national highways

A66 Northern Trans-Pennine project TR010062

4.4 Consultation Report Annex L: S47 consultation material Part 5

APFP Regulation 5(2)(q)

Planning Act 2008 Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Infrastructure Planning

Planning Act 2008

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

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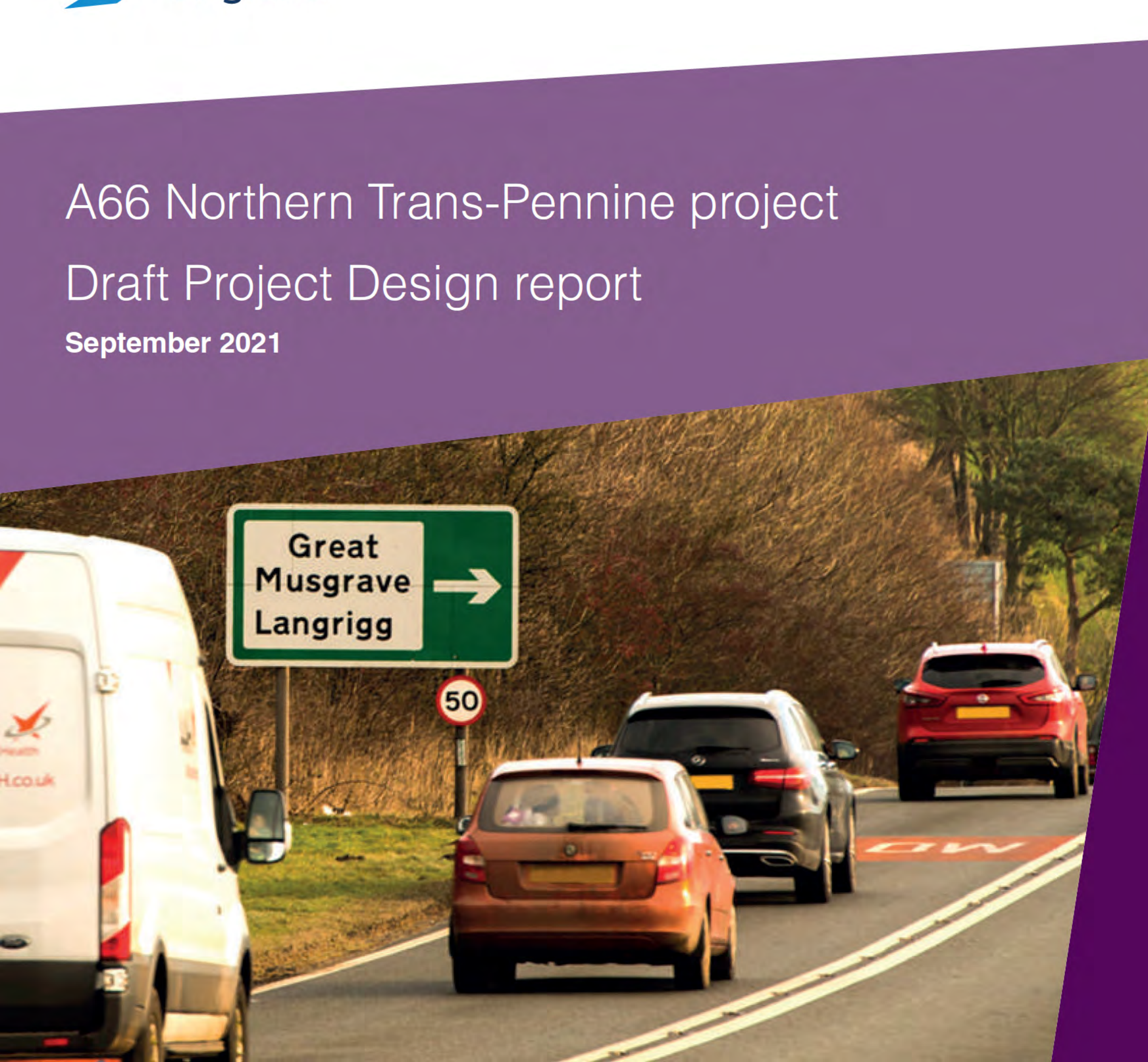
A66 Northern Trans-Pennine project

Draft Project Design report

September 2021



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Introduction

1 Introduction

1.1 Project overview

The A66 is a key local, regional and national route for east-west journeys in the north of England – providing vital connections for freight, tourism and businesses across the UK. It offers the most direct route between the central belt of Scotland and the eastern side of England and connects the North East to the North West and Midlands. The road also plays an important role for tourism, providing access to the North Pennines Area of Outstanding Natural Beauty (AONB), the Yorkshire Dales and the Lake District National Park.

Whilst the A66 has undergone a number of improvements in recent years, over 18 miles of the road remain as single carriageway, resulting in congestion and making the road accident prone and unreliable. The dualling of the remaining 18 miles of single carriageway will ensure the entire route has two lanes in both directions along the full 50-mile route.

The route carries high levels of freight, with 25% of the traffic being heavy goods vehicles (HGVs), more than twice the national average for a road of this nature. Dualling the single carriage sections between M6 junction 40 at Penrith and the A1(M) at Scotch Corner, along with other key improvements, will enable future growth, supporting the economies of the North East, Yorkshire and Cumbria, as well as improving east /west journeys.

Given the importance of addressing long-standing concerns, in 2014 the Government announced that it intended to examine the case for dualling one of the routes across the Pennines to improve east / west connectivity in the north of England. This examination concluded with Highways England's Road Investment Strategy 2 programme being published in March 2020, which confirmed that the A66 had been selected for dualling between the M6 junction 40 and the A1(M) at Scotch Corner.

The A66 Northern Trans-Pennine Project (referred to as the Project) will invest around one billion pounds to dual the remaining single carriageway sections of the A66, making it one of the largest and most important highways investments in the north of England.

Given the exceptional landscapes and urban settings that the road passes through, it is vital that high design standards are applied and that the planned improvements for the road adopt a sensitive approach to design that will respect the landscape beauty, the needs of adjacent communities and the setting of important historical areas such as the Roman fort at Carkin Moor and Brougham Castle.

This report focuses on how the emerging design proposals are being developed to address current challenges, whilst capturing the exceptional potential offered by a project of this scope and importance.

1.2 Project objectives

As summarised in the table, the Project seeks to deliver eleven Objectives, each grouped according to four themes. These have been the key strategic influences in shaping the brief for design proposals.

Objectives	Theme
1. Regional: Support the economic growth objectives of the Northern Powerhouse and Government levelling up agenda.	Economic
2. Ensure the improvement and long-term development of the Strategic Route Network (SRN) through providing better national connectivity including freight.	
3. Maintain and improve access for tourism served by the A66.	
4. Seek to improve access to services and jobs for local road users and the local community.	
5. Improve road safety, during construction, operation and maintenance for all, including road users, Non-Motorised Users (NMU), road workers, local businesses and local residents.	Transport
6. Improve journey time reliability for road users.	
7. Improve and promote the A66 as a strategic connection for all traffic and users.	
8. Improve the resilience of the route to the impact of events such as incidents, roadworks and severe weather events.	
9. Seek to improve NMU provision along the route.	
10. Reduce the impact of the route on severance for local communities.	Community
11. Minimise adverse impacts on the environment and where possible optimise environmental improvement opportunities.	Environment

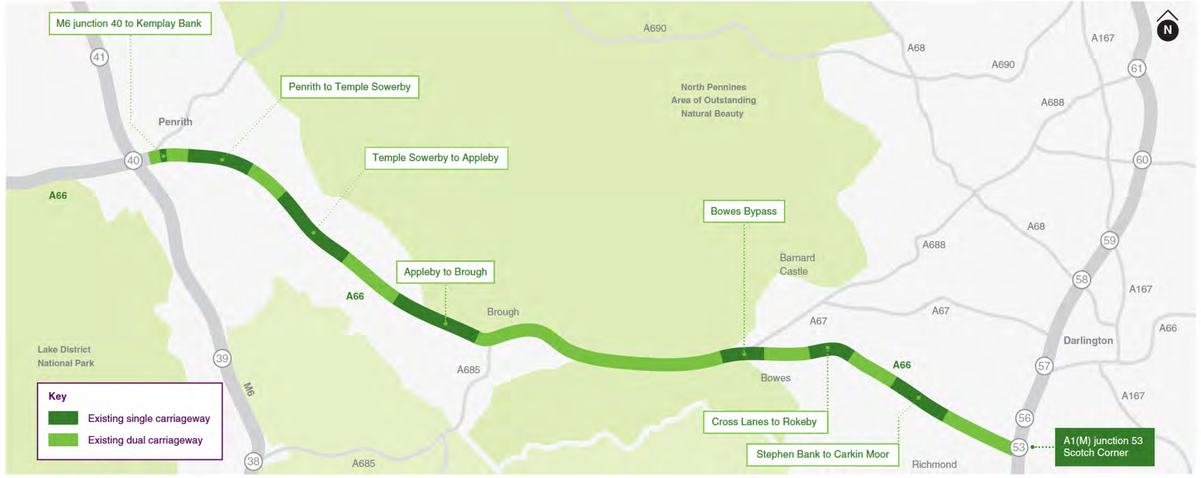
1 Introduction

1.3 Project location

As indicated in Figure 1.1, the geographic scope of the project extends across 18 miles of the current A66, from Junction 40 of the M6 in the west, to Junction 53 of the A1(M), also known as Scotch Corner. The Project includes upgrading the existing single lane sections of the A66 to dual two-lane all-purpose roads. It also includes amendments to existing junctions and accesses within these sections. The project has been split into eight schemes. The location of each of these is indicated in Figure 1.1 and summarised in Chapter 7.

Whereas the scope of the Development Consent Order (DCO) application is focused on these schemes, in specific geographic sections of the road corridor design proposals have been prepared in relation to the continuity of the broader coast-to-coast experience and the character and qualities of the various landscape, urban and heritage settings of adjacent contexts, as described in Chapters 5 and 6.

Fig 1.1 Proposed A66 route alignment



1.4 The value of good design

This report focuses on the design proposals and how they have been framed in relation to the qualities and characteristics of the places and spaces along the route that make this part of the UK so special. Good design can change a place for the better, by being sensitive to local context and responsive to the needs of those who use the A66 and the communities through which the route passes.

Good design also makes a profound difference to the experience of road users and the communities through which the road passes. Design decisions have the potential to enhance or erode the experiences of driving through places and impact how we feel and experience these places. Good design goes way beyond aesthetic considerations and can act as a means of helping to attain social, economic and environmental sustainability objectives.

The importance of applying high design standards is emphasised in the Highways England document The Road to Good Design, which is a key point of reference in shaping the A66 Project design proposals. This includes a focus on ensuring that close engagement with communities is integral to road planning, design development and construction processes. This commitment to public consultation and participation at each step of the design process is integral to the A66 project. 'The Road to Good Design' also emphasises the role of careful assessment of context in shaping design and the way this is embedded within the road investment programme. This context-led approach is a fundamental feature of the A66 design proposals as they take shape, with designs being formulated to capture the opportunities to enhance the varied urban and rural environments along the A66 (see Chapter 4.2).

1.5 Purpose of this report

Given the importance and value of design proposals, this document:

- **Explains how designs have been prepared with sensitivity to their context**. This includes contextual design influences that relate to the Project itself and the wider geography within which it is set, and how this has been informed by feedback that has been received from local communities and other stakeholders.
- **Sets out how principles of good design have been applied**. This ensures proposals are based on good practice and provide the basis for high design standards to be attained.
- **Summarises how design proposals have evolved**. This summarises how feedback and technical studies have informed designs and resulted in the draft proposals and strategic options that are the subject of public consultation.
- **Provides an overview of preliminary designs being consulted upon**. This conveys how designs combine inter-disciplinary inputs, which will be further developed, taking account of consultation feedback, to develop the design proposals that will be submitted for Development Consent.

This report is the precursor to two subsequent documents that will accompany the DCO application, namely:

- the **Project Design Report**, which will summarise and illustrate the design proposals for which consent is sought, and explain their underlying rationale; and
- the **Project Design Principles**, which will set out scheme-specific design principles that ensure at the DCO consenting stage those design principes are delivered. Key features of the design proposals to be carried through to detailed design and construction will be confirmed, establishing the design parameters within which later stages of design development will adhere.

The Highways England design team is currently working to produce preliminary design proposals to serve as the basis for the DCO. Should Development Consent be granted, this preliminary design will be subject to further detailed technical and design refinement.

Given the design proposals are preliminary, this version of the Project Design Report should be regarded as draft. Feedback on this report emerging from the statutory consultation process will be taken account of in preparing the final version, which will be submitted with the DCO application. Plans and perspectives conveying design proposals are therefore presented in initial draft form only in this version of the document and will be developed within the final version that is submitted with the DCO once design proposals have been further developed.

1 Introduction

1.6 The design team

The Project design proposals have been prepared by a multi-disciplinary design team appointed by Highways England, which combines the experience and technical capabilities of Amey and Arup, working in close partnership as an integrated project team. It is comprised of appropriately qualified and experienced professionals that include: landscape architects; town planners; highways engineers; drainage engineers; heritage specialists; and a variety of environmental specialists that include acousticians, ecologists and air quality specialists. The contributions from each of these technical specialists has resulted in a balanced, well-integrated design approach to the Project.

During Project design development the project team has worked collaboratively with a variety of stakeholders through working groups, workshops, and one-to-one meetings with landowners and other interested parties. Design proposals have also been informed by ongoing consultation with each of the communities along the route, using a variety of engagement techniques to maximise local involvement. This broad-based engagement has provided the project design team with enhanced knowledge and experience of each of the local areas along the road corridor and helped shape the overall vision and design of the Project. A summary of the consultation undertaken and how this has informed design evolution is provided in Chapter 4.

1.7 Structure of this document

This document begins by describing the overarching contextual factors affecting the whole route and how this influences design proposals, before looking in more detail at each of the sections of the route and how they relate to their relevant landscape character and urban context at the more local level. Woven throughout the report is consideration for the way the design will respond to the contextual setting whilst also shaping and enhancing the experience of users of the route, whether drivers, cyclists, pedestrians, or horse-riders, and others in local communities who will interact with the route in relation to the views and experiences that are shaped.

Following this introduction:

- **Chapter 2**. **Design Context** sets out the project vision for the A66 and outlines the context in which the road sits.
- **Chapter 3**. **The A66 Design Principles** explains the design principles that are applied and their importance in securing high quality design outcomes for the Project.
- **Chapter 4**. **Design Evolution** summarises how the design proposals have evolved since the project's inception in response to consultation feedback, technical analysis and design development.
- **Chapter 5**. **Responding to Context** explains how the road design relates to the wider geographic contextual setting.
- **Chapter 6**. **Shaping the User Experience** outlines the design influences that affect how the road is experienced, by both users of the road and those that live, work and visit the areas around it.
- **Chapter 7**. **Route Schemes** summarises the design proposals for each section of the route and explains the underlying rationale behind proposals.
- **Chapter 8**. **Next Steps** outlines how the Project will move forward beyond consultation, toward the preparation of the DCO application.

2

The big picture

2 The big picture

2.1 Project vision

The approach set out in the Highways England publication The Road to Good Design has been central to the way that the Project design vision has been shaped. This puts people at its heart of design proposals by ensuring that road design generates inclusive, resilient and sustainable outcomes. This is core to the design philosophy being applied to the A66.

Given the strength of its landscape setting, the A66 is already renowned for offering breathtaking views, and a broad range of noteworthy recreational and historical tourist destinations. The towns and villages along the route exemplify the character of the North Pennines, the Yorkshire Dales and the Lake District in each of these respective areas. The vision for the road improvements is therefore to respect, reinforce and where possible further enhance these most valued of landscapes and townscapes, and their heritage assets, and contribute to the strong sense of place, or inter-linked series of places, experienced by the road's users, as well as those who live, work and visit its wider setting.

This context-led design thinking is being applied to both the large-scale design features of the proposals, such as the choice and nature of route alignments in relation to existing settlements, as well as more detailed considerations such as the choice of local materials, building techniques and vegetation.

2 The big picture

2.2 The beauty of the coast-to-coast route

This section of the report places the specific section of the A66 that serves as the basis for the Project within the broader context of the existing coast-to-coast route, appreciating how design proposals need to be formulated with an understanding of the varying views and experiences that this sets up for the road user (a red rectangle is used on diagrams to show the approximate extent of the Project).

The A66 passes through a series of areas of highly distinctive urban and landscape character (Figure 2.1), which are highly influenced by the area's undulating topography (Figure 2.2) and set up sea views at both ends to the route (Figure 2.3).

Starting from the east, the A66 immediately interacts with the industrial and historical townscape of Middlesbrough, with its expansive, lingering views over the port-side machinery on the River Tees. These views give way to an elevated carriageway that closely weaves through the fringes of the town, with the river crossing followed by a green ribbon through the suburban landscape.

Views open-out across large agricultural fields as the road enters the rural lowlands of the Tees Valley. A view from the top of a rise precedes the approach to Darlington and, soon, the road has become an integrated part of the town's urban fringe. Passages through open spaces follow, with glimpsed views of passing villages.

The scale of the road builds as it joins the A1 Motorway, at the iconic Scotch Corner. The junction is a major focal point for the entire A66 and marks the end of the Tees Valley section of the route.

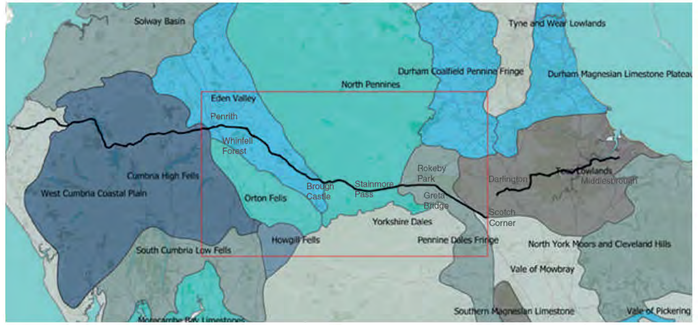


Figure 2.1 The A66 coast-to-coast route passes through a series of highly distinctive National Character areas

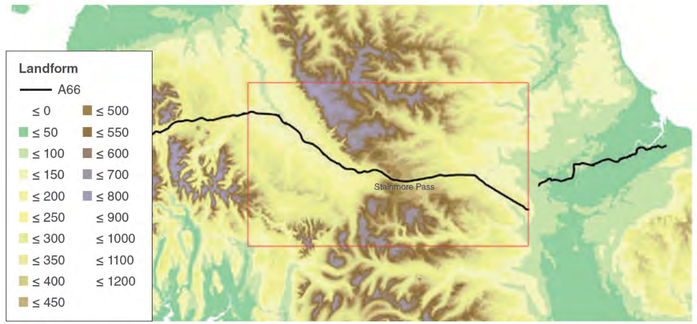


Figure 2.2 The hills and valleys of the North Pennines and Yorkshire Dales shape the drama of the A66 at the mid-point of the coast-to-coast journey character areas

From there the road enters the Pennine landscape, with glimpses of open moorland hinting at the experiences yet to come. The road retraces the Roman passage of the moors, with rolling, yet straight roads accompanied by scattered roadside trees; Rokeby Park at the historic crossing of the River Greta is a particular highlight.

Travelling westwards, the road user enters one of the most iconic stretches, the Stainmore Pass, flanked by the visually striking North Pennines Area of Outstanding Natural Beauty (AONB). The road reaches its highest elevation as it takes in panoramas of bleak moorlands and winding river valleys. Brough Castle marks the end of this memorable experience.

As it descends, the A66 takes on a more winding character. As the peaks of the Pennines recede to the north, glimpses of the Lake District to the west begin to appear, as a backdrop to a parkland landscape. The Center Parcs attraction at Whinfell Forest follows, and travelling further westards Brougham Castle marks the arrival at Penrith. A stop at the Rheged Centre provides cultural experiences before the entry into the landscape of the Lake District. The road skirts around the southern limits of Penrith before meeting the M6, the western-most extent of the Project.

Moving further westwards, following a view of the Lake's recognisable silhouette at the top of a rise, the A66 gradually approaches the fells. The steep slopes loom larger until the road begins to interact with the slopes of Blencartha at Threlkeld. The A66 crosses the River Greta at Keswick, over a dramatic modern bridge structure, before descending into the immersive Derwent Valley at Braithwaite. With the dramatic slopes of Grisedale Pike and Skiddaw on either side, the road runs close along the bank of Bassenthwaite Lake for three miles, providing extensive views across the National Nature Reserve.

The A66 passes through the open landscape of the Western Lake District on its approach to Cockermouth. From there, it interacts with the River Derwent as it leads to the coast. The first view of the Irish Sea precedes a descent into Workington, alongside the parkland of the medieval Workington Hall.

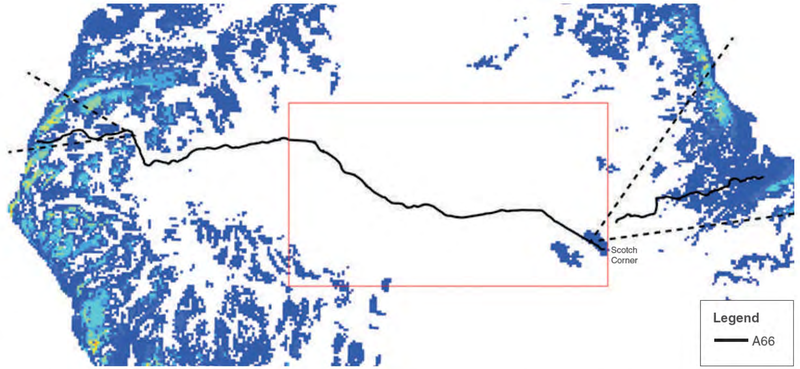


Figure 2.3 Areas where sea views can be gained (shown in shades of blue). At the eastern end of the Project, glimpses of the North Sea come into view from the area around Scotch Corner (dashed view cone shown)

3

The A66 design principles

3 The A66 design principles

3.1 Overview

The Road to Good Design sets out ten design principles, grouped under three themes. These serve as prompts to improve design quality and outcomes.

This chapter summarises how each of these principles has been applied to the A66 design proposals to date.

Highways England is committed to ensuring that the Project proposals place good design at its heart through applying these general principles in a way that makes the most of the unique character, local identity and 'specialness' of the areas the road passes through.

Design generally combines utilitarian, technical, environmental and economic considerations with aspects of place and culture. Road design is bound to both place and function, with specific demands of technical design and safety that must be met, combining with design features that are tailored to locally appropriate solutions.

Good design is thus a balance and coordination of aesthetic, functional and technological considerations.

The aesthetics of the A66 road design is also influenced by the nature of each of the places it interacts. A design approach has been applied that is essentially conservative, particularly in rural areas, with a focus on preserving and where possible with sensitive interventions enhancing existing natural beauty.

This chapter of the report conveys how each of the ten design principles is reflected in Highways England's proposals for the Project.

The Road to Good Design: Themes and Principles

Connecting People

1. **Good road design makes roads safe and useful**
2. **Good road design is inclusive**
3. **Good road design makes roads understandable**

Connecting Places

4. **Good road design fits in context**
5. **Good road design is restrained**
6. **Good road design is environmentally sustainable**

Connecting Processes

7. **Good road design thorough**
8. **Good road design is innovative**
9. **Good road design is collaborative**
10. **Good road design is long-lasting**

3 The A66 design principles

3.2 Good road design makes roads safe and useful

Safety is fundamental to good road design; it is integral to both the usefulness of its function and the confidence of road users and their well-being. Good design creates safe roads which support and link to other wider policy objectives that apply both nationally and locally that seek to meet users' need for mobility effectively.

Examples of how this principle is being applied to the A66

- Introducing a more consistent speed dual carriageway to reduce accidents on the road.
- Reducing congestion and improving journey reliability between the M6 at Penrith and the A1(M) Scotch Corner.
- Improving the performance of key junctions such as the A66/A6 and the M6 junction 40.
- Providing space to enable lane closure due to accidents or breakdowns to keep traffic moving.
- Ensuring sustainable travel opportunities are encouraged through well connected walking, cycling and horse-riding routes.

Sample design features

- In conformity to modern safety standards, typically, each carriageway would comprise two standard 3.65m wide lanes in each direction, 1 metre hard strips and a central reserve. A minimum verge width of 2.5m would be provided, which would be increased as required to provide adequate visibility splays, highway drainage, communication ducts and street furniture. Where sections of the existing route are to be replaced on a new alignment, the intention is that the replaced section of road ceases to be a part of the trunk road network.
- New central reserve gaps for right turning traffic will not be proposed, to eliminate unsafe turning movements, and all side roads will be designed as left in/left out junctions, if a replacement provision, to promote safe practice.
- Side roads and private means of access will be gathered where appropriate to minimise the number of direct accesses onto the A66 and minimise safety risks.
- Vehicle Restraint System (VRS) barriers are proposed in the central reserve between the two carriageways and in the verges to protect traffic from potential hazards.
- At grade crossings within the scheme will be replaced with grade-separated crossings, providing vulnerable road users with a safe alternative, away from the dual carriageway environment.

3.3 Good road design is inclusive

Inclusive environments facilitate dignified and equal use by all. An inter-disciplinary design process involves and places people's needs and views at its heart, nurturing well-being and creating a shared sense of ownership of the road. All users and communities are considered carefully in order to reduce barriers to access and participation, particularly mindful of the most vulnerable.

Examples of how this principle is being applied to the A66

- Holding independent design reviews and Technical Working Group (TWG) sessions to inform the design process, allowing a diverse range of views to be considered.
- Integrating the needs of walkers, cyclists and horse-riders within designs, incorporating the network of Public Rights of Way (PRoW) around the A66 that designs tie in with. The network comprises mainly of footpaths and a small number of bridleways and restricted byways. Where the Project proposals could affect the existing PRoW, appropriate mitigation measures are being integrated into designs, including safe crossing points where necessary.
- Applying a design approach that aims to ensure routes remain accessible for the community and visitors to the area.

Sample design features

- Connectivity into the existing PRoW and bridgeways network including the Pennine Way to facilitate leisure activity.
- A network of off-route roads and private means of access will be utilised where appropriate to ensure local connectivity surrounding the A66.

3.4 Good road design makes roads understandable

Easy to read, a good road is intuitive to use so as to be safe and efficient for all. 'Self-explaining roads' focus on the essentials and eliminate unnecessary and confusing clutter to make them legible, while responding to place and enhancing both environmental and economic outcomes.

Examples of how this principle is being applied to the A66

- Incorporating a number of 'all movement' junctions in the form of compact grade separated junctions that facilitate easily understood road user decision-making.
- Providing large Advanced Direction Signs and Local Direction Signs (ADS/LDS) in advance of the junctions on the mainline and associated side roads, within the junctions, and at isolated locations along the mainline for destination information.

Sample design features

- No right turn junction designs to ensure free flowing traffic.
- Rationalise signage to ensure clarity and consistency across the route.

3.5 Good road design fits in context

The aesthetic quality of a road and its design in relation to the places through which it passes, is integral to its function and the experience of those that use it. Whereas highway safety and other tehnical requirements place certain limitations on potential design outcomes, good road design demonstrates sensitivity to the landscape, heritage and local community. It seeks to enhance a place while being true to functional necessities. It builds a legacy for the future.

Examples of how this principle is being applied to the A66

- Ensuring that the preliminary Project design is being developed to be responsive to local context. Where possible it reflects local requirements, including those related to walking, cycling and horse riding provision that is provided within close proximity to existing key networks and tourist and community leisure facilities.
- Utilising planting and grading techniques that integrate development with natural landforms and ecological features – connecting and restoring landscape elements.
- Giving careful consideration to the choice of boundary treatment around the highway. In general, modest fencing around the highway boundary will generally be appropriate, comprising of timber post and four-rail fencing. At certain locations, noise fencing or stockproof treatments may be required to mitigate noise impacts or prevent local fauna crossing the fence line. This may include mammal-proof fencing. Landscape-led elements such as hedgerows and dry-stone walling is being considered for key locations where appropriate.

Sample design features

- Specimen tree planting to replicate the surrounding landscape where appropriate.
- Drainage systems designed to complement existing natural waterways and be planted to enhance local ecology and biodiversity.
- Use of local stone and building techniques such as County Durham dry stone walling in replicated stone wall boundary treatments where appropriate.

3 The A66 design principles

3.6 Good road design is restrained

Functional, but responding positively and elegantly to the context, good road design allows for the expression of the character and identity of the places and communities through which a road passes. Good road design can enhance a sense of place and add to what we have inherited, particularly through the use of appropriate materials and traditions, but does not make unnecessary superficial or superfluous visual statements.

Examples of how this principle is being applied to the A66

Given the beauty and importance of the various landscape and heritage contexts, and their respective statutory designations, this is an important principle for the A66 Project – where the natural landscape should be predominant and the highway-related interventions as recessive as possible. With this in mind:

- Ensuring that the landscape design approach utilises native and specimen planting to soften the impact of the development, helping it to integrate into its surroundings.
- Ensuring lighting design is restrained to protect the area's night-time tranquillity and biodiversity, whilst meeting road safety requirements and also having regard to environmental considerations including sensitive human and ecological receptors.
- Utilising local materials appropriately to ensure that new development is respectful of its surroundings and integrates in to the existing landscape as much as possible.
- Seeking to ensure that the highway design achieves a full standard rural cross-section where possible, whilst recognising that in certain situations it may be necessary to propose narrow verges or retaining structures to minimise impacts on adjacent land. This will be determined on a scheme-by-scheme basis.

Sample design features

- Overbridges faced with local stone.
- Specimen planting to replicate the species used within parkland and estate settings.

3.7 Good road design is environmentally sustainable

Making an important contribution to the conservation and enhancement of the natural, built and historic environment, good road design seeks to achieve net environmental gain. It is multi-functional, resilient and sustainable, allowing for future adaptation and technical requirements, while minimising waste and the need for new materials.

Examples of how this principle is being applied to the A66

- Ensuring the environmental sustainability of the project is appropriately assessed and mitigation measures integrated into designs. The proposals being consulted upon are accompanied by a Preliminary Environmental Information Report (PEIR). The DCO application will be accompanied by an Environmental Statement, establishing the significant effects of the proposed development on the environment and how they will be mitigated.
- Integrating drainage design as a key contributor to the project's overall environmental sustainability. Highway drainage will be designed in accordance with appropriate standards, with:
  - the central reserve being grass where appropriate, with provision for surface water channels and barriers.
  - large areas of hardstanding within the central reserve avoided where possible.
  - drainage managed via the incorporation of a series of attenuation basins designed as attractive landscape features.
- Giving due consideration to flood risk and appropriate mitigation measures, which are set out in the Road Drainage and Water Environment chapter of the PEIR. This will be further developed for the DCO application, which will include a Flood Risk Assessment as an appendix to the Environmental Statement. The Project will be designed to manage a 1 in 100-year return period event plus an allowance for climate change.
- Seeking to maximise opportunities for biodiversity net gain as a result of the Project where possible.

Sample design features

- Ponds are proposed to be utilised through the Project as part of SuDS (Sustainable Drainage Systems) and, where possible, will be designed to also improve ecological habitats as well as managing drainage.

3.8 Good road design is thorough

The result of robust processes that create a continual cycle of improvement, good road design starts with an in-depth understanding of people, place and context; learning from best practice worldwide. The design of all elements of the road environment are considered together and integrated into a responsive design.

Examples of how this principle is being applied to the A66

- Taking account of local and site specific social, environmental and economic issues. Local geographical context and topography has been assessed to seek to retain existing viewpoints, setting and sense of arrival. The PEIR provides further detail on the assessments undertaken, which will be developed further into a full Environmental Statement to accompany the DCO application.
- Applying a rigorous inter-disciplinary design process, involving periodic design reviews undertaken by independently appointed Design Council experts. Recommendations have helped to inform designs, as summarised in Chapter 4 of this document.

Sample design features

- Design rationalisation through working group presentations and independent design critique and check back processes.
- Strong emphasis on landscape led design throughout the project and use of local materials and planting to reflect local context.
- Respectful of existing topography and viewpoints ensuring that setting is prioritised and, where possible, preserved with the project.

3 The A66 design principles

3.9 Good road design is innovative

Responding positively to change, good road design captures opportunities for betterment and develops in tandem with emerging new technologies. Designing to a standard is not the same as achieving good design; an innovative and resourceful approach that is mindful of context is necessary to achieve better outcomes.

Examples of how this principle is being applied to the A66

- Working with partners to identify locations and providing infrastructure to support electric vehicle charging in line with Highways England's 'Net Zero Highways: Our 2030 / 2040 / 2050 Plan'.
- Ensuring that key design features are appropriately tailored to the unique qualities and characteristics of the A66 and its context, and securing the delivery of these as part of the DCO consenting process.

Sample design features

- Supporting opportunities for electric vehicle charging points at gateway and key locations. exploring design opportunities in integrating these features into the environment.

3.10 Good road design is collaborative

Collaboration ensures roads are useful to and accepted by the communities they serve. Collaborative working requires a rigorous process that identifies dependencies and wider opportunities, and facilitates effective communication and engagement from the start. Community engagement will be led by a local sense of culture, place and value.

Examples of how this principle is being applied to the A66

- Undertaking extensive consultation and incorporating feedback into emerging designs, ensuring that local communities and other stakeholders have been given opportunity to comment on and influence scheme design. Public consultation has been an invaluable part of the design process to-date, in aiding understanding of local site context, identifying key issues and opportunities and in understanding the components that combine to shape the unique sense of place.
- Establishing working groups with statutory and non-statutory stakeholders, including the Environment Agency, local authorities and community groups to agree principles and influences for the scheme.
- Adopting a 'one team' approach that ensures ongoing cross-disciplinary working to provide holistic responses to design challenges.

Sample design features

- Junction design requirements reflect local context drawn out through engagement with the local community, such as, where possible retaining access to property and avoiding severance of land.

3.11 Good road design is long lasting

With quality materials and careful detailing, good road design brings lasting value. The design process requires sufficient time for challenges to be resolved before delivery and is adaptable to future needs and technologies as part of the commitment to whole-life operation, management and maintenance.

Examples of how this principle is being applied to the A66

- Incorporating appropriate technology to support the high standards of maintenance and operation of the new road.
- Adopting a robust management and maintenance governance regime.
- Ensuring design proposals provide future proofing where possible, including allowances for climate change adaptations and future road use growth throughout the life of the road.

Sample design features

- Drainage design is considered in relation to long-term needs, including climate change allowances.
- Locally sourced, contextually relevant materials are to be utilised where appropriate to be reflective of the history and character of the area, preventing the Project design proposals from appearing 'of its time' and incongruous to its surrounding. The design is futureproofed in landscape terms to blend with the existing landscape.

4

Design evolution

4 Design evolution

4.1 Engaging with local communities and other stakeholders

The project team has engaged and consulted with stakeholders and the public throughout the development of the project. As well as this statutory pre-application consultation required by the Planning Act 2008, Highways England has undertaken a broad range of different consultation and engagement measures and applied a variety of techniques to encourage broad-based participation in the evolution of design proposals.

Feedback from stakeholders has informed the design of the scheme to-date and will continue to do so throughout the preliminary design and preparation of the DCO application.

4.2 Consultation to-date

Consultation to-date has included engagement with the statutory bodies and other key stakeholders throughout each stage of project development, and a public consultation at the preferred route option stage which took place from May to June 2019.

During the earliest stage of project development (which aimed to understand the problems that exist and the possible solutions, or options, for addressing those problems) consultation was focussed on progressing the selection of options to take forward.

An initial workshop was held in January 2018, attended by the statutory bodies Environment Agency, Natural England and Historic England, and involved: a briefing about the project; reviewing the environmental appraisal process; presenting the long list of options; and reviewing the future engagement programme.

A second workshop was held in May 2018 to provide a project update, demonstrate how feedback from the first workshop had been incorporated, present the shortlist of options and outline the approach to shortlist assessment by topic.

In addition, a number of consultation workshops were held with non-statutory bodies in February and September 2018 to outline progress and to gain an understanding of their initial views.

Following this, a series of meetings were held in January 2019 to present the findings of the option development and shortlisting process and to discuss the scope of the assessment to be undertaken to inform the selection of the Preferred Route.

In March 2019 an Environmental Interest Group meeting was held, which brought together a wide-range of different local and national environmental bodies to discuss the findings from the option development and short-listing process.

In parallel with these consultation processes with statutory and non-statutory organisations, in order to inform the selection of the Preferred Route, in 2019 public consultation was undertaken to provide local residents, landowners and stakeholders with an overview of the project and the solutions that were under consideration. These sessions sought to provide a range of opportunities to provide feedback and opinions. This included holding 21 events in local areas along the route, as well as meetings with key stakeholders such as local planning authorities, parish councils, ward representatives, landowners, local residents and other road users.

Information provided at these consultations focused on the project options. The responses were considered in the selection of the Preferred Route for each of the schemes that form the Project.

The preferred route was formally announced in May 2020. Following that announcement, further stakeholder and public consultation has been undertaken to help inform the future Environmental Statement to be prepared in 2022 to support the DCO submission and associated preliminary design. This has included consultation with local planning authorities and other organisations to inform the design, the environmental impact assessment work and the environmental mitigation measures. Design reviews and Technical Working Group sessions have informed the design.

Due to Covid-19 restrictions, a virtual public engagement event was held in November 2020 to provide further detail of the preferred route including junction locations and emerging junction layouts and to seek feedback from landowners and local communities. This feedback has informed preferred route alignment and junction design.

As well as the formal statutory public consultation currently being undertaken (as required under the Planning Act 2008), there will be continued engagement with landowners and local communities. Further engagement will be undertaken with statutory environmental bodies, the local planning authorities and other organisations throughout the design development up to the DCO submission.

4 Design evolution

4.3 Independent design review

To help inform the emerging preliminary design, ensuring that this embodied good practice and reflected learnings from high quality precedents, Highways England requested the involvement of the Design Council to act as independent expert design advisors.

The Project was first presented to the Design Council's Highways England Design Review Panel in September 2019, which helped to inform the early preliminary design proposals.

The Project was further presented to the Highways England Design Review Panel on 4th and 5th May 2021. A 'virtual site visit' was undertaken, followed by a presentation of emerging Project proposals. This considered design changes since the initial September 2019 review and presentation of the Preferred Route.

The panel acknowledged that a number of key recommendations from the 2019 review had been accepted and had helped shape design progress. Feedback provided following the May 2021 panel session conveyed an appreciation that the project had made a strong start on the key strategic elements, and that more focus was needed to be directed towards the finer detailed design and associated management arrangements as the project proposals were further developed. The appointed Design Council expert advisors summarised the design proposals as:

"a high-quality landscape scheme, something the whole country can be proud of. There is much to be excited about with the project – the team can aspire to create what could reasonably claim to be 'England's best road'."

Key points raised at the May 2021 review and how these have helped inform the Project are summarised opposite.

Key points raised by Design Council appointed expert advisors at the Highways England Design Review Panel (May 2021)	How points are being used to help inform the project
The panel acknowledged that as an incredibly important project, of national importance, it is vital that a clear and compelling narrative be developed to highlight landscape sensitivities, understand the context and identify the opportunities for the highest quality design interventions.	This Project Design Report provides this design narrative, which will be further developed for the version of the report that will be submitted to accompany the DCO application.
Recommendation that further analysis of options at Kirkby Thore were undertaken given the profound and significant implications of each option, on both community and landscape.	Further analysis of alternative route alignments at Kirkby Thore have been undertaken and their associated impacts, with mitigation measures integrated into the emerging preliminary design presented for consultation.
Support for the proposal at Warcop involving a minor incursion into the AONB, as preferable to an alternative proposal at Rokeby involving an underpass closer to the park.	This constitutes the preferred route alignment for Warcop being presented for consultation.
Welcome for the positive and extensive engagement and consultation to-date, acknowledging the vital role of stakeholder engagement given the profound impact on communities, and how the process may assist in informing mitigation and management strategies.	The support for the comprehensive approach to engagement and consultation was appreciated. The review highlighted a number of challenges for the design team to respond to, which are being addressed through successive stages of engagement and design iterations.
Commend the strength and breadth of the multi-disciplinary team, but suggest it be expanded further by working with artists.	The potential to incorporate artists to help inform distinctive design solutions will be considered in future design stages.
Emphasise the need for high quality landscape interventions. The panel emphasised that the many ponds need to be carefully sited within the landscape to become features in their own right. They noted other details such as all boundary treatments, including stone walls and hedges need to be considered carefully, respecting the local landscape.	Sensitive landscape design forms a core component of design proposals. Consideration is being given to the integration of ponds into the landscape as features with ecological and landscape value whilst maintaining their primary drainage functions.
Further analysis is needed on tree species, recognising this was underway. They flagged this needs to anticipate future management and changes resulting from ash dieback and climate change.	Comprehensive analysis of existing trees has been undertaken and appropriate tree selection is a key aspect of landscape designs.
Encourage a clear strategy and design guidance is prepared for components such as gantries, signage, lighting, boundary treatments and structures.	Each of these considerations will be given further detailed attention as the design process progresses, to serve as the basis for construction contracts.
Welcomed reduced impacts and land-take at Center Parcs and at the two terminals (M6 and A1).	Support for this aspect of the proposals noted.

4.4 Developing the preliminary design

Further to the preferred route announcement in Spring 2020, refinement of the preliminary design has taken place as well as the identification of alternative alignment routes considered in response to further environmental assessment and with regard to consultation and engagement responses.

In addition to minor refinements such as speed limit reductions, road gradient amendments, further sustainable drainage and landscape planting, it was determined that minor works are also required to the junctions with the M6 at Penrith (J40) and the A1(M) at Scotch Corner, in order to ensure the entire route achieves consistent standards.

A number of key scheme development opportunities have also been assessed and, a number of alternative route alignments for a number of the schemes were explored and analysed at earlier stages of the project prior to the identification of a preferred alignment for this consultation. These key scheme development and alignment amendments are set out below.

This process has been discussed in detail in the A66 Northern Trans-Pennine Draft Route Development Report (Highways England, 2021), which is also a document available for comment during the consultation

Site Location (Scheme Name)	Scheme Development and Alignment Amendments	Reasons for Amendments
M6 junction 40 (M6 Junction 40 to Kemplay Bank Roundabout)	A combination of improvements to traffic signal arrangement, widening of slip roads and use of spiral road markings.	The PRA preferred route design proposed widening to both bridges over the M6 junction 40. This presented buildability issues. Following traffic modelling analysis it was agreed to proceed with a combination of improvement measures, but not to progress with widening the bridges.
Warrener Lane (Stephen Bank to Crakin Moor)	An offline link connecting Warrener Lane to the de-trunked A66 to allow local traffic to access a proposed grade separated junction.	Reasons of safety (preventing U-turns on A66). Roman fort and prehistoric enclosed settlement 400m west of Carkin Moor Farm. Design revised to avoid the heritage asset.
Carkin Moor (Stephen Bank to Crakin Moor)	Lifting the vertical alignment of the road to reduce the overall height of the proposed retaining structures and allowing the full width of the existing available cutting to be utilised.	To minimise impact on the Carkin Moor Scheduled Monument. To construct the retaining walls, large areas of over excavation would be required, which would have adversely affected the historical site.
Route Alignment at Kirkby Thore (Temple Sowerby to Appleby)	Evaluation of alternative route alignments to explore opportunities to further reduce the environmental and ecological impact as well as the impacts on designated areas and features (such as the Area of Outstanding Natural Beauty, Special Area of Conservation, Special Protection Area and Scheduled Ancient Monuments present along the route), that are protected by National Policy	To ensure that the route taken forward minimises the impact of and potential damage of to the River Eden Special Area of Conservation (SAC), which is protected as an internationally designated site by legislation and policy.
Route Alignment to the north of Warcop (Appleby to Brough)		To ensure that the route taken forward minimises the impact of and potential damage to the North Pennines Area of Outstanding Natural Beauty, which is protected as a nationally designated site by legislation and policy.
Route Alignment and Junction Location at Cross Lanes and Rokeby (Cross Lanes to Rokeby)		To ensure that the route and junction location does not result in substantial harm to the Rokeby Park Registered Parks and Garden and if there is harm (that is less than substantial) there are clear and evidence based exceptional circumstances for this preferred route/ junction location.

5

Responding to context

5 Responding to context

5.1 Overview

This chapter outlines the context and characteristics of the A66 Project area (from the M6 junction to the west to the A1 junction to the east, combining existing elements with those that are proposed to be improved). This comprehensive contextual appreciation provides the basis for the sensitive and appropriate design proposals for the road corridor that are being progressed. The focus of the approach is to enhance what is of environmental value, avoid or reduce environmental harm, and mitigate any adverse effects the proposed Project may cause.

As set out in Chapters 2 and 3, this context-led approach is critical to good design, leading to the appropriate use of local materials, sensitively designed highway structures, sensible use of visual screening and a considered approach to colour and planting. It also informs where restraint is required in the installation of highway infrastructure, and conversely, where the highway could become an opportunity to create landmark features.

5 Responding to context

5.2 Landscape context

The landscape context influences are summarised below and illustrated with accompanying diagrams (a red rectangle is used on diagrams to show the approximate extent of the Project).

Governance

The A66 lies within five local planning authority administrative areas. In addition to county and borough local authorities, the Lake District National Park Authority and the North Pennines Area of Outstanding Natural Beauty Partnership have an interest in the road. These authorities each have management plans and design-related policies to support their administrative boundaries in the form of local plans and masterplans. Design has had regard to the plans, policies and requirements of each of these bodies. A full review of relevant policies and how these have been addressed will be provided to support the DCO application.

National Character Areas

Figure 5.2 identifies the various National Character Areas (NCA) published by Natural England of relevance to the project area. National Character Areas are defined, not by administrative boundaries but through geology, landform and broader geography. The NCAs are a good way of understanding the broad character designations and their defining characteristics are being used to help inform locally appropriate design solutions.

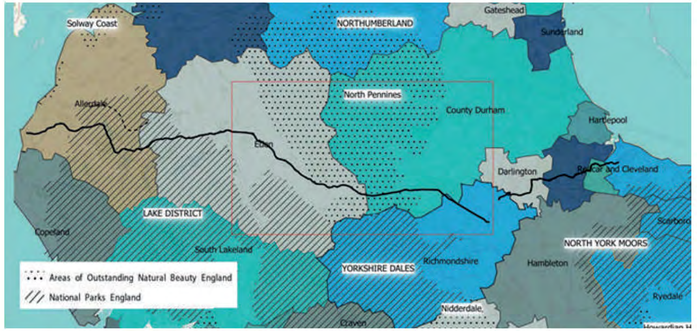


Figure 5.1 Governance considerations

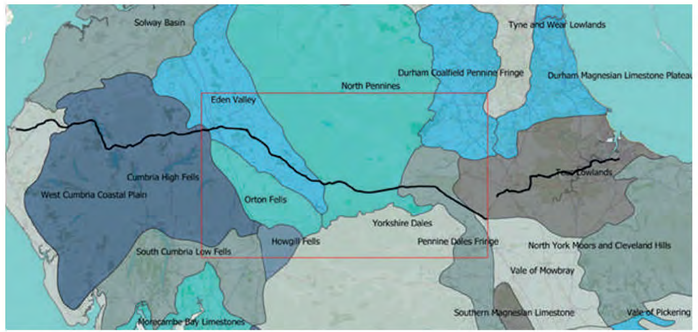


Figure 5.2 National Character Areas

Geology

The geology of the region is one of the key factors influencing the shape of the landscape: stronger, more resistant rocks tend to produce highland areas while weaker rocks tend to form lowlands. Designs have been informed by a thorough understanding of the area's geology and the role this plays in relation to engineering design and the broader opportunities and influences such as landform, soils and land use.

Figure 5.3 outlines the geological influence on the landscape, with the Yorkshire Dales to the south of the route, the relatively simple geology of the North Pennines and the northern edge of the Yorkshire Dales, the Eden Valley west extending to Penrith and the complex geology of the Lake District.

The design approach will be to use natural materials where appropriate to help anchor the road to its surroundings. The contrast between the red sandstone of the west and the paler gritstone of the east is a key consideration. This influences building vernacular and walls, for example, which will inform the materiality and finish of scheme components. Consideration will be given to reinforcing the distinct character areas of the road through the careful use of stone walling and other key features in appropriate locations.

Soils and Agriculture Land Value

Soils play an important part in defining landscape character along the road, often through the way they influence agriculture. Figure 5.4 shows how the higher value agricultural land relates to the fertile value bottoms, with the Grade 4 and 5 land corresponding with the higher sloping land forms.

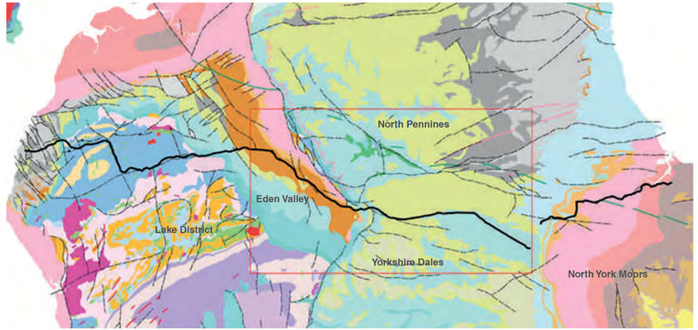


Figure 5.3 Geology (highlighting some of the contrasting geological structures of the wider area)

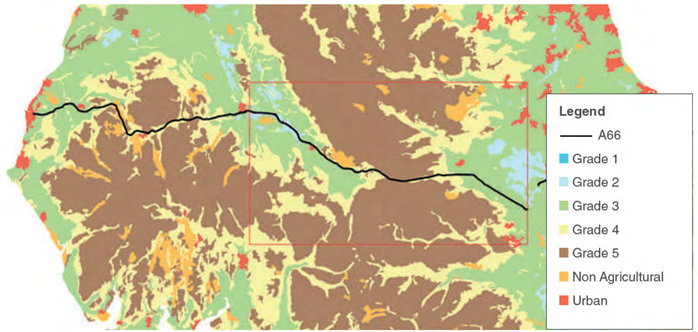


Figure 5.4 Agricultural characteristics

5 Responding to context

5.2 Landscape context (continued)

Night Sky

Figure 5.5 illustrates the current influence of lighting. With very little lighting along much of the road, dark skies are experienced across significant parts of the project area. Project lighting designs and operational activities are being proposed with due consideration to the influence of these proposals on the night sky, and in relation to policies governing the need to maintain dark skies.

The majority of the Project will be unlit. The two areas where lighting is required are in the M6 Junction 40 to Kemplay Bank area and at Scotch Corner. Where lighting is required, this will be designed to minimise light spill.

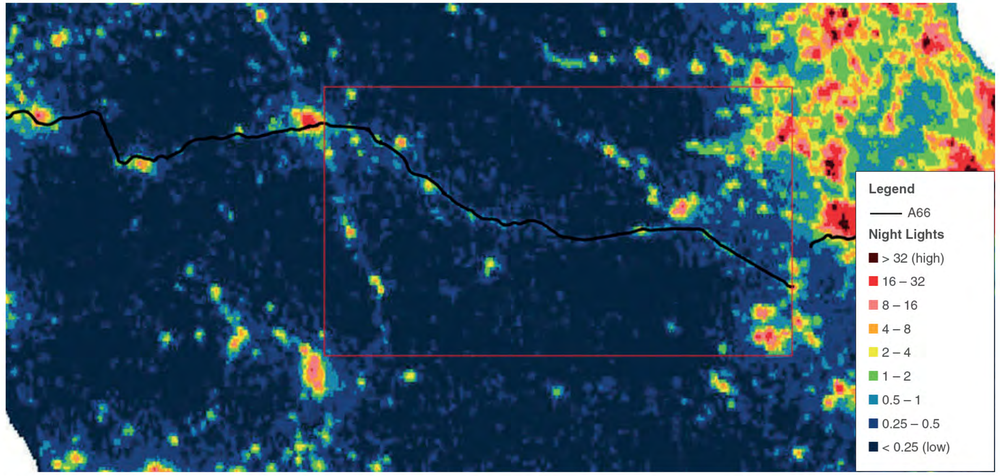


Figure 5.5 Relative incidence of light and its intensity at ground level

Vegetation

Figure 5.6 provides a general review of habitats across the Project area. The proposed landscape design will integrate with existing habitats and where possible strengthen or enhance existing features such as woodland, trees, hedges, grassland and wetland areas and create new areas where appropriate.

Landform

Topography and landform are essential in understanding the road corridor and its design influences, the landscape, views, enclosure and experiences of the user. As indicated in Figure 5.7, the Eden Valley defines the western half of the road section that is the focus for the Project, with the hills of the North Pennines and Yorkshire Dales shaping the geography of the eastern half of this route section.

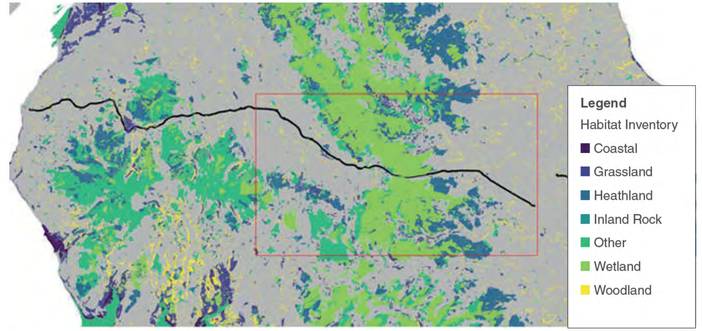


Figure 5.6 Habitat types

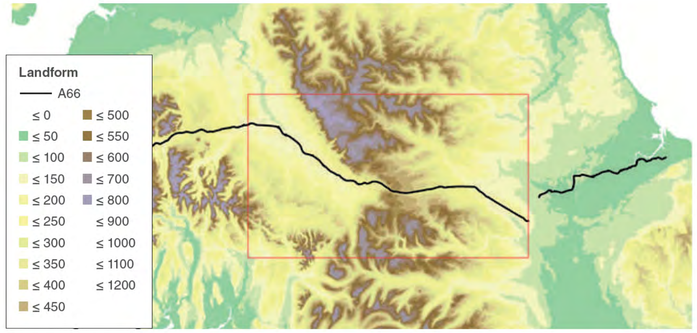


Figure 5.7 Landform

5 Responding to context

5.2 Landscape context (continued)

Roman Roads

Roman roads are very important in the context of A66 and a key influence on design proposals. The relationship between the present-day A66 and its Roman origins can be clearly seen in Figure 5.8, an alignment influenced by topography and appropriate crossing points within the Eden Valley. Many scheduled monuments dating back to Roman occupation are located in close proximity to the road corridor, with settings that require careful consideration.

Sea Views

In the broader context of the coast-to-coast route, sea views are important events for road users. However, as indicated in Figure 5.9, which indicates where it is possible to enjoy sea views, this is not a particularly pertinent consideration for the specific project scope. The North Sea begins to be glimpsed from the eastern extents of the project area, around Scotch Corner. This view east to the sea is from far away, coming off the North Pennines and experienced over a long period. Poor weather can obscure this view.

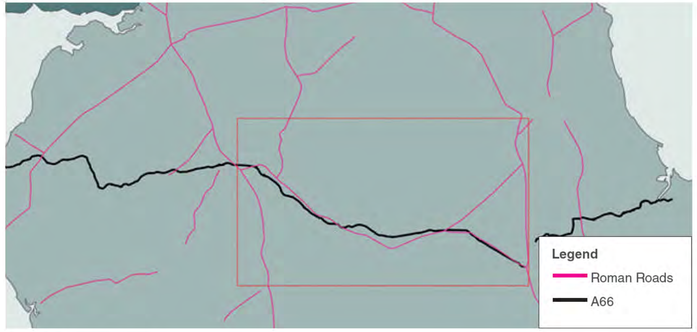


Figure 5.8 Roman roads

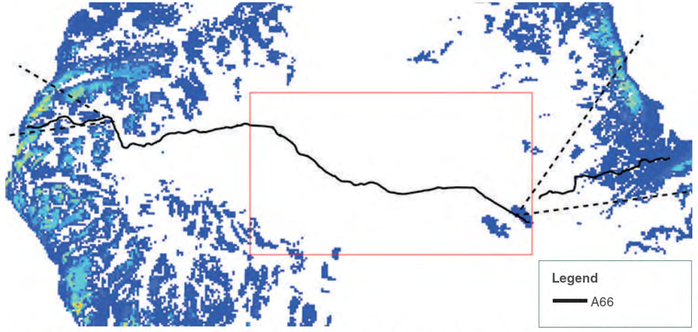


Figure 5.9 Places from which sea views can be experienced (shown in shades of blue). At the eastern end of the Project, glimpses of the North Sea come into view from the area around Scotch Corner (dashed view cone shown)

5.3 Settlement context

Figure 5.10 shows settlements alongside the Project section of the A66. From the west, the road skirts around the southern boundary of Penrith, and as it travels to the east passes alongside the smaller settlements such as Temple Sowerby, Kirkby Thore, Appleby, Warcop, Brough and Bowes.

The way that the A66 interacts with these settlements requires careful design consideration. Positive views that are key to wayfinding and local identity should be respected and can potentially be enhanced. Other visual and noise impacts need to be mitigated where necessary. Accessibility for a variety of different transport modes need to be facilitated and improvements made wherever appropriate.

5.4 Environmental designations

Figure 5.11 shows a range of environmental designations along the corridor. The National Parks and Areas of Outstanding Natural Beauty (AONBs), conservation areas and the setting of listed buildings along the corridor all have special qualities that are important considerations. Each of these is a key influence on design proposals in the vicinity of each of these locations and their settings. Where appropriate proposals incorporate opportunities to strengthen their value and integrate necessary environmental mitigation measures within creative design solutions.

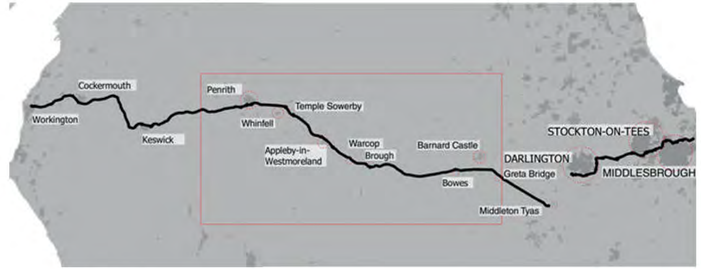


Figure 5.10 Settlements

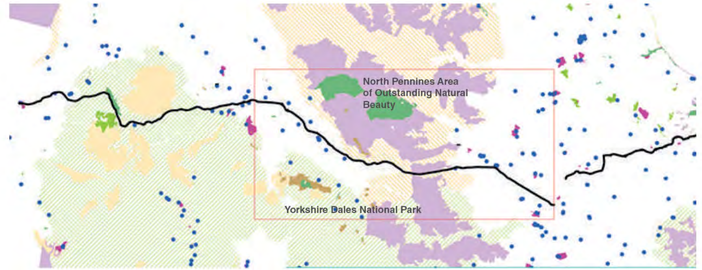


Figure 5.11 Environmental designations (details are provided in the PEIR)

5 Responding to context

5.5 Heritage

As previously referenced, the A66 and its setting have considerable historic importance, as evidenced by Roman remains and the Scheduled Monuments along the route, particularly the fortifications.

Figure 5.12 summarises some of the key heritage-related considerations, such as the Scheduled Monuments, Registered parks and Gardens, and Roman Roads along the corridor. Of note are the sections of Roman Roads and the forts and castles in close proximity. These features present significant events in the corridor as assets of environmental and heritage value, and for their contribution to user experience. Design proposals seek to carefully respect these settings. The type and nature of planting (including an absence of planting where appropriate) and screening will reduce the visual impact of the A66 near local archaeological sites and historic buildings including the Countess Pillar, the settlement to the north east of Brougham Castle in Penrith, the Roman Camp in Kirkby Thore, the Greta Bridge Roman Fort, and the Grade II registered parks and gardens in Rokeby.

5.6 Road network

Figure 5.13 illustrates the A66 in the context of other roads. Its importance as an east west corridor is evident, as is its relationship to the north south road network. The gaps in the network as a result the Lake District and the Pennines are also notable. The opportunity exists to use junctions as events along the A66 route corridor.

Figure 5.12 Key heritage considerations across the project area

Figure 5.13 Existing road network context

5.7 Crossings

Figure 5.14 illustrates the main crossings in the form of motorways, A roads, high frequency public rights of way, railways and rivers.

It identifies the main crossings as potential events on the journey. There is the opportunity to mark river crossings more effectively through signage, but also by creating appropriate views, either over a longer period or clear shorter views. The design of the bridge crossings are also important in achieving a relationship between road user and the landscape, notably in the barrier types used which could completely obscure the river.

The Pennine Way National Trail crosses the current A66 in an underpass.

5.8 Characteristics of the A66

It is important to recognise the historic significance of the A66 and its relationship to nearby settlements, and the combined influences these have on design proposals. The development of the route over time has been influenced by the geography of the area and the changing needs of its users. It is a mix of single and dual carriageways, in both urban and rural contexts with bypasses around many of the settlements. Where improvements are to be made, these will include the application of appropriate contemporary design standards and highway infrastructure requirements and will generally result in higher speeds within the sections currently experiencing high levels of congestion.

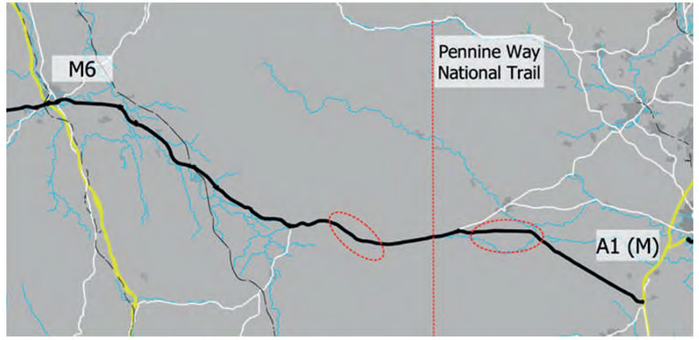


Figure 5.14 Crossing points along the A66 project area corridor

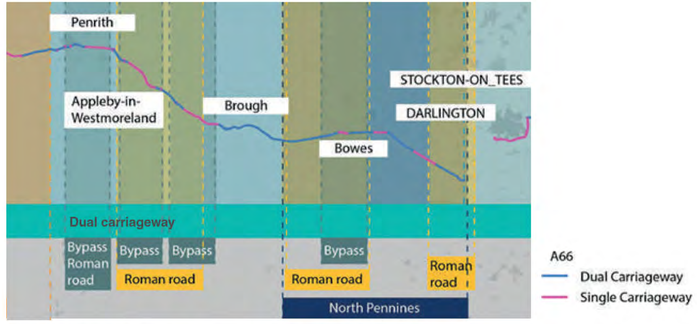


Figure 5.15 Key characteristics across the project area

6

Shaping the user experience

6 Shaping the user experience

6.1 Overview

The ‘mobile landscape’ is defined as the experience of road users, whereas what might be regarded as the ‘static landscape’ relates to the geographic context, as experienced around the highway. The mobile landscape has a temporal quality in addition to its spatial quality – it is a sequence of moments or events, which come together to form the perceived route narrative.

A moment within a route narrative can vary by type: it could be a spectacular view or a glimpse of something up-ahead, a crossing of a river, the entry into a woodland, the arrival at a junction, and so on. Each moment of a route narrative has an important relationship with the moment before.

A route narrative consists of individual moments that come together to form the journey. The range of factors influencing the journey experience are summarised below, together with ways that design proposals relate to these.

6.2 Safety: Alertness

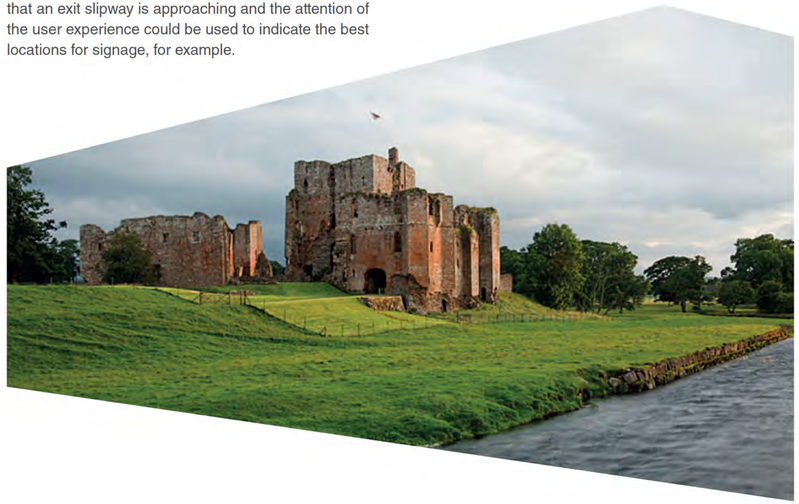
Driver awareness is strongly linked to stimulating roadscapes with highly repetitive streetscenes known to lead to fatigue symptoms and impaired driving performance. Road-side monotony has been shown to have a strong negative influence on a driver’s ability to assess their own level of alertness. The distinctiveness of the geographic setting through the Project section of the A66 helps to provide a stimulating experience, with sensitive landscape design specified to complement this natural beauty.

6.3 Distractions and decision making

The driver experience involves navigating and wayfinding, influenced by road scale and speed, the location of decision points, the experience of motion on bends, climbs and descents, and the various complexities of interpreting road geometry. These decision-making moments need to be understood and help inform appropriate design of the road-side environment.

The user experience can be manipulated to aid the driver: the reveal of a town could signal to the driver that an exit slipway is approaching and the attention of the user experience could be used to indicate the best locations for signage, for example.

Integrated into the A66 design proposals is consideration in relation to the sequence of junctions, signs, decision points and bends, for example, together with consideration of the scale of the road in influencing the driver experience.



6 Shaping the user experience

6.4 The landscape experience

Perceived landscape plays an important role in shaping the user experience. Among the best ways to experience the British landscapes are to navigate the pathways through them. The A66 is a route of national significance – the landscape beauty and inter-linked series of landmarks and attractions, make the route a place in its own right – with its own identity, programme of events, tourist attractions, for example.

The A66 designs have been progressed with this perspective in mind – retaining and supporting the ability of the road to offer valuable cultural experiences of the landscape's beauty and heritage significance.

6.5 Orientation

Route orientation enables a driver to plan journeys with reliability. Without a road atlas or satellite navigation, orientation is achieved by generating a mind-map in your own head. This would typically be a simple spatial diagram with the destination at the end. Leading to the destination would be a sequence of landmarks, waypoints and other features; in essence a simplification or conceptualisation of the user experience. Good orientation is achieved where a road offers a user experience with memorable structure. The A66 designs seek to help structure positive user experiences in a way that aids intuitive orientation.

6.6 Route identity

As indicated in Figure 6.1, the stretch of the A66 that is the focus for the Project offers a series of experiences that could be said to be iconic, with:

- the Whinfell Park and Forest and the interaction with the edges of Penrith town to the west and glimpses of the Lake District Fells beyond this offering memorable waypoints;
- the views of the Pennine Hills and glimpses of key landmark features such as Murton Pike for east bound users approaching Kirkby Thore; and
- the 'gateway to the Pennines' at the eastern end.

The project provides opportunties to strengthen the sense of place and enhance the overall landscape quality in each of these areas.

However, it is the Stainmore Pass at the midpoint of the road that provides one of the most dramatic sections in shaping the route's identity. The elevated, bleak moorland landscapes at Stainmore Pass, part of the North Pennines AONB, provide a strong sense of place and a memorable journey experience.

East of the Stainmore Pass, the parkland landscapes become more prevalent (such as as the Rokeby Estate and Rokeby Park RPG), and provide a striking contrast in scale and place.

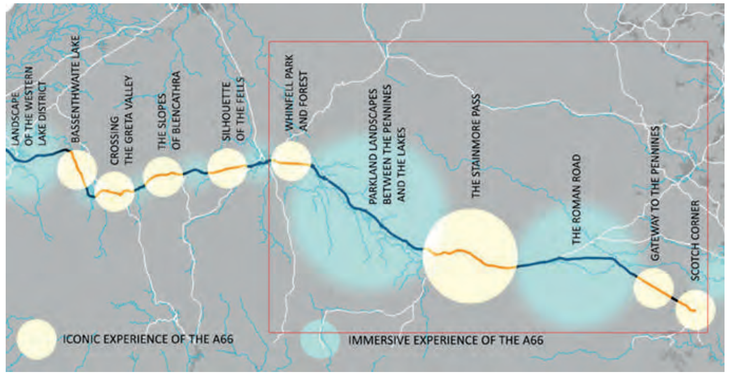


Figure 6.1 Route identity – highlighting the identity of the Project area section within the context of the coast-to-coast journey

6.7 Connecting places

The section of the route that is the focus of the Project divides the route into four broad areas; the Lake District, Eden Valley, North Pennines and Tees Valley, as shown in Figure 6.2. The centres of Penrith, Whinfell Park, Brough and Scotch Corner are important as gateways between these areas.

Stainmore is particularly important at the centre-point of the route and a key focal feature of the Pennines.

The Eden Valley acts as a large-scale transition between the Lake District and the Pennines.

This hierarchy of places and spaces (at key junctions and close to settlements, for example), and their respective transitions, has helped to inform the nature of Project design proposals.

6.8 The driver's experience

The route passes through landscapes of a high scenic quality with high intervisibility of the North Pennines, forming distinctive visual landmarks, providing a sense of scale and offering an immersive quality.

A high degree of inter-visibility is also experienced along the Eden Valley as the transition between the Lakes and the Pennines; especially where landmarks provide focal points to views of the approaching peaks.

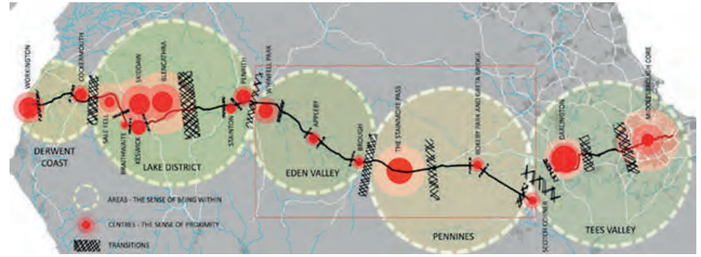


Figure 6.2 Connecting places – highlighting the settlement centres along the Project area section, their respective transitions and relationship with their broader landscape setting (within the wider context of the coast-to-coast journey)

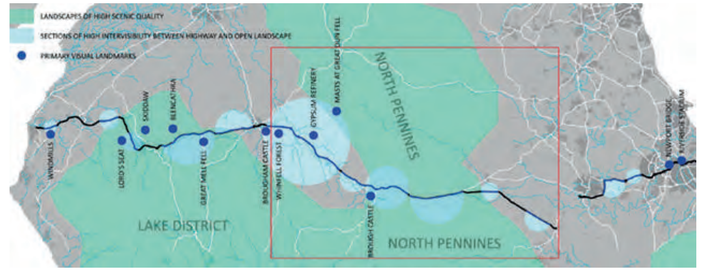


Figure 6.3 Setting and visual landmarks – highlighting key features of the Project area section within the wider context of the coast-to-coast journey

6 Shaping the user experience

6.9 Speed and perception

The A66 road user takes-in the landscape at speed, providing a user experience that is different to walking and cycling: the speed encourages a greater focus on the 'broad strokes' of the landscape; they highlight regional contrasts, with time periods between major landscape types; and transitions become much quicker, and potentially more dramatic as a result.

The carriageway dualling proposals will serve to create a gentler and more predictable journey experience, with more consistent speeds.

6.10 The influence of place on road-side edges

The verge is important; along with the road's geometry, it has a critical role in achieving an appropriate road vernacular. The verge defines the road's relationship with the landscape.

Figure 6.4 distinguishes between sections of the route where design of the corridor (and in particular the road verges) focuses on bringing the surrounding landscape up to the road edge, and where road corridor design is conceived to offer its own identity.

For the areas requiring 'full integration' this relates to an approach to design that envisages designing road verges so that they harmonise as much as possible with the surrounding landscape, utilising appropriate planting and land form grading. For the Pennines this will mean avoiding the use of lawn grass and instead matching with the characteristics of existing vegetation, such as the ground cover of the moorlands.

Where boundaries must be defined, the use of local materials will be considered as a means of integrating the highway with existing landscape characteristics. Opportunities to vary the design of road furniture will also be considered, where this can be achieved without compromising road safety.

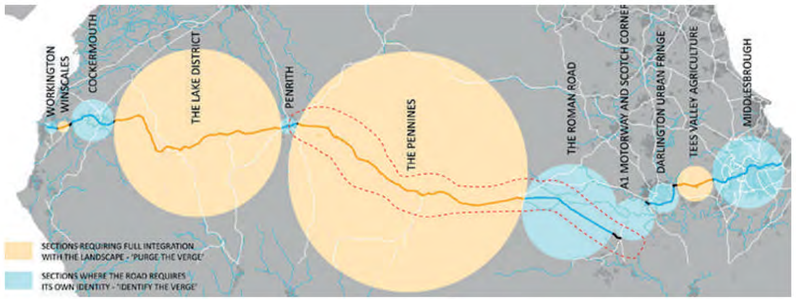


Figure 6.4 The influence of place on road-side edges (red dashed line highlighting approximate project extent)

6.11 Colour and themes

Figure 6.5 provides an indicative representation of the dominant colours associated with the user experience at each moment in the journey.

They are not necessarily illustrative of the colours that dominate in terms of visual space or volume, but seek to convey the influence of colour on the user experience. There are several patterns that are apparent in the sequence of relevance to the A66 section that is the focus for the Project:

- There is a contrast in shades between the North Pennines and the Lake District. The Stainmore Pass is particularly bold and consistent in colour.
- The noticeable change from red sandstone west of Stainmore to the gritstone of Durham County.
- The transition from red Penrith stone to grey Lake District stone is a noticeably hard line.
- The Lakes are punctuated by settlements of white, while the Pennines, settlements of red.

This distinction is being integrated into landscape design proposals and will influence the choice of planting and materials in the schemes' detailed design stages.

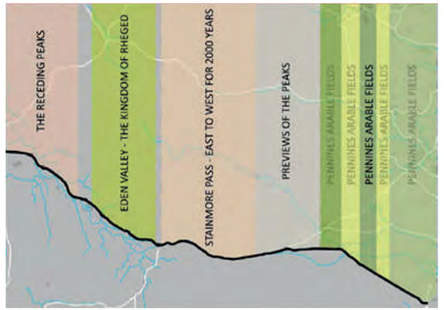


Figure 6.5 Colours and themes

6.12 Cultural attractions

Figure 6.6 illustrates experiences on offer along the route, which helps shape the route's identity. These are divided into two categories:

- Those with imageability value offer experiences associated with culture and human activity, past and present; and
- those with restorative value, which offer experiences associated with the natural landscape and a sense of tranquillity.

There is a strong historical theme running along the A66 – reflective of the age of the route, the Roman Road defines the routing, with historic assets such as Brough Castle and Rokeby Park Registered Park and Garden. Design proposals seek to strengthen the relationship between the road and these attractions, helping to shape positive identities.

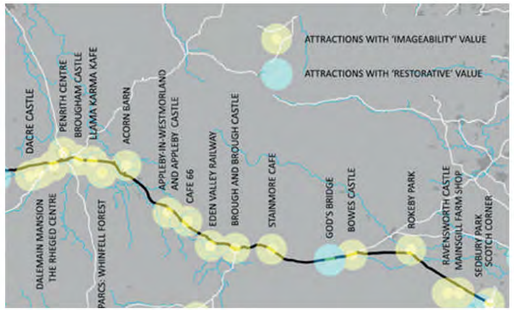


Figure 6.6 Cultural attractions

7

Route schemes

7.1 Route schemes

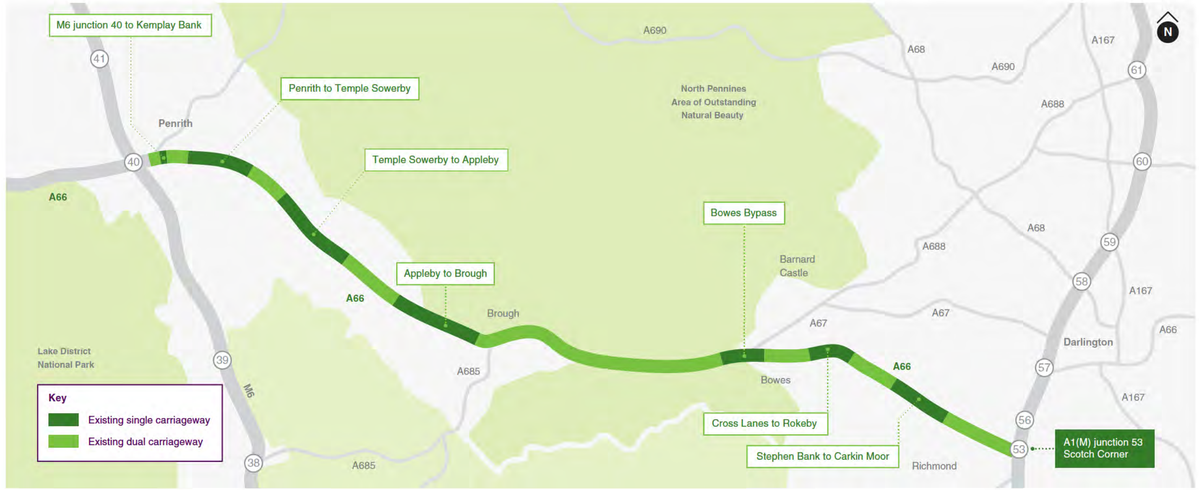
Overview

This chapter summarises design proposals for each of the eight schemes where design proposals are focused, namely:

- M6 junction 40 to Kemplay Bank
- Penrith to Temple Sowerby
- Temple Sowerby to Appleby
- Appleby to Brough
- Bowes Bypass
- Cross Lanes to Rokeby
- Stephen Bank to Carkin Moor
- A1(M) junction 53 Scotch Corner

Key context-related considerations that have influenced design thinking are identified, ensuring that each of the schemes combines to create a well-coordinated and cohesive route-wide design approach.

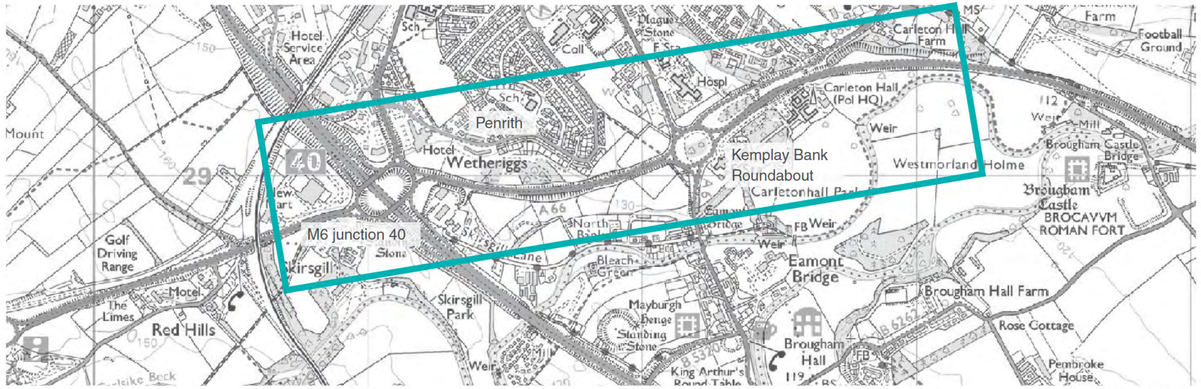
Plans summarising the emerging preliminary design proposals are included for each scheme, which are to be read in conjunction with a legend provided as an appendix to this report.



7.2

M6 junction 40 to Kemplay Bank

7.2 M6 junction 40 to Kemplay Bank

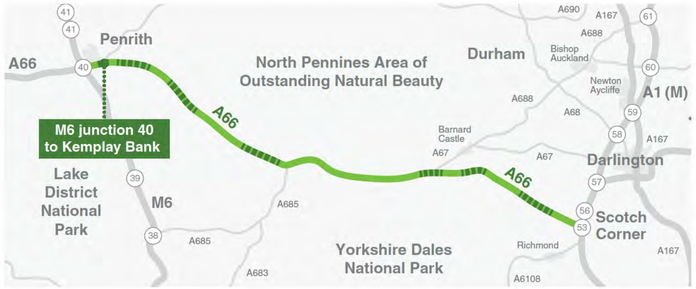


Location and overview

The M6 junction 40 to Kemplay Bank scheme is located at the most westerly point of the proposed A66 project. The scheme is situated adjacent to the urban fringes of Penrith and run from junction 40 of the M6 to Kemplay Bank Roundabout.

As the main point of access to Penrith, M6 junction 40 accommodates high volumes of traffic from the north via the M6 and the A66 to the west. The M6 junction 40 is also prone to bottlenecks caused by high levels of congestion at the Kemplay Bank Roundabout which affects the flow of traffic along the A66 and for north and southbound traffic using the A6.

To address these issues, improvements are proposed to both M6 junction 40 and the Kemplay Bank Roundabout, and their respective approach roads.



Location Plan (not to scale)

7.2 M6 junction 40 to Kemplay Bank

Existing context

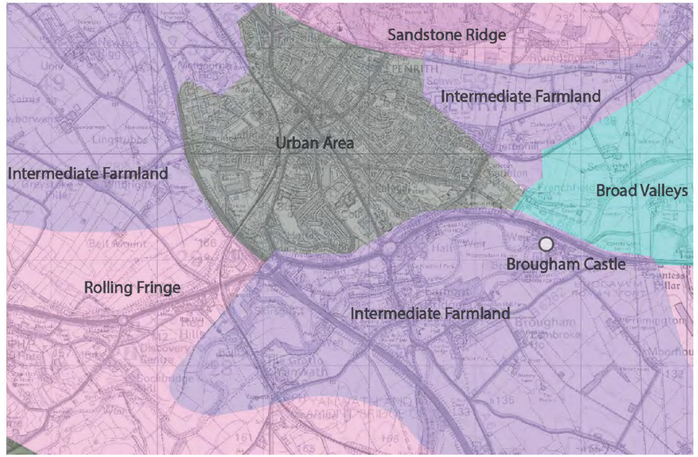
Landscape character

This scheme marks the transition between the Cumbria High Fells and the Eden Valley. Approaching from the east, Brougham Castle symbolises the entry point to Penrith, following which the road skirts around the southern limits of the town, fringed by Wetheriggs Country Park, before meeting the M6. As one continues westwards, glimpses of the Lake District begin to be revealed as the entry into this landscape setting begins to open up.

Approaching from the west along the valley, distant glimpsed views of the Pennine Fells begin to be revealed.

Key landscape features include:

- Intermediate farmland providing the landscape character setting on the road's southern sides, with hedges, scattered trees and fencing.
- A mix of mature deciduous (80%) and coniferous (20%) tree-cover with some large open grass verges.
- River Eamont to the south of the road corridor (though not visible), with deciduous trees following the meander.
- Scrubby deciduous roadside planting, with occasional single conifer specimens.
- Laybys on both east and west-bound sides.
- On the approach to the Kemplay Roundabout, sports fields to the north and rough grazing to the south, both of which with rail timber boundary fences.
- Leaving the Kemplay Roundabout heading east, conifer planting predominates (perhaps intended as screening for the hospital) and more sparse deciduous planting to the south.
- Some significant mature trees are found to the south of the road (Sycamore, Oak and Horse Chestnut).



Legend

- Intermediate farmland
- Urban area
- Rolling fringe
- Sandstone ridge
- Broad valleys

Intermediate farmland

Key characteristics include:

- Transitional farmland between the lowland and upland landscapes;
- Extensive areas of improved pasture with some arable farming;
- Planned villages displaying topographical and archaeological evidence of their medieval origins;
- Landscape dissected in part by the deeply incised or open river valleys.

Rolling fringe

Key characteristics include:

- Large-scale undulating topography;
- Stone walls mainly in the east;
- Occasional hedges and fence boundaries;
- Very sparse tree cover; some large scale conifer plantations;
- Small streams and rivers cut through the rolling topography.

Urban area Penrith

Key characteristics include:

- Suburban residential communities, interspersed with grassland areas and woodland strips;
- Stand-alone office, commercial and hotel buildings with tree screening form entry to town from Skirsgill Interchange (M6 J40).
- Penrith Hospital and cluster of low-rise medical and retail buildings within landscaped plots form entry point to town from Kemplay Bank Roundabout.

Sandstone ridge

Key characteristics include:

- Prominent north-south ridge;
- Improved pasture with a mosaic field pattern;
- Conifer plantation blocks and mixed woodland;
- Landscape punctuated by farms and heathland;
- Significant areas of improved heathland;
- and open, expansive long distance views.

Broad valleys

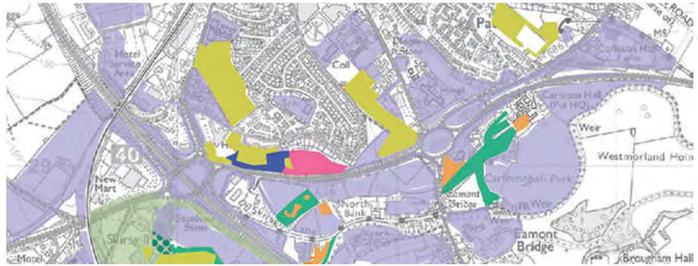
Key characteristics include:

- Wide and deep valleys with open floodplains;
- Rural farmland comprising significant areas of improved pasture;
- Pockets of scrub, woodland and coniferous plantations; hedges and stone walls form a matrix of field boundaries;
- Roads and railway lines often following the linear valley contours.

7.2 M6 junction 40 to Kemplay Bank

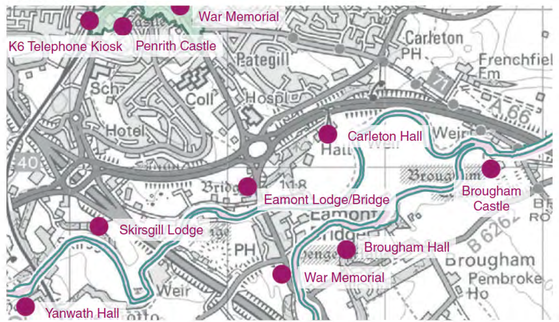
Other key design influences

- **Vegetation:** the immediate road-side environment is characterised by dense urban fringe, roadside planting and improved and semi-improved grassland.
- **Heritage and conservation assets:** Key heritage and conservation assets are indicated in the diagram to the bottom-right. The rivers Eamont and Lowther have both SSSI and SAC status. Key heritage assets within the wider area include Penrith Castle and Yanwath Hall, both examples of medieval defended residences, and the historically high status country houses of Carleton Hall, Skirsgill and Lowther Lodge. There are four designated Twentieth Century heritage assets within the study area: Eamont Lodge, a K6 Telephone Kiosk and two Boer war memorials. The former ice house at Carleton Hall is also a non-designated heritage resource within the area. Designs are being prepared with due regard to the setting of each of these heritage and conservation assets.



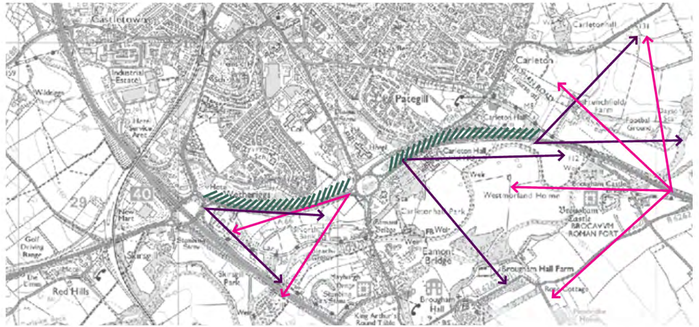
Vegetation types

- A1.1.1 – Broadleaved woodland – semi-natural
- A1.1.2 – Broadleaved woodland – plantation
- A1.3.2 – Mixed Woodland/ plantation
- A2.1 – Scrub – dense/continuous
- A3.3 – Mixed parkland/scattered trees
- B2.2 – Neutral grassland – semi-improved
- B4 – Improved grassland
- J1.2 – Cultivated/disturbed land – amenity grassland



Key heritage and conservation assets

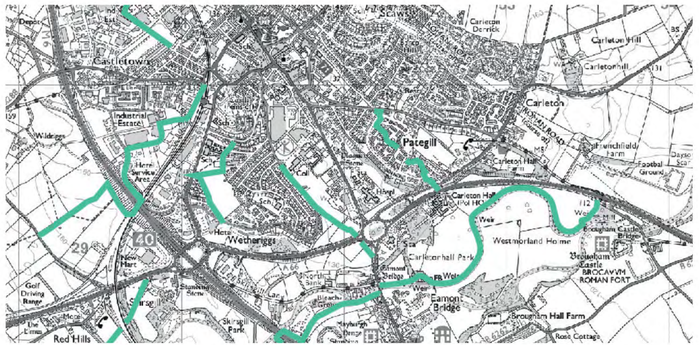
- Key heritage asset
- Conservation area
- Special Area of Conservation (SAC)
- Site of Special Scientific Interest (SSSI)



Views / User experience

Legend

- View travelling East
- View travelling West
- View constrained



Public rights of way

Legend

- Public rights of way

- **User experience:** East of Junction 40 of the M6 along the A66, views northward are screened by road-side planting, enabling glimpsed views through Wetheriggs Country Park through to the Penrith urban area, with views across agricultural fields to the south. At the mid-way point between Junction 40 and the Kemplay Bank Roundabout, wide panoramic views open out to the south over the rolling pastoral landscape. Moving further east, views open up north and south, with less roadside vegetation obstructing panoramic views up to the prominent higher ridges. Moving east from Kemplay Bank Roundabout, roadside vegetation screens views both north and south.
- **Public Rights of Way (PRoW):** A number of PRoW cross the A66, connecting with southern Penrith are of most relevance to this scheme.

7.2 M6 junction 40 to Kemplay Bank

Summary of the proposals

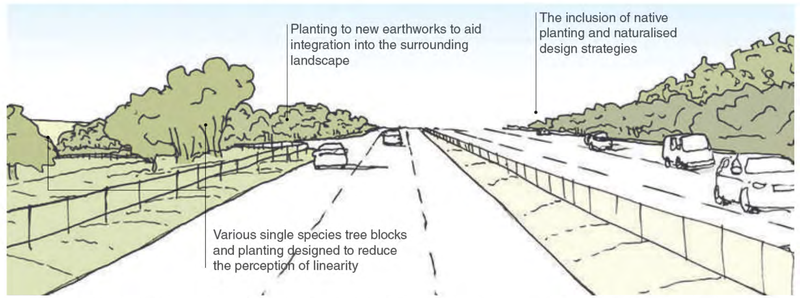
In this scheme the proposals are to:

- Widen each of the slip roads approaching the M6 junction 40 roundabout to provide additional southbound access.
- Widen the existing dual carriageway between M6 junction 40 and Kemplay Bank to three lanes in each direction.
- Widen the A66 along the existing alignment to the northern and southern sides of the carriageway.
- Construct a new dual-carriageway underpass below the existing Kemplay Bank roundabout. This will enable free-flowing traffic eastbound and westbound along the A66 and improve access to Penrith on the A6.
- Create new slip roads to the A6 and A686 at Kemplay Bank Roundabout, allowing users to safely join and leave the A66 in both directions. This will also serve the local road network with links to Penrith, Eamont Bridge, and other local settlements.
- Extend the existing Carleton Avenue underpass which serves the emergency services facilities to the south east of the Kemplay Bank Roundabout.

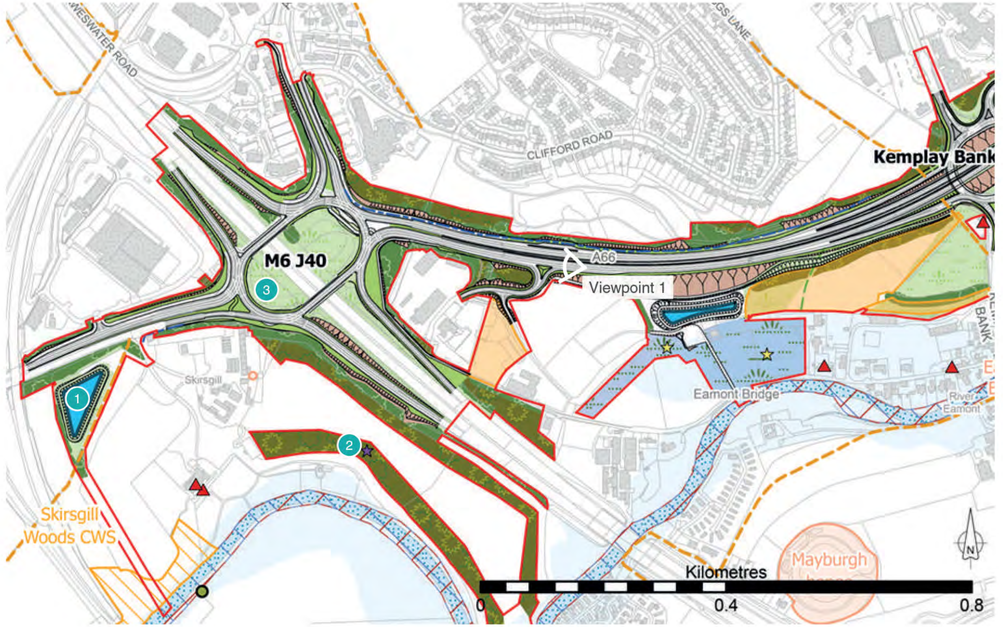
Potential design elements and considerations

Key potential design considerations are illustrated in the opposite plan. These include:

- The upgrade of existing traffic signals and installation of new traffic signals at M6 junction 40 and adjacent junctions to provide controlled crossing facilities for pedestrians.
- The introduction of spiral road markings to help improve lane discipline, traffic flow and capacity.
- The creation of a pond as part of the sustainable drainage strategy, attractively designed to incorporate potential for improved wetland planting.
- Drystone walling to be consistent with local character.
- Various single species tree blocks and planting designed to reduce the perception of linearity.
- Species variety and planting form shaped to help increase visual interest and reduce user fatigue.
- The inclusion of native planting and naturalised design strategies.
- Consideration for planting across the new landform rather than with new land form to avoid emphasising the land form change.
- Existing shared pedestrian/cyclist crossings are to be retained on Kemplay Bank Roundabout. The crossings are a mix of controlled (traffic signals) and uncontrolled provision. An existing shared use cycle/footway runs along the north side of the scheme and around all arms of the junction. This will be retained.
- Woodland and grassland habitat mosaic to new earthworks to provide compensatory planting and connectivity with wider landscape and habitat network.
- Conservation and enhancement of historic parkland vegetation at Skirsgill Park. Light touch approach in terms of tree impacts and vegetation reinstatement to respond to parkland character



Viewpoint 1 M6 junction 40 approach sketch perspective showing potential design features (view point shown in opposite plan)



1 Pond to western edge

The pond has a shallow margin and there is potential to enhance the ecological value. Tree planting suitable to enhance red squirrel habitat and water margin planting. Retain as much existing vegetation as possible and replant where removed.

2 Skirgill Park

Extension of woodland planting and restoration to support red squirrels. Embankments and open areas planted with species rich grassland. Area of ecological interest extend south to the River Eamont, with appropriate ecological and mitigation measures incorporated into the landscape scheme.

3 Junction improvements

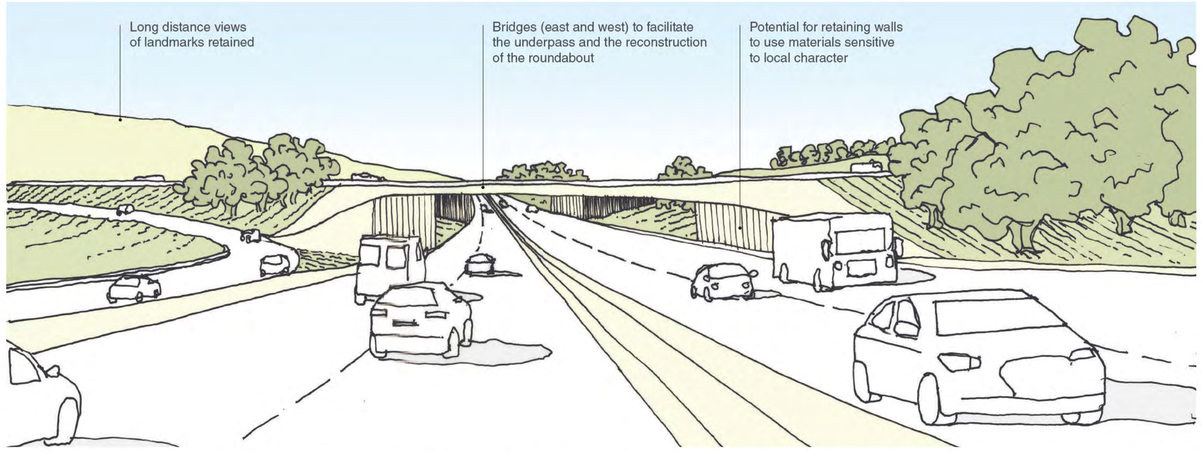
The upgrade of existing traffic signals and installation of new traffic signals at M6 junction 40 and adjacent junctions to provide controlled crossing facilities for pedestrians.

7.2 M6 junction 40 to Kemplay Bank

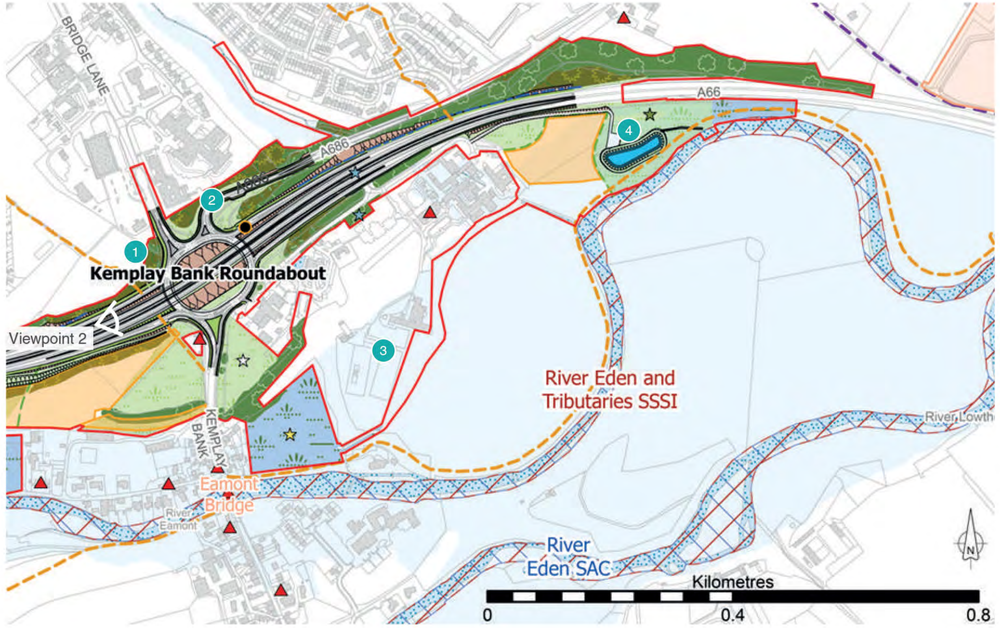
Potential design elements and considerations

Key potential design features of the Kemplay Bank Roundabout area are illustrated on the opposite plan. These include:

- Minor realignment of the A686.
- Retaining walls to use local materials sensitive to local character, including the new Kemplay Bank Underpass.
- The introduction of bridges (east and west) to facilitate the underpass and the reconstruction of the roundabout itself provides design opportunity.
- Measures to minimise impacts on mature tree canopy cover at Wetheriggs Country Park to maintain setting and landscape experience.
- Habitat creation and landscape integration (woodland) planting for new slip road north of Kemplay Bank Roundabout.
- Balancing pond and layout reduce impacts on former Carletonhall Park landscape.



Viewpoint 2 Kemplay Bank Roundabout sketch perspective showing potential design features (view point shown in opposite plan)



1 Wetheriggs Country Park

Measures to minimise impacts on mature tree canopy cover at Wetheriggs Country Park to maintain setting and landscape experience.

2 Slip road and landscape

Habitat creation and landscape integration (woodland) planting between minor realignment of A686 and A66 slip road.

3 Carletonhall Park

Temporary construction access / haul road returned to parkland landscape post-construction.

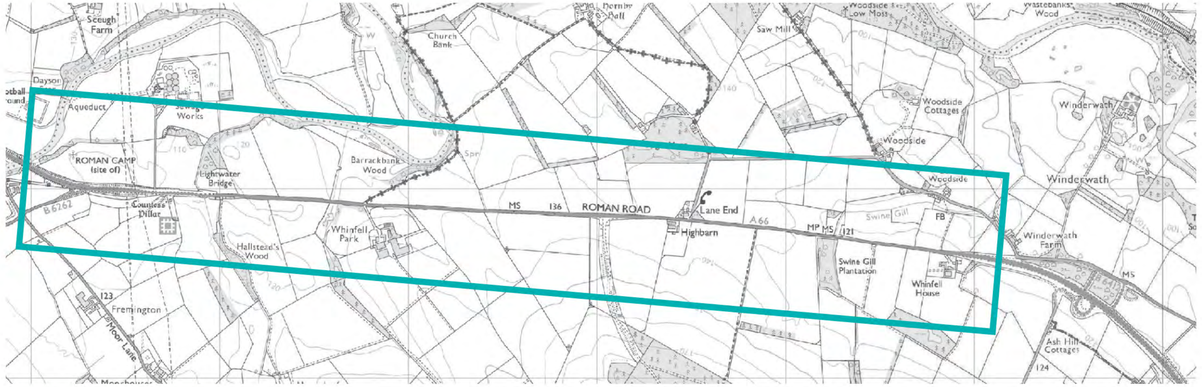
4 Balancing pond and layout

Balancing pond and layout reduce impacts on former Carletonhall Park landscape.

7.3

Penrith to Temple Sowerby

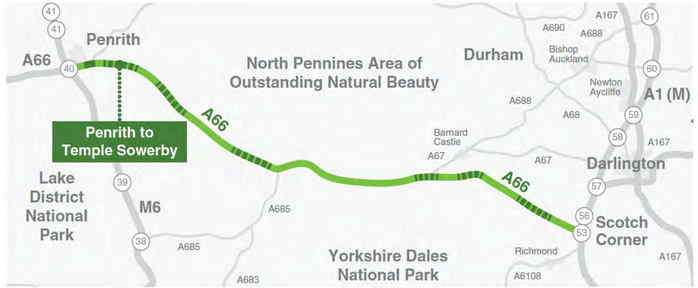
7.3 Penrith to Temple Sowerby



Location and overview

This three mile scheme of the A66 has varying widths, causing an inconsistent driving experience, and creating safety issues. There are several private access points, including one for Center Parcs, where it is difficult and unsafe for cars to turn right onto the main road. Full dualling of this section is therefore proposed, together with associated access improvements.

Since the preferred route announcement, working closely with landowners and associated businesses has resulted in a proposal that represents a significant reduction in the land-take required to achieve expansion of the A66 on its northern side and improve access, including a new junction to replace the existing junction at Center Parcs.



Location Plan (not to scale)

7.3 Penrith to Temple Sowerby

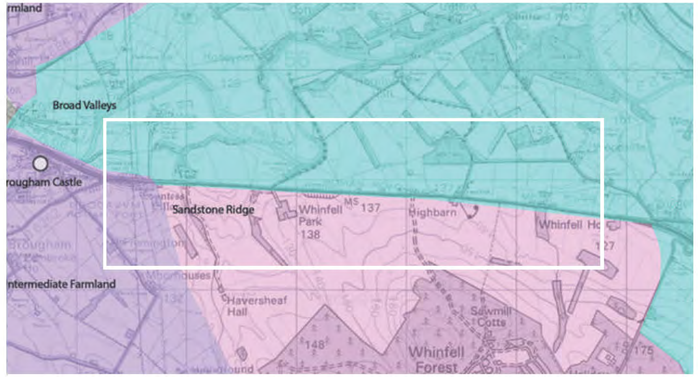
Existing context

Landscape character

This scheme continues along the Eden Valley, on the alignment of the former Roman Road. Approaching from the west, easterly views open to a pastoral landscape, with the splendour of Brougham Castle positioned proudly at the confluence of the Rivers Eamont and Lowther.

Key landscape features include:

- Screening of the roadside close to the Castle, with deciduous and coniferous trees and a road embankment.
- Elevation gaining as the route progresses east from Whinfell Park to just east of the Junction related to the Center Parcs access.
- A distant eastern ridge line that corresponds with the site of Center Parcs, where planting is more dense.
- An open aspect of rolling pasture north and south from the Llama Karma Kafe to Whinfell Park.
- Blocks of both deciduous and coniferous (such as Sitka Spruce) in the middle distance.
- Some stone wall boundaries adjacent to the A66 and nearby fields (with a greater number to the south of the A66)
- Smaller isolated groups of trees that present a 'parkland' feel to the south of Whinfell Park.
- Large fields with less distinct boundaries, with some walls to the south in poor repair (some gaps), and with post and wire to the north.
- Scattered single trees (such as Hawthorn / Crataegus monogyna and English Oak / Quercus robur) on the roadside and along field boundaries
- Distant views east of the Pennine Fells to the east.
- A descending gradient towards Temple Sowerby.



Legend

- Intermediate farmland
- Sandstone ridge
- Broad valleys

White rectangle indicates approximate Project scheme context

Broad valleys

Key characteristics include:

- Wide and deep valleys with open floodplains;
- Rural farmland comprising significant areas of improved pasture;
- Pockets of scrub, woodland and coniferous plantations;
- Hedges and stone walls form a matrix of field boundaries;
- Roads and railway lines that often follow the linear valley contours.

Sandstone ridge

Key characteristics include:

- Prominent north south ridge;
- Improved pasture with a mosaic field pattern;
- Conifer plantation blocks and mixed woodland;
- Punctuate farm and heathland;
- Significant areas of improved heathland;
- Open, expansive long distance views.

Intermediate farmland

Key characteristics include:

- Transitional farmland between the lowland and upland landscapes;
- Extensive areas of improved pasture with some arable farming;
- Planned villages with greens displaying topographical and archaeological evidence of their medieval origins;
- A landscape partly dissected by the deeply incised or open river valleys, wooded valleys and ghylls;
- Sandstone and limestone vernacular.

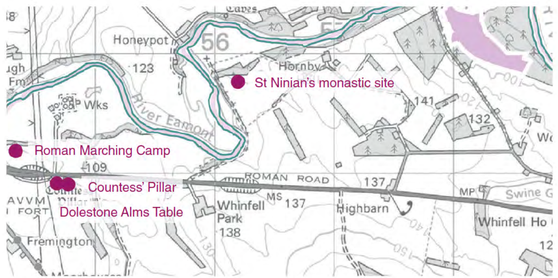
7.3 Penrith to Temple Sowerby

Other key design influences

- **Vegetation:** the road-side environment is characterised by improved grasslands at either end of the section, while arable land is also prominent.
- **Heritage and conservation assets:** Key heritage and conservation assets are indicated in the diagram to the bottom-right. The River Eamont has both SSSI and SAC status. Key heritage assets within the wider area include the site of the Roman Marching Camp northeast of Brougham fort, identified as Brocavum. Brougham fort was constructed on the south bank of the River Eamont near its confluence with the River Lowther possibly as early as AD78-84. Brougham Castle was built between 1203 and 1214 by Robert de Vieuxpont. East of this, the Countess Pillar commemorates the last parting of Lady Anne Clifford and her mother. The adjacent stone block, known as the Dolestone, is an alms table upon which the Lady Anne Clifford laid an annual offering to the poor in memory of her mother. The St Ninian's monastic site to the north has medieval origins, with the present church built in 1660 to replace an older group of buildings. Designs are being prepared with due regard to the setting of each of these heritage and conservation assets.

Vegetation types

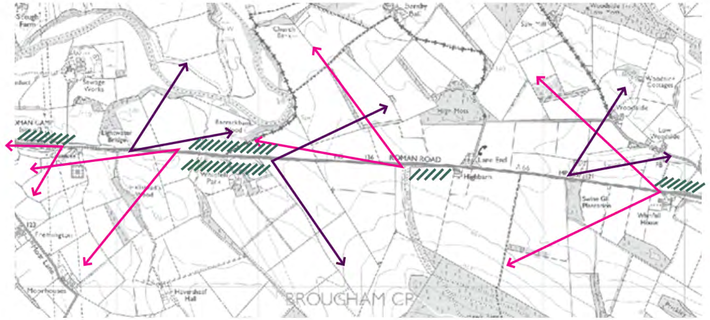
- A1.1.2 – Broadleaved woodland – plantation
- A1.3.2 – Mixed Woodland/plantation
- B6 – Poor semi-improved grassland
- J1.1 – Cultivated/disturbed land – arable
- B2.2 – Neutral grassland – semi-improved
- B4- Improved grassland
- J1.2 – Cultivated/disturbed land – amenity grassland
- A3.1 – Broadleaved parkland/scattered trees
- A1.2.2 – Coniferous woodland – plantation
- G2.2 – Running water – mesotrophic



Key heritage and conservation assets

- Key heritage asset
- Special Area of Conservation (SAC)
- Site of Special Scientific Interest (SSSI)

Key heritage and conservation assets

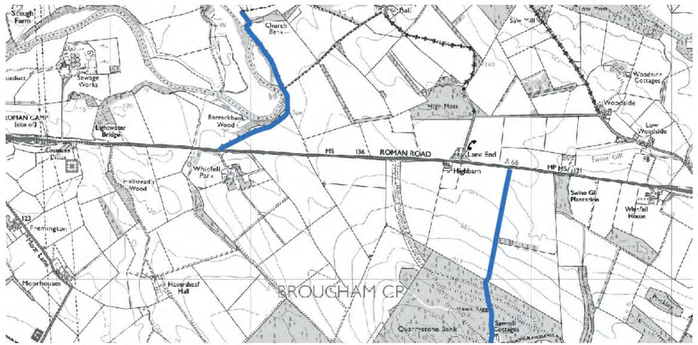


Legend

- View travelling East
- View travelling West
- View constrained

Views / User experience

- **User experience:** Travelling east into this scheme, the road-side planting screens the Frenchield Sports Centre grounds and Brougham Castle to the north and south respectively. Beyond the River Eamont views open out, to present wide open panormas of rolling pastures with attractive dry stone walls framing the foreground experience.



Legend

- Public rights of way

Public rights of way

- **Public Rights of Way (PRoW:** There is one footpath and one byway open to all traffic (BOAT) which terminate at the existing A66.

7.3 Penrith to Temple Sowerby

Summary of the proposals

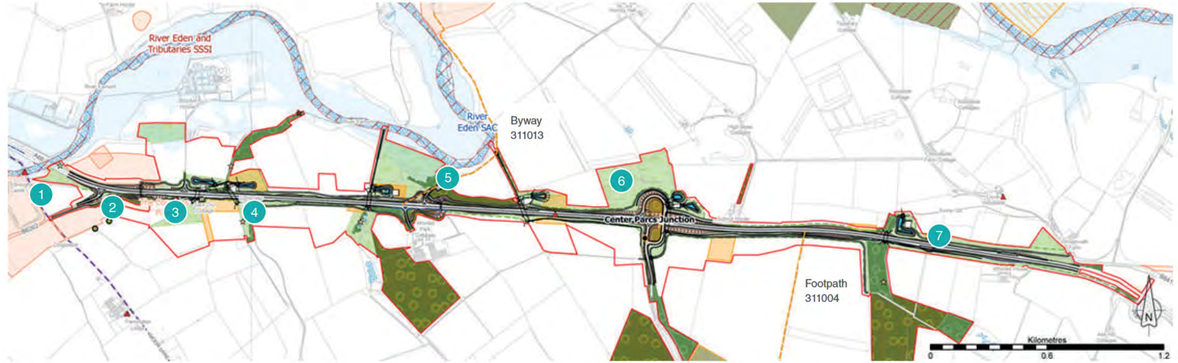
In this scheme the proposals are to dual the entire road, whilst closely following the line of the existing A66. This involves:

- Widening the route to dual carriageway between Penrith and Temple Sowerby on this scheme, providing more capacity. The scheme predominantly follows the existing route, widening the existing carriageway and constructing a second carriageway to the north of the existing route.
- Diverting the route to the south from Whinfell Park Farm to avoid the hamlet of Lane End. The road will then rejoin the A66 at Swine Gill before tying into the Temple Sowerby Bypass.
- Providing a new major junction to connect the new A66 route with Center Parcs, providing access to the holiday park and local roads. The junction will cater for all movements on and off the A66, making it easier for users to join the main highway and preventing tailbacks at peak times. This two-level junction will provide a left-in left-out arrangement and an underpass below it while also allowing local access to the existing A66.
- Introducing a new left-in, left-out arrangement on the B6262 for access to the local road network.
- Maintaining and improving access to St Ninian's Church on the Winderwath estate.
- Replacing the existing shared cycle path exiting the A66 immediately east of the Penrith to Temple Sowerby scheme with a route from Center Parcs to the B6412. This will be via an underpass and the existing local road network.

Potential design elements and considerations

Key potential design considerations are illustrated in the opposite plan. These include:

- With widening focused on the northern side, the southern side of embankments will be left to support invertebrate habitats where possible.
- Elsewhere, grasslands will be provided for invertebrates and biodiversity enhancements.
- Tree-planting will be incorporated within the road corridor where appropriate.
- Restoration and replacement of dry stone walls, where appropriate.
- A new bridge to provide farm access.
- A left-in, left-out junction for access to Whinfell Holme Wastewater Treatment Works from the eastern carriageway.
- Aquiring the Llama Karma Kafe and associated businesses and replacing with a new amenity area, with parking and direct access to the Countess Pillar.
- A left-in, left-out junction to provide access to Light Water Cottages. West-bound direct access is replaced with access via the Whinfell Park access road, and access to the A66 eastbound is via a track, underpass, and access to car park for public rights of way.
- A new underpass, allowing local farm access from both sides of the carriageway.
- A slight realignment of the existing left-in, left-out access to Whinfell Park Cottages.
- A new left-in, left-out junction enables access, with a relocated car park and public right of way to St Ninian's Church from the A66 eastbound carriage-way.
- A new two-level junction accommodates traffic on and off the A66 to the junction at Center Parcs.
- A new underpass and compact two-level junction to support all movements to and from Center Parcs to the A66. Two new slip roads provide both eastbound and westbound movements.
- Demolition of High Barn Farm.
- An access to Lane End via junction at Center Parcs from the new route.
- Deviation of the carriageway south of the existing A66 to enable the tie-in to the access related to Center Parcs.
- Replacement of the track from Whinfell House directly to the A66 with access via the local road network.
- Existing Byway 311013 and Footpath 311004 currently terminate at the existing A66. Pedestrians are required to walk along the highway verge to rejoin the path. It is proposed to connect both routes to to the grade separated crossing to enable onward journeys and connectivity, improving safety.



1 Castle views

Landscape approach conserves views to Brougham Castle keep, fortifications and parkland.

2 Western overbridge

Bridge design opportunity.

3 Countess Pillar views

Enhance views to the Countess Pillar, a key historic landmark within the Brougham Estate.

4 Landscape integration

Response to open historic landscape character: grassland and dry stone walls with occasional trees.

5 Whinfell Park access

Access improvements and associated landscape integration.

6 Junction at access to Center Parcs

Access improvements and associated landscape integration, including sensitive earthworks, grading off and rural landscape.

7 Landscape integration

Integration of earthworks, SuDS pond and access track with planting layers and minimising fenced boundaries.

7.4

Temple Sowerby to Appleby

7.4 Temple Sowerby to Appleby

Location and overview

This scheme involves dualling of the road between Temple Sowerby and Appleby, via Kirkby Thore and Crackenthorpe.

Since the preferred route announcement, preliminary design refinement has progressed to determine the best way to minimise the potential impact on the Trout Beck watercourse, which is a part of the River Eden Special Area of Conservation designation, and to achieve positive integration with Kirkby Thore.

Location Plan (not to scale)

7.4 Temple Sowerby to Appleby

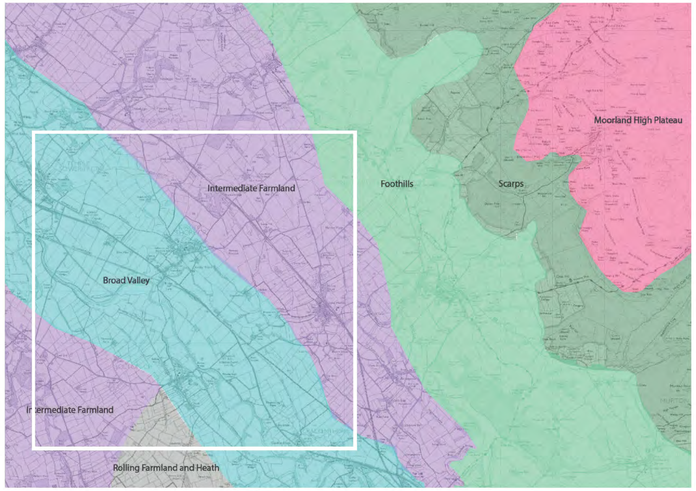
Existing context

Landscape character

This scheme continues to extend along the Eden Valley, before beginning to enter the foothills of the North Pennines as one travels eastwards, continuing to follow the alignment of the former Roman Road. Approaching from the west, this character area transition is evident from the way the existing road begins to subtly cut into the hill-side slopes.

Key landscape features include:

- The route passes through a broad valley area, with the River Eden and Trout Beck meandering along the valley bottom, flanked by rural farmland on the open floodplains.
- The areas of intermediate farmland on the valley slopes to the north and south of the road, with its attractive mix of pasture and arable farming.
- The North Pennine foothills to the north-east.



Legend

- Intermediate farmland
- Foothills
- Broad valleys

White square indicates approximate Project scheme context

Broad valleys

Key characteristics include:

- Wide and deep valleys with open floodplains;
- Rural farmland comprising significant areas of improved pasture;
- Pockets of scrub, woodland and coniferous plantations;
- Hedges and stone walls form a matrix of field boundaries;
- Roads and railway lines that often follow the linear valley contours.

Intermediate farmland

Key characteristics include:

- Transitional farmland between the lowland and upland landscapes;
- Extensive areas of improved pasture with some arable farming;
- Planned villages with greens displaying topographical and archaeological evidence of their medieval origins;
- A landscape partly dissected by the deeply incised or open river valleys, wooded valleys and ghylls;
- Sandstone and limestone vernacular.

Foothills

Key characteristics include:

- Rolling, hilly or plateau farmland and moorland.
- Occasional rocky outcrops.
- Hills are dissected by numerous streams and minor river valleys.
- Areas of improved grassland, unimproved heathland and extensive conifer plantations.
- Semi natural woodland in the small valleys.
- Large areas of farmland are bounded by stone walls and hedges.

7.4 Temple Sowerby to Appleby

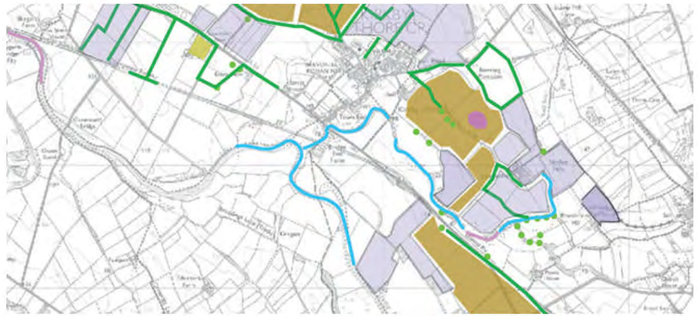
Other key design influences

- **Vegetation:** the road-side environment is characterised by hedgerows, a scattering of trees, improved grassland & arable land.
- **Heritage and conservation assets:** Key heritage and conservation assets are indicated in the diagram to the bottom-right. The River Eden has both SSSI and SAC status, with Trout Beck designated SAC. Key heritage assets within the Kirkby Thore area include four Roman military sites – two temporary camps at Eden View and east of Redlands Bank (Crackenthorpe). A permanent fort, identified as Bravoniacum, is considerably smaller in size than the temporary camp. The fort rampart remains visible as a low but distinct terrace within the modern village of Kirkby Thore. Extensive remains of the associated civil settlement lie to the north, east and south of the fort.

  Other Roman structures in the area include a scheduled mile stone located on the parish boundary between Temple Sowerby and Kirkby Thore near Spitals Farm. The churches of St Margaret and St James, and St Michael, Kirkby Thore are largely medieval in date. Designs are being prepared with due regard to the setting of each of these heritage and conservation assets.

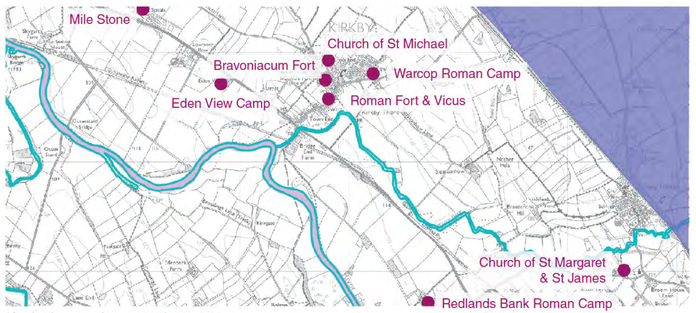
Key heritage and conservation assets

- Key heritage asset
- Special Area of Conservation (SAC)
- Site of Special Scientific Interest (SSSI)
- Area of Outstanding Natural Beauty (AONB)

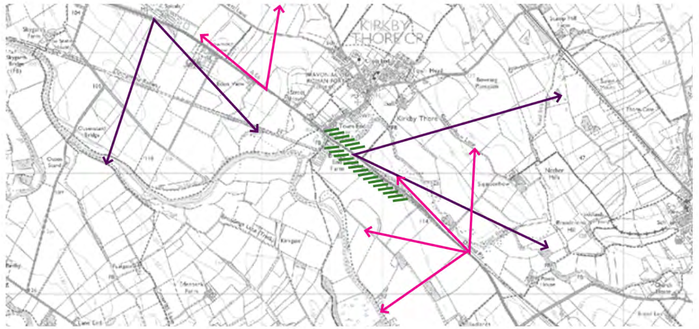


Vegetation types

- B5 – Marsh/marshy grassland
- B4 – Improved grassland
- J1.2 – Cultivated/disturbed land – amenity grassland
- A3.1 – Broadleaved parkland/ scattered trees
- G2.2 – Running water – mesotrophic
- J2 – Hedge
- J1.1 – Cultivated/disturbed land – arable



Key heritage and conservation assets

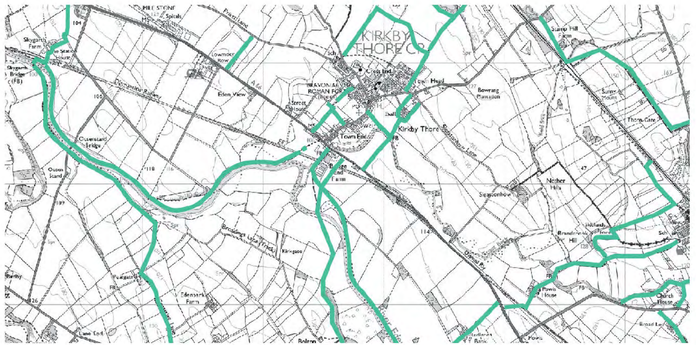


Views / User experience

Legend

- View travelling East
- View travelling West
- View constrained

- **User experience:** Travelling eastwards along the valley into this section, the attractive North Pennine foothills begin to be revealed as one passes east of Kirkby Thore. Travelling in the opposite direction, the road user enjoys the wide open panoramas across the River Eden Valley.
- **Public Rights of Way (PRoW):** There several footpaths and bridleways that terminate at the existing A66. The proposed design will sever Footpaths 336013 and 317004.



Public rights of way

Legend

- Public rights of way

7.4 Temple Sowerby to Appleby

Summary of the proposals

A new dual carriageway route alignment is proposed in the Temple Sowerby to Appleby section, as summarised below.

- This is an evolved version of the route that was described in the Preferred Route Announcement and would comprise a new offline bypass around the north of Kirkby Thore, moving into a new bypass to the north of Crackenthorpe. This route would include a number of new junctions and improvements throughout its alignment.
- Design evolution since the Preferred Route Announcement has not altered the proposed route from the western end of the village to the junction at the British Gypsum site to the north of Kirkby Thore. As the route travels south-east the alignment has moved approximately 100m east from the Preferred Route Announcement alignment in order to alter the location at which the route crosses Trout Beck. The length of this crossing of the Trout Beck and its floodplain is about 400m, which is being minimised to reduce the impact on connectivity and shading of the watercourse.
- The new multi-span viaduct would represent a major design opportunity, informed by design review, flood modelling and the Habitats Regulations Assessment, which is ongoing.
- A new junction, referred to as the Temple Sowerby Bypass Junction, would provide connections between the existing A66 and the local road network. A short section of road would connect from Temple Sowerby Bypass junction to the existing A66, allowing access for local traffic and other road users from Temple Sowerby to Crackenthorpe and to wider settlements.
- A new junction would be provided at Main Street to the north-east of Kirkby Thore. Main Street would pass over the proposed A66 alignment on a bridge structure. This junction would maintain the key local connection onto the A66 and also provide access to the British Gypsum plant via a private access road. This would contribute to a reduction in the number of Heavy Goods Vehicle movements through Kirkby Thore. New merge and diverge lanes would be incorporated as part of this junction to enable users to safely join and leave the A66 in both directions.
- New bridge structures for both Station Road and Sleastonhowe Lane would enable access over the A66 for local traffic, representing design opportunities. A diversion would lead from Priest Lane to Station Road to maintain local traffic access.
- At Crackenthorpe, a new junction on the westbound carriageway of the new A66 alignment would provide left-in/left-out access. The junction would link to the previous A66 alignment and the B6542 and provide access to both Crackenthorpe and Appleby.
- Provision of an additional left-in junction to the eastbound carriageway at the existing Appleby bypass junction would make better use of the existing infrastructure. This, together with the proposed Crackenthorpe junction, would provide all movement access to the A66 west of Appleby.
- There are seventeen proposed ponds along this route located at various points, which provide drainage and run-off attenuation, and manage water quality before it is discharged into the surrounding ditch networks. Each of these represents an opportunity for landscape design and ecological enhancement.

Key design features are illustrated in the plan overleaf. These include:

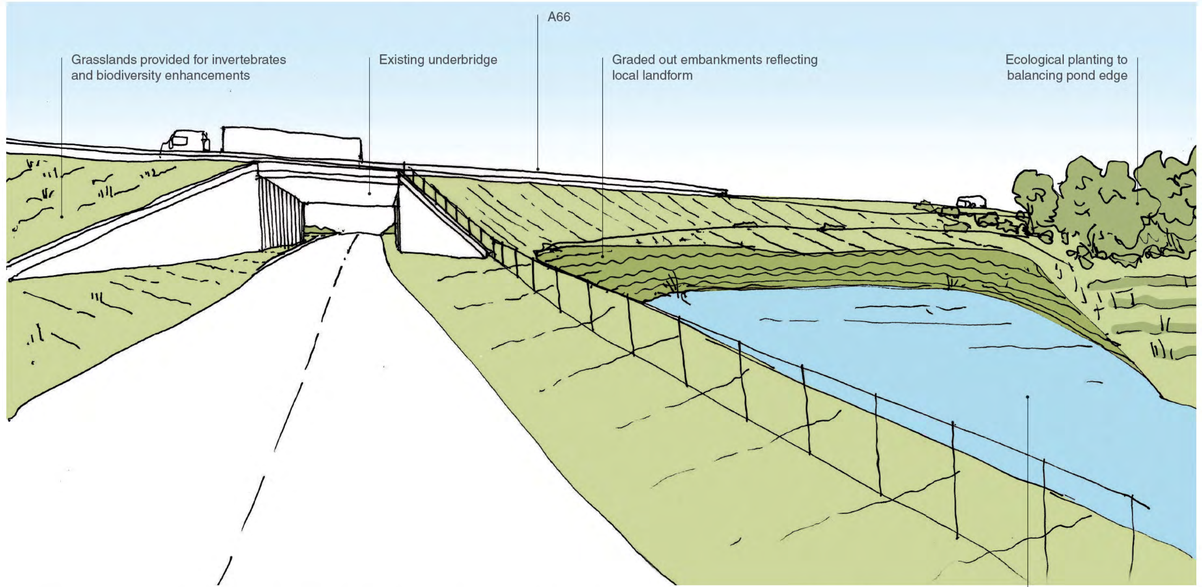
- Widening to the northern side, with southern side of embankments left to support invertebrate habitats where possible.
- Elsewhere, grasslands will be provided for invertebrates and biodiversity enhancements.
- Tree-planting will be incorporated within the road corridor where appropriate.
- Restoration and replacement of dry stone walls, where appropriate.
- A new bridge to provide farm access.
- A left-in, left-out junction for access to Whinfell Holme Wastewater Treatment Works from the eastern carriageway.

Potential design elements and considerations

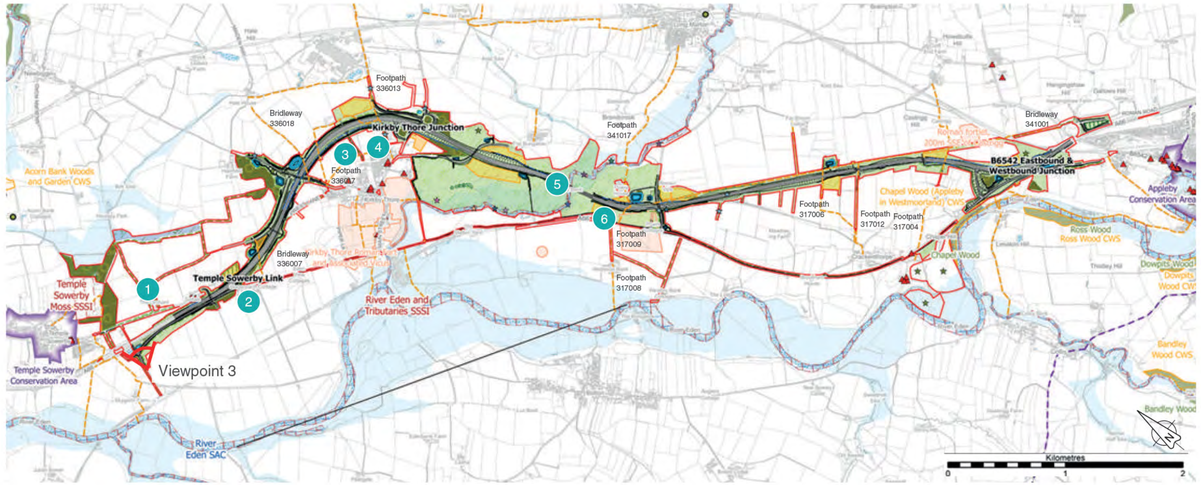
Key potential design considerations are illustrated in the plan overleaf. These include:

- Design of the western junction and alignment of associated side roads.
- The minimisation of side roads and road upgrades north of Kirkby Thore. Consideration of the impact of side roads on field patterns, the alteration of rural lanes and the intersections of Public Rights of Way.
- Potential effects on views to and from the North Pennines AONB from north of Kirkby Thore.
- The integration of mitigation measures within designs relating to the impact on the Roman Road in the eastern part of this section.
- Integration of the junction at Kirkby Thore.
- Design of Trout Beck viaduct and other proposed bridging structures.
- Design of proposed ponds and associated drainage features as attractive, biodiverse features.
- Reinstatement and improvement of existing footpaths that are severed as a result of the proposed works, providing better connectivity and user experiences, improving safety along these routes.
- Bridleway 336007 will be redirected to an underpass to the east and will connect back up to Priest Lane. The diversion is approximately 200m long.
- Bridleway 336018 and Footpath 336017 will be redirected to new bridges. The footpath diversion is negligible. The Bridleway diversion is around 250m.
- Footpath 336013 will be diverted to a footbridge to the west. This will also connect the footpath to Bridleway 336018 further west. The diversion for the severance of the footpath is approximately 500m.
- Footpaths 317009 and 341017 will both be diverted to a bridge which will be built for a local road diversion. The diversion will redirect pedestrians back to the old de-trunked A66 and along a proposed footpath. This will also provide a connection to Footpath 317008. The proposed diversion is around 750m.
- Two underpasses are proposed to redirect Footpaths 317006, 317012 and 317004 and reconnect them with the existing Bridleway 341001 which will run parallel to the proposed alignment along the line of the Roman Road. This Bridleway will not be affected by the proposed dualling. The diversions for the footpaths are minimal, at around 40m for Footpath 317012, and around 110m for Footpath 317004.

7.4 Temple Sowerby to Appleby



Viewpoint 3 Balancing pond adjacent to Temple Sowerby sketch showing potential design features perspective (view point shown in opposite plan)



1 Maintaining views

Sensitive alignment and earthworks to minimise views towards AONB.

2 Habitat creation

Habitat connectivity through island areas.

3 Local materiality

Use of vernacular and local materials for walling, parapets etc that integrate with the context.

4 Maintaining connections

Minimising impacts to existing recreational links to wider countryside.

5 Water mitigation

Mitigation of Trout Beck through wetland habitat creation and flood storage capabilities.

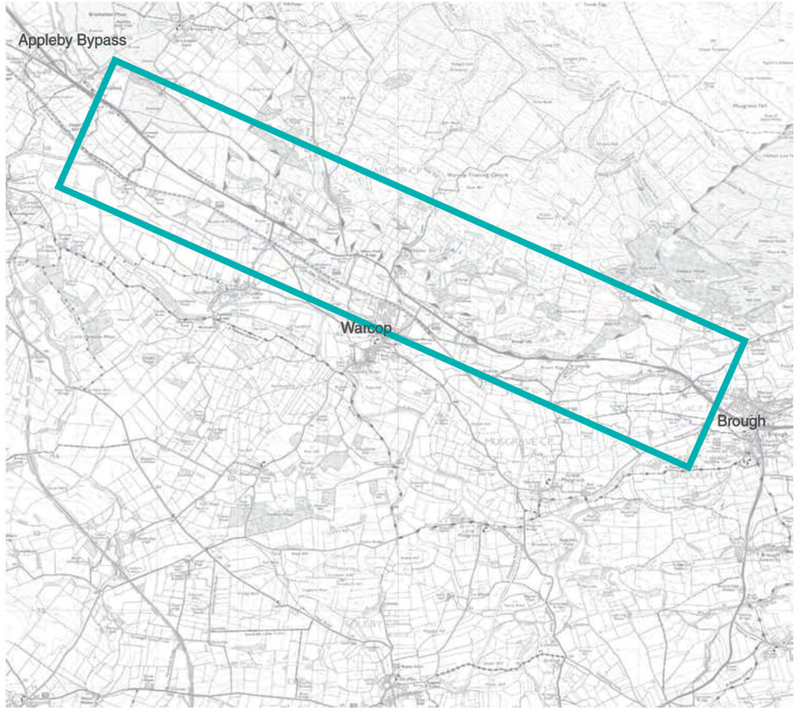
6 Roman Road

Journey / interpretation opportunity and view maintained from road, emphasising historic narrative of the site.

7.5

Appleby to Brough

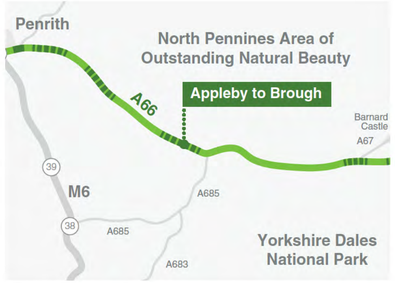
7.5 Appleby to Brough



Location and overview

This scheme comprises dualling of a section of the route that is currently single carriageway between Coupland Beck (south-east of the Appleby Bypass) and Brough, via Warcop. Junction improvements are proposed that will enable access on and off the A66 to improve user safety and reduce congestion.

Following the Preferred Route Announcement, feedback was received from stakeholders requesting that measures were taken to further minimise the potential impact on the North Pennines Area of Outstanding Natural Beauty (AONB), located to the north of the existing A66. An alternative alignment route has subsequently been incorporated to further mitigate the impact.



Location Plan (not to scale)

7.5 Appleby to Brough

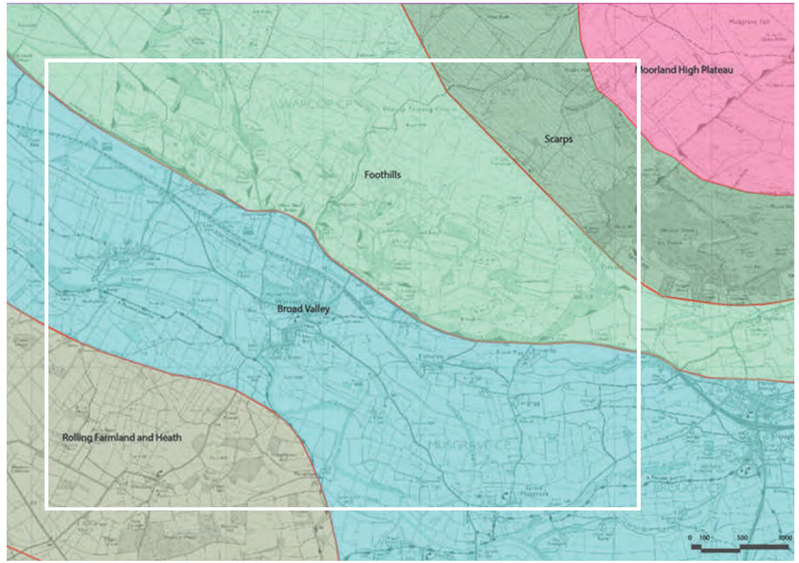
Existing context

Landscape character

This scheme continues to extend along the broad open reaches of the Eden Valley, with the North Pennine foothill slopes running along the A66 corridor to the north.

Key landscape features include:

- The broad open valley landscape with its verdant patchwork of small fields interspersed with hedges, stone walls and woodland.
- Woodland groups along sections of the corridor on the northern edge, marking a transition to the North Pennine foothills, with views that open in places to reveal undulating farmland.



Legend

- Rolling farmland & heath
- Broad valleys
- Moorland high plateau
- Foothills
- Scarps

White rectangle indicates approximate Project scheme context

Rolling farmland & heath

Key characteristics include:

- Shallow relief plateau with ridges and hollows.
- Rolling farmland.
- Occasional rocky outcrops.
- Rough pasture with wet flushes and semi heathland.
- Coniferous plantations.
- Narrow wooded valleys with wetland features.

Broad valleys

Key characteristics include:

- Wide and deep valleys with open floodplains;
- Rural farmland comprising significant areas of improved pasture;
- Pockets of scrub, woodland and coniferous plantations;
- Hedges and stone walls form a matrix of field boundaries;
- Roads and railway lines that often follow the linear valley contours.

Foothills

Key characteristics include:

- Rolling, hilly or plateau farmland and moorland.
- Occasional rocky outcrops.
- Hills are dissected by numerous streams and minor river valleys.
- Areas of improved grassland, unimproved heathland and extensive conifer plantations.
- Semi natural woodland in the small valleys.
- Large areas of farmland bounded by stone walls and hedges.

Scarps

Key characteristics include:

- Horizontal outcrops of limestone and volcanic rock form distinct features.
- Unimproved grassland dominates.
- Steep slopes often filled with bracken and scrub.
- Ghylls and gullies intersect the scar and moorland.
- Improved pasture on lower slopes.
- Small fields bounded by stone walls.

Moorland high plateau

Key characteristics include:

- Fells, summits and moorland plateau.
- Incised by deep valleys and ghylls.
- Extensive areas of blanket bog.
- Acid grassland and dwarf heath shrub provide contrast to bog.
- Valley slopes have varied land cover.

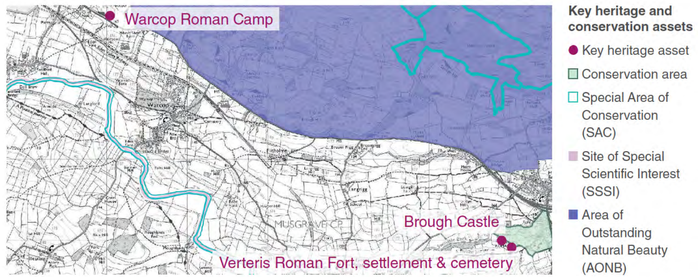
7.5 Appleby to Brough

Other key design influences

- **Vegetation:** the road-side environment is characterised by improved grassland and cultivated arable land along most of this stretch of the corridor, with deciduous trees and scrubland along much of the road's northern side, and significant coniferous woodland planting to the north of the road in blocks east and west of Warcop.
- **Heritage and conservation assets:** Key heritage and conservation assets are indicated in the diagram to the bottom-right. The River Eden has both SSSI and SAC status. North of Warcop, where the A66 moves northwards, the Roman road continues straight across what are now fields. Evidence of a further 200m length of the Roman road is recorded on the southern side of the scheduled site of the Warcop Roman camp. Here the road survives as a slight terrace on the hillslope to the south of the camp and north of the modern road. Warcop Roman camp is located on northern side of the current A66. The Roman fort at Brough, identified as Verteris, and its associated civil settlement, is located to the east. An associated cemetery is also located to the east of the settlement. Brough Castle was built on the site of the Roman fort and civil settlement during or immediately after William Rufus' campaign which resulted in his seizure of Cumbria in 1092. Designs are being prepared with due regard to the setting of each of these heritage and conservation assets.

Vegetation types

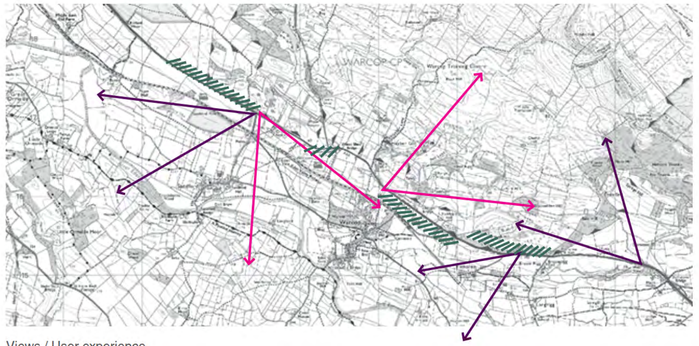
- B5 – Marsh/marshy grassland
- B4 – Improved grassland
- J1.1 – Cultivated/disturbed land – arable
- G2.2 – Running water – mesotrophic
- B2.2 – Neutral grassland – semi-improved
- A1.2.2 – Coniferous woodland – plantation



Key heritage and conservation assets

- Key heritage asset
- Conservation area
- Special Area of Conservation (SAC)
- Site of Special Scientific Interest (SSSI)
- Area of Outstanding Natural Beauty (AONB)

Key heritage and conservation assets

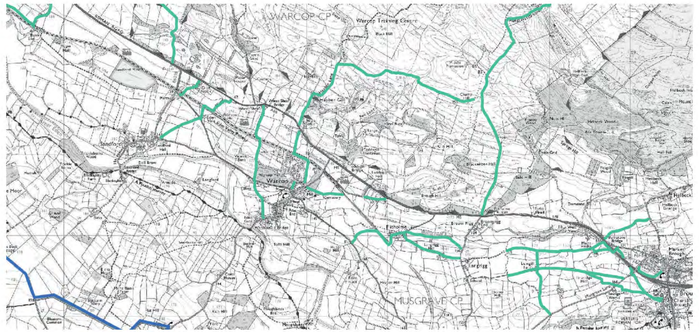


Legend

- View travelling East
- View travelling West
- View constrained

Views / User experience

- **User experience:** Travelling eastwards along the valley into this section, the user experiences view north towards the adjacent AONB and well as south towards Warcop and the agricultural land.



Legend

- Cycle Routes
- Public rights of way

Public rights of way and cycle routes

- **Public Rights of Way (PRoW) and cycle routes:** There are several footpaths and bridleways that terminate at the existing A66. The proposed design will sever Footpaths 336013 and 317004.

7.5 Appleby to Brough

Summary of the proposals

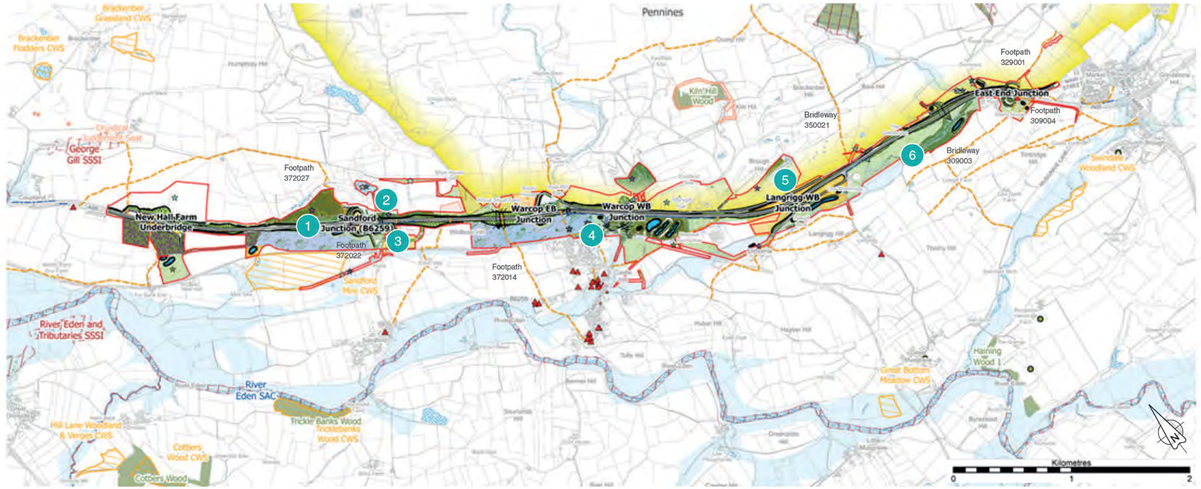
The route as developed for statutory consultation is summarised below and shown in the plan overleaf.

- From the end of the existing Appleby Bypass (near Café Sixty Six) to a point west of Wildboar Hill, it is proposed to use the existing A66 as the eastbound carriageway and build a new westbound carriageway to the south. A new junction will be provided at the B6259 at Sandford to provide access to and from both the eastbound and westbound carriageways.
- The new dual carriageway will continue in a south-easterly direction, deviating from the line of the existing A66 near Moor House Lane, running through Wheatsheaf Farm. The route will be predominantly elevated through this section. From East Field Farm, the new A66 will continue to follow a line to the south of the old A66 to tie in to Brough Bypass, near West View Farm.
- The old existing A66 will be used for local journeys between Moor House Lane and Turks Head. To provide a connection to Brough and the eastern end of the scheme, it is proposed to build a new section of local road that runs parallel to the north of the new A66 to connect to Brough Main Street.
- Between Wildboar Hill and Flitholme, it is proposed to move the new A66 further away from the community of Warcop compared to the Preferred Route announced in May 2020. However, it is recognised that some residents and businesses previously unaffected by the Preferred Route may now be impacted by these proposals.
- Between Wildboar Hill and Flitholme, the route will follow the line of the existing A66, by using the old A66 as the new eastbound carriageway and building the new westbound carriageway to the south. It is also proposed that a new road for local journeys will be constructed to the north of the new A66. Part of this new local road will result in minor encroachment into the boundary of the AONB.
- Around Warcop the new A66 will be lowered to be on a smaller embankment closer to existing ground levels, with access to the MoD training camp and local road to the north crossing over the top of the new road. Constructing this route closer to the existing ground level will significanly reduce the visual impact of the route.The route will be moved further north away from Warcop village, but the new local road will encroach further in to the AONB and will require the demolition and relocation of some MoD facilities.
- A new local road will provide connection between Flitholme and Langrigg, with a westbound-only junction at Langrigg. Another new local road is proposed at Turks Head to connect Langrigg to the old A66 via a new overbridge.
- New track connections will include an overbridge to cross the new A66, for local access to Brough for land and property owners at the eastern end of the scheme.
- As a whole, this route is proposed to minimise incursion of the new A66 alignment into the AONB that runs to the north of the existing A66 between Moorhouse Lane and Brough. However, minimal incursions are required for local access connections and at the eastern end to provide the local road connection to Brough.

Potential design elements and considerations

Key potential design considerations include:

- Addressing potential impacts on the North Pennines AONB and setting, with appropriate mitigation measures integrated into the design proposals.
- Addressing potential impacts on people living outside the AONB to the south of the road.
- Providing mitigation planting on north side to strengthen the backdrop against the AONB.
- Addressing potential impacts east of Flitholme.
- Utilising landform where practicable to screen the alignment.
- Potentially grading embankments into rolling pasture landscape.
- Minimising the number of side roads.
- Reinstating and improving severed sustainable travel routes, providing better connectivity and user experiences, improving safety along these routes.
- Footpaths 372022 and 372027 will be diverted to a new junction to give pedestrians a segregated crossing of the dual carriageway.
- An underpass will be provided to reconnect the Footpath 372014. No diversion will be required.
- Bridleway 350021 currently terminates at the A66. The proposals will provide a new connection from the Bridleway to an underpass to allow for connections south of the A66. The diversion is around 1km.
- Bridleway 309003 and Footpaths 309004 and 329001 currently terminate at the existing A66. The proposals allow for a new underpass to allow pedestrians to cross the A66 safely. The diversion is around 200m.



1 Junction landscape design

Woodland and grassland habitat mosaic for landscape integration and ecological mitigation.

2 North Pennines AONB setting

Blend mitigation planting to match mosaic of woodland, copse and moorland to integrate with character of AONB.

3 Structure planting

Creation of diverse ecological mosaics to include wetlands that integrate balancing ponds and woodland that integrates junction and cuttings.

4 Embankment profiling

Slacken slopes to tie in with adjacent agricultural areas and integrate compensatory habitat, including balancing pond.

5 Wilding and heathland restoration

Provide measures that complement MOD land management activities at Warcop.

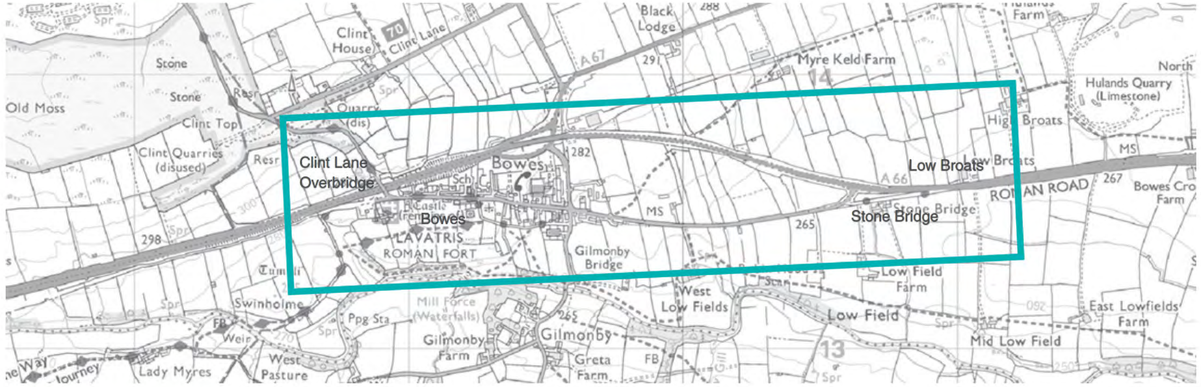
6 Varied landscape and habitat mosaic

Integrate balancing ponds with woodland, grassland and wetland.

7.6

Bowes Bypass

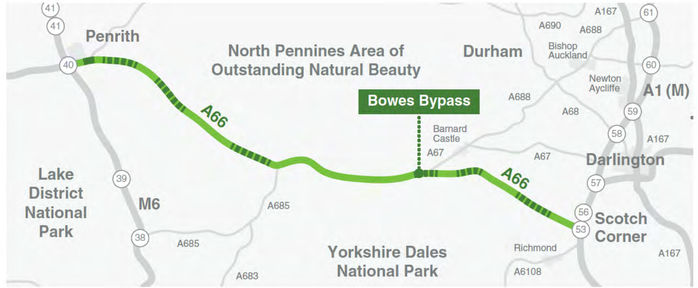
7.6 Bowes Bypass



Location and overview

This section of the route focuses on upgrading the Bowes Bypass, as the road passes to the north of the village of Bowes.

The route is proposed to closely follow the existing road, with a new adjacent eastbound carriageway constructed to the north. The existing carriageway would be changed to carry westbound traffic. The new carriageway would begin east of Clint Lane Overbridge that connects the Pennine Way (also known as the Bowes Loop), and extends to the eastern extent of the bypass.



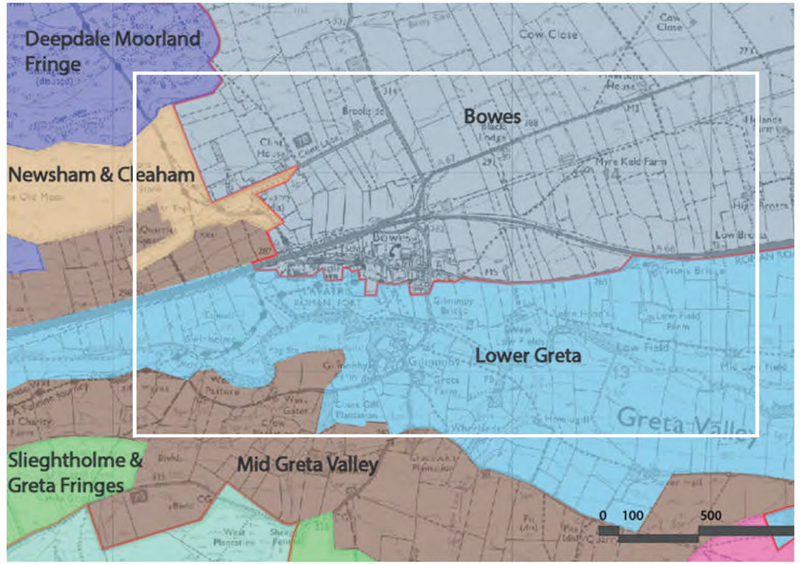
7.6 Bowes Bypass

Existing context

Landscape character

Travelling eastwards, this section of the route represents a transition point between eastern end of the Eden Valley and the area characterised as the Pennine – Dales Fringe. Key landscape features include:

- The River Greta floodplain flanking the southern sides of the route, with the river lined by woodland meandering through the pastoral landscape.
- The almost flat pastoral farmland with more regular, linear field patterns, comprised of small, rectangular fields north of Bowes and around the villlage.
- Fields boundaries becoming more prominent to the east are delineated by stone walls and mature hedges and occaisional scattered trees on boundaries, with more tree cover around the village.
- The Mid Greta Valley shallow dale of walled pastures and meadows west of Bowes, on the road's northern side.



White rectangle indicates approximate Project scheme context

Legend

- Deepdale Moorland Fringe
- Bowes
- Lower Greta
- Mid Greta Valley
- Newsham & Cleaham
- Slieghtholme & Greta Fringes

Deepdale moorland fringe

Key characteristics include:

- Open flat or gently rolling pastures and rougher moorland intakes in the eastern edges of the moorland plateau.
- Large regular enclosures bounded by stone walls and wire fences cover Battle Hill.
- Smaller and less regular field systems surround older farms at Loups Hill, Stony Keld and Levy Pool.
- There are areas of MOD land at Battle Hill Range and abandoned bunkers at Stony Keld.
- River valleys, wooded valleys and ghylls, sandstone and limestone vernacular.

Newsham and Cleaham

Key characteristics include:

- Gently rolling or undulating farmland in the floor of the vale east of Barnard Castle.
- A patchwork of arable and pastoral farmland with sub-regular patterns of clipped hedgerows and occasional dry stone walls with frequent oak, ash and sycamore and scattered plantations.
- Small hamlets and farms are connected by narrow winding lanes.
- The farms and farm buildings of the Raby Estate are painted white.

Lower Greta

Key characteristics include:

- A shallow dale running across the high plateau of the Stainmore Gap.
- The River Greta meanders across a narrow floodplain in the west before entering a narrow wooded gorge in the east.
- The wooded limestone scar of Kilmond Wood rises above the dale in the north.
- A pastoral landscape of improved and semi-improved pastures, sub regular patterns of old hedges and walls, with a linear grain in places, and scattered hedgerow trees.
- Farms and farm clusters are scattered along the dale.

Mid Greta Valley

Key characteristics include:

- A shallow dale of walled pastures and meadows between the low moorland plateaux of Ravock and Gilmonby moors.
- Field systems are generally regular, and isolated farms are strung out along the dale floor.
- The landscape is visually open with few trees or woodlands and is dominated in places by the busy A66.

Bowes

Key characteristics include:

- An area of high almost flat ground on the edges of the moorland plateau of the Stainmore Gap.
- An open pastoral landscape of improved pasture and wet, rushy pasture with few trees or woodlands.
- East of Bowes, narrow linear parliamentary enclosures and older curvilinear town field enclosures are bounded by a mixture of leggy, overgrown hedges and stone walls with scattered, locally abundant, ash and Sycamore trees.
- Isolated farms are scattered across the area.

Sleightholme & Greta Fringes

Key characteristics include:

- Open pasture and rough moorland intakes in the edges of the Moorland Plateau of Stainmore Forest fringing the valleys of the Greta and the Sleightholme Beck.
- The beck is incised in a narrow steep side gill surrounded by irregular walled pastures and larger irregular moorland intakes.

7.6 Bowes Bypass

Other key design influences

- **Vegetation:** the road-side environment is dominated by grassland pastures, with some scattered trees and hedges, with some small arable fields east of the village.
- **Heritage and conservation assets:** The North Pennines Area of Outstanding Natural Beauty extends across the route west of Bowes. Key heritage assets are indicated in the diagram to the bottom-right. These include the Roman fort at Bowes, known as Lavatris, and Bowes Castle, which includes the ruins of Henry II's 12th-century keep, built on the site of the Roman fort to guard the approach to the strategic Stainmore Pass over the Pennines. The Church of St. Giles lies a short distance east of the castle. Designs are being prepared with due regard to the setting of each of these heritage and conservation assets.

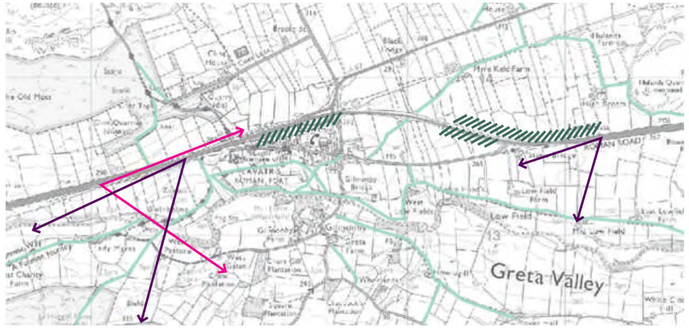
Vegetation types

- A1.1.1 – Broadleaved woodland – semi-natural
- B2.2 – Neutral grassland – semi-improved
- A3.1 – Broadleaved parkland/ scattered trees
- B4 – Improved grassland
- A1.2.2 – Coniferous woodland – plantation
- J2 – Hedge
- J1.1 – Cultivated/disturbed land – arable
- A3.1 – Broadleaved parkland/ scattered trees
- A3.1 – Broadleaved parkland/ scattered trees
- G2.2 – Running water – mesotrophic

Key heritage and conservation assets

- Key heritage asset
- Area of Outstanding Natural Beauty (AONB)

Key heritage and conservation assets

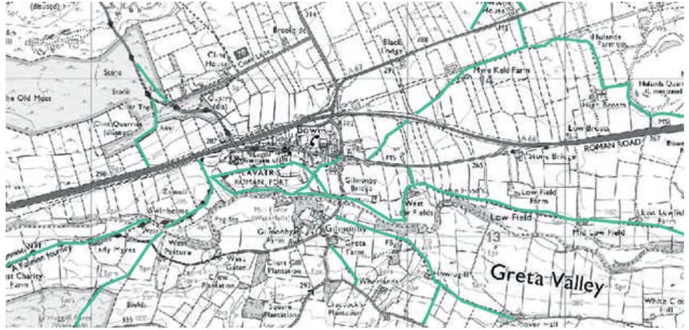


Views / User experience

Legend

- View travelling East
- View travelling West
- View constrained

- **User experience:** Travelling eastwards along the valley into this section, the framing of Bowes village, the Castle and pastoral setting are key considerations, including the woodland planting on the village's northern edge that provides visual screening. Travelling westwards in the opposite direction, the open views over the Greta Valley, to the west and eastern sides of the village need to be conserved and further enhanced where possible.



Public rights of way

Legend

- Public rights of way

- **Public Rights of Way (PRoW):** There are two existing footpaths within the vicinity of the scheme, and National Cycle Network Route 70 crossed the scheme via Clint Lane Bridge to the west of Bowes. The existing grade-separated junction provides for pedestrians to cross the A66 safety, and footways are retained in the proposed scheme.

7.6 Bowes Bypass

Summary of the proposals

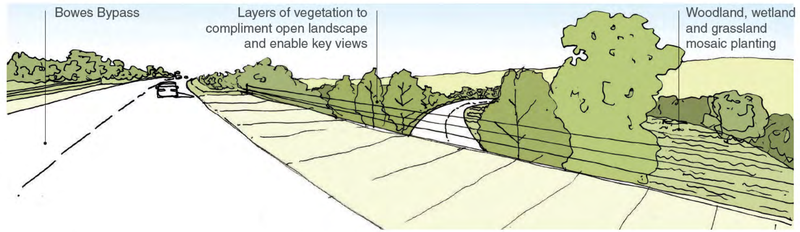
Upgrading the Bowes Bypass to dual this whole section would entail widening the road on its northern side. Key features of the proposals, indicated on the plan overleaf, are summarised below:

- At the junction with the A67, an underbridge would carry the new eastbound carriageway. Two new slip roads would accommodate traffic travelling to and from the east. These would provide access to and from the A67 and Bowes. Some derelict buildings at the junction and a barn structure would need to be demolished.
- The A67 will be widened to the east to create a staggered junction and a right turn lane for the eastbound slip road. The existing eastbound slip carrying traffic from the east will be realigned to the north to make way for the new eastbound A66 carriageway. The existing westbound slip road will have minor improvements made to create a safer merge.
- Access from Bowes to the A66 (via the Roman road known as The Street, and locally known as Low Road) would be stopped up. The upgraded grade-separated Bowes Junction would provide safer access to the A66 for local traffic.
- The existing westbound layby to the west of Stone Bridge Farm will be relocated to make way for the new westbound off-slip.
- It is expected that five balancing ponds would be required on adjacent land to store water, control pollution and provide acceptable outfall flow rates into nearby watercourses, whilst also representing a design and ecological opportunity. Accesses would be needed to facilitate maintenance.

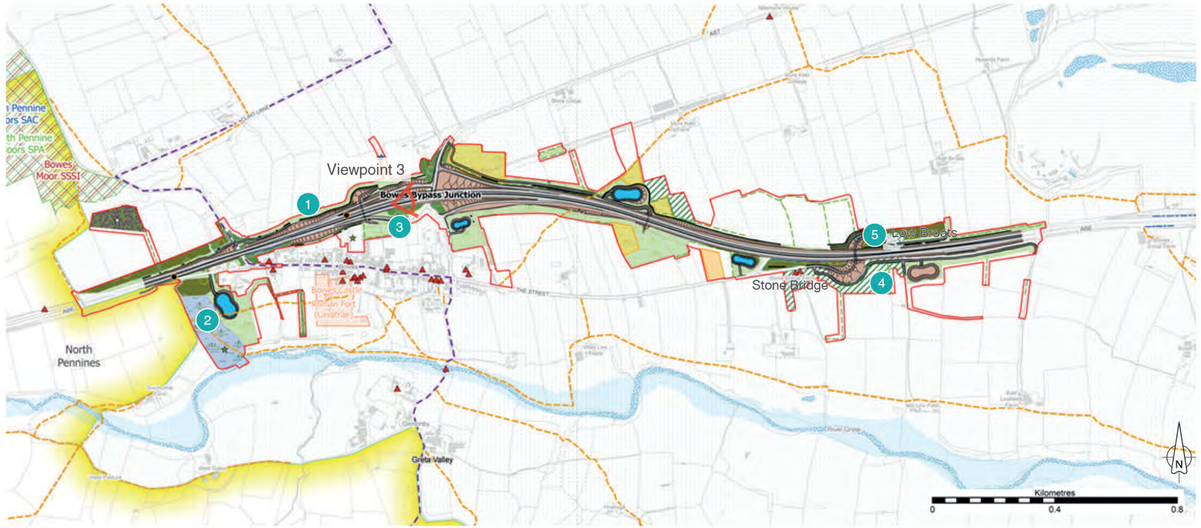
Potential design elements and considerations

Key potential design considerations are illustrated in the opposite plan. These include:

- Minimising potential impacts on the landscape character of the AONB and Bowes Castle setting to be assessed and measures incorporated into design proposals as necessary. Explore potential for advance structure planting to include castle screening.
- Replacement of the existing structure planting within the highways land.
- Addressing potential impacts at the reconfigured junction.
- Incorporating sustainable drainage, including balancing ponds as attractive, biodiverse features. Proposals to reflect the need for a sensitive approach to drainage to the south-west of Myre Keld Farm to retain field boundaries.
- Incorporating earthworks at 'Stone Bridge' and 'Low Broats,' with close attention to landscape and structural detail at Low Broats overbridge. Potential to slacken slopes on the south side of over-bridge access road or introduce planting into existing field boundaries and re-use wall material.
- Minimising change to existing habitats on the southern side embankments for invertebrates where possible.
- Ensuring the embankment slopes on the north side of junction integrate with natural land forms.
- Providing additional land for tree planting, arranged in a linear pattern along narrow, linear field boundaries.
- Promoting grasslands for invertebrates and biodiversity enhancements.
- Considering the incorporation of locally distinctive dry-stone walling where appropriate.
- Reinstating and improving severed sustainable travel routes, providing better connectivity and user experiences, improving safety along these routes.



Viewpoint 6 Sketch perspective view showing potential design features, including potential landscape mosaic planting from Bowes Bypass (view point shown in opposite plan)



1 Woodland planting

Replacement of woodland lost to realignment.

2 Landscape mosaic

Woodland, wetland and species-rich grassland mosaic to integrate large balancing pond as part of wetland landscape.

3 Landscape layering

Landscape design based on layers of vegetation, rather than blocks, to complement relatively open landscape and enabling key views such as those towards Bowes Castle.

4 Context-led design

Subtle reinforcement of field boundaries and conservation of open ridge and furrow medieval landscape where possible.

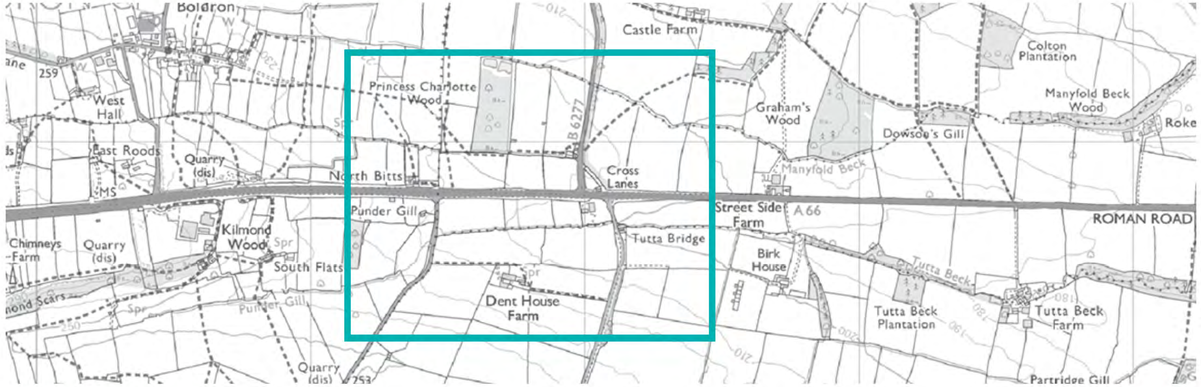
5 Connected Landscape

Improved severed connections and enchancing user experience & safety within the area.

7.7

Cross Lanes to Rokeby

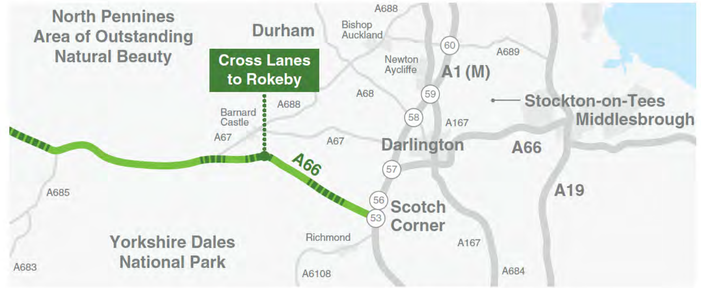
7.7 Cross Lanes to Rokeby



Location and overview

This scheme relates to the Cross Lanes to Rokeby junction proposals, which have been prepared to improve traffic movements in the area, whilst minimising impacts upon landowners and heritage assets.

The Preferred Route Announcement alignment still applies for this scheme, however this has been combined with further developed junction options to produce the presented route.



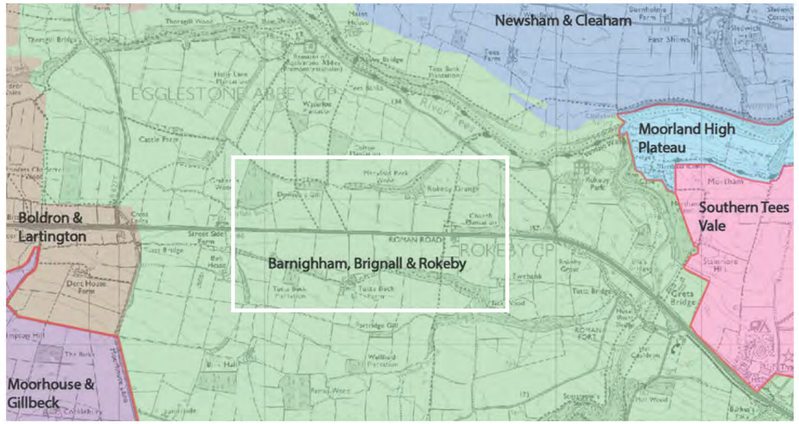
7.7 Cross Lanes to Rokeby

Existing context

Landscape character

This section of the route continues to represent part of the area characterised as the Pennine – Dales Fringe. Within this, the landscape character of the Barningham, Brignall and Rokeby area is distinguished by:

- The elevated carriageway, which provides an open aspect to the north, with fenced boundaries, slightly unkempt pastoral fields with scattered trees.
- The existence of a few blocks of tree planting.
- Small pastoral fields, which increase in size from west to east, with a medium-sized pastoral field pattern characterising the eastern area.
- Fenced field boundaries, with scattered trees and some gappy hedges.
- On the approach to St Mary's Church from the west, the evidence of a designed parkland to the north becomes increasingly apparent (Rokeby Park).
- A mix of deciduous and coniferous trees lining Tutta Beck.



White rectangle indicates approximate Project scheme context

Legend

- Moorhouse and Gillbeck
- Moorland high plateau
- Newsham and Cleaham
- Boldron and Lartington
- Barningham, Brignall and Rokeby
- Southern Tees Vale

Landscape types

Barnighham, Bignall and Rokeby

Key characteristics include:

- Broad rolling vale incised by the narrow denes of rivers and streams.
- Gently rounded topography of thinly bedded sandstones, limestones and mudstones overlain by glacial drift.
- Mosaic of heavy, seasonally waterlogged clay soils and more fertile brown earths. Mixed farmland of improved pasture and arable cropping.
- Semi-regular, sometimes linear, patterns of old enclosures bounded by thorn hedges, with occasional dry-stone walls.
- Abundant hedgerow ash, oak and sycamore.
- Ancient ash and oak woodlands in narrow denes. Scattered coniferous or mixed plantations.
- Areas of old parklands and heavily wooded estate farmland.
- Nucleated settlement pattern of small green villages centered on the historic market town of Barnard Castle.
- Buildings of local stone with roofs of stone, slate, or clay pan tile. Farm buildings of the Raby Estate painted white. Narrow winding lanes and some busy modern highways.

Moorland high plateau

Key characteristics include:

- Fells, summits and moorland plateau
- Incised by deep valleys and ghylls
- Extensive areas of blanket bog
- Acid grassland and dwarf heath shrub provide contrast to bog
- Valley slopes have varied land cover

Moorhouse and Gillbeck

Key characteristics include:

- A visually open pastoral landscape, broad in scale though locally defined by minor ridgelines.
- Areas of high, almost flat ground either side of the River Greta.
- Gently rounded topography of thinly bedded sandstones, limestones and mudstones overlain by glacial boulder clay.
- Small becks, occasionally in narrow incised valleys.
- Regular grids of parliamentary enclosures bounded by dry stone walls or hawthorn hedges, often gappy and overgrown. Occasional older field systems.
- Few trees – scattered hedgerow oak and ash.
- Variable woodland cover – generally sparsely wooded but with scattered conifer plantations in places.
- Isolated farms connected by straight enclosure roads.

Newsham and Cleatlam

Key characteristics include:

- Gently rolling or undulating farmland in the floor of the vale east of Barnard Castle.
- A patchwork of arable and pastoral farmland with sub-regular patterns of clipped hedgerows and occasional dry-stone walls with frequent oak, ash and sycamore and scattered plantations.
- Small hamlets and farms are connected by narrow winding lanes.
- The farms and farm buildings of the Raby Estate are painted white

Southern Tees Vale

Key characteristics include:

- Broad lowland vale.
- Varied Carboniferous and Permian rocks covered by a thick mantle of drift.
- Gently rolling or undulating topography of glacial moraines, boulder clays and sands and gravels. Occasional flats.
- Seasonally waterlogged loamy clay soils and more free-draining brown earths.
- Mixed, but predominantly arable farmland – a mosaic of improved pasture and arable cropping.
- Semi-regular patterns of old enclosures bounded by thorn hedges.

Boldron and Lartington

Key characteristics include:

- Broad ridges and plateaux. Gently rounded topography of thinly bedded sandstones, limestones and mudstones overlain by glacial boulder clay.
- Small becks, occasionally in narrow incised valleys. Heavy, seasonally waterlogged clay soils. Pastoral land use of improved, semi-improved or wet rushy pasture.
- Regular field grids bounded by dry stone walls or hawthorn hedges, often gappy and overgrown.
- Occasional older field systems. Few trees – scattered hedgerow oak and ash. Isolated farms connected by straight enclosure roads.
- A visually open landscape, broad in scale though locally defined by minor ridgelines and with occasional panoramic views across the Tees vale.
- A remote and tranquil rural landscape. Variable woodland cover – generally sparsely wooded but with scattered conifer plantations in places.

7.7 Cross Lanes to Rokeby

Other key design influences

- **Vegetation:** the road-side environment is characterised by arable farmland, grasslands and parklands with scattered trees.
- **Heritage and conservation assets:** Key heritage and conservation assets are indicated in the diagram to the bottom-right. A stretch of the River Greta located to the south of the A66 has both SSSI and SAC status. Rokeby Park is one of Historic England's Registered Parks and Gardens (RPG) of Special Historic Interest, covering approximately 48ha to the north of the village of Greta Bridge, the site of a Roman fort. Within this area, located close to the River Tees, the area's principal building, Rokeby Hall. The Church of St Mary at Rokeby (consecrated 1778) is connected to Rokeby Park by what may have originally been a dedicated tree-lined walkway. Rokeby Rectory (known as The Old Rectory) was constructed opposite the Church of St Mary (south of the A66) in the late eighteenth century and forms part of a group of buildings that includes a former schoolhouse and the schoolmaster's house located on the north side of the A66. Designs are being prepared with due regard to the setting of each of these heritage and conservation assets.

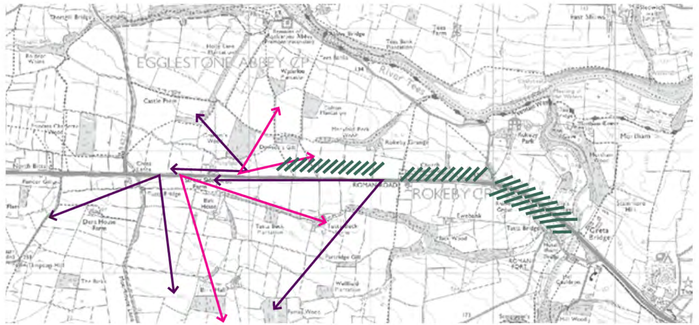
Vegetation types

- A1.1.1 – Broadleaved woodland – semi-natural
- B4 – Improved grassland
- J1.1 – Cultivated/disturbed land – arable
- G2.2 – Running water – mesotrophic
- B2.2 – Neutral grassland – semi-improved
- A1.2.2 – Coniferous woodland – plantation
- A3.1 – Broadleaved parkland/ scattered trees
- J2 – Hedge
- A3.1 – Broadleaved parkland/ scattered trees

Key heritage and conservation assets

- Key heritage asset
- Conservation area
- Special Area of Conservation (SAC)
- Site of Special Scientific Interest (SSSI)

Key heritage and conservation assets

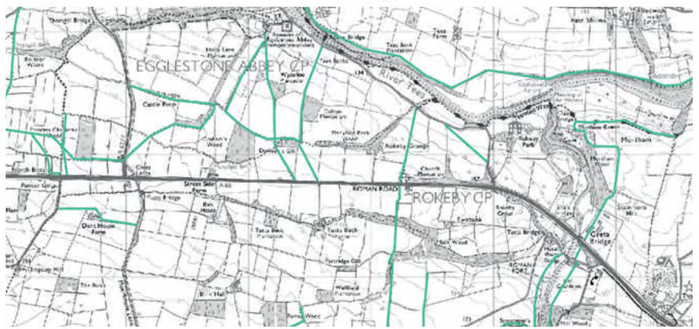


Legend

- View travelling East
- View travelling West
- View constrained

Views / User experience

- **User experience:** Travelling eastwards along the this part of the route, the natural landform blocks views north but allows for views towards the southern side of the road. Open views of the pastoral landscape can be ensured around the junction, which will be respected and enhanced in the design proposals.



Legend

- Public rights of way

Public rights of way

- **Public Rights of Way (PRoW):** There are six footways within this location which currently terminate at the existing A66. Two are close to Rutherford Lane, two lead down from Tutta Beck, and two are near to Rokeby Chapel and the Old Rectory. The proposed grade-separated junctions will allow walkers and cyclists to cross the new dual carriageway safety. New footways will link the ends of the existing footways together, with walkers being able to continue their journey north or south of the A66, including potential circular routes, without having to cross the A66.

7.7 Cross Lanes to Rokeby

Summary of the proposals

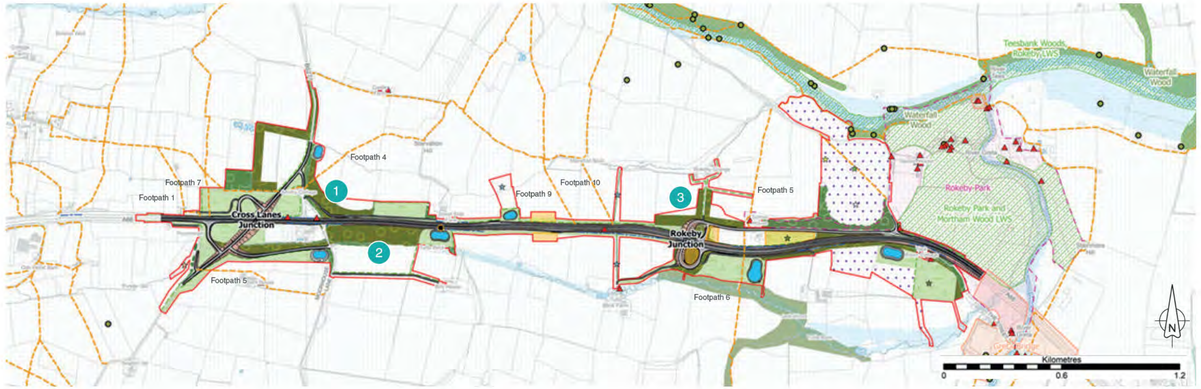
This scheme entails dualling of the carriageway and making major improvements to both the Cross Lanes and Rokeby junctions. Key features of the proposals, indicated on the plan overleaf, are summarised below:

- This route will mostly follow the existing alignment, with a new adjacent westbound carriageway constructed to the south between the B6277 junction at Cross Lanes and the existing Tutta Beck Cottage access. Both carriageways will then be routed to the south of The Old Rectory and St. Mary's Church, re-joining the existing A66 at Rokeby.
- At Cross Lanes, the existing junctions will be removed which provide access to the B6277 Moorhouse Lane and Cross Lanes Organic Farm and Café, which will remove the need for right-turn manoeuvres.
- A compact grade-separated junction on the A66, west of the existing Cross Lanes junction, is proposed. Moorhouse Lane (B6277) and Rutherford Lane will be linked via a structure over the A66. This will help to maintain and improve access to the B6277 for Barnard Castle, Cross Lanes Organic Farm Shop and Café, the Grade II listed Cross Lanes Farmhouse, and other local farms and residential properties.
- At Rokeby, the existing junction will be removed and replaced with a compact grade-separated junction west of St Mary's Church and the Old Rectory. This junction would be an underpass arrangement and would avoid direct impact on the RPG and the Old Rectory.
- The Rokeby junction will provide access to Barnard Castle Road for all westbound traffic and diverging eastbound traffic via the old A66, which will form part of the local road network. Eastbound merging traffic will join the A66 via a slip road at the existing Rokeby Junction with the C165 Barnard Castle Road. This junction would maintain HGV access to Barnard Castle.
- A new culvert will be constructed to accommodate Tutta Beck

Potential design elements and considerations

Key potential design considerations are illustrated in the opposite plan. These include:

- Minimising change to existing habitats on the southern side embankments for invertebrates where possible.
- Grading embankment slopes on the north side of junction to integrate with natural land forms.
- Promoting grasslands for invertebrates and incorporating other biodiversity enhancements.
- Considering the incorporation of locally distinctive dry-stone walling, where appropriate.
- Incorporating ponds as part of a sustainable drainage solution for ecology and increased biodiversity.
- Promoting the reduction in linearity of planting form.
- Creating glade environments
- Designing the bridge to reinforce place and route identity, including elements that reference the local distinctiveness.
- Careful design of the area around Tutta Beck and arrangement of side roads and junctions in relation to the impact of earthworks and watercourse crossing on field pattern and landscape character.
- Addressing potential impacts of junction design on the setting of St Mary's Church and Rectory to the south of the A66, incorporating an underpass rather than an overbridge.
- Addressing the impacts of Rokeby Junction on the setting of Rokeby Park RPG through sensitive landscape design.
- At the proposed Cross Lanes junction, the overbridge will allow cyclists to travel from Rutherford Lane to Moorhouse Lane (B6277) safely. Existing Footpaths 1 and 7 currently terminate at the existing A66. These routes will be connected to the proposed overbridge to allow for grade-separated crossings. Footpaths 4 and 5 will also be connected up to Footpaths 1 and 7
- Footpath 9 and 10 currently terminate at the existing A66. The proposals awllow for grade separated crossings and traffic-free connections into other existing footpaths.
- Currently, Footpath 5 and Footpath 6 are severed by the existing A66. Pedestrians are required to cross at grade. Reconnection of existing Footpath 5 through Rokeby Chapel to Footpath 6 is proposed via the new grade-separated junction. The length of the diversion is approximately 750m.
- The provision of a grade separated junctions means that Footpaths 9 and 10 would be connected to Footpath 5 and 6 for onward journeys and circular walks.



1 Cross Lanes Junction

Context-led engineering design, with woodland planting to integrate structure, tying into adjacent field boundary network and wider 'estate' landscape pattern.

2 Wetland habitat creation

Wetlands of high ecological value created as part of sustainable drainage strategy.

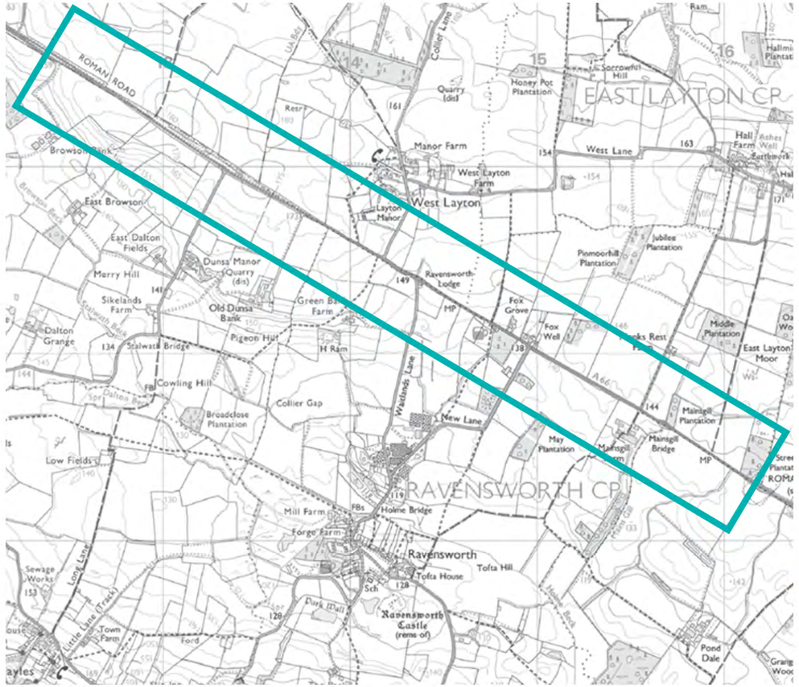
3 Integration of mature trees

Road alignment to seek to retain mature tree avenue and integrate this within design proposals.

7.8

Stephen Bank to Carkin Moor

7.8 Stephen Bank to Carkin Moor



Location and overview

This section of the A66 is located in the vicinity of the villages of East Layton and West Layton, with 17,100 vehicles using it every day. Mainsgill Farm Shop is also located alongside it adjacent to Moor Lane which receives heavy footfall from tourists and passing traffic. The four miles of single carriageway in this section are in significant need of upgrading. A new dual carriageway is proposed between Stephen Bank and Carkin Moor Farm.

Location Plan (not to scale)

7.8 Stephen Bank to Carkin Moor

Existing context

Landscape character

This section of the route forms a transition between the area characterised as the Pennine – Dales Fringe and the beginning of the Tees Uplands to the north-east. Within these broad character area designations, this local area is referred to as the Moors Fringe, with the area extending north of Smallways regarded as the Hutton Magna landscape characetr area. Key characteristics of these areas that influence landscape proposals include:

- A finer agricultural grain to the south of the A66 and moving east bound by post and wire fences, gappy hedges and stone walls. As fields become smaller there is a sense of enclosure.
- An increased number of larger tree plantations to the south and west.
- More frequent small settlements towards the west.
- Irregular shaped and sizes fields adjacent, aligning with the topography.
- Stone walls with formal and informal coping.
- Roadside avenue tree planting.
- Fence and hedge field boundaries further to the east.
- Predominantly arable land use.
- Fixhall static caravan park.
- Mainsgill Farm serving as a local retail destination.

Legend

- Hutton Magna
- Moors Fringe

Hutton Magna

Key characteristics include:

- Gently rolling or undulating farmland;
- Open and predominantly arable farmland;
- A landscape with old pre-dominantly enclosure field pattern;
- Field boundaries of clipped Hawthorn hedges with some scattered trees;
- Sparsely wooded;
- Occasional Broadleaf woodland;
- Small hamlets and scattered farms;
- Narrow and winding lanes provide local connections.

Moors Fringe

Key characteristics include:

- Gently sloping landscape which transitions between higher moors and fells to the west and the lower magnesian limestone ridge to the east;
- Predominantly rural and tranquillity landscape;
- A patchwork of arable and pastoral fields which are delineated by stone walls and hedgerow field boundaries;
- Dispersed settlement pattern of small villages and large farmsteads linked by a network of minor roads;
- A mosaic of habitats including moorland and acid grassland support a large number of wading bird species;
- Settlements generally display buildings which are predominantly constructed from local stone, resulting in strong visual unity;
- Historic parklands and wooded estates enclosing a number of country houses are scattered throughout the landscape;
- Reservoirs are key landscape features in places;
- Few trees – with scattered hedgerows incorporating oak and ash.

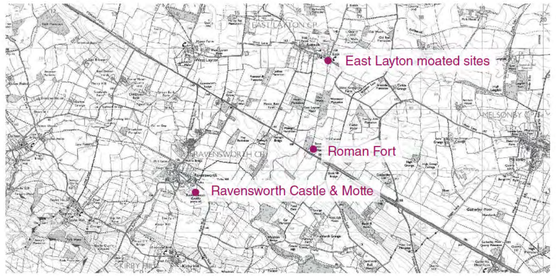
7.8 Stephen Bank to Carkin Moor

Other key design influences

- **Vegetation:** the road-side environment is characterised by predominantly arable farmland and grassland with a scattering of hedges and trees.
- **Heritage and conservation assets:** Key heritage and conservation assets are indicated in the diagram to the bottom-right. The Roman fort at Carkin Moor is set upon the summit of a small flat-topped hill. Rectangular in shape, the fort measures 150m north-east to south-west by 132m north-west to south-east. Clearly visible as earthworks, the north-eastern corner is the most well preserved and survives as a raised platform that extends up to 2m high in places. Other defensive features, such as a ditch, have been identified on the northern edge of the fort and are thought to survive as below-ground remains to its south, where the degree of upstanding earthwork remains is limited. Almost all of the post-medieval buildings of historic interest identified within the study area can be found within or on the periphery of the settlements of Ravensworth and East Layton, which are scheduled monuments. Besides the route of the road itself, the only surviving remains of the original post-medieval road network found within the study area are two milestones: one located beside the A66 close to Carkin Moor Roman Fort while the second can be found to the north-west of Fox Hall cottage. Designs are being prepared with due regard to the setting of each of these heritage and conservation assets.

Vegetation types

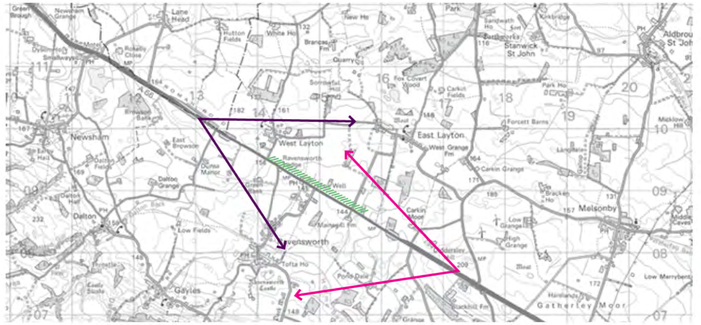
- A1.1.2 – Broadleaved woodland – plantation
- B4 – Improved grassland
- J1.1 – Cultivated/disturbed land – arable
- G2.2 – Running water – mesotrophic
- J2 – Hedge
- A3.1 – Broadleaved parkland/scattered trees



Key heritage and conservation assets

- Key heritage asset

Key heritage and conservation assets

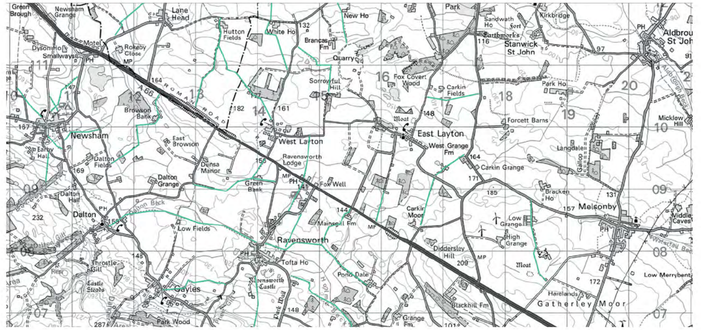


Legend

- View travelling East
- View travelling West
- View constrained

Views / User experience

- **User experience:** Travelling eastwards along the valley into this run of highway is open, with expansive uninterrupted views of the surroundings.



Legend

- Public rights of way

Public rights of way

- **Public Rights of Way (PRoW):** There are five Walking, Cycling and Horse-riding (WCH) locations where WCH routes either terminate or cross the A66, which incorporate four bridleways and four footpaths. Currently pedestrians must walk along the verge in order to continue onwards to connect with the next footpath.

7.8 Stephen Bank to Carkin Moor

Summary of the proposals

A new dual carriageway is proposed in this section, which involves:

- The dual carriageway to be located to the north of the existing A66 a
- A new two-level junction and bridge will be built on Moor Lane, providing access to the old A66 towards the villages of East and West Layton, Ravensworth and the Mainsgill Farm shop.
- Widening the road through the Roman fort and settlement at Carkin Moor in close collaboration with Historic England.

Potential design elements and considerations

Key potential design considerations are illustrated in the opposite plan. These include:

- Minimising change to existing habitats on the southern side embankments for invertebrates where possible.
- Promoting grasslands for invertebrates and biodiversity enhancements.
- Incorporating locally distinctive dry-stone walling where appropriate.
- Incorporating sustainable drainage ponds as design features for ecology and increased biodiversity.
- Promoting the reduction in linearity of planting form.
- Reinstating hedges where necessary.
- Creating glade environments.
- Creating woodland blocks consistent with the landscape character.
- Maintaining low planting where appropriate to enhance sightlines to Mainsgill Farm Shop.
- Designing the bridge to reinforce place and route identity, including elements that reference the local distinctiveness.
- Addressing impacts on West Layton and surrounding area to north with appropriate mitigation measures, including replacement woodland.
- Giving careful consideration of design of earthworks in relation to adjacencies, incorporating noise barriers (where necessary), side roads and sustainable drainage.
- Addressing impacts on Carkin Moor, including careful consideration of design of earthworks, noise barriers, side roads and sustainable drainage in this vicinity and integration with historic environment.
- At the western end of this scheme lies Bridleway 0650000012 which terminates at the existing A66. Riders must continue along the A66 for 450m and then turn down Dick Scott Lane to reach the next bridleway. The proposed design will provide an underpass for riders to access Dick Scott Lane without having to ride along the A66.
- At West Layton, footpath 20.72/1/1 terminates at the existing A66. This footway will be diverted to the underpass east of this footpath to enable a grade-separated crossing of the newly dualled A66. The footpath will then be connected to footpath 20.55/1/1 for onward journeys via a parallel walking route.
- Footpath 20.23/8/1 will be severed by the emerging preliminary design. This footpath will also be diverted to the underpass. This means that all three footpaths will be connected together in this location.
- A revised alignment is proposed for bridleway Route 20.55/6/1. The new bridleway diversion will be off-carriageway, however part of the route will run parallel to Moor Lane. The route will cross the new A66 through an underpass. Appropriate crossing facilities will be provided where riders need to cross the highway.
- The emerging preliminary design proposes to redirect the bridleway around the back of Mainsgill Farm to connect with the existing bridleway.
- At Carkin Moor, the existing at-grade bridleway crossing for Route 20.33/17/2 will be replaced. Following engagement with WCH Focus Groups, the preliminary design proposals provide a grade-separated crossing via an underpass.

1 Maintain open character

Landscape integration with grassland restoration and dry stone walls.

2 Conserve formal stone boundary

Careful treatment to boundary of West Layton Manor.

3 Wetland

Integration of wetland and species-rich grassland, including large balancing pond.

4 Integrated junction design

Woodland and grassland habitat mosaic to be inegrated with engineering design.

5 Islanded land

Opportunity of large-scale woodland habitat.

6 Context sensitivity

Pond layout to reflect setting of Scheduled Monument and Monuments Record (SMR), with Roman fort site either side of A66, an associated burial ground and Neolithic settlement to northwest.

7.9

A1(M) junction 53 Scotch Corner

7.9 A1(M) junction 53 Scotch Corner

Location and overview

Unlike the more extensive schemes presented earlier in this report, the design proposals for the A1(M) junction 53 Scotch Corner are of a more limited scope. The only component of the proposals at this location is the widening of the Middleton Tyas Lane approach to the A1(M) junction 53 at Scotch Corner roundabout, from one lane to two lanes.

Potential design elements and considerations

A section of footway, some signs and lighting columns would require relocation to the back of the widened carriageway and road markings would be required to tie in with those existing, accompanied by limited landscape-related proposals.

Location Plan (not to scale)

8

Next steps

8 Next steps

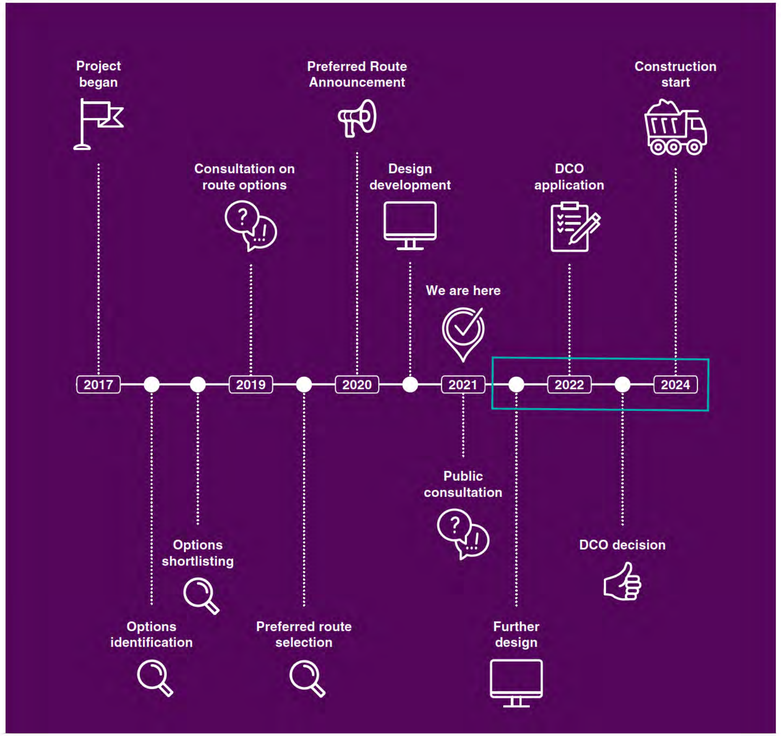
What happens next?

Your feedback will inform our continuing development of the project. Once we have taken your feedback into consideration, we plan to submit our application for a Development Consent Order (DCO) in Spring 2022. We will also prepare a report on the consultation, recording the feedback and our response, which will be published with our application.

As part of our DCO application we will further develop the Project preliminary design and prepare a document that establishes scheme-specific Project Design Principles that will establish the design parameters that will have to be applied in subsequent design and construction stages.

If our application for a DCO is accepted by the Planning Inspectorate, there will be an examination of the application. This examination will take a maximum of six months. An Examining Authority (made up of independent experts from the Planning Inspectorate) is appointed to examine the application on behalf of the Secretary of State. Following the close of the examination, the Examining Authority has three months to make a recommendation to the Secretary of State, who then has a further three months to make a final decision.

Construction work on the project is planned to start in 2024, as indicated on the illustrated timeline.



A

Appendix

A Appendix

Map legend

This provides the legend that accompanies the plans depicting the preliminary design proposals for each of the schemes presented in Chapter 7 of this report.

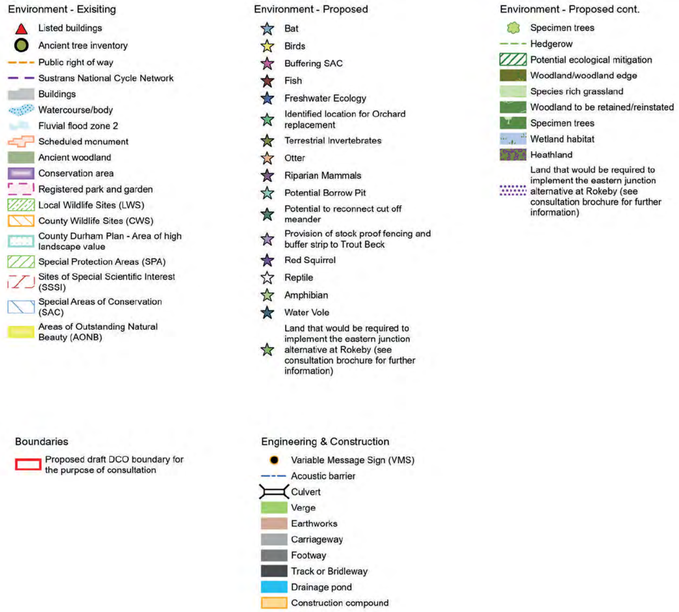


Image References

Section 1 Introduction diagram (Fig 1.1) derived from Highways England A66 Northern Trans-Pennine Project Preferred Route Announcement report (2020).

Section 2 The Big Picture maps (Fig 2.1- 2.3), Section 5 Responding to Context (Fig 5.1-5.15) and Section 6 Shaping the User Experience (Fig 6.1-6.6) derived from Jacobs / Atkins Towards a Corridor Design Framework The a66 Corridor Case Study

Section 7 Route Schemes overview map and all section location plans derived from Highways England A66 Northern Trans-Pennine Project Preferred Route Announcement report (2020). Page 47 Intermediate farmland, rolling fringe, sandstone ridge, limestone foothills, broad valleys sourced from Cumbria Landscape Character Guidance Photographs are courtesy of Cumbria County Council, Brian Irving HELM Images and Lucy Drummond. Urban area Penrith sourced from [redacted]k Author Nick Mutton. Page 57 Broad valleys, sandstone ridge, Intermediate farmland sourced from Cumbria Landscape Character Guidance Photographs are courtesy of Cumbria County Council, Brian Irving HELM Images and Lucy Drummond. Page 65 Intermediate farmland, foothills, broad valleys sourced from Cumbria Landscape Character Guidance Photographs are courtesy of Cumbria County Council, Brian Irving HELM Images and Lucy Drummond. Page 75 Broad valleys, Foothills sourced from Cumbria Landscape Character Guidance Photographs are courtesy of Cumbria County Council, Brian Irving HELM Images and Lucy Drummond. Scarps, Rolling farmland & heath, Moorland high plateau sourced Map Data: Google Copyright 2021. Page 83 Deepdale moorland fringe, Sleightholme & Greta Fringes sourced from Durham Landscape, Durham County Council Copyright 2021. Newsham and Cleaham, Lower Greta, Mid Greta Valley, Bowes sourced Map Data: Google Copyright 2021. Page 99 Hutton Magna, Moors Fringe sourced Map Data: Google Copyright 2021.

On 20 August 2021, it was announced that Highways England would be changing its name to National Highways. The name change reflects the role of the strategic road network – to connect the nation's regions – and the part it plays in setting Highways standards across the UK.

We have continued this consultation under the Highways England branding to avoid confusion but will be rebranding this project as of 8 November.

The remit of the organisation has not changed and we will continue to operate and maintain England's motorways and A roads.

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