where possible and appropriate.</p>
5.150-153	<p>There is a strong presumption against any significant road widening or the building of new roads and strategic rail freight interchanges in a National Park, the Broads and Areas of Outstanding Natural Beauty, unless it can be shown there are compelling reasons for the new or enhanced capacity and with any benefits outweighing the costs very significantly. Planning of the</p>

NPSNN reference	Requirement of the NPSNN (paraphrase)
	Strategic Road Network should encourage routes that avoid National Parks, the Broads and Areas of Outstanding Natural Beauty.
5.160	Adverse landscape and visual effects may be minimised through appropriate siting of infrastructure, design (including choice of materials), and landscaping schemes, depending on the size and type of proposed project. Materials and designs for infrastructure should always be given careful consideration.

## National planning policy framework

- 10.2.5 The *NPPF* (Ministry of Housing, Communities & Local Government, 2021)<sup>7</sup> originally published in March 2012 and most recently updated in July 2021, sets out the government's planning policies for England and provides a framework within which locally prepared plans can be produced. The *NPPF* is "*an important and relevant matter to be considered in decision making for NSIP*".

## Local Planning policy

- 10.2.6 The following local planning policies are relevant to the assessment:
- *Eden Local Plan 2014-2032* (Eden District Council, 2018)<sup>8</sup> Policies ENV2 and ENV3
  - *County Durham Plan 2020-2035* (Durham County Council, 2020)<sup>9</sup> Policies 38, 39 and 40
  - *Richmondshire District Council Core Strategy 2014* (Richmondshire District Council, 2014)<sup>10</sup> Core Policy CP12
  - *Eden District Council Core Strategy 2010* (Eden District Council, 2010)<sup>11</sup> Policy CS16

## Standards and guidance

- 10.2.7 In addition to compliance with the *NPSNN* and *NPPF*, this assessment has been compiled in accordance with professional standards and guidance. The standards and guidance which relate to the assessment are:

<sup>7</sup> Ministry of Housing, Communities & Local Government (2021) National Planning Policy Framework, available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1005759/NPPF\\_July\\_2021.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf) [accessed 6 September 2021]

<sup>8</sup> Eden District Council (2018) *Eden Local Plan 2014-2032*, available at: <https://www.eden.gov.uk/planning-and-building/planning-policy/adopted-eden-local-plan/eden-local-plan-adalternative/> [accessed 6 September 2021]

<sup>9</sup> Durham County Council (2020) *County Durham Plan*, available at: <https://www.durham.gov.uk/article/3266/Development-Plan-for-County-Durham> [accessed 6 September 2021]

<sup>10</sup> Richmondshire District Council (2014) *Richmondshire Local Plan 2012-2028 Core Strategy*, available at: <https://www.richmondshire.gov.uk/media/9616/core-strategy-2012-28.pdf> [accessed 6 September 2021]

<sup>11</sup> Eden District Council (2010) *Core Strategy*, available at: <https://www.eden.gov.uk/media/5551/core-strategy-dpd-final.pdf> [accessed 6 September 2021]

- *The Road to Good Design*, Highways England (2018)<sup>12</sup>
- *North Pennines AONB Planning Guidelines* (North Pennines, 2019)<sup>13</sup>

## 10.3 Assessment Methodology

- 10.3.1 The assessment of effects on landscape and visual receptors requires consideration of the nature of the receptor (sensitivity) and the nature of the effect on those receptors (magnitude of effect). Evaluation judgements on sensitivity and magnitude of effect are combined in a professional judgement on the overall level of effect and as to whether it is significant or not. The assessment does not assess effects on the significance of heritage assets. It does consider effects on heritage assets in terms of their contribution to landscape character. Where appropriate, views from publicly accessible heritage assets may be considered as part of the assessment of effects on visual amenity.
- 10.3.2 A receptor-based approach is used for both landscape and visual receptors. For landscape receptors this involves describing effects on landscape character units and landscape designations. For visual receptors i.e. people this involves assessing receptors, such as residents of properties or users of public rights of way, individually or as groups. Both the assessments of landscape receptors and visual receptors use the photosheets shown in Figures 10.10a to 10.10g. These are intended to show winter views of the landscape and views typical of visual amenity of the locality in which they are located. The viewpoints are not intended to show the views experienced by every receptor assessed.
- 10.3.3 The assessment describes effects on landscape and visual receptors at construction, winter year one and summer year 15.

### Landscape assessment methodology

#### Landscape sensitivity

- 10.3.4 As stated in *DMRB LA 107*, sensitivity is a combination of a landscape receptor's susceptibility to change and the value attributed to the receptor. Susceptibility and value are evaluated for the part of the landscape receptor that coincides with the study area, and will be affected by the project, and combined to give a judgement of sensitivity of the receptor in accordance with Table 3.22 in *DMRB LA 107*.

#### Magnitude of landscape effect

- 10.3.5 The assessment of magnitude of effect (change) for landscape receptors considers the size and scale of change, the geographical extent over which the change will occur, its duration and reversibility. Magnitude of effect is assessed for each phase of the project during construction and operation (year one and year 15). Potentially effects on landscape receptors may be adverse, beneficial or neutral. For this project reported effects are considered to be adverse unless stated otherwise.
- 10.3.6 The size and scale of landscape change is about the degree to which a landscape receptor is changed by the project, such as the removal or addition of new features

<sup>12</sup> The Road to Good Design, Highways England (2018) Available at: <https://highwaysengland.co.uk/media/141hgawx/strategic-design-panel-the-road-to-good-design.pdf> [Accessed 06 September 2021]

<sup>13</sup> North Pennines (2019) North Pennines Area of Outstanding Natural Beauty Planning Guidelines, available at: <https://www.northpennines.org.uk/wp-content/uploads/2019/11/North-Pennines-AONB-Planning-Guidelines.pdf> [accessed 6 September 2021]



within the landscape, whether these are perceived as typical, and how the change will affect the key characteristics of the landscape.

- 10.3.7 The evaluation of geographical extent of effect considers whether the project will result in local or limited effects on landscape character. It also considers where physical changes occur across a wider area or widely influence the landscape receptor, therefore having a greater influence on the overall evaluation of magnitude.
- 10.3.8 Magnitude also considers the duration and reversibility of effect. Reversible effects of short duration such as the presence of construction plant and machinery influence magnitude less than irreversible effects of longer duration such as introduction of a new structure crossing of a large watercourse or loss of mature trees and woodland.

#### Significance of landscape effect

- 10.3.9 The susceptibility and value (sensitivity) of each receptor to the proposed changes will be combined with judgements on size and scale, geographical extent, duration and reversibility of effects (magnitude of effect) to determine the significance or level of effect.

### Visual assessment methodology

- 10.3.10 Visual assessment is about the change to views and visual amenity experienced by visual receptors i.e. people. An overview of the visual baseline is described for residents of settlements and rural properties, users of public rights of way (PRoW), recreational routes and public parks and users of visitor attractions including viewing locations identified on Ordnance Survey maps or with cultural associations. Where PRoW are severed by the project and will need to be re-routed but the new route is not yet known, the assessment is based on the impacts on the current route of the PRoW. The visual baseline is described with reference to selected viewpoints from which there are views in the direction of the project. Each viewpoint is identified in section 10.6 as being in one of three categories: representative, specific or illustrative. This PEI Report includes photosheets showing the baseline view in winter without leaves on trees thereby indicating the least amount of interruption to views in the direction of the project. For the ES, the final location of viewpoints and photomontages will be identified in consultation with relevant stakeholders.
- 10.3.11 Effects on visual receptors require consideration of the nature of the receptor (sensitivity) and the nature of the effect on those receptors (magnitude of effect (change)), which are combined using professional judgement to record the significance of effect.
- 10.3.12 Users of the existing A66 will experience significant effects during construction resulting from a reduction in the quality of visual amenity due to the presence of construction activity and alteration to the experience of driving on the A66. Based on the current stage of project design there is the potential for significant effects which are yet to be fully identified and assessed, and where necessary mitigated. Further survey and design will be undertaken and any significant effects reported in the ES.
- 10.3.13 There are likely to be significant effects during construction and operation on users of the local road network in the vicinity of the project. Further survey and design will be undertaken and any significant effects reported in the ES.

#### Visual sensitivity

- 10.3.14 Visual sensitivity is a combination of a visual receptor's susceptibility to change and the value of the the view.

- 10.3.15 DMRB LA 107 identifies that the assessment of susceptibility to change should be tailored to the project. GL VIA3 states that the susceptibility of different visual receptors to changes in views and visual amenity relates to *“the occupation or activity of people experiencing the view at particular locations; and the extent to which their attention or interest may therefore be focused on the views and the visual amenity they experience at particular locations”* (paragraph 6.32).
- 10.3.16 The assessment describes the potential for the project to change the composition and quality of views and visual amenity during construction and operation. These changes include the widening of the A66, introduction of junctions, loss of existing features such as trees, woodland and hedgerows, changes in topography and introduction of new features such as overbridges, accommodation access tracks, detention ponds, fences and other elements of road infrastructure. The change resulting from mitigation relative to the baseline is also considered.
- 10.3.17 GL VIA3 (para 6.33) states that visual receptors most susceptible to change include residents or communities where views contribute to the landscape setting enjoyed, people engaging in outdoor recreation (such as users of PROW) whose attention or interest is likely to be focused on the landscape and on particular views, and visitors to heritage assets, or other attractions where views of the surroundings are an important contributor to the experience.
- 10.3.18 Visual receptors with lower susceptibility to change include travellers on roads, rail and other transport routes, people engaged in outdoor sport or recreation which does not involve or depend upon appreciation of views of the landscape, and people at their place of work.
- 10.3.19 The evaluation of sensitivity also considers the value of views and visual amenity which is influenced by relevant aspects of landscape designations, formal viewpoints identified on Ordnance Survey maps or other views identified in local policy documents or management plans that indicate value or special qualities of views.
- 10.3.20 Other indicators of visual value include the inclusion of viewpoints in guidebooks or tourist maps, or through the provision of facilities for their enjoyment (such as parking places, seating, sign boards and interpretive materials) or reference to views in literature or art.

#### Magnitude of visual effect

- 10.3.21 The magnitude of effect for each visual receptor or group of receptors considers the size and scale of effect, its geographical extent, duration and reversibility. Potentially effects on views and visual amenity may be adverse, beneficial or neutral. For this project effects are considered to be adverse unless stated otherwise.
- 10.3.22 The size and scale of change will depend on the degree to which peoples' views or visual amenity is changed by the project, such as through the removal or addition of new features and whether these are characteristic or uncharacteristic of the baseline.
- 10.3.23 Geographical extent of visual effects considers whether effects will be localised, where there are limited locations from where the project will be seen and potentially fewer numbers of people affected. Where the project may be seen from a wider area or potentially by greater numbers of people, this may have more of a bearing on the assessment of magnitude.
- 10.3.24 Magnitude also considers the duration and reversibility of effect. Reversible effects of short duration such as the presence of construction plant and machinery influence magnitude less than irreversible effects of longer duration such as the introduction of



a new structure crossing of a large watercourse or loss of mature trees and woodland which would be a permanent change to views.

### Significance of effect

- 10.3.25 Final judgements on the likely significance of visual effects will combine judgements of the sensitivity of each visual receptor and the magnitude of their visual effect as a result of the project.
- 10.3.26 Significance of effect will be identified as either neutral, slight, moderate, large or very large. Very large, large and moderate effects will be judged to be significant, any effect assessed as less than moderate is considered not to be significant.
- 10.3.27 DMRB LA 107 states that the approach to deriving impact significance should be “based on the significance matrix included in the Environmental assessment methodology section of LA 104 and include evidence to support any professional judgements that have been made” (paragraph 3.26). Paragraph 3.8.1 in DMRB LA 104 indicates that where Table 3.8.1 includes two significance categories, evidence should be provided to support reporting of a single significance category. Where that is the case this LVIA takes a precautionary approach and uses the higher of the two significance categories based on the information available. These significance categories will be reviewed as more information becomes available and further detail provided in the ES.

## 10.4 Assessment Assumptions and Limitations

- 10.4.1 The assessment of effects described in this chapter is based on currently available information. The chapter provides a preliminary assessment of likely significant effects, where these effects will occur and what will cause them. The chapter does not describe effects on receptors where such effects are considered not significant. A detailed assessment of effects will be described in the ES.
- 10.4.2 At the time survey work was undertaken it was not possible to visit and assess effects at all publicly accessible visitors attractions, due to the Covid-19 pandemic. Where restrictions allow these will be visited and effects will be reported in the ES.
- 10.4.3 All viewpoints considered in the assessment are located on publicly accessible land.
- 10.4.4 Viewpoint photography includes photographs taken during field work in winter 2020/2021.
- 10.4.5 The assessment of effects on views from residential properties is undertaken from publicly accessible land.
- 10.4.6 The assessment assumes that the screening provided by existing vegetation and proposed mitigation will reduce during winter months when vegetation is not in leaf.
- 10.4.7 The PEI Report does not include photomontage visualisations as these will be presented in the ES.
- 10.4.8 A tree survey will inform further design and the detailed assessment of landscape and visual effects described in the ES.
- 10.4.9 An overview of the assessment of night time effects is included in this chapter. During construction there will be lighting associated with construction compounds and construction activities which could potentially contribute to or constitute temporary localised significant effects. These will be identified and assessed in more detail in the ES when further information is provided about construction. The majority of the project will be unlit during operation with lighting columns installed only at Junction

40 M6 to Kemplay Bank and Scotch Corner, where lighting is already part of the baseline environment. Car headlights and tail-lights will be more noticeable at off-line sections and potentially at online sections where roadside vegetation is removed to accommodate the project. The assessment indicates where visibility of car lights is likely. A detailed assessment of night-time effects will be described in the ES.

10.4.10 Construction assumptions are set out in Chapter 2: The Project, with the following additional assumptions relevant to the LVIA:

- topsoil and subsoil stockpiles are 2m in height
- the site office and compounds are one storey
- cranes and piling rigs will be used for the construction of over bridges, underpasses and structure crossings of watercourses
- temporary construction lighting will be used to illuminate compounds and for construction works of longer duration at fixed points such as structure crossings.

10.4.11 At year one of operation mitigation planting will be between 0.4m and 0.8m in height for whips, transplants and hedgerow planting and between 1m and 1.8m in height for trees.

10.4.12 At year 15 of operation mitigation planting will have reached a height of at least 6m based on a planting size of 1m and conservative average growth rates of approximately 1m per 3 years.

## 10.5 Study Area

10.5.1 *DMRB LA 107* requires the study area to be identified on a project-by-project basis using four criteria for landscape effects and four criteria for visual effects. These criteria are listed below in Table 10-2: DMRB study area selection criteria together with the rationale for the proposed extent of the study area.

10.5.2 An preliminary Zone of Theoretical Visibility (ZTV) was produced extending 10km from the project as a first step in establishing the extent of the initial study area. During preliminary fieldwork the wider landscape context of the project was also considered, and visibility within, and intervisibility between, landscape receptors was a factor in refining the proposed study area. The presence of woodland, buildings and other features in the landscape influences the extent of visibility more with increasing distance from the project. This led to establishment of the 7km study area as the area in which there is greater likelihood of likely significant effects. Professional judgement, supported by site visits, has been applied to verify the 7km study area but also to consider specific features outside of 7km where appropriate. The study area is measured from the centreline of the alignment, including main roads, junctions and side roads.

10.5.3 Local landscape character, national and local landscape designations that coincide with the study area are considered in the assessment. Visibility of the project from the study area for Temple Sowerby to Appleby, Appleby to Brough and Bowes Bypass has informed the assessment of effects on the North Pennines AONB.

Table 10-2: DMRB study area selection criteria

Criteria	Rationale
<b>Landscape effects</b>	
The study area shall be identified on a project by project basis and be proportionate to the following factors:	The proposed 7km study area study area for landscape effects has been informed by: 1) The draft DCO boundary (see Figure 2-1).

Criteria	Rationale
<ol style="list-style-type: none"> <li>1) the project boundary/construction activity (including compounds and temporary land take);</li> <li>2) the wider landscape setting within which the project/its works has the potential to influence;</li> <li>3) the extent of the area visible by the project; and</li> <li>4) the full extent of adjacent or affected landscape receptors of special value (i.e. conservation areas, designated areas) whose setting can be influenced by the project.</li> </ol>	<ol style="list-style-type: none"> <li>2) The wider setting of the project has been considered including theoretical visibility of the project, distance to the project,</li> <li>3) and other factors such as topography (Figure 10-3).</li> <li>4) A ZTV was produced to 10km from the indicative DCO boundary. Fieldwork indicated that visibility from lowland areas will be restricted by vegetation and from upland areas the project will be a distant element with a limited influence on landscape character.</li> <li>5) The full extent of adjacent landscape designations has also been considered and this has been informed by engagement with stakeholders.</li> </ol>
Visual effects	
<p>The study area shall be identified on a project by project basis and proportionate to the following factors:</p> <ol style="list-style-type: none"> <li>1) the project/construction visual footprint (including compounds and temporary land take);</li> <li>2) the wider visual envelope within which the project has the potential to influence.</li> <li>3) the extent of representative viewpoints visible of the project; and</li> <li>4) the extent of adjacent or affected visual receptors and the visual amenity of the area that can be influenced by the project.</li> </ol>	<p>The proposed 7km study area for visual effects has been informed by:</p> <ol style="list-style-type: none"> <li>1) Consideration of the visual footprint of the project and construction.</li> <li>2) A range of long-distance views within the study area have been selected, but also beyond the 7km study area if considered appropriate, informed by engagement with stakeholders.</li> <li>3) A broad range of viewpoints, representing a variety of receptor categories, has been selected.</li> <li>4) The ZTV, which indicates which receptors have potential visibility of the scheme</li> <li>5) Fieldwork, to verify the extent of affected visual receptors and visual amenity, taking into account the screening effect of layers of intervening vegetation.</li> </ol>

## 10.6 Baseline Conditions

### Introduction

- 10.6.1 This section provides a description of the landscape and visual baseline for each scheme and lists the National Character Areas (NCA), Landscape Character Units (LCU) and landscape designations that coincide with the study area for each scheme. Key characteristics of NCA and LCU are described in the relevant publications referenced in this chapter and to which links are provided. Scotch Corner is not included in the baseline description and assessment as it is considered there will not be significant effects during construction and operation due to the small scale, localised, nature of the planned work and there will be no notable change to the landscape and visual baseline. The scheme is included on the Figures provided with this chapter for completeness.

## Landscape

### Landscape character

- 10.6.2 A description of landscape character drawing on published studies and fieldwork is provided in the assessment for each scheme. It provides additional baseline information and where relevant explains any notable variations in landscape character occurring in individual landscape units. Section 10.8 also provides further baseline information about elements and features of the existing landscape that have been considered in design and mitigation of each scheme.
- 10.6.3 Natural England has produced 159 individual NCA profiles for England to make environmental evidence and information easily accessible to a wide audience.
- 10.6.4 The project is covered by the following published Landscape Character Assessments:
- *Cumbria Landscape Character Guidance and Toolkit* (Cumbria County Council, 2011)<sup>14</sup>
  - *County Durham Landscape Character Assessment* (Durham County Council, 2008)<sup>15</sup>
  - *Lake District National Park Landscape Character Assessment and Guidelines* (Chris Blandford Associates, 2008)<sup>16</sup>
  - *North Pennines AONB Management Plan 2019-24*
  - *North Yorkshire & York Landscape Character Assessment* (North Yorkshire County Council, 2011)<sup>17</sup>.
- 10.6.5 The respective local authorities coinciding with the study area have different approaches to identifying and classifying landscape character. Cumbria County Council has identified landscape types in the county. Landscape types are areas that share similar broad characteristics and are not geographically unique. The landscape types are divided into sub-types which also share similar broad characteristics with geographical references in each description. The sub-types cover large areas and while the degree to which key characteristics are expressed varies in each sub-type, they are recognisably different. Localised variations in key characteristics have been identified through fieldwork observations and analysis of sensitivity and this forms part of the evidence base used to assess impacts of the project.
- 10.6.6 Durham County Council has identified county character areas which are regional in scale and based on Natural England's NCAs. At the sub-regional level Durham has identified broad landscape types (BLT) and broad character areas (BCA). BLT are landscapes with similar patterns of geology, soils, vegetation, land use, settlement, and field patterns identified at a broad sub-regional level. BCA are geographically

<sup>14</sup> Cumbria Landscape Council (2011) Cumbria Landscape Character Guidance and Toolkit, available at: <https://www.cumbria.gov.uk/eLibrary/Content/Internet/538/755/2789/406869467.pdf> [accessed 6 September 2021]

<sup>15</sup> Durham County Council (2008) County Durham Landscape Character Assessment, available at: <http://www.durhamlandscape.info/article/10054/The-Landscape-Character-Assessment> [accessed 6 September 2021]

<sup>16</sup> Chris Blandford Associates (2008) Lake District National Park Landscape Character Assessment and Guidelines, available at: <https://www.cbastudios.com/projects/27-lake-district-landscape-guidelines/> [accessed 6 September 2021]

<sup>17</sup> North Yorkshire County Council (2011) North Yorkshire and York Landscape Characterisation Project, available at: [https://www.northyorks.gov.uk/sites/default/files/fileroot/Environment%20and%20waste/Conservation/North Yorkshire and York landscape character assessment report.pdf](https://www.northyorks.gov.uk/sites/default/files/fileroot/Environment%20and%20waste/Conservation/North%20Yorkshire%20and%20York%20landscape%20character%20assessment%20report.pdf) [accessed 6 September 2021]

unique examples of a particular BLT. At a local level, local landscape types and sub-types are identified. These are smaller areas which may be found in more than one BLT. For example Lowland Woods local landscape type is found throughout County Durham. This LVIA uses BCA and any variations in character as part of the evidence base against which effects of the project are assessed.

- 10.6.7 The *Lake District National Park* has identified 13 landscape character types (LCT) which are described as having “*a distinct and relatively homogenous composition and pattern of physical and cultural attributes...Landscape Character Types are generic in form, and may occur in different areas of the National Park.*” Local variations in LCT are identified by sub-types of which there are 22 in total. The published landscape character assessment also identifies 71 Areas of Distinctive Character which are individual geographical areas with a unique composition. This LVIA considers effects on sub-types due to the separation distance between the National Park and the project, the limited theoretical visibility of the project and the presence of existing infrastructure and development in the intervening landscape.
- 10.6.8 The *North Pennines AONB Management Plan*, published by the North Pennines AONB Partnership in 2019, identifies 13 LCT and indicates there are separate landscape character areas coinciding with some of the 13 LCT. The Management Plan provides a map of LCT. Landscape character areas are not mapped and the Management Plan explains that the AONB Partnership is undertaking a detailed landscape character assessment with descriptions of LCT and landscape character areas. This LVIA uses LCT to inform the assessment of effects on the AONB.
- 10.6.9 North Yorkshire County Council has identified 39 County LCT and primary landscape units which are groups of LCT. The LCT cover large areas and while there may be more than one unit of a LCT and therefore not geographically unique, the published landscape character assessment provides geographically specific information in the description of each LCT that distinguishes one from another.
- 10.6.10 When referring generally to local landscape character this report uses the term LCU. When referring to a specific LCU that is affected by a scheme this report uses the terminology of the relevant local authority e.g. 8b Broad Valleys landscape sub-type.

#### Landscape designations

- 10.6.11 This section identifies national and local landscape designations that coincide with the LVIA study area. These are shown on Figure 10.4: Designations.

#### UNESCO world heritage sites

- 10.6.12 The English Lake District World Heritage Site (WHS) coincides with the study area and has the same boundary as the Lake District National Park described below. The WHS is of outstanding universal value. Its statement of outstanding universal value describes three criteria that support its designation and these relate to recognition of its natural beauty in literature and art, its landscapes, which are an example of a northern European upland agro-pastoral system and its direct and tangible association with a number of ideas of universal significance.

#### UNESCO global geoparks

- 10.6.13 The North Pennines AONB Global Geopark coincides with the study area and covers the same area as the North Pennines AONB described below. Global Geoparks are single, unified geographical areas where sites and landscapes of international geological significance are managed with a holistic concept of protection, education and sustainable development.



### *National parks*

10.6.14 The Lake District National Park and World Heritage Site boundary coincides with the LVIA study area with the nearest scheme being M6 Junction 40 to Kemplay Bank which is 2.5km to the north of the scheme. The Yorkshire Dales National Park also coincides with the study area with the nearest scheme being Temple Sowerby to Appleby at a distance of 4km to the north of the Park boundary. The statutory purposes of National Parks as set out in the National Parks and Access to the Countryside Act 1949 and Environment Act 1995 are:

- *“To conserve and enhance the natural beauty, wildlife and cultural heritage of the National Parks*
- *To promote opportunities for the public understanding and enjoyment of the special qualities of the Parks.”*

### *Areas of outstanding natural beauty*

10.6.15 The North Pennines Area of Outstanding Natural Beauty coincides with the study area. Part of the Appleby to Brough scheme is in the AONB and the Temple Sowerby to Appleby scheme is within 2.2km of the AONB boundary. The Countryside and Rights of Way Act 2000 identifies that areas are designated as AONB for the purpose of:

“Conserving and enhancing the natural beauty of the area.”

### *Registered parks and gardens*

10.6.16 Registered Parks and Gardens (RPG) are a non-statutory cultural heritage designation. They are considered in the LVIA in the context of their contribution to landscape character and, where relevant, their importance as a visitor destination and implications for visual amenity and views. Several RPG coincide with the study area with Rokeby Park being a key consideration for the Cross Lanes to Rokeby scheme.

### *Local landscape designations*

10.6.17 Local authorities may identify landscapes with scenic qualities or characteristics that they consider should be afforded policy protection in local development plans. Durham County Council has identified Areas of High Landscape Value (AHLV) in its administrative boundary and one AHLV (Dales Fringe AHLV) coincides with the study area. Bowes Bypass scheme and Cross Lanes to Rokeby scheme are in Dales Fringe AHLV.

### *Visual*

10.6.18 An overview of the visual baseline environment for each scheme is described followed by a table listing viewpoints used to represent visual receptors with the potential to be affected by the project. Photographs of existing or baseline views from each viewpoint are shown on the photosheets on Figures 10.10a to 10.10g. Viewpoint locations are shown on Figures 10.1: Zone of Theoretical Visibility and Viewpoints 10km and Figure 10.2: Zone of Theoretical Visibility and Viewpoints 2km.

## **M6 Junction 40 to Kemplay Bank**

### *Landscape*

#### *Landscape character*

#### *National Landscape Character*

- NCA8 Cumbria High Fells

- NCA9 Eden Valley

#### *Landscape Character Units*

- 6 Intermediate Farmland landscape sub-type
- 8b Broad Valleys landscape sub-type
- 10 Sandstone Ridge landscape sub-type
- 12b Rolling Fringe landscape sub-type
- 12c Limestone Foothills landscape sub-type
- Upland Valley landscape character type
- Upland limestone farmland landscape character type
- High Fell Fringe landscape character type

#### *Landscape designations*

##### *World heritage sites*

10.6.19 The English Lake District World Heritage Site boundary is approximately 2.5km to the south of the scheme.

##### *National parks*

10.6.20 The Lake District National Park boundary is approximately 2.5km to the south of the scheme.

##### *Areas of outstanding natural beauty*

10.6.21 There are no AONB in the 7km study area.

##### *Registered parks and gardens*

10.6.22 The nearest RPG is Dalemmain Grade II\* RPG, approximately 2.2km to the west. Lowther Castle Grade II RPG is approximately 3km to the south.

#### *Visual*

10.6.23 The scheme is located on the alignment of the existing A66 between Junction 40 of the M6 and a point at the eastern rural fringes of Penrith. The existing A66 is a dominant visual focus along and adjacent to the existing road corridor. To the north of the scheme there are residential areas of Penrith including the districts of Wetheriggs, Pategill and Carleton. Between Wetheriggs and Pategill districts there is an area of institutional, industrial, retail and municipal buildings including Penrith Hospital immediately to the north of Kemplay Bank roundabout. There is a substantial buffer of open space, parkland and formal parks including Wetheriggs Country Park between the A66 and residential areas. Views in the direction of the scheme from the edge of Penrith comprise of formal and informal parkland, sports pitches, institutional, industrial and retail buildings. Belts of trees and woodland on the north side of the existing A66 restrict views of infrastructure and traffic. There will be some loss of trees and woodland during construction which will potentially increase visibility of traffic until mitigation has matured. Views in the direction of the scheme from the south are relatively open. The existing A66 is elevated at the upper valley rim of the river Eamont and traffic is visible on a large embankment. To the east of Kemplay Bank woodland and buildings obstruct views of traffic in views from the south. During construction loss of vegetation on the south side of the A66 between Junction 40 of the M6 and Kemplay Bank will slightly increase visibility of traffic.

10.6.24 To the south of the scheme, between the existing A66 and the River Eamont, topography falls from north to south and there is an elevated outlook from the existing A66 where roadside trees and woodland are absent. This provides views to the Lake

District Fells for west bound travellers on the A66 from the urban fringe edge of Penrith looking out to the wider countryside.

10.6.25 To the south of the scheme there is an urban fringe character to the landscape with a range of different land uses including agriculture, paddocks, industrial and institutional buildings. The mosaic of land uses and the existing A66 and M6 influence views and visual amenity with a more rural character to the east of the A6, where a PRoW follows the north side of the River Eamont to Brougham Castle.

10.6.26 The viewpoints listed in Table 10-3: M6 Junction 40 to Kemplay Bank viewpoints are used to illustrate the baseline environment and inform the assessment of effects of the scheme.

Table 10-3: M6 Junction 40 to Kemplay Bank viewpoints

<b>M6 Junction 40 to Kemplay Bank: Viewpoints</b>				
<b>Viewpoint number</b>	<b>Viewpoint title</b>	<b>Viewpoint type and receptors</b>	<b>Description of location</b>	<b>Grid reference</b>
1.1	Clifford Road, Penrith	Representative Residents	At the western end of Clifford Road to the north of Junction 40.	NY 51114 29258
1.2	Entrance to Wetheriggs Country Park, Clifford Road	Representative Recreational	On Clifford Road close to the entrance to Wetheriggs Country Park	NY 51326 29120
2.1	Footpath in Wetheriggs Country Park	Representative Recreational	In Wetheriggs Country Park south of properties on Clifford Road	NY 51737 29024
2.2	PRoW (footpath) 358008 at Wetheriggs Country Park	Representative Recreational	Adjacent to the play area on footpath within Wetheriggs Country Park	NY 51950 29163
2.3	Skirsgill Lane at Happy Hooves Riding Centre	Representative Road users	At the road junction with minor road on Skirsgill Lane	NY 51768 28724
2.4	Mayburgh Henge Scheduled Monument	Representative Recreational	On the north-eastern bank of Mayburgh Henge Scheduled Monument	NY 51974 28456
2.5	Penrith Hospital car park	Representative Employment	On amenity grass to south-eastern edge of hospital staff car park	NY 52196 29250
2.6	PRoW (footpath) 358005 south-east	Representative Recreational	On the northern banks of the River	NY 52774 29195

M6 Junction 40 to Kemplay Bank: Viewpoints				
Viewpoint number	Viewpoint title	Viewpoint type and receptors	Description of location	Grid reference
	of Cumbria Constabulary HQ		Eamont adjacent to outflow from Cumbria Constabulary HQ	
2.7	Minor road to Yanwath west of Glendowlin Lodges	Representative Road users	On the grass verge at junction between minor road to the B5320 and minor road leading to Yanwath	NY 51077 26800
2.8	Penrith Beacon	Specific Recreational	Adjacent to Penrith Beacon	NY 52136 31369

## Penrith to Temple Sowerby

### Landscape

#### Landscape character

##### *National landscape character*

10.6.27 The following NCAs coincide with the study area for the scheme:

- NCA9 Eden Valley
- NCA17 Orton Fells.

##### *Landscape character units*

10.6.28 The following LCUs fall within the study area for the scheme:

- 6 Intermediate Farmland landscape sub-type
- 8b Broad Valleys landscape sub-type
- 10 Sandstone Ridge landscape sub-type
- 12b Rolling Fringe landscape sub-type
- Upland Limestone Farmland landscape character type.

### Landscape designations

#### *World Heritage Sites*

10.6.29 The English Lake District WHS boundary is approximately 3.5km to the south-west of the scheme.

#### *National parks*

10.6.30 The Lake District National Park boundary is approximately 3.5km to the south-west of the scheme.

#### *Areas of outstanding natural beauty*

10.6.31 The North Pennines AONB boundary is approximately 5.2km to the north-east of the scheme.

### *Registered parks and gardens*

10.6.32 The nearest RPG is Lowther Castle Grade II RPG which is approximately 3.4km to the south-west.

### *Visual*

10.6.33 The scheme is located approximately 1.2km to the east of Penrith beginning a short distance to the east of the River Eamont in the vicinity of Brougham Castle scheduled monument. Brougham Castle is a notable feature in the landscape visible from the existing A66. East of Brougham Castle the existing A66 passes through a cutting before crossing an area of fairly level topography in the river floodplain from which there are views of hills in the North Pennines AONB on the distant horizon.

10.6.34 Views are expansive and the single carriageway is bounded on either side by characteristic sandstone drystone walls. Views to the south are open with Whinell Forest a notable feature on the horizon. At the Center Parcs junction views of the North Pennines are more evident and for westbound traffic there are glimpses of the Lake District Fells.

10.6.35 This section of the A66 is rural in character and relatively sparsely populated. There are scattered farmsteads and residential properties mainly at the western and eastern ends of the scheme with a small number of properties adjacent to the road on the south side and a group of properties on the north side at Lane End. Views from the western part of the scheme to the existing A66 east of the B6262 are partly restricted by a cutting through which the road passes. East of this point the A66 is largely at grade or in shallow cutting or on a small embankment. The relatively straight alignment of the existing A66 and its location at the edge of the valley floor means that it is seen against a backdrop of rising land to the south. The existing A66 is visible in conjunction with the Lake District Fells in views to the west and with the edge of the North Pennines AONB in views to the east.

10.6.36 To the north of the A66 views across the landscape are interrupted by belts and blocks of woodland that give the experience of an estate landscape. At Lane End to the east of Center Parcs junction there are open views west towards the Lake District Fells. East of Lane End a minor road leads to a series of farms and roadside cottages at Woodside, Low Woodside and Winders Farm from which there are views of the existing A66, which is seen against a backdrop of rising land towards Whinell Forest. On the south side of the A66 and to the east of Lane End the topography is more varied and incised with blocks and belts of woodland drawing the eye to views down a valley with a diverse visual composition.

10.6.37 The viewpoints listed in Table 10-4: Penrith to Temple Sowerby viewpoints are used to illustrate the baseline environment and inform the assessment of effects of the scheme.

Table 10-4: Penrith to Temple Sowerby viewpoints

Penrith to Temple Sowerby: Viewpoints				
Viewpoint number	Viewpoint title	Viewpoint type and receptors	Description of location	Grid reference
3.1	Junction of B6262 and Moor Lane near Brougham Castle	Representative Recreational	At the south-east corner of crossroads at Moor Lane and B6262	NY 53969 28855



Penrith to Temple Sowerby: Viewpoints				
Viewpoint number	Viewpoint title	Viewpoint type and receptors	Description of location	Grid reference
3.2	National Cycle Network (NCN) 71, Moor Lane near Fremington Cottages	Representative Recreational	Adjacent to field boundary south-east of Fremington Cottages	NY 54273 28532
3.3	PRoW (footpath) 311010 west of Highground Farm	Representative Recreational	Field boundary hedgerow on the PRoW north-west of Highground Farm	NY 54796 27241
3.4	Junction of PRoWs 311013 (bridleway) and 31109 (footpath)	Representative Recreational	North-west corner of field on the PRoW east of River Eamont	NY 56240 29348
3.5	Minor road south of High Moss woodland	Representative Road users	Layby towards road end north of the properties at Lane End	NY 57578 29091
3.6	PRoW (footpath) 311004 near Center Parcs Whinell Forest	Representative Recreational	Adjacent to the field gate entrance north of Whinell Forest	NY 57739 28255
3.7	Minor road near Lower Woodside	Representative Road users	Gap in roadside vegetation between Woodside and Lower Woodside	NY 58591 29038
3.8	Cliburn Road at Ash Hill Cottages	Representative Residential	Walled entrance to Ash Hill Farm north of Ash Hill Cottages	NY 59436 28359
3.9	B6412 west of Culgaith	Representative Road users	Roadside verge of the B6412 north of the River Eden	NY 59989 30126

### Temple Sowerby to Appleby

## Landscape

### Landscape character

#### *National landscape character*

- NCA9 Eden Valley
- NCA17 Orton Fells

#### *Landscape character units*

- 6 Intermediate Farmland landscape sub-type
- 8b Broad Valleys landscape sub-type
- 9b Rolling Farmland and Heath landscape sub-type
- 10 Sandstone Ridge landscape sub-type
- 11a Foothills landscape sub-type
- 12a Limestone Farmland landscape sub-type
- 12b Rolling Fringe landscape sub-type
- 12d Moorland and Commons landscape sub-type
- 13a Scarps landscape sub-type.

### Landscape designations

#### *National parks*

10.6.38 The Yorkshire Dales National Park boundary is approximately 4km to the south of the scheme.

10.6.39 The Lake District National Park boundary is not in the 7km study area for the scheme.

#### *Areas of outstanding natural beauty*

10.6.40 The North Pennines AONB boundary is approximately 2.2km to the north-east of the scheme.

#### *Registered parks and gardens*

10.6.41 The nearest RPG is Appleby Castle Grade II\* RPG which is approximately 1.5km to the east.

### Visual

10.6.42 The existing A66 follows the rim of the Eden valley before descending slightly into the valley floor at Crackenthorpe. This section of the A66 has a well settled rural character with the main villages of Temple Sowerby, Kirkby Thore and Crackenthorpe positioned on the north side of the road. The existing A66 is a very noticeable feature in views from these settlements. In addition there are a number of individual properties and groups of properties adjacent to the A66 mainly between Temple Sowerby and the Petrol Station to the east of Kirkby Thore. There is no or limited visibility of the A66 from the villages of Bolton, Long Marton and Brampton which are set back from the road. To the south of the existing A66 the landscape has a stronger rural character and is influenced less by infrastructure and settlement and has an undulating topography that allows glimpses of the A66. The British Gypsum works is a notable and incongruous feature influencing views experienced by people on the north side of the A66. The edge of the North Pennines AONB dominates the horizon in views to the east.

10.6.43 The scheme is located immediately to the east of Temple Sowerby extending past Kirkby Thore and to the north of Crackenthorpe to join the existing dual carriageway at Appleby. The existing A66 narrows to a two lane carriageway at Spitals Farm at which point the road crests a slight rise eastbound, opening up views of the North

Pennines AONB. The existing A66 passes through large scale rolling farmland on the north side of the Eden valley before descending into the valley floor at Crackenthorpe.

- 10.6.44 Temple Sowerby, Kirkby Thore, Long Marton and Crackenthorpe are traditional villages with vernacular buildings. The villages are connected to a network of minor roads and lanes with drystone walls prevalent in field boundaries. There is an extensive PRoW network which provides opportunities for walking and riding in a diverse range of landscapes in the Eden and Trout Beck valleys and the large tracts of farmland in the area. The North Pennines AONB is a backdrop to views in this area with Murton Pike a notable landmark. Once beyond the existing A66 road corridor, and to the north and east of Kirkby Thore, topography becomes more irregular with a higher proportion of trees and woodland that contrast with the brown of the North Pennine hills. The British Gypsum works is a large industrial site noticeable from a long distance due to the pale colour of the buildings and frequent visibility of a plume emerging from a tall stack.
- 10.6.45 The Roman road to the north of Crackenthorpe is a notable feature in the landscape. It marks a transition to the more undulating topography and wooded, smaller scale landscapes of the Intermediate Farmland landscape sub-type that includes the villages of Long Marton, Brampton and Dufton and which forms part of the setting to the AONB.
- 10.6.46 From elevated locations in the study area such as Dufton Pike, Murton Pike and further afield at Great Dun Fell, the existing A66 is a minor feature in views.
- 10.6.47 Table 10-5: Temple Sowerby to Crackenthorpe viewpoints details the viewpoints in the Temple Sowerby to Crackenthorpe scheme.

Table 10-5: Temple Sowerby to Crackenthorpe viewpoints

Temple Sowerby to Crackenthorpe: Viewpoints				
Viewpoint number	Viewpoint title	Viewpoint type and receptors	Description of location	Grid reference
4.1	Eden Valley Ride cycle route near Skygarth Farm	Representative Recreational	At the road corner along minor road north-east of Skygarth Farm	NY 61429 26064
4.2	Priest Lane, Kirkby Thore	Representative Road users	At the field gate entrance along Priest Lane north-east of Low Moor Park	NY 62767 26327
4.3	Low Moor Park, A66	Representative Residential	At the footpath to north-east corner of properties at Low Moor Park	NY 62627 25972
4.4	Piper Lane, Kirkby Thore	Representative Recreational	At the northern entrance to the recreational area adjacent to Piper Lane	NY 63490 25705

Temple Sowerby to Crackenthorpe: Viewpoints				
Viewpoint number	Viewpoint title	Viewpoint type and receptors	Description of location	Grid reference
4.5	PRoW (footpaths) 336017 and 336011 at Kirkby Thore School	Representative Recreational	At the junction of PRoWs adjacent to Cross Street and Priest Lane	NY 63654 26050
4.6	PRoW (footpaths) 336013 and 336014 at British Gypsum works	Representative Recreational	Road end of Fell Lane before British Gypsum works gatehouse	NY 64582 26380
4.7	PRoW (footpath) 336013 at Kirkby Thore Industrial Estate	Representative Recreational	Entrance to Kirkby Thore Industrial Estate opposite homes along Fell Lane	NY 64262 25900
4.8	PRoW (footpath) 336005, Main Street, Kirkby Thore	Representative Recreational	At the exit of narrow PRoW lane between homes along Main Street	NY 63890 25576
4.9	Sleastonhow Lane, Kirkby Thore	Representative Road users	Corner field boundary opening west of Sleastonhow Farm	NY 64943 24990
4.10	PRoW (footpath) 341017 near Powis House	Representative Recreational	On the legacy railway embankment south-west of Powis House	NY 65142 23966
4.11	Stevens Gate at Long Marton Primary School	Representative Recreational	Field entrance at south-western extents of Long Marton at Long Marton Primary School	NY 66404 24544
4.12	PRoW (bridleway) 317005 at Crackenthorpe	Illustrative Recreational	PRoW on an area of amenity grassland at northern extents of Crackenthorpe	NY 66132 22217

Temple Sowerby to Crackenthorpe: Viewpoints				
Viewpoint number	Viewpoint title	Viewpoint type and receptors	Description of location	Grid reference
4.13	PRoW (bridleway) 317012 north-east of Crackenthorpe	Representative Recreational	Adjacent to the western field boundary approximately 270m south of Roman Road	NY 66447 22544
4.14	PRoW (footpath) 317004 near Roman Road (High Street)	Representative Recreational	Adjacent to the field entry stile at Roman Road north-east of Roger Head Farm	NY 67270 22207
4.15	PRoW (footpath) 341003 at Castrigg Lane	Illustrative Recreational	Field track entrance west of railway line and Keld Farm	NY 67342 22754
4.16	PRoW (bridleway) 311002 at Slate Hill	Representative Recreational	South-east corner of Atkinson's Plantation adjacent to birdwatcher's tower	NY 59614 27108
4.17	PRoW (footpath) 314007 at Howgate House	Representative Recreational	Adjacent to the field boundary north-east of Howgate House	NY 59349 25146
4.18	PRoW (footpath) 308012 near Peatgate Farm	Representative Recreational	On PRoW adjacent to the field boundary north of Crossrigg Lane and Peatgate Farm	NY 62052 24307
4.19	PRoW (bridleway) 317011 at Bridge End Farm	Representative Recreational	Gated entry/exit of PRoW at southern end of Bridge End Farm	NY 63491 24969
4.20	PRoW 308006 north of Bolton	Representative Recreational	Adjacent to the north-western field boundary north of Bolton Hall leading to a	NY 63468 23809



Temple Sowerby to Crackenthorpe: Viewpoints				
Viewpoint number	Viewpoint title	Viewpoint type and receptors	Description of location	Grid reference
			belt of mixed woodland	
4.21	PRoW (footpath) 336013 east of Low Abbey Farm	Representative Recreational	Adjacent to the field boundary wall along the entrance road to Low Abbey Cottages and Farm	NY 65432 27108
4.22	PRoW (footpath) 317008 at Redlands Bank Farm	Representative Recreational	At the field entrance on northern edge of Redlands Bank Farm	NY 64696 23782
4.23	Minor road east of Knock Cross Farm	Representative Road users	Grass roadside verge at the field boundary east of Knock Cross Farm	NY 67193 26206
4.24	PRoW (footpath) 308002 south of Luz Beck	Representative Recreational	Adjacent to the field entry stile on PRoW south of farm outbuilding	NY 63369 22447
4.25	Dufton Pike	Representative Recreational	Eastern access track on Dufton Pike leading from PRoW 322018	NY 70253 26375
4.26	Great Dun Fell	Representative Recreational	At the summit of Great Dun Fell	NY 71012 32138

## Appleby to Brough

### Landscape

#### Landscape character

##### *National landscape character*

- NCA9 Eden Valley
- NCA10 North Pennines

##### *Landscape character units*

- 6 Intermediate Farmland landscape sub-type
- 8b Broad Valleys landscape sub-type
- 9b Rolling Farmland and Heath landscape sub-type
- 11a Foothills landscape sub-type

- 12a Limestone Farmland landscape sub-type
- 12d Moorland and Commons landscape sub-type
- 13a Scarps landscape sub-type
- 13b Moorland High Plateau landscape sub-type
- Upland Fringe Foothills LCT
- Moor and Scarp LCT
- Moorland Fringe LCT
- Moor and Plateau LCT

## Landscape designations

### *National parks*

10.6.48 The Yorkshire Dales National Park boundary is approximately 4km to the south of the scheme.

10.6.49 The Lake District National Park boundary is not in the 7km study area for the scheme.

### *Areas of outstanding natural beauty*

10.6.50 The North Pennines AONB boundary is adjacent to the eastern half of the scheme.

### *Registered parks and gardens*

10.6.51 The nearest RPG is Appleby Castle Grade II\* RPG which is approximately 3.3km to the west.

## Visual

10.6.52 This section of the A66 passes along the north side of the Eden valley before heading cross country to Brough. There are glimpsed views of the A66 from the northern edge of Sandford and from the northern edge of Warcop. The majority of Warcop does not experience views of the existing A66 due to screening by landform, woodland, buildings and a railway embankment that runs east-west and is the route of the Eden Valley steam railway. The hamlet of Flitholme is a short distance from the existing A66 but without views due to screening by landform. The existing A66 is visible from the western edge of Brough and from a new residential area adjacent to the existing dual carriageway a short distance to the east of the scheme. There are several residential properties and farmsteads on the north and south side of the existing A66. Those on the north side generally look across the Eden valley to the undulating pasture landscape beyond where small blocks of woodland and mature hedges are an important element of views. Views towards the A66 from the south are truncated by the undulating topography and where visible the A66 is seen against the backdrop of the North Pennines AONB foothills and the distinctive skyline of brown and grey moorland that contrasts with the green pasture of the valleys. In views to the north MoD compounds, tracks and depots are visible at the edge of the AONB and influence the composition of views.

10.6.53 The western part of the scheme starts at Café Sixty Six. To the south of the road the land falls gradually to the floor of the Eden valley. There are views towards the Yorkshire Dales across a landscape of rural character. Approaching Warcop the topography becomes more irregular and undulating and views to the south are truncated by landform. East of Warcop where the A66 skirts the foothills of the North Pennines there are views through gaps in hills to the surrounding ridges and undulating pastoral landscapes between the River Eden and Swindale Beck.

10.6.54 At Warcop the A66 becomes channelled through a gap between the foothills of the AONB to the north and a large drumlin landform to the west of Warcop. Land on the

north side of the road rises steeply to the grey and brown hills of the North Pennines which contrast markedly with the green pastures in the valley below.

- 10.6.55 Approaching Brough the topography is more open and regular, giving open views across the landscape and towards Brough Castle which is situated on a low hill that increases its prominence as a focal point in the landscape.
- 10.6.56 Between Café Sixty Six and Brough, where the scheme ends, there are small villages and hamlets such as Sandford, Warcop and Flitholme, and groups of properties such as those at Broom Rigg mainly to the south of the scheme.
- 10.6.57 Also to the south of the scheme there are PRoW in the Eden Valley and traversing the ridges and drumlin landforms in the locality. A Pennine Journey long distance trail passes approximately 1.3km to the south of the scheme.
- 10.6.58 On the north side of the road east of Moorhouse Lane, the majority of the AONB coinciding with the study area is owned by the Ministry of Defense (MoD) and used for military training with limited public access from the south. There are several MoD compounds and storage areas in the Warcop area, in the AONB, that are visible from the locality and which will be seen in combination with the scheme.
- 10.6.59 The viewpoints listed in Table 10-6: Appleby to Brough (Warcop) viewpoints are used to illustrate the baseline environment and inform the assessment of effects of the scheme.

Table 10-6: Appleby to Brough (Warcop) viewpoints

<b>Appleby to Brough: Viewpoints</b>				
<b>Viewpoint number</b>	<b>Viewpoint title</b>	<b>Viewpoint type and receptors</b>	<b>Description of location</b>	<b>Grid reference</b>
6.1	Near PRoW 372028 north of Café Sixty Six	Representative Recreational	Field gate entrance at the northern drystone wall field boundary	NY 71927 18328
6.2	PRoW (bridleway) 354010 near Trickle Banks Wood	Representative Recreational	Near the field entrance approximately 170m west of woodland edge	NY 71781 16221
6.3	Sandford Fold	Representative Residential	The field gate entrance at northern extents of Sandford Fold	NY 73134 16264
6.4	B6259 south of the Eden Valley Railway bridge	Representative Road users	At the roadside adjacent to grass verge and road signage	NY 73391 16780
6.5	Minor road leading to Moor House Farm	Representative Road users	On the road midway between Moor House Farm and the existing A66	NY 74331 16783

Appleby to Brough: Viewpoints				
Viewpoint number	Viewpoint title	Viewpoint type and receptors	Description of location	Grid reference
6.6	PRoW (bridleway) 372008 south of Langford Farm	Illustrative Recreational	At the field gate entrance on bridleway south of Langford Farm	NY 73733 15409
6.7	PRoW (footpath) 372021 north of Warcop Training Centre	Representative Recreational	On the PRoW adjacent to railway line at northern extents of Warcop Training Centre	NY 74830 16019
6.8	Adjacent to Warcop Railway Station entrance	Representative Residential	At the field gate entrance immediately east of residential properties opposite railway station	NY 75396 15634
6.9	PRoW (bridleway) 350017 south of Lowgill Beck	Representative Recreational	On the PRoW approximately 60m south of Lowgill Beck	NY 76733 14979
6.10	PRoW (bridleway) 309003 west of Low Garth Farm	Representative Recreational	Adjacent to the field gate entrance between Musgrave Lane and Lowgill Farm	NY 77889 14338
6.11	Adjacent to PRoW 309003 (bridleway) and PRoW (footpath) 309033	Representative Recreational	Roadside grass verge at the entrance to residential properties at Mains House and West View Farm	NY 78677 14926
6.12	PRoW (footpath) 329001 between A66 and Helbeck Road	Representative Recreational	On the PRoW track at Bullistone Bridge heading towards the A66	NY 78768 15045
6.13	PRoW (footpath) 354011 between Little Ormside and Great Ormside	Representative Recreational	Adjacent to the field boundary approximately 190m north of Mill Beck	NY 70586 17046

Appleby to Brough: Viewpoints				
Viewpoint number	Viewpoint title	Viewpoint type and receptors	Description of location	Grid reference
6.14	Murton Pike Triangulation Pillar	Specific Recreational	Top of Murton Pike adjacent to the Triangulation Pillar	NY 73489 23104
6.15	Leagarth Lane south-east of Hilton	Illustrative Road users	Adjacent to a drystone wall to the front of residential properties on Hag Lane	NY 73328 20436

## Bowes Bypass

### Landscape

#### Landscape character

##### *National landscape character*

- NCA10 North Pennines
- NCA22 Pennine Dales Fringe

##### *Landscape character units*

- Baldersdale broad character area
- Barningham, Hope and Scargill Moors broad character area
- Boldron and Lartington broad character area
- Bowes broad character area
- Cotherstone Moor broad character area
- Deepdale Moorland Fringe broad character area
- Lower Greta broad character area
- Lower Teesdale broad character area
- Mid Greta Valley broad character area
- Raby Hill and Marwood broad character area
- Scargill and Barningham Fringes broad character area
- Sleightholme and Greta Fringes broad character area
- Stainmore broad character area
- Upper Baldersdale broad character area
- Upper Greta Valley broad character area
- Woodland, Langleydale and Marwood Fringes broad character area

### Landscape designations

#### *National parks*

10.6.60 The Yorkshire Dales National Park boundary is approximately 3.8km to the south of the scheme.

10.6.61 The Lake District National Park boundary is not in the 7km study area for the scheme.

#### *Areas of outstanding natural beauty*

10.6.62 The North Pennines AONB boundary is adjacent to the western part of the scheme.



### *Registered parks and gardens*

10.6.63 The nearest RPG is Lartington Hall Grade II RPG which is located approximately 3.5km to the north.

### *Local landscape designations*

10.6.64 The scheme is located in Dales Fringe Area of High Landscape Value which is a non-statutory landscape designation of Durham County Council.

### *Visual*

- 10.6.65 The main settlement along this section is the village of Bowes. The village is largely inward facing although there are views out across the Greta valley to the south and along the valley to the east and west. The A66 is in cutting at the western part of Bowes and not visible. The junction with the A67 is a noticeable feature and influences visual amenity in the eastern part of the village, as does the section to the east of the junction which is positioned in the valley rim and elevated above land to the south. There is a small number of properties on the south side of the A66 with views of the road and rising ground of the North Pennines AONB beyond. On the north side of the A66 the land rises steeply to Clint Lane, along which there are several individual properties from which there are views of the A66 and Bowes, both of which are seen in the context of the Greta Valley and the AONB to the south.
- 10.6.66 The scheme is located to the north of the village of Bowes on the north side of the Greta Valley. Immediately to the west of Bowes the North Pennines AONB boundary marks a transition to a more enclosed part of the Greta Valley with the dark hues of moorland forming the horizon to the south and rising steeply to the north of the A66.
- 10.6.67 The A66 is partly in cutting as it passes to the north of Bowes before emerging onto an overbridge and the existing grade-separated junction with the A67 that leads to Barnard Castle. East of the junction the A66 passes through a landscape characterised by ancient field boundaries of tall drystone walls delineating long narrow fields which are also bounded by hedges and hedge trees. Drystone wall field boundaries also characterise fields to the south of the A66 in the Greta Valley. There are slightly elevated, open views from the A66, which traverses the valley side, across the landscape of drystone field boundaries and pasture fields against the backdrop of rising moorland. This creates a very distinctive sense of place and adds to the experience of travelling through different landscapes and the transition to and from high moorlands of Stainmore.
- 10.6.68 Bowes Conservation Area lies a short distance to the south of the A66. There are views from the Conservation Area to the overbridge at the junction with the A67 and east along the mainline of the A66 from the eastern part of the designated area.
- 10.6.69 The Pennine Way national trail runs parallel to the A66 approaching Bowes from the west and crosses the A66 and the scheme at an overbridge at the western part of the village. National Cycle Network route 70 uses the same overbridge before following the route of Clint Lane above Bowes to the north. Residents of properties on Clint Lane experience elevated views of Bowes in the direction of the scheme. Residents of properties in the east of Bowes also experience views in the direction of the scheme.
- 10.6.70 The viewpoints listed in Table 10-7: Bowes Bypass viewpoints are used to illustrate the baseline environment and inform the assessment of effects of the scheme.

Table 10-7: Bowes Bypass viewpoints

Bowes Bypass: Viewpoints				
Viewpoint number	Viewpoint title	Viewpoint type and receptors	Description of location	Grid reference
7.1	National Cycle Network (NCN) Route 70 south-west of Bowes	Representative Recreational	At the field gate entrance west of West Plantation	NY 98376 12454
7.2	Pennine Way (Bowes Loop) south of Clint Lane	Representative Recreational	On Pennine Way leading south from Clint Lane towards Bowes	NY 98596 13795
7.3	Road leading north at Bowes crossroads to the A67	Representative Road users	At the entrance to residential properties north-east of Bowes roundabout	NY 99586 13602
7.4	West of Whorlands adjacent to PRoW (footpath) 10	Representative Recreational	On the roadside grass verge adjacent to PRoW signpost	NY 99657 12694
7.5	Black Lodge Farm adjacent to the A67	Representative Road users	At a gated field entrance on western boundary of Black Lodge Farm	NY 99896 14106
7.6	PRoW (footpath) 6 east of Bowes	Representative Recreational	Adjacent to timber post and wire field boundary on PRoW approximately 125m south of the A66	NY 99877 13643
7.7	The Street, Bowes near Junction with the A66	Representative Road users	On roadside grass verge adjacent to field boundary along The Street	NZ 00581 13539
7.8	PRoW (bridleway) 7 south of Gilmonby	Representative Recreational	At south-east corner of the first field adjacent to single tree	NY 99217 12123

## Cross Lanes to Rokeby

### Landscape

#### Landscape character

##### *National landscape character*

- NCA22 Pennine Dales Fringe

##### *Landscape character units*

- Barningham, Brignall and Rokeby broad character area
- Barningham, Hope and Scargill Moors broad character area
- Boldron and Lartington broad character area
- Lower Greta broad character area
- Moorhouse and Gilbeck broad character area
- Newsham and Cleatlam broad character area
- Raby and Streatlam broad character area
- Raby Hill and Marwood broad character area
- River Tees broad character area
- Scargill and Barningham Fringes broad character area
- Sleightholme and Greta Fringes broad character area
- Southern Tees Vale: Hutton Magna broad character area
- Woodland, Langleydale and Marwood Fringes broad character area

### Landscape designations

#### *National parks*

10.6.71 The Yorkshire Dales National Park boundary is approximately 6.9km to the south-west of the scheme.

10.6.72 The Lake District National Park boundary is not in the 7km study area for the scheme.

#### *Areas of outstanding natural beauty*

10.6.73 The North Pennines AONB boundary is approximately 2.3km to the south-west of the scheme.

#### *Registered parks and gardens*

10.6.74 The nearest RPG is Rokeby Park Grade II\* RPG which coincides partly with the scheme boundary in the east. Bowes Museum Grade II RPG is approximately 2.4km to the north.

#### *Local landscape designations*

10.6.75 The scheme is located in the Dales Fringe Area of High Landscape Value which is a non-statutory landscape designation of Durham County Council.

### Visual

10.6.76 The existing A66 descends from west to east and follows a straight route that coincides with the alignment of a Roman road. The area is sparsely populated with the nearest settlement being the village of Boldron to the north-west and the hamlet of Brignall to the south, neither of which experience views of the section of the existing A66 with which the scheme will coincide. Views of the A66 from the north and south tend to be interrupted by topography and woodland, although traffic moving on the road is noticeable as it tends to be elevated above the surrounding land. At the eastern end of the section views of the existing A66 become more enclosed by woodland particularly at Rokeby Park RPG and at Greta Bridge.

- 10.6.77 The scheme is located in the Rokeby Estate on the alignment of the existing A66 between the River Tees and the River Greta. The landscape to the east of Cross Lanes has an estate landscape character of frequent belts and blocks of woodland, individual notable and veteran trees in field boundaries and in open fields. The A66 follows the alignment of a Roman road along the crest of a broad ridge from which there are long distance views to the north and south to a series of parallel ridges and south to the Yorkshire Dales.
- 10.6.78 Rokeby Park Grade II\* RPG is a notable feature at the east end of the scheme and includes the Grade II\* listed St Mary's Church which is in the western part of the RPG.
- 10.6.79 There are residential properties at Cross Lanes and alongside the A66 at Street Side Farm, The Rectory and Rokeby Grove in addition to nearby residential properties and farms at Smithy Cottage, Dent House Farm, Birk House, Tuta Beck Farm and Ewebank. To the north of the scheme several PRow head north to the the River Tees connecting with the Teesdale Way long distance trail. On the south side of the scheme there are fewer PRow although Moorhouse Lane and Brignall Lane provide quiet byways for cyclists and pedestrians.
- 10.6.80 The viewpoints listed in Table 10-8: Cross Lanes to Rokeby viewpoints are used to illustrate the baseline environment and inform the assessment of effects of the scheme.

Table 10-8: Cross Lanes to Rokeby viewpoints

Cross Lanes to Rokeby: Viewpoints				
Viewpoint number	Viewpoint title	Viewpoint type and receptors	Description of location	Grid reference
8.1	PRow (footpath) 8 west of the B6277	Representative Recreational	Adjacent to the stile at the stream crossing to the south-east corner of Princess Charlotte Wood	NZ 04734 13951
8.2	PRow (footpath) 5 near Dent House Farm	Representative Recreational	Approximately mid-way along entrance road to Dent House Farm	NZ 04870 13452
8.3	PRow (footpath) 10 at Dowson's Gill	Representative Recreational	North-western corner of the field adjacent to Dowson's Gill woodland	NZ 06403 14051
8.4	PRow (footpath) 5 north of Church of St Mary	Representative Recreational	On the PRow at the field boundary heading north from Rokeby Chapel	NZ 07265 13893
8.5	Greta Bridge Bank near Tack Room Cottage	Representative Residential	Near the wooden stairway leading from Greta Bridge Bank to an informal	NZ 08303 13570

Cross Lanes to Rokeby: Viewpoints				
Viewpoint number	Viewpoint title	Viewpoint type and receptors	Description of location	Grid reference
			footpath parallel to the A66	
8.6	PRoW (footpath) 3 north of Brignall Farm	Representative Recreational	Adjacent to eastern field boundary opposite the copse of trees	NZ 07133 12541
8.7	Mount Eff Trail east of Bowes Museum	Representative Recreational	At a field gate entrance on the northern field boundary north of Lowfield Gardens	NZ 06184 16188
8.8	View to the north at PRoW No. 6 south of Church of St Mary	Representative Recreational	On the PRoW along the field boundary south-west of the Old Rectory	NZ 07214 13536

## Stephen Bank to Carkin Moor

### Landscape

#### Landscape character

##### *National landscape character*

- NCA22 Pennine Dales Fringe
- NCA23 Tees Lowlands
- NCA24 Vale of Mowbray

##### *Landscape character units*

- Barningham, Brignall and Rokeby broad character area
- Barningham, Hope and Scargill Moors broad character area
- Gritstone High Plateau landscape character type
- Lower Greta broad character area
- Moorhouse and Gilbeck broad character area
- Moors Fringe landscape character type
- Newsham and Cleatlam broad character area
- River Tees broad character area
- Scargill and Barningham Fringes broad character area
- Southern Tees Vale: Hutton Magna broad character area
- Vale Farmland with Dispersed Settlements landscape character type
- Woodland, Langleydale and Marwood Fringes broad character area.

## Landscape designations

### National parks

10.6.81 The Yorkshire Dales National Park boundary is approximately 6.9km to the south of the scheme.

10.6.82 The Lake District National Park boundary is not in the 7km study area for the scheme.

### Areas of outstanding natural beauty

10.6.83 The North Pennines AONB boundary is not in the 7km study area for the scheme.

### Registered parks and gardens

10.6.84 The nearest RPG is Forcett Hall Grade II RPG which is approximately 2.7km to the north. Rokeby Park Grade II\* RPG is approximately 4km to the west.

## Visual

10.6.85 The existing A66 follows the route of a Roman road and passes a short distance to the south of the hamlet of West Layton and also to the south of the village of East Layton from which traffic using the existing A66 may be glimpsed. There are scattered residential properties and farmsteads on the north and south side of the A66. Views from the north look out across rolling farmland with views of the A66 interrupted by woodland blocks. The A66 is largely at grade and not a prominent feature except in close proximity. Views from the south are interrupted more by topography than views from the north and the horizon to views is in the medium distance without notable or prominent features.

10.6.86 The scheme is located on a section of the A66 that coincides with a Roman road and is a notable feature on the journey between Penrith and Scotch Corner. The road passes through a large scale landscape of gradual, rolling topography with large fields bounded by post and wire fences and gappy hedges. There are views south from the A66 to the Yorkshire Dales with views to the north truncated in the middle distance by gradually rising land and woodland.

10.6.87 There are a number of residential properties alongside the A66 such as Ravensworth Lodge, Fox Grove, Fox Well and Mainsgill Farm, in addition to nearby properties such as Browson Bank, Green Bank Farm, Monks Rest Farm and Carkin Moor. The hamlet of West Layton is a short distance from the west end of the scheme and the larger village of East Layton is located approximately 1.2km to the north.

10.6.88 There are several PRoW nearby from which there are views in the direction of the scheme, with views interrupted and fragmented by blocks of woodland and vegetation alongside the A66 particularly between West Layton and the Roman Fort scheduled monument near Carkin Moor.

10.6.89 The viewpoints listed in Table 10-9: Stephen Bank to Carkin Moor viewpoints are used to illustrate the baseline environment and inform the assessment of effects of the scheme.

Table 10-9: Stephen Bank to Carkin Moor viewpoints

Stephen Bank to Carkin Moor: Viewpoints				
Viewpoint number	Viewpoint title	Viewpoint type and receptors	Description of location	Grid reference
9.1	Collier Lane south of West Layton	Representative Road users	At the roadside of Collier Lane to the southern	NZ 14263 09700



Stephen Bank to Carkin Moor: Viewpoints				
Viewpoint number	Viewpoint title	Viewpoint type and receptors	Description of location	Grid reference
			outskirts of West Layton	
9.2	PRoW (bridleway) 20.23 8/1 south-east of West Layton	Illustrative Recreational	At the southern corner of the mixed woodland north of Fox Grove	NZ 14832 09585
9.3	Existing A66 at Fox Hall Inn	Representative Recreational	On the northern grass embankment at the Fox Hall Inn car park	NZ 14703 09181
9.4	PRoW (bridleway) 20.55 6/4 east of Ravensworth	Representative Recreational	Adjacent to concrete silage storage area at the northern extents of Ravensworth	NZ 14402 07885
9.5	Entrance to Mainsgill Farm Shop	Representative Residential	At the bottom of the entrance/exit road east of the car park at Mainsgill Farm Shop	NZ 15516 08631
9.6	PRoW (bridleway) 20.23 5/1 at Middle Plantation	Representative Recreational	On the PRoW to the south-eastern corner of Middle Plantation	NZ 16058 08951
9.7	South of East Layton at East Layton Social Club	Representative Residential	At the southern edge of the East Layton Social Club car park	NZ 16444 09803
9.8	PRoW (bridleway) 20.33 17/2 adjacent to Warrener Lane	Representative Recreational	South of the road junction between Warrener Lane and the bridleway leading to Pond Dale	NZ 16426 07824
9.9	PRoW (footpath) 20.32/6/1 north-west of Gayles	Representative Recreational	North of Swinery Wood at field boundary fence	NZ 11793 07839
9.10	PRoW (footpath) 20.49/10/1 at	Representative Recreational	At the north-western field corner adjacent	NZ 10915 10063

Stephen Bank to Carkin Moor: Viewpoints				
Viewpoint number	Viewpoint title	Viewpoint type and receptors	Description of location	Grid reference
	edge of Newsham		to the eastern settlement edge of Newsham	

## 10.7 Potential Impacts

### Demolition and construction

- 10.7.1 Construction and demolition activities associated with the project will take place between 2024 and 2029.
- 10.7.2 To avoid double counting of effects, the assessment of landscape and visual construction effects identifies and assesses only temporary effects which arise as a result of activities and elements that are unique to the construction phase.
- 10.7.3 For example, the permanent removal of built form or vegetation is assessed as part of the operational phase, but the works such as the disruption caused by construction plant used during demolition and site clearance are assessed as part of the construction phase. A further example would be proposed landforms or structures, which would form permanent features and have been assessed as part of the operational phase, but the earthworks required to form them, including excavation, aggregate, earth movements and stock piling are assessed as construction effects.
- 10.7.4 Sources of construction impacts on landscape and visual receptors typically include:
- Temporary construction compounds with associated fencing
  - Temporary haul roads
  - Stock piling and storage of materials
  - Excavation, large-scale earthworks and handling of materials
  - On-site and off-site construction traffic
  - On-site plant, such as:
    - Demolition plant and excavators for site clearance
    - Articulated dump trucks, excavators, dozers and rollers for bulk earthworks
    - Cranes, telescopic boom lifts, piling rigs and telescopic forklifts for construction of structures
  - Night-time lighting year-round, such as:
    - Isolated task lighting would be provided intermittently where required during the winter months only
    - Lighting of construction site compounds.
- 10.7.5 The construction phase planning is currently in the early stages, with detailed phasing and programming underway. A description of the information currently known about the construction phase that has informed this assessment is provided in Chapter 2: The Projects section 2.7. It should be noted that a Construction Method Statement<sup>18</sup> has also been prepared to provide indicative information regarding the works that would be needed to construct the project, to inform consultees. This was not available at the time of the preliminary assessment, but will continue to be developed and will

<sup>18</sup> The Construction Method Statement is available as part of the consultation material at: <http://www.highwaysengland.co.uk/A66-NTP>

be used to inform the assessment presented in the ES. Further information will be available to inform the ES.

## Operation

- 10.7.6 Sources of landscape and visual effects are likely to occur as a result of the loss of or changes to existing landscape features or characteristics, or the addition of new infrastructure or features within the landscape or view. The following section describes the potential operational effects as a result of individual schemes.

### M6 Junction 40 to Kemplay Bank

- 10.7.7 Notable landscape and visual effects likely to occur as a result of the scheme include:
- Relocation of the entrance point to Skirsgill Depot resulting in the partial loss of farmland to the east.
  - Introduction of substantial earthworks and balancing pond to accommodate the new road infrastructure north of Skirsgill Lane resulting in change of land use and opening of views towards the scheme.
  - Widening of the route on the approach to Kemplay Bank Roundabout to three lanes in each direction resulting in loss of roadside vegetation.
  - Loss of mature vegetation along the northern and southern carriageways, including at Wetheriggs Country Park and south of Carleton Avenue as a result of road widening, resulting in the opening of views for residents and recreational users.
  - Introduction of replacement woodland edge, individual trees, hedgerows, landscape bunds and noise barriers to provide screening and noise attenuation.
  - Introduction of large detention pond east of Penrith Police HQ resulting in partial loss of farmland.

### Penrith to Temple Sowerby

- 10.7.8 Notable landscape and visual effects likely to occur as a result of the scheme include:
- Introduction of a major compact grade-separated junction, earthworks and associated slip roads at Center Parcs to connect the facility with the new A66 alignment. This will result in changes to existing landscape and field pattern and will increase the visual presence of infrastructure for nearby residents and road users.
  - Provision of an overbridge to serve as an accommodation track east of the junction with the B6262 resulting in an increase in visible infrastructure.
  - Introduction of balancing ponds throughout the length of the scheme at various locations resulting in the partial loss of agricultural land.
  - Provision of access tracks north and south of the realigned A66 to serve Whinfell Park Farm, including an overpass north-east of the farm, resulting in partial change of use to farmland and additional infrastructure.
  - Demolition of High Barn Farm buildings to accommodate the new road alignment, further opening views towards the scheme from the south.
  - Removal of stretches of roadside vegetation and stone walls to accommodate road widening, leading to changes in landscape character and views.
  - Introduction of replacement woodland edge, individual trees, hedgerows, landscape bunds and walls to provide screening and noise attenuation.

## Temple Sowerby to Appleby

10.7.9 Consideration of route alignments has been undertaken for this scheme. Three alternative route alignments have been assessed - the Blue alternative, Red alternative and Orange alternative. Notable landscape and visual effects likely to occur as a result of the scheme include:

### Blue alternative

- Alteration of existing field patterns resulting in a change in landscape character around Kirkby Thore due to a substantial increase in infrastructure.
- Substantial earthworks to accommodate the new road infrastructure, altering baseline views and characteristics particularly at Kirkby Thore.
- Introduction of several balancing ponds, filtration strips, drainage channels and culverts associated with drainage proposals, particularly where these are typical engineered solutions e.g. regular shaped ponds, slope angle and location on steep gradients and any associated earthworks or other features.
- Creation of an overpass north-west of Kirkby Thore at Cross Street, with the realigned Cross Street in cutting, resulting in views of additional infrastructure for residents and recreational users to the western extents of the village.
- Creation of several bridge structures and overpasses including at Main Street, Sleastonhowe Lane, Roman Vale and Trout Beck, resulting in visual change for residents and recreational users of nearby PRow.
- Loss of field boundary vegetation, historic lanes and stone walls, altering the perceived landscape character of the area, changing views and modifying the scale of field patterns, including potential loss of avenue woodland along the Roman road.
- Introduction of landscape mitigation measures including woodland blocks and belts, hedgerows and individual trees in order to reduce landscape and visual impacts.
- Realignment of a number of PRow, including a shared cycleway extended alongside the existing A66 for access towards Temple Sowerby, resulting in partial change of use for affected farmland.
- Provision of a connector road east of Oak Dene between the new road alignment and existing A66, thereby severing existing field patterns resulting in a loss of rural character.

### Red alternative

10.7.10 The Red alternative follows a broadly similar alignment to the Blue alternative; accordingly the following impacts will be present where deviations from the Blue alternative occur:

- Provision of an open span or multi span structure across Trout Beck in addition to a watercourse crossing at Keld Syke, creating substantial visual and landscape change as a result of field pattern change, interruption of skyline. views, introduction of noise and movement and additional infrastructure
- Introduction of large detention ponds either side of Trout Beck at the proposed crossing, resulting in further loss of agricultural land and reduction in rural character.

### Orange alternative

10.7.11 The Orange alternative closely follows the existing A66 road alignment with the addition of connector roads to the west and north of Kirkby Thore. Notable landscape and visual effects likely to occur as a result of the scheme include:

- Additional connector roads west and north of Kirkby Thore, resulting in loss of agricultural land and changing field patterns, particularly west of Dunfell View and Green Lane.
- Part demolition of Bridge End Farm (extents of demolition to be confirmed), partially opening views towards additional infrastructure from nearby PRoW.
- Introduction of landscape mitigation measures including woodland blocks and belts, hedgerows and individual trees in order to reduce landscape and visual impacts.
- Loss of field boundary vegetation and stone walls, altering the perceived landscape character of the area, changing views and modifying the scale of field patterns, including potential loss of avenue woodland along the Roman Road.
- Construction of a multi-span structure crossing Trout Beck and associated flood plain at Bridge End Farm, in addition to overbridge structures near Redlands Bank and Long Marton, resulting in localised visual change.

### Appleby to Brough

10.7.12 Consideration of route alignments has been undertaken for this scheme. As set out in Chapter 2: The Project, the scheme has been divided into three sections, with alternative alignments currently being explored in order to identify the most suitable alignment, within two of those sections. The western section has one route (Black); central section has two (Black route and Blue alternative) and the eastern section has two routes (Black route and Orange alternative). Minimisation of potential impacts on the North Pennines AONB is being considered in particular. The alternatives could be implemented in any combination, leading to four possible route alternatives (Black-Black-Black; Black-Blue-Black; Black-Blue-Orange or Black-Black-Orange). Notable landscape and visual effects likely to occur as a result of the scheme include:

Black-Black-Black alternative (evolved version of the Preferred Route announced in Spring 2020)

- Construction of an eastbound diverge and merge at Café Sixty Six to provide access to the eastbound carriageway and an access track providing links to a replacement underpass for New Hall Farm, resulting in changes to existing land use and visual change for users of the nearby PRoW.
- Provision of a grade-separated junction forming an underpass at Dyke Nook in addition to several balancing ponds and associated earthworks and access tracks, creating a change in localised landscape character and land use whilst increasing the visibility of associated infrastructure.
- Substantial loss of roadside vegetation north of Dyke Nook as a result of road widening and grade-separated junction.
- Substantial earthworks (embankments) south of Wheatsheaf Farm and north of Warcop to accommodate the scheme as a result of realignment, in addition to an underpass to allow access to agricultural land and drainage ponds on the south side of the new carriageway, resulting in a localised loss of landscape character and severance of existing field patterns.
- Construction of an overbridge for walkers, cyclists and horse riders at the eastern end of the scheme near West View Farm, resulting in visual change for nearby residents and users of the PRoW.
- Provision of a new road formed as a realignment of the existing A66 which will provide access to Brough High Street. This may also incur additional landscape impacts on the AONB through encroachment

- Introduction of landscape mitigation measures including woodland blocks and belts, hedgerows, stone walls and individual trees in order to reduce landscape and visual impacts and restore local character.
- Alteration of existing field patterns as a result of the scheme by severing existing areas of agricultural land and loss of field boundaries including stone walls
- Potential for impacts on views from within and towards the AONB as a result of additional infrastructure.

#### Blue alternative (central section)

10.7.13 The potential impacts on landscape and visual amenity within the central section for the Blue alternative include the following:

- Construction of the westbound carriageway directly south of the existing A66 resulting in the loss of roadside vegetation and field boundaries.
- Addition of a new structure crossing the Moor Beck resulting in localised visual change.
- Construction of a new underpass to the east of Walk Mill Barn, resulting in relatively large land take as cutting.
- Construction of a new local road to the north of the new A66 carriageway encroaching into the AONB and having a direct impact on two residential properties and an MoD tank storage and refuelling compound which will require replacing within the AONB, potentially resulting in additional landscape and visual impacts.
- Provision of an underpass connecting the new local road to the north of the existing A66 with Flitholme via an underpass which will also provide a connector road with the new A66 to the east, resulting in loss of agricultural land and change of field pattern.

#### Orange alternative (eastern section)

10.7.14 The potential impacts on landscape and visual amenity within the eastern section for the Orange alternative include the following:

- Requirement for a crossing and associated earthworks at Lowgill Beck west of West View Farm, altering the setting of Lowgill Beck, severing existing field patterns and altering rural views to the south-west from within the AONB.
- Loss of riparian woodland potentially opening up views at Lowgill Beck as a result of earthworks and the new dual carriageway.

### Bowes Bypass

10.7.15 Notable landscape and visual effects likely to occur as a result of the scheme include:

- Construction of a large balancing pond, associated earthworks and access track directly south of Ivy Hall Cottage incurring loss of farmland and change of use.
- Widening of the new A66 to provide a new eastbound carriageway and eastbound slip road, resulting in the alteration of existing field patterns as a result of the scheme by severing existing areas of agricultural land, loss of field boundaries including stone walls and alteration or loss of ancient enclosed field boundaries.
- Construction of a new slip road from the A67 eastbound which will connect with the new A66 and require demolition of several farm buildings south-west of Black Lodge Farm and loss of field boundaries, changing the existing land use and opening up views towards the scheme.



- Demolition of Low Broats Farm and associated farm outbuildings to accommodate the new eastbound carriageway and overpass, which will provide continued field access for Stone Bridge Farm and Lowfield Farm, in addition to access tracks for balancing ponds south of the new carriageway.
- Introduction of landscape mitigation measures including woodland blocks and belts, hedgerows, stone walls and individual trees in order to reduce landscape and visual impacts and restore local character.
- Potential impacts on views from and towards the AONB as a result of additional infrastructure.

## Cross Lanes to Rokeby

10.7.16 Consideration of route alignments has been undertaken for this scheme, with one full alignment Black alternative (Black + Black) and two partial alignments (Blue and Red). The Blue alternative (Blue + Black) offers an alternative junction alignment for the western part of the scheme at Cross Lanes, while the Red alternative (Black + Red) offers an alternative junction alignment for the eastern part at Rokeby.

### Black alternative (evolved version of Preferred Route announced in spring 2020)

10.7.17 Notable landscape and visual effects likely to occur as a result of the mainly online Black alternative include:

- Addition of the westbound carriageway to the south of the existing A66 as far as Tutta Beck Cottage, incurring extensive loss of roadside and field boundary vegetation, resulting in open views towards the scheme and loss of farmland.
- Construction of a compact grade-separated junction to the east of the B6277 resulting in the loss of agricultural land, re-routing of the Tutta Beck, some loss of field boundaries and notable visual change for nearby residents and visitors to Cross Lanes Organic Farm Shop.
- Construction of a grade-separated junction and deviation of the scheme in order to pass south of the Church of St Mary, creating notable visual change from baseline conditions, loss of farmland and associated field boundaries thereby altering existing field patterns, and potentially altering the setting of Rokeby Park RPG further.

### Blue (Cross Lanes) alternative

10.7.18 The Blue (Cross Lanes) alternative would generally follow the alignment of the existing A66, resulting in the loss of roadside vegetation and field boundaries in addition to:

- Loss of existing field pattern and boundaries and localised landscape character following the introduction of connector roads and associated earthworks north and south of the scheme to the west of the B6277.
- Notable visual change following construction of a grade-separated junction and associated earthworks west of Cross Lanes Organic Farm Shop.

### Red (Rokeby) alternative

10.7.19 The Red (Rokeby) alternative broadly follows the Black alternative south of the Church of St. Mary but omits the grade-separated junction west of the church in favour of utilising an underpass through Rokeby Park RPG. This alternative will incur the loss of roadside vegetation including the severance of woodland at Church Plantation in Rokeby Park RPG and will also result in loss of agricultural land to the north and south of the scheme. Potential for considerable impacts on the setting of Rokeby Park RPG.

## Stephen Bank to Carkin Moor

- 10.7.20 The western section of the scheme broadly follows a similar alignment to the existing A66 before gradually moving north at West Layton and then returning to the existing alignment south of Squirrel House.
- 10.7.21 Notable landscape and visual effects likely to occur as a result of the scheme include:
- Some loss of roadside vegetation and agricultural land as a result of the scheme, opening views towards infrastructure from the surrounding area.
  - Alteration of existing field patterns south and east of West Layton as a result of field boundary loss and severance of land, plus loss of features such as the part of the stone wall estate boundary to Collier Lane.
  - Significant localised visual change for users of Moor Lane and nearby residents following the introduction of a grade-separated junction north of Mainsgill Farm Shop.
  - Loss of areas of woodland blocks to accommodate the scheme east and west of the proposed grade-separated junction, potentially altering local landscape character.
  - Changes in field pattern south of the eastern section of the scheme following realignment of the existing A66 to connect with Warrener Lane and loss of farmland to accommodate several balancing ponds.

## A1(M) Junction 53 Scotch Corner

- 10.7.22 Although the introduction of the scheme will incur some loss of roadside vegetation along Middleton Tyas Lane, this loss is not predicted to incur significant landscape or visual effects.

## 10.8 Design, Mitigation and Enhancement Measures

### Route wide

- 10.8.1 The purpose of landscape mitigation is to avoid, minimise, restore or offset potential landscape and visual impacts of the project. The principal means of mitigation is embedded in design of each scheme alignment and associated earthworks to achieve the best fit with topography and sensitive landscape features.
- 10.8.2 Construction of each scheme will inevitably result in the loss and alteration of landscape character and features such as trees, woodland, hedges, walls and modification of landform. Operation of each scheme will also result in impacts on landscape of longer duration and impacts on views and visual amenity.
- 10.8.3 Landscape mitigation for the project has sought to replace lost features where practicable and to ameliorate or offset impacts on landscape character. Landscape mitigation may also function as visual screening when it has become established and reaches a reasonable height.
- 10.8.4 At this stage of the project preferred alignments have been selected for a number of schemes with three schemes undergoing alternatives appraisal and further design. Landscape mitigation is evolving and at this stage general principles are applied to the project with specific measures at each scheme. The broad landscape mitigation strategy is shown on Figure 10.11: Landscape design Approach. Both the landscape principles and scheme specific design will continue to evolve and more detail will be provided and submitted with the DCO application.

- 10.8.5 The landscape planting design includes a range of measures designed to complement the local landscape character using species of local provenance with appropriate consideration of climate change resilient species. The measures will include:
- Woodland planting
  - Woodland edge
  - Linear belts of trees and shrubs
  - Blocks of single and mixed species native woodland
  - Scattered trees
  - Scrub
  - Hedgerows
  - Hedgerows with trees
  - Individual trees
  - Species rich grassland.

- 10.8.6 Essential mitigation for each scheme is described below.

### M6 Junction 40 to Kemplay Bank

- 10.8.7 The M6 Junction 40 crossing link to the A66 with adjacent light industrial use requires restoration and enhancement to the existing visual and noise screening, with the additional benefit of improving the experience for the users of the PRoW. The inclusion of a detention pond south-west of the junction will provide the opportunity to increase the ecological potential of the site with marginal wetland planting and tree planting that is appropriate for the adjacent red squirrel habitat. The immediate roadside environment will benefit from the planting of mixed species woodland blocks that break the linearity of this environment.
- 10.8.8 The junction above the M6 will be restored with species rich grassland, mixed deciduous and coniferous tree planting to ensure visual continuity and ecological connectivity.
- 10.8.9 The south bound M6 off slip to the A592 filter lane borders the Gillian Way Business Park, where the existing screening and noise reduction measures will be restored and enhanced with single species woodland planting.
- 10.8.10 The existing woodland screening and noise reduction measures on the A66 link to Kemplay Roundabout will be restored and enhanced to maximise ecological connectivity. Species rich grassland on southern facing embankments provides the potential for invertebrate habitat, whilst restoring and extending the woodland planting increase visual and noise screening.
- 10.8.11 The Carleton Park and Hall (Blue Light zone), south of the A66, are set in a parkland environment with the River Eamont further to the south of the park. The single specimen trees and coppice form of planting, with the soft engineered slopes of the detention pond, are elements that are suitable for the Carleton Hall Park landscape.
- 10.8.12 The proposed woodland belt north of the A66 provides visual and noise screening for Carleton Avenue (A686), Penrith Rugby Union Club, Carleton Hall Farm and Carleton Hill housing estate.
- 10.8.13 The first new A66 eastbound layby is south of this woodland belt.

## Penrith to Temple Sowerby

- 10.8.14 Crossing the River Eamont the density of the roadside woodland decreases giving way to a more open agrarian landscape with small tree belts, scattered trees and hedgerows and the relict parkland of Brougham Castle. The on-off slip of the B6262 south of Brougham Castle will be seen in the context of restored field boundaries of Cumbria dry stone walling, individual specimen trees and scrub planting with species rich grassland.
- 10.8.15 Countess Pillar scheduled monument on the boundary of an embankment will be kept clear of vegetation to ensure open sight lines of it from the road.
- 10.8.16 The detention ponds with softly engineered slopes to the north and woodland planting will provide an ecological connection with existing woodlands and potential to develop greater biodiversity.
- 10.8.17 At Whinfell Park, south of the A66, there is PRow access to Barrackbank Wood and the River Eamont and public car parking. The restoration planting will make an ecological connection with the wood and provide additional screening for the car parking.
- 10.8.18 The overbridge at Center Parcs is an opportunity for route identification or destination identification. An existing large and distinctive Scots pine forms a local landmark and is used to identify the junction from a distance.

## Temple Sowerby to Appleby

- 10.8.19 Landscape mitigation development is ongoing for this scheme following the assessment of alternatives, in collaboration with ecology, cultural heritage, noise and drainage technical teams.

## Appleby to Brough

- 10.8.20 Environmental design is particularly important for this scheme which passes adjacent to and partly in the North Pennines AONB. As mentioned in section 10.6 the purpose of the AONB is the conservation and enhancement of the natural beauty of the area. It is therefore of key importance that the scheme alignment, junction configurations, link roads and alterations to the existing minor roads and lanes and new detention ponds are designed to minimise potential impacts on the AONB and its setting. The potential impacts on areas outside the AONB is also a consideration with regard to setting of the AONB, landscape character and visual amenity.
- 10.8.21 The detention ponds at New Hall and Dike Nook are an opportunity to increase the biodiversity of the area. The inclusion of mixed species blocks of tree planting will contribute to the reduction in the linearity of the roadside planting. The species rich grassland and creation of 'glade' environments will provide additional variations that are both ecologically and visually diverse.
- 10.8.22 New mixed species woodland blocks and hedgerow planting will be introduced as appropriate to create new field boundaries to visually screen the scheme. New planting areas will link with existing woodland and hedgerows to unify and link habitats in the area.
- 10.8.23 To the north are the foothills of the North Pennines moorlands at the western fringe of the Pennines. To the south is the more open pastoral Eden Valley which is a south sloping open river valley that gives this section of road a distinct character, a definite feeling of transitioning between changing landscapes.

- 10.8.24 The offline section, north west of Warcop village and army camp, will bypass Wheat Sheaf Farm, Walk Mill and the other outlying buildings associated with Toddygill Hall. The route remains offline as it approaches Brough bypassing West View, Mains House, the embankments, and detention ponds of the off-line section, with south facing slopes that will be planted with species rich grasslands that are suitable for invertebrate habitat. These areas will provide additional ecological benefits and the mixed species woodland will provide seasonal variation, screening, and will break the linearity of the route.
- 10.8.25 The long distance walking route 'The Pennine Way' becomes 'A Pennine Journey' and south of Appleby there is a link to the Dales High Way National Trail.

### Bowes Bypass

- 10.8.26 The long-distance walking route 'A Pennine Journey' links across the A66 at Bowes. Bowes, on the North facing slope of the River Greta, is the site of 'Lavatrisis' Roman Fort (80AD) the site now of a 12th century moated medieval castle. These historical elements serve to emphasise the many years that this east-west route has been of national and strategic significance.
- 10.8.27 The new tree planting will connect across the wider scheme to complement local landscape character. Planting design would respond to the character of existing local features such as field boundaries, coppices, and native woodlands. North of the route there are substantial remnants of a strip field pattern with the boundaries delineated by hedges with scattered trees which contrasts with the broader and larger scale field pattern south of the scheme.
- 10.8.28 Restoration using County Durham dry stone walling on field boundaries and along parts of the scheme boundary will match and complement the local character. The stone walling will also reference the local mineral extraction industry (Hulands & Kilmonds Quarries) and could be utilised as facing material on the overbridge which will further integrate the scheme into the built elements of the surrounding landscape.

### Cross Lanes to Rokeby

- 10.8.29 The Cross Lanes Junction provides direct access for Moorhouse Lane traffic to Barnard Castle north of the A66. For both the blue and black alternatives the additional woodland planting and hedge planting will provide ecological connectivity to Princess Charlotte Wood and an element of screening for the wider landscape. Planting or replanting of hedges with scattered trees will replicate or restore the field boundaries in the local rectilinear field pattern.
- 10.8.30 North of the scheme is the Tees River Valley. The walking route of the Teesdale Way follows the meander of the River Tees where the ruins of Egglestone Abbey occupy a commanding position above the River Tees south of Barnard Castle. There are frequent linear blocks of woodland that the scheme's planting will connect to, enhancing local ecological connectivity.
- 10.8.31 At the eastern end of the scheme the route diverts south of St. Mary's church and the Old Rectory to retain an open aspect to the church and church yard. The A66 is slightly elevated and provides the user with a glimpsed view out to the landscape north and south of the route. The black junction alternative will result in loss of notable trees at Rokeby Grange but with less of an impact on Rokeby Park RPG than the red alternative.

- 10.8.32 The planting and grading of the underpass for the red alternative will integrate the underpass with the landform, ecologically connecting with the Church Plantation and restoring a woodland element of the Rokeby Park RPG.
- 10.8.33 At the Barnard Castle junction, south west of Rokeby Park, the stone pillars and steel railings of the parkland entrance are a notable landmark. Single specimen tree planting will reference the existing single specimens of the parkland landscape.

### Stephen Bank to Carkin Moor

- 10.8.34 At Stephen Bank the existing A66 forms the boundary between County Durham to the north and North Yorkshire to the south, following the alignment of the Roman road (Dere Street). Hutton Magna lies to the north in the Tees valley surrounded by a relatively large grained field pattern. To the south the River Swale Valley in Richmondshire generally has a small scale, irregular field pattern. Numerous footpaths and bridleways provide recreational access to the landscape.
- 10.8.35 Woodland planting and creation of species rich grassland will restore or replace habitat lost during construction of the proposed scheme. The introduction of new mixed native woodland blocks and hedgerow planting will provide ecological connectivity to Black Plantation and woodland areas south of West Layton.
- 10.8.36 The softening of engineered slopes and the additional woodland planting to create new ecological connections will help reduce the visual influence of the new underpass and access to Mainsgill Farm.
- 10.8.37 Additional mixed native woodland planting is proposed for the north of the underpass, considering potential views from East Layton.
- 10.8.38 There is evidence at Carkin Moor, on both sides of the road, of a Roman settlement (scheduled monument), including a Roman fort intersected by the A66 (and indicating the strategic significance of the route) and an enclosed prehistoric settlement to the north-west, which is also part of the scheduling.



## 10.9 Assessment of the Likely Significant Effects

### Route wide

- 10.9.1 The LVIA has not identified any route wide likely significant effects. Likely significant effects are scheme specific and are described below.
- 10.9.2 . For the few visual receptors that have views of more than one scheme, the assessment considers the scheme expected to have the worst case impact on that receptor and the receptor is reported within that scheme assessment. The impacts arising from visibility of any other scheme are not expected to give rise to worse effects than those identified. Effects of visibility from multiple schemes will be reported in detail within the ES.
- 10.9.3 For any landscape receptors that may be affected by more than one scheme, the assessment considers the effects of each scheme on the localised area of each LCU or receptor (e.g. AONB) within the study area. Whilst significant effects are reported at localised locations within LCUs, for LCUs affected by more than one scheme no significant effects on the LCU as a whole are expected.

### M6 Junction 40 to Kemplay Bank

#### Landscape

Table 10-10: Assessment of effects on 6 Intermediate Farmland landscape sub-type

6 Intermediate Farmland Landscape Sub-type		
Designated landscapes: n/a		Distance to the scheme: Located in the sub-type
Baseline analysis		
<p>The landscape character of the part of 6 Intermediate Farmland sub-type that will be affected by the scheme is typical of the landscape of the wider sub-type. There is variation in the degree to which key characteristics are expressed as follows:</p> <ul style="list-style-type: none"> <li>Urban areas and infrastructure are notable features albeit having a relatively localised influence on landscape character. These include the A66, M6, rail infrastructure, overhead transmission lines on lattice pylons, telecommunications masts and built form at Penrith.</li> <li>Between the A66 and River Eamont, the field pattern is influenced by the river corridor, forming large irregular fields with scattered field trees and woodland belts. South of the River Eamont, between the B6262 and Wetheriggs Road, the pattern is generally large to medium scale regular fields.</li> </ul>		

## 6 Intermediate Farmland Landscape Sub-type

- Brougham Castle scheduled monument is situated on a river terrace at the confluence of the River Lowther and River Eamont. The landscape in this part of the sub-type has a mature parkland character albeit influenced by the existing A66 which introduces noise and movement.
- Other notable cultural heritage features in this part of the sub-type include the following scheduled monuments: King Arthur's Round Table Henge, Mayburgh Henge and Little Round Table Henge in the vicinity of Eamont Bridge.
- The prevalence of post and wire and post and rail field boundaries in this discrete area is not typical of the character of hedge and drystone wall field boundaries that distinguish other parts of the sub-type.
- There is no evidence of wooded valleys or ghylls within this part of the sub-type.
- Limited wider views are available to the Lake District Fells, North Pennines AONB and wider landscape.

### Value

Medium

### Sensitivity

Medium: the landscape can potentially accommodate some change while being recognised for its landscape features of local importance and cultural heritage assets of national importance. The area contains distinctive physical features that are mostly intact, and despite some visual detractors retains strong aesthetic and perceptual qualities associated with the large scale open working farmed landscape.

### Susceptibility

Medium

## Construction phase

### Magnitude of effect

During construction there will be direct physical impacts through the loss of vegetation, the alteration of landform and the presence of construction activities and associated enabling infrastructure. While the majority of construction effects will occur in the existing A66 corridor, physical effects will extend slightly to the south where storage areas will be positioned and to the east where a new detention pond will be constructed.

The effects of construction on landscape character will be localised to a small part of the sub-type with limited influence on key characteristics of the baseline in the wider sub-type. The magnitude of effect is assessed as **moderate** in a localised area.

### Significance of effect

Significance of effect is assessed as **moderate** and significant in a localised part of the sub-type.

## Operational phase (year 1)

### Magnitude of effect

At year 1 the loss of vegetation alongside the existing A66 and in the corridor accommodating the scheme will result in it being a more noticeable feature in the landscape. The addition of detention ponds in the west and east of the scheme will be new features uncharacteristic of the baseline. While traffic using the scheme and the presence of lighting columns and signage are characteristic of the baseline, these features will be more noticeable due to the loss of vegetation and alteration of landform to accommodate the scheme. Mitigation planting will not yet have established and the magnitude of effect is assessed as **moderate** in a localised area.

### Significance of effect

## 6 Intermediate Farmland Landscape Sub-type

Significance of effect is assessed as **moderate** and significant in a localised part of the sub-type.

### Operational phase (year 15)

#### Magnitude of effect

At year 15 mitigation grassland, hedgerow planting and landscape associated with detention ponds will have established, providing a degree of assimilation to some scheme elements and features as part of the local landscape. Mitigation planting will be sufficiently established to provide some screening and landscape integration. Existing woodland along the River Eamont will continue to screen detention ponds in views from the wider area of the LCT in the south although these will be localised changes uncharacteristic of the baseline. The magnitude of effect is assessed as **minor**.

#### Significance of effect

Significance of effect is assessed as **slight** and not significant in a localised part of the sub-type.

Table 10-11: Assessment of effects on 12b Rolling Fringe Landscape Sub-type

## 12b Rolling Fringe Landscape Sub-type

**Designated landscapes:** Lake District  
National Park

**Distance to the scheme:** Western part located within sub-type

### Baseline analysis

The landscape character of the part of LCT 12b Rolling Fringe sub-type that will be affected by the scheme is typical of the landscape of the wider sub-type. There is variation in the degree to which key characteristics are expressed as follows:

- The landscape at Redhills immediately to the west of the scheme, is more complex due to the proximity to Penrith, visual interaction with the Lake District National Park, the North Pennines AONB and surrounding interrelationship with the landscape of Intermediate Farmland; yet overall, the sub-type has a calm, tranquil rural character.
- Skirsgill Park to the south of the scheme is a locally important parkland and designed landscape.
- Landscape character is strongly influenced by Junction 40 of the M6 and the belts of tree planting associated with that which are uncharacteristic of the wider sub-type. Industrial and commercial land uses also influence landscape character in this area.
- North of the A66 there are larger regular fields in comparison to the irregular medium sized field pattern to the south where the River Eamont and nucleated villages such as Stainton influence land use. To the south of the B53320 field sizes increase.
- Tree cover is sparse, however there is a higher proportion of broad leaf woodland along Carlsike Beck and the River Eamont. Tree cover is also influenced by localised topography and field patterns near settlements where isolated trees and hedgerow trees are present in and on the boundaries of smaller fields.

12b Rolling Fringe Landscape Sub-type	
<b>Value</b> Medium	<b>Sensitivity</b> Medium: There are no statutory landscape designations in the sub-type although it is adjacent to the Lake District National Park.
<b>Susceptibility</b> Low	
Construction phase	
<b>Magnitude of effect</b> During construction there will be direct physical impacts on a small part of the sub-type and construction in the adjacent Intermediate Farmland sub-type will be a noticeable influence. There will be loss of vegetation on the north side of the existing A66 adjacent to an industrial area and there will be loss of vegetation along slip roads on the north side of Junction 40. A new detention pond will be constructed in a field on the south side of the existing A66 that is surrounded by woodland. While construction will result in the loss of vegetation and alteration of landform to accommodate a detention pond, the effects on landscape character will be limited and the magnitude of effect is assessed as <b>minor</b> .	
<b>Significance of effect</b> Significance of effect is assessed as <b>slight</b> and not significant in a localised part of the sub-type.	
Operational phase (year 1)	
<b>Magnitude of effect</b> At year 1 the key impacts would be from the loss of vegetation alongside the existing A66 and the introduction of a detention pond in the sub-type. Mitigation planting will not yet be established at year 1 and the scheme will be a more noticeable feature although not uncharacteristic of the baseline and having a limited influence on landscape character. The detention pond and associated fences and access will be uncharacteristic and although it will change local landscape character considerably it will have a limited influence in the wider area and a limited impact on sensitive characteristics and features of the baseline. The magnitude of effect is assessed as <b>minor</b> .	
<b>Significance of effect</b> Significance of effect is assessed as <b>slight</b> and not significant in a localised part of the sub-type.	
Operational phase (year 15)	
<b>Magnitude of effect</b> At year 15 mitigation planting will be established and vegetation alongside the existing A66 that was removed during construction will have been replaced and a similar amount of planting will be achieved although it will not have attained the height of vegetation in the baseline. The landscape associated with the detention pond will be established although associated fences and access mean that the pond will remain a noticeable new feature in a localised area and uncharacteristic of baseline landscape character. The magnitude of effect is assessed as <b>negligible</b> .	
<b>Significance of effect</b> Significance of effect is assessed as <b>slight</b> and not significant in a localised part of the sub-type.	

## Visual

- 10.9.4 The visual assessment firstly considers residents of Clifford Road as per Table 10-12: Assessment of effects on residents of Clifford Road. Other residential receptor groups such as those at Skirsgill Close and Carleton Hall Road are not predicted to experience significant effects as a result of the scheme.
- 10.9.5 Users of PRow and cycle routes to the south of the scheme have been considered. Other PRow, cycle route and long-distance trail users are not predicted to experience significant effects.
- 10.9.6 The following visitor attractions have been considered:
- Wetheriggs Country Park
  - Mayburgh Henge Scheduled Monument.

Table 10-12: Assessment of effects on residents of Clifford Road

Residents of Clifford Road		
Receptor category: residential	Distance to scheme: 10-200m	Sensitivity: high (dense residential area)
Relevant viewpoints: VP1.1, 1.2, 2.1, 2.2		
Baseline conditions		
Clifford Road is on the southern edge of Penrith and runs parallel to the A66. Residents of Clifford Road experience a range of different views in the direction of the scheme with the majority experiencing views restricted by buildings and vegetation. Belts of trees on the north side of the A66 and woodland in Wetheriggs Country Park provide a degree of screening of the existing A66.		
Construction phase		
<b>Magnitude of effect</b> Residents at the western end of Clifford Road will experience views of construction on Ullswater Road. Residents opposite the playing fields at Wetheriggs Country Park will experience noticeable change resulting from loss of trees on the north side of the A66, as will residents at the eastern end of Clifford Road on the approach to Kemplay Bank Roundabout where there will be vegetation loss. Construction activities will be very noticeable with greater impacts on those residents closest to Kemplay Bank Roundabout. The magnitude of effect is assessed as <b>major</b> .		
<b>Significance of effect</b> Large and significant.		
Operational phase (year 1)		

Residents of Clifford Road
<p><b>Magnitude of effect</b> At year 1 mitigation planting will not yet have established and traffic using the scheme will be noticeable to some residents of Clifford Road. Noise barriers will be noticeable new features in views and a change to the baseline. The loss of existing vegetation on the north side of the A66 means that column lighting and car lights will be more apparent. The magnitude of effect is assessed as <b>moderate</b> for residents in the east of Clifford Road.</p> <p><b>Significance of effect</b> <b>Moderate</b> and significant.</p>
Operational phase (year 15)
<p><b>Magnitude of effect</b> At year 15 mitigation planting will be established and will provide screening of traffic using the A66 with glimpsed and intermittent views in winter. Mitigation planting will reduce the effects of column lighting and car lights to that comparable to baseline. There will be noticeable change compared to the baseline although magnitude of effect is predicted to reduce to <b>minor</b>.</p> <p><b>Significance of effect</b> <b>Slight</b> and not significant.</p>

Table 10-13: Assessment of effects on users of Wetheriggs Country Park

Users of Wetheriggs Country Park		
<b>Receptor category:</b> recreational	<b>Distance to scheme:</b> adjacent	<b>Sensitivity:</b> high
<b>Relevant viewpoints:</b> VP1.2		
Baseline conditions		
Wetheriggs Country Park is adjacent to the eastbound carriageway of the existing A66 opposite Clifford Road. It is accessed via Clifford Road and includes a car park and formal playing fields in the west with the majority of the park being woodland with glades and footpaths.		
Construction phase		
<p><b>Magnitude of effect</b> Construction will result in the loss of trees on embankments on the north side of the A66 at the edge of Wetheriggs Country Park. There will be construction activities in the park at the playing fields and the wooded area with footpaths where tree protection measures will be in place. The changes to views will be very noticeable to users of the park and the magnitude of effect is assessed as <b>major</b>.</p> <p><b>Significance of effect</b> <b>Large</b> and significant.</p>		
Operational phase (year 1)		



#### Magnitude of effect

At year 1 mitigation planting will not yet have established and traffic using the scheme will be more noticeable than in baseline conditions. The loss of trees will be more noticeable to users of the playing fields in the west of the park. Walkers in the wooded area will notice loss of trees at the southern edge of the park. The loss of existing vegetation on the north side of the A66 means that column lighting and car lights will be more apparent. The magnitude of effect is assessed as Moderate for users of the park.

#### Significance of effect

**Moderate** and significant.

#### Operational phase (year 15)

#### Magnitude of effect

At year 15 mitigation planting will be established and will provide screening of traffic using the A66 with glimpsed and intermittent views in winter. Mitigation planting will reduce the effects of column lighting and car lights to that comparable to baseline. There will be noticeable change compared to the baseline although magnitude of effect is predicted to reduce to **minor**.

#### Significance of effect

**Slight** and not significant.

Table 10-14: Assessment of effects on visitors to Mayburgh Henge Scheduled Monument

Visitors to Mayburgh Henge Scheduled Monument		
Receptor category: recreational	Distance to scheme: 400m	Sensitivity: high
Relevant viewpoints: VP2.4		
Baseline conditions		
<p>Mayburgh Henge scheduled monument is adjacent to the southbound carriageway of the M6 which passes the Henge at grade. The Henge comprises of a circular stone bank that is grass covered measuring up to 3.8m in height and 33.7m in width on the northern side and 7.3m in height and 45m wide on the southern side. The bank encloses a level internal area between 87.5m and 90m in diameter. The enclosed area is almost circular in plan and approximately 10m north-west of the centre there is a single upstanding granite stone measuring 2.79m in height.</p> <p>There are views from the Henge bank in the direction of the scheme. Traffic using the existing A66 is noticeable through intervening vegetation.</p>		
Construction phase		

Visitors to Mayburgh Henge Scheduled Monument	
<b>Magnitude of effect</b>	Construction will result in the loss of trees on embankments on the south side of the A66 which will be discernible through intervening vegetation in views from the Henge bank. The more noticeable change will be visibility of construction activities, plant, machinery and lighting and potentially an increased frequency of higher traffic volumes and slower vehicle movement as a result of traffic management during construction. The magnitude of effect is assessed as <b>moderate</b> .
<b>Significance of effect</b>	<b>Moderate</b> and significant.
Operational phase (year 1)	
<b>Magnitude of effect</b>	At year 1 mitigation planting will not yet have established. However, vegetation loss will result in a limited increase in visibility of traffic compared to the baseline due to the presence of intervening vegetation that will not be affected by the scheme. The magnitude of effect will reduce to <b>minor</b> at year 1.
<b>Significance of effect</b>	<b>Slight</b> and not significant.
Operational phase (year 15)	
<b>Magnitude of effect</b>	At year 15 mitigation planting will be established and will provide a limited degree of additional screening compared to the baseline. screening of traffic using the A66 with glimpsed and intermittent views in winter. The magnitude of effect will remain <b>minor</b> at year 15.
<b>Significance of effect</b>	<b>Slight</b> and not significant.

Table 10-15: Assessment of effects on users of PRow and cycle routes to the south of the scheme

Users of PRow and cycle routes to the south of the scheme		
<b>Receptor category:</b> recreational	<b>Distance to scheme:</b> 200-500m	<b>Sensitivity:</b> high
<b>Relevant viewpoints:</b> VP2.3, 2.4, 2.6		
Baseline conditions		
<p>This table refers to PRow and cycle routes to the south of the scheme between the M6 and Cumbria County Police HQ and north of the River Eamont. On the west side of the A6 the baseline environment has an urban fringe character with a mix of land uses including agriculture, equestrian, industrial and residential. There are uninterrupted views of the existing A66 which is elevated above the valley floor and seen against a backdrop of trees and woodland on the north side of the road.</p> <p>East of the A6 the landscape is more rural in character and views of the existing A66 are interrupted by buildings and woodland except from PRow to the south-east of Carleton House where there uninterrupted views.</p>		

<b>Construction phase</b>
<p><b>Magnitude of effect</b> Construction will result in the loss of trees on embankments on the south side of the A66 which will be noticeable in views from the cycle route on Skirsgill Lane and discernible through intervening vegetation in views from the PRoW to the north of Mayburgh Henge. Change will occur predominantly from visibility of construction activities, plant and machinery and potentially an increased frequency of higher traffic volumes and slower vehicle movement as a result of traffic management during construction. The magnitude of effect is assessed as <b>moderate</b>.</p> <p><b>Significance of effect</b> <b>Moderate</b> and significant.</p>
<b>Operational phase (year 1)</b>
<p><b>Magnitude of effect</b> At year 1 mitigation planting will not yet have established. However, the increase in visibility of traffic (compared to the baseline) resulting from vegetation loss will be offset to a degree by the presence of intervening vegetation that will not be affected by the scheme. The magnitude of effect will reduce to <b>minor</b> at year 1.</p> <p><b>Significance of effect</b> <b>Slight</b> and not significant.</p>
<b>Operational phase (year 15)</b>
<p><b>Magnitude of effect</b> At year 15 mitigation planting will be established and will provide a limited degree of additional screening compared to the baseline. This will result in visual screening of traffic using the A66 with glimpsed and intermittent views in winter. The magnitude of effect will be <b>minor</b> at year 15.</p> <p><b>Significance of effect</b> <b>Slight</b> and not significant.</p>

## Penrith to Temple Sowerby

### Landscape

Table 10-16: Assessment of effects on 6 Intermediate Farmland Landscape Sub-type

6: Intermediate Farmland Landscape Sub-type		
<b>Designated landscapes:</b> n/a	<b>Relevant viewpoints:</b> VP3.1, 3.2	<b>Distance to the scheme:</b> Western part of the scheme is in the sub-type
<b>Baseline analysis</b>		

## 6: Intermediate Farmland Landscape Sub-type

The landscape character of the part of 6 Intermediate Farmland sub-type that will be affected by the scheme is typical of the landscape of the wider sub-type. There is variation in the degree to which key characteristics are expressed as follows:

- Infrastructure and telecommunications influence landscape character in this part of the sub-type.
- Brougham Castle and Brovacum Roman Fort scheduled monument is situated on a river terrace at the confluence of the River Lowther and River Eamont. The landscape in this part of the sub-type has a mature parkland character albeit influenced by the existing A66 which introduces noise and movement.
- The prevalence of post and wire and post and rail field boundaries in this discrete area is not typical of the character of hedge and drystone wall field boundaries that distinguish other parts of the sub-type.
- There is no evidence of wooded valleys or ghylls within this part of the sub-type.
- Limited wider views to the Lake District Fells, North Pennines AONB and wider landscape.

<b>Value</b> Medium	<b>Sensitivity</b> Medium: the landscape can accommodate some change while being recognised for its landscape features of local importance and cultural heritage assets of national importance. The area contains distinctive physical features that are mostly intact, and despite some visual detractors retains strong aesthetic and perceptual qualities associated with the large scale open working farmed landscape. It also retains a clear sense of time depth associated with Brougham Castle and Brovacum.
<b>Susceptibility</b> Medium	

## Construction phase

### Magnitude of effect

During construction there will be direct physical impacts on a small part of the sub-type. There will be loss of vegetation alongside the existing A66 where it passes into a cutting at the northern edge of the sub-type. Reconfiguration of the junction with the B6262 will result in loss of vegetation and drystone wall field boundaries on the east and west sides of the 'B' road. There will be alteration of landform to construct embankments at the junction and to provide farm access via an overbridge to the north side of the scheme. While the effects will occur in a relatively localised part of the sub-type, there will be loss and alteration of sensitive characteristics and features of the baseline. The magnitude of effect is assessed as **moderate**, albeit localised.

### Significance of effect

Significance of effect is assessed as **moderate** and significant in a localised part of the sub-type.

## Operational phase (year 1)

### Magnitude of effect

At year 1 drystone wall field boundaries will be replaced although the original field pattern will be altered slightly. The new embankments at the junction will be larger than existing and the farm access overbridge will introduce a new feature across the existing cutting at that location. Mitigation planting will not yet be established and the earthworks will be noticeable new alterations to landform although not

#### 6: Intermediate Farmland Landscape Sub-type

uncharacteristic of the baseline. There will be limited effects on the contribution of Brougham Castle and Brovacum to landscape character given the influence of overhead lines and existing road infrastructure. The magnitude of effect is assessed as **moderate**, albeit localised.

##### Significance of effect

Significance of effect is assessed as **moderate** and significant in a localised part of the sub-type.

#### Operational phase (year 15)

##### Magnitude of effect

At year 15 mitigation planting will be established and provide a degree of integration of earthworks associated with the junction improvement and overbridge. The overbridge will remain an uncharacteristic feature of the baseline and will slightly increase the influence of road infrastructure on landscape character. The magnitude of effect is assessed as **minor** in a localised part of the sub-type.

##### Significance of effect

Significance of effect is assessed as **slight** and not significant in a localised part of the sub-type.

Table 10-17: Assessment of effects on 8b Broad Valleys Landscape Sub-type

8b: Broad Valleys Landscape Sub-type		
<b>Designated landscapes:</b> North Pennines AONB	<b>Relevant viewpoints:</b> VP3.4, 3.5, 3.7, 3.8	<b>Distance to the scheme:</b> the scheme is positioned on a boundary of the sub-type
Baseline analysis		
<p>The landscape character of the part of LCT 8b Broad Valleys sub-type that will be affected by the scheme is typical of the landscape of the wider sub-type. There is variation in the degree to which key characteristics are expressed as follows:</p> <ul style="list-style-type: none"> <li>• Generally, limited distant views to higher slopes of the Lake District Fells and North Pennines AONB. In contrast along the B6412 between Culgaith and Langwathby, there are uninterrupted long distance views.</li> <li>• Limited pockets of woodland and coniferous plantations to the lower valley sides.</li> <li>• Field boundary degradation and fragmentation is apparent with gappy hedges, loss of stone walls and replacement with post and wire fencing.</li> <li>• Stronger sense of tranquillity and calm within the wider valley than areas close to the existing A66. Traffic using the A66 is audible in the wider valley even if not clearly visible, with occasional glimpsed views of high sided vehicles.</li> <li>• The valley floor has a settled character, with less rolling and undulating topography than the wider valley.</li> <li>• The area by Winderwath Gardens has a mature parkland character.</li> </ul>		
<b>Value</b> Medium	<b>Sensitivity</b> Medium: There are no statutory landscape designations in the sub-type. The area contains distinctive physical features that are mostly intact and retains aesthetic and perceptual qualities, notably the sense of tranquillity in the valley.	
<b>Susceptibility</b> Medium		

## 8b: Broad Valleys Landscape Sub-type

### Construction phase

#### Magnitude of effect

During construction there will be direct physical impacts on sensitive characteristics and features of the sub-type:

- Loss of hedges, woodland belt, individual trees, and stone walls due to alteration in field pattern.
- Construction of earthworks including modified cuttings and new embankment structures to accommodate both widening and a proposed underpass at Centre Parcs at Whinfell Forest.
- Construction of seven detention ponds which will occupy areas of fields, altering and interrupting the pattern of agricultural land and widening the influence of road infrastructure.
- Alteration to existing minor lanes and tracks through the upgrading of existing roads and construction of new routes.
- Impacts on the sense of calm associated with open farmland.

With the exception of loss of trees, woodland and other features and elements construction effects will be temporary and localised to a relatively small geographical area and part of the sub-type. Given the degree of change to landscape character in this area and the loss and alteration of characteristics and features important to the baseline, the magnitude of effect is assessed as **major** adverse, albeit of localised occurrence.

#### Significance of effect

Significance of effect is assessed as **large** and significant in a localised part of the sub-type.

### Operational phase (year 1)

#### Magnitude of effect

At year 1 mitigation planting will not yet have established. The modified cuttings, new embankment structures including stone walls and detention ponds and the new junction at Center Parcs will be the key physical elements of the scheme resulting in change to landscape character in this part of the sub-type. Earthworks will be visible albeit with ground cover of grassland and young shrub and tree planting. Detention ponds and associated fences and access will be notable new features uncharacteristic of the baseline. There will be a large scale and noticeable increase in road infrastructure and the scheme will intensify the influence of road infrastructure in a part of the sub-type where it is a characteristic of the baseline. However, the scale of change in a localised area and the introduction of new features that are not a characteristic of the baseline will result in a **major** magnitude of effect.

#### Significance of effect

Significance of effect is assessed as **large** and significant in a localised part of the sub-type.

### Operational phase (year 15)



### 8b: Broad Valleys Landscape Sub-type

#### Magnitude of effect

At year 15 mitigation planting will be established and the scheme will achieve a degree of integration with surrounding landscape character. However, it will be a large scale and noticeable increase in road infrastructure in part of the sub-type. While mitigation will soften the engineered earthworks and structures, the scheme including the detention ponds and large junction at Center Parcs will be a noticeable addition to the landscape. The magnitude of effect is assessed as **moderate**, albeit of localised occurrence.

#### Significance of effect

Significance of effect is assessed as **moderate** and significant in a localised part of the sub-type.

Table 10-18: Assessment of effects on 10 Sandstone Ridge Landscape Sub-type

### 10: Sandstone Ridge Landscape Sub-type

**Designated landscapes:** n/a

**Relevant viewpoints:** VP3.6

**Distance to the scheme:** the scheme is positioned on a boundary of the sub-type

#### Baseline analysis

The landscape character of the part of the Sandstone Ridge sub-type that will be physically affected by the scheme is typical of the landscape of the wider sub-type. There is variation in the degree to which key characteristics are expressed as follows:

- Area influenced by Center Parcs at Whinfell Forest.
- Sense of physical and perceptual segregation between Whinfell Forest (Center Parcs) and the wider character area due to localised topography and farming land use on lower ridges and large woodland blocks on the elevated middle and upper ridges.
- Long distance views to the hills of North Pennines AONB.
- Shallow, open subtle valley bottom landform through which the A66 passes.
- Field boundary degradation and fragmentation with gappy hedges, loss of stone walls and the introduction of post and wire fencing.

#### Value

Medium

#### Sensitivity

Medium: There are no statutory landscape designations in the sub-type. The northern part of the sub-type is characterised by large rectilinear fields, large conifer plantations and development at Center Parcs holiday village.

#### Susceptibility

Medium

#### Construction phase

#### Magnitude of effect

The majority of change during construction will occur to the north of the sub-type in 8b Broad Valleys. However, there will be physical effects during construction on the Sandstone Ridge sub-type. In particular the scheme will result in:

- Loss of woodland and hedges that provide enclosure to the existing A66.
- Alteration and loss of field boundaries characteristic of the geometric mosaic field pattern.
- Partial loss of shelterbelts where these occur adjacent to the existing A66.

### 10: Sandstone Ridge Landscape Sub-type

- Alteration of landform during construction of embankments and junctions.

The existing A66 is positioned at the boundary between the Sandstone Ridge sub-type and the Broad Valleys sub-type. There is a notable transition particularly to the east of Center Parcs from the level, large scale, estate landscape character of the Broad Valleys in this area to the steeper slopes of the Sandstone Ridge where the perception of landscape is influenced more by large blocks of coniferous plantation than agriculture and small block of deciduous woodland. While the existing A66 influences this transition to some degree, the scheme will increase the influence of infrastructure. The magnitude of effect is assessed as **major** albeit in a localised part of the sub-type.

#### Significance of effect

Significance of effect is assessed as **large** and significant in a localised part of the sub-type.

### Operational phase (year 1)

#### Magnitude of effect

At year 1 mitigation planting will not yet have established. Earthworks will be visible albeit with ground cover of grassland and young shrubs and trees. The new underpass at Whinfell Park and the junction at Center Parcs will be noticeable changes to the baseline situation. The scheme will intensify the influence of road infrastructure in a part of the sub-type where it is a characteristic of the baseline. However, the scale of change in a localised area and increase in influence will result in a **moderate** magnitude of effect.

#### Significance of effect

Significance of effect is assessed as **moderate** and significant in a localised part of the sub-type.

### Operational phase (year 15)

#### Magnitude of effect

At year 15 mitigation planting will be established and the scheme will achieve a degree of integration with the baseline. However, it will be a large scale and noticeable increase in road infrastructure in part of the sub-type. While mitigation will soften the engineered earthworks and structures, the scheme will be a noticeable addition to the landscape and will increase the influence of infrastructure in this part of the sub-type with permanent change to the baseline. The magnitude of effect is assessed as **moderate**.

#### Significance of effect

Significance of effect is assessed as **moderate** and significant in a localised part of the sub-type.

### Visual

10.9.7 The visual assessment firstly considers residents in the following groups of properties and individual properties:

- Residents along Moor Lane
- Residents at Foxgloves and Lightwater
- Residents at Whinfell Park
- Residents at Lane End
- Residents at Woodside

- Residents at Whinfell House

10.9.8 Users of PRow 311013 and PRow 311014 have been considered for assessment.

10.9.9 Visitors to Center Parcs Holiday Village have been considered for assessment.

Table 10-19: Assessment of effects on residents along Moor Lane

Residents along Moor Lane		
<b>Receptor category:</b> residential	<b>Distance to scheme:</b> 130m-1.1km	<b>Sensitivity:</b> medium
<b>Relevant viewpoints:</b> VP3.1, VP3.2 (both located on Moor Lane)		
Baseline conditions		
Residents of properties at the north end of Moor Lane to the north of Brougham Bridge generally experience oblique and partly screened views in the direction of the scheme. Residents of the residential property named Brovacum opposite Brougham Castle to the east experience uninterrupted views in the direction of the scheme. To the south of the B6262 there is a two storey property (Dinglefield) with views in the direction of the scheme interrupted by two large cypress trees growing in the garden. To the south of this property there is a detached bungalow with partial views in the direction of the scheme and three two storey properties to the south with uninterrupted views, and a further property to the south at the corner before Moor Lane turns south-west.		
Construction phase		
<p><b>Magnitude of effect</b> During construction the scheme will be very noticeable to residents of Brovacum and Dinglefield. Residents of both properties would experience views of construction plant and machinery, predominantly at the western end of the scheme where the B6262 will be upgraded and where an overbridge will be constructed. The magnitude of effect is assessed as <b>major</b> as the scheme will be a dominant focal point in views. Residents of Dinglefield will also experience partial and filtered views of construction although magnitude of effect will be <b>minor</b> due to the combination of distance and the fact that views will be partial and filtered. Residents of properties south of the Dinglefield will experience views of construction which will be a perceptible feature although it will not substantially alter the balance of features and elements in the view. Magnitude of effect will range from <b>negligible</b> to <b>minor</b>.</p> <p><b>Significance of effect</b> Significance of effect will be <b>large</b> and significant for Brovacum and Dinglefield as the scheme will be a notable new feature in views during construction.</p>		

Residents along Moor Lane
Effects on other properties along Moor Lane will not be significant.
Operational phase (year 1)
<p><b>Magnitude of effect</b> At year 1 mitigation planting will not yet have established. Vegetation loss will result in slightly more open views for the residents of Brovacum and Dinglefield than at present. Residents of Brovacum will experience views of the new overbridge and the upgraded junction of the B6262 and A66. Residents of Dinglefield will experience views of the upgraded junction but the overbridge is unlikely to be discernible. The magnitude of effect for Brovacum is assessed as <b>moderate</b> and for Dinglefield it is assessed as <b>minor</b>. For other properties the improvements at the west end of the scheme will be discernible although magnitude of effect will be <b>negligible</b> for most of the properties.</p> <p><b>Significance of effect</b> <b>Moderate</b> and significant for Brovacum. <b>Slight</b> and not significant for Dinglefield and for the remaining properties along Moor Lane.</p>
Operational phase (year 15)
<p><b>Magnitude of effect</b> At year 15 mitigation planting will be established and will provide a degree of screening, and the earthworks at the upgraded junction will be better integrated with the surrounding landscape. Replacement planting at the overbridge will help integrate the earthworks and the new structure. While the scheme will be noticeable it will not substantially alter the balance of features and elements in the view. The magnitude of effect will be <b>minor</b> at year 15 for Brovacum and <b>negligible</b> for Dinglefield and the other properties along Moor Lane.</p> <p><b>Significance of effect</b> <b>Slight</b> and not significant.</p>

Table 10-20 Assessment of effects on residents at Foxgloves and Lightwater

Residents at Foxgloves and Lightwater		
<b>Receptor category:</b> residential	<b>Distance to scheme:</b> adjacent	<b>Sensitivity:</b> medium
<b>Relevant viewpoints:</b> n/a		
Baseline conditions		
This table assesses effects on four properties. There are two detached properties to the rear of Llama Karma Kafé. Foxgloves to the west and Barn Owl Cottage to the east. There are oblique views in the direction of the scheme from Foxgloves while there are views		

Residents at Foxgloves and Lightwater
from garden ground only from Barn Owl Cottage. There are two semi-detached properties at Lightwater both of which are a very short distance from the existing A66 and look directly onto the road.
Construction phase
<p><b>Magnitude of effect</b> Construction activities will be very noticeable from Foxgloves and the loss of vegetation immediately to the north-west and demolition of the Llama Karma Kafe will open up views towards the new junction at the wastewater treatment works (WWTW) on the north side of the existing A66. There will be restricted views of construction from Barn Owl Cottage although demolition of Llama Karma Kafe will be very noticeable for a short duration. Construction activities will be a dominant focal point in views from Lightwater Cottages. The magnitude of effect at all four properties is assessed as <b>major</b>.</p> <p><b>Significance of effect</b> Significance of effect will be <b>large</b> and significant.</p>
Operational phase (year 1)
<p><b>Magnitude of effect</b> At year 1 mitigation planting will not yet have established and there will be uninterrupted views from Foxgloves of the access road on embankment and the earthworks associated with the overbridge to the west. There will be restricted views from Barn Owl Cottage. At Lightwater cottages the mainline will appear slightly closer to the properties than at present and the earthworks, detention pond and new access road will be very noticeable. The magnitude of effect is assessed as <b>moderate</b> for Foxgloves and <b>major</b> for Lightwater Cottages.</p> <p><b>Significance of effect</b> The significance of effect is assessed as <b>moderate</b> and significant for Foxgloves and <b>large</b> and significant for Lightwater Cottages.</p>
Operational phase (year 15)
<p><b>Magnitude of effect</b> At year 15 mitigation planting will be established and will provide a degree of screening and the earthworks at the overbridge will be better integrated with the surrounding landscape. The scheme will result in a slight intensification of road infrastructure for Foxgloves. For Lightwater Cottages the changes will be considerable and will remain unchanged from Year 1. The magnitude of effect is assessed as <b>minor</b> for Foxgloves and <b>major</b> for Lightwater Cottages.</p> <p><b>Significance of effect</b> The significance of effect is assessed as <b>slight</b> and not significant for Foxgloves and <b>large</b> and significant for Lightwater Cottages.</p>

Table 10-21 Assessment of effects on residents at Whinfell Park

Residents at Whinfell Park		
Receptor category: residential	Distance to scheme: 70-110m	Sensitivity: medium
Relevant viewpoints: n/a		
Baseline conditions		
<p>Whinfell Park is a group of farm buildings on the south side of the A66. There is a large detached two storey house (Whinfell Park) in the west of the group and a terrace of three two storey cottages in the north (1-3 Whinfell Park Cottages). Access is via a tree lined drive that screens views to the north from Whinfell Park from which there are views west with oblique views in the direction of the scheme. Whinfell Park is surrounded by mature vegetation and with its principal elevations orientated west-east in relation to the existing A66. There are uninterrupted views in the direction of the scheme from 1-3 Whinfell Park Cottages which are slightly elevated above the level of the existing A66.</p>		
Construction phase		
<p><b>Magnitude of effect</b> Construction activities will be very noticeable from the three cottages and will be a dominant focal point in views. There will be loss of trees on the north side of the road which will open up views to the north considerably changing the composition of views. The magnitude of effect is assessed as <b>major</b>.</p> <p><b>Significance of effect</b> Significance of effect will be <b>large</b> and significant.</p>		
Operational phase (year 1)		
<p><b>Magnitude of effect</b> At year 1 mitigation planting will not yet have established. The embankment for the overbridge will be a very noticeable new feature a short distance from the cottages and will be a focal point truncating views northwards. The magnitude of effect is assessed as <b>major</b>.</p> <p><b>Significance of effect</b> <b>Large</b> and significant for the three cottages.</p>		
Operational phase (year 15)		
<p><b>Magnitude of effect</b> At year 15 mitigation planting will be established, providing a degree of screening and the earthworks at the overbridge will be better integrated with the surrounding landscape. While the scheme will be noticeable it will not be a focal point of views. The magnitude of effect will be <b>moderate</b> at year 15.</p> <p><b>Significance of effect</b> <b>Moderate</b> and significant.</p>		

Table 10-22 Assessment of effects on residents at Lane End



Residents at Lane End		
<b>Receptor category:</b> residential	<b>Distance to scheme:</b> 50-115m	<b>Sensitivity:</b> medium
<b>Relevant viewpoints:</b> VP3.5		
Baseline conditions		
<p>Lane Ends is a group of five properties comprising four semi-detached two storey dwellings (1-4 Lane Ends) and a detached two storey house (School House) in the south. There is an open outlook west from 1-4 Lane Ends with views of the Lake District Fells. These properties are orientated east-west and there are views east filtered by a belt of mature trees. School House fronts onto Lane End and the existing A66. Views west are restricted by a large shed although there are clearer views from the property curtilage. Views to the south are restricted to a degree by vegetation in garden ground to the property.</p>		
Construction phase		
<p><b>Magnitude of effect</b> Construction activities will be very noticeable from all five properties and will be a dominant focal point in views. There are likely to be periods during construction where an increase in lighting will be noticeable in views to the west. The magnitude of effect is assessed as <b>major</b>.</p> <p><b>Significance of effect</b> Significance of effect will be <b>large</b> and significant.</p>		
Operational phase (year 1)		
<p><b>Magnitude of effect</b> At year 1 mitigation planting will not yet have established. The new junction, detention ponds and associated planting will be dominant focal points in views west from 1-4 Lane Ends. Lighting from traffic using the north side of the junction will be noticeable in views to the west. For School House, the main line will be approximately 50m to the south of the property with the existing A66 retained as local access. Lighting from traffic using the junction will be visible from the west elevation of School House. There will be oblique views of the mainline on embankment to the west and the new junction will be a prominent feature in views from the curtilage of the property. The magnitude of effect is assessed as <b>major</b>.</p> <p><b>Significance of effect</b> <b>Large</b> and significant for all five properties.</p>		
Operational phase (year 15)		
<p><b>Magnitude of effect</b> At year 15 mitigation planting will be established and will provide a degree of screening to the detention ponds and provide integration for the new junction and mainline in embankment. Lighting from traffic using the north side of the junction will be discernible in views to the west. The scheme will be a substantial change compared to baseline conditions and while mitigation planting will provide a degree of landscape integration, the balance of features in the view will change considerably from the baseline. The magnitude of effect will be <b>major</b> at year 15.</p>		

<b>Residents at Lane End</b>
<b>Significance of effect</b> <b>Moderate</b> and significant.

Table 10-23 Assessment of effects on residents at Woodside

<b>Residents at Woodside</b>		
<b>Receptor category:</b> residential	<b>Distance to scheme:</b> 150-450m	<b>Sensitivity:</b> medium
<b>Relevant viewpoints:</b> VP3.7		
<b>Baseline conditions</b>		
This table refers to residential properties on the minor road between Woodside Farm in the north and Winderwath Farm in the south near the B6412. The properties have a relatively open outlook in the direction of the scheme with intervening vegetation in field boundaries, alongside the minor road and alongside the A66 providing a degree of screening and integration of the existing A66.		
<b>Construction phase</b>		
<b>Magnitude of effect</b> During construction there will be removal of vegetation on the north side of the existing A66, formation of a large detention pond and construction of a layby on embankment in the section between Swine Gill Plantation and Winderwath Farm. Construction activities will be noticeable from most of the properties and will be readily apparent. The magnitude of effect is assessed as <b>moderate</b> .		
<b>Significance of effect</b> Significance of effect will be <b>moderate</b> and significant.		
<b>Operational phase (year 1)</b>		
<b>Magnitude of effect</b> At year 1 mitigation planting will not yet have established and the earthworks associated with the scheme will be noticeable. However, construction activities will have ceased and the scheme will not be uncharacteristic of views from the properties as the improvements will be online along the current alignment of the A66. The magnitude of effect is assessed as <b>minor</b> .		
<b>Significance of effect</b> <b>Slight</b> and not significant for all properties.		
<b>Operational phase (year 15)</b>		
<b>Magnitude of effect</b> At year 15 mitigation planting will be established and will replace vegetation lost during construction providing a degree of screening and integration of the scheme. The change to views in comparison to baseline would be limited and the magnitude of effect will be <b>minor</b> at year 15.		
<b>Significance of effect</b>		

Residents at Woodside
Slight and not significant.

Table 10-24 Assessment of effects on residents at Whinfell House

Residents at Whinfell House		
<b>Receptor category:</b> residential	<b>Distance to scheme:</b> 20-40m	<b>Sensitivity:</b> medium
<b>Relevant viewpoints:</b> n/a		
Baseline conditions		
This table refers to a group of residential properties at Whinfell House to the east of Swine Gill Plantation. There are two semi-detached properties in the west and two semi-detached properties in the east. The western properties face north towards the scheme with views of the existing A66. There are oblique views of the existing A66 from the eastern properties, due to their orientation.		
Construction phase		
<b>Magnitude of effect</b> During construction there will be removal of vegetation on the north and south sides of the existing A66, formation of a large detention pond and construction of a layby on embankment in the section between Swine Gill Plantation and Winderwath Farm. Construction activities will be noticeable from the two western properties and will be readily apparent with oblique views from the two eastern properties. The magnitude of effect is assessed as <b>major</b> for the two western properties and <b>moderate</b> for the two eastern properties.		
<b>Significance of effect</b> Significance of effect will be <b>large</b> and significant for the western properties and <b>moderate</b> and significant for the eastern properties.		
Operational phase (year 1)		
<b>Magnitude of effect</b> At year 1 mitigation planting will not yet have established and the earthworks associated with the scheme will be noticeable. However, construction activities will have ceased and the scheme will not be uncharacteristic of views from all four properties as the improvements will be online along the current alignment of the A66. The magnitude of effect is assessed as <b>minor</b> for all four properties		
<b>Significance of effect</b> <b>Slight</b> and not significant for all properties.		
Operational phase (year 15)		

### Residents at Whinfell House

#### Magnitude of effect

At year 15 mitigation planting will be established and will replace vegetation lost during construction providing a degree of screening and integration of the scheme. The change to views in comparison to baseline would be limited and the magnitude of effect will be **minor** at year 15 for all four properties

#### Significance of effect

**Slight** and not significant.

Table 10-25 Assessment of effects on users of PRow

### Users of PRow

**Receptor category:** recreational

**Distance to scheme:** adjacent

**Sensitivity:** high

**Relevant viewpoints:** VP3.4 (PRow 311013), VP3.6 (PRow 311004)

### Baseline conditions

This table refers to two PRow. PRow 311013 is a byway open to all traffic (BOAT) and runs from the north side of the A66 opposite Whinfell Park to the Grade I listed Church of St Ninian and the associated scheduled monument. PRow 311004 is a footpath that runs from the south side of the A66 to Whinfell Forest and Center Parcs. From PRow 311013 there are views south across rising land towards the A66 where high sided vehicles are visible above an intervening drystone wall. Given the restricted views north significant effects are unlikely along the majority of the PRow with only the southern part affected. There are elevated views in the direction of the scheme from PRow 311004 and it is considered further in this assessment.

### Construction phase

#### Magnitude of effect

Construction activity will be very noticeable from PRow 311004. Demolition of buildings at High Barn and construction of the mainline on embankment to the west will be visible as will construction of the new junction at Center Parcs. The southern part of PRow 311003 will be severed by the new access arrangements associated with Whinfell Park and construction activities will be a notable focal point in views. There will be loss of vegetation on the north side of the existing A66 which will increase visibility of traffic from the southern part of the PRow. The magnitude of effect is assessed as **major** on both PRow.

#### Significance of effect

Significance of effect will be **large** and significant.

### Operational phase (year 1)

Users of PRow
<p><b>Magnitude of effect</b></p> <p>At year 1 mitigation planting will not yet have established and the earthworks associated with the scheme will be noticeable. The loss of buildings at High Barn will change the composition of views and the mainline on embankment and at grade will be a noticeable increase in road infrastructure. While the scheme will not be uncharacteristic of views it will increase the influence of road infrastructure from PRow 311004. The new access arrangements opposite Whinfell Park will truncate the route of PRow 311003 and the new infrastructure will be noticeable in views from the southern part of the PRow. Loss of vegetation alongside the A66 means that traffic using the mainline will be slightly more noticeable although not uncharacteristic of views. The magnitude of effect is assessed as <b>moderate</b> for both PRow.</p> <p><b>Significance of effect</b></p> <p><b>Moderate</b> and significant for PRow 311004.</p>
Operational phase (year 15)
<p><b>Magnitude of effect</b></p> <p>At year 15 mitigation planting will be established and will replace vegetation lost during construction providing a degree of screening and integration of the scheme. The change to views in comparison to baseline would be noticeable particularly in views towards Lane End from PRow 311004 where the new junction would be readily apparent. From PRow 311003 effects of the mainline will be limited due to interruption by landform, drystone walls and mitigation planting. The access arrangements will be a noticeable change to baseline only from the southern most part of the PRow. The magnitude of effect is assessed as <b>moderate</b> for PRow 311004 and <b>Minor</b> for PRow 311003</p> <p><b>Significance of effect</b></p> <p><b>Moderate</b> and significant for both PRow.</p>

Table 10-26 Assessment of effects on visitors to Center Parcs Holiday Village

Visitors to Center Parcs Holiday Village		
<b>Receptor category:</b> recreational (visitors)	<b>Distance to scheme:</b> adjacent	<b>Sensitivity:</b> high
<b>Relevant viewpoints:</b> n/a		
Baseline conditions		
<p>Center Parcs Holiday Village is accessed via an existing at grade junction off the A66 where eastbound motorists must cross the westbound carriageway when entering and exiting the village. The junction therefore marks the arrival point to the holiday village and provides direct access only to the village access road. These motorists are therefore assessed as higher sensitivity recreational receptors due to the purpose of their visit. The access road to the village is a narrow two lane road that ascends a ridge with landscaped bunds. There are views from the access road to the North Pennines AONB and glimpsed views to the Lake District Fells. The village is set within a forest of mature pine trees from which there are very limited views in the direction of the scheme.</p>		

Visitors to Center Parcs Holiday Village
Construction phase
<p><b>Magnitude of effect</b> Construction activity associated with the new junction will be very noticeable to visitors to Center Parcs at the junction and on the access road and will impinge upon views of the North Pennines AONB. Construction activities are unlikely to be visible from the village due to screening by mature trees in which the village is set. The magnitude of effect at the junction and access road is assessed as <b>major</b>.</p> <p><b>Significance of effect</b> Significance of effect will be <b>very large</b> and significant.</p>
Operational phase (year 1)
<p><b>Magnitude of effect</b> At year 1 mitigation planting will not yet have established. The earthworks associated with the scheme junction will be very noticeable and the overbridge and mainline embankment to the east of the junction will introduce large scale localised change which will also be visible from the Center Parcs access road. The loss of buildings at High Barn, which make a small positive contribution to existing views, will change the composition of views. While the scheme will not be uncharacteristic of views it will be a very noticeable increase in road infrastructure. The scheme is unlikely to be visible from the village due to screening by landform and mature trees. The magnitude of effect is assessed as <b>major</b>.</p> <p><b>Significance of effect</b> <b>Large</b> and significant.</p>
Operational phase (year 15)
<p><b>Magnitude of effect</b> At year 15 mitigation planting will be established and will partly replace vegetation lost during construction, providing a degree of screening and integration of the scheme. The change to views in comparison to baseline would be noticeable particularly on approaching the new junction and from the access road. The magnitude of effect is assessed as <b>moderate</b>.</p> <p><b>Significance of effect</b> <b>Moderate</b> and significant.</p>



## Temple Sowerby to Appleby

### Landscape

Table 10-27 Assessment of effects on 8b Broad Valleys landscape sub-type

8b Broad Valleys Landscape Sub-type		
<b>Designated landscapes:</b> Views to the North Pennines AONB	<b>Relevant viewpoints:</b> VP4.1 to 4.5, 4.7 to 4.10, 4.12 to 4.16, 4.18 to 4.20, 4.22.	<b>Distance to the scheme:</b> the scheme is in the sub-type
Baseline analysis		
<p>The landscape character of the part of 8b Broad Valleys sub-type that will be affected by the scheme is typical of the landscape of the wider sub-type. There is variation in the degree to which key characteristics are expressed as follows:</p> <ul style="list-style-type: none"><li>• To the west of Kirkby Thore the landscape is relatively large scale and open with views west to the Lakeland Fells and north-east to the North Pennines AONB.</li><li>• Winding lanes on the valley sides are lined with intact trimmed hedges while field boundaries comprise of gappy hedges with hedge trees and drystone walls.</li><li>• The British Gypsum works is a very noticeable feature in the landscape and the eye is drawn to the plume emanating from a tall stack.</li><li>• Fields around Kirkby Thore are smaller and drystone wall field boundaries are more prevalent.</li><li>• Trout Beck valley is small scale, well wooded and relatively secluded with a stronger sense of tranquillity than areas closer to the existing A66.</li><li>• Between Powis House and Roger Head Farm the topography is more undulating and the route of a historic Roman road is accentuated as a feature in the landscape by its position on a ridge and by the mature trees that line the route.</li><li>• There are notable views to the edge of the North Pennines AONB from a bridleway that follows the route of the Roman road.</li></ul>		
<b>Value</b> Medium	<b>Sensitivity:</b> Medium: there are no statutory landscape designations in the sub-type. Kirkby Thore is an historic pennines edge village with a relatively intact traditional character and views from and of it in the setting of the North Pennines AONB are important.	
<b>Susceptibility</b> Medium		
Description of effects of alternatives – See Section 10.7 for alternatives descriptions		
<b>Blue alternative.</b> During construction there will be direct physical impacts on sensitive characteristics and features described in the CLCG. These will occur as follows: <ul style="list-style-type: none"><li>• Loss of hedges, trees and walls leading to alteration of field pattern.</li></ul>		

### 8b Broad Valleys Landscape Sub-type

- Alteration to the setting of the traditional village of Kirkby Thore.
- Alteration of historic lanes and roads on the valley sides.
- Alteration to the undeveloped valley rim to the west and east of Kirkby Thore.
- Alteration to the character of Trout Beck valley.
- Change to the sense of calm associated with open farmland.

In addition the following characteristics will be affected:

- Views of the North Pennines AONB from lanes and PRow around Kirkby Thore and from the Roman road to the north of Crackenthorpe.
- Impacts on the transition between 8b Broad Valleys sub-type and 6 Intermediate Farmland sub-type.

The scheme will result in the alteration of a number of sensitive characteristics and features in the draft DCO boundary between Spitals Farm in the west and Roger Head Farm in the east as identified in the list above. It will affect aesthetic and perceptual aspects of landscape character beyond the draft DCO boundary, including views towards the North Pennines AONB, which will reduce with increasing distance from the scheme. The loss and alteration of features and elements will be partial and uncharacteristic features will be introduced during construction. The magnitude of effect is assessed as **major** during construction in a limited part of the sub-type.

At year 1 the scheme will be a noticeable new feature crossing the open farmland to the west and east of Kirkby Thore and running parallel to the historic Roman road to the east of Powis House. The new structure crossing Trout Beck will be very noticeable affecting the rural character of the valley and the importance of the sinuous river as a feature in the landscape. The alteration to the undulating topography, loss of hedges and alteration to field pattern alongside the Roman road will be considerable. Views to the North Pennines AONB will be affected both from the eastern edge of Kirkby Thore and in the vicinity of the Roman road thereby affecting experience of the landscape of 8b Broad Valleys and its relationship with the AONB. The magnitude of effect is assessed as **major** at year 1 in a limited part of the sub-type.

At year 15 mitigation planting will be established and earthworks will be less noticeable. The mainline will be a noticeable addition to the landscape around Kirkby Thore having a notable influence on the setting to the village, the matrix of fields and hedges and views towards the North Pennines AONB. Noticeable change will remain at year 15 where the scheme runs parallel to the Roman road. It will directly affect landscape character and the way in which the landscape is experienced by users of PRow in that area. The magnitude of effect is assessed as **moderate** at year 15 in a limited part of the sub-type.

#### Red alternative

The effects of the Red alternative will be similar to those of the Blue alternative although the effects on Trout Beck valley will be different as the crossing will be shorter and it will affect an area where the field pattern is irregular and smaller. The structure will be approximately 18m above existing ground level and therefore of greater height than that used for the Blue alternative which will be approximately 7.3m. It will be larger in scale than the Blue alternative and will cross both the Trout Beck valley and a minor road. The Trout Beck valley at the crossing point is also more wooded and the topography more irregular than at the point where the Blue

### 8b Broad Valleys Landscape Sub-type

alternative crosses. The valley is slightly more rural in character and a higher degree of tranquillity is evident. The magnitude of effect is assessed as **major** during construction in a limited part of the sub-type.

At year 1 and year 15 the effects will be similar to the Blue alternative with the exception that the effects on remoteness and tranquillity of Trout Beck valley will be greater although the crossing will be shorter. The magnitude of effect is assessed as **major** at year 1 and **moderate** at year 15 in a limited part of the sub-type.

#### Orange alternative

The Orange alternative is largely in an area influenced by the existing A66 road corridor between Spitals Farm and Powis House. There will be loss of features and elements important to the baseline such as trees, hedges, drystone walls and alteration to historic lanes due to the alignment being slightly offline in places but also due to the requirement for link roads and detention ponds which differ from those required in the Blue and Red alternatives. The magnitude of effect is assessed as **major** during construction in a limited part of the sub-type.

At year 1 the effects of the Orange alternative on the setting of Kirkby Thore will be considerably less than the Blue and Red alternatives as it will follow a largely online route to the south of the village. The crossing of Trout Beck will be of low height and in an area where there is existing infrastructure and development. It will intensify the amount of road infrastructure on the valley rim. It will influence the pattern of historic lanes and alter field boundaries through the introduction of new side roads to the west of Kirkby Thore with the realigned Priest Lane impinging upon views of the North Pennines AONB. The magnitude of effect is assessed as **major** at year 1 in a limited part of the sub-type.

At year 15 the scheme will be a noticeable although not uncharacteristic feature of the baseline between Spitals Farm and Powis House although it will intensify the amount of road infrastructure present particularly to the west of Powis House. New link roads and upgrades to the existing network will also increase the amount of infrastructure to the west of Kirkby Thore. While mitigation planting will achieve a degree of integration the scheme will be a noticeable new feature particularly to the east of Powis House where it runs parallel to the Roman road. The magnitude of effect is assessed as **moderate** at year 15 in a limited part of the sub-type.

#### Significance of effects

Alternative	Construction		Year 1		Year 15	
	Magnitude	Significance	Magnitude	Significance	Magnitude	Significance
Blue	Major	Large	Moderate	Large	Moderate	Moderate
Red	Major	Large	Moderate	Large	Moderate	Moderate
Orange	Major	Large	Moderate	Large	Moderate	Moderate

Table 10-28 Assessment of effects on 6 Intermediate Farmland landscape sub-type

6 Intermediate Farmland Landscape Sub-type		
<b>Designated landscapes:</b> Views to the North Pennines AONB	<b>Relevant viewpoints:</b> VP4.6, 4.11, 4.15, 4.21, 4.23.	<b>Distance to the scheme:</b> the scheme is in the sub-type
Baseline analysis		
<p>The landscape character of the part of 6 Intermediate Farmland sub-type that will be affected by the scheme is typical of the landscape of the wider sub-type. There is variation in the degree to which key characteristics are expressed as follows:</p> <ul style="list-style-type: none"><li>• The British Gypsum works to the north of Kirkby Thore is a notable landmark that adds a large scale industrial feature into the rural landscape and affects views across the sub-type to the North Pennines AONB.</li><li>• Complex, incised topography and wooded landscape to the south-east of Long Marton.</li><li>• Notable edge feature of the Roman road between Powis House and Appleby.</li><li>• The steep sided hills at the edge of the North Pennines AONB dominate the skyline with notable landmarks such as Murton Pike, Dufton Pike and Roman Fell contrasting with the well wooded farmland below.</li></ul>		
<b>Value</b> High	<b>Sensitivity:</b> High: part of the sub-type coincides with the North Pennines AONB and the sub-type is important to the setting of the AONB.	
<b>Susceptibility</b> Medium		
Description of effects of alternatives		
<p><b>Blue alternative.</b></p> <p>During construction there will be direct physical impacts on sensitive characteristics and features described on a small part of the sub-type to the north of Kirkby Thore. There will be loss of hedges, hedge trees, woodland and alteration to field boundaries and field pattern to accommodate the mainline and the junction to the north of Sleastonhow Lane. There will be effects on the relatively tranquil rural character of the landscape. Construction of the section that runs parallel to the Roman road will be noticeable particularly at the eastern end of this section. This will result in physical impacts on a small part of the sub-type and affect the rural character and experience of the landscape in the area between Long Marton and Castrigg. Considering the cumulation of direct and indirect effects on features that are locally important to the landscape, the magnitude of effect is assessed as <b>moderate</b> during construction in a limited part of the sub-type.</p> <p>At year 1 the scheme will be a noticeable new feature to the east of Kirkby Thore where the mainline will be in cutting and a new junction and overbridge will be present. The modifications and overbridge at Sleastonhow Lane will also be visible from the sub-type. The section running parallel to the Roman road will influence landscape character through the introduction of road infrastructure adjacent to the sub-type, thereby introducing noise and movement. The magnitude of effect is assessed as <b>moderate</b> at year 1 in a limited part of the sub-type.</p>		

## 6 Intermediate Farmland Landscape Sub-type

At year 15 mitigation planting will be established and earthworks will be less noticeable. Noticeable change will be evident at year 15 where the scheme runs parallel to the Roman road. It will affect landscape character through the introduction of noise and movement and affect the way in which the landscape is experienced by users of PRoW in that area. The magnitude of effect is assessed as **minor** at year 15 in a limited part of the sub-type.

### Red alternative

The effects of the Red alternative will be similar to those of the Blue alternative although there may be slightly greater effects on the relative tranquillity of the Trout Beck valley near Long Marton as the mainline will be closer than in the Blue alternative. The magnitude of effect is assessed as **moderate** during construction in a limited part of the sub-type.

At year 1 and year 15 the effects will be similar to the Blue alternative with the exception that the effects on remoteness and tranquillity of Trout Beck valley will be greater. The magnitude of effect is assessed as **moderate** at year 1 and **minor** at year 15 in a limited part of the sub-type.

### Orange alternative

The direct physical effects of the Orange alternative will be limited to the construction of a link road to the north of Kirkby Thore and a very short section of the mainline intersecting with the southern extent of the sub-type. There will be slight loss or damage to key characteristics and the magnitude of effect is assessed as **moderate** in a very limited part of the sub-type.

At year 1 the new link road and mainline will be noticeable new elements in the landscape and the scheme will be partly visible from areas of the sub-type adjacent to it. The magnitude of effect is assessed as **minor** at year 1 in a very limited part of the sub-type.

At year 15 mitigation planting at the link road will integrate it reasonably well into the landscape. It will be a noticeably wider road than the lanes that characterise the sub-type although it will be associated with the existing access to the British Gypsum works which is wider than local roads. The effects on the area adjacent to the Roman road will remain as the scheme will continue to influence adjacent landscape character through the introduction of noise and movement. The magnitude of effect is assessed as **minor** at year 15 in a limited part of the sub-type.

## Significance of effects

Alternative	Construction		Year 1		Year 15	
	Magnitude	Significance	Magnitude	Significance	Magnitude	Significance
Blue	Moderate	Large	Moderate	Moderate	Minor	Moderate
Red	Moderate	Large	Moderate	Moderate	Minor	Moderate
Orange	Moderate	Moderate	Minor	Moderate	Minor	Slight

Table 10-29 Assessment of effect on the North Pennines AONB

North Pennines Area of Outstanding Natural Beauty	
<b>Relevant viewpoints:</b> VP4.1 to 4.3, 4.5, 4.8, 4.13, 4.19, 4.20, 4.22, 4.24 to 4.26	<b>Distance to the scheme:</b> 2km to the south-west
Baseline analysis	
<p>This table provides an overview of the assessment of the effects of the scheme on the North Pennines AONB. The viewpoints listed in this table include typical views back towards and from the AONB that inform the baseline and assessment of effects.</p> <p>The scheme will potentially affect the setting of the AONB as it will be visible in views to and from the designated area. Baseline photography indicates that in elevated views from the AONB to the landscape in which the scheme will be located the existing A66 is a very minor element and traffic is barely discernible. In views towards the AONB the skyline is dominated by the steep hills that form a 'scarp' edge with landmark peaks such as Murton Pike, Dufton Pike and Roman Fell. The dark green, brown, yellow and grey hues of the hills contrast with the rust colour of red sandstone and greens of vegetation in the valley and foothills below. The movement of light and shade across the hills contributes to the scenic qualities of views and an appreciation of the scale of the upland area.</p> <p>The landscape character of the AONB is described in the North Pennines AONB Management Plan 2019-24 which also refers to the following special environmental qualities of the AONB:</p> <ul style="list-style-type: none"> <li>• Peatland</li> <li>• Hay meadows and species-rich grassland, including arctic alpine flora</li> <li>• Upland woodland</li> <li>• Upland rivers</li> <li>• Geological heritage, including soils</li> <li>• Upland birds</li> <li>• Cultural heritage and the built environment</li> <li>• Scenic beauty, remoteness, wildness and tranquillity including dark skies.</li> </ul> <p>For the purposes of this preliminary assessment of effects of the scheme on the North Pennines AONB the special environmental qualities listed above relevant to landscape and visual assessment are considered along with the following LCT:</p> <ul style="list-style-type: none"> <li>• Upland Fringe Foothills LCT</li> <li>• Upland Fringe Pikes</li> <li>• Moorland Scarp</li> <li>• Moorland Summit</li> </ul>	
<b>Value</b> High	<b>Sensitivity:</b> Very high due to its designation as an AONB and status as a UNESCO Global Geopark.
<b>Susceptibility</b> High	



## North Pennines Area of Outstanding Natural Beauty

### Description of effects of alternatives

#### Blue alternative.

The Blue alternative will be approximately 2km from the boundary of the AONB where the Upland Fringe Foothills LCT is identified and which merges into the higher ground of Upland Fringe Pikes LCT to the south-east. To the east of these two LCT the Moorland Scarp LCT extends in a band north-west to south-east with the Moorland Summit LCT forming the higher plateau above.

None of these LCT will be physically affected by the scheme. The scheme may be discernible during construction from the Upland Fringe Foothills LCT although layers of intervening vegetation and undulating landform will limit visibility. The scheme will be visible from the Upland Fringe Pikes LCT and in particular Dufton Pike (481m AOD) and Murton Pike (594m AOD). The elevated land and hill tops of the Upland Fringe Pikes LCT allow panoramic long distance views along the Eden Valley and towards the Lake District Fells and the Yorkshire Dales.

Moorland Scarp and Moorland Summit LCT also allows elevated views in the direction of the scheme which will be discernible during construction. Collectively, the four LCT listed above, form the backdrop to views towards the AONB and from a number of areas to the west of the AONB, the scheme will be visible during construction and will impinge upon views of the AONB.

Of the special qualities listed above, scenic quality, remoteness, wildness and tranquillity including dark skies could potentially be affected by the scheme. The lower lying Upland Fringe Foothills LCT is a transitional landscape where agriculture is the dominant land use and has a more settled and modified character than the upland areas. There are notable scenic qualities and the sparse settlement pattern provides areas of remoteness, wildness and tranquillity away from the larger settlements and infrastructure corridors of the Eden Valley. In the more elevated LCT there is a greater appreciation of remoteness, wildness and tranquillity as these areas are further from settlements, infrastructure and enclosed farmland and with different scenic qualities to the lowland areas. While the scheme will be visible during construction it will result in limited effects on these special qualities and will affect a very limited part of the AONB.

The magnitude of effect on landscape character and special qualities during construction is assessed as **minor**.

At year 1 of operation the scheme will be a noticeable new feature in the Broad Valleys sub-type and traffic using the scheme will be visible from southern parts of the AONB. It will be seen in the context of Kirkby Thore and the British Gypsum works and while this will increase the amount of development in the landscape adjacent to the AONB, it will not result in substantial intensification of development to the detriment of the special qualities of the AONB. The magnitude of effect on landscape character and special qualities at year 1 is assessed as **minor**.

At year 15 mitigation planting will be established and it is predicted that earthworks will be less noticeable due to distance of the AONB from the scheme and the filtering and screening effect of intervening vegetation. Traffic using the scheme will be discernible and this will be more noticeable in views towards the AONB from the east of Kirkby Thore. The magnitude of effect on landscape character and special qualities at year 1 is assessed as **minor**.

#### Red alternative

### North Pennines Area of Outstanding Natural Beauty

The effects of the Red alternative will be similar to those of the Blue alternative although the Trout Beck crossing will be slightly closer to the edge of the AONB and will impinge slightly more on views of the AONB from the bridleway that runs along the Roman road to the west of Powis House. The magnitude of effect on landscape character and special qualities during construction is assessed as **minor**. At year 1 and 15 the effects will be similar to the Blue alternative and the magnitude of effect will be **minor** at year 1 and year 15.

#### Orange alternative

The majority of construction work associated with the Orange alternative will occur in the vicinity of the existing A66 corridor, largely in an area influenced by the existing A66 road corridor between Spitals Farm and Powis House. There will be construction activity associated with link roads to the north of Kirkby Thore within approximately 2km of the AONB boundary. This will be visible in views towards the AONB and scenic quality will be temporarily affected. The magnitude of effect is assessed as Minor.

At year 1 the effects of the Orange alternative on the AONB will be less than those of the Blue and Red alternatives due to the greater separation distance between the mainline and the AONB and the fact that it will occupy the existing A66 corridor and therefore will not be uncharacteristic of the baseline. The new link road to the north and west of Kirkby Thore will be a noticeable feature which will be a distant element in elevated views from the AONB and more noticeable in views towards the AONB. The magnitude of effect on landscape character and special qualities at year 1 is assessed as **minor**.

At year 15 traffic using the mainline will potentially be visible from the AONB at distances of 3km and greater and will not be uncharacteristic of the baseline as it will be seen in a similar location to the existing A66, except where it will be glimpsed running parallel to the Roman road to the north of Crackenthorpe. The link road to the north and west of Kirkby Thore will be a noticeable new feature in view towards the AONB. While the effects of the Orange alternative will reduce slightly the magnitude of effect will remain as **minor**.

#### Significance of effects

Alternative	Construction		Year 1		Year 15	
	Magnitude	Significance	Magnitude	Significance	Magnitude	Significance
Blue	Minor	Moderate	Minor	Moderate	Minor	Slight
Red	Minor	Moderate	Minor	Moderate	Minor	Slight
Orange	Minor	Moderate	Minor	Moderate	Minor	Slight

#### Visual

10.9.10 The visual assessment firstly considers residents in the following individual properties and groups of properties:

- Residents of Kirkby Thore
- Residents at Spitals Farm
- Residents between Low Moor and Kirkby Thore
- Residents between Bank End Farm and Powis House
- Residents between Sleastonhow Farm and Appleby.

10.9.11 PRow and long-distance trails are considered as follows:

- PRow at Temple Sowerby
- PRow at Kirkby Thore
- PRow between Powis House and Appleby.

Table 10-30 Assessment of effects on residents of Kirkby Thore

Residents of Kirkby Thore		
<b>Receptor category:</b> residents	<b>Distance to scheme:</b> adjacent	<b>Sensitivity:</b> medium
<b>Relevant viewpoints:</b> VP4.4, VP4.5, VP4.6, VP4.7, VP4.8		
Baseline conditions		
Residents of Kirkby Thore experience relatively open views west across large scale, rolling farmland through layers of intervening vegetation in field boundaries. There are views east from Main Street along the Trout Beck valley and towards the North Pennines AONB. There are views north towards the British Gypsum works from Dunfell View and Sanderson Court. Residents at the southern end of Main Street and along the south side of the existing A66 experience views to the south into the River Eden valley. For the majority of residents of Kirkby Thore, where visible the existing A66 is a relatively minor feature in views.		
Description of effects of alternatives		
<p><b>Blue alternative</b></p> <p>Construction activities will be very noticeable to residents of Kirkby Thore with most residents experiencing views from their dwellings or from within public areas in the village as they travel to and from and within the village. Construction lighting will also be noticeable introducing point sources of light. The greatest impacts are likely to be experienced by residents at Dunfell View, Sanderson Court and on Main Street. Residents of properties at Dunfell View will experience views of construction of the mainline and of the realigned Cross Street and overbridge. Residents at Sanderson Court will experience views of construction of the mainline and the new junction to the north of Sleastonhow Lane. Residents of Main Street will experience views of construction of the mainline and upgrade to Sleastonhow Lane.</p> <p>At year 1 there will be views from Dunfell Lane west to the mainline on embankment and glimpsed views of the overbridge at Cross Street. At Sanderson Court the mainline will be visible from upper floors of dwellings, as will the overbridges associated with the new junction north of Sleastonhow and the farm access north-west of Sanderson Court. Residents along Main Street will experience views of the mainline where it crosses Sleastonhow Lane and the re-aligned lane and overbridge will be noticeable as will lights of vehicles using the scheme at night. The crossing of Trout Beck may be discernible.</p> <p>At year 15 mitigation planting will have softened the appearance of the scheme from Dunfell View and from Sanders on Court although the cutting will be a very noticeable change and high sided vehicles will be partly visible. Mitigation planting will also soften the appearance of the scheme in views from Main Street although it will be a noticeable new feature in views and the lights of vehicles will be discernible where previously lights were not a characteristic of the baseline.</p>		

### Residents of Kirkby Thore

#### Red alternative

The impacts on residents will be similar to the Blue alternative. The overbridge at Sleastonhow Lane will be more noticeable. The crossing at Trout Beck is unlikely to be discernible due to screening by landform and vegetation.

#### Orange alternative

The Orange alternative will affect mainly residents at the southern end of Main Street and the south side of the A66 immediately west of the existing junction with Main Street. Residents will experience views of construction of the mainline in close proximity to their properties. There will also be impacts on residents of Dunfell View who will experience views of upgrades to Cross Street and link roads on embankment to the west.

At year 1 the mainline will be a dominant focal point in views south from properties on the south side of the existing A66 and very noticeable to residents of properties at the south end of Main Street on the north side of the existing A66. The new link roads to the west of Dunfell View will be noticeable to residents although impacts will reduce from those experienced at construction.

At year 15 the mainline will remain a dominant focal point in views from properties in the south and impacts will not reduce. The link roads will be better integrated than at year 1 due to mitigation planting having established.

#### Assessment of effects

Alternative	Construction		Year 1		Year 15	
	Magnitude	Significance	Magnitude	Significance	Magnitude	Significance
Blue	Major	Large	Major	Large	Moderate	Moderate
Red	Major	Large	Major	Large	Moderate	Moderate
Orange	Major	Large	Major	Large	Major	Large

Table 10-31 Assessment of effects on residents at Spitals Farm, Priest Lane and Low Moor

### Residents at Spitals Farm, Priest Lane and Low Moor

<b>Receptor category:</b> residents	<b>Distance to scheme:</b> adjacent	<b>Sensitivity:</b> medium
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**Relevant viewpoints:** VP4.3

#### Baseline conditions

Residents of the property at Spitals Farm experience views to the south and the existing A66 which are screened by vegetation. Views to the east and north are screened by farm buildings. Residents of the three properties at the west end of Priest Lane experience open and elevated views to the west and east. Residents of properties at Low Moor on the south side of the existing A66 experience views north to the existing A66 in close proximity and against the backdrop of the AONB which forms the horizon to views.

#### Description of effects of alternatives

## Residents at Spitals Farm, Priest Lane and Low Moor

### Blue alternative

Construction will result in the loss of some vegetation alongside the alignment to accommodate widening and a noise barrier. Construction of the new link road that runs parallel to the mainline will be noticeable and there will be oblique views from the curtilage of the Spitals Farm of construction of the new underpass to the east. There will be oblique views from properties at Priest Lane of construction of the mainline.

At Low Moor residents of a number of properties will experience short range views of construction of the mainline on embankment. For both Spitals Farm and Low Moor construction activities will be a dominant focal point of views.

At year 1 traffic will be visible on the mainline at Spitals Farm and on the link road to the south, and at year 15 mitigation planting will have become established and reduce effects slightly. At Priest Lane there will be oblique views of traffic using the mainline.

At Low Moor traffic will be visible on embankment at year 1 and will be a very noticeable addition where it traverses open farmland to the north of the existing A66, although not uncharacteristic of the baseline. At year 15 mitigation planting will have become established and will filter or partly screen views of traffic, and impacts will reduce.

### Red alternative

The impacts on residents will be the same as the Blue alternative.

### Orange alternative

At Spitals Farm the scale of change will be less than for the Blue or Red alternatives as a link road will not be required to the south of the existing A66. Construction of the re-alignment of Priest Lane link road will not be discernible from Spitals Farm due to screening by farm buildings and landform. At Year 1 mitigation planting will not yet have established and traffic will be more noticeable than at present due to loss of vegetation, and the underpass will be visible in oblique views. At year 15 mitigation planting will have become established and effects will reduce.

At Priest Lane construction of the re-aligned Priest Lane will be very noticeable. At Year 1 and Year 15 the realigned Priest Lane will result in limited intensification of road infrastructure.

At Low Moor construction will be a dominant focal point in views. At year 1 traffic will be visible on embankment a short distance from properties and will represent an increase in intensification of road infrastructure. At year 15 mitigation planting will have become established and will filter or partly screen views of traffic, and impacts will reduce slightly but remain a considerable change compared to baseline.

## Assessment of effects

Alternative	Construction		Year 1		Year 15	
	Magnitude	Significance	Magnitude	Significance	Magnitude	Significance
Blue	Major	Large	Major	Large	Moderate	Moderate
Red	Major	Large	Major	Large	Moderate	Moderate

Residents at Spitals Farm, Priest Lane and Low Moor						
Orange	Major	Large	Major Minor (Priest Lane only)	Large Slight (Priest Lane only)	Major Minor (Priest Lane only)	Large Slight (Priest Lane only)

Table 10-32 Assessment of effects on residents between Low Moor and Kirkby Thore

Residents between Low Moor and Kirkby Thore						
Receptor category: residents		Distance to scheme: adjacent		Sensitivity: medium		
Relevant viewpoints: n/a						
Baseline conditions						
This table describes effects on a group of six properties that includes four properties at Eden View Farm and single properties at Street House and Glen Field at the south end of Piper Lane. Residents of all properties experience views directly towards the existing A66.						
Description of effects of alternatives						
<b>Blue alternative</b> The Blue alternative will pass approximately 300m to the north of properties at Eden View and 500m to the north-west of Street House and Glen Field. During construction residents of properties at Eden View will experience views of construction activity which will be noticeable and readily apparent, and residents of Glen View will experience longer distance views. At year 1 residents of Eden View will experience views of traffic at a distance of approximately 350m. The existing A66 will be retained as local access and it is likely that traffic will be less noticeable than at present. At year 15 mitigation planting will have established and will provide screening to the earthworks and integration of the alignment into the landscape. The degree of change to views experienced by residents at Street House and Glen View will be similar.						
<b>Red alternative</b> The impacts on residents will be similar to the Blue alternative.						
<b>Orange alternative</b> The Orange alignment will pass in close proximity to all six properties and during construction the scheme will be a dominant focal point in views. At year 1 and year 15 the Orange alignment will be further away from the properties than the existing A66 which will be retained for local access. However, there will be intensification of road infrastructure and while traffic will be further away from the properties and not uncharacteristic of views it is considered that, relative to baseline, the scheme will be a noticeable new feature.						
Assessment of effects						
Alternative	Construction		Year 1		Year 15	
	Magnitude	Significance	Magnitude	Significance	Magnitude	Significance
Blue	Moderate	Moderate	Minor	Slight	Minor	Slight

Residents between Low Moor and Kirkby Thore						
Red	Moderate	Moderate	Minor	Slight	Minor	Slight
Orange	Major	Large	Moderate	Moderate	Moderate	Moderate

Table 10-33 Assessment of effects on residents between Bridge End Farm and Powis House

Residents between Bridge End Farm and Powis House						
Receptor category: residents			Distance to scheme: adjacent (Orange alternative)		Sensitivity: medium	
Relevant viewpoints: VP4.19						
Baseline conditions						
This table describes effects on two properties. One at Bridge End Farm and another at Barley half-way between Main Street and Sleastonhow Lane to the east. The property at Bridge End Farm is approximately 30m from the existing A66 with uninterrupted views in the direction of the A66. The property at Barley is set back from the A66 and screened by landform and vegetation with relatively enclosed views to the north-west.						
Description of effects of alternatives						
<b>Blue alternative</b> Construction will be visible from Bridge End Farm at a distance of approximately 950m and there will be oblique views from Barley at a distance of approximately 650m. The scheme will be perceptible but will not alter the overall balance of features or elements in the view. At years 1 and 15 traffic will be visible on the mainline and the existing A66 will be retained for local access. It is likely that residents of Bridge End Farm will experience a slight reduction in traffic compared to baseline with very little discernible change in traffic levels for residents at Barley.						
<b>Red alternative</b> The impacts on residents will be similar to the Blue alternative.						
<b>Orange alternative</b> The Orange alternative will result in the removal of the property at Bridge End Farm. While the alternative will be a short distance from Barley it is unlikely to be visible from inside the dwelling due to screening by landform and vegetation immediately to the south of the property. Construction activities will be visible from the property access and the scheme will be visible from the property access at year 1 and year 15. While the scheme will be visible from the property access it will not be visible from the immediate curtilage of the dwelling and it will not be a focal point in sustained static views from the dwelling.						
Assessment of effects						
Alternative	Construction		Year 1		Year 15	
	Magnitude	Significance	Magnitude	Significance	Magnitude	Significance



Residents between Bridge End Farm and Powis House						
<b>Blue</b>	Minor	Slight	Negligible	Slight	Negligible	Slight
<b>Red</b>	Minor	Slight	Negligible	Slight	Negligible	Slight
<b>Orange</b>	Moderate	<b>Moderate</b>	Moderate	<b>Moderate</b>	Moderate	<b>Moderate</b>

Table 10-34 Assessment of effects on residents between Sleastonhow Farm and Appleby

Residents between Sleastonhow Farm and Appleby		
<b>Receptor category:</b> residents	<b>Distance to scheme:</b> adjacent	<b>Sensitivity:</b> medium
<b>Relevant viewpoints:</b> VP4.9, 4.10, 4.12, 4.13, 4.22		
Baseline conditions		
<p>This table describes effects on properties in the rural area between Sleastonhow Farm and Appleby. It provides an overview of where significant likely effects are probable. Effects on properties will be assessed in detail at a later date and described in the ES submitted with the DCO application. The following rural properties are situated between Sleastonhow Farm and Crackenthorpe and are either in close proximity to the scheme or residents will potentially experience uninterrupted views in the direction of the scheme:</p> <ul style="list-style-type: none"> <li>• Sleastonhow Farm and Hare Cottage</li> <li>• Side Lands, to the south-east of Sleastonhow</li> <li>• Powis House, Dunelm, Powis Cottage and Roman Vale</li> <li>• Properties at Broom, to the south of Long Marton</li> <li>• Castrigg House to the south of Keld</li> <li>• Meadow Ing Farm</li> <li>• Properties at Roger Head Farm</li> </ul>		
Description of effects of alternatives		
<p><b>Blue alternative</b></p> <p>Construction will be very noticeable to residents of properties at Sleastonhow, the group at Powis House and properties at Roger Head Farm. Dunelm will be demolished to accommodate the Blue alternative. Most of the properties are in the vicinity of the Trout Beck crossing or on the south side of the ridge on which the Roman road is located. At year 1 the scheme will be a very noticeable new feature in views from these properties and at year 15, while mitigation planting will achieve a degree of integration, the scheme will be a very noticeable change to the baseline. Traffic using the scheme at night will introduce vehicle lights into an area where existing light sources are absent. While there will be minimal light spill from vehicle lights it will be a discernible change to night time views. For other properties the scheme will not be a noticeable feature due to screening by landform, buildings or vegetation.</p> <p><b>Red alternative</b></p>		

### Residents between Sleastonhow Farm and Appleby

There will be views of construction for Side Lands and properties at Broom. The effects will be more intense than the Blue alternative for properties at Sleastonhow as the scheme will be closer than the Blue alternative. Dunelm will not be demolished. For other properties the effects will be similar to the Blue alternative.

#### Orange alternative

The effects of the Orange alternative will be similar to the Blue alternative with the exception that Dunelm will not be demolished and will remain in close proximity to the alternative. The potential effects on properties at Sleastonhow will be considerably less than for the Blue and Red alternatives as the mainline will be approximately 750m to the south-west on the alignment of the existing A66.

### Assessment of effects

Alternative	Construction		Year 1		Year 15	
	Magnitude	Significance	Magnitude	Significance	Magnitude	Significance
Blue	Major	Large	Major	Large	Moderate	Large
Red	Major	Large	Major	Large	Moderate	Large
Orange	Major	Large	Major	Large	Moderate	Large

Table 10-35 Assessment of effects on PRoW at Temple Sowerby

### PRoW at Temple Sowerby

**Receptor category:** recreational    **Distance to scheme:** 100m    **Sensitivity:** high

**Relevant viewpoints:** VP4.1

#### Baseline conditions

This table describes effects on PRoW 368004 to the south-east of Temple Sowerby. PRoW 368004 runs between the River Eden in the south and the minor road at the eastern edge of Temple Sowerby in the north. It passes beneath the existing A66 dual carriageway section in an underpass. Other PRoW at Temple Sowerby are unlikely to be significantly affected.

#### Description of effects of alternatives

##### Blue alternative

Construction of the new roundabout and link road to the west of Spitals Farm will be a very noticeable change to views east from the PRoW. The loss of hedges will be noticeable and construction activities will be very noticeable for a short duration. At years 1 and 15 the scheme will result in intensification of road infrastructure visible from the southern part of the PRoW with a reduction in effect at year 15 due to mitigation planting having established and integrated earthworks.

##### Red alternative

The impacts on users of the PRoW will be similar to the Blue alternative.

PRoW at Temple Sowerby						
<b>Orange alternative</b>						
The Orange alternative will not include a new roundabout and link road to the east of the PRoW. There will be limited change to views from the southern part of the PRoW. There will be glimpsed views of construction at Priest Lane from the northern part of the PRoW and some vegetation loss will be noticeable. At years 1 and 15 the western part of the realigned Priest Lane will be noticeable in views east from the northern part of the PRoW.						
<b>Assessment of effects</b>						
Alternative	Construction		Year 1		Year 15	
	Magnitude	Significance	Magnitude	Significance	Magnitude	Significance
Blue	Moderate	<b>Moderate</b>	Moderate	<b>Moderate</b>	Minor	Slight
Red	Moderate	<b>Moderate</b>	Moderate	<b>Moderate</b>	Minor	Slight
Orange	Minor	Slight	Minor	Slight	Minor	Slight

Table 10-38: Assessment of effects on PRoW at Kirkby Thore

PRoW at Kirkby Thore		
<b>Receptor category:</b> recreational	<b>Distance to scheme:</b> adjacent	<b>Sensitivity:</b> high
<b>Relevant viewpoints:</b> VP4.1-4.10, 4.19		
Baseline conditions		
This table describes effects on PRoW in the area around Kirkby Thore between the River Eden in the south-west and the British Gypsum works in the north. It includes the area between Low Moor in the west and Powis House in the east. Views from PRoW to the south of Kirkby Thore and the existing A66 are focused along the River Eden valley. Views from PRoW to the west of Kirkby Thore look out across open, rolling farmland with views of the Lake District Fells and the North Pennines AONB. Views from PRoW to the east of Kirkby Thore are focussed along Trout Beck valley with Sleastonhow Lane visible on a ridge on the middle ground against the backdrop of the North Pennines AONB and landmark features such as Murton Pike. Views from PRoW to the north of Kirkby Thore look across a large scale, relatively open landscape of rolling topography to the North Pennines AONB. The British Gypsum works is a very noticeable feature.		
Description of effects of alternatives		
<b>Blue alternative</b>		
Construction of the Blue alternative will result in severance of several PRoW to the north of Kirkby Thore and construction will be a dominant focal point in views from the diverted sections of PRoW. At years 1 and 15 the scheme will be a very noticeable new feature in views from PRoW to the north of Kirkby Thore.		

### PRoW at Kirkby Thore

For users of PRoW to the east of Kirkby Thore there will be views of construction on the ridge at Sleastonhow Lane which will impinge upon views of the North Pennines AONB. At years 1 and 15 the scheme will be a noticeable new feature and traffic will introduce movement into a part of the view where presently there is limited visible movement. Mitigation is still being developed for this scheme, and will include reinstatement of landscape features where appropriate, the extent to which mitigation will improve views of the new road will be limited.

Users of PRoW to the west and south will experience more distant views of construction and operation. Effects on these PRoW will be limited.

#### Red alternative

The impacts on users of the PRoW will be similar to the Blue alternative.

#### Orange alternative

The Orange alternative will result in effects primarily on PRoW to the north, west and south of Kirkby Thore.

For PRoW to the north effects will relate primarily to construction of the eastern part of the re-aligned Priest Lane link road and the new link road between Cross Street and the British Gypsum works access road. Construction will result in temporary severance of PRoW and be very noticeable in views to the north towards the North Pennines AONB. At year 1 and year 15 the link road will be a noticeable new feature in views from the PRoW compared to the baseline.

For PRoW to the west of Kirkby Thore, construction of the mainline will be very noticeable albeit slightly restricted by buildings on the south side of the existing A66 and intervening vegetation. At years 1 and 15 the scheme will be a noticeable although not uncharacteristic feature of views.

For PRoW to the south of Kirkby Thore there will be severance of two PRoW to the west and east of Bank End Farm. These PRoW will be accessible from the south and construction of the mainline and the structure at the crossing of Trout Beck will be a dominant focal point in views from the northern part of these two PRoW. At years 1 and 15 the new structure and mainline will be a very noticeable new feature compared to the baseline. Mitigation planting will provide a degree of screening which will reduce effects slightly at year 15.

### Assessment of effects

Alternative	Construction		Year 1		Year 15	
	Magnitude	Significance	Magnitude	Significance	Magnitude	Significance
Blue	Major	Very large	Major	Large	Major	Large
Red	Major	Very large	Major	Large	Major	Large
Orange	Major	Very large	Major	Large	Major	Large

Table 10-36 Assessment of effects on PRoW 341017, 317008 and 317009

### PRoW 341017, 317008 and 317009

Receptor category: recreational	Distance to scheme: adjacent	Sensitivity: high
Relevant viewpoints: VP4.10, 4.11, 4.22		

**PRoW 341017, 317008 and 317009**

**Baseline conditions**

PRoW 341017 runs west from the outskirts of the village of Long Marton to the bridleway that follows the route of the historic Roman road to the east of Powis House. It follows a minor road along the rim of Trout Beck valley before crossing the floodplain and Trout Beck, ascending to Powis House and joining PRoW 317009 to the south of Powis House. PRoW 317009 is a short link route between PRoW 341017 and PRoW 317008. It crosses a level field between the Roman road and the existing A66. PRoW 317008 follows a farm access track to Redlands Bank Farm between the existing A66 and a minor road to the east of Bolton Bridge.

**Description of effects of alternatives**

**Blue alternative**

The mainline alignment of the Blue alternative will sever the western end of PRoW 341017 and construction will be very noticeable to users across the floodplain looking north-west to Sleastonhow, and while crossing the field to the east of Powis House. At year 1 the earthworks south of Sleastonhow and the structure crossing the floodplain of Trout Beck will be very noticeable new features and the scale of change to views will be considerable for users of the western part of the PRoW. At year 15 there will be a softening of the earthworks as mitigation planting will have established providing a degree of integration. The structure across Trout Beck floodplain will, however, be a very noticeable feature in views.

The eastern end of PRoW 317009 will be severed by the mainline. During construction the scheme will be a dominant focal point in views. During operation the precise route of the realigned PRoW is yet to be determined. It is likely that effects will be considerable during year 1 and year 15 compared to baseline due to the scale of change and intensification of road infrastructure in this locality. During construction the alternative will be very noticeable from the eastern part of PRoW 317008. It will not be visible from the western part due to screening by buildings at Redlands Bank Farm and landform to the west. At year 1 earthworks will be noticeable and a detention pond will be discernible to the west of Powis House. The structure crossing the Trout Beck valley will be visible as will the mainline ascending the small ridge at Sleastonhow. At year 15 there will be a slight reduction in effect.

**Red alternative**

The Red alternative will affect primarily PRoW 341017. The mainline will cross the PRoW at the structure crossing of Trout Beck valley. There will be a detention pond to the north of the PRoW which will be partly screened by a belt of trees. Construction will be very noticeable to users of the PRoW and the scheme will be a dominant focal point. At year 1 the mainline will be noticeable to the north of the PRoW where it ascends towards Sleastonhow and the structure crossing of Trout Beck will be a prominent new feature in views. At year 15 while mitigation planting will integrate earthworks into the landscape to a degree, the scheme will be a very noticeable new feature in views from the PRoW across the rural landscape and the structure crossing of Trout Beck will be a notable feature.

**Orange alternative**

The Orange alternative will pass immediately adjacent to the western end of PRoW 341017. A detention pond will be located immediately to the east of the PRoW to the south of Powis House. Construction of the mainline will be very noticeable approaching Powis House from the north from where there will be noticeable vegetation loss along the Roman road and along the alignment of the

#### PRoW 341017, 317008 and 317009

existing A66. At year 1 the mainline on embankment to the west and the realigned side road to the east on overbridge will be very noticeable, as will traffic using the scheme at grade immediately to the south of the PRoW. At year 15 there will be a degree of integration as mitigation planting will be established although the increase in road infrastructure will be very noticeable.

The alternative will sever PRoW 317009 resulting in considerable effects at construction and operation year 1 and year 15.

At the northern end of PRoW 317008 realignment of the existing A66, which will be used as local access, will sever the PRoW.

Construction of the mainline and realigned A66 will be the dominant focal point in views impinging on views of the North Pennines AONB. At year 1 the scheme will be a very noticeable addition to views particularly to the north-west where the mainline will be on embankment with the re-aligned, de-trunked A66 crossing the mainline on an overbridge. At year 15 there will be a degree of integration although the change in views will be considerable compared to baseline.

#### Assessment of effects

Alternative	Construction		Year 1		Year 15	
	Magnitude	Significance	Magnitude	Significance	Magnitude	Significance
Blue	Major	Very large	Major	Large	Major	Large
Red	Major	Very large	Major	Large	Major	Large
Orange	Major	Very large	Major	Large	Moderate	Large

Table 10-37 Assessment of effects on PRoW between Powis House and Appleby

#### PRoW between Powis House and Appleby

Receptor category: recreational	Distance to scheme: adjacent	Sensitivity: high
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Relevant viewpoints: VP4.12-4.15

#### Baseline conditions

This table considers the likely significant effects on a number of PRoW between Powis House and Appleby.

PRoW 341001 is a bridleway that runs south-east from Powis House along the route of a historic Roman road passing beneath a railway line to the minor road that connects Appleby with Dufton. The bridleway follows high ground for the majority of its length and this affords users panoramic views south-west and west across the Eden Valley to the Yorkshire Dales and Lake District Fells. There are elevated views north and east to the edge of the North Pennines AONB and the notable landmark hills of Murton Pike and Roman Fell. Mature trees on either side of the bridleway and the sparsely populated rural land to the north give a strong sense of tranquillity and rural calm.

PRoW 341005 and PRoW 341004 run south-west to connect with PRoW 341001 with 341004 continuing as 317004 south-west of the Roman road. Both of these routes connect with PRoW 341003 which follows the route of Castrigg Lane to the north. Both PRoW

### PRoW between Powis House and Appleby

341005 and PRoW 341004 ascend the side of the ridge on which the Roman road is located and there is a sense of expectation of views on reaching the ridge crest.

PRoW 317012 is a bridleway that runs north-east from the village of Crackenthorpe and connects with PRoW 341001 that runs along the Roman road. The bridleway ascends steep ground before descending into a shallow dip then ascending to the Roman road. There are notable views to the North Pennines AONB with the Roman road accentuated as a feature in the landscape by the mature trees that line it on either side.

PRoW 317006 is a footpath that connects with PRoW 317012 on the fringes of Crackenthorpe and traverses the slopes of the ridge north-east then north before following field boundaries north-east to connect with PRoW 341001 on the Roman road.

### Description of effects of alternatives

#### Blue alternative

At the west end of PRoW 341001 the mainline will be constructed immediately to the south where the PRoW connects with the minor road to Long Marton. At this location the minor road will be re-aligned and cross the mainline on an overbridge. To the east of this point the mainline will be constructed immediately to the south of the route of the Roman road along which PRoW 341001 passes. There will be considerable impacts on views from PRoW 341001 during construction and on views from PRoW 341004 and 341005 where these connect with the Roman road. There will also be considerable impacts on PRoW 317004, 317006 and 317012, the northern ends of which will be severed by the mainline during construction and operation.

At year 1 the scheme will be a very noticeable new feature in views from all of the PRoW discussed above. The scheme will introduce large scale change uncharacteristic of the baseline and during operation movement and noise from traffic will considerably affect enjoyment of these PRoW where they connect with the Roman road. At year 15 mitigation planting will have become established and earthworks will achieve a degree of integration with the surrounding landscape, slightly reducing the effects experienced at year 1. However, the scheme will be a considerable change to baseline and views from these PRoW will be substantially changed.

#### Red alternative

The key difference with the Red alternative is that it passes approximately 450m to the north-east of the west end of PRoW 341001 before crossing the Roman road approximately 750m south-east of the minor road to Long Marton. The degree of construction and operation effects will be similar to the Blue alternative although at the western end of PRoW 341001 construction and operation of the new crossing of Trout Beck will be a notable feature in views. Effects on other PRoW discussed above will be similar to those experienced with the Blue alternative.

#### Orange alternative

The Orange alternative follows the same alignment as the Blue alternative between Powis House and Appleby and there will be a realignment of the minor road to Long Marton and an overbridge at the western end of PRoW 341001. Effects on PRoW 341001 and other PRoW discussed above will be similar to the Blue alternative.

### Assessment of effects



PRoW between Powis House and Appleby							
Alternative	Construction			Year 1		Year 15	
	Magnitude	Significance		Magnitude	Significance	Magnitude	Significance
Blue	Major	Very large			Major	Very large	Major Large
Red	Major	Very large			Major	Very large	Major Large
Orange	Major	Very large			Major	Very large	Major Large

## Appleby to Brough

### Landscape

Table 10-38 Assessment of effects on 8b Broad Valleys landscape sub-type

8b Broad Valleys Landscape Sub-type		
<b>Designated landscapes:</b> North Pennines AONB and Yorkshire Dales National Park	<b>Relevant viewpoints:</b> VP 6.1 to 6.10	<b>Distance to the scheme:</b> adjacent
Baseline analysis		
<p>The landscape character of the part of 8b Broad Valleys sub type that will be affected by the scheme is typical of the landscape of the wider sub-type with regard to wide open floodplain, rural farmland, hedges and walls forming a matrix of field boundaries, and with road and railway lines following the valley contours in the shadow of the North Pennines AONB and the upland fells. There is variation in the degree to which key characteristics are expressed as follows, and the additional complexity of the local landscape is due in part to the proximity to the AONB and Warcop Village:</p> <ul style="list-style-type: none"> <li>The visual interaction with the North Pennines AONB, the distant Yorkshire Dales National Park and the surrounding interrelationship with the varied landscape sub-types of Rolling Farmland, Foothills and Scarps results in the local landscape sub-type retaining an overall calm, tranquil and rural character.</li> <li>Directly south of the scheme the landscape sub-type Broad Valleys predominantly has a medium scale field pattern in contrast to the areas further south that have an irregular smaller sized field pattern typical of the River Eden valley .</li> <li>To the south where the River Eden and nucleated villages such as Warcop and Sandford influence land use the field pattern is more regular with some areas of smaller rectilinear and coaxial historic field patterns.</li> </ul>		

### 8b Broad Valleys Landscape Sub-type

- The sub-type includes part of Warcop Training Area and Eden Valley scenic railway line, there is a variation in landscape character due to these features.
- Tree cover is generally sparse except in the area around Warcop and between Warcop and Great Musgrave where hedge trees are prevalent in a mosaic of varied field sizes and shapes.
- Tree cover is also influenced by localised topography and field patterns near settlements where isolated trees and hedgerow trees are present in and on the boundaries of smaller fields.

#### Value

High

#### Sensitivity:

High: while the sub-type does not coincide with a landscape of national importance the part of the sub-type affected by the scheme is adjacent to the North Pennines AONB and contributes to the setting of the designated landscape.

#### Susceptibility

Medium

### Description of effects of alternatives

#### Black-Black-Black alternative

Between Café 66 and Wheatsheaf Farm this alternative will be online. It will result in the loss of some vegetation alongside the existing A66 with most of this occurring on the north side of the road where a large proportion of a linear conifer plantation will be removed to the north of the sub-type. There will be loss of vegetation at Dyke Nook to accommodate the new junction and detention ponds.

There will be considerable impacts between Wheatsheaf Farm and Eastfield Farm where vegetation will be removed and field pattern and landform altered to accommodate earthworks associated with a large embankment.

Between Eastfield Farm and Brough there will be considerable change during construction particularly between Flitholme and Turks Head where the scheme will be offline resulting in loss of vegetation in field boundaries and lanes and alteration of simple undulating landform to the east of Broom Rigg.

During year 1 of operation the scheme will be a noticeable new feature in the landscape, especially where alternatives take the route offline. The new junction and detention ponds at Dyke Nook will be uncharacteristic of the baseline. The new 8m embankment between Wheatsheaf Farm and Eastfield Farm will be a substantial new linear feature that will alter the landscape in the open valley between the AONB foothills and rising land to the south at Warcop. The introduction of a new junction and detention pond on level ground to the east of Warcop will also have a more limited influence upon the setting of the AONB. To the east of Flitholme where there is a smaller scale undulating landform, the scheme will become the dominant characteristic.

At year 15 while mitigation planting will soften the appearance of earthworks and structures, the scheme will be a notable new feature that will increase the influence of road infrastructure on landscape character due to the height of the embankment, and result in permanent loss and alteration of features important to the baseline in a localised part of the sub-type.

#### Black-Blue-Black alternative

### 8b Broad Valleys Landscape Sub-type

The scale of earthworks between Wheat Sheaf Farm and Eastfield Farm will be less than for those in the Black-Black-Black alternative with a smaller embankment in the central section. The junction configuration east of Flitholme will be slightly different utilising an underpass which will result in less *change to landform*. Construction effects will be similar to those for the Black-Black-Black alternative. Operational year 1 and year 15 effects will result in a similar degree of change to the Black-Black-Black alternative although the amount of land occupied by the earthworks will be less between Wheatsheaf Farm and Eastfield Farm.

#### Black-Black-Orange alternative

This alternative will be similar to the Black-Black-Black alternative between Café 66 and Turks Head, at which point the Black-Black-Orange alternative will go offline to the south of West View Farm joining the existing A66 at the Musgrave Lane overbridge. The offline section will cross Lowgill Beck on a structure and another tributary watercourse to the east will be crossed. There will be loss of vegetation in field boundaries and alteration of field pattern and severance of two PRow. The scheme will introduce a substantial structure into Lowgill Beck valley which will be uncharacteristic of the baseline and will be a notable new feature in the landscape at Year 1. Mitigation is anticipated to reduce impacts slightly at year 15.

#### Black-Blue-Orange alternative

This alternative includes sections of all three of the above alternatives with the main difference being that, compared to Black-Black-Black it will result in lower impacts in the central section where there will be a smaller scale of embankment and greater impacts in the eastern section where it will be offline to the south of West View Farm. Overall the impacts on 8b Broad Valleys will be similar to the Black-Black-Black alternative.

### Significance of effects

Alternative	Construction		Year 1		Year 15	
	Magnitude	Significance	Magnitude	Significance	Magnitude	Significance
Black-Black-Black	Major	Large	Moderate	Large	Moderate	Moderate
Black-Blue-Black	Major	Large	Moderate	Large	Moderate	Moderate
Black-Black-Orange	Major	Large	Moderate	Large	Moderate	Moderate
Black-Blue-Orange	Major	Large	Moderate	Large	Moderate	Moderate

Table 10-39 Assessment of effects on 11a Foothills landscape sub-type

### 11a Foothills Landscape Sub-type

<b>Designated landscapes:</b> NPAONB & YDNP	<b>Relevant viewpoints:</b> VP6.1, 6.5, 6.11, 6.12, 6.15.	<b>Distance to the scheme:</b> the scheme is partly in the sub-type
<b>Baseline analysis</b>		

### 11a Foothills Landscape Sub-type

The landscape character of the part of 11a Foothills sub type that will be affected by the scheme is typical of the landscape of the wider sub-type with regard to rolling hills, streams and minor river valleys, improved grasslands, unimproved heathland, semi-natural woodlands and views of the North Pennines AONB and the upland fells.

- The high points local to the north of the route are Black Hill, Thornless Hill, Humphrey Hill, Middle Plantation and Mount Ida.
- The Foothills sub-type includes The Warcop Training Area and the national trail 'A Pennine Journey'.
- North of the A66 the Foothills sub-type predominates with a northern increase in elevation to upland heath and the Burton Fell and Murton Pike.
- This Foothills sub-type contrasts with the Broad Valleys sub-type to the south which is a settled agricultural landscape typical of the River Eden valley.
- Tree cover is generally sparse but increasingly so as the elevation increases.
- On the lower slopes there are occasional broad leaf woodlands, scattered tree and linear plantation which follow water courses e.g., Deep Gill, Cringle Beck and Yosgill Sike.

#### Value

High

#### Sensitivity:

High: the sub-type coincides with the North Pennines AONB.

#### Susceptibility

Medium

### Description of effects of alternatives

#### Black-Black-Black alternative.

The majority of this alternative will be in the Broad Valleys sub-type immediately to the south of Foothills sub-type. However, the boundary between the two sub-types is transitional in nature albeit delineated to a degree by the existing A66. The Black-Black-Black alternative will include earthworks at Café 66 to construct the new underpass and access, and there will be a new junction at Dyke Nook and widening which will involve loss of conifer plantation on the north side of the existing A66 in the sub-type. At the eastern end of the scheme there will be upgrades to the de-trunked A66 and the new junction at West View will involve earthworks and a new farm access in the sub-type. In addition detention ponds will be excavated in the sub-type at the eastern end of the scheme. During operation the scheme will be a noticeable new feature in the sub-type and adjacent to it influencing the open character of the landscape in the west and east, and intensifying the influence of road infrastructure at the edge of the sub-type.

#### Black-Blue-Black alternative

The effects of this alternative will be similar to those of the Black-Black-Black alternative although the embankment between Wheatsheaf Farm and Eastfield Farm will be smaller scale and will be less of an influence on the sub-type. An MoD compound will be removed during construction to accommodate a junction at Fell Lane. To the east of Eastfield Farm there will be direct effects on woodland at the southern edge of the sub-type in the MoD Firing Range. A proportion of the woodland will be removed to accommodate a local access road.

### 11a Foothills Landscape Sub-type

#### Black-Black-Orange alternative

The level of effect of this alternative will be similar to those of the Black-Black-Black alternative with the exception of the eastern offline part of the scheme. The Black-Black-Orange alternative will not be in the sub-type at the eastern end of the scheme and will be set back from the boundary of the sub-type to the south of West View Farm. The crossing of Lowgill Beck and the mainline on a 17m embankment to the east will be very noticeable in views towards the sub-type and from the edge of the sub-type thereby affecting the transition between Foothills and Broad Valleys.

#### Black-Blue-Orange alternative

This alternative will result in greater impacts in the central section compared to the Black-Black-Black alternative due to a new link road being constructed in a part of the sub-type that coincides with the North Pennines AONB. Effects would be less at the eastern end as there will not be physical impacts on the sub-type whereas the Black-Black-Black alternative will result in physical impacts on a part of the sub-type that coincides with the AONB.

#### Significance of effects

Alternative	Construction		Year 1		Year 15	
	Magnitude	Significance	Magnitude	Significance	Magnitude	Significance
Black-Black-Black	Major	Large	Moderate	Large	Moderate	Moderate
Black-Blue-Black	Major	Large	Moderate	Large	Moderate	Moderate
Black-Black-Orange	Major	Large	Moderate	Large	Moderate	Moderate
Black-Blue-Orange	Major	Large	Moderate	Large	Moderate	Moderate

Table 10-40 Assessment of effects on the North Pennines AONB

North Pennines Area of Outstanding Natural Beauty	
Relevant viewpoints: VP6.2, 6.3, 6.5 to 6.15.	Distance to the scheme: part of the scheme is in the AONB
Baseline analysis	
<p>This table provides an overview of the assessment of the effects of the scheme on the North Pennines AONB. A detailed assessment will be provided in the ES that accompanies the DCO application. The viewpoints listed in this table include typical views back towards and from the AONB that inform the baseline and assessment of effects.</p> <p>The scheme will physically affect the AONB and will potentially affect the setting of the AONB as it will be visible in views to and from the designated area. The western part of the scheme between Café 66 and Wheat Sheaf Farm will be outside the AONB although it will</p>	

### North Pennines Area of Outstanding Natural Beauty

have the potential to affect the AONB's setting as there are views from the landscape to the west looking back to the prominent scarp and hill edge of the AONB that defines the horizon. East of Wheat Sheaf Farm the scheme will largely follow the alignment of the existing A66 which is immediately adjacent to the boundary of the AONB. Terrain rises steeply to the north of the existing A66 and this, in combination with trees, hedges and woodland tends to limit views of traffic using the existing A66. Baseline photography indicates that the Upland Fringe Foothills LCT and Moorland Scarp LCT are the backdrop to views from the locality to the south of the existing A66 and extending south of the Eden Valley. The rocky outcrops of the scarp edge are more prevalent than further to the north-west and form a notably different backdrop to that experienced in views of the AONB from Kirkby Thore. The Upland Fringe Foothills LCT narrows in the area to the north of the scheme, and land use is a mixture of agriculture and the MoD training centre which includes a number of roads, tracks, compounds, buildings and earthworks that influence landscape character and scenic quality of the AONB in this area.

The landscape character of the AONB is described in the North Pennines AONB Management Plan 2019-24 which also refers to the following special qualities of the AONB:

- Peatland
- Hay meadows and species-rich grassland, including arctic alpine flora
- Upland woodland
- Upland rivers
- Geological heritage, including soils
- Upland birds
- Cultural heritage and the built environment
- Scenic beauty, remoteness, wildness and tranquillity including dark skies.

For the purposes of this preliminary assessment of effects of the scheme on the North Pennines AONB the special qualities listed above are considered along with the following LCT:

- Upland Fringe Foothills LCT
- Moorland Fringe LCT
- Moorland Plateau LCT
- Moorland Scarp LCT
- Moorland Summit LCT

**Value**

High

**Susceptibility**

High

**Sensitivity:**

Very high due to its designation as an AONB and status as a UNESCO Global Geopark.

### Description of effects of alternatives

### North Pennines Area of Outstanding Natural Beauty

#### **Black-Black-Black alternative.**

During construction this alternative will result in loss of vegetation alongside the existing A66 and at Dyke Nook. There will be considerable impacts between Wheat Sheaf Farm and Eastfield Farm where vegetation will be removed and field pattern and landform altered to accommodate earthworks associated with a large embankment. This will result in impacts on the setting of the AONB in a localised area and limited physical effects where a new link road is constructed to tie in to the de-trunked A66 to the west of Hayber Lane. The new junction and associated detention pond and link roads opposite Fell Lane will also result in impacts on the setting of the AONB in a localised area as will the offline section that runs to the south of the existing A66 between Eastfield Farm and West View Farm. At West View Farm there will be a new junction and an access on the north side of the existing A66 in the AONB will be re-aligned, and detention ponds will be constructed in the AONB. A short stretch of the de-trunked A66 will be re-aligned into the AONB to tie in to Main Street at Brough. During construction point sources of light will temporarily be introduced along the scheme and these will be seen in views to and from the edge of the AONB. As a result of the physical impacts on the AONB and the impacts on setting, albeit in a very localised part of the AONB, the magnitude of effect is assessed as Moderate.

At year 1 of operation the scheme will result in a noticeable increase in road infrastructure primarily in the setting of the AONB. The new junction and associated detention ponds at Dyke Nook will be a notable addition as will the short section of new embankment immediately to the east. Between Wheat Sheaf Farm and Eastfield Farm the large embankment will be a notable new feature which will be visible in views from a localised area extending from Wheat Sheaf Farm to Eastfield Farm and to the west of Warcop and north of Vicarage Bank which is the name given to a prominent drumlin landform that truncates views from further south. Between Flitholme and Brough there will be considerable change to the small scale undulating landform through the introduction of the mainline and associated link roads and detention ponds. Vehicle lights will be slightly more noticeable than the baseline situation on those sections of the scheme on embankment. The magnitude of effect is assessed as Moderate.

At year 15 mitigation planting will be established and designed and managed to complement the type of planting found in and around the AONB. It is predicted that earthworks will be less noticeable although the section between Wheat Sheaf Farm and Eastfield Farm will be a substantial new addition to the landscape in the setting of the AONB, albeit in a localised area. Mitigation planting will also replace to a degree the vegetation lost in the AONB although the alteration to landform and occupation of part of the AONB will be permanent. The magnitude of effect on landscape character and special qualities at year 15 is assessed as Minor.

#### **Black-Blue-Black alternative**

The effects of this alternative will be similar to those of the Black-Black-Black alternative to the west of Wheat Sheaf Farm. Between Wheat Sheaf Farm and Eastfield Farm the embankment will be lower than in the Black-Black-Black alternative and less of an influence on landscape character and setting of the AONB. There will be removal of an MoD compound at Fell Lane to form a new junction which will physically affect the AONB, as will the new link road to the west which will result in the loss of mature trees alongside the existing A66. To the east of Eastfield Farm the link road will run inside the boundary of the AONB resulting in the loss of woodland along an 800m stretch of the scheme. To the east of Flitholme the small scale undulating landform around Lowgill Beck will be altered and vegetation will be lost in field boundaries and lanes although the effects will be slightly less than those for the Black-Black-Black



### North Pennines Area of Outstanding Natural Beauty

alternative. East of Broom Rigg the effects will be similar to those for the Black-Black-Black alternative. The magnitude of effect is assessed as Moderate.

At year 1 of operation the scheme will result in a noticeable increase in road infrastructure in the setting of the AONB and will result in physical changes to the AONB primarily to the east of Fell Lane where the new link road will be located and woodland will be lost. Replacement planting in the AONB, and on scheme earthworks outside the AONB, will not yet be established and this will open up views to Brough Hill where there is an MoD facility. The magnitude of effect is assessed as Moderate at year 1.

At year 15 it is predicted that mitigation planting will be established, which will soften the appearance of earthworks and integrate them into the surrounding landscape. Earthworks design of the embankment between Wheat Sheaf Farm and Eastfield Farm and the offline section east of Flitholme combined with new planting will also integrate the scheme although it will be a noticeable increase in road infrastructure compared to the baseline situation. Replacement planting in the AONB will be established and will reduce the openness of views towards the MoD facility at Brough Hill but will not fully reinstate the baseline situation. The magnitude of effect is assessed as Minor at year 15.

#### Black-Black-Orange alternative

This alternative is identical to the Black-Black-Black alternative with the exception of the eastern end of the scheme where it will be offline to the south of West View Farm. The offline section will cross Lowgill Beck on a structure and another tributary watercourse to the east will be crossed. There will be loss of vegetation in field boundaries and alteration of field pattern and severance of PRoW, all of which will result in impacts on the setting of the AONB in a limited area during construction, in addition to the effects identified above where the alternative coincides with the Black-Black-Black route. The magnitude of effect during construction is assessed as Moderate.

**At years 1 and 15** the effects of this alternative on the AONB will be similar to those of the Black-Black-Black alternative although the structure crossing Lowgill Beck will be noticeable in views towards the AONB, and there will not be physical effects on the AONB at the eastern end of the scheme. The magnitude of effect on landscape character and special qualities at year 1 is assessed as Moderate and Minor at year 15.

#### Black-Blue-Orange alternative

This alternative will result in larger direct impacts on the AONB in the central section than the Black-Black-Black alternative due to the construction of a new link road in the AONB and the new junction at Fell Lane. The impacts on setting will be less due to the lower height of the embankment in the central section and the potential for this to be mitigated to a greater degree than the large embankment associated with the Black-Black-Black alternative. At the eastern end of the scheme as described above there will not be physical impacts on the AONB although the structure crossing of Lowgill Beck will influence the setting of the AONB in a limited area.

#### Significance of effects

Alternative	Construction		Year 1		Year 15	
	Magnitude	Significance	Magnitude	Significance	Magnitude	Significance
Black-Black-Black	Moderate	Large	Moderate	Large	Minor	Moderate
Black-Blue-Black	Moderate	Large	Moderate	Large	Minor	Moderate

North Pennines Area of Outstanding Natural Beauty						
<b>Black-Black-Orange</b>	Moderate	<b>Large</b>	Moderate	<b>Large</b>	Minor	<b>Moderate</b>
<b>Black-Blue-Orange</b>	Moderate	<b>Large</b>	Moderate	<b>Large</b>	Minor	<b>Moderate</b>

#### Visual

10.9.12 The visual assessment firstly considers residents in the following groups of properties:

- Residents of rural properties east of Coupland
- Residents of rural properties in the Sandford area
- Residents of rural properties in the Warcop area
- Residents of rural properties in the Flitholme area
- Residents of properties in the area to the west of Brough.

10.9.13 The settlements of Sandford, Warcop and Brough are unlikely to be significantly affected due to separation distance to the scheme, screening by landform, buildings and vegetation.

10.9.14 PRoW and long distance trails are considered as follows:

- PRoW between Coupland and Sandford
- PRoW between Warcop and Flitholme
- PRoW to the west of Brough
- PRoW in the North Pennines AONB
- A Pennine Journey long distance trail.

10.9.15 The following visitor attractions are considered:

- Eden Valley Railway
- Brough Castle.

Table 10-41 Assessment of effects on residents east of Coupland

Residents east of Coupland		
<b>Receptor category:</b> residential	<b>Distance to scheme:</b> n/a	<b>Sensitivity:</b> medium
<b>Relevant viewpoints:</b> VP6.1, 6.2, 6.13		
<b>Baseline conditions</b>		

Residents east of Coupland						
To the east of Coupland the existing A66 is dual carriageway and ascends a hill passing through a cutting at its crest before passing Café Sixty Six at grade. The following properties are located nearby or with uninterrupted views in the direction of the scheme: Middle Bank End Cottage, High Bank End and New Hall.						
Description of effects of alternatives						
<p><b>Black-Black-Black alternative</b> Middle Bank End Cottage is located at a group of farm buildings approximately 720m to the south-west of the scheme. While construction will be a noticeable feature of views effects are unlikely to be significant due to separation distance from the scheme and the oblique angle of views. Nor will effects be significant at years 1 and 15. High Bank End is located approximately 540m to the south-west of the mainline. A Detention pond will be located approximately 150m to the north-east and construction of the mainline and the new local access at Café 66 will be noticeable to High Bank End. Effects will be significant at construction for High Bank End. There will be views of construction of the mainline at a distance of approximately 500m from the dwelling at New Hall. Effects will not be significant during construction and operation due to the separation distance to the scheme and filtering of views by intervening vegetation adjacent to the property.</p> <p><b>Black-Blue-Black alternative</b> This alternative is the same as Black-Black-Black at this section and the effects on residents will be the same.</p> <p><b>Black-Black-Orange alternative</b> This alternative is the same as Black-Black-Black and Black-Blue-Black at this section and the effects on residents will be the same.</p> <p><b>Black-Blue-Orange alternative</b> This alternative is the same as the other three alternatives at this section and the effects on residents will be the same.</p>						
Assessment of effects						
Alternative	Construction		Year 1		Year 15	
	Magnitude	Significance	Magnitude	Significance	Magnitude	Significance
Black-Black-Black	Moderate	Moderate	Minor	Slight	Minor	Slight
Black-Blue-Black	Moderate	Moderate	Minor	Slight	Minor	Slight
Black-Black-Orange	Moderate	Moderate	Minor	Slight	Minor	Slight
Black-Blue-Orange	Moderate	Moderate	Minor	Slight	Minor	Slight

Table 10-42 Assessment of effects on residents in the Sandford area

Residents in the Sandford area		
Receptor category: residents	Distance to scheme: n/a	Sensitivity: medium
Relevant viewpoints: VP6.3, 6.4		

### Baseline conditions

The village of Sandford is approximately 850m to the south-west of the existing A66 and traffic is visible to residents of properties at the northern edge of the village. Due to the separation distance to the scheme significant effects on residents of Sandford are unlikely. To the north of Sandford there are several rural properties, of which the following are considered due to residents living nearby or experiencing uninterrupted views in the direction of the scheme: Platts, Dyke Nook, Dyke Nook Cottage and Moor House.

### Description of effects of alternatives

#### Black-Black-Black alternative

There will be oblique views of construction from Platts. A railway embankment will screen low level views and while construction activities will be noticeable the effects will not be readily apparent due to the orientation of the property. Impacts will not be significant at Platts. Dyke Nook and Dyke Nook Cottage are located immediately to the south of the scheme. There will be considerable impacts on views during construction due primarily to excavation of detention ponds to the west of the properties, removal of trees to the north of the properties and construction of the mainline on embankment. There will be considerable change to views during years 1 and 15 of operation particularly to the east where a large embankment will impinge upon views, though planting will achieve some level of integration once mature. Vehicle lights will be noticeable.

Significant effects are unlikely at Moor House due to screening by landform and filtering of views by vegetation.

#### Black-Blue-Black alternative

This alternative is the same as Black-Black-Black at this section and the effects on residents will be the same.

#### Black-Black-Orange alternative

This alternative is the same as Black-Black-Black and Black-Blue-Black at this section and the effects on residents will be the same.

#### Black-Blue-Orange alternative

This alternative is the same as the other three alternatives at this section and the effects on residents will be the same.

### Assessment of effects

Alternative	Construction		Year 1		Year 15	
	Magnitude	Significance	Magnitude	Significance	Magnitude	Significance
Black-Black-Black	Major	Very large	Major	Very large	Major	Large
Black-Blue-Black	Major	Very large	Major	Very large	Major	Large
Black-Black-Orange	Major	Very large	Major	Very large	Major	Large
Black-Blue-Orange	Major	Very large	Major	Very large	Major	Large

Table 10-43 Assessment of effects on residents in the Warcop area

### Residents in the Warcop area

Receptor category: residential	Distance to scheme: n/a	Sensitivity: moderate
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Residents in the Warcop area						
Relevant viewpoints: VP6.5, 6.7, 6.8						
Baseline conditions						
<p>The village of Warcop is located approximately 500m to the south-west of the existing A66. The majority of the village is to the south of the B6259 and views in the direction of the scheme are screened by landform and vegetation. To the north of the B6259 views are screened by vegetation, a railway embankment and buildings at the MoD Training Centre. This table therefore considers likely significant effects on those rural properties to the north of the village with uninterrupted views in the direction of the scheme. They are: Wheatsheaf Cottage, Wheat Sheaf Farm, Street House, Walk Mill, Walk Mill Barn, Station House, Hylton Holme, Meadow Bank Farm, Eastfield Farm, Toddygill Hall and Eastfield Gate.</p>						
Description of effects of alternatives						
<p><b>Black-Black-Black alternative</b> Residents of the following properties are likely to experience significant effects during construction only: Walk Mill, Walk Mill Barn and Meadow Bank Farm. For other properties there will be significant effects during construction and operation relating primarily to the close proximity of the mainline on embankment, severance of property accesses and intensification of road and ancillary infrastructure such as detention ponds in a limited nearby area. Vehicle lights will be noticeable primarily to residents of Hylton Holme as a result of the new junction opposite the property.</p> <p><b>Black-Blue-Black alternative</b> This alternative is similar to Black-Black-Black except that it will be at grade opposite Hylton Holme with a junction further to the west of this property. While there will be a considerable change to views the effects will be less than those of the Black-Black-Black alternative during construction and operation.</p> <p><b>Black-Black-Orange alternative</b> This alternative is the same as Black-Black-Black and Black-Blue-Black at this section and the effects on residents will be the same.</p> <p><b>Black-Blue-Orange alternative</b> This alternative is the same as Black-Black-Black and Black-Blue-Black at this section and the effects on residents will be the same.</p>						
Assessment of effects						
Alternative	Construction		Year 1		Year 15	
	Magnitude	Significance	Magnitude	Significance	Magnitude	Significance
Black-Black-Black	Major	Very large	Major	Large	Moderate	Large
Black-Blue-Black	Major	Very large	Major	Large	Moderate	Large
Black-Black-Orange	Major	Very large	Major	Large	Moderate	Large
Black-Blue-Orange	Major	Very large	Major	Large	Moderate	Large

Table 10-44 Assessment of effects on residents in the Flitholme area

Residents in the Flitholme area						
Receptor category: residential			Distance to scheme: n/a		Sensitivity: medium	
Relevant viewpoints: VP6.9						
Baseline conditions						
Views in the direction of the scheme mainline are screened by landform from the hamlet of Flitholme. There will be glimpses of construction and operation of the upgraded access road to Flitholme. The following rural properties are a short distance from the scheme or with uninterrupted views in its direction: Low Broomrigg, Thunderstones, Broomrigg House and Old Long Byre.						
Description of effects of alternatives						
<b>Black-Black-Black alternative</b> Construction of the Black-Black-Black alternative will be very noticeable to residents of all properties. New link roads will be constructed to the west of the three properties at Broomrigg and the mainline will be closer to these properties during operation. Construction lighting will be visible and vehicle lights will be more noticeable at Broomrigg during operation. At Old Long Byre the scheme will be constructed below the line of sight immediately to the south of the property although it will be very noticeable in views to the south-west and south-east. During operation traffic will be in cutting and the existing A66 de-trunked. During operation effects on residents at Old Long Byre are unlikely to be significant.						
<b>Black-Blue-Black alternative</b> This alternative will be similar to Black-Black-Black on this section with the exception that there will be less infrastructure at Broomrigg. However, the level of effect will be similar to that experienced with the Black-Black-Black alternative.						
<b>Black-Black-Orange alternative</b> This alternative is the same as Black-Black-Black at this section and the effects on residents will be the same.						
<b>Black-Blue-Orange alternative</b> This alternative is the same as Black-Black-Black at this section and the effects on residents will be the same.						
Assessment of effects						
Alternative	Construction		Year 1		Year 15	
	Magnitude	Significance	Magnitude	Significance	Magnitude	Significance
Black-Black-Black	Major	Very large	Major	Large	Moderate	Large
Black-Blue-Black	Major	Very large	Major	Large	Moderate	Large
Black-Black-Orange	Major	Very large	Major	Large	Moderate	Large
Black-Blue-Orange	Major	Very large	Major	Large	Moderate	Large

Table 10-45 Assessment of effects on residents west of Brough

Residents west of Brough						
Receptor category: residential			Distance to scheme: n/a		Sensitivity: medium	
Relevant viewpoints: VP6.11, 6.12, 6.13						
Baseline conditions						
This table describes likely significant effects on residents of West View, Foxtower View, Croft Cottage, Mains House, Cherry Tree House and Rowan House to the west of Brough. The assessment also considers residents of a small number of properties in Brough at Lady Anne Drive and Pembroke Close adjacent to the existing A66 dual carriageway who will experience views of construction of the Orange alternative only, where it joins the existing dual carriageway. .						
Description of effects of alternatives						
<b>Black-Black-Black alternative</b> Construction of the Black-Black-Black alternative will primarily affect West View, Foxtower View, Croft Cottage and Mains House. Residents of these properties will experience views of construction of the mainline and the new junction at the edge of Brough. There will be loss of vegetation on the south and north sides of the existing A66 and there will be a noticeable increase in infrastructure during operation at year 1 and year 15. The effects will be greater during operation for Croft Cottage and Mains House due to their proximity to the new junction.						
<b>Black-Blue-Black alternative</b> This alternative will be identical to the Black-Black-Black alternative at this section. The effects will therefore be the same as described for the Black-Black-Black alternative.						
<b>Black-Blue-Orange alternative</b> This alternative will pass to the south of the existing A66. There will be a structure crossing Lowgill Beck and to the south-east the mainline will be on embankment before tying in to the existing A66 dual carriageway at Brough. During construction and operation the scheme will be a noticeable new feature in views for residents of West View, Foxtower View and Croft Cottage. During construction residents in the south western part of Lady Anne Drive and Pembroke Close adjacent to the existing A66 dual carriageway will experience views of construction activity and the loss of vegetation on the north side of the A66 will be noticeable. Operational effects on residents of Lady Anne Drive and Pembroke Close will not be significant. Construction lighting will be noticeable and vehicle lights will be visible during operation on the structure crossing.						
<b>Black-Blue-Orange alternative</b> This alternative is the same as Black-Black-Orange at this section and the effects on residents will be the same.						
Assessment of effects						
Alternative	Construction		Year 1		Year 15	
	Magnitude	Significance	Magnitude	Significance	Magnitude	Significance
Black-Black-Black	Major	Very large	Major	Large	Major	Large
Black-Blue-Black	Major	Very large	Major	Large	Major	Large



Residents west of Brough						
<b>Black-Black-Orange</b>	Major	<b>Very large</b>	Major	<b>Large</b>	Major	<b>Large</b>
<b>Black-Blue-Orange</b>	Major	<b>Very large</b>	Major	<b>Large</b>	Major	<b>Large</b>

Table 10-46 Assessment of effects on PRoW between Coupland and Sandford

PRoW between Coupland and Sandford		
<b>Receptor category:</b> recreational	<b>Distance to scheme:</b> adjacent	<b>Sensitivity:</b> high
<b>Relevant viewpoints:</b> VP6.1, 6.2 and 6.13		
Baseline conditions		
<p>This table considers five PRoW at the west end of the scheme. PRoW 372024 is a bridleway that runs parallel to the existing A66 at a distance of approximately 650m before using the access road of High Bank End leading the PRoW to the existing A66. PRoW 372027 is a footpath on the north side of the existing A66 that crosses grazed moorland, heading east along a farm track before turning south to the A66 west of the minor road to Sandford. PRoW 372028 is a footpath that heads north from Café Sixty Six before heading west along a narrow valley to the north of Coupland. Both PRoW 372027 and PRoW 372028 cross higher ground which is also open access land from where there are elevated views in the direction of the scheme. PRoW 372013 and 372022 are to the north and east of Sandford with substantial effects likely to occur only to the north of the railway line for PRoW 372013.</p>		
Description of effects of alternatives		
<p><b>Black-Black-Black alternative</b></p> <p>The Black-Black-Black alternative will be noticeable only from the eastern part of PRoW 372024 where it emerges from behind a woodland copse to the north of High Bank End, and a Detention pond will be noticeable to the east of High Bank End. Construction activities will be very noticeable for a short duration. At year 1 the new underpass and modifications at and to the east of Café Sixty Six will be a noticeable change to views and seen in the context of the new mainline which will not be uncharacteristic of views. At year 15 there will be a degree of integration as planting becomes established.</p> <p>Construction will be very noticeable from PRoW 372027 and 372028. During year 1 the underpass and modifications at Café Sixty Six will be discernible although not substantially altering the balance of features and elements in the existing view due to partial screening by landform. The new junction at Sandford will be a very noticeable change. At year 15 there will be a degree of integration as mitigation planting will have established. Effects will be greater at the eastern end of PRoW 372027 than for the majority of the footpath. The effects on PRoW 372013 and 372022 will be considerable to the north of the railway line where the scheme will be a noticeable new feature in views.</p> <p><b>Black-Blue-Black alternative</b></p> <p>This alternative will be identical to the Black-Black-Black alternative at this section. The effects will therefore be the same as described for the Black-Black-Black alternative.</p>		

PRoW between Coupland and Sandford						
<b>Black-Black-Orange alternative</b> This alternative will be identical to the Black-Black-Black alternative at this section. The effects will therefore be the same as described for the Black-Black-Black alternative.						
<b>Black-Blue-Orange alternative</b> This alternative will be identical to the Black-Black-Black alternative at this section. The effects will therefore be the same as described for the Black-Black-Black alternative.						
Assessment of effects						
Alternative	Construction		Year 1		Year 15	
	Magnitude	Significance	Magnitude	Significance	Magnitude	Significance
<b>Black-Black-Black</b>	Major	<b>Large</b>	Moderate	<b>Moderate Large</b> (372013 and 372022 only)	Minor <b>Moderate</b> (372013 and 372022 only)	Slight <b>Moderate</b> (372013 and 372022 only)
<b>Black-Blue-Black</b>	Major	<b>Large</b>	Moderate	<b>Moderate Large</b> (372013 and 372022 only)	Minor <b>Moderate</b> (372013 and 372022 only)	Slight <b>Moderate</b> (372013 and 372022 only)
<b>Black-Black-Orange</b>	Major	<b>Large</b>	Moderate	<b>Moderate Large</b> (372013 and 372022 only)	Minor <b>Moderate</b> (372013 and 372022 only)	Slight <b>Moderate</b> (372013 and 372022 only)
<b>Black-Blue-Orange</b>	Major	<b>Large</b>	Moderate	<b>Moderate Large</b> (372013 and 372022 only)	Minor <b>Moderate</b> (372013 and 372022 only)	Slight <b>Moderate</b> (372013 and 372022 only)

Table 10-47 Assessment of effects on PRoW at Warcop and Flitholme

PRoW at Warcop and Flitholme		
<b>Receptor category:</b> recreational	<b>Distance to scheme:</b> adjacent	<b>Sensitivity:</b> high
<b>Relevant viewpoints:</b> VP6.5, 6.7 and 6.8		
Baseline conditions		
This table considers PRoW to the west of Warcop and between Warcop and the hamlet of Flitholme and includes PRoW to the east of Flitholme. PRoW 372014 is a footpath that runs from the south western edge of Warcop north to the A66 at Wheatsheaf Farm. PRoW 372021 is a footpath that runs from the north of Warcop around the eastern boundary of the MoD Training Facility to the A66 opposite Walk Mill. PRoW 372020 is a short stretch footpath to the east of Warcop that connects the minor road at Eden Valley railway station		

### PRoW at Warcop and Flitholme

with the A66. PRoW 350018 is a footpath that runs from the B6295 to the east of Warcop and passes through Flitholme connecting with PRoW 350017 which is a bridleway that runs east to a minor road to the south of Broomrigg.

### Description of effects of alternatives

#### Black-Black-Black alternative

The Black-Black-Black alternative will result in significant effects during construction and operation on the northern part of 372014 and 372021, both of which will be severed by the scheme. There will also be significant effects on 372020, the eastern part of which will be severed. Significant effects are likely during construction only on the western part of 350018 as the scheme will be screened by vegetation and landform from the eastern part of the PRoW. There will be significant effects on 350017 due to construction and operation of the mainline, link road and Detention ponds in the valley below and on slopes to the north.

#### Black-Blue-Black alternative

While this alternative will involve a smaller embankment than the Black-Black-Black alternative, the scale of change and effect on the composition of views will be to a similar degree as the Black-Black-Black alternative for users of 372014 and 372021. For users of 372020 the Black-Blue-Black alternative will be slightly further to the north, although impacts will be similar as will the impacts on 350018.

#### Black-Black-Orange alternative

This alternative will be identical to the Black-Black-Black alternative at this section. The effects will therefore be the same as described for the Black-Black-Black alternative.

#### Black-Blue-Orange alternative

This alternative will be identical to the Black-Black-Orange alternative at this section. The effects will therefore be the same as described for the Black-Black-Orange alternative.

### Assessment of effects

Alternative	Construction		Year 1		Year 15	
	Magnitude	Significance	Magnitude	Significance	Magnitude	Significance
Black-Black-Black	Major	Very large	Major	Very large	Major	Large
Black-Blue-Black	Major	Very large	Major	Very large	Major	Large
Black-Black-Orange	Major	Very large	Major	Very large	Major	Large
Black-Blue-Orange	Major	Very large	Major	Very large	Major	Large

Table 10-48 Assessment of effects on PRoW to the west of Brough

### PRoW to the west of Brough

Receptor category: recreational	Distance to scheme: adjacent	Sensitivity: high
Relevant viewpoints: VP6.11, 6.12		

## PRoW to the west of Brough

### Baseline conditions

The following PRoW to the west of Brough will be affected by the scheme:

- PRoW 309006, a footpath that runs west to east parallel to the existing A66 at a distance of approximately 400m to the south.
- PRoW 309003, a bridleway that connects to the eastern end of 309006 from which it runs east to the existing A66 and south to Musgrave Lane.
- PRoW 309005, a bridleway that crosses perpendicular to 309006 south of Lowgill Farm and runs east crossing Musgrave Lane to the west of Brough Castle on the north side of Swindale Beck.
- PRoW 309007, a bridleway that runs west from Musgrave Lane connecting with 309005.
- PRoW 309004, a short stretch of footpath that connects with 309003 at Mains House and crosses the existing A66 dual carriageway to the east.
- PRoW 309031, a short stretch of bridleway on the east side of the existing A66 dual carriageway.

### Description of effects of alternatives

#### Black-Black-Black alternative

During construction there will be considerable change to views for users of the PRoW mentioned above. Those stretches of PRoW closest to the scheme will experience greater changes to views and the scheme will be a dominant focal point on users of those PRoW or sections of longer PRoW that pass closer to the scheme. Landform will provide screening for the western parts of those PRoW that lie to the south and south-west of Lowgill Farm. During operation the scheme will be a noticeable new feature particularly for those PRoW in the north and east. The new junction and overbridge at Main Street and the offline section to the west of that will be notable features at year 1. At year 15 there will be a degree of integration as mitigation planting matures although there will be noticeable change relative to baseline.

#### Black-Blue-Black alternative

This alternative will be identical to the Black-Black-Black alternative at this section. The effects will therefore be the same as described for the Black-Black-Black alternative.

#### Black-Black-Orange alternative

This alternative will be offline to the south of West View Farm and elevated on a structure crossing of Lowgill Beck and embankment. There will be a large Detention pond at the eastern end of the scheme. The scheme will sever PRoW 309003 and 309004. During construction there will be considerable change to views from parts of all the PRoW mentioned above. During operation the most notable change will be the offline section crossing Lowgill Beck which will be very noticeable at year 1 and year 15 due to the presence of a structure and an embankment 17m in height. While mitigation will provide a degree of integration the change to existing views will be considerable due to the scale of the structure and embankment which will result in loss of skyline views.

#### Black-Blue-Orange alternative

PRoW to the west of Brough						
This alternative will be identical to the Black-Black-Orange alternative at this section. The effects will therefore be the same as described for the Black-Black-Orange alternative.						
Assessment of effects						
Alternative	Construction		Year 1		Year 15	
	Magnitude	Significance	Magnitude	Significance	Magnitude	Significance
Black-Black-Black	Major	Large to very large	Major	Large	Moderate	Moderate
Black-Blue-Black	Major	Large to very large	Major	Large	Moderate	Moderate
Black-Black-Orange	Major	Large to very large	Major	Large	Major	Large
Black-Blue-Orange	Major	Large to very large	Major	Large	Major	Large

Table 10-49 Assessment of effects on PRoW in the North Pennines AONB

PRoW in the North Pennines AONB		
<b>Receptor category:</b> recreational (AONB)	<b>Distance to scheme:</b> adjacent	<b>Sensitivity:</b> Very high
<b>Relevant viewpoints:</b> VP6.5 and 6.12		
Baseline conditions		
This table considers two PRoW that coincide with the North Pennines AONB. PRoW 372031 is a footpath that runs north from the A66 along Hayber Lane through the MoD Warcop Training Centre to higher ground in the North Pennine hills. The southern part of the PRoW is relatively enclosed by trees and landform with views channelled along the lane in the direction of the scheme. PRoW 329001 is a footpath that runs along the route of a wide farm track between the existing A66 and the minor road between Brough and Helbeck. Views in the direction of the scheme are relatively open and prolonged due the orientation of the PRoW in the direction of the scheme.		
Description of effects of alternatives		
<b>Black-Black-Black alternative</b> Construction of the Black-Black-Black alternative will be very noticeable from the southern end of PRoW 372031 and it will be noticeable from more elevated parts of the PRoW to the north of the woodland that screens views from the southern part of the PRoW. Substantial effects will be limited to the southern part of the PRoW. During operation the mainline on embankment will be a very noticeable new feature at the southern end of the PRoW. While the scheme will be further away from the PRoW than the existing A66, the change to views will be very noticeable to the west and east. PRoW 329001 is at the eastern end of the scheme. Construction of the new junction at Main Street will be very noticeable and a new access road will connect with the track along which the PRoW passes. The horizontal field of view occupied by the scheme will be relatively small due to containment by landform. However, it will result in the loss of vegetation and be a focal point in views for a short		

### PRoW in the North Pennines AONB

duration. During operation at year 1 and year 15 there will be a noticeable increase in road infrastructure compared to the baseline where the existing A66 dual carriageway runs at grade but without a junction at this location.

#### **Black-Blue-Black alternative**

This alternative will be identical to the Black-Black-Black alternative at this section. The effects will therefore be the same as described for the Black-Black-Black alternative.

#### **Black-Black-Orange alternative**

This alternative will be slightly different in the west although the effects on PRoW 372031 will be similar to the Black-Black-Black alternative during construction and operation. For users of PRoW 329001 the Black-Black-Orange alternative will be further away from the footpath and will not involve realignment of the access track it uses or construction of a new junction opposite the western end of the PRoW. Construction will be noticeable from the PRoW and there will be intermittent views through vegetation. During operation at years 1 and 15 the new structure crossing of Lowgill Beck will be discernible although due to the narrow field of view and intermittent nature of views effects will be of a limited degree and occur primarily at the southern end of the PRoW where it joins the existing A66.

#### **Black-Blue-Orange alternative**

This alternative will be the same as the Black-Black-Black alternative where PRoW 372031 is affected and the impacts will therefore be the same. In the eastern end of the scheme the impacts on PRoW 329001 will be the same as those described for the Black-Black-Orange alternative.

### Assessment of effects

Alternative	Construction		Year 1		Year 15	
	Magnitude	Significance	Magnitude	Significance	Magnitude	Significance
<b>Black-Black-Black</b>	Moderate	<b>Large</b>	Moderate	<b>Large</b>	Moderate	<b>Large</b>
<b>Black-Blue-Black</b>	Moderate	<b>Large</b>	Moderate	<b>Large</b>	Moderate	<b>Large</b>
<b>Black-Black-Orange</b>	Moderate	<b>Large</b>	Moderate Minor (329001 only)	<b>Large</b> <b>Moderate</b> (329001 only)	Moderate Minor (329001 only)	<b>Large</b> <b>Moderate</b> (329001 only)
<b>Black-Blue-Orange</b>	Moderate	<b>Large</b>	Moderate Minor (329001 only)	<b>Large</b> <b>Moderate</b> (329001 only)	Moderate Minor (329001 only)	<b>Large</b> <b>Moderate</b> (329001 only)

Table 10-50 Assessment of effects on visitors to Eden Valley Railway

Visitor to Eden Valley Railway						
Receptor category: visitor attraction			Distance to scheme: 25m at its closest point.		Sensitivity: moderate	
Relevant viewpoints: VP6.4, 6.7, 6.8						
Baseline conditions						
The Eden Valley Railway runs between Warcop in the east and a point approximately 3.5km to the west near New Hall where the line terminates. It runs parallel to the existing A66 and there are views towards the scheme against the backdrop of the North Pennines AONB.						
Description of effects of alternatives						
<b>Black-Black-Black alternative</b> During construction the scheme will be very noticeable , particularly the new junction and embankment to the north of Sandford and the offline section to the north-east of Warcop. During operation at year 1 and year 15 the scheme will be a very noticeable change to views from the railway although it will not impinge on skyline views of the North Pennines hills which are a notable feature identified in the description of the route. Effects will reduce at year 15 as mitigation planting will be established, softening the appearance of earthworks and providing a degree of integration of the scheme with the baseline.						
<b>Black-Blue-Black alternative</b> This alternative will be similar to the Black-Black-Black alternative at this section. The effects will therefore be of a similar degree to those described for the Black-Black-Black alternative.						
<b>Black-Black-Orange alternative</b> This alternative will be similar to the Black-Black-Black alternative at this section. The effects will therefore be of a similar degree to those described for the Black-Black-Black alternative.						
<b>Black-Blue-Orange alternative</b> This alternative will be similar to the Black-Black-Black alternative at this section. The effects will therefore be of a similar degree to those described for the Black-Black-Black alternative.						
Assessment of effects						
Alternative	Construction		Year 1		Year 15	
	Magnitude	Significance	Magnitude	Significance	Magnitude	Significance
Black-Black-Black	Major	Large	Major	Large	Moderate	Moderate
Black-Blue-Black	Major	Large	Major	Large	Moderate	Moderate
Black-Black-Orange	Major	Large	Major	Large	Moderate	Moderate
Black-Blue-Orange	Major	Large	Major	Large	Moderate	Moderate



Table 10-51 Assessment of effects on visitors to Brough Castle

Visitors to Brough Castle						
Receptor category: visitor attraction (cultural heritage)			Distance to scheme: 500m		Sensitivity: Very high	
Relevant viewpoints: n/a						
Baseline conditions						
Brough Castle is a Scheduled Monument located on the south western fringes of Brough and to the south of Swindale Beck. It is positioned above the valley on a mound giving a prominent outlook in the direction of the scheme against the backdrop of the North Pennines AONB.						
Description of effects of alternatives						
<b>Black-Black-Black alternative</b> Construction of the new junction to the east of West View Farm will be noticeable. However, significant effects will arise only from construction and operation of the Black-Black-Orange and Black-Blue-Orange alternatives which are discussed below.						
<b>Black-Blue-Black alternative</b> This alternative will be similar to the Black-Black-Black alternative at this section. The effects will therefore be similar to those described for the Black-Black-Black alternative.						
<b>Black-Black-Orange alternative</b> Construction of the offline section to the south of West View Farm will be very noticeable from Brough Castle. During operation the mainline structure crossing of Lowgill Beck will be a noticeable feature in views which will be slightly better integrated at year 15.						
<b>Black-Blue-Orange alternative</b> This alternative will be similar to the Black-Black-Orange alternative at this section. The effects will therefore be similar to those described for the Black-Black-Orange alternative.						
Assessment of effects						
Alternative	Construction		Year 1		Year 15	
	Magnitude	Significance	Magnitude	Significance	Magnitude	Significance
Black-Black-Black	Minor	Moderate	Negligible	Slight	Negligible	Slight
Black-Blue-Black	Minor	Moderate	Negligible	Slight	Negligible	Slight
Black-Black-Orange	Moderate	Large	Minor	Moderate	Minor	Moderate
Black-Blue-Orange	Moderate	Large	Minor	Moderate	Minor	Moderate

## Bowes Bypass

## Landscape

10.9.16 The assessment of effects on landscape considers the broad character areas that coincide with Dales Fringe AHLV. At this stage the AHLV is not assessed in detail as further survey work is required to understand potential impacts in the context of the wider locally designated area. However, given that likely significant effects are predicted on BCA that coincide with Dales Fringe AHLV significant effects are also predicted on the AHLV during construction and operation.

Table 10-52 Assessment of effects on Bowes broad character area

Bowes Broad Character Area		
<b>Designated landscapes:</b> Dales Fringe Area of High Landscape Value	<b>Relevant viewpoints:</b> VP7.3, 7.5, 7.6, 7.7	<b>Distance to the scheme:</b> In the southern part of the BCA
Baseline analysis		
<p>The landscape character of the part of the BCA that will be affected by the scheme is typical of the landscape of the wider BCA. There is variation in the degree to which key characteristics are expressed as follows:</p> <ul style="list-style-type: none"><li>• At lower levels alongside the A66 and the settlement of Bowes the landscape is smaller scale and enclosed.</li><li>• Between the A67 and the existing A66 and to the east of Bowes there is a historic strip field pattern with a higher proportion of hedges and mature hedge trees than to the north of the A67.</li><li>• There are notable scenic qualities particularly from more elevated areas to the north of Bowes where the village is seen in its setting of historic field pattern with mature hedge trees contrasting with drystone walls.</li><li>• There is a perception of a lightly settled shallow and rolling valley, framed by the Yorkshire Dales National Park.</li><li>• Bowes Castle and the Greta Valley are set in a relatively open landscape of linear fields with drystone wall field boundaries and contribute to a strong sense of place at Bowes.</li></ul>		
<b>Value</b> Medium	<b>Sensitivity</b> Medium; the south west part of the BCA coincides with the AHLV which is of regional importance.	
<b>Susceptibility</b> Medium		
Construction phase		
<b>Magnitude of effect</b> During construction there will be direct physical impacts on sensitive characteristics and features described in the BCA and variations that have been identified. These will occur as follows: <ul style="list-style-type: none"><li>• Loss of walls and small sections of hedgerow leading to alteration of field pattern.</li><li>• Loss of tree belts immediately adjacent to the carriageway, opening up of A66 corridor.</li></ul>		

### Bowes Broad Character Area

- Alteration to the setting of the traditional village of Bowes.
- Construction of earthworks including modified cuttings and entirely new embankment structures to accommodate both widening and a new overbridge at Low Broats.
- Introduction of five Detention ponds which will occupy small fields with effects on strip field pattern in the east.
- Alteration to the character of the River Greta valley.
- Change to the sense of calm associated with the rolling valley bottom.

In addition the following characteristics will be affected:

- Views of the County Durham - Area of High Landscape Value and Yorkshire Dales National Park from lanes to the north of Bowes and A66
- Impacts on the transition between Bowes BCA and Cotherstone Moor BCA.

Construction effects will be temporary and localised in the south-western part of the BCA. The changes will be uncharacteristic of the baseline and result in loss and alteration of features important to the baseline. The magnitude of effect is assessed as **major** in a localised part of the sub-type.

#### Significance of effect

Significance of effect is assessed as **large** and significant in a localised part of the BCA.

### Operational phase (year 1)

#### Magnitude of effect

At year 1 the loss of vegetation and alteration to field boundaries will be a noticeable change to the baseline. The introduction of detention ponds and associated fences and access will be uncharacteristic of the baseline. The embankments and overbridge at Low Broats will interrupt the openness of the landscape and the steep slopes of the earthworks will contrast with the relatively gradual undulating topography of the Greta Valley. The magnitude of effect is assessed as **moderate** in a localised part of the BCA.

#### Significance of effect

Significance of effect is assessed as **moderate** and significant in a localised part of the BCA.

### Operational phase (year 15)

#### Magnitude of effect

At year 15 mitigation planting will have established providing layers of intervening vegetation designed to respond to prevailing character. The new junction with the A67 will be reasonably integrated and the degree of change relative to baseline will be discernible although not uncharacteristic of the baseline. Mitigation planting at Low Broats will reduce the impact of the earthworks and overbridge while reducing to a degree the sense of openness and views south across the Greta Valley to the Yorkshire Dales. Detention ponds will be established although fences and access will increase the amount of infrastructure in a predominantly small scale landscape of rural character. The magnitude of effect is assessed as **moderate** in a localised part of the BCA.

#### Significance of effect

### Bowes Broad Character Area

Significance of effect is assessed as **moderate** and significant in a localised part of the BCA.

Table 10-53 Assessment of effects on Cotherstone Moor broad character area

### Cotherstone Moor Broad Character Area

**Designated landscapes:**  
North Pennines AONB

**Relevant viewpoints:** VP7.2

**Distance to the scheme:** 150m to the south

### Baseline analysis

The landscape character of the part of the BCA that will be affected by the scheme is typical of the landscape of the wider BCA. There is variation in the degree to which key characteristics are expressed as follows:

- The edge of this BCA is influenced by the complex surrounding character areas.
- The lightly settled valley and long distance views result in a strong scenic quality with a sense of wildness and remoteness.
- There are notable views from the southern edge of the BCA where the village of Bowes is seen in its setting of historic field pattern with mature hedge trees and drystone walls contrasting with the open moorland of Cotherstone Moor BCA.
- Bowes Castle and the Greta Valley are set in a relatively open landscape of linear fields with drystone wall field boundaries and contribute to a strong sense of place in the southern part of the BCA.

**Value**  
High

### Sensitivity

High: the majority of the BCA including the south eastern part BCA coincides with the North Pennines AONB which is of national recognition. The Pennine Way national trail passes through the BCA in the study area.

**Susceptibility**  
Medium

### Construction phase

#### Magnitude of effect

The scheme will not be located in the BCA. However, there will be effects on views from the elevated southern edge of the BCA during construction. Views from the edge of the BCA to Bowes and the Greta Valley are a notable characteristic as the contrast between the moors and the valley landscape is more evident than in the interior of the BCA. The scheme will be a noticeable feature during construction and will affect the scenic quality of views and perceptual character from the edge of Cotherstone Moor BCA. Construction will be uncharacteristic of the baseline and the magnitude of effect is assessed as **moderate**.

#### Significance of effect

The significance of effect is assessed as **moderate** and significant albeit with effects occurring in a limited part of the BCA where there are views across the scheme towards the Greta Valley and the Yorkshire Dales.

### Operational phase (year 1)

Cotherstone Moor Broad Character Area
<p><b>Magnitude of effect</b></p> <p>At year 1 the scheme will be a discernible change to views and while the reconfigured junction with the A67 will be more noticeable in views from Cotherstone Moor BCA than in the baseline situation it will not be uncharacteristic of views. The effects on scenic quality and contrast between the character areas will be limited and the magnitude of change is assessed as <b>minor</b>.</p> <p><b>Significance of effect</b></p> <p>The significance of effect is assessed as <b>slight</b> and not significant.</p>
Operational phase (year 15)
<p><b>Magnitude of effect</b></p> <p>At year 15 mitigation planting will have established and the reconfigured junction will have integrated to a degree into its immediate context and will not be an uncharacteristic feature. There will be a slight reduction in overall effect although there will be discernible change compared to the baseline situation. Magnitude of change is assessed as <b>minor</b>.</p> <p><b>Significance of effect</b></p> <p>The significance of effect is assessed as <b>slight</b> and not significant.</p>

Table 10-54 Assessment of effects on Lower Greta broad character area

Lower Greta Broad Character Area		
<b>Designated landscapes:</b> Dales Fringe Area of High Landscape Value	<b>Relevant viewpoints:</b> VP7.4	<b>Distance to the scheme:</b> Eastern part located along northern edge of the BCA
Baseline analysis		
<p>The landscape character of the part of the BCA that will be affected by the scheme is broadly typical of the landscape of the wider BCA. There is variation in the degree to which key characteristics are expressed as follows:</p> <ul style="list-style-type: none"><li>• The River Greta dissects the BCA, creating a compartmentalised landscape.</li><li>• On the south side of the river corridor, there are areas of higher ground with open views in the direction of the scheme.</li><li>• From the higher ground there is an intervisibility with other BCA such as Bowes BCA and Cotherstone Moor BCA.</li><li>• There are panoramic views of the AONB.</li><li>• Traffic using the existing A66 is a notable feature passing through the BCA at grade in a relatively open setting.</li></ul>		
<b>Value</b> Medium	<b>Sensitivity</b> Medium: the BCA coincides within Durham AHLV. A small part in the west of the BCA coincides with the North Pennines AONB.	
<b>Susceptibility</b> Medium		
Construction phase		

### Lower Greta Broad Character Area

#### Magnitude of effect

There will be direct physical effects on a small part of the BCA at the eastern end of the scheme at Low Broats. There will be loss of a small amount of vegetation alongside the existing A66 in the BCA and a belt of woodland immediately to the north of the BCA at Low Broats. There will be loss of vegetation and drystone walls in field boundaries in the BCA to create a new farm access and to accommodate the earthworks for the overbridge at Low Broats. There will be construction of a detention pond to the east of Low Broats in the BCA. Construction activities occurring in the adjacent Bowes BCA to the north of Lower Greta BCA will be very noticeable. The magnitude of change is assessed as **moderate** in a limited part of the BCA.

#### Significance of effect

Significance of effect is assessed as **moderate** and significant in a localised part of the BCA.

### Operational phase (year 1)

#### Magnitude of effect

At year 1 the earthworks associated with the new overbridge at Low Broats will be a noticeable new feature and the alteration to field boundaries and pattern will be permanent. The detention pond and associated fences and access will be uncharacteristic of the baseline. Mitigation planting at Low Broats will not yet have established and the earthworks and detention pond will be conspicuous features in a localised part of the BCA. Traffic using the scheme will be more noticeable than in the baseline situation although not uncharacteristic. However, due to the relatively limited degree of physical change to the BCA the effects are relatively localised and magnitude is assessed as **minor**.

#### Significance of effect

Significance of effect is assessed as **slight** and not significant in a localised part of the BCA.

### Operational phase (year 15)

#### Magnitude of effect

At year 15 mitigation planting will be established at Low Broats and will provide a degree of integration of the embankment and overbridge. However, the earthworks and mitigation planting associated with the overbridge will affect openness of the landscape in a limited part of the BCA. There will be permanent alteration of field boundaries at Low Broats and the introduction of detention ponds and associated fences and access will be uncharacteristic of the baseline. While these effects will result in physical change to landscape character, the effects will occur in a relatively localised area where road infrastructure is a notable existing influence on landscape character. Magnitude of effect is assessed as **minor**.

#### Significance of effect

Significance of effect is assessed as **slight** and not significant in a localised part of the BCA.

### Visual

10.9.17 The visual assessment firstly considers residents in the following groups of properties:

- Residents of Bowes

- Residents to the south of Bowes and the A66
- Residents to the north of Bowes and the A66.

10.9.18 PRoW and long distance trails are considered as follows:

- PRoW at Bowes
- PRoW in the North Pennines AONB
- The Pennine Way national trail.

Table 10-55 Assessment of effects on residents of Bowes

Residents of Bowes		
<b>Receptor category:</b> residential	<b>Distance to scheme:</b> n/a	<b>Sensitivity:</b> medium
<b>Relevant viewpoints:</b> VP7.3		
Baseline conditions		
<p>The majority of the residents of Bowes do not experience views in the direction of the scheme due to screening by landform, buildings and vegetation. A small number of properties are likely to experience views of the scheme:</p> <ul style="list-style-type: none"> <li>• Three properties (West End Bungalow, Ivy Hall Cottage and Ivy Hall Farm) with views in the direction of the site of a detention pond in the west of the scheme.</li> <li>• The northern part of a row of properties at Kilmond View in the central part of Bowes on the north side of Moor View.</li> <li>• Properties at Bowes Hall on the north side of Low Road.</li> </ul>		
Construction phase		
<p><b>Magnitude of effect</b></p> <p>During construction, activities associated with construction of the detention pond will be noticeable to residents of West End Bungalow, Ivy Hall Cottage and Ivy Hall Farm. Construction will be relatively small scale but in close proximity, resulting in a <b>moderate</b> magnitude of effects. At Kilmond View construction of the mainline and new structures will be very noticeable and be a focal point in views, potentially also with night-time effects of construction lighting, resulting in a <b>major</b> magnitude of effect. At Bowes Hall construction activities will be noticeable from the upper floors of Bowes Hall and the upper floor of East Byre. The magnitude of effect is assessed as <b>major</b>.</p> <p><b>Significance of effect</b></p> <p>West End Bungalow, Ivy Hall Cottage and Ivy Hall Farm, <b>moderate</b> and significant although of short duration.</p> <p>North end of Kilmond View, <b>large</b> and significant.</p> <p>Bowes Hall and East Byre, <b>large</b> and significant. While these properties are located at a distance of 200m, the views will be uninterrupted with construction activity occupying a large proportion of the view.</p>		
Operational phase (year 1)		



### Residents of Bowes

#### Magnitude of effect

During operation the detention pond will be a new feature in the foreground of views from West End Bungalow, Ivy Hall Cottage and Ivy Hall Farm, but will not be uncharacteristic of a rural environment and the magnitude of effect is assessed as **minor**.

At the north end of Kilmond View the reconfigured junction will be noticeable and some vegetation loss on the south side of the existing west bound on slip will open up views. However, vegetation on the north side of the slip road will be retained and while there will be intensification of road infrastructure and a discernible increase in vehicle lights it will not be uncharacteristic of views. The magnitude of effect is assessed as **minor**.

At Bowes Hall and East Byre the new detention pond will be visible, as will the earthworks associated with the new westbound off slip which will result in the loss of vegetation on the south side of the existing A66 and at the junction. The mainline will be noticeable in views to the east. While there will be an increase in the amount of road infrastructure, it will not be uncharacteristic of views and the magnitude of effect is assessed as **minor**.

#### Significance of effect

**Slight** and not significant.

### Operational phase (year 15)

#### Magnitude of effect

At year 15 mitigation planting will have established and the detention pond in the west of the scheme will be a familiar and not uncharacteristic component of the view. The magnitude of effect is assessed as **negligible**.

At Kilmond View, Bowes Hall and East Byre, while mitigation planting will be established and will soften the earthworks and new structures to a degree, there will be a perceptible change compared to baseline and the magnitude of effect will be **minor**.

#### Significance of effect

**Slight** and not significant.

Table 10-56 Assessment of effects on residents to the south of Bowes and the A66

### Residents to the south of Bowes and the A66

**Receptor category:** residential

**Distance to scheme:** n/a

**Sensitivity:** medium

**Relevant viewpoints:** n/a

#### Baseline conditions

This table considers residential properties to the south of Bowes from which there are uninterrupted views in the direction of the scheme or which are in close proximity to the scheme and for which significant effects may occur. Residents of properties to the south of the River Greta are unlikely to experience significant effects due to screening by landform and vegetation or due to the separation distance to the scheme. The following properties are assessed:

### Residents to the south of Bowes and the A66

Lowfield Barn. A two storey property with views to the north.

Lowfield Grange, Lowfield Farm and Lowfield Lodge. A group of three properties with restricted views in the direction of the scheme.

Stone Bridge Farm. A two storey property a short distance from the existing A66 with views to the north filtered by a belt of trees and with open views to the east.

### Construction phase

#### Magnitude of effect

During construction the scheme will be noticeable to residents of properties at Lowfield Barn, Lowfield Grange, Lowfield Farm and Lowfield Lodge. It will be very noticeable to residents of Stone Bridge Farm and there will be loss of trees that currently provide some screening in views to the north which will potentially allow views of construction lighting. Magnitude of effect will be **major** for Stone Bridge Farm and **moderate** for the other four properties.

#### Significance of effect

**Large** and significant for Stone Bridge Farm due to the short separation distance and the intensification of activities in a localised area in close proximity. **Moderate** and significant for the four other properties as construction will be a noticeable change but will not impinge substantially on views.

### Operational phase (year 1)

#### Magnitude of effect

At year 1 the scheme will be very noticeable to residents of Stone Bridge Farm who will experience an intensification of road infrastructure due to the presence of the new overbridge and associated earthworks, widening of the mainline, and positioning of a detention pond opposite the access to the property. Magnitude of effect is assessed as **moderate**.

For the other four properties the earthworks associated with the new overbridge at Low Broats will be the most noticeable change to views at a distance of 250m to 420m. Due to the separation distance and the potential for integration of the earthworks with surrounding landform and land use, the magnitude of effect is assessed as **minor**.

#### Significance of effect

**Moderate** and significant for Stone Bridge Farm.

**Slight** and not significant for the other four properties.

### Operational phase (year 15)

#### Magnitude of effect

At year 15 mitigation planting will be established and will filter views of the earthworks and overbridge to the east of Stone Bridge Farm. Planting on the south side of the scheme will filter views to the north which in the baseline situation are characterised by filtered views of traffic on the A66. Mitigation planting will also reduce effects from other properties although the scheme will be discernible. The magnitude of effect is assessed as **minor** for all properties.

#### Significance of effect

### Residents to the south of Bowes and the A66

**Slight** and not significant for all properties.

Table 10-57 Assessment of effects on residents to the north of Bowes and the A66

### Residents to the north of Bowes and the A66

**Receptor category:** residential

**Distance to scheme:** n/a

**Sensitivity:** medium

**Relevant viewpoints:** VP7.2, 7.5

#### Baseline conditions

This table considers properties on Clint Lane to the north of Bowes and properties along the A67 and to the south of the A67 between Bowes and Hulands Quarry. Residents of properties along Clint Lane experience elevated and uninterrupted views in the direction of the scheme, while those between Bowes and Hulands Quarry experience views across fairly level topography filtered by vegetation with views in the direction of the scheme from properties in the north and east screened by landform.

#### Construction phase

##### Magnitude of effect

During construction the scheme will be a noticeable change to views from properties along Clint Lane. These properties are orientated towards Bowes with elevated views from which the majority of the scheme will be visible, in particular the construction works at the new junction with the A67 and night-time effects due to the temporary introduction of new point sources of light. The magnitude of effect is assessed as **moderate**.

Due to screening by vegetation, landform and buildings and the distance to the scheme, the magnitude of effect on properties between Bowes and Hulands Quarry will be **minor**.

##### Significance of effect

**Moderate** and significant for properties along Clint Lane.

**Slight** and not significant for properties between Bowes and Hulands Quarry.

#### Operational phase (year 1)

##### Magnitude of effect

At year 1 the loss of vegetation at the new junction with the A67 will open up visibility of the scheme for residents of properties on Clint Lane. The degree of change will be limited and although perceptible, the scheme, and a slight increase in vehicle lights, would not be uncharacteristic of views and the magnitude of effect is assessed as **minor**.

At year 1 there may be glimpses of the new overbridge at Low Broats and a discernible increase in visibility of traffic due to the loss of vegetation along the existing A66. However, for residents of properties between Bowes and Hulands Quarry the magnitude of effect is assessed as **negligible**.

Residents to the north of Bowes and the A66
<b>Significance of effect</b> <b>Slight</b> and not significant for all properties.
Operational phase (year 15)
<b>Magnitude of effect</b> At year 15 mitigation planting will have established and while it will be discernible to residents along Clint Lane the change compared to the baseline will be limited. The magnitude of effect is assessed as <b>negligible</b> and will be the same for properties between Bowes and Hulands Quarry.
<b>Significance of effect</b> <b>Slight</b> and not significant for all properties.

Table 10-58: Assessment of effects on PRoW at Bowes

PRoW at Bowes
<b>Receptor category:</b> recreational <b>Distance to scheme:</b> adjacent <b>Sensitivity:</b>
<b>Relevant viewpoints:</b> n/a
Baseline conditions
<p>There are a number of PRoW to the north and south of the scheme and around Bowes, some of which extend into the North Pennines AONB to the west of the village. For most of the PRoW to the north and south of the scheme, the effects will be limited due to the scheme being in cutting or screened by intervening landform and buildings. This table considers the following PRoW between Bowes and Hulands Quarry and to the north and south of the scheme:</p> <p>PRoW 6 which runs north-east from The Street to the east of Bowes Hall crossing large fields on ground that rises south to north. It is severed by the existing A66 and continues on the north side of the road north-east to Myre Keld Farm and to the east to Myre Keld Cottage where it joins PRoW 0046 and continues east to Hulands Quarry.</p> <p>PRoW 9 is to the east of Bowes and heads south from The Street along the access to West Lowfields where it links to PRoW 8 before heading west following the course of the River Greta and passing to the north of Gilmonby.</p> <p>PRoW 8 heads east from West Lowfields along the rim of the River Greta valley passing approximately 630m to the south of Kilmond Wood limestone quarry.</p> <p>There will potentially be views of the scheme from PRoW in the North Pennines AONB approximately 800m to the south and immediately to the west of the scheme. These are discussed in</p> <p>Table 10-59 Assessment of effects on PRoW in the North Pennines AONB.</p>
Construction phase
<b>Magnitude of effect</b>

### PRoW at Bowes

Construction activities will be very noticeable to users of PRoW 6 and will be a dominant focal point in views to the north and south of where the scheme intersects the footpath. From the central section of the footpath the scheme will be less noticeable, becoming more apparent on the eastern section of the route at Hulands Quarry. Magnitude of effect is assessed as **major**.

There will be glimpses only of the scheme from the northern part of PRoW 9. The magnitude of effect is assessed as **minor** and the PRoW is not discussed further in this table.

The scheme will be noticeable from the eastern part of PRoW 8 in the vicinity of Mid Lowfields Farm and East Lowfields. There will be sustained views of construction activities associated with the eastern part of the mainline, the overbridge and detention ponds at Low Broats. Magnitude of effect is assessed as **moderate**.

#### Significance of effect

**Large** and significant for users of PRoW 6. **Moderate** and significant for users of PRoW 9. **Slight** and not significant for users of PRoW 8.

### Operational phase (year 1)

#### Magnitude of effect

At year one the new junction and mainline will be noticeable to users of PRoW 6. Vegetation loss alongside the existing A66 will open up views of traffic using the scheme and the earthworks will be noticeable due to their scale relative to existing landform variations as mitigation planting will not yet have established. Magnitude of effect is assessed as **moderate**.

Users of PRoW 8 will experience views of the new overbridge and earthworks at Low Broats in addition to views of traffic using the mainline and views of the detention ponds. While the overbridge will be discernible it will not be a prominent feature and traffic using the scheme will not be uncharacteristic of views. Magnitude of effect is assessed as **minor**.

#### Significance of effect

**Moderate** and significant for users of PRoW 6. **Slight** and not significant for users of PRoW 8.

### Operational phase (year 15)

#### Magnitude of effect

At year 15 mitigation planting will have established, softening the appearance of the new junction and integrating earthworks and structures into the landscape and views. The scheme will be a noticeable change to views along short sections of the footpath where it is severed by the scheme and while this will lead to slight intensification of road infrastructure in views it will not be uncharacteristic.

With mitigation planting established the magnitude of effect is assessed as **minor**.

For users of PRoW 8 there will be a slight reduction in effect as mitigation planting will have established although magnitude of effect will remain as **minor**.

#### Significance of effect

**Slight** and not significant for PRoW 6 and 8.

Table 10-59 Assessment of effects on PRoW in the North Pennines AONB

PRoW in the North Pennines AONB		
<b>Receptor category:</b> recreational (AONB)	<b>Distance to scheme:</b> 0.5-1.5km	<b>Sensitivity:</b> Very high
<b>Relevant viewpoints:</b> VP7.1, 7.4, 7.8		
Baseline conditions		
<p>This table considers potential effects on users of PRoW in the North Pennines AONB to the south of the scheme. The following three PRoW are representative of receptors using the PRoW network in that part of the AONB to the south of the scheme:</p> <p>PRoW 3 is a bridleway to the south-west of Bowes that runs west to east along Long Close Lane passing through West Gates Farm and connecting with Gilmonby.</p> <p>PRoW 7 is a bridleway that runs south from a minor road to the south of Gilmonby. It traverses high moorland connecting with a wider network of bridleways in the AONB. It crosses open access land in the AONB.</p> <p>PRoW 22 is a footpath on the southern rim of the Greta Valley to the south of Plover Hall and White Close Hill. It crosses the northern fringes of an area of moorland and is representative of a number of PRoW with views from elevated land in the direction of the eastern part of the scheme.</p>		
Construction phase		
<p><b>Magnitude of effect</b></p> <p>During construction there may be glimpses of activity from PRoW 3 with the majority of the scheme screened by landform and buildings in Bowes. For other PRoW in this area the effects will be similar although the scheme may be more noticeable to users of PRoW on more open elevated land. The magnitude of effect is assessed as <b>minor</b>.</p> <p>Users of PRoW 7 will experience views of construction from an elevated position approximately 1.5km to the south of the scheme. It is likely that construction activities will be a readily apparent feature of views but not a dominant or overbearing influence. The magnitude of effect is assessed as <b>moderate</b>.</p> <p>Users of PRoW 22 will also experience views of construction from an elevated position approximately 1.5km to the south-east of the scheme. The more intensive activities at the new A67 junction will be apparent as will construction of the overbridge at Low Broats. The magnitude of effect is assessed as <b>moderate</b>.</p> <p><b>Significance of effect</b></p> <p>For PRoW 3 and vicinity the significance of effect will be <b>moderate</b> and significant.</p> <p>For PRoW 7 and 22 the significance of effect will be <b>large</b> and significant.</p>		
Operational phase (year 1)		

### PRoW in the North Pennines AONB

#### Magnitude of effect

At year there will be a very slight opening up of views of traffic using the scheme due to the loss of vegetation at the western end but this will not be uncharacteristic of views. The new detention pond will be a visible new feature. It is considered that the degree of change to views from PRoW 3 and vicinity will be very limited and the magnitude of effect is assessed as **negligible**.

Users of PRoW 7 will experience views of traffic using the scheme, the reconfigured junction with the A67 and the overbridge at Low Broats. While the loss of vegetation will open up views of traffic slightly, this will not be uncharacteristic of views and the magnitude of effect is assessed as **minor**.

Users of PRoW 22 will experience views primarily of the new overbridge at Low Broats and associated detention ponds in addition to a slight increase in visibility of traffic using the scheme. The magnitude of effect is assessed as **minor**.

#### Significance of effect

For PRoW 3 and vicinity the significance of effect will be **slight** and not significant.

For PRoW 7 and 22 the significance of effect will be **moderate** and significant.

### Operational phase (year 15)

#### Magnitude of effect

At year 15 mitigation planting will be established and the reconfigured junction with the A67 will be better integrated in views from all the PRoW assessed. Mitigation planting at Low Broats will partly interrupt and filter views of the overbridge and earthworks. There will be a slight reduction in effect and compared to the baseline situation there will be a discernible change to views from PRoW at the edge of the AONB. The magnitude of effect will remain as **minor** for PRoW 7 and 22 and reduce to **negligible** for PRoW 3.

#### Significance of effect

The significance of effect will be **slight** for all three PRoW.

Table 10-60: Assessment of effects on the Pennine Way national trail

### The Pennine Way national trail

**Receptor category:** recreational

**Distance to scheme:** adjacent

**Sensitivity:** high

**Relevant viewpoints:** VP7.2

#### Baseline conditions

The Pennine Way national trail approaches Bowes from the west along the valley of the River Greta before passing to the west of Brough Castle then west through Bowes crossing the existing A66 on the route of a minor road and continuing north past Clint Lane and across elevated moorland to Baldersdale. There are views in the direction of the scheme east along the Greta Valley and elevated views from the minor road to the north.

#### Construction phase



### The Pennine Way national trail

#### Magnitude of effect

During construction there will be a direct effect on the Pennine Way at the western edge of Bowes where a detention pond will be excavated on the route of the trail. Construction of the reconfigured A67 junction will also be noticeable. There will be views of construction where the trail crosses the existing A66 and it will be very noticeable in views from the elevated section to the north where it passes Clint Lane. The magnitude of change is assessed as **major** along a short section of the trail at the detention pond in the west and between the bridge crossing the A66 and Clint Lane.

#### Significance of effect

The significance of effect is assessed as **large** and significant due to the direct impacts on the trail and the scheme will be a notable change to views during construction.

### Operational phase (year 1)

#### Magnitude of effect

At year 1 it is assumed that the trail will be re-routed around the detention pond and it will be visible in close proximity. The scheme will be noticeable where the trail crosses the A66 on a minor road and will be noticeable from the road to the south of Clint Lane. The scheme will not be uncharacteristic of views but will be more noticeable than in the baseline situation due to the loss of vegetation and newly formed earthworks on which mitigation planting will not yet have established. The magnitude of effect is assessed as **minor**.

#### Significance of effect

The significance of effect is assessed as **slight** and not significant.

### Operational phase (year 15)

#### Magnitude of effect

At year 15 mitigation planting will be established and the reconfigured junction with the A67 will be better integrated in views. The detention pond and associated landscape will be established although it will be a noticeable change to views with associated fences, access and gates. The magnitude of effect is assessed as **minor**.

#### Significance of effect

The significance of effect is assessed as **slight** and not significant.

## Cross Lanes to Rokeby

### Landscape

10.9.19 The assessment of effects on landscape considers the broad character areas that coincide with Dales Fringe AHLV. At this stage the AHLV is not assessed in detail as further survey work is required to understand potential impacts in the context of the wider locally designated area. However, given that likely significant effects are predicted on BCA that coincide with Dales Fringe AHLV significant effects are also predicted on the AHLV during construction and operation.

Table 10-61: Assessment of effects on Barningham, Brignall and Rokeby broad character area

Barningham, Brignall & Rokeby Broad Character Area		
<b>Designated landscapes:</b> County Durham – Area of High Landscape Value, Rokeby Park RPG	<b>Relevant viewpoints:</b> VP8.1 to 8.8	<b>Distance to the scheme:</b> The scheme is in the BCA.
Baseline analysis		
<p>The landscape character of the part of the BCA that will be affected by the scheme is broadly typical of the landscape of the wider BCA. There is variation in the degree to which key characteristics are expressed as follows:</p> <ul style="list-style-type: none"><li>• The A66 lies between the River Greta and River Tees corridors, the topography is therefore varied falling away to the north and rising up towards the south.</li><li>• The A66 follows localised ridges, shallow valley bottoms and also flat open plateaux.</li><li>• Strong landscape framework, notable mature and veteran trees and broadleaf plantations give an estate landscape character.</li><li>• Generally high degree of enclosure, with some open and panoramic views towards Newsham &amp; Cleatlam BCA and the North Pennines AONB to the west from ridge tops.</li><li>• Rokeby Park RPG including the Church of St Mary makes a notable and positive contribution to landscape character.</li></ul>		
<b>Value</b> High	<b>Sensitivity</b> High: while the majority of the BCA coincides with Durham AHLV, Rokeby Park RPG makes a notable contribution to landscape character and the prevalence of notable mature and veteran trees and blocks of deciduous woodland combine to give a strong estate landscape character and sense of place.	
<b>Susceptibility</b> Medium		
Construction phase		
<b>Magnitude of effect</b> Barningham, Brignall and Rokeby BCA will be affected by the Black, Red and Blue alternatives the key difference being the alternative junctions at the east end of the scheme for Black and Red and at the western end for Black and Blue. During construction the western Black (Cross Lanes) alternative junction will involve loss of trees and hedges in field boundaries, along the course of Tutta Beck and alongside the B6277 to the north of Cross Lanes. Construction of detention ponds will alter field pattern and construction of the mainline will involve loss of hedges and trees on the south side of the existing A66.		

### Barningham, Brignall & Rokeby Broad Character Area

Construction of the Black eastern (Rokeby) junction alternative will result in loss of trees and hedges in field boundaries and in particular loss of notable pollarded sycamore trees to accommodate an upgraded access to Rokeby Grange Farm. Construction of the offline section of the mainline will involve loss of hedges and trees in field boundaries and alteration of field pattern.

Construction of the Blue (Cross Lanes) alternative junction alternative will involve loss of trees alongside the existing B6277 to the north of Cross Lanes and loss of hedges and alteration of field boundaries on the north side of the existing A66 between Cross Lanes and North Bitts.

Construction of the Red (Rokeby) alternative eastern junction alternative will result in physical impacts on Rokeby Park RPG and loss of mature trees on the south side of the A66 to accommodate a new underpass and loss of trees in Church Plantation to the east of the Church of St Mary.

The magnitude of effect for all alternatives is assessed as **major**.

#### Significance of effect

The significance of effect is assessed as **large** and significant for all alternatives.

### Operational phase (year 1)

#### Magnitude of effect

At year 1 the scheme will be a very noticeable new feature in the landscape. The BCA is susceptible to linear infrastructure due to the prevalence of woodland and relatively small field size with hedges and mature trees in field boundaries. This estate character to the landscape is a notable feature and culminates in Rokeby Park RPG. The Black alternative western junction, while relatively compact and present in an area already influenced by road infrastructure, will introduce a large scale feature that will be uncharacteristic of the baseline. So too will the addition of detention ponds which are large in size and not a common characteristic of the BCA.

The loss of mature trees at the Black alternative eastern junction will be irreversible and those along the access to Rokeby Grange are notable features.

The Blue (Cross Lanes) alternative junction alternative will introduce a new junction and overbridge with associated earthworks which will increase the amount of infrastructure in that part of the BCA such that it will become a notable characteristic.

The Red (Rokeby) alternative junction will impinge upon the setting to Rokeby Park RPG and its contribution to landscape character by introducing infrastructure into the setting of the RPG.

The offline section and associated detention ponds at the east end of the scheme will intensify the appearance of road infrastructure.

The magnitude of effect for all alternatives is assessed as **major**.

#### Significance of effect

The significance of effect is assessed as **large** and significant for all alternatives.

### Operational phase (year 15)

### Barningham, Brignall & Rokeby Broad Character Area

#### Magnitude of effect

At year 15 of operation mitigation planting will be established and there will be a degree of integration of the scheme. The Black alternative western junction and associated link roads will include hedges and woodland planting on and around the earthworks and this will mitigate to a degree the new landform and structures that will not be characteristic of the baseline.

The Black alternative eastern junction will result in permanent loss of notable mature trees at Rokeby Grange Farm and field pattern will be altered on the offline section.

The Blue (Cross Lanes) alternative junction will permanently alter the character of a discrete part of the BCA and result in alteration of field boundaries in and adjacent to the BCA and the new overbridge will be a noticeable addition uncharacteristic of the baseline.

The Red (Rokeby) alternative junction will be a permanent new addition to the setting of Rokeby Park RPG and while landform mitigation and tree planting will integrate the new junction to a degree, it will be a noticeable alteration to the immediate setting and contribution that Rokeby Park RPG makes to landscape character of the BCA.

While mitigation will reduce effects to a degree, landscape character will be defined by road infrastructure in a limited part of the BCA and the magnitude of effect in this area is assessed as **moderate** for all alternatives.

#### Significance of effect

The significance of effect is assessed as **large** and significant for all alternatives.

Table 10-62: Assessment of effects on Boldron and Lartington broad character area

### Boldron and Lartington Broad Character Area

#### Designated landscapes:

County Durham – Area of High Landscape Value

#### Relevant viewpoints: VP8.1, 8.2

**Distance to the scheme:** The western part of the scheme is in the BCA

#### Baseline analysis

Landscape character of the part of the BCA that will be affected by the scheme is broadly typical of the landscape of the wider BCA.

There is variation in the degree to which key characteristics are expressed as follows:

- Regular and narrow field pattern dominates part of the BCA to the north-west of Cross Lanes.
- Abundant hedgerows and hedgerow trees.
- High degree of enclosure that opens lightly to the south of the existing A66 at Cross Lanes.
- From the southern edge of BCA there are views across the valley with the North Pennines AONB as the backdrop to the south.
- Strong landscape framework linked to the lowland, working agricultural setting.
- Narrow sunken lanes.
- The A66 follows a broad ridge with topography falling away in the north to the River Tees and rising in the south towards the historic village of Brignall.

Boldron and Lartington Broad Character Area	
<b>Value</b> Medium	<b>Sensitivity</b> Medium: the BCA coincides with Durham AHLV and includes a coaxial field pattern with a strong sense of enclosure in the landscape.
<b>Susceptibility</b> Medium	
<b>Construction phase</b>	
<b>Magnitude of effect</b> Boldron and Lartington BCA will be affected primarily by the Blue (Cross Lanes) alternative. The mainline section remains the same for both Black and Blue alternatives. This table therefore considers only the Blue (Cross Lanes) alternative junction. There will be considerable localised effects from the removal of vegetation to accommodate the new grade-separated junction and associated link roads. Field boundaries will be removed and field pattern will be altered where infrastructure is accommodated in existing fields. This will reduce the enclosed character of the landscape and the loss of woodland, hedges and trees and realignment of lanes will affect the rural character of a localised part of the BCA. The magnitude of effect is assessed as <b>major</b> in a limited part of the BCA.	
<b>Significance of effect</b> The significance of effect is assessed as <b>large</b> and significant for the Blue junction alternative only in a localised part of the BCA.	
<b>Operational phase (year 1)</b>	
<b>Magnitude of effect</b> At year 1 the scheme will be a very noticeable new feature. While there is road infrastructure in this part of the BCA, the junction and associated link roads will be of a scale that is uncharacteristic, introducing new features and intensifying the amount of infrastructure in this part of the BCA. The change is such that landscape character will be altered in a small part of the BCA to a landscape influenced primarily by road infrastructure. The loss of trees, woodland and hedges and the alteration of lanes and public rights of way will be permanent and irreversible. However, given the relatively small area affected and the enclosure provided by localised landform and woodland in the wider area, the magnitude of effect at year 1 is assessed as <b>moderate</b> .	
<b>Significance of effect</b> The significance of effect is assessed as <b>moderate</b> and significant in a localised part of the BCA.	
<b>Operational phase (year 15)</b>	
<b>Magnitude of effect</b> At year 15 of operation mitigation planting will be established and there will be a degree of integration of the scheme. The new link roads to the junction and the realigned roads will be lined with hedges, and woodland planting on and around the earthworks at the overbridge will mitigate to a degree the new landform and structures that will not be characteristic of the baseline. While mitigation will reduce effects to a degree, landscape character will be defined by road infrastructure in a limited part of the BCA and the magnitude of effect in this area is assessed as <b>moderate</b> .	
<b>Significance of effect</b>	

### Boldron and Lartington Broad Character Area

The significance of effect is assessed as **moderate** and significant in a localised part of the BCA.

#### Visual

10.9.20 The visual assessment firstly considers residents in the following groups of properties:

- Residents west of Tutta Beck Farm
- Residents east of Tutta Beck Farm

10.9.21 PRoW and long distance trails are considered as follows:

- PRoW west of Cross Lanes
- PRoW to the north of the A66
- PRoW to the south of the A66

10.9.22 The following visitor attractions are also considered:

- Rokeby Park RPG
- Church of St. Mary
- Cross Lanes Organic Farm

Table 10-63: Assessment of effects on residents west of Tutta Beck Farm

Residents west of Tutta Beck Farm		
<b>Receptor category:</b> residential	<b>Distance to scheme:</b> n/a	<b>Sensitivity:</b> medium
<b>Relevant viewpoints:</b> VP8.1, 8.2		
Baseline conditions		
This table considers the potential effects on residents of the following properties: Smithy Cottage, Ivy Cottage, North Bitts, Pounder Gill, The Cottage, Dent House Farm and Birk House.		
Construction phase		
<b>Magnitude of effect</b> During construction there will be noticeable change to views from all properties with the highest degree of change resulting from the Blue junction alternative for residents at North Bitts, Pounder Gill and Dent House Farm. Smithy Cottage, Ivy Cottage, The Cottage and Birk House will be affected primarily by the Black (Cross Lanes) junction alternative. The magnitude of effect is assessed as <b>major</b> .		
<b>Significance of effect</b> Significance of effect is assessed as <b>large</b> and significant for all properties.		

Residents west of Tutta Beck Farm
<b>Operational phase (year 1)</b>
<p><b>Magnitude of effect</b> At year 1 the loss of vegetation will be noticeable and will open up views towards the scheme. The amount of vegetation loss resulting from the Blue junction alternative will be substantial and this will change the composition of views in a localised area for North Bitts, Pounder Gill Dent House Farm, Smithy Cottage and Ivy Cottage. Vehicle lights will be noticeable in views from the rear of Smith Cottage and Ivy Cottage. The Black (Cross Lanes) junction alternative will also result in substantial change to view in a localised area through the introduction of a new junction and loss of vegetation alongside the existing A66 and in adjacent field boundaries. The Black (Cross Lanes) junction alternative will have greater effects on Smithy Cottage, Ivy Cottage and Birk House. The magnitude of effect is assessed as <b>moderate</b> for these properties.</p> <p>The effects of the Black (Cross Lanes) junction alternative on The Cottage will be considerable due to the close proximity of the junction and the scale of the earthworks. The magnitude of effect is assessed as <b>major</b> at The Cottage.</p> <p><b>Significance of effect</b> Significance of effect is assessed as <b>moderate</b> and significant for all properties except The Cottage where the significance of effect will be <b>large</b> and significant.</p>
<b>Operational phase (year 15)</b>
<p><b>Magnitude of effect</b> At year 15, while mitigation planting will achieve a degree of integration of the scheme, compared to the baseline scenario the effects of the Blue (Cross Lanes) junction alternative will be noticeable to residents of Pounder Gill, Dent House Farm, Smithy Cottage and Ivy Cottage and less noticeable to residents of North Bitts who would experience oblique views. Vehicle lights will be glimpsed in views from the rear of Smith Cottage and Ivy Cottage. The magnitude of effect is assessed as <b>moderate</b>.</p> <p>The Black (Cross Lanes) junction alternative will result in limited effects on residents of North Bitts and Pounder Gill and greater effects on residents of Smithy Cottage, Ivy Cottage, The Cottage and Birk House. For the latter four properties only the magnitude of effect is assessed as <b>moderate</b>.</p> <p><b>Significance of effect</b> <b>Moderate</b> and significant on Pounder Gill, Dent House Farm (Blue Cross Lanes alternative only) Smithy Cottage, Ivy Cottage, The Cottage and Birk House.</p>

Table 10-64: Assessment of effects on residents east of Tutta Beck Farm

Residents east of Tutta Beck Farm		
<b>Receptor category:</b> residential	<b>Distance to scheme:</b> n/a	<b>Sensitivity:</b> medium
<b>Relevant viewpoints:</b> VP8.5		
<b>Baseline conditions</b>		



### Residents east of Tutta Beck Farm

This table considers the potential effects on residents of the following properties:

Tutta Beck Cottage and Keepers House both at Tutta Beck Farm, The Rectory, School House, Ewebank, Tack Room Cottage and The Grove. Other nearby properties such as Rokeby Grange, West Lodge and North Park Cottage are unlikely to be significantly affected due to screening by landform, vegetation or built form.

### Construction phase

#### Magnitude of effect

During construction there will be loss of vegetation alongside the existing A66 opposite Tutta Beck Farm, opposite Ewebank and at Tack Room Cottage and The Grove. Construction activity will be noticeable to residents at Tutta Beck Farm at a distance of approximately 280m from the mainline although an access road will be constructed a short distance to the north of the properties. Construction of all alternatives will be noticeable and the magnitude of effect is assessed as **moderate**.

The Rectory and School House are a short distance from the mainline and residents will experience substantial effects during construction with activities being a focal point in views. The magnitude of effect is assessed as **major**.

At Tack Room Cottage and The Grove the loss of vegetation immediately to the north and the presence of construction activities associated with the mainline and the two detention ponds will result in substantial change to views. The magnitude of effect is assessed as **major**.

At Ewebank construction of the mainline will be noticeable and construction of the new junction for the red alternative at Rokeby will be very noticeable. The magnitude of effect is assessed as **major**.

#### Significance of effect

**Moderate** and significant for two properties at Tutta Beck Farm. **Large** and significant for The Rectory, School House, Ewebank, Tack Room Cottage and The Grove.

### Operational phase (year 1)

#### Magnitude of effect

At year 1 the loss of vegetation opposite Tutta Beck Farm will open up views to traffic using the scheme which will bring traffic slightly closer to the properties than in the baseline situation. The new access road will be a minor feature in views and there will be oblique views of the junction associated with the Black (Rokeby) junction alternative from the curtilage of properties. The magnitude of effect is assessed as **minor**.

During operation the scheme will be very noticeable to the south of The Rectory and the existing A66 will be de-trunked and used as local access. The scheme will be noticeable from School House and will be further from the property than the existing A66 although will result in a slight intensification of road infrastructure. The magnitude of effect is assessed as **moderate** for residents of School House and **major** for residents of The Rectory.

At Tack Room Cottage and The Grove the loss of vegetation will open up views in the direction of the scheme which will be in cutting as it passes a short distance to the north. Vehicle lights will be more noticeable as a result of the loss of vegetation. The new detention

#### Residents east of Tutta Beck Farm

ponds will be noticeable and the junction for the red alternative will be prominent for residents of Tack Room Cottage with a discernible increase in visibility of vehicle lights. The magnitude of effect is assessed as **major** at both properties.

At Ewebank the mainline will be noticeable from the access road to the property and there will be oblique views from the property and direct views from the property curtilage of the red alternative junction. The magnitude of effect is assessed as **moderate**.

#### Significance of effect

**Slight** and not significant at Tutta Beck Farm.

**Moderate** and significant at School House, Tack Room Cottage and Ewebank.

**Large** and significant at The Rectory and The Grove.

#### Operational phase (year 15)

#### Magnitude of effect

At year 15 mitigation planting will have established and there will be views of traffic through vegetation from Tutta Beck Farm and oblique views of the Black (Rokeby) alternative junction. Views of the scheme will not be uncharacteristic of those experienced in the baseline scenario although there will be slight intensification of road infrastructure. The magnitude of effect is assessed as **minor**.

At the Rectory the scheme will remain a noticeable feature of views and result in intensification of road infrastructure in close proximity to the property. The magnitude of effect is assessed as **moderate**. At School House mitigation planting will reduce effects although there will be a discernible change compared to the baseline scenario and the magnitude of effect is assessed as **minor**.

At Tack Room Cottage and The Grove mitigation planting on cutting slopes and at detention ponds will integrate the scheme into the landscape although the red alternative will be a noticeable change to views. The magnitude of effect is assessed as moderate.

#### Significance of effect

**Slight** and not significant at Tutta Beck Farm.

**Moderate** and significant at School House, The Rectory, The Grove, Tack Room Cottage and Ewebank.

Table 10-65: Assessment of effects on PRoW west of Cross Lanes

#### PRoW west of Cross Lanes

**Receptor category:** recreational

**Distance to scheme:** adjacent

**Sensitivity:** high

**Relevant viewpoints:** VP8.1, 8.2

#### Baseline conditions

PRoW to the west of Cross Lanes will be affected primarily by the Blue junction alternative. The following PRoW are considered:  
ProW 14 which runs east from the village of Boldron connecting with ProW 7 and 8 to the west of Princess Charlotte Wood.

ProW 19 which runs southeast from ProW 14 linking with ProW 1 to the north of North Bitts before connecting with the A66 opposite the junction with Stang Lane.

### PRoW west of Cross Lanes

ProW 7 which runs north from the A66 approximately 50m to the east of ProW 1. The footpath links with ProW 8 where it crosses ProW 14 to the west of Princess Charlotte Wood, at which point the ProW skirts the wood to the south before passing to the north of Smithy Cottage and crossing the B6277 before heading north-east.  
ProW 5 is to the south of Cross Lanes Organic Farm and runs west from Cross Lanes to the north of Dent House Farm before joining Stang Lane to the south of Punder Gill.

### Construction phase

#### Magnitude of effect

During construction the Blue junction alternative will be more noticeable from PRoW to the west of Cross Lanes and in particular PRoW 7 and 8 will be physically affected with PRoW 8 being severed by the realigned B6277. PRoW 5 and 8 and will be affected by the Black alternative only.

There will be views of construction from the eastern part of PRoW 14 and it is likely that activities will be a noticeable and uncharacteristic feature in views during that period.

The scheme will also be noticeable from the southern part of PRoW 19 and prominent in views from the southern part of PRoW 1 and PRoW 7.

PRoW 8 will be severed by the realigned B6277 and construction will be very noticeable.

Construction will also be very noticeable from PRoW 5 which runs parallel to a side road associated with the scheme and from which there will be elevated views of the side road and crossing of Tutta Beck.

The magnitude of effect is assessed as **moderate** for PRoW 14 and Major for PRoW 1, 5, 7, 8 and 19 in relation the Blue junction alternative.

Construction of the Black (Cross Lanes) junction alternative will be very noticeable from PRoW 5 and 8.

PRoW 5 is elevated above the Tutta Beck valley and it is likely there will be sustained views of construction of the Black (Cross Lanes) junction alternative junction. Vegetation loss will open up views in the direction of the Black (Cross Lanes) junction alternative junction from the eastern part of PRoW 8. The magnitude of effect is assessed as **moderate** for the Black (Cross Lanes) junction alternative on PRoW 5 and 8 only.

#### Significance of effect

**Moderate** and significant for PRoW 5 and 8 (Black (Cross Lanes) junction alternative only)

**Moderate** and significant for PRoW 14 (Blue (Cross Lanes) junction alternative only)

**Large** and significant for PRoW 1, 5, 7, 8 and 19 (Blue (Cross Lanes) junction alternative only).

### Operational phase (year 1)

#### PRoW west of Cross Lanes

##### Magnitude of effect

At year 1 the loss of vegetation at and around the junction for the Blue (Cross Lanes) junction alternative will open up views of infrastructure. The balance of features and elements in the view will change and while road infrastructure will not be uncharacteristic of views it will intensify in appearance and be a more noticeable element than in the baseline situation.

The scheme will be a noticeable feature in views from the eastern part of PRoW 14 and southern part of PRoW 19, with the most notable change compared to baseline being the new overbridge and associated earthworks at the junction. The magnitude of effect is assessed as **moderate**.

The new junction will be very noticeable from the southern part of PRoW 1 and 7 and from PRoW 5 and 8. The magnitude of effect is assessed as **major** for these PRoW for the Blue junction alternative.

The magnitude of effect will be **moderate** on PRoW 5 and 8 only for the Black (Cross Lanes) junction alternative.

##### Significance of effect

**Moderate** and significant for PRoW 5 and 8 (Black (Cross Lanes) junction alternative only)

**Moderate** and significant for PRoW 14 and 19 (Blue (Cross Lanes) junction alternative only)

**Large** and significant for PRoW 1, 5, 7 and 8 (Blue (Cross Lanes) junction alternative only)

#### Operational phase (year 15)

##### Magnitude of effect

At year 15 mitigation planting will have established and will soften and integrate the earthworks into the surrounding landscape. The Blue alternative will remain a noticeable new feature in views primarily as a result of the loss of vegetation in field boundaries and along Tutta Beck which will be permanent. While there will be new planting, the pattern of landscape features and the composition of views will change relative to the baseline situation.

The magnitude of effect is assessed as **minor** for PRoW 14 and 19 and **moderate** for PRoW 1, 5, 7 and 8 for the Blue junction alternative.

The magnitude of effect will be **moderate** on PRoW 5 and 8 only for the Black (Cross Lanes) junction alternative.

##### Significance of effect

**Moderate** and significant for PRoW 5 and 8 (Black (Cross Lanes) junction alternative only)

**Slight** and not significant for PRoW 14 and 19 (Blue (Cross Lanes) junction alternative only)

**Moderate** and significant for PRoW 1, 5, 7 and 8 (Blue (Cross Lanes) junction alternative only)

Table 10-66: Assessment of effects on PRoW to the north of the A66

#### PRoW to the north of the A66

**Receptor category:** recreational

**Distance to scheme:** adjacent

**Sensitivity:** high

**Relevant viewpoints:** VP8.3, 8.4

PRoW to the north of the A66
Baseline conditions
<p>This table assesses effects on the following PRoW which are listed west to east from Cross Lanes:  PRoW 4 is a footpath that runs in a south-west to north-east direction from a point where it links with PRoW 14 to the east of the B6277 to Egglestone Abbey scheduled monument on the south bank of the River Tees.  PRoW 9 runs north from the A66 passing west and north of Dowson's Gill before heading north passing west of Colton Plantation and connecting with the Barnard Castle road at Abbey Bridge.  PRoW 5 runs north-south from the Barnard Castle road to the Church of St Mary where it passes through the Church grounds to the A66.  PRoW 13 crosses a large field opposite the main entrance to Rokeby Park RPG and runs north-west to south-east between sections of the Barnard Castle road.  Between Cross Lanes and Rokeby Park land to the north of the A66 gradually falls north to the River Tees. Large blocks and belts of woodland are prevalent in this area and in particular Graham's Wood, Manyfold Beck Wood and Church Plantation interrupt views in the direction of the A66. When these factors are considered it is likely that only the southern part of these PRoW will be affected by the scheme.</p>
Construction phase
<p><b>Magnitude of effect</b>  During construction activities associated with the Black (Cross Lanes) junction alternative will be noticeable to users of PRoW 4 and the Black (Rokeby) junction alternative will be particularly noticeable to users of the southern end of PRoW 5, 9 and 10 where these PRoW link to the existing A66. Magnitude of effect is assessed as <b>moderate</b> for PRoW 4, Black (Cross Lanes) junction alternative, and <b>major</b> for 5, 9 and 10 for the Black (Rokeby) junction alternative.  PRoW 13 will be affected primarily by the red alternative. The junction at Rokeby Park RPG will sever PRoW 13. Construction of the Red (Rokeby) alternative will result in some loss of vegetation at Church Plantation and a belt of mature trees on the south side of the A66. There will be sustained views of construction from PRoW 13. The magnitude of effect is assessed as <b>major</b>.</p> <p><b>Significance of effect</b>  <b>Moderate</b> and significant for PRoW 4 (Black (Cross Lanes) junction alternative only).  <b>Large</b> and significant for PRoW 5, 9 and 10 (Black (Rokeby) junction alternative only).  <b>Large</b> and significant for PRoW 13 (Red (Rokeby) alternative only).</p>
Operational phase (year 1)
<p><b>Magnitude of effect</b>  At year 1 there will be views of the Black (Cross Lanes) junction alternative from PRoW 4. The junction will be glimpsed through hedges and trees from the southern part of the footpath and will be a noticeable new feature in views. For users of PRoW 9 and 10 the removal of vegetation will open up views of the scheme and the mainline on embankment will be noticeable as it approaches the Black (Rokeby)</p>

### PRoW to the north of the A66

alternative junction to the west of the Church of St Mary. Users of PRoW 5 will experience change resulting from the loss of vegetation immediately to the south of the Church of St Mary along the existing A66 and to the west where the new Black (Rokeby) alternative junction will be situated. The mainline will be further from users of the PRoW than the existing A66 which will be de-trunked and used as local access. Magnitude of effect is assessed as **moderate** for PRoW 4 for the Black (Cross Lanes) junction alternative. The magnitude of effect of the Black (Rokeby) junction alternative on PRoW 5 will be **moderate** and Major for 9 and 10.

The Red (Rokeby) alternative will primarily affect PRoW 13. As mentioned above the PRoW will be severed. There will be views of traffic using the northern part of the junction where it links with the Barnard Castle Road. The magnitude of effect is assessed as **moderate**.

#### Significance of effect

**Moderate** and significant for PRoW 4 (Black (Cross Lanes) junction alternative only).

**Major** and significant for PRoW 5, 9 and 10 (Black (Rokeby) junction alternative only).

**Major** and significant for PRoW 13 (Red (Rokeby) alternative only).

### Operational phase (year 15)

#### Magnitude of effect

At year 15 mitigation planting at the Black (Cross Lanes) junction alternative will integrate the earthworks into the landscape to a degree which, combined with existing intervening vegetation, will slightly reduce effects of the junction on views from the southern part of PRoW 4. The overbridge will be a noticeable new feature in views and the mainline will also intensify the appearance of road infrastructure in views. Users of PRoW 9 and 10 will experience views of the scheme from the southern end of each footpath. While there will be a noticeable intensification of road infrastructure in views, mitigation planting will filter or fragment views of traffic from the southern part of these PRoW. Users of PRoW 9 and 10 will experience views of the Black (Rokeby) alternative junction and filtered views of traffic using the mainline to the south. Magnitude of effect is assessed as **moderate** for PRoW 4 for the Black (Cross Lanes) junction alternative.

The magnitude of effect of the Black (Rokeby) junction alternative on PRoW 5, 9 and 10 will be moderate.

For users of PRoW 13 there will be views of traffic using the northern part of the Red (Rokeby) alternative junction where it links with the Barnard Castle Road. The magnitude of effect is assessed as **moderate**.

#### Significance of effect

**Moderate** and significant for PRoW 4 (Black (Cross Lanes) junction alternative only).

**Moderate** and significant for PRoW 5, 9 and 10 (Black (Rokeby) junction alternative only).

**Moderate** and significant for PRoW 13 (Red (Rokeby) alternative only).

Table 10-67: Assessment of effects on PRow to the south of the A66

PRow to the south of the A66		
<b>Receptor category:</b> recreational	<b>Distance to scheme:</b> adjacent	<b>Sensitivity:</b> high
<b>Relevant viewpoints:</b> VP8.8		
<b>Baseline conditions</b>		
This table considers the potential effects on PRow 6 that runs south from the existing A66 opposite the Church of St Mary. It passes through a deep wooded gill through which Tutta Beck flows and links with PRow 3 which runs south to the village of Brignall. PRow 3 is also considered as there may be sustained and intermittent views of the scheme for northbound users.		
<b>Construction phase</b>		
<b>Magnitude of effect</b> During construction there will be considerable impacts on PRow 6 which will be severed by the mainline. A detention pond will be excavated to the south of The Rectory and immediately to the east of PRow 6. Construction activities will be visible above trees from the northern part of PRow 3 and there will be longer distance views from the southern part of the PRow where it crosses slightly more elevated land. Magnitude of effect is assessed as <b>major</b> for PRow 6 and <b>moderate</b> for PRow 3 for both the Black (Rokeby) and Red (Rokeby) alternatives.		
<b>Significance of effect</b> <b>Very large</b> and significant for PRow 6. <b>Large</b> and significant for PRow 3.		
<b>Operational phase (year 1)</b>		
<b>Magnitude of effect</b> At year 1 the mainline will intensify the amount of road infrastructure visible from the PRow 6 and a detention pond immediately to the east of the footpath with fencing and access will further change the predominantly rural character of views from the PRow. The Black alternative junction will be noticeable to the west of PRow 6. Users of PRow 3 will notice traffic using the mainline and will see a noticeable change to views from the northern part of the footpath and in sustained longer distance views along the southern part of the PRow.		
Magnitude of effect is assessed as <b>major</b> for PRow 6 and <b>moderate</b> for PRow 3 for both the Black (Rokeby) and Red (Rokeby) alternatives.		
<b>Significance of effect</b> <b>Very large</b> and significant for PRow 6. <b>Large</b> and significant for PRow 3.		
<b>Operational phase (year 15)</b>		



### PRoW to the south of the A66

#### Magnitude of effect

At year 15 mitigation planting will provide a degree of integration although the scheme will remain a dominant focal point in views from PRoW 6 when compared to the baseline situation. For users of PRoW 3 the scheme will be a noticeable new feature in views from more elevated parts of the footpath and where it passes along open field margins. Magnitude of effect is assessed as **major** for PRoW 6 and **moderate** for PRoW 3 for both the Black (Rokeby) and Red (Rokeby) alternatives.

#### Significance of effect

**Large** and significant for PRoW 6.

**Large** and significant for PRoW 3.

Table 10-68: Assessment of effects on visitors to Rokeby Park RPG

### Visitors to Rokeby Park RPG

**Receptor category:** recreational (visitor attraction)

**Distance to scheme:** adjacent

**Sensitivity:** high

**Relevant viewpoints:** n/a

#### Baseline conditions

Rokeby Park RPG is open to the public and access is gained via the minor road to Barnard Castle and through the main entrance which faces west. There are oblique views from the entrance to Rokeby Park RPG towards the Church of St Mary.

#### Construction phase

#### Magnitude of effect

There will potentially be views of construction plant from the grounds of Rokeby Park RPG. However, the effects on visitors to the grounds will be limited. There will potentially be views of construction from inside the main building and again the effects on visitors will be limited. The main effect on visitors will be on entering and leaving Rokeby Park RPG via the main entrance. Visitors will experience views of construction of the Red (Rokeby) alternative junction which will be approximately 180m from the main entrance at its closest point. Construction activities will be a dominant focal point in views. Magnitude of effect is assessed as **major** for the Red (Rokeby) alternative only.

#### Significance of effect

**Large** and significant.

#### Operational phase (year 1)

Visitors to Rokeby Park RPG
<p><b>Magnitude of effect</b> At year 1 mitigation planting will not yet have established. Earthworks associated with the junction will be noticeable and traffic using it will be visible for a short duration. Vehicles using the scheme will introduce lights into a part of the view where currently there is open land without any source of light. Visitors to Rokeby Park RPG are likely to use the junction during their journey to visit the property. Magnitude of effect is assessed as <b>moderate</b> for the Red (Rokeby) alternative only.</p> <p><b>Significance of effect</b> <b>Moderate</b> and significant.</p>
Operational phase (year 15)
<p><b>Magnitude of effect</b> At year 15 mitigation planting will have established, as will grassland on earthworks. The junction will be a noticeable feature in views from the gates of Rokeby Park RPG when compared to the baseline situation. However, it is predicted that mitigation will minimise the effects on views through integration of the earthworks into adjacent landform and through sensitive siting and design of signage, fencing and finishes to structures and detailing of road design. Magnitude of effect is assessed as <b>minor</b> for the Red (Rokeby) alternative only.</p> <p><b>Significance of effect</b> <b>Slight</b> and not significant.</p>

Table 10-69: Assessment of effects on visitors to the Church of St Mary

Visitors to the Church of St Mary		
<b>Receptor category:</b> recreational (visitor attraction)	<b>Distance to scheme:</b> adjacent	<b>Sensitivity:</b> high
<b>Relevant viewpoints:</b> VP8.4		
Baseline conditions		
The Church of St Mary is in Rokeby Park RPG and is a Grade II* listed building. The church building is slightly elevated above the grounds in which it is situated and which front onto the existing A66. The church grounds may be accessed from the east via a car park or from the south via PRow 5, the impacts on which are described in Table 10-69. Views are focussed to the south from the main entrance to the church building and to the north and north-west from the grounds. Views west are interrupted by mature pollarded trees.		
Construction phase		
<p><b>Magnitude of effect</b> The effects will be similar to those described for PRow 5 and are assessed as <b>major</b> during construction for the Black (Rokeby) alternative only.</p> <p><b>Significance of effect</b></p>		

Visitors to the Church of St Mary
<b>Large</b> and significant for the Black (Rokeby) alternative only.
Operational phase (year 1)
<b>Magnitude of effect</b> The effects will be similar to those described for PRow 5 and are assessed as <b>major</b> during year 1 for the Black (Rokeby) alternative only.
<b>Significance of effect</b> <b>Large</b> and significant for the Black (Rokeby) alternative only.
Operational phase (year 15)
<b>Magnitude of effect</b> The effects will be similar to those described for PRow 5 and are assessed as <b>moderate</b> during year 15 for the Black (Rokeby) alternative only.
<b>Significance of effect</b> <b>Moderate</b> and significant for the Black (Rokeby) alternative only.

Table 10-70: Assessment of effects on visitors to Cross Lanes Organic Farm

Visitors to Cross Lanes Organic Farm		
<b>Receptor category:</b> recreational (visitor attraction)	<b>Distance to scheme:</b> adjacent	<b>Sensitivity:</b> high
<b>Relevant viewpoints:</b> n/a		
Baseline conditions		
Cross lanes Organic Farm is situated at the junction of Moorhouse Lane, the B6277 and the A66. The farm is accessed via Moorhouse Lane and there is visitor parking and outdoor seating on the south side of the property. Inside there is a farm shop and restaurant. There are uninterrupted views north to the existing A66 from the car park and oblique views from the outdoor seating area to the south of the main building. The A66 is a single carriageway in each direction separated by a central reservation.		
Construction phase		
<b>Magnitude of effect</b> During construction there will be considerable temporary impacts on visitors primarily from the Black (Cross Lanes) junction alternative which will involve a grade-separated junction immediately to the west of the entrance to the Farm. The Blue (Cross Lanes) junction alternative will also result in considerable impacts of relatively short duration as a new link road will be constructed to the south of the Farm and construction of the new junction to the west will be very noticeable. Magnitude of effect is assessed as <b>major</b> for both alternatives.		

Visitors to Cross Lanes Organic Farm
<b>Significance of effect</b> <b>Very large</b> and significant for both alternatives.
Operational phase (year 1)
<b>Magnitude of effect</b> At year 1 the loss of vegetation on the south side of the existing A66 will open up views of traffic using the scheme. The Black (Cross Lanes) junction alternative junction to the east of the Farm will be noticeable above intervening hedges, some of which will be removed to accommodate a new link road connecting with Moorhouse Lane opposite the entrance to the Farm. The link road for the Blue (Cross Lanes) junction alternative will pass a short distance to the south of the Farm and will be noticeable where it curves north to join the realigned B6277 which will cross the new mainline on an overbridge. Magnitude of effect is assessed as <b>major</b> for both alternatives.
<b>Significance of effect</b> <b>Large</b> and significant for both alternatives.
Operational phase (year 15)
<b>Magnitude of effect</b> At year 15 vegetation will have established and there will be a degree of integration of the Black (Cross Lanes) junction alternative junction. It will remain a noticeable change compared to the baseline situation and the magnitude of effect is assessed as <b>moderate</b> . The Blue junction alternative junction and side road will also be noticeable new features and a notable change compared to the baseline situation. However, it is predicted that the main impacts will relate to visibility of the new link road that will run to the south of the Farm and it is predicted that mitigation planting alongside the link road will allow views of high sided vehicles only. The magnitude of effect is assessed as <b>minor</b> for the Blue junction alternative.
<b>Significance of effect</b> <b>Moderate</b> and significant for the Black (Cross Lanes) junction alternative. <b>Slight</b> and not significant for the Blue junction alternative.

## Stephen Bank to Carkin Moor

### Landscape

Table 10-71: Assessment of effects on Moors Fringe landscape character type

Moors Fringe Landscape Character Type		
<b>Designated landscapes:</b> n/a	<b>Relevant viewpoints:</b> VP9.1 to 9.8	<b>Distance to the scheme:</b> The majority of the scheme is in the LCT
Baseline analysis		

Moors Fringe Landscape Character Type	
<p>The part of the LCT that will be affected by the scheme is broadly typical of the landscape of the wider LCT. There is variation in the degree to which key characteristics are expressed as follows:</p> <ul style="list-style-type: none"><li>• The A66 traverses a relatively narrow ridge between river corridors.</li><li>• Shallow vale to the south consisting of a flat valley bottom rising gradually to the edge of the LCT, topography rises in the north.</li><li>• Strong landscape framework, patchwork of agricultural farmland, dominated by arable with noticeable mature trees.</li><li>• Scheduled monuments and other heritage assets contribute to the sense of place.</li><li>• Distinctive stone walls and mature trees associated with West Layton Manor.</li><li>• High degree of enclosure throughout limiting intervisibility with A66.</li></ul>	
<b>Value</b> Medium	<b>Sensitivity</b> Medium: although much of the LCT is not covered by designations it consists of lightly settled lowland valleys with a strong landscape framework.
<b>Susceptibility</b> Medium	
Construction phase	
<b>Magnitude of effect</b> <p>During construction there will be loss of mature trees alongside the existing A66, alongside Collier Lane and in field boundaries at West Layton. There will be considerable alteration to landform where the scheme is in cutting and consequent alteration to small scale field pattern at West Layton. In addition there will be loss of woodland to the east of Collier Lane and loss of distinctive stone walls alongside Collier Lane on the approach to West Layton.</p> <p>The offline section will result in loss of woodland and alteration of field boundaries in addition to loss of mature trees alongside Moor Lane and loss of woodland to the east of Moor Lane. A large detention pond to the east of Foxwell Farm will result in loss of woodland and of a small scale field.</p> <p>The realignment of Warrener Lane and construction of a new overbridge at Carkin Moor, combined with removal of vegetation to construct the mainline on embankment and the excavation of detention ponds, will considerably alter landscape character in a localised area.</p> <p>The magnitude of effect is assessed as <b>major</b> in a limited part of the Moors Fringe LCT.</p>	
<b>Significance of effect</b> <p>The significance of effect is assessed as <b>large</b> and significant in a localised part of the LCT.</p>	
Operational phase (year 1)	

### Moors Fringe Landscape Character Type

#### Magnitude of effect

At year 1 the scheme will be a very noticeable new feature. At West Layton the mainline in cutting, new overbridge and detention pond, in addition to loss of stone walls and woodland, will result in notable change to the setting of West Layton. The new junction at Moor Lane and the loss of woodland along the offline section will be notable changes to the distribution of woodland and field pattern, particularly to the east side of Moor Lane and to the north and east of Foxwell Farm. At Carlin Moor and Warrener Lane the restoration of land disturbed during construction will not yet have established and the series of detention ponds will be noticeable new features. The magnitude of effect is assessed as **major** in a limited part of the Moors Fringe LCT.

#### Significance of effect

The significance of effect is assessed as **large** and significant in a localised part of the LCT.

### Operational phase (year 15)

#### Magnitude of effect

At year 15 of operation mitigation planting will be established and there will be a degree of integration of the scheme. New woodland planting and restoration of field boundaries and establishment of new planting will integrate the scheme to a degree. However, there will be noticeable change to the setting of West Layton, and the introduction of the offline section and junction at Moor Lane will be permanent and uncharacteristic additions to the landscape. The series of detention ponds and realignment of Warrener Lane will be new additions to the landscape and while these will not be uncharacteristic, they will intensify the influence of road infrastructure at the eastern end of the scheme.

While mitigation will reduce effects to a degree, landscape character will be defined by road infrastructure in a limited part of the LCT and the magnitude of effect in this area is assessed as **moderate**.

#### Significance of effect

The significance of effect is assessed as **moderate** and significant in a localised part of the LCT.

### Visual

10.9.23 The visual assessment considers residents in the following groups of properties and individual properties:

- Residents of West Layton
- Residents at Browson Bank
- Residents at Duns Bank
- Residents at Foxhall Cottage, Fox Holme, Foxgrove Farm, Foxwell Cottage and Foxwell Farm
- Residents at Monks Rest Farm
- Residents at Squirrel House, Carlin Moor Farm and Warriner House

10.9.24 PRoW and long distance trails are considered as follows:

- PRoW west of West Layton

- PRow east of West Layton
- PRow south of the A66

10.9.25 The following visitor attractions are considered:

- Mainsgill Farm Shop
- Fox Hall Inn

Table 10-72: Assessment of effects on residents of West Layton

Residents of West Layton		
<b>Receptor category:</b> residential	<b>Distance to scheme:</b> n/a	<b>Sensitivity:</b> medium
<b>Relevant viewpoints:</b> VP9.1		
Baseline conditions		
This table considers properties within West Layton including West Layton Manor, and properties on West Lane and around Collier Lane. Residents within West Layton at Collier Lane and West Layton Manor experience limited or no views towards the scheme as a result of intervening policy woodland and field boundary woodland. Residents along West Lane, such as those at The Beeches, Greystones and West Layton Farm experience views south towards the scheme, often screened by landform.		
Construction phase		
<p><b>Magnitude of effect</b> During construction the scheme will create limited or no change to views from properties along Collier Lane, including West Layton Manor. Although properties are generally orientated south, views are screened or heavily filtered by intervening woodland and/or existing properties. The magnitude of effect is therefore assessed as <b>minor</b>.</p> <p>For residents within properties at Greystones, The Beeches and West Layton Farm, all broadly orientated towards the scheme, some views of construction activity are predicted, resulting in a moderate magnitude of effect.</p> <p><b>Significance of effect</b> <b>Moderate</b> and significant for properties along West Lane. <b>Slight</b> and not significant for properties around Collier Lane.</p>		
Operational phase (year 1)		
<p><b>Magnitude of effect</b> Loss of vegetation to the north of the existing A66 and the introduction of the scheme in cutting will not impact on views for residents around Collier Lane, given the retention of woodland at West Layton Manor and field boundary trees south-west of Woodside. The magnitude of effect is assessed as <b>no change</b>.</p> <p>For residents along West Lane there will be limited visibility towards moving traffic which would not be uncharacteristic given their proximity to an existing road. The magnitude of effect is assessed as <b>minor</b>.</p>		



Residents of West Layton
<b>Significance of effect</b> <b>Neutral</b> for properties around Collier Lane, <b>slight</b> and not significant for properties along West Lane.
Operational phase (year 15)
<b>Magnitude of effect</b> At year 15 mitigation planting will have established and while it will be discernible to residents along West Lane, the change will not appear uncharacteristic given the existing field boundary tree belts and policy woodland available within views for residents. Magnitude of effects is assessed as <b>negligible</b> . Residents around Collier Lane will not experience any discernible change within views as a result of mitigation planting. Magnitude of effect is assessed as <b>no change</b> . <b>Significance of effect</b> <b>Slight</b> and not significant for properties along West Lane, <b>neutral</b> for properties around Collier Lane.

Table 10-73: Assessment of effects on residents at Browson Bank

Residents at Browson Bank
<b>Receptor category:</b> residential <b>Distance to scheme:</b> 470m <b>Sensitivity:</b> medium
<b>Relevant viewpoints:</b> n/a
Baseline conditions
This table considers residents at Browson Bank which lies to the south of the scheme's western extents. Views for residents are available to the north towards the scheme mainline and west towards proposed balancing ponds. The properties comprise a farmhouse and adjacent house with a number of large outbuildings to the south. The properties lie on a raised plot of land, providing wide visibility of the surrounding area.
Construction phase
<b>Magnitude of effect</b> During construction there would be direct views towards construction of the mainline, realignment of the A66 and filtered oblique views towards construction of the balancing ponds and associated access track some 200m to the west. Loss of roadside vegetation on the existing A66 to the north will open up views of mainline construction, although this will be to the north of the A66 realignment and will therefore be viewed in conjunction with it. The magnitude of effect has been assessed as <b>major</b> . <b>Significance of effect</b> <b>Large</b> and significant for residents at Browson Bank.
Operational phase (year 1)

Residents at Browson Bank
<p><b>Magnitude of effect</b> Following construction mitigation planting will not have matured to a level where it would provide additional screening. Although the realigned A66 will lie in cutting for a large section of the route where visible, the mainline section will remain clearly visible. The visible section of mainline will however closely follow the route of the existing A66 and therefore will not appear incongruous within views. The balancing ponds to the west will not incur any notable visual change given the oblique views and their ground level nature. The magnitude of effect has been assessed as <b>moderate</b>.</p> <p><b>Significance of effect</b> <b>Moderate</b> and significant.</p>
Operational phase (year 15)
<p><b>Magnitude of effect</b> By year 15 of operation mitigation will have established, providing screening towards the realigned A66 and mainline. Visibility of moving traffic will return to similar levels to the baseline. Mitigation will also provide screening in oblique views towards the balancing ponds to the west. The magnitude of effect is considered <b>minor</b>.</p> <p><b>Significance of effect</b> <b>Slight</b> and not significant.</p>

Table 10-74: Assessment of effects on residents at Duns Bank

Residents at Duns Bank
<p><b>Receptor category:</b> residential      <b>Distance to scheme:</b> 470m      <b>Sensitivity:</b> medium</p>
<p><b>Relevant viewpoints:</b> n/a</p>
Baseline conditions
<p>This table considers residents at Duns Bank which lies to the south of the scheme. The farmhouse lies on a slightly elevated plot of land with views available to the north, south and east. Views to the west are foreshortened by large agricultural outbuildings associated with the farm, in addition to mature boundary vegetation. Access to Duns Bank is gained directly from the A66 at present.</p>
Construction phase
<p><b>Magnitude of effect</b> During construction there will be clear views north towards the de-trunked A66 and mainline of the scheme, with filtered views available to the north-east of associated balancing ponds. Roadside vegetation loss will increase visibility of activity. Residents will also experience road closures and disruption to their entrance road which adjoins the A66. The magnitude of effect is assessed as <b>major</b>.</p> <p><b>Significance of effect</b> <b>Large</b> and significant.</p>

Residents at Duns Bank
Operational phase (year 1)
<p><b>Magnitude of effect</b> Following construction residents will retain access to the realigned A66, which will be used as local access. Visible sections of the mainline will appear in cutting for residents, as will sections of the de-trunked A66, reducing visual effects to a degree. The loss of vegetation will increase visibility of vehicle lights. Mitigation planting will not have established by year 1 however, and subsequently the magnitude of effect is assessed as <b>moderate</b>.</p> <p><b>Significance of effect</b> <b>Moderate</b> and significant.</p>
Operational phase (year 15)
<p><b>Magnitude of effect</b> By year 15 of operation mitigation will have established, providing screening of the scheme mainline, and although traffic along the realigned local route will be visible, it is likely to be of a reduced volume and of a similar distance to baseline conditions. The magnitude of effect is assessed as <b>negligible</b>.</p> <p><b>Significance of effect</b> <b>Slight</b> and not significant.</p>

Table 10-75: Assessment of effects on residents at Fox Grove area

Residents at Fox Grove Area		
<b>Receptor category:</b> residential	<b>Distance to scheme:</b> n/a	<b>Sensitivity:</b> medium
<b>Relevant viewpoints:</b> n/a		
Baseline conditions		
This table considers a cluster of properties which lie within a partially wooded area to the east of Fox Hall Inn and to the north of the existing A66. Stands of mixed woodland and field boundary vegetation obstruct views in the direction of the scheme for residents at these properties, aside from Foxhall Cottage from which there are glimpsed views to the north.		
Construction phase		
<p><b>Magnitude of effect</b> Visibility of construction activity will partly screened by woodland or screened entirely by farm outbuildings, aside from Foxhall Cottage where views towards the scheme mainline to the north will generally be available. Given the proximity of the scheme to residents at this location construction activity will be a noticeable feature. Consequently the magnitude of effect for the majority of residents where visibility is restricted has been assessed as <b>minor</b>. For residents at Foxhall Cottage the magnitude of effect is assessed as <b>moderate</b>.</p> <p><b>Significance of effect</b></p>		

Residents at Fox Grove Area
<b>Moderate</b> and significant for residents at Foxhall Cottage, <b>slight</b> and not significant for remaining residents.
Operational phase (year 1)
<p><b>Magnitude of effect</b> Following construction residents at Foxhall Cottage will experience visibility of moving traffic to the north, although mitigation planting will partially screen moving vehicles. The magnitude of effects is subsequently assessed as <b>minor</b>. For the remaining residents visibility towards the scheme will be limited by intervening vegetation and outbuildings and they are therefore assessed as experiencing a <b>negligible</b> magnitude of effect.</p> <p><b>Significance of effect</b> <b>Slight</b> and not significant for all residents.</p>
Operational phase (year 15)
<p><b>Magnitude of effect</b> By year 15 of operation mitigation will have established, providing screening of views towards the scheme for all residents. The resulting magnitude of effect is assessed as <b>negligible</b> for all residents.</p> <p><b>Significance of effect</b> <b>Slight</b> and not significant.</p>

Table 10-76: Assessment of effects on residents at Monks Rest Farm

Residents at Monks Rest Farm
<p><b>Receptor category:</b> residential      <b>Distance to scheme:</b> n/a      <b>Sensitivity:</b> medium</p>
<b>Relevant viewpoints:</b> n/a
Baseline conditions
<p>This table considers residents at Monks Rest Farm which lies north-east of the scheme at close distance. The property lies adjacent to the tree-lined Moor Lane with access gained to the north and south directly from the road. Outward views to the west and east are filtered or screened by field boundary hedgerows and trees, whilst views to the south and north are relatively open. The surrounding landscape is a combination of gently rising or flat farmland interspersed with woodland blocks.</p>
Construction phase
<p><b>Magnitude of effect</b> During construction residents at Monks Rest Farm will experience road closures and diversions as the realignment of Moor Lane takes place directly south of the property. The graded junction will be constructed at short distance, with the mainline passing through agricultural land to the south of the property at some 190m distance. The realigned PRow 20.23/5/1 will also pass to the south. Consequently construction activity will be an obvious component of the view for residents, including loss of field boundary vegetation</p>

Residents at Monks Rest Farm
and areas of woodland to the west near Fox Well and to the south at Mainsgill Plantation. The magnitude of effect for residents at Monks Rest Farm is assessed as <b>major</b> . <b>Significance of effect</b> <b>Large</b> and significant.
Operational phase (year 1)
<b>Magnitude of effect</b> Following construction the composition of views for residents will remain appreciably altered as the graded junction and realignment of Moor Lane will be noticeable new features. The removal of field boundary vegetation to the south of the property will potentially open up views towards the mainline. Lights of vehicles using the mainline and junction will be noticeable. The magnitude of effect will remain <b>major</b> . <b>Significance of effect</b> <b>Large</b> and significant.
Operational phase (year 15)
<b>Magnitude of effect</b> By year 15 of operation mitigation will have established, including replacement of field boundary trees which will effectively filter views towards the mainline as it passes south-west and south of the property. The composition of views will remain notably altered from baseline conditions. There will be glimpsed views of vehicle lights. The magnitude of effect is predicted to reduce to <b>moderate</b> . <b>Significance of effect</b> <b>Moderate</b> and significant.

Table 10-77: Assessment of effects on residents at and near Carkin Moor Farm

Residents at and near Carkin Moor Farm		
<b>Receptor category:</b> residential	<b>Distance to scheme:</b> n/a	<b>Sensitivity:</b> medium
<b>Relevant viewpoints:</b> n/a		
Baseline conditions		
This table considers residents of a group of three properties at and near Carkin Moor Farm approximately 250m north of the A66. Warrener House is bounded by mature vegetation that partly screens views beyond the property boundary. Primary views from Carkin Moor Farm face north, with rear views partly screened by garden vegetation. Squirrel House is orientated south-east/north-west, with views to the south-east screened by large farm outbuildings.		
Construction phase		
Magnitude of effect		

#### Residents at and near Carkin Moor Farm

During construction there will be some visual disruption to the south of the properties, particularly where the existing PRoW 20.30/8/1 bridleway will be placed in cutting as an underpass to the dualled A66. Work on the A66 is generally online at this location, and as a result it is likely to be earthworks, removal of existing vegetation and the movement of large vehicles which will result in the greatest visual effects upon the properties listed above. The removal of vegetation will incur open views towards the works where visible, although clear views are not possible from any of these properties. Some moderate disruption is predicted during the construction of the upgraded PRoW to the south. The magnitude of effect is assessed as **moderate** for all properties.

##### Significance of effect

**Moderate** and significant for all three properties.

#### Operational phase (year 1)

##### Magnitude of effect

Following construction views towards the works will remain obvious where visible given the relatively short distance. Mitigation planting will not yet be established limiting screening of views towards the scheme. However, views towards the scheme from these properties are generally partly screened by vegetation and, given that the scheme will be online at this location the magnitude of effect has been assessed as **minor** for all properties.

##### Significance of effect

**Slight** and not significant for all three properties.

#### Operational phase (year 15)

##### Magnitude of effect

By year 15 of operation mitigation will have established, thereby providing further screening of views towards the scheme. The resultant magnitude of effect is assessed as **negligible** for all properties.

##### Significance of effect

**Slight** and not significant for all three properties.

Table 10-78: Assessment of effects on PRoW between Stephen Bank and West Layton

#### PRoW west of West Layton

**Receptor category:** recreational

**Distance to scheme:** adjacent

**Sensitivity:** high

**Relevant viewpoints:** n/a

#### Baseline conditions

This table considers three PRoW. Bridleway 13 and Bridleway 20.72/2/1 pass between Durham and North Yorkshire as a continuation and are subsequently considered as one PRoW. PRoW 12 is a bridleway which lies within Durham and runs broadly north to south over undulating farmland for approximately 1.5km from Hutton Fields West to the northern carriageway of the existing A66. PRoW 13, which adjoins with PRoW 12 south of Hutton Fields West, runs in a north-west to south-east direction crossing into North Yorkshire, reaching a

PRoW west of West Layton
high point at coniferous woodland to the north of West Layton before terminating at Collier Lane. PRoW 20.72/1/1 originates at Collier Lane and broadly follows the western extents of West Layton, turning south to meet the existing A66 along a field boundary tree belt.
Construction phase
<p><b>Magnitude of effect</b> Construction activity will incur visual change for users of PRoW to the west of West Layton although given the undulating nature of the landscape these will not always be clear views. There are predicted to be notable visual impacts on PRoW 12 and PRoW 20.72/1/1 as the scheme will incur severance at their southern extents by the mainline route. Visibility towards construction activity will also be notable at the high point of PRoW 20.72/2/1 north of West Layton. The loss of woodland edge along the northern carriageway of the existing A66 will open up views towards new and existing infrastructure along large sections of these PRoW. The magnitude of effect for users of the PRoW is assessed as <b>moderate</b> overall.</p> <p><b>Significance of effect</b> <b>Large</b> and significant for all PRoW users.</p>
Operational phase (year 1)
<p><b>Magnitude of effect</b> Loss of vegetation to the north of the existing A66 and the introduction of additional infrastructure will incur visual change for users. Although sections of the scheme will lie in cutting, the loss of vegetation will open up views of the existing A66, resulting in clear views towards traffic along both routes where visible. Additional access tracks to the north of the mainline will also provide views of new infrastructure, particularly for users of PRoW 12 which passes directly west. The magnitude of effect is assessed as <b>moderate</b> overall.</p> <p><b>Significance of effect</b> <b>Moderate</b> and significant for all PRoW users.</p>
Operational phase (year 15)
<p><b>Magnitude of effect</b> At year 15 mitigation planting will have established returning the views to a similar condition as baseline, albeit at shorter distance. Users of PRoW 12 and PRoW 20.72/1/1 will experience diversions at the southern extents of the routes as they reach the scheme but otherwise visual change will be limited. The magnitude of effect is assessed as <b>minor</b>.</p> <p><b>Significance of effect</b> <b>Slight</b> and not significant for users of all PRoW.</p>

Table 10-79: Assessment of effects on PRoW between West Layton and Carkin Moor

PRoW east of West Layton		
<b>Receptor category:</b> recreational	<b>Distance to scheme:</b> adjacent	<b>Sensitivity:</b> high
<b>Relevant viewpoints:</b> VP9.2, 9.6.		



PRoW east of West Layton
Baseline conditions
<p>This table considers four PRoW, all of which run north to south to meet the existing A66. PRoW 20.23/8/1 which is a footpath, originates approximately 400m east of West Layton Farm and continues south through farmland, passing an area of mixed woodland before meeting the A66 some 425m further south. PRoW bridleway 20.23/5/1 originates at a bend along Moor Lane before running south through gradually falling farmland, passing Middle Plantation and Mainsgill Plantation before reaching the A66. PRoW bridleway 20.30/2/1 originates at West Lane before turning south towards Carkin Moor across undulating farmland, terminating at Warrener House. From there, PRoW 20.30/8/1 continues the bridleway from the entrance to Carkin Moor Farm to the northern carriageway of the A66.</p>
Construction phase
<p><b>Magnitude of effect</b> Given the orientation of these PRoW, users travelling south towards the scheme will experience views towards construction activity, albeit to varying degrees. For users of PRoW 20.23/8/1 there will be significant change as they pass the mixed woodland area as the mainline severs the PRoW on minor embankment approximately 250m north of the existing A66. This will result in a <b>major</b> magnitude of effect. For users of PRoW 20.23/5/1 any view of construction activity will be screened or interrupted by intervening woodland and field boundary trees until they pass south of Middle Plantation. From there views south-west towards the mainline and construction will be available and again at short distance as they pass Mainsgill Plantation. The route will be severed at its southern extents by the scheme. The magnitude of effect has been assessed as <b>moderate</b>. Users of PRoW 20.30/2/1 will experience limited or no views towards construction activity given the screening afforded by intervening landform and vegetation; therefore it will not be assessed further in this table. There will be notable visual change for users of PRoW 20.30/8/1 however, as a new underpass is created in cutting, connecting with Warrener Lane to the south. The magnitude of effect for the PRoW is assessed as <b>major</b>.</p> <p><b>Significance of effect</b> <b>Large</b> and significant for PRoW 20.23/8/1 and PRoW 20.23/5/1, <b>very large</b> and significant for PRoW 20.30/8/1.</p>
Operational phase (year 1)
<p><b>Magnitude of effect</b> Users of PRoW 20.23/8/1 will experience notable change to their views during Year 1 of operation as infrastructure and associated traffic will appear at short distance south of the mixed woodland area. The magnitude of change is assessed as <b>major</b>. At PRoW 20.23/5/1 visibility towards the scheme will be limited by intervening vegetation north of Middle Plantation. South of Middle Plantation the loss of vegetation to provide new access for the bridleway will be noticeable, with the scheme mainline on embankment to the south-west also visible. The magnitude of effect has been assessed as <b>moderate</b>. Users of PRoW 20.30/8/1 will experience change along its length as a new underpass extends to connect with Warrener Lane, resulting in a <b>major</b> magnitude of effect.</p> <p><b>Significance of effect</b> <b>Large</b> and significant for PRoW 20.23/8/1 and PRoW 20.30/8/1, <b>moderate</b> and significant for PRoW 20.23/5/1.</p>

<b>PRoW east of West Layton</b>
<b>Operational phase (year 15)</b>
<p><b>Magnitude of effect</b> At year 15 mitigation planting will have established, interrupting views along much of the PRoW routes for users. The resultant magnitude of effect is assessed as <b>minor</b> to <b>negligible</b> for all the aforementioned PRoWs.</p> <p><b>Significance of effect</b> <b>Slight</b> and not significant for users of PRoW 20.23/8/1, 20.23/5/1, 20.30/8/1.</p>

Table 10-80: Assessment of effects on PRoW south of the A66

PRoW south of the A66		
Receptor category: recreational	Distance to scheme: adjacent	Sensitivity: high
Relevant viewpoints: VP9.5		
Baseline conditions		
This table considers three PRoW which lie to the south of the A66, namely PRoW 20.55/1/1 and 20.55/2/1 which are footpaths, and 20.55/6/1 which is a bridleway. PRoW 20.55/1/1 passes to the west of Greenbank Farm before turning north across relatively flat arable farmland for approximately 300m before reaching the southern carriageway of the A66. PRoW 20.55/2/1 originates at New Lane, passing to the west of Fox Hall Caravan Park broadly following a field boundary before terminating between Fox Hall Inn and Fox Hall Cottage on the southern carriageway of the A66. PRoW 20.55/6/1 follows a field boundary south of Mainsgill Farm before turning east then north to pass through Mainsgill Farm and terminate at the southern carriageway of the A66.		
Construction phase		
Magnitude of effect		
For the first half of PRoW 20.55/1/1 there will be no visibility of the scheme as a result of screening by landform. As the PRoW passes to the west of Greenbank Farm construction activity will be evident at a relatively short distance to the north – approximately 260m. Realignment of the A66 in conjunction with the overpass to Colliers Lane and mainline construction will incur notable visual change. The resultant magnitude of effect is assessed as <b>major</b> . At PRoW 20.55/2/1 visual change will be less noticeable as views to the north are screened partly or entirely by intervening field boundary planting or woodland. Occasional glimpses of activity will be possible however, in particular towards the mainline at Fox Hall Inn. The magnitude of effect has been assessed as Minor. At PRoW 20.55/6/1 construction activity will be visible as the bridleway is realigned to pass west of Mainsgill Farm. Loss of vegetation along the southern carriageway of the A66 will open views towards construction to the north, including the grade-separated junction west of Moor Lane. The resultant magnitude of effect is assessed as <b>major</b> .		
Significance of effect		
Large and significant for PRoW 20.55/1/1 and 20.55/6/1, <b>moderate</b> and significant for PRoW 20.55/2/1.		
Operational phase (year 1)		

PRoW south of the A66
<p><b>Magnitude of effect</b> Users of PRoW 20.55/1/1 will experience notable visual change during Year 1 of operation as a result of the A66 realignment and overpass to Collier Lane, although this will not appear incongruous given the previous visibility of the A66. It will result in additional infrastructure within the composition of views, giving rise to a <b>major</b> magnitude of effect. Users of PRoW 20.55/2/1 are not predicted to experience significant visual change following construction and are therefore not considered further in this table. For users of PRoW 20.55/6/1 visual change will remain notable, resulting in a <b>major</b> magnitude of effect.</p> <p><b>Significance of effect</b> <b>Large</b> and significant for PRoW 20.55/1/1 and 20.55/6/1.</p>
Operational phase (year 15)
<p><b>Magnitude of effect</b> At year 15 mitigation planting will have established, providing some screening of the scheme for users of PRoW south of the A66. Elements of the scheme will remain visible however, resulting in a <b>moderate</b> magnitude of effect.</p> <p><b>Significance of effect</b> <b>Moderate</b> and significant for PRoW 20.55/1/1 and 20.55/6/1.</p>

Table 10-81: Visitors to Mainsgill Farm shop

Visitors to Mainsgill Farm Shop		
<b>Receptor category:</b> recreational	<b>Distance to scheme:</b> 100m	<b>Sensitivity:</b> high
<b>Relevant viewpoints:</b> VP9.5		
Baseline conditions		
This table considers visitors to Mainsgill Farm Shop, situated south of the A66. The farm shop lies at a lower elevation than the A66 and includes a working farm in addition to the shop, play area and a large car park. Currently access is gained via the A66, and PRoW 22.55/6/1 passes between the shop and the farm in a south-west to north-east direction, terminating at the southern carriageway of the A66. From within the shop and adjacent car park views are available to the north towards the scheme.		
Construction phase		
<p><b>Magnitude of effect</b> During construction visitors to the shop will be likely to experience disruption as a result of diversions and road closures given the intention to realign the A66 to the east, eventually connecting with Warrener Lane. There will be clear visibility of construction activity for users, including removal of woodland at Mainsgill Plantation and grade-separated junction proposed approximately 200m north, west of Moor Lane. Some minor disruption as a result of the realigned PRoW to the west of the farm shop will also occur. The magnitude of effect is assessed as <b>major</b>.</p> <p><b>Significance of effect</b></p>		

Visitors to Mainsgill Farm Shop
<b>Very large</b> and significant for visitors to the farm shop.
Operational phase (year 1)
<p><b>Magnitude of effect</b> During year 1 of operation there will be a substantial increase in visible infrastructure for visitors to Mainsgill Farm Shop following construction of the mainline on embankment and grade-separated junction to the north. Given the proximity of the existing A66 however, the additional roads will not appear incongruous, resulting in a <b>moderate</b> magnitude of effect.</p> <p><b>Significance of effect</b> <b>Large</b> and significant given the increase in visible infrastructure for visitors of the farm shop.</p>
Operational phase (year 15)
<p><b>Magnitude of effect</b> By year 15 of operation mitigation planting will provide a level of screening towards the mainline and junction, thereby reducing effects on visual amenity for visitors. The realigned PRow and former A66 will be well established and will provide improved access for users. The magnitude of effect is assessed as <b>minor</b>.</p> <p><b>Significance of effect</b> <b>Moderate</b> and significant.</p>

Table 10-82: Visitors to Fox Hall Inn

Visitors to Fox Hall Inn
<p><b>Receptor category:</b> recreational      <b>Distance to scheme:</b> 220m      <b>Sensitivity:</b> high</p>
<b>Relevant viewpoints:</b> VP9.3
Baseline conditions
<p>This table considers visitors to Fox Hall Inn, situated south of the A66. The Inn currently lies adjacent to the southern carriageway of the A66 and is accessed by a junction into car parks to either side. Views are available south across farmland towards the Feldon Ranges whilst views north of the adjacent A66 are restricted by rising landform and field boundary trees.</p>
Construction phase
<p><b>Magnitude of effect</b> During construction the mainline will pass to the north of the Inn at a distance of approximately 220m, generally at grade. Although some activity will be indirectly visible such as movement of large vehicles to and from the site, the main areas of construction to the north will be screened by landform. The removal of vegetation and subsequent construction to the west of the Inn at Ravensworth Lodge would be visible however, in addition to the A66 realignment. The magnitude of effect is assessed as <b>minor</b>.</p> <p><b>Significance of effect</b></p>

Visitors to Fox Hall Inn
<b>Moderate</b> and significant for a short duration.
Operational phase (year 1)
<p><b>Magnitude of effect</b> Following construction of the scheme although the removal of woodland and roadside vegetation to the west of the Inn will still incur visual change, it is not considered notable, given that the mainline will not be visible to the west or to the north. The magnitude of effect is assessed as <b>negligible</b>.</p> <p><b>Significance of effect</b> <b>Slight</b> and not significant.</p>
Operational phase (year 15)
<p><b>Magnitude of effect</b> By year 15 of operation there will be little visual change from year 1 of operation regarding the introduction of additional infrastructure; however the mitigation proposals will provide visibility of additional woodland to the north and west. The magnitude of effect is assessed as <b>negligible</b>.</p> <p><b>Significance of effect</b> <b>Slight</b> and not significant.</p>

### A1(M) Junction 53 Scotch Corner

10.9.26 No likely significant effects are predicted for this scheme.

## 10.10 Monitoring

### Route wide

- 10.10.1 *DMRB LA 104 Environmental assessment and monitoring* states that where significant landscape and visual effects have been identified “*project must undertake proportionate monitoring of associated mitigation measures, in accordance with the EIA Directive.*”[Para 5.1]
- 10.10.2 *DMRB LA 107* states that monitoring “*shall determine the effectiveness of delivery of mitigation measures linked to the landscape or screening commitments agreed as part of the assessment process.*”[Para 4.1]
- 10.10.3 All significant effects arising as a result of the proposed scheme will be monitored across the life of the proposed scheme. Proposed planting will be monitored every year for the first three years under a normal establishment phase then inspected every two to five years for the next 12 years, a total of 15 to support successful establishment of landscape mitigation.
- 10.10.4 It is essential that the proposed planting is monitored and maintained to allow it to establish well and grow to the desired extent and become effective as mitigation during the long-term operation of the new road infrastructure.
- 10.10.5 For the ES, full details will be provided in the Landscape and Ecological Management Plan (LEMP) which will be developed and will set out a framework in which the successful establishment of these measures can be managed and ensured.