

A66 Northern Trans-Pennine project

TR010062

8.2 Change Application: Consultation Report - Appendix H: Proposed Changes Consultation Brochure

Planning Act 2008

Infrastructure Planning (Examination Procedure) Rules 2010

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Infrastructure Planning

Planning Act 2008

**The Infrastructure Planning
(Examination Procedure)
Rules 2010**

A66 Northern Trans-Pennine project
Development Consent Order 2022

**8.2 CHANGE APPLICATION:
CONSULTATION REPORT – Appendix H:
Proposed Changes Consultation Brochure**

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A66 Northern Trans-Pennine project

Proposed changes consultation

January/February 2023

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Foreword



Since the end of Statutory Consultation in November 2021, the A66 Northern Trans-Pennine project continues to develop at pace.

As part of the Government's Project Speed initiative, we are working in different ways to ensure we deliver major infrastructure projects as efficiently as possible to bring benefits to people sooner. For example, our Development Consent Order (DCO) is currently being examined while we make preparations for potential construction in 2024, and we are in the process of acquiring land by agreement.

Since the acceptance of our DCO application in July 2022, and following the review of further feedback, we are proposing a number of changes to our designs across the route. This brochure details why we are considering amending the designs in our current application.

I encourage you to read this brochure and have your say on what we are proposing. We'll also be holding several public information events across the route where you can meet members of the team and talk about our latest designs. You can then formally submit feedback to us again.

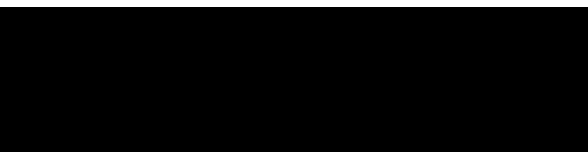
It's been a very busy year and the project has reached two major milestones. The first was the acceptance of our DCO application in July. Public hearings have taken place and the Planning Inspectorate are in the process of examining our application in more detail. A decision on whether we'll be able start construction is expected to be made by the Secretary of State for Transport in autumn 2023.

The second milestone achieved is bringing on board the four contractors who will be responsible for upgrading the A66. I'm delighted to welcome Balfour Beatty, Costain, Keltbray and Kier to the project and I look forward to working with them on the biggest generational investment on the north's road network.

Safety remains an issue on the A66 with collisions and disruption taking place on what is an all too regular basis. It is incredibly upsetting to hear someone has died or has been seriously injured. Our plans to dual the remaining single sections of carriageway, as well as improve junctions, will improve safety and ensure journeys from east to west are more reliable for everyone who uses the A66.

Social value plays a pivotal part of our project. Team members have been and will continue to volunteer their time to help local charities and organisations, to improve facilities, decorate rooms or clean up litter. Throughout this year and beyond, we will be looking at other ways we can help improve and support the local communities, no matter how big or small the project.

Finally, your feedback is vital and we encourage you to keep providing us with it, whether it's good or bad. I hope you'll agree that this project is needed for national, regional and local prosperity. We'd like to think that we've got to this point objectively and in a balanced way, and we look forward to the Secretary of State's decision later this year.



Lee Hillyard
Project Director

Introduction

Large road projects such as the A66 Northern Trans-Pennine project are classed as Nationally Significant Infrastructure Projects, which means that we need to apply for a Development Consent Order (DCO) to gain permission to build the project. Four independent Inspectors (the Examining Authority) – appointed by the Planning Inspectorate – are examining our DCO application, looking at evidence presented by the A66 project team and issues raised by others, during a six-month examination period which began at the end of November 2022, and which will end in May 2023. After the examination closes, the Examining Authority will report to the Secretary of State for Transport, who will decide whether to grant development consent for the project.

We are now consulting on some proposed design changes to the DCO application. We are proposing to introduce these changes to the DCO application because we think they will benefit the final project. They are being considered in response to ongoing conversations with stakeholders, those directly impacted by the project and our delivery partners. The changes would deliver wider benefits, including to the environment and could reduce the amount of land required to deliver the project.

The A66 has been identified by Government as a key project which will help support the growth of the north and is part of Project Speed, an initiative to accelerate important infrastructure projects.

As part of Project Speed, we are carrying out some of our detailed design work alongside our DCO application process which means we can bring forward some design development

which we might not usually be able to consider at this stage and we can also propose design changes through this change consultation. Then, if the changes are taken forward, they would be written into our DCO application and guaranteed to be delivered, if consent is granted.

We are using this parallel approach to help reduce the amount of land required, structures, construction time and therefore the impact on communities and road users.

We wrote a letter to the Examining Authority on 16 December 2022, which was published on the Planning Inspectorate's website on 21 December 2022, providing notice of our intention to propose some changes to the project.

We will engage with local people and landowners as well as our ongoing discussions with Local Authorities and environmental bodies.

Following this public consultation we will consider all responses and then submit a request to the Examining Authority to accept, as part of our DCO application, those changes we still wish to proceed with. If those changes are accepted for examination, there will be opportunities for the detail of each proposed change to be considered and for all interested parties to make representations on the change as part of the ongoing examination of the DCO application.

The illustrations used in this brochure vary between technical drawings and schematics as we have chosen the best way to illustrate the change in each case. We're available to further explain by phone, email or in person at our drop-in events.

How to find out more

If you would like to find out more about the changes we are proposing, we are holding the following drop-in events where members of the team will be on hand to talk to you about the changes and answer your questions.

If you would like to find out more about how to provide your feedback please see page 12 of this brochure.

Date and times	Drop-in event locations
30 January, 3pm-7pm	Gilling West Village Hall, High St, Gilling West, Richmond DL10 5JJ
31 January, 3pm-7pm	Kirkby Thore Memorial Hall, Kirkby Thore CA10 1UE
1 February, 3pm-7pm	Warcop Village Hall, Appleby-in-Westmorland CA16 6NX
6 February, 3pm-7pm	Penrith Methodist Church, Wordsworth St, Penrith CA11 7QY



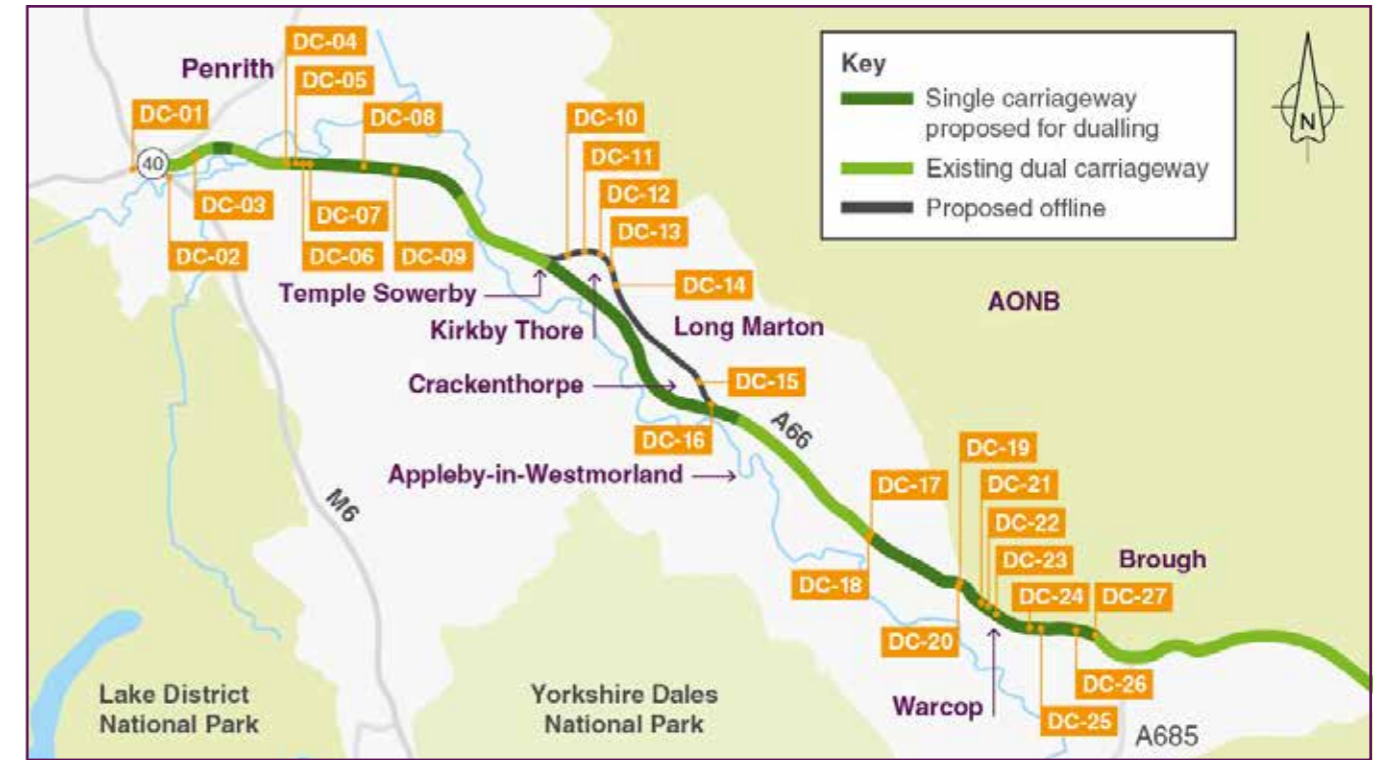
Location of proposed changes

The plans show the locations where we propose changes to our DCO application. The tables identify which page in this brochure you can find more information. Please refer to the change reference number clearly on any feedback you provide.

Key

General design changes Limits of Deviation (LoDs). See page 60

Location	Change in the design (west)	Page
DC-01	Change in speed limit west of M6 Junction 40	14
DC-02	Realignment of walking and cycling route at Skirsgill	16
DC-03	Reorientation of Kemplay Bank junction	62
DC-04	Separation of, and greater flexibility for, shared public rights of way and private access track provision on the Penrith to Temple Sowerby scheme	66
DC-05	Removal of junction for Sewage Treatment Works (and private residence) from A66, and provision of an alternative access from B6262	18
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DC-08	Inversion of the mainline alignment at the junction at Center Parcs	22
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DC-26	Revision to West View Farm accommodation bridge and removal of West View Farm underpass	46
DC-27	Construction of noise barrier south of Brough	48



Proposed changes in design – west

Location	Change in the design (east)	Page
DC-28	Realignment of local access road to be closer to new dual carriageway east of Bowes	78
DC-29	Realignment of A66 mainline and Collier Lane	50
DC-30	Realignment of maintenance/footpath adjacent to Waitlands Lane	52
DC-31	Realignment of Warrener Lane	81
DC-32	Lower the A66 mainline levels east of Carkin Moor and change an underpass to an overbridge	54



Proposed changes in design – east

Understanding our plans

This key is used for the plans in this brochure unless individual keys are provided. The plans used are indicative and vary in scale to best illustrate the change. Where we show details, such as the design of a structure or planting, on visuals these are also indicative and maybe changed in detailed design.

Key

- Order Limits
- Area excluded from Order Limits
- Area of Outstanding Natural Beauty (AONB)
- Existing watercourse
- Proposed highway boundary
- Parish boundary
- Proposed equestrian track
- Proposed bridleway and private access track
- Proposed bridleway
- Proposed footpath and private access track
- Proposed footpath
- Proposed shared cycleway and private access track
- Proposed shared cycleway
- Proposed footpath and private access track
- Proposed footpath
- Proposed cycle track and private access track
- Proposed cycle track
- Proposed private access track
- Existing public right of way
- Proposed earthworks (embankments)
- Proposed earthworks (cutting)
- Proposed ditch
- Proposed verge
- Proposed central reserve
- Proposed highway structure
- Proposed carriageway
- Proposed drainage treatment area
- Proposed landscape reprofiling
- Proposed site compound
- Proposed Variable Message sign (VMS)
- Proposed national speed limit on dual carriageway and slip roads (70mph)
- Proposed national speed limit where we have street lighting (30mph)
- Proposed DCO design
- Location of proposed changes
- Change to Order Limits as proposed in the DCO application
- Order Limits as proposed in the DCO application
- Additional land proposed to be acquired
- Land currently included in Order Limits as proposed in the DCO application but no longer required
- Land currently in Order Limits as proposed in the DCO application and still required

Please note:

- The proposals show the design changes, but not any associated environmental mitigation at this stage
- Drainage ponds may change locations through the next detailed design stage of the project

Environmental information

We have assessed each change against the conclusions of the Environmental Impact Assessment undertaken for the DCO application to determine whether there is a risk of a potential change in likely significant environmental effects. Where a change has been identified we will work to mitigate it where possible. The copy in this brochure highlights where we think there is a risk of change in the significant effects by topic.

An environmental appendix is provided alongside this brochure. The tables in this appendix set out where we think there is potential for the proposed change to give rise to a new or different likely significant effect compared to those reported in the Environmental Statement we submitted as part of our DCO application. The purpose of this is to give an understanding of the potential risks of new or different likely significant effects which could arise from these changes.

It should be noted that the risks reported within the appendix are based on the potential worst case scenario assumptions which may differ

by topic and by change, but which consider, for example, that the fullest extents of Limits of Deviation are used, or that all vegetation within new land or within a design footprint is lost. We are continuing to consider and develop mitigation measures that may be able to reduce or remove a potential likely significant effect and where possible, potential mitigation measures are noted within the tables.

Each of the changes in this consultation will have to be accepted by the Examining Authority before they can be included in our DCO application. We will provide further details of any proposed mitigation measures as they become available, to allow people to comment on those details as part of the examination of the DCO application.

Our commitment to mitigation will be secured through the DCO, with the appropriate mechanism for securing it being confirmed when the mitigation measure is introduced into the DCO examination.



Understanding the change proposals

Our project is moving into the detailed design phase and some of the language we use in this brochure is more technical than we would normally include. We've added the following glossary to help with understanding the changes. If you have any questions or there is something you would like explaining, please give us a ring on **0333 090 1192** or email us on **changeconsultationA66NTP@**

We also have the technical team on hand at our drop-in events if you would like to meet them. Please see page 5 for details.

Glossary

Alignment – the route or course of a road.

All-movement – a junction which allows access to the new A66 in both directions and also to the local road network. These junctions include an underpass or overbridge.

AONB – Area of Outstanding Natural Beauty which is a national designation of land which has special rights to protect and enhance its natural beauty.

Balancing pond – man-made ponds which are included in our design to drain and filter water which runs off the new road surface.

Carriageway – one or two lanes of the road travelling in either direction.

Crown land – land which is owned by the King, or his private estates or a government department, and land in which any of these persons has an interest. Crown land has specific planning restrictions, rights and protections.

Cutting – where the road is artificially lowered in the landscape, usually to minimise visual impacts or to even out undulations.

DCO – Development Consent Order which is the planning process for getting consent for a project such as the A66 (see diagram on page 82 for where we are in this process).

De-trunked – the section of the old A66 which would no longer be part of the mainline trunk road operated by National Highways. De-trunked sections of road become part of the local road network and will be operated by the Local Authority (instead of National Highways).

Earthworks – cuttings or embankments used to make sure the road alignment is designed for optimum safety and visibility.

Environmental mitigation – planting or habitat creation designed to offset the environmental impacts of the project.

Embankment – where the road is artificially raised in a landscape with the use of earthworks.

Land take – the amount of land we are buying from local landowners to construct the new road and associated infrastructure and mitigation, to enable us to deliver our project.

Left-in, left-out – an access point onto the new A66 road which is only available for traffic heading in one direction.

LoDs – Limits of Deviation allow for small degrees of flexibility in where the road might lie once it is constructed. They allow for horizontal deviation from the lines shown on the works plans and vertical deviation from the levels which are shown on the engineering section drawings, all of which are submitted as part of the DCO application (see page 60 for further details about LoDs).

Mainline – the main A66 road we are constructing.

Offline – a location away from the existing mainline or the new alignment.

Order limits – the outer limit of the works as included in our DCO application. This is shown by a red line boundary on our land plans and works plans submitted as part of the DCO application.

Overbridge – a bridge structure spanning the new A66 alignment.

PMA – Private Means of Access/private access track are tracks we build as part of the project to enable landowners to access areas of their land. They are intended primarily for use by the landowner only.

PRoW – Public Rights of Way such as walking, cycling or horse riding routes.

RLB – Red line boundary which shows the extent of our works area in the DCO application (this is the same as the Order Limits).

SM – Scheduled Monument, a historical feature in the landscape or hidden underground.

Severed land – areas of land which have been cut off from the rest of a farm or holding. In these cases, we would either provide an access structure to this land or acquire it as part of the project.

Span – the distance between supports for a structure such as a bridge.

Tie-in – where the new or improved road we are constructing meets the existing road.

Underpass – a tunnel under the main A66 route usually designed for the use of WCH and/or as a PMA.

Undulations – where the level of the land is not flat, but varies (up and down).

WCH – walking, cycling and horse riding.

For a detailed glossary in relation to environmental terms please see the Environmental Appendix which accompanies this document.

Your data, your rights

On 25 May 2018, the General Data Protection Regulations (GDPR) became law. The law requires Highways England to explain to you – consultees, stakeholders and customers – how your personal data will be used and stored.

Highways England adheres to the government's consultation principles, the Planning Act 2008 and the Highways Act 1980 as required, and may collect personal data to help shape development of highways schemes.

Personal data collected by the project team will be processed and retained by Highways England and its appointed contractors until the scheme is complete.

In some instances consultation responses may also be sent to the Planning Inspectorate. To view the Planning Inspectorate's information relating to GDPR at Examination events please visit: infrastructure.planninginspectorate.gov.uk/help/privacy-notice/

Under the GDPR regulations you have the following rights:

- Right of access to the data (Subject Access Request)
- Right for the rectification of errors
- Right to erasure of personal data – this is not an absolute right under the legislation
- Right to restrict processing or to object to processing
- Right to data portability

If, at any point, Highways England plans to process the personal data we hold for a purpose other than that for which it was originally collected, we will tell you what that other purpose is. We will do this prior to any further processing taking place and we will include any relevant additional information, including your right to object to that further processing.

You have the right to lodge a complaint with the supervisory authority, the Information Commissioners Office.

If you'd like more information about how we manage data, or a copy of our privacy notice, please contact: DataProtectionAdvice@highwaysengland.co.uk

Responding to this consultation

We are proposing to make thirty two changes to the Development Consent Order (DCO) application.

Each of the thirty two proposed changes is identified by a unique reference. A map showing the locations of the changes as well as a description of each is on pages 6 and 7.

Please ensure you note which change you are responding to in all feedback. This consultation is about changes which we are proposing to our DCO application for the project. Therefore, only feedback which relates to the proposed changes presented in this brochure will be considered for the purposes of our Proposed Changes Consultation Report.

This consultation will provide stakeholders, and those directly affected by the proposed changes, with an opportunity to give their feedback.

The consultation launches on 28 January. If you would like to take part in the Proposed Changes Consultation, please provide your comments by 23:59 on Monday 27 February 2023:

- Online: by completing the feedback form on the project website at [REDACTED]
- Calling: **0333 090 1192** to request a hard copy of the feedback form and send it to us using the freepost address **FREEPOST A66 NORTHERN TRANS-PENNINE PROJECT**
- Email: to request a feedback form which you can send to **changeconsultationA66NTP@nationalhighways.co.uk**

Hard copies will also be made available in local deposit points **Penrith Library, St Andrew's Churchyard, Penrith** and **The Witham, 3 Horse Market, Barnard Castle** and at our drop-in events.

Our DCO application documents are also available to view online on the Planning Inspectorate's website (<https://infrastructure.planninginspectorate.gov.uk/projects/northwest/a66-northern-trans-pennine-project/>) and hard copies are available at Penrith Library and The Witham.

If you are having difficulty accessing the documents, please call **0333 090 1192** and we will help.

Drop-in events

We're also holding the following drop-in sessions where members of the team will be on hand to talk to you about the changes:

Date and times	Drop-in event locations
30 January, 3pm-7pm	Gilling West Village Hall, High St, Gilling West, Richmond DL10 5JJ
31 January, 3pm-7pm	Kirkby Thore Memorial Hall, Kirkby Thore CA10 1UE
1 February, 3pm-7pm	Warcop Village Hall, Appleby-in-Westmorland CA16 6NX
6 February, 3pm-7pm	Penrith Methodist Church, Wordsworth St, Penrith CA11 7QY



M6 Junction 40 to Kemplay Bank

DC-01 – Change in speed limit west of M6 Junction 40

Background to change

To the west of Junction 40 on the M6, the auction site has a direct access onto the A66. In our DCO application we had designed the access to the auction site to include merge and diverge lanes designed for the existing speed of the road (70mph).

The DCO design also includes a shared cycle way in the verge of the eastbound section which crosses the access/exit to the auction's main depot.

Description of change

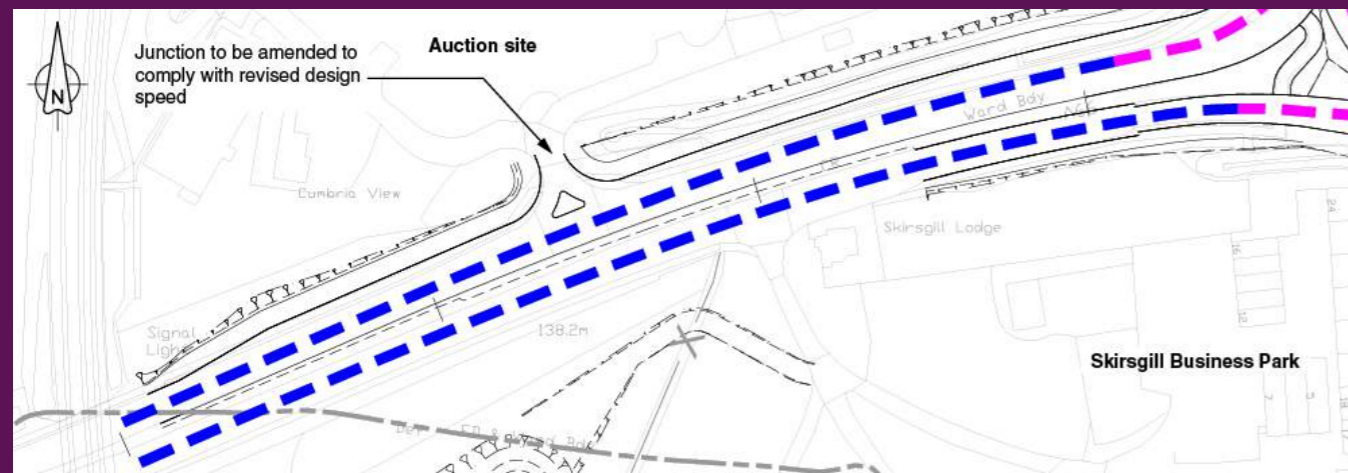
Our proposed change would reduce the speed limit from 70mph to 30mph on both the eastbound and westbound carriageways of the A66, between the railway bridge and Junction 40. As a result, there could be no need to add merge and diverge lanes to the auction site access. A more compact junction arrangement (similar to the existing access) would be safe and suitable.

Reason for change

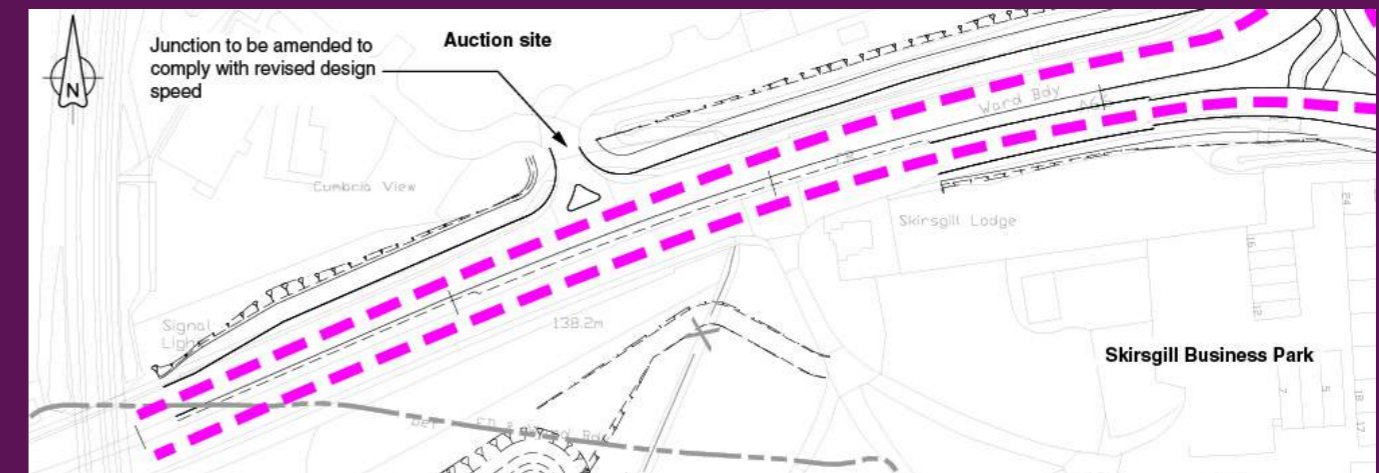
This change would make the shared cycleway safer and reduce the speed of eastbound traffic passing the entrance/exit to the auction site as it approaches the roundabout at Junction 40 of the M6. The more compact arrangement for access to the auction site would be more in keeping with the existing access and would reduce our impact on the landowner and the auction business by reducing the land required.

This design change would help to reduce the area of carriageway/hard standing required. This could shorten the construction programme, simplify the drainage and signage arrangements and reduce the amount of materials needed for construction.

It is considered that this proposed change does not have the potential to change the likely significant effects reported for any topic in the Environmental Statement.



DCO design



Proposed change

M6 Junction 40 to Kemplay Bank

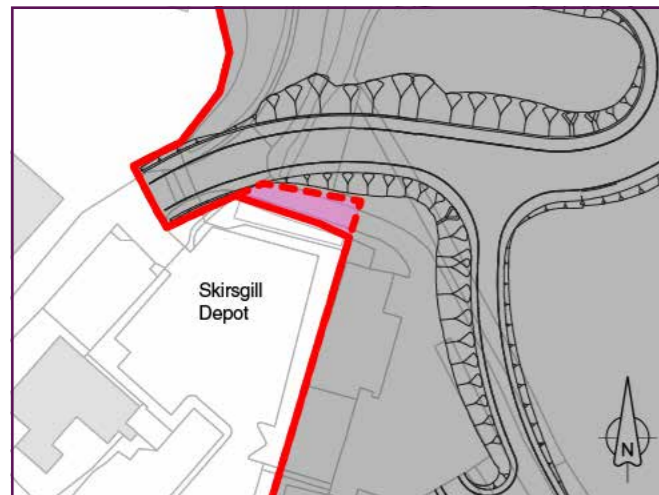
DC-02 – Realignment of walking and cycling route at Skirsgill

Background to the change

Our DCO application proposes a footpath and cycleway running adjacent to the southbound slip road of the M6 at Junction 40 which runs along the south side of Skirsgill depot and connects with Skirsgill Lane.

Description of the change

This change proposes that we divert the footpath from the slip road and re-direct it alongside the boundary of the Skirsgill depot to the north. Pedestrians and cyclists will take a route which runs adjacent to the A66 before heading south east to join Skirsgill Lane.



The land shown in solid pink is new land required for the new alignment of the walking and cycling route

Reason for change

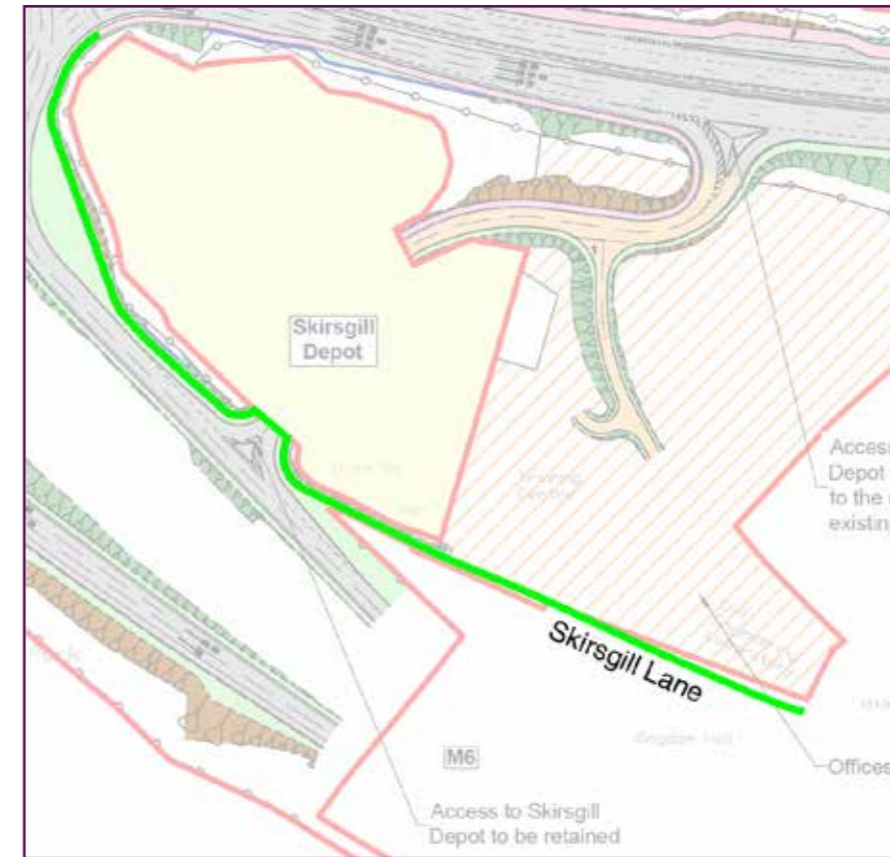
The proposed route is a more attractive and safer alternative for walkers and cyclists who would be redirected away from the M6 Junction 40 southbound slip road.

In addition, earthworks on slip roads are heavily constrained in this location meaning that structural solutions may be required to retain the route.

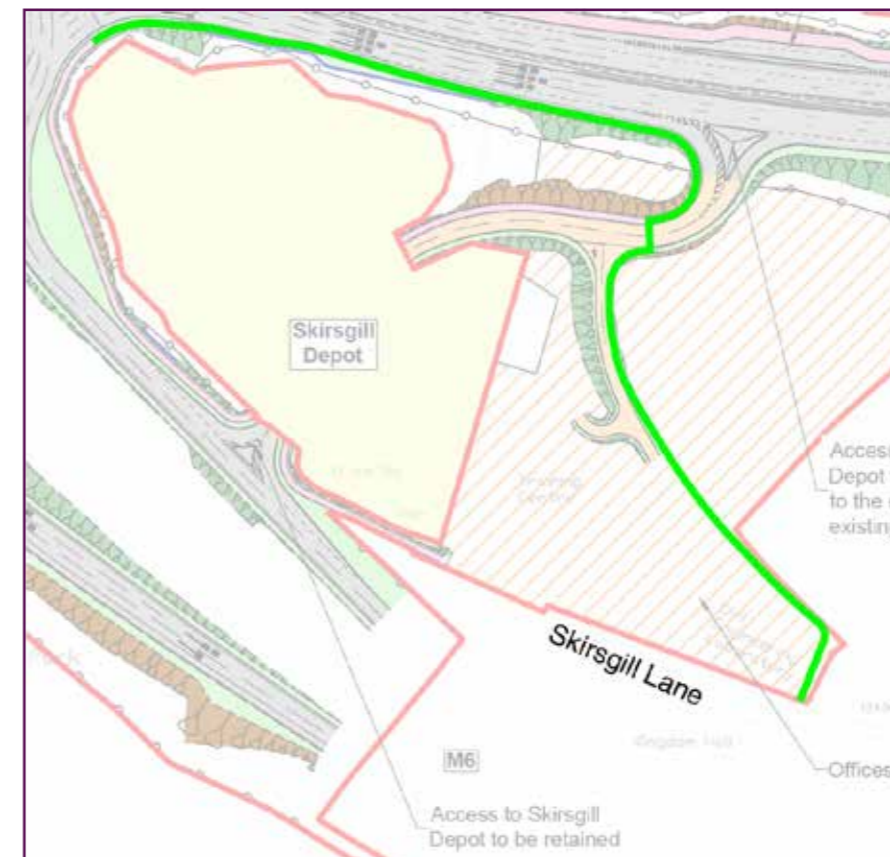
The re-routed footpath will reduce the earthworks required and shorten the duration of the construction programme. The exact location of the walking and cycling route, as well as the access arrangements, will be developed further during detailed design, in conjunction with Cumbria County Council.

This would require a small change to the Order Limits for our DCO application.

It is considered that this proposed change does not have the potential to change the likely significant effects reported for any topic in the Environmental Statement.



DCO design



Proposed change

Penrith to Temple Sowerby

DC-05 – Removal of junction for Sewage Treatment Works (and private residence) from A66, and provision of an alternative access from B6262

Background to the change

In our DCO plans we have included an eastbound left-in, left-out access from the A66 to the road serving the sewage treatment works and a residential property at Brougham. At this location there is both a high-pressure fuel pipeline and a high-pressure gas main underground.

Prior to our DCO application, discussions with Shell about this high-pressure fuel pipeline led us to conclude it was necessary to amend the design for the access to the sewage treatment works and residential property.

Based on the information available about this nationally important pipeline at the DCO application design stage, we considered it was feasible to move the access further east and locate it between the Shell pipeline and the gas main.

This location for the access road would allow the fuel pipeline to remain in place but still required a lengthy diversion of the gas pipeline to provide sufficient space for the new left-in, left-out access to the sewage treatment works and residential property.

Description of change

Our proposed change is to provide a private access track, shared with a cycle track, from the north side of the A66, crossing the A66 on a bridge and continuing to the B6262. This replaces what was put forward in the DCO application for access to the eastbound carriageway. On the southern side we would retain access to the Countess Pillar.

Reason for change

As a result of early detailed design and further information from National Grid, our understanding of the complex nature of the

diversion of the gas pipeline led to the need to reconsider how access to the sewage treatment works and private residence could be maintained.

Our assessment is that there is inadequate space between the Shell fuel pipeline and the National Grid gas pipeline to construct and maintain a safe and suitable access. We concluded that an alternative route was needed.

By removing the junction, we avoid a clash with the gas pipeline and reduce potential disruption and the risk associated with the road being built over nationally significant utilities which would make ongoing maintenance both unsafe and costly.

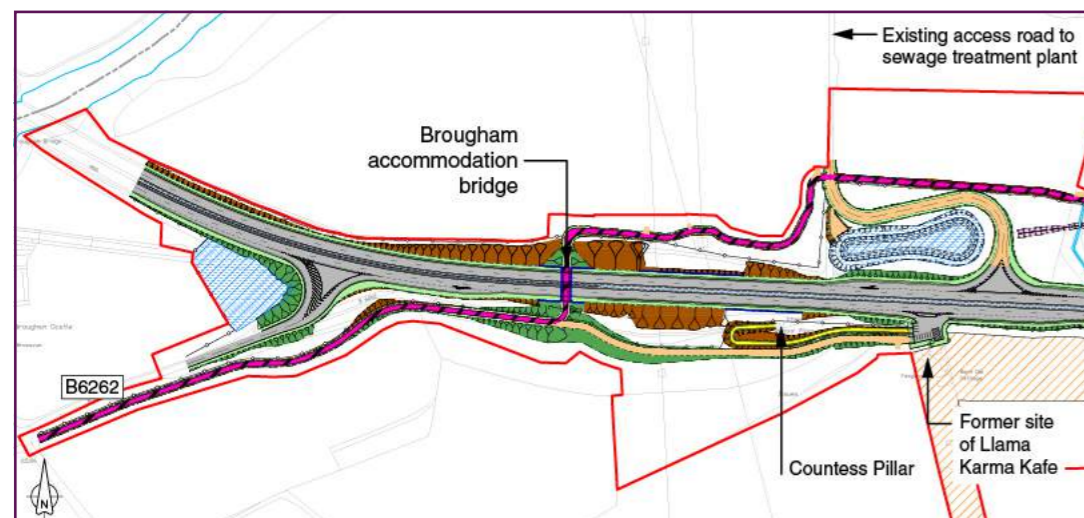
With this change, access to the A66 is provided to the westbound rather than the eastbound carriageway. In the DCO design drivers would turn around at Center Parcs to travel west and with this change, drivers would need to use the junction at Kemplay Bank to travel east. The distance to Kemplay Bank is

similar to the distance to the junction at Center Parcs, meaning there is minimal change to the distance travelled.

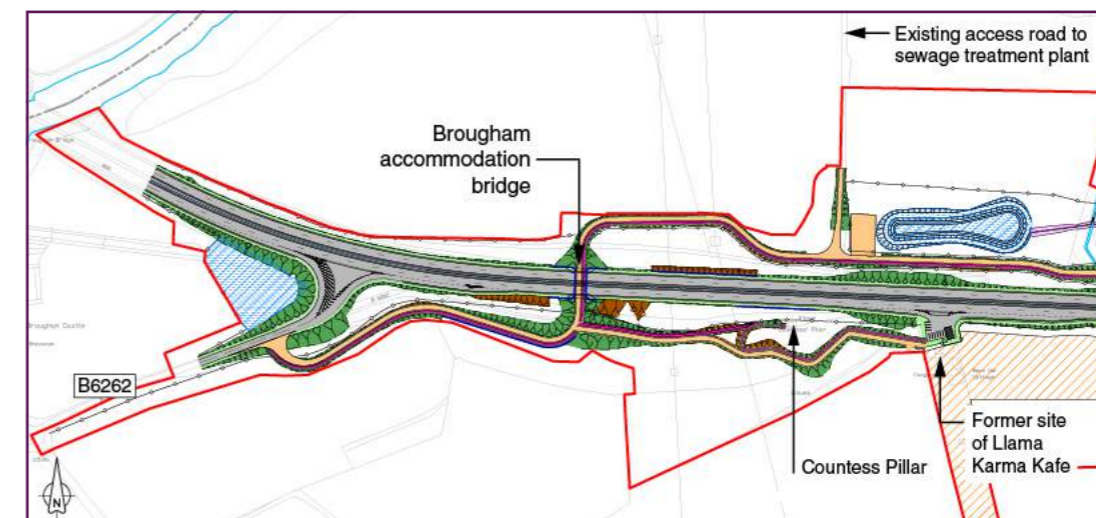
By removing the junction we are also able to move the proposed walking and cycling route and private access to the south of the balancing ponds (on the north side of the A66) which responds to feedback received from landowners to reduce the land required for the project. We will also retain access to the Countess Pillar.

Please also see change DC-06 – Increase in vertical Limits of Deviation local to Shell Pipeline on page 68.

It is considered that this proposed change has the potential to introduce new or different likely significant effects reported for the topics of Biodiversity, Noise and Vibration and Road Drainage and Water Environment in the Environmental Statement. See the Environmental Appendix to this brochure for further information.



DCO design



Proposed change

Penrith to Temple Sowerby

DC-07 – Retention of Lightwater Cottages

Background to the change

Our DCO application, which has been discussed with Eden District Council and the landowner, requires the demolition of Lightwater Cottages in order to retain a private access to Haversheaf Hall, to the south-west of Whinfellpark Farm buildings at Brougham.

In order to provide good visibility onto the new dualled section of the A66 with diverge and merge lanes (left-in, left-out) substantial improvements are needed for safety reasons which would require the demolition of Lightwater Cottages in this location. Lightwater Cottages currently provide rented accommodation for farm staff. Concerns have been raised about the demolition of Lightwater Cottages and safety concerns associated with a high number of accesses on to the A66.

Description of the change

The proposed change retains Lightwater Cottages and removes the direct access onto the A66 for Haversheaf Hall.

Access to both Haversheaf Hall and Lightwater Cottages, would be via a private access road that runs parallel to the new A66, through Whinfellpark Farm which is itself, served by a dedicated left-in, left-out junction on the A66.

The private access road would be approximately 900m in length, running between Lightwater Cottages (enabling connection to Haversheaf Hall) and Whinfellpark Farm's access onto the A66.

Reason for the change

The proposed change is in response to concerns raised by Eden District Council about the demolition of Lightwater Cottages and the shortage of rented rural accommodation. The tenants of Lightwater Cottages had also raised similar concerns about the shortage of accommodation in their response to our autumn 2021 consultation.

By preserving the cottages people would be able to stay in their homes. This change also supports the principle of the development of the A66 to minimise access points along the route in order to reduce the volume of vehicles entering and leaving fast-flowing traffic on the newly-dualled sections of the route and so makes it safer.

This section of the route, from Penrith to Temple Sowerby bypass, has a high number of accesses, in that there are four left-in, left-out access points onto the westbound side of the A66 within just two kilometres.

Removal of this particular access would reduce the number of entry and exit points along this length of the scheme providing greater separation between junctions.

It is considered that this proposed change has the potential to introduce new or different likely significant effects reported for the topics of Biodiversity, Noise and Vibration, and Population and Human Health in the Environmental Statement. See the Environmental Appendix to this brochure for further information.



DCO design



Proposed change

Penrith to Temple Sowerby

DC-08 – Inversion of the mainline alignment at the junction at Center Parcs

Background to the change

In our DCO application we have introduced an all-movement junction local to the entrance of Center Parcs. This junction has been added to allow movements east and west on the A66 from the local road network as well as to and from Center Parcs.

The DCO design of the mainline of the new A66, travelling east/west, is elevated on an embankment approximately eight metres above the existing ground levels. The junction passes underneath the elevated A66. To construct this embankment, we will require a temporary traffic diversion during construction. This diversion will run through farmland to the south of the current A66, will be approximately 1.2km in length and would be in place for 18 months.

Description of the change

We are now proposing to invert this junction so that the mainline of the A66 would more closely follow the existing road at ground level rather than being elevated on an eight-metre-high embankment. The local road access, which forms part of the junction, would cross over the A66 mainline on a bridge rather than passing underneath it. The proposed bridge would be at a similar height to the embankments included in the DCO design.

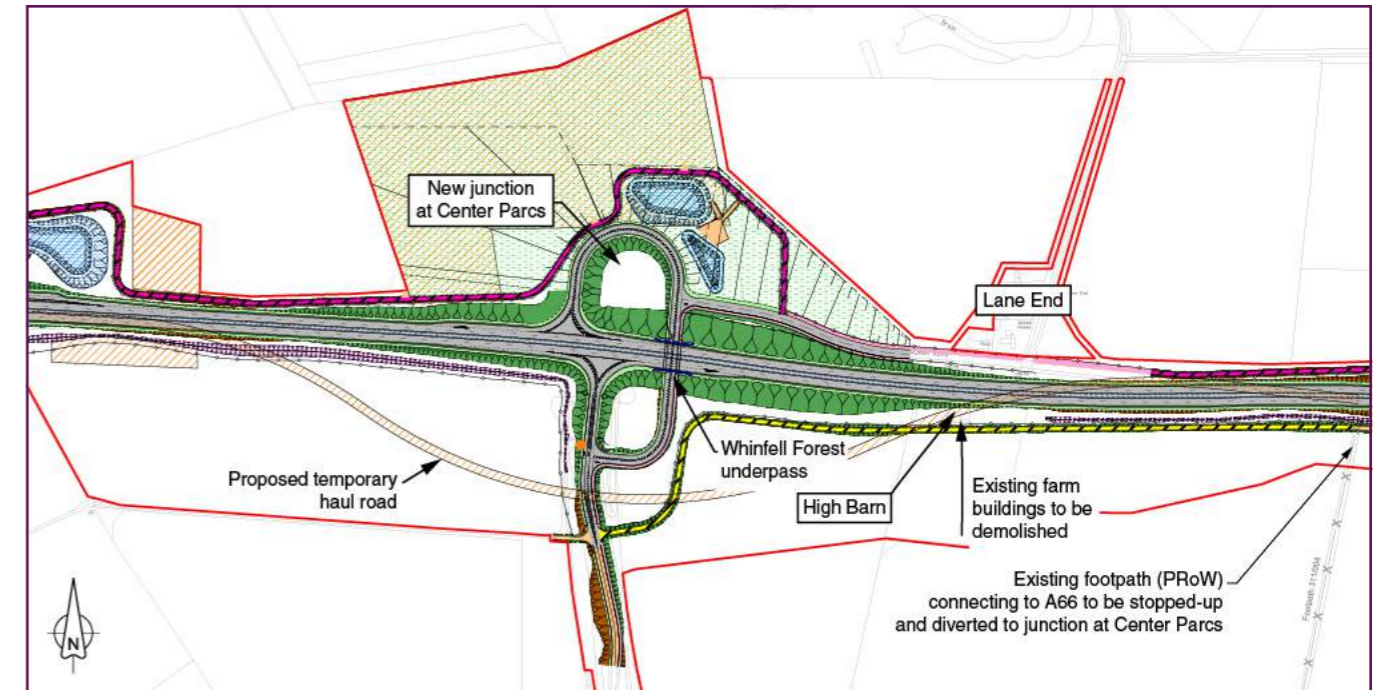
Reason for the change

The proposed change removes the need for the temporary diversion, which would have been around 1.2km, minimising disruption for road users. The new bridge would be built in two sections with traffic initially being retained on the existing A66 while the westbound carriageway and southern half of the structure is constructed. Once complete, traffic will be switched to the newly-built carriageway whilst the northern half of the structure and eastbound carriageways works are completed. This will substantially reduce the construction period and amount of temporary work in this location as well as reducing construction traffic.

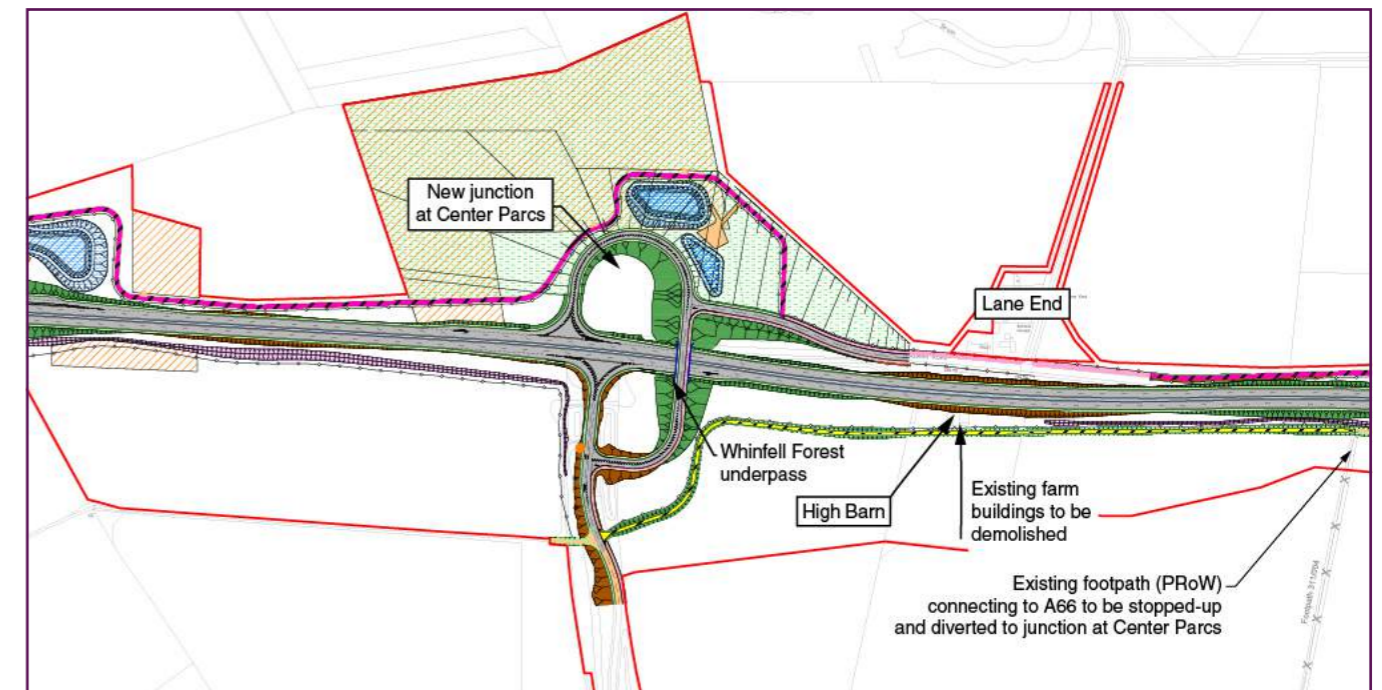
This would also remove the need for large earthworks which, due to soil disturbance, would impact on the productivity of the surrounding land for some time to come and would require a high number of vehicles to transport material. It would also reduce the overall land required for the project.

Another key consideration of this proposal is the potential change in the visual impact for properties on the northern side of the A66 to the east of the junction.

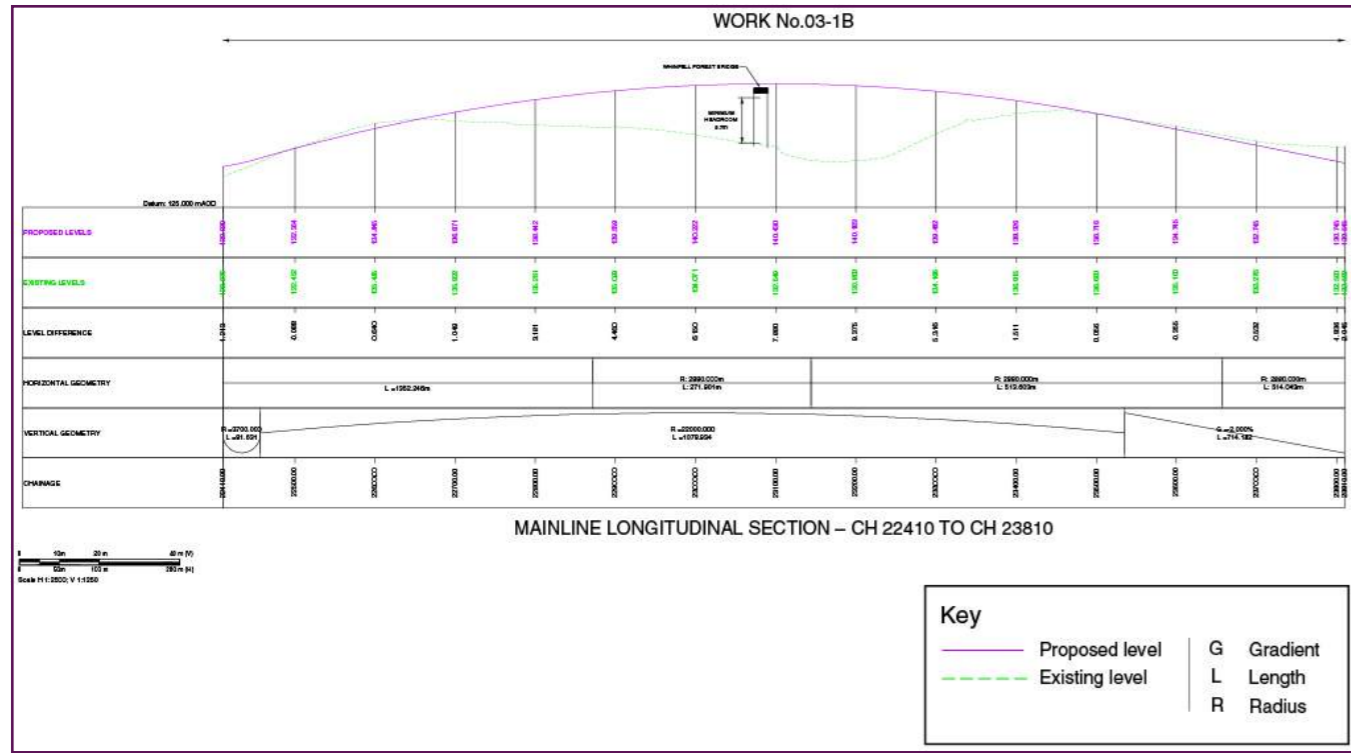
It is considered that this proposed change has the potential to introduce new or different likely significant effects reported for the topics of Biodiversity, Landscape and Visual, and Road Drainage and Water Environment in the Environmental Statement. See the Environmental Appendix to this brochure for further information.



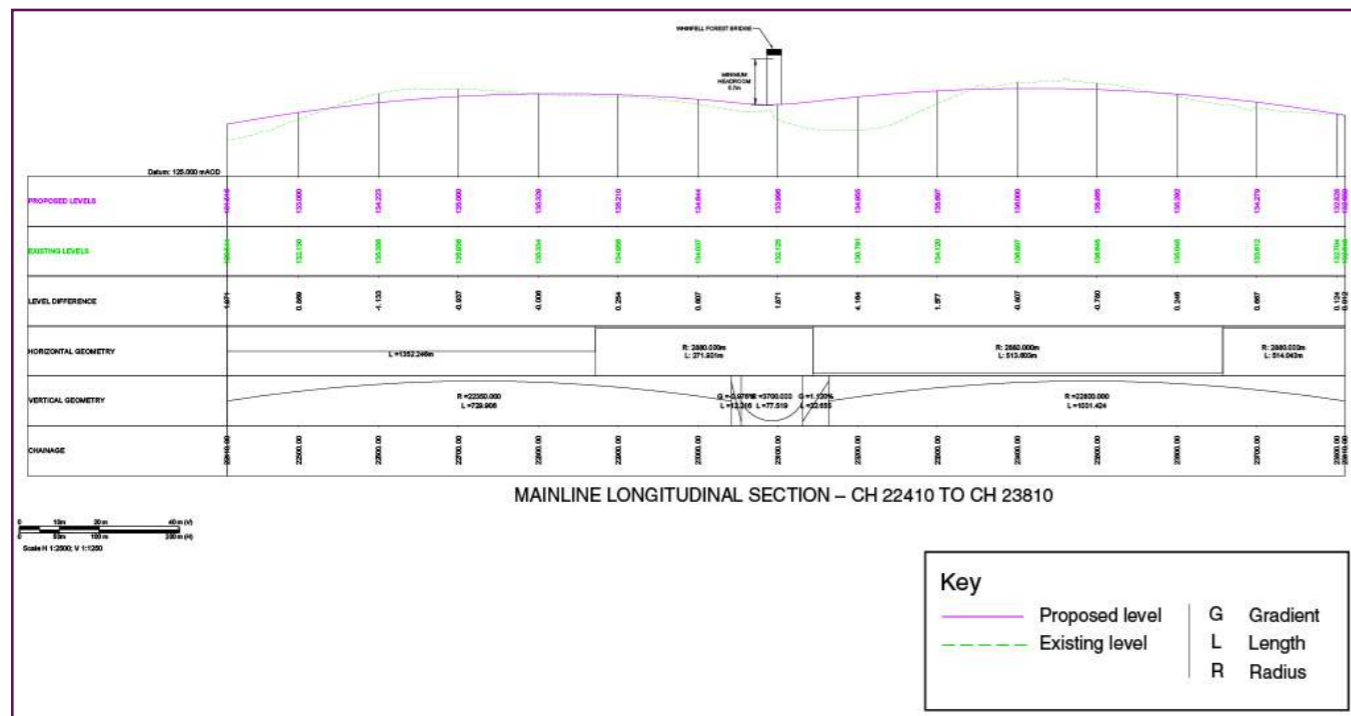
DCO design



Proposed change



Long section – DCO design



Long section – Proposed change



DCO design view from south east



Proposed change view from south east



DCO design view from east



Proposed change view from east



DCO design view from west



Proposed change view from west

Temple Sowerby to Appleby

DC-10 – Removal of Priest Lane underpass

Background to the change

In our DCO application we provide an underpass to connect Priest Lane (to the north of the A66) with a shared brideway (to the south) following the principal line of Bridleway 336-007 that is severed by the A66. This enables walkers, cyclists and horse riders (WCH) on Priest Lane, or on the brideway to the south, the option to continue their journey underneath the new A66. The underpass also provides access for three landowners whose land is severed by the new road.

Description of the change

We propose to no longer provide the Priest Lane underpass and redirect both WCH and the landowners requiring access to their farmland via Cross Street.

Horse riders who might have used the severed Bridleway 336-007 would now be able to travel north either along Piper Lane or via the new brideway adjacent to the new A66, and over Cross Street bridge to reconnect with Bridleway 336-018. This journey is only marginally longer without the underpass. Horse riders wanting to travel east and west would use the old A66.

For pedestrians and cyclists using Priest Lane travelling in an east west direction, the footpath would be diverted over the Cross Street overbridge, this diversion would mean pedestrians and cyclists would need to travel 180m further than they would with our current DCO design.

Landowners would either use the shared brideway and Cross Street overbridge from the old de-trunked A66 or access Priest Lane

from the proposed junction at the end of the Temple Sowerby junction via Morland Road. This requires diversions of 1.2km and 2.2km respectively.

This change would fit with the DCO designation of Priest Lane as a 'quiet lane' which is a mixed-use road suitable for the use of walkers, cyclists and horse riders as well as vehicles.

Reason for the change

Our proposal to remove the underpass enables the shared brideway to be raised closer to existing ground levels, meaning landowners would retain more land for farm use as the size of the earthworks required for the brideway will be reduced.

The proposed change is supported by local landowners who raised concerns about the amount of land required in this area. Some journeys for affected landowners will increase but many currently own and work numerous plots around the village and moving stock and machinery by road is not uncommon.

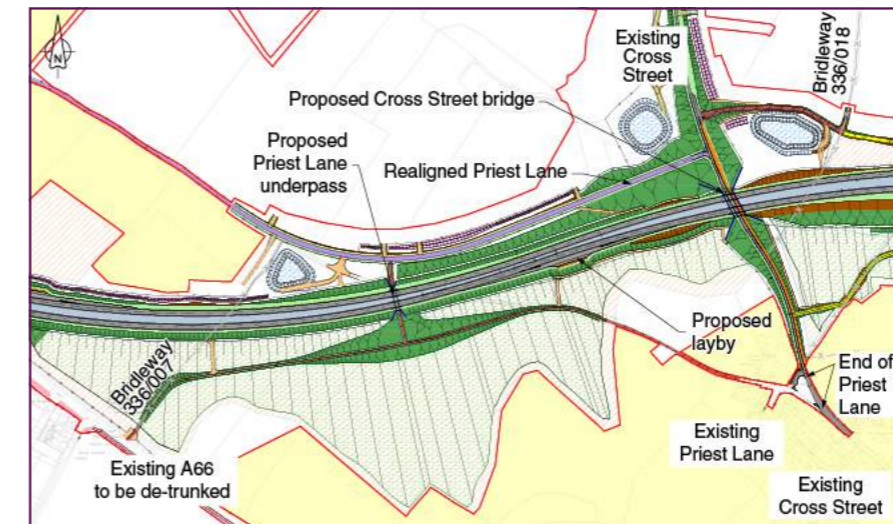
However, as the land plots are relatively small at the western end of the shared brideway, we are in discussion with two of the affected landowners around a potential land swap to minimise the severance, so they would no longer require access across the A66.

As a result of early detailed design it was determined that the underpass would require lighting. By removing the underpass we remove any potential impacts of the lighting in a rural area whilst there would be a reduction in construction works associated with electrical supply to the underpass.

By removing the Priest Lane underpass and consolidated crossings of the new A66, we are able to reduce the construction period in this area and therefore the impact on road users.

of Biodiversity and Population and Human Health in the Environmental Statement. See the Environmental Appendix to this brochure for further information.

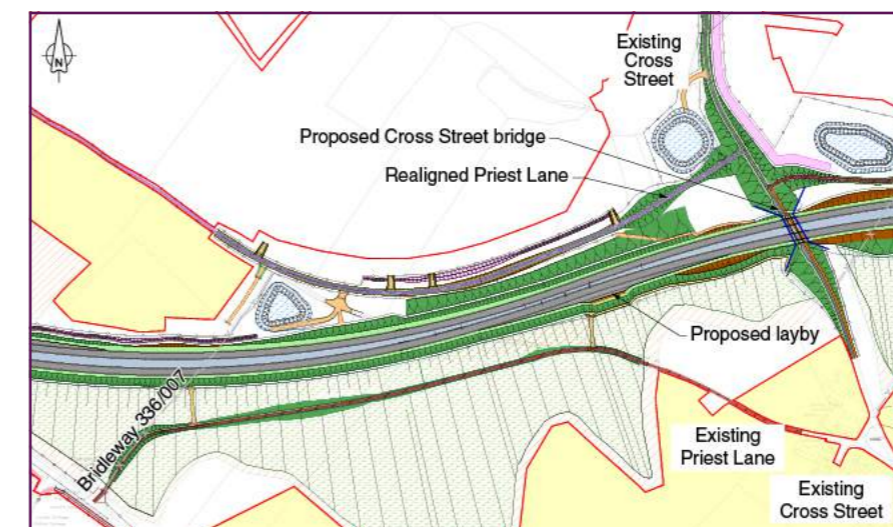
It is considered that this proposed change has the potential to introduce new or different likely significant effects reported for the topics



DCO design



DCO design WCH route



Proposed change



Proposed change WCH route

Temple Sowerby to Appleby

DC-12 – Green Lane bridge realignment

Background to the change

As part of our DCO application, we have included a bridge at Green Lane in Kirkby Thore. The bridge is intended primarily for the use of a landowner to access land to the north of the new A66 and enables an existing nearby footpath to be diverted over the same structure.

Description of the change

The change we are proposing is to make Green Lane bridge a private access track, meaning only the landowner will use it. Walkers, cyclists and horse riders (WCH) will be able to use Cross Street or Fell Lane to reconnect to the

north of the new A66 (see plans) via existing lengths of footpath and bridleway and the creation of small additional lengths.

We are also proposing to move the bridge back to the original alignment of the current farm access track rather than the current designed location which cuts diagonally across the field. This change has been discussed with the landowner who is in agreement with the proposed change.

This change means the width of the bridge would be reduced as it now serves only one purpose.

Reason for the change

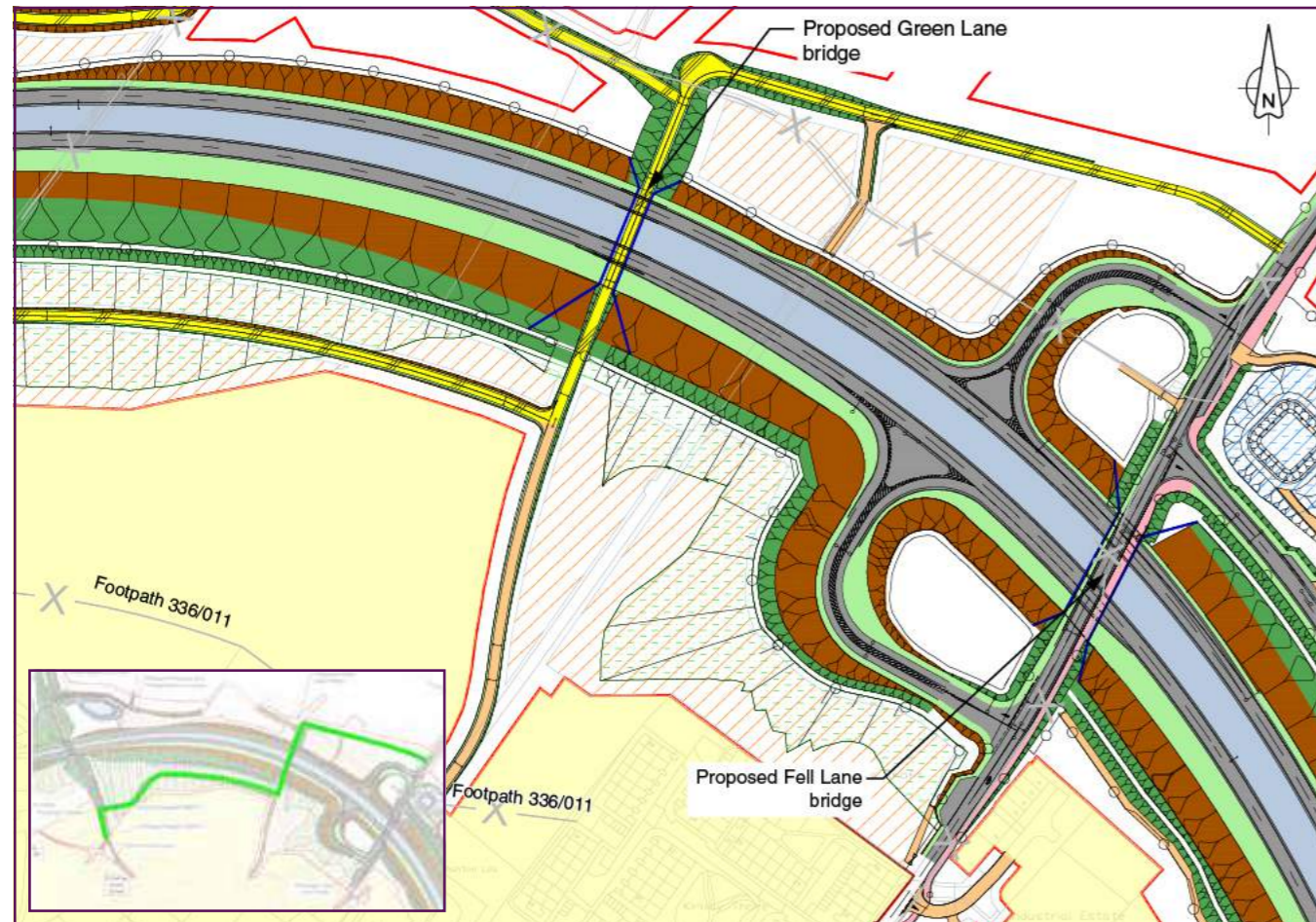
We have had feedback from a number of landowners about shared routes for WCH and private access tracks for farm operations. The landowner in this location was concerned that our proposals to allow members of the public to cross a bridge which is also used for cattle, could present a potential safety risk.

At this location, the existing network of footpaths and bridleways and the creation of small additional lengths enables us to make this change with minimal impacts on local routes. Walkers will be able to access Kirkby

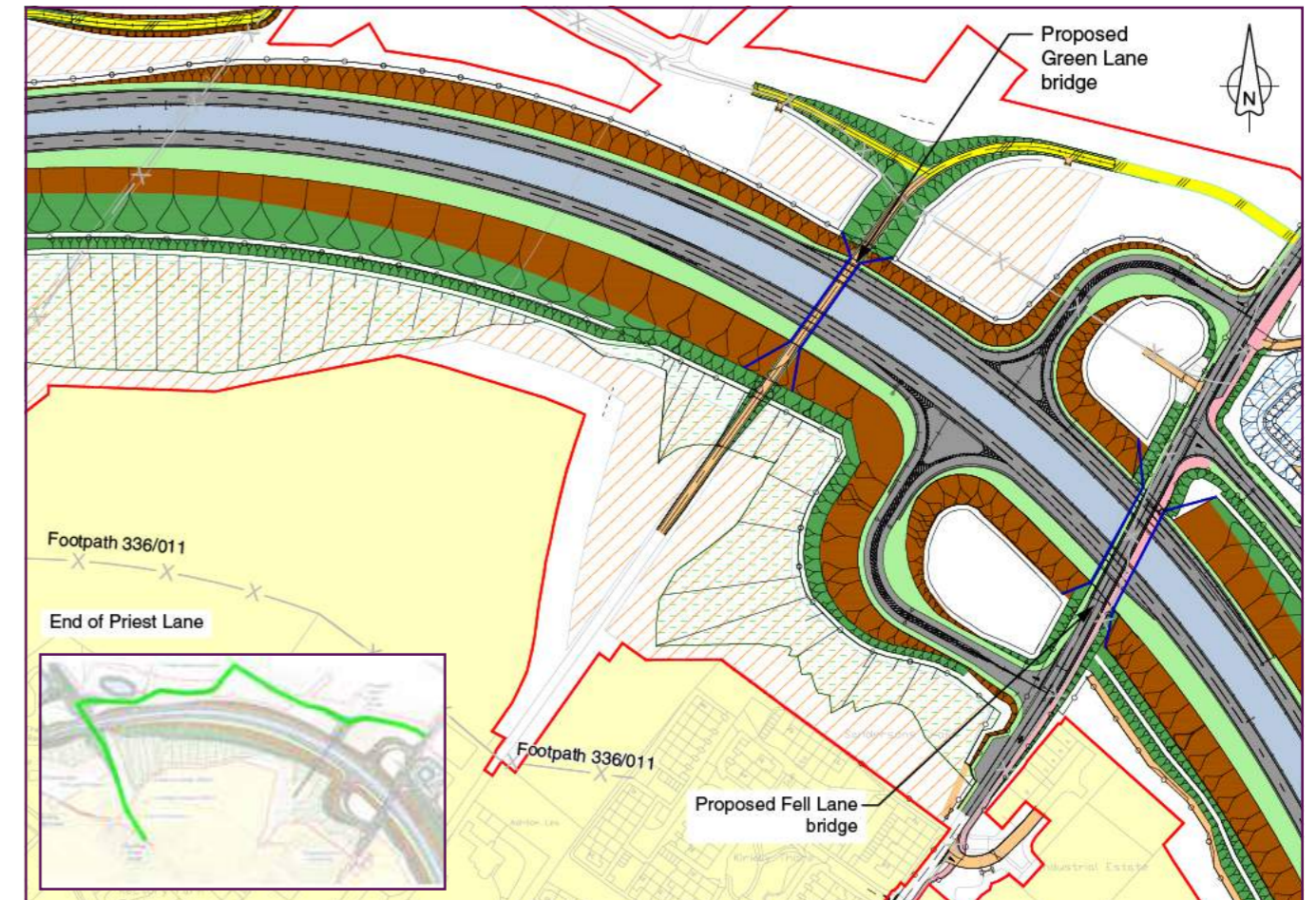
Thore via Fell Lane, retaining the means to complete a circular route using footpath 336/011.

Reducing the width of the bridge would reduce the scale of the structure and therefore the length of the construction period. This change also reduces the land required for the project.

It is considered that this proposed change does not have the potential to change the likely significant effects reported for any topic in the Environmental Statement.



DCO design (inset shows walking route between Cross Lane and Fell Lane)



Proposed change (inset shows walking route between Cross Lane and Fell Lane)

Temple Sowerby to Appleby

DC-16 – Removal of Roger Head Farm overbridge

Background to change

At land to the north of Roger Head Farm, west of Appleby, our DCO application proposes an overbridge to connect land severed by the new A66. The overbridge would provide access to two local landowners to move livestock across the new road. It would also connect a footpath across the new road with the bridleway to the north (disused railway).

Description of change

The proposed change is to no longer construct the Roger Head Farm bridge and instead divert the severed footpath, parallel to the A66 on its southern side, to an underpass 700m to the west. The underpass will provide access under the new A66 and connect to an existing bridleway on the Roman Road to the north west.

Reason for change

Removal of the bridge, a large concrete structure and its associated ramps, will reduce the land required for the scheme and have a positive visual impact on the landscape. In addition, less construction means we can shorten the programme reducing disruption to local people.

The removal of Roger Head Farm overbridge has been discussed with two adjacent landowners who support the change in principle.

A small parcel of land is now isolated by this change. This will be included within the Order Limits, with the intention of using this for environmental mitigation.

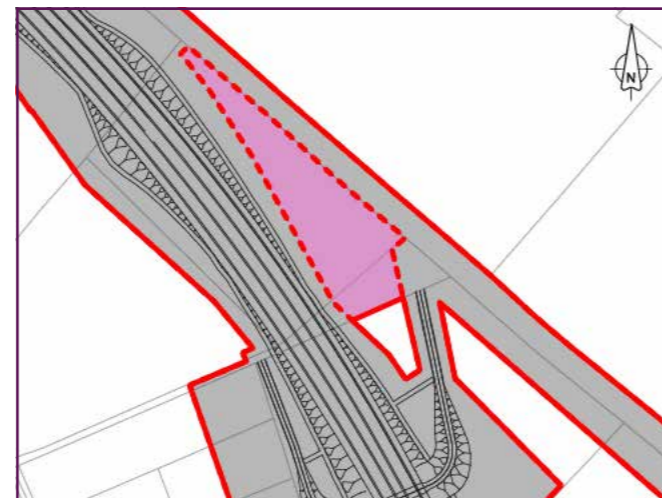
It is considered that this proposed change has the potential to introduce new or different likely significant effects reported for the topic of Biodiversity in the Environmental Statement. See the Environmental Appendix to this brochure for further information.



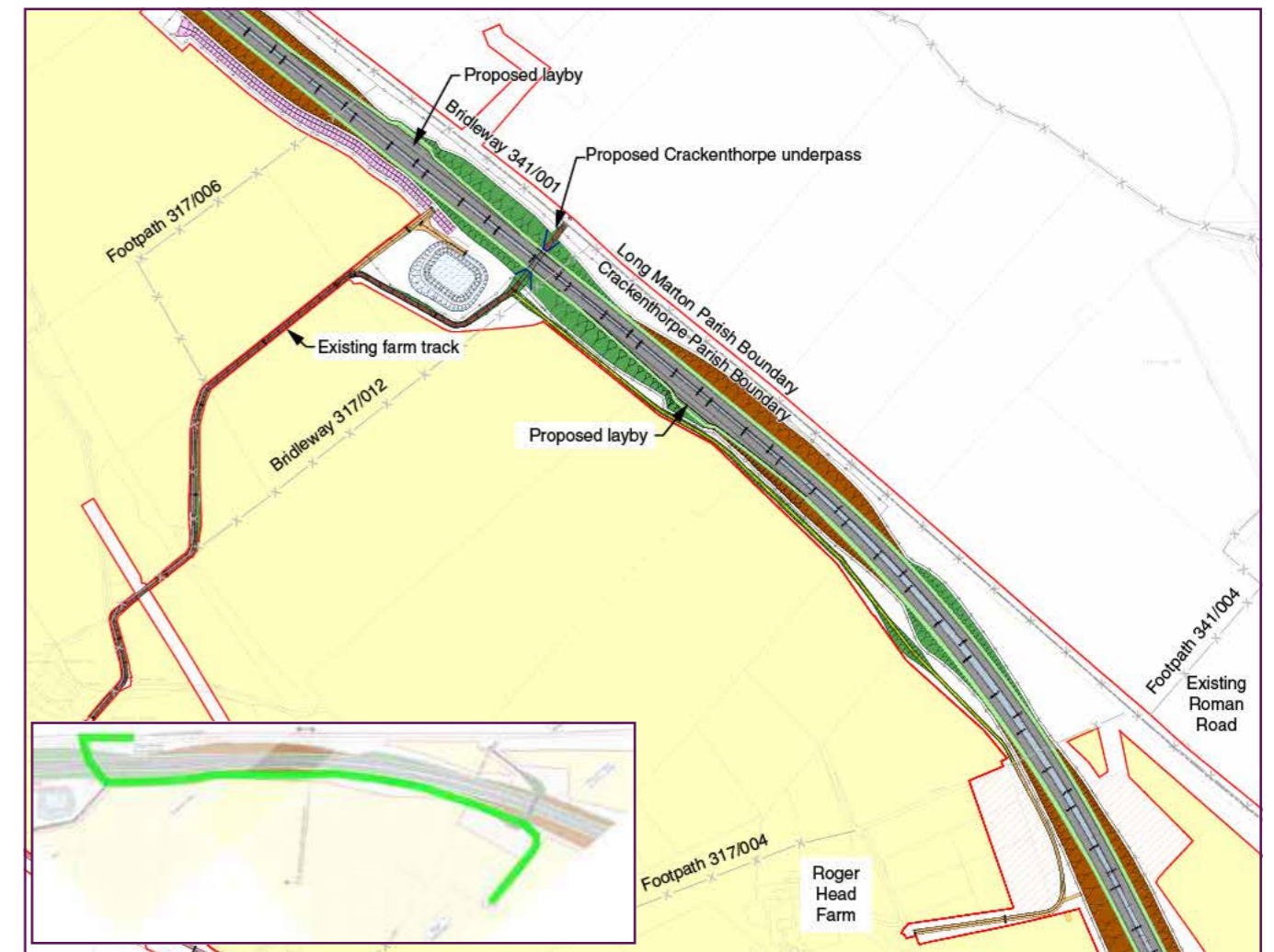
DCO design



DCO design walking route



Land severed as a result of the removal of Roger Head Farm overbridge will be acquired



Proposed change (inset shows proposed walking route)

Appleby to Brough

DC-17 – Café Sixty Six – Revised land plan

Background to change

On the Appleby to Brough section of the route, we wanted to accommodate an existing business (Café Sixty Six) and maintain their eastbound left-in, left-out access onto the A66.

Our plans for the café include an access road off the A66 with a lower loop access into the

café area. Inadvertently, our plans show this loop road impacting on the café buildings.

Description of the change

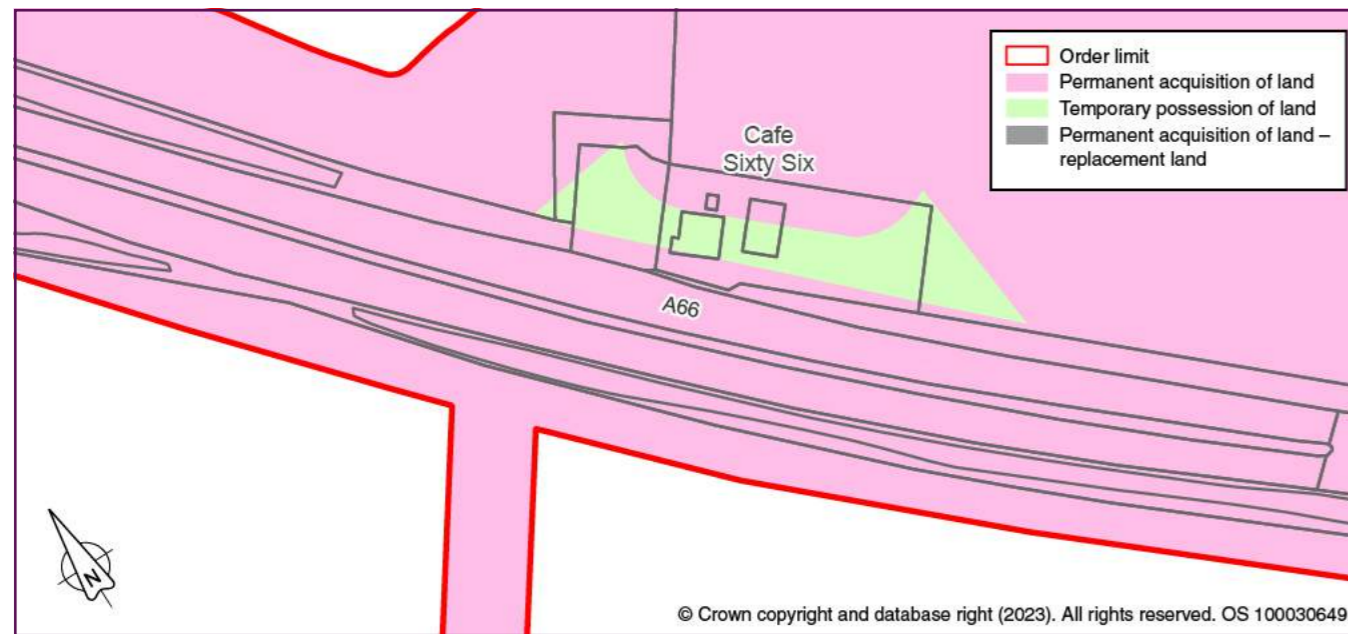
We will correct this on our DCO plans and we are looking at opportunities in detailed design to simplify this access arrangement with input from the landowner.

The DCO land plans will reflect the land required on a permanent and temporary basis local to Café Sixty Six.

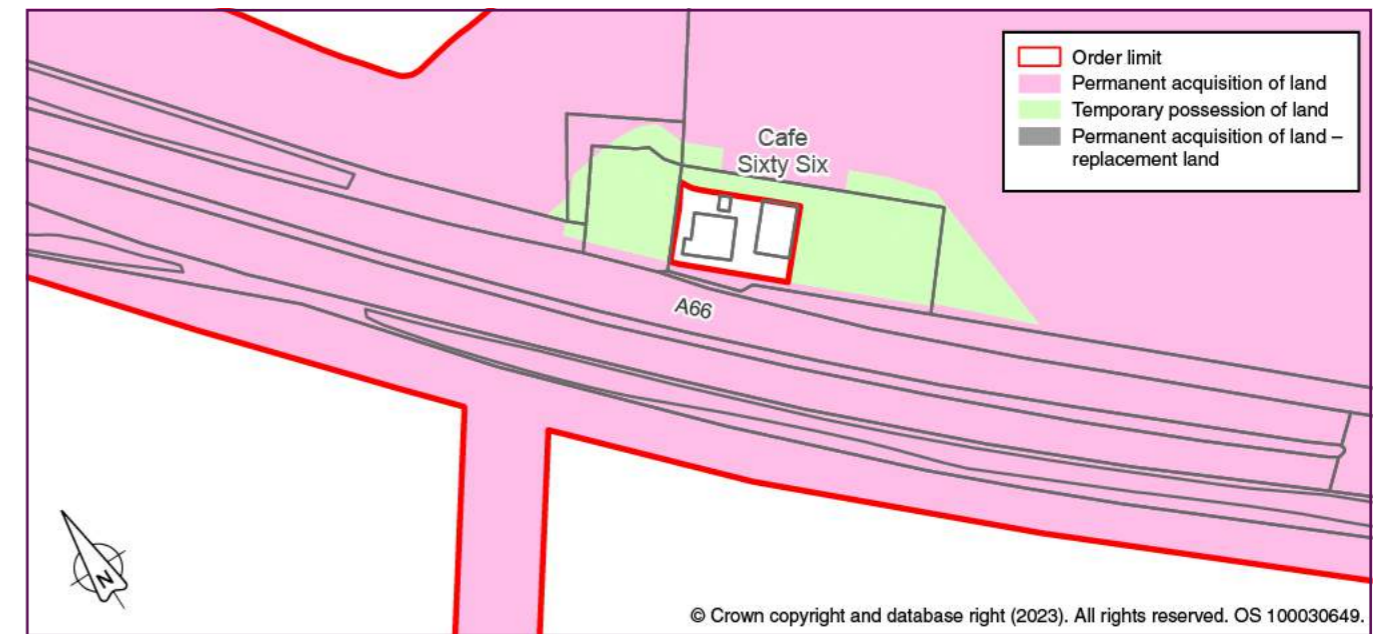
Reason for the change

This change will amend the land plans and reduce the amount of land we need to acquire from the landowner or occupy on a temporary basis.

It is considered that this proposed change does not have the potential to change the likely significant effects reported for any topic in the Environmental Statement.



DCO design



Proposed change

Appleby to Brough

DC-18 – Revision to access for New Hall Farm and Far Bank End

Background to change

Our DCO application proposed constructing a new underpass to replace the existing one (to the east of Café Sixty Six) on the Appleby to Brough stretch of the route. This was to provide the landowner with access to agricultural land on each side of the A66 and to facilitate a new walking and cycling route under the A66.

We also proposed closing both of the farm accesses to the south side of the A66 and providing a new left-in, left-out which connects all the properties to the south.

Our DCO design allows the owners and occupiers of farms to the south to travel east by using the underpass to access the Café Sixty Six access road to reach the A66 eastbound carriageway. To travel west they would use the proposed left-in, left-out. An eastbound slip road to Café Sixty Six would provide access to the underpass for vehicles travelling from the west.

This would require substantial earthworks as it would involve cutting into an area of steep land to the north of the A66.

Description of change

Our proposed change would see the retention of the existing underpass and its extension under the new walking and cycling route to the north of the A66 instead of creating a new underpass. This underpass connects land to the north and south of the A66.

This is because we have had feedback from the landowner that there is a potential conflict between WCH and farm animals and vehicles at

the underpass. This is in line with other changes we are suggesting to mitigate this issue.

We plan to move the proposed new westbound left-in, left-out access approximately 150m to the west which would provide access to New Hall Farm and Far Bank End. This would be a shared route for both farms and their businesses. This change would enable the underpass to continue to be used exclusively by the landowner to avoid potential conflict between cattle and walkers and cyclists.

The proposed change maintains the current provision which terminates the bridleway at the A66.

Connectivity remains for WCH to access routes to the north with an underpass further to the west and we are looking into options to improve connectivity in this area.

This change incorporates the new track proposed in our DCO application along the northern side of the proposed dual carriageway.

Both farms to the south of the A66 will use the new left-in, left-out when travelling west and will turn at the Sandford junction when travelling from the west. When travelling east they would go west to Appleby and turn using the B6542.

Access from Café Sixty Six would be limited to New Hall Farm and walkers and cyclists in order prevent any unauthorised use of the underpass and onwards connectivity to the new A66 dual carriageway.

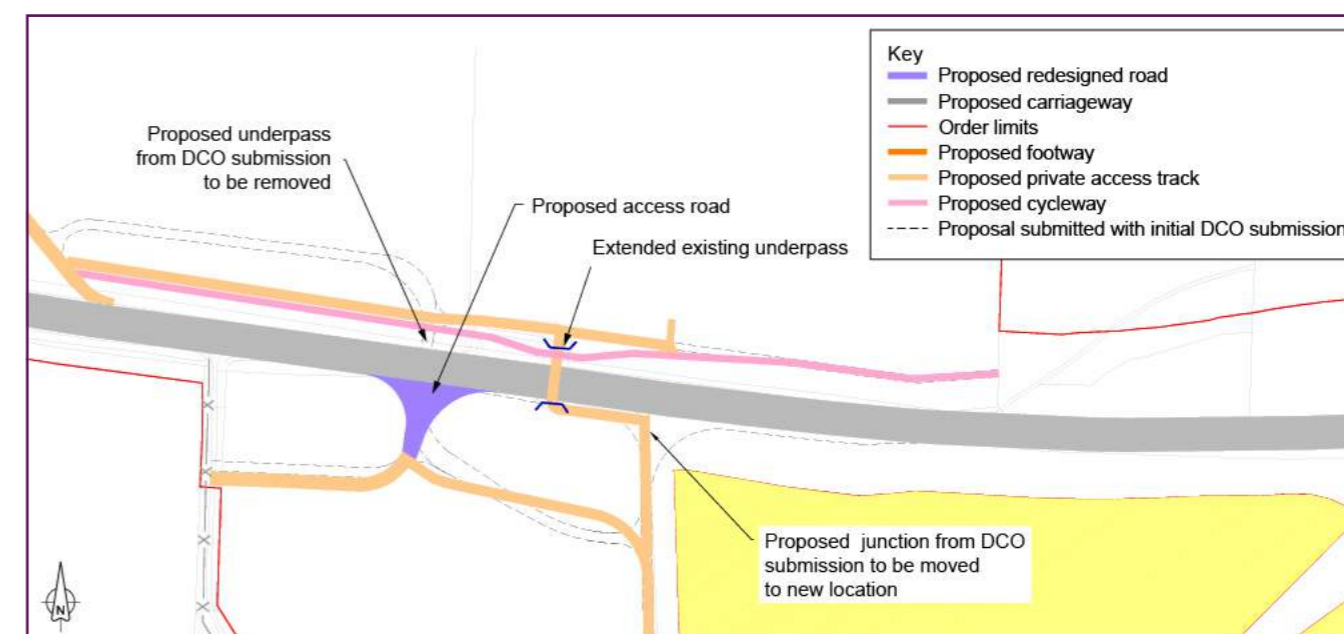
Reason for change

By not providing a new underpass, this would reduce earthworks, materials and associated construction traffic on the local network. It would also reduce construction time and disruption to road users.

It also removes the potential conflict between walkers and cyclists and farm traffic and animals.

By extending the existing underpass, we provide a dedicated route for the landowner allowing them the opportunity to gate the access for security.

It is considered that this proposed change does not have the potential to change the likely significant effects reported for any topic in the Environmental Statement.



DCO design alongside proposed change



DCO design WCH routes



Proposed change WCH routes

Appleby to Brough

DC-19 – Realignment of cycleway local to Cringle and Moor Beck

Description of the change

We are planning on re-routing a small section of the walking and cycling route to move it away from the new A66 and out of the floodplains of Moor Beck and Cringle Beck. The proposed route will utilise part of the old, de-trunked A66 road instead (see plan below).

Reason for the change

This change will move walkers and cyclists away from the new alignment and onto the de-trunked A66 providing a more rural setting. The speed limit on the local road is proposed to be reduced to 30mph to make the route safer.

The change allows us to repurpose the old A66 as a footpath and cycleway, removing the need for construction of a new route. It will also remove the need for an underpass from the side road, meaning walkers and cyclists would no longer be required to pass underneath the road. If required, this underpass would have needed lighting which would not be appropriate in this rural location.

In addition, this part of the current route is in a floodplain. Early detailed design has looked at how we can minimise impacts and we've decided there is a viable alternative route for walkers and cyclists outside the floodplains. The change would remove the need for four small bridges to cross over Cringle Beck and Moor Beck. Removal of these crossings will help to reduce impacts on the becks.

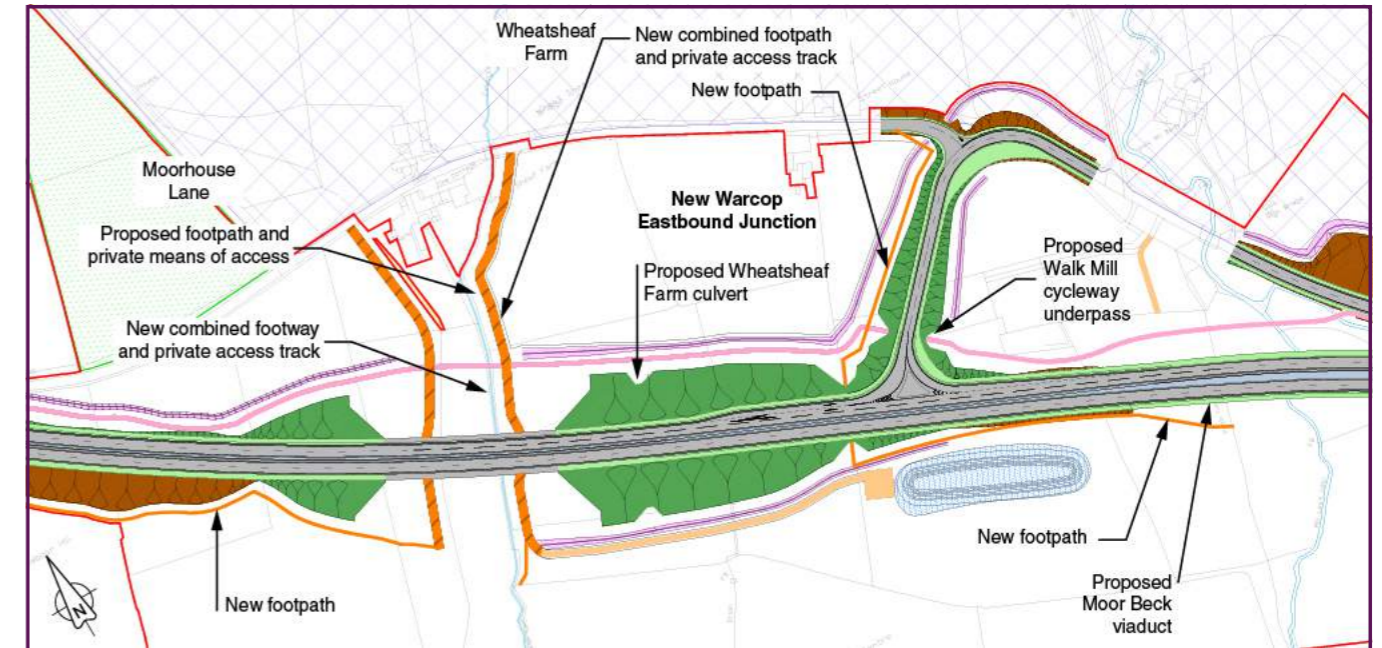
By making this change we are also able to retain the existing hedgerows and dry-stone walls which line the A66 and which would need to be removed under the current DCO plans.

This change would require some additional land (outside the current Order Limits) to enable the proposed walking and cycling route to be located on the de-trunked A66.

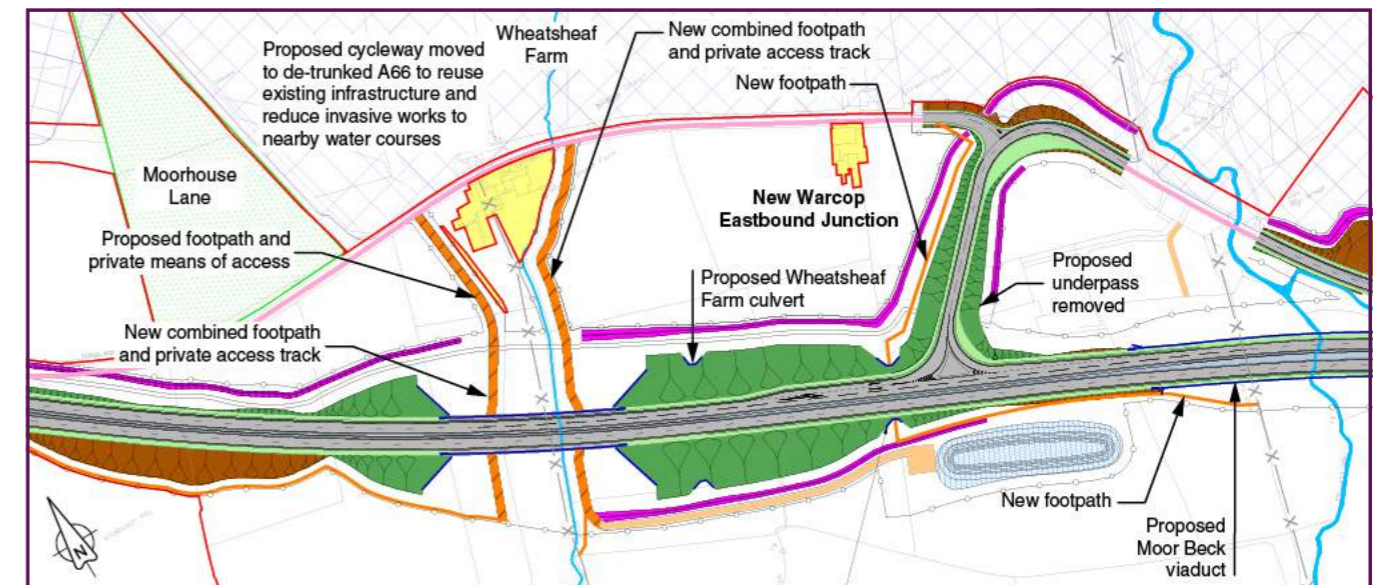
It is considered that this proposed change does not have the potential to change the likely significant effects reported for any topic in the Environmental Statement.



Additional land shown in solid pink will allow the cycleway to be moved northwards onto the de-trunked length of the old A66.



DCO design



Proposed change



DCO design walking and cycling route



Proposed change walking and cycling route

Appleby to Brough

DC-21 – Amendments to Order Limits within Ministry of Defence land

Background to the change

On the Appleby to Brough section of the route, the design of the road is constrained by land to the north which is owned by the Ministry of Defence (MoD) and some which is within the Area of Outstanding Natural Beauty (AONB).

The MoD land holds a special designation as Crown Land. Crown Land cannot be purchased for a DCO without agreement from the landowner.

In our DCO submission we have included some land within the MoD area which we are proposing for environmental mitigation. Environmental mitigation is where we identify areas of land for planting or habitat creation to support protected species which may be affected by the project, or to replace land lost.

In this case, the land was proposed for replacement woodland and grassland planting for both habitat replacement and for mitigating potential effects on protected species, such as red squirrels.

Description of the change

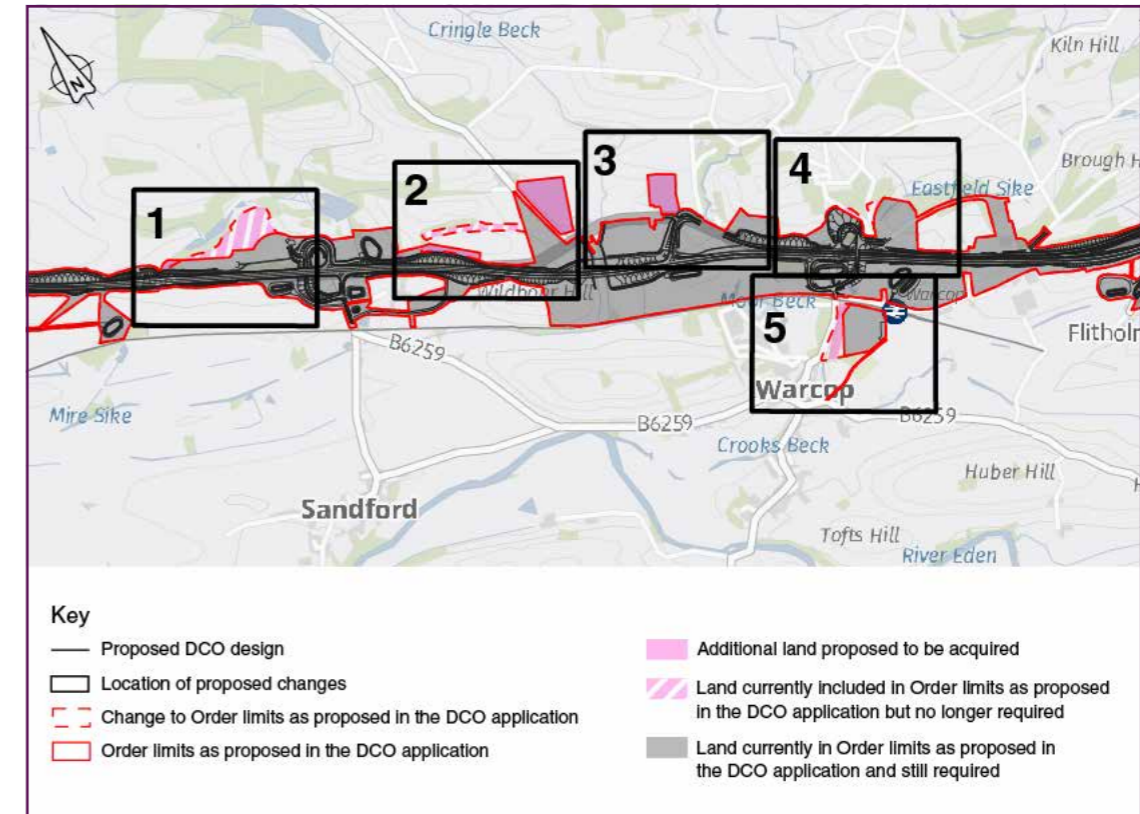
In our ongoing discussions with the MoD, they have told us that some of the land we have proposed to use for mitigation for the scheme is now required for their operational purposes, including the training of troops, which is fundamental to the functioning of the site. They have explained that areas north of the A66 are tactical land and particular locations are of strategic importance.

The MoD have suggested some alternative locations outside of the Order Limits where mitigation planting will not impact on the operations of their site. The changes are shown in the plans. This would require a change to the Order Limits for our DCO application.

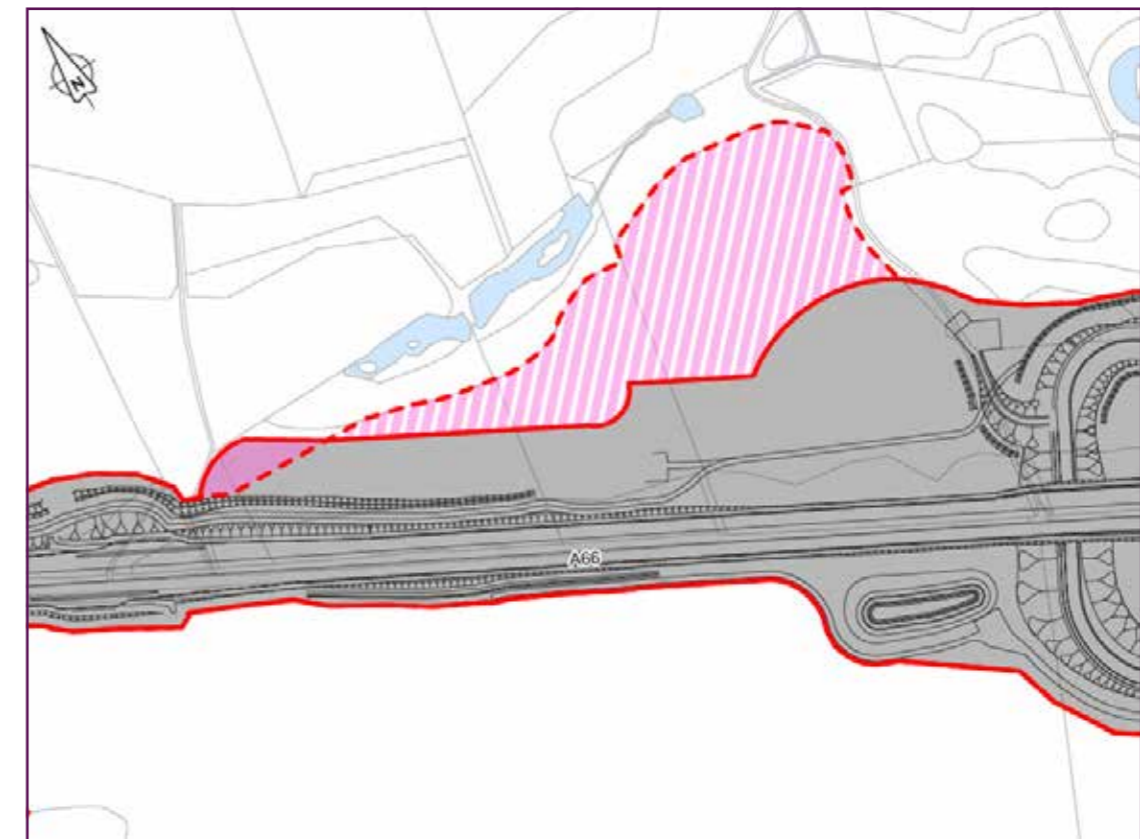
Reason for the change

Crown Land cannot be compulsorily acquired and so we need to reach agreement with the MoD. The new land proposed is equal in size to that originally suggested and does not compromise on the project's environmental objectives.

It is considered that this proposed change has the potential to introduce new or different likely significant effects reported for the topic of Landscape and Visual in the Environmental Statement. See the Environmental Appendix to this brochure for further information.



Amendments to the Order Limits within Ministry of Defence land. Increase in the land required to accommodate design changes to ensure the operational requirements of the site are not compromised.



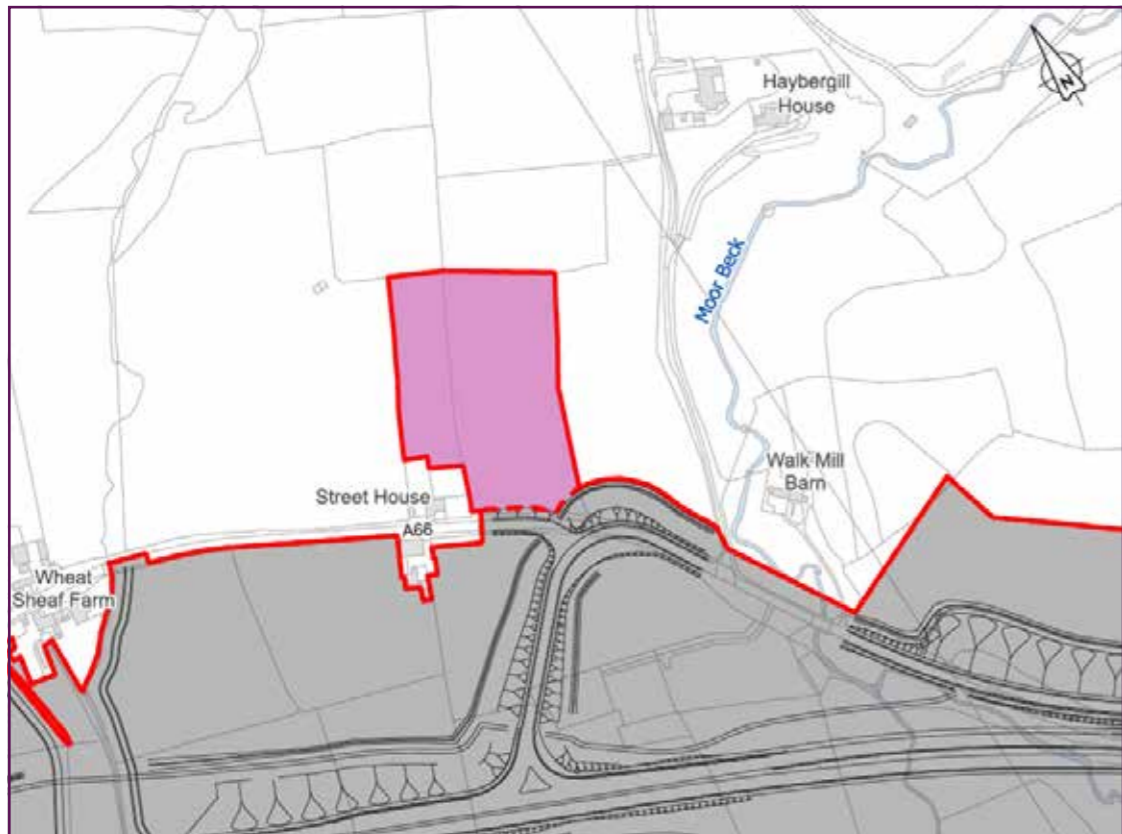
Proposed change 1



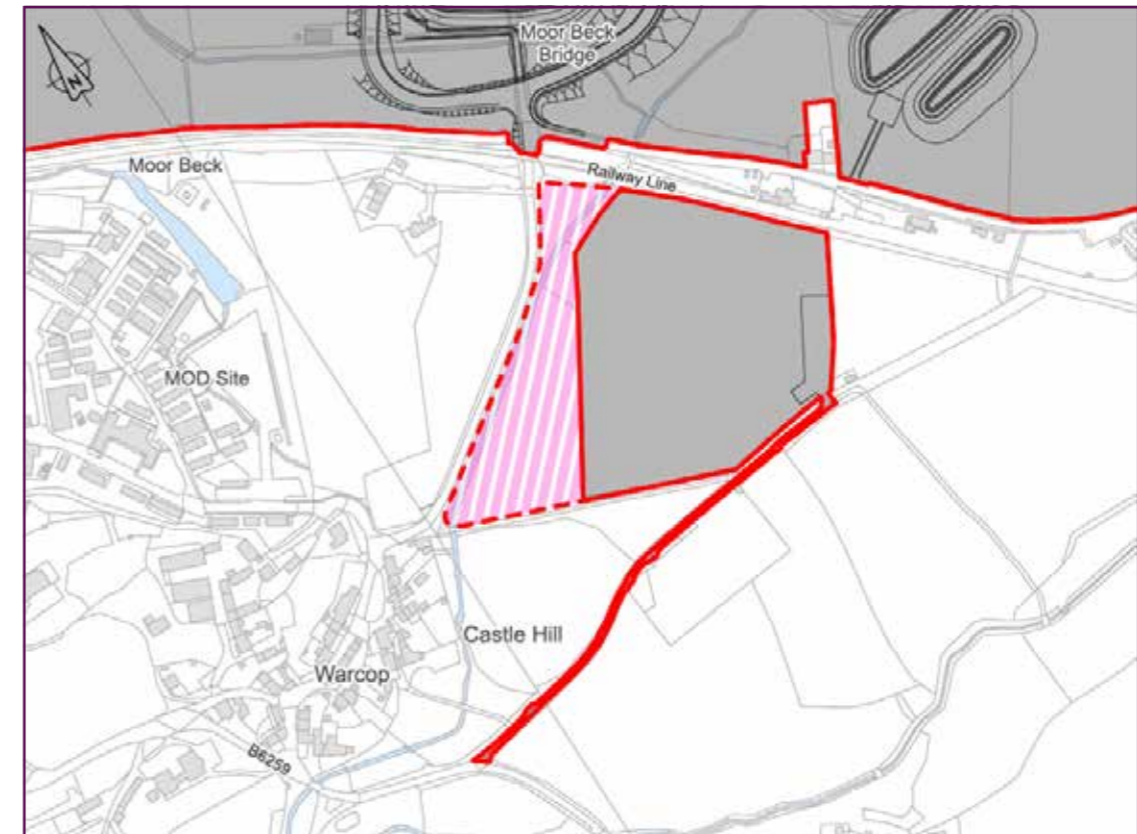
Proposed change 2



Proposed change 4



Proposed change 3



Proposed change 5

Appleby to Brough

DC-25 – Removal of Langrigg westbound junction, revision to Langrigg Lane link, and shortening of Flitholme Road

Background to the change

At Langrigg, to the east of Warcop, our DCO application proposes to maintain the junction with Langrigg Lane as a left-in, left-out to provide access to the properties on Langrigg Lane and to maintain the link southwards to Great Musgrave. Our proposals also include a link road from Langrigg Lane westerly towards Flitholme Road. This link road would provide access, via Flitholme Road, northwards under the new A66 to link to the old A66 for east and west movements.

The concentration of works in this location is significant with impacts on local residents in terms of the proximity of the new arrangement. In particular, the works required on the western side of Langrigg Lane surround a single property.

It also impacts on an area of fen. A number of balancing ponds are required in and around Langrigg Lane, including within the fen area, to manage water run-off from this new road configuration. The fen area is designated as a priority habitat and may suffer a loss if the proposed ponds were constructed; such loss would be difficult to mitigate.

Description of the change

We are proposing to remove the direct left-in, left-out to the new A66 at Langrigg Lane. This enables the link road between Langrigg Lane and Flitholme Road to be moved further north to sit adjacent, where possible, to the new A66 mainline. The tie-in to Flitholme Road at the western end of the link would also be reduced and moved northwards to minimise the amount of new construction required. The connection to the de-trunked A66 via an underpass from the link road would remain.

As a result of the proposed change, access to and from Langrigg Lane would be via the de-trunked A66 (on the north side of the new A66) and through the underpass to enable access to the communities of Warcop to the west and Brough to the east. Access to the new A66 would be maintained via the proposed junction at Warcop and at the existing junction in Brough.

Our proposal would also result in the largest balancing pond, west of Langrigg Lane, being relocated eastwards, within the DCO Order Limits. With less road needing to be constructed, there is the potential that balancing ponds could be made smaller and potentially combined.

This change would require a small area of additional land (outside the current Order Limits) to enable the pond to drain into an existing watercourse.

Reason for the change

This change is being proposed in response to feedback from both local residents and Warcop Parish Council, who suggested the removal of the Langrigg Lane junction, and was a matter discussed at the DCO Issue Specific Hearing on Alternatives in November 2022.

This change would enable us to minimise the impacts of the junction, link road access and balancing ponds on the residents at Langrigg Lane. The new configuration would be at least 50m away from the residential properties rather than 11m in the current proposals.

By tying in the Flitholme Road junction 100m to the north of the bridge over Lowgill Beck, we can also reduce impacts on residents in that area.

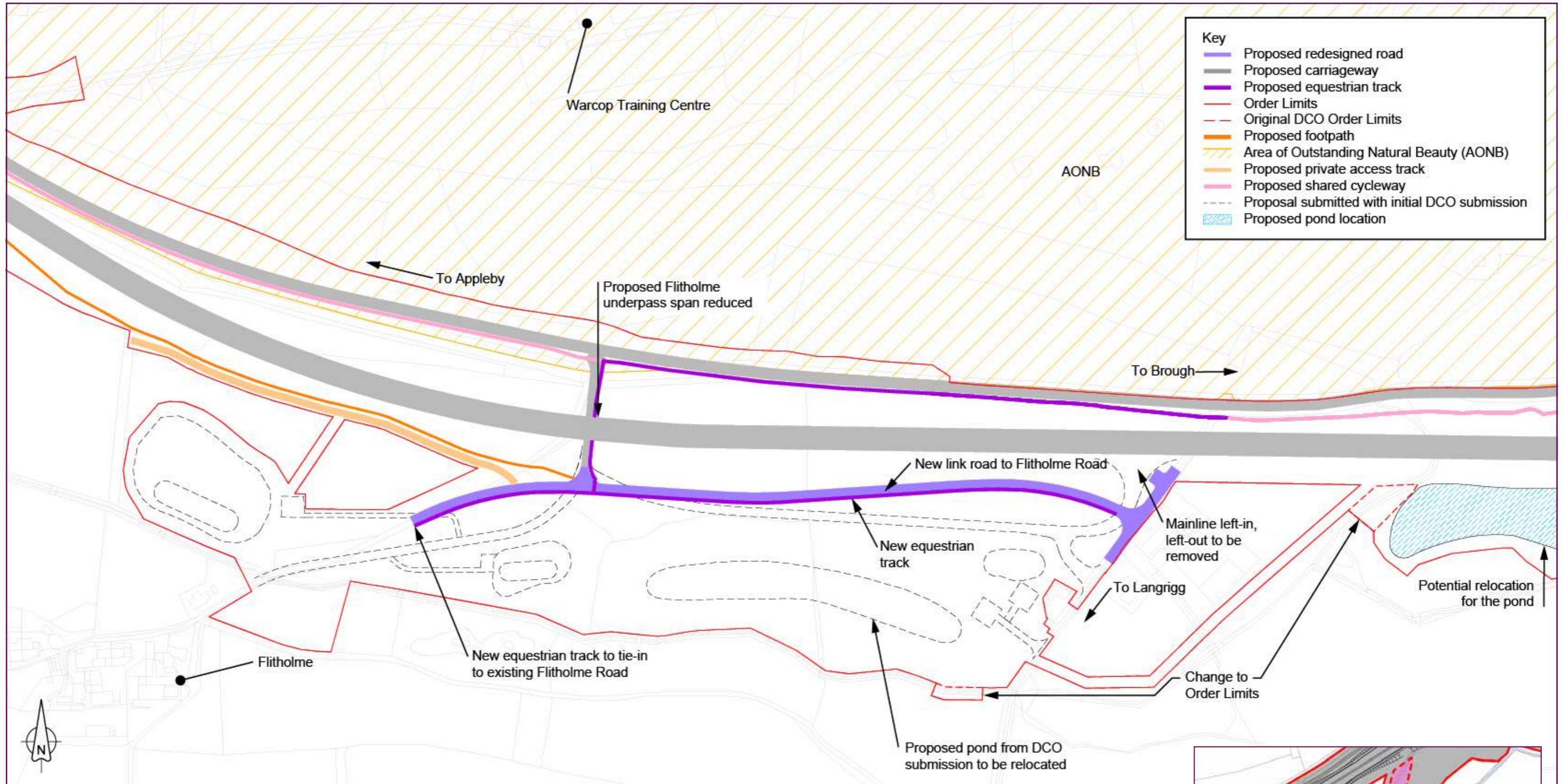
The removal of the Langrigg junction allows the link road and associated infrastructure to move north. The relocation of the largest balancing pond away from an area of fen, which is considered a priority habitat, provides the opportunity to reduce environmental

impact. The relocation of the pond may create different impacts and we will continue to work with landowners to explore options. The reduction in the scale of infrastructure at this location means that less material will need to move via the road network which helps to minimise the impacts of construction traffic on local communities and reduce the build time.

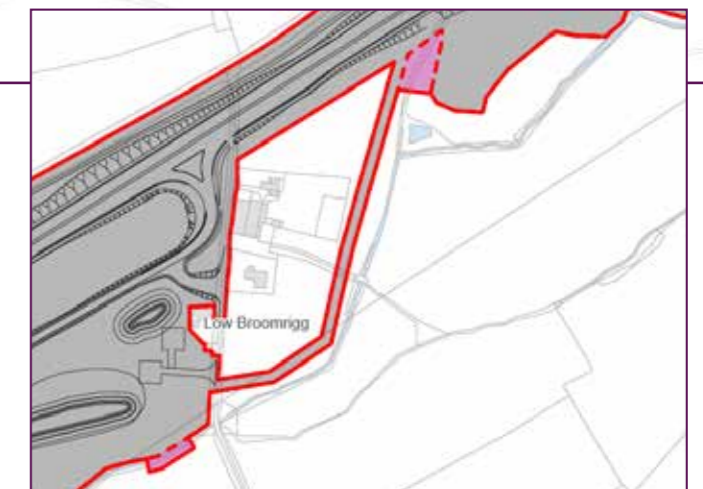
By removing this direct link from the A66, the new configuration, which is more in keeping with the existing local roads, is less likely to attract high speed vehicles. Removing the left-in, left-out also manages the concerns raised by local residents around HGV use of the area and the potential for overnight parking.

Walking, cycling and horse riding provision will be maintained and will match the current arrangements on these roads.

It is considered that this proposed change does not have the potential to change the likely significant effects reported for any topic in the Environmental Statement.



This plan helps to compare the DCO design with the proposed change at Langrigg. The DCO design is shown in dotted black with the proposed change (in principle) shown in colour. Further detailed design of aspects such as ponds and accesses continue to be developed.



Additional land to enable the outfall of the relocated balancing pond.

Appleby to Brough

DC-26 – Revision to West View Farm accommodation bridge and removal of West View Farm underpass

Background to change

Our DCO proposal includes a private access track over the A66 for the use of West View Farm and adjoining properties at the eastern end of the Appleby to Brough section of the route. To the west of West View Farm, an associated underpass is provided to provide connectivity to severed lands.

This access arrangement, for the private access track, includes a left-in, left-out to the westbound carriageway and an overbridge providing access to the realigned local road (Main Street) into Brough and to local lanes to the north. The new overbridge would also provide access for walkers, cyclists and horse riders (WCH).

The underpass would provide for movements of livestock and access to the fields and a silage tank to the north.

Description of change

Our proposed change to the DCO moves the overbridge structure to the south east by approximately 80m, locating it further away from the farm buildings and adjacent properties. We would also reduce the span of the bridge as a result of a more compact design for the connecting accesses, leading to less land being required in the North Pennines Area of Outstanding Natural Beauty (AONB), to the north of the A66.

To facilitate this, the westbound left-in, left-out access from the A66 would be removed. We also plan to remove the underpass from our proposals. An extended private access track would connect severed lands to the north from the West View Farm overbridge instead. Access to the balancing ponds to the south would be via a shared track connecting to the West View overbridge on the southern side.

Reason for change

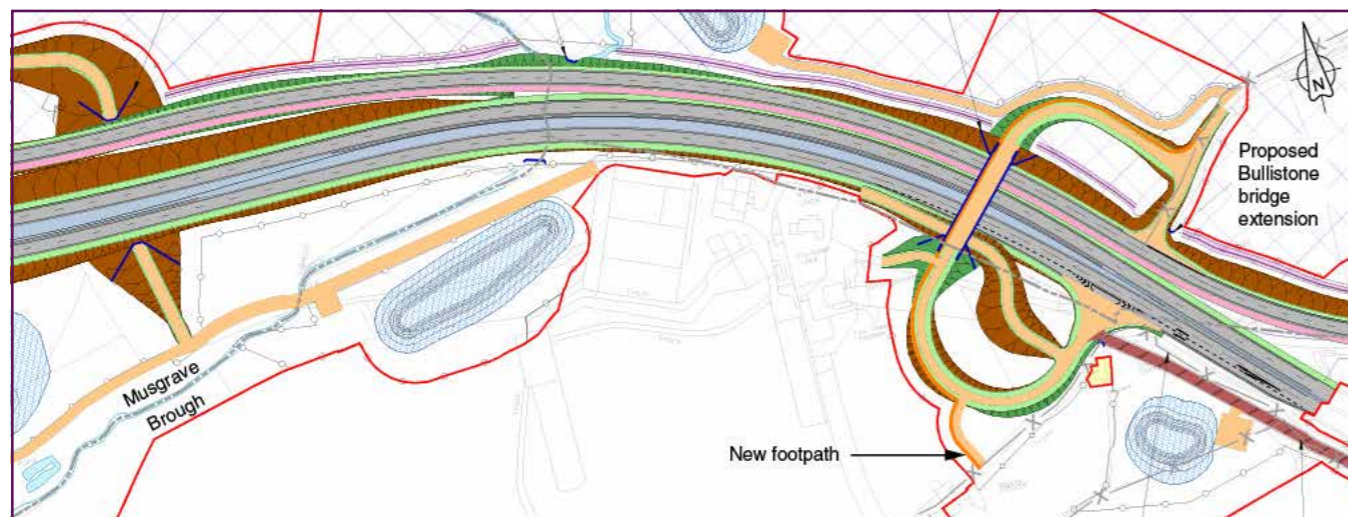
This change has been requested by the landowner and residents of adjoining properties who raised concerns about the proximity of the structure and unauthorised access to the farm and properties by people wanting access to Brough from the A66. It also addresses the landowner's concerns about security, the amount of land required and the proximity of the bridge to residential buildings.

It would provide safer access to the farm by ensuring the bridge, as intended, is a private access track for the farm, adjoining properties and walkers only as the likelihood of members of the public and unauthorised vehicles using the bridge will be significantly reduced. It would also remove the risk of livestock or walkers meeting high speed traffic using the bridge as an access to Brough.

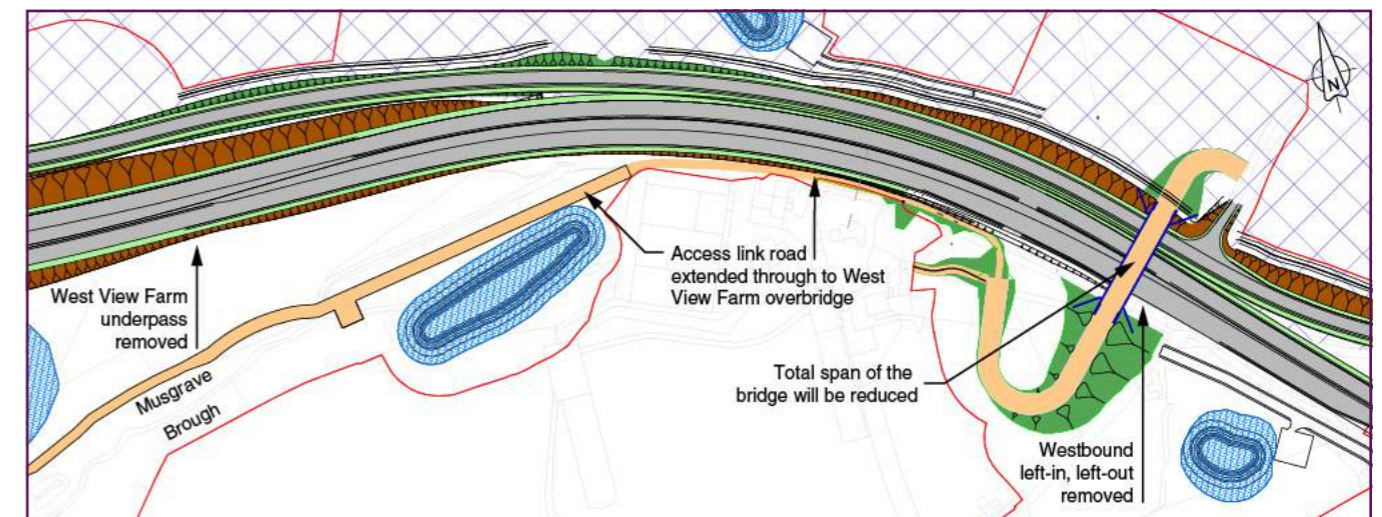
This in turn, allows us to remove the underpass to the west which is not required if the overbridge is solely a private access track and walkers' route.

Reducing the overbridge span and removing the left-in, left-out access and the underpass helps reduce land acquisition and earthworks, resulting in less materials and a shorter construction time. This will help minimise disruption for the landowner and road users and reduce construction traffic.

It is considered that this proposed change does not have the potential to change the likely significant effects reported for any topic in the Environmental Statement.



DCO design



Proposed change

Appleby to Brough

DC-27 – Construction of noise barrier south of Brough

Background to change

As part of the assessments we have carried out for the project, we have looked at the potential noise impacts on properties from additional traffic which the new road might generate.

In our DCO application we identified that there might be additional noise impacts on properties on the housing development off Castle View in Brough. To mitigate this impact, we have included acoustic fencing which will help reduce noise levels in this location. This fencing was planned to be erected on land owned by National Highways at the edge of the A66. Because we own the land where the fencing was proposed it was not included in the DCO application.

Description of the change

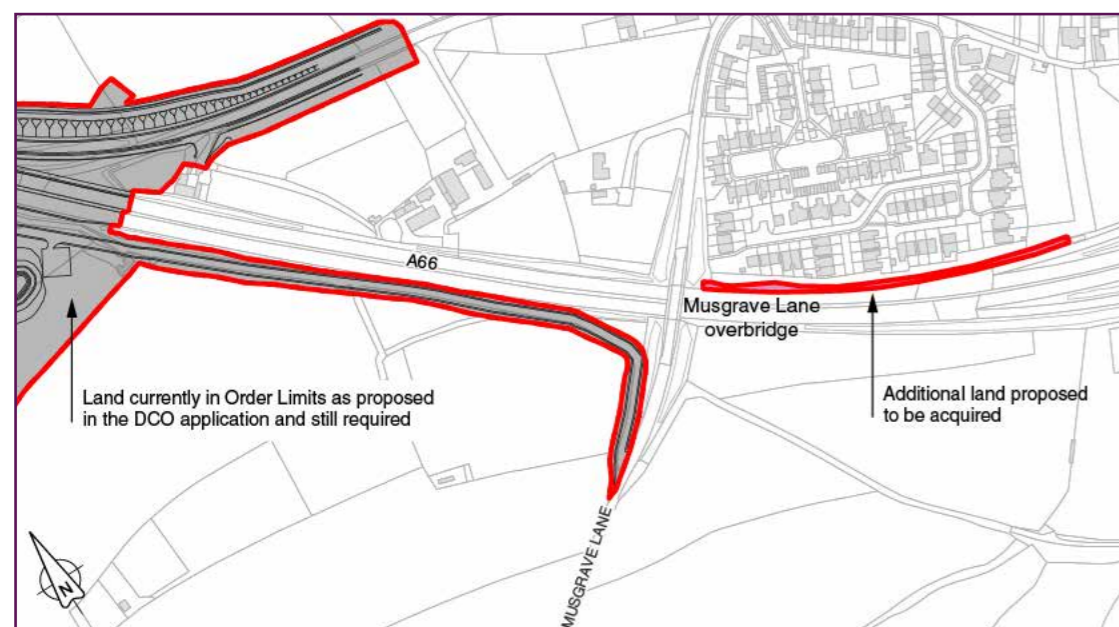
Following further investigation, as part of the early detailed design work, we have determined that the fence cannot be built

and maintained wholly within land owned by National Highways. This means that we need to acquire land which is not owned by National Highways. We are in discussions with the landowner about this change. We are therefore proposing an amendment to the Order Limits to include the land required to erect and maintain the acoustic fencing.

Reason for the change

To allow for the provision of acoustic fencing, as proposed in our DCO submission, to mitigate noise impacts.

It is considered that this proposed change does not have the potential to change the likely significant effects reported for any topic in the Environmental Statement.



Construction of noise barrier south of Brough. Additional land will be required to construct and maintain the noise barrier.



Stephen Bank to Carkin Moor

DC-29 – Realignment of A66 mainline and Collier Lane

Background to the change

Our DCO application shows the new A66 west of Collier Lane in a deep cutting. To the west of the cutting, an underpass is proposed beneath the new A66 to take a bridleway and a private access track from land on the north side of the new A66, under the de-trunked A66 near Dick Scot Lane.

The Collier Lane bridge will provide road and footpath access over the new A66. The existing A66 will become a de-trunked, local access road at the southern end of Collier Lane. It will be moved southwards to make room for a deep cutting for the new A66, over a length of approximately 800m.

Description of the change

We are proposing to raise the level of the new A66 and reduce the depth of the cutting by around 2.5m and increase the height of the embankment by Dick Scot Lane by a similar amount. This would create space to allow a longer length of the existing A66 road to be re-used (instead of being moved southwards) when it becomes a local access road. This change would also mean that there was no need for us to provide a temporary diversion road while the deep cutting was being built.

This smaller, shallower cutting for the new A66 would reduce the earthworks in this area. This would then allow us to continue the proposed bridleway and the private access tracks (for land on the north side of the A66) eastwards along the northern boundary of the new A66 mainline, to connect up with Collier Lane. This would make the proposed underpass by Dick Scot Lane surplus to requirements. The proposed bridleway would then continue southwards over the new Collier Lane

bridge before linking into the proposed new equestrian track on the old (de-trunked) A66.

This change would require a small increase in the land required for the project and a change to the Order Limits included in our DCO application. The additional land would be needed to the north west and north east of Collier Lane bridge, to enable the de-trunked A66 to be used for a longer stretch to the south and to accommodate the bridleway to link into Collier Lane.

Reasons for the change

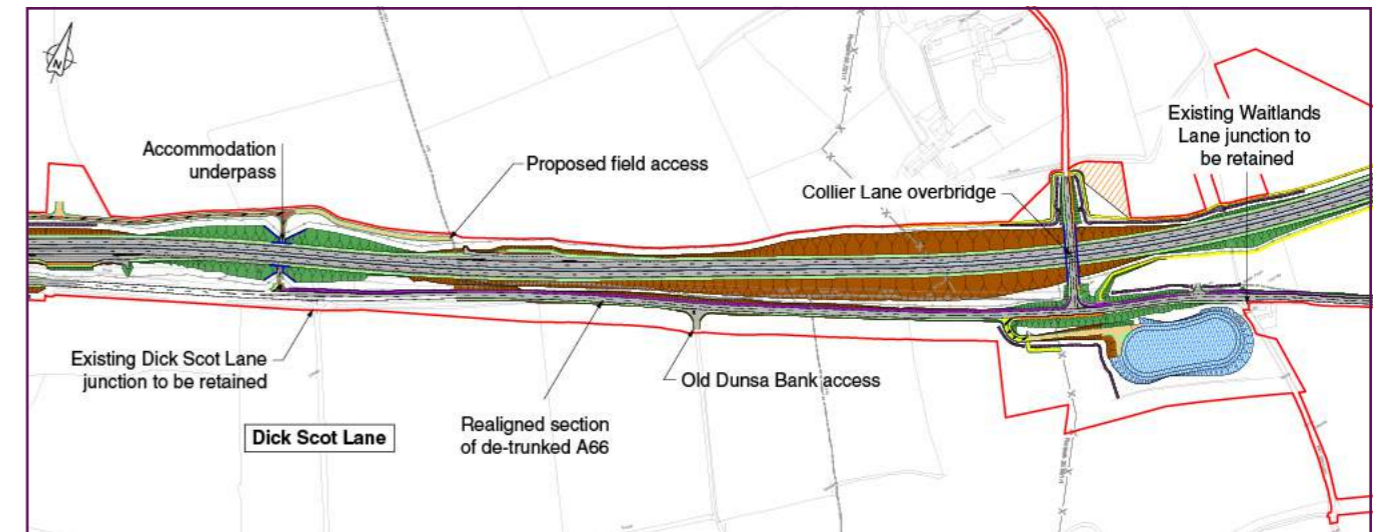
This change will remove the need for a temporary diversion road during the construction of the project. If we reduce the size of the cutting, this will reduce the earthworks, helping in turn to reduce construction traffic and shorten the build programme.

By reducing the footprint of the earthworks, we can also keep more of the existing A66 to maintain local access to the south.

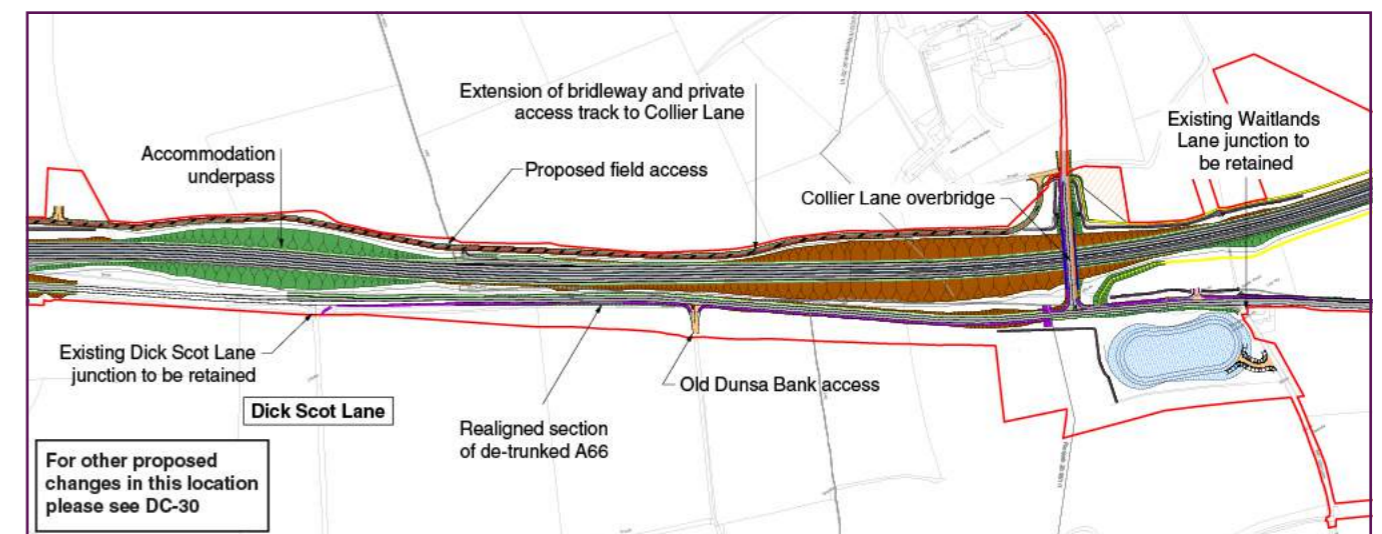
This will facilitate the removal of the proposed concrete underpass, with its associated lighting and drainage requirements.

Please see the plan for details of the WCH route diversion.

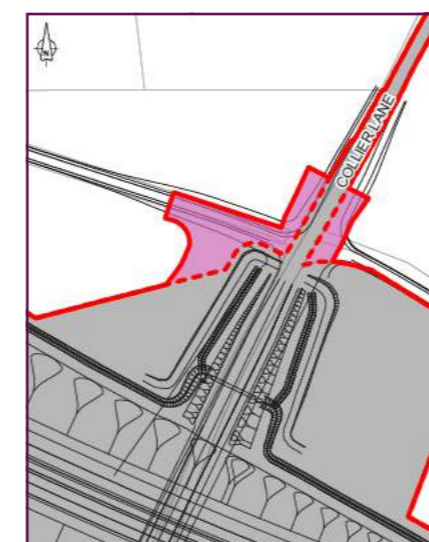
It is considered that this proposed change has the potential to introduce new or different likely significant effects reported for the topics of Landscape and Visual, Noise and Vibration, and Population and Human Health in the Environmental Statement. See the Environmental Appendix to this brochure for further information.



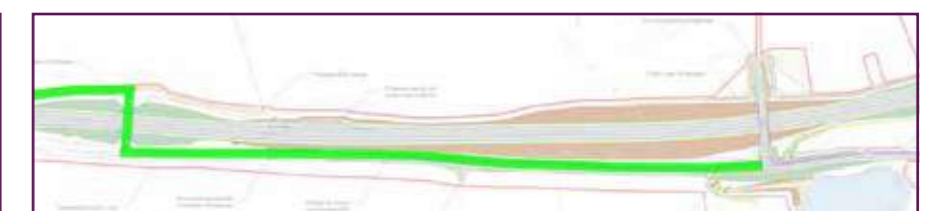
DCO design



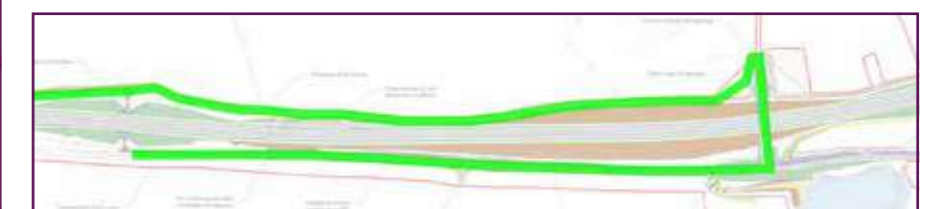
Proposed change



Additional land for extended bridleway



DCO design WCH route



Proposed change WCH route

Stephen Bank to Carkin Moor

DC-30 – Realignment of maintenance/footpath adjacent to Waitlands Lane

Background to the change

In our DCO application design there is a balancing pond close to Waitlands Lane on the south side of the A66, north of Ravensworth. This balancing pond has its maintenance access track running west to join the de-trunked section of the A66 which is parallel to the south of the new A66 alignment in this location.

Footpath number 20.55/1/1 is diverted around the access track to meet with the de-trunked

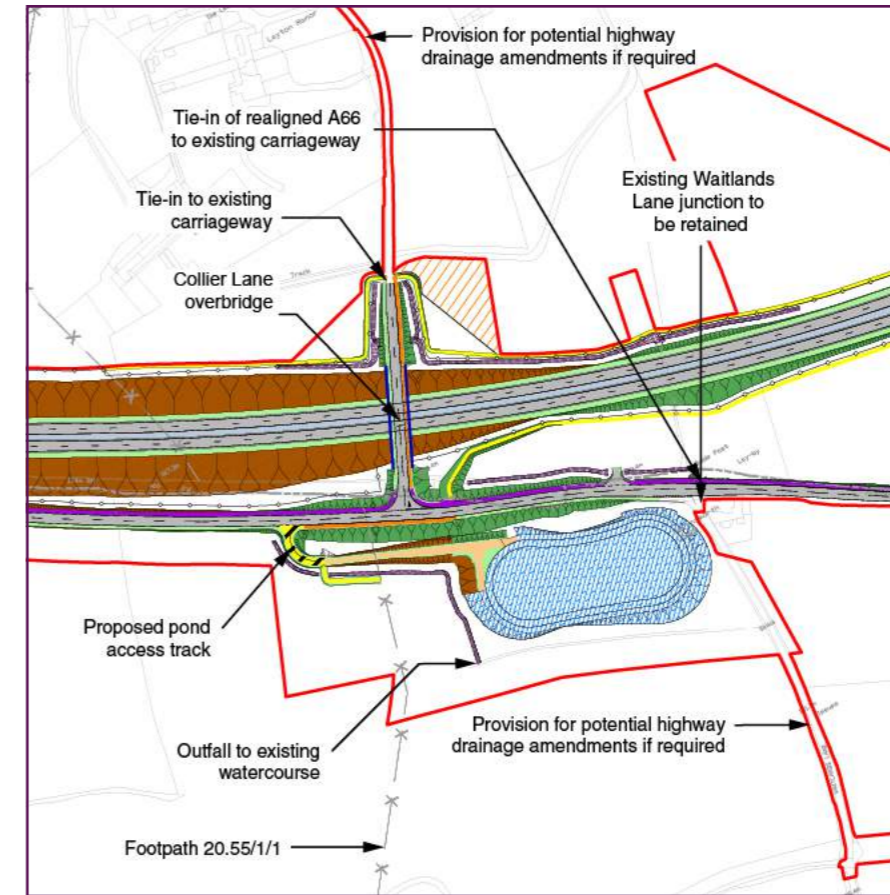
Description of the change

Our proposal is to move the access to the balancing pond from the west to the east. This will avoid the clash with the footpath. The footpath will stay on its original alignment with a small ramp to bring it up to the new level of the de-trunked A66.

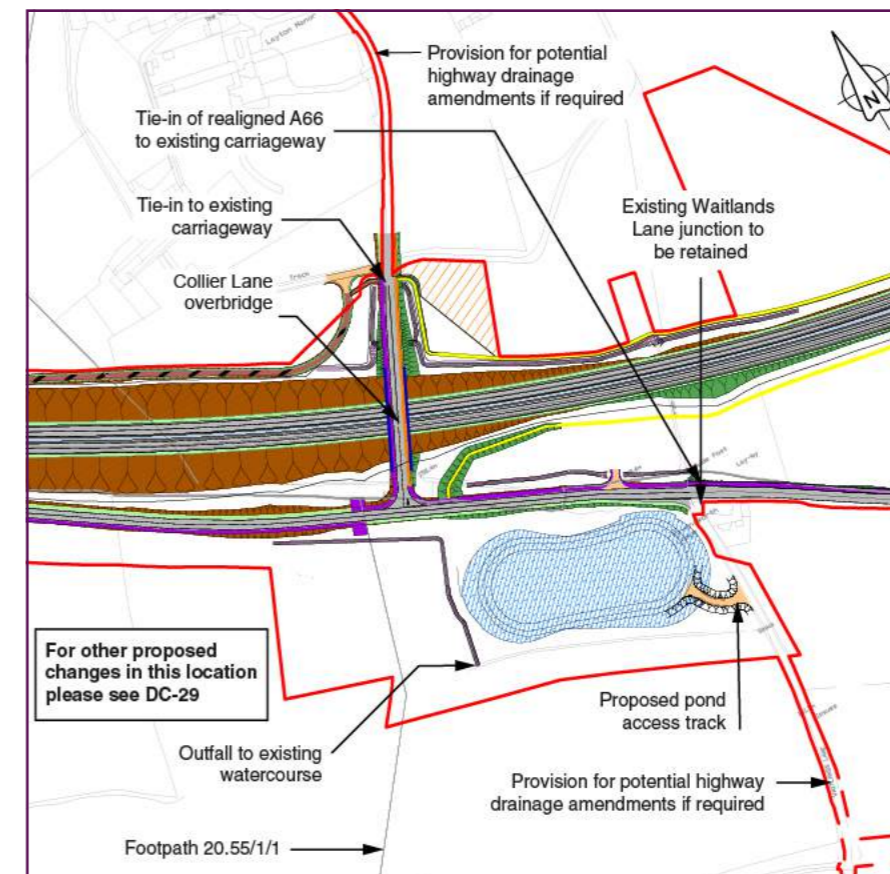
Reason for the change

This change avoids the need to realign the footpath and divert walkers. It also reduces the length of the maintenance access track and associated earthworks, reducing the build programme.

It is considered that this proposed change does not have the potential to change the likely significant effects reported for any topic in the Environmental Statement



DCO design



Proposed change

Stephen Bank to Carkin Moor

DC-32 – Lower the A66 mainline levels east of Carkin Moor and change an underpass to an overbridge

Background to the change

In our DCO application we have proposed to raise the new A66 mainline by approximately four metres above the existing levels of the A66 to the east of the Scheduled Monument (SM) at Carkin Moor. As the route passes through the SM, the design currently has a retaining wall on the southern verge to avoid earthworks encroaching into the SM.

At the eastern end of the scheme, we are proposing to build an underpass beneath the proposed A66 mainline to provide connectivity from Warrener Lane to an existing bridleway. There are also three drainage ponds, one for our roads and two ponds for the Local Authority roads.

Description of the change

The proposed change would keep the A66 mainline at the current level of the existing A66 carriageway rather than raising it through, to the east of, the SM.

By maintaining the existing levels, the underpass will be replaced with an overbridge for WCH. The design of the overbridge is proposed to be of steel construction. The colour, look and feel of the structure will be developed in coordination with Historic England and other stakeholders at detailed design so that any impact on the setting of the SM and any visual intrusion on the local environment is mitigated as far as reasonably possible. The overbridge could be used as an opportunity for an information area for visitors to view and be able to interpret the SM to the west.

The drainage network will need to be modified as a result of lowering the mainline. Early detailed design work suggests this will result in an increase in the size and number of drainage ponds at the eastern end of the scheme. Further detailed design work is required to develop and optimise the number and size of ponds.

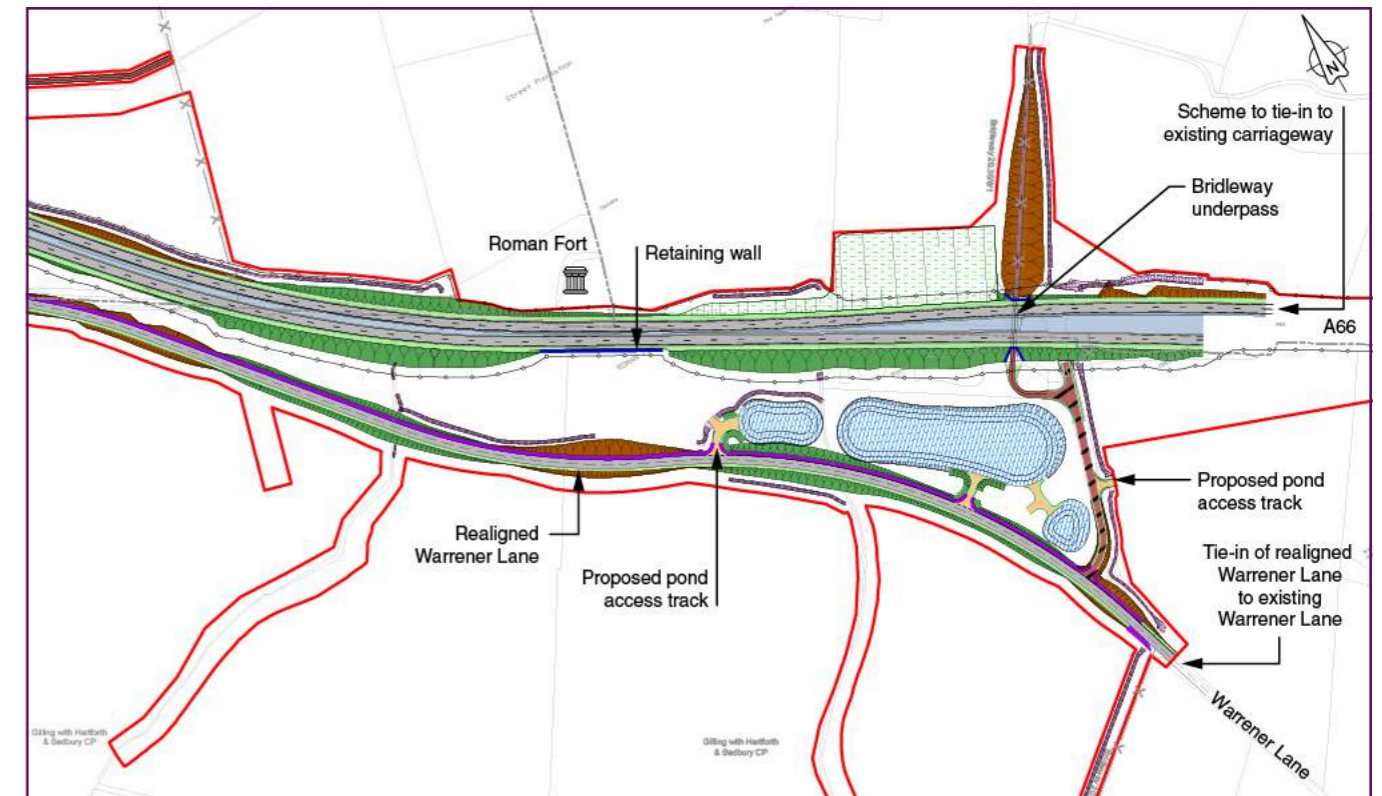
Reason for the change

Reducing levels on the A66 will provide significant construction efficiencies, minimise earthwork activities and significantly lessen the need to import and dispose of materials from the scheme.

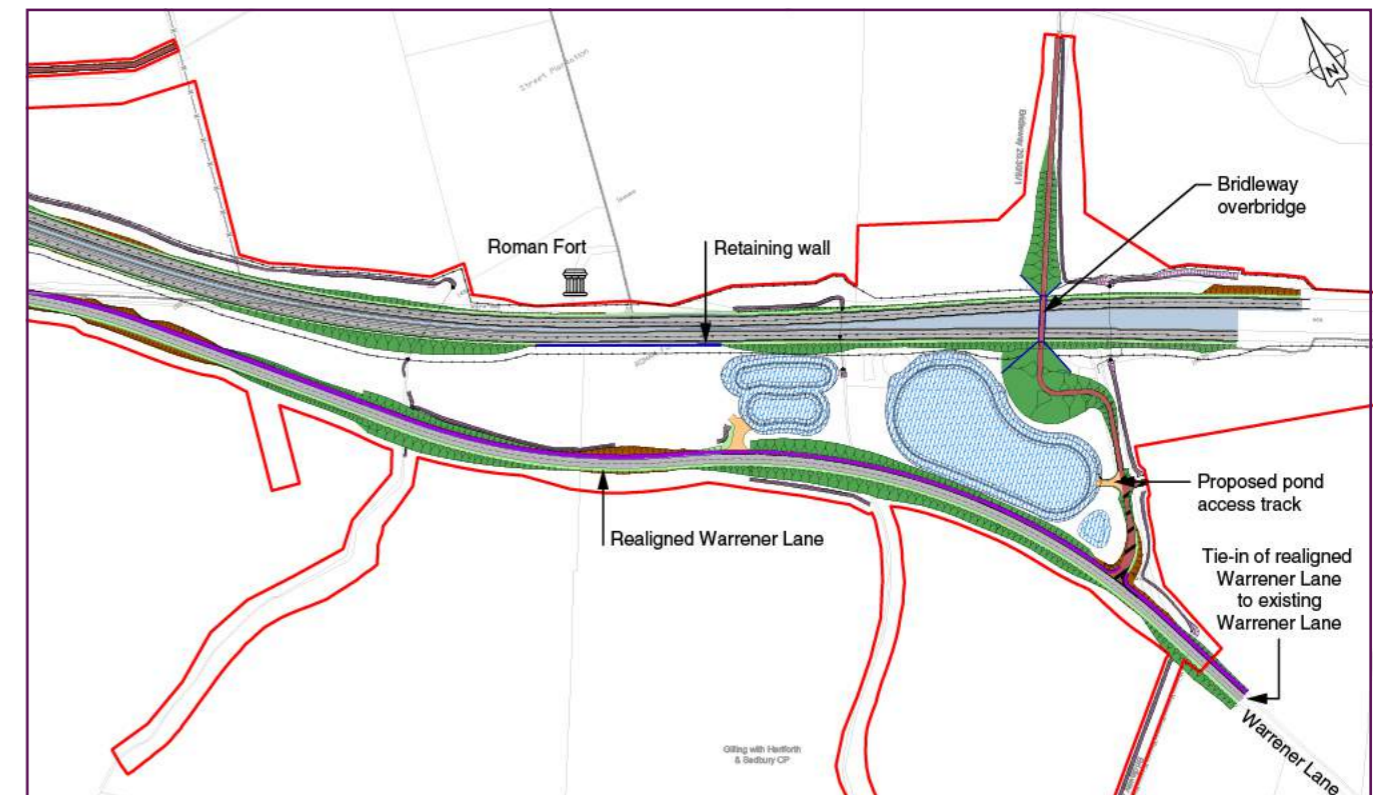
By reducing the level of the mainline, there is an opportunity to ensure the landform of the SM is more distinguishable from the earthworks associated with the road. This has the potential to reduce the impact on the setting of the SM.

The reduction in construction will provide opportunities to shorten duration of the work and reduce the impact on road users. By matching existing A66 levels, the existing carriageway can be used during construction which will avoid the need for temporary roads and diversions which would have been necessary if the road had been raised. The construction footprint would have also been considerably larger.

It is considered that this proposed change has the potential to introduce new or different likely significant effects reported for the topics of Cultural Heritage and Landscape and Visual in the Environmental Statement. See the Environmental Appendix to this brochure for further information.



DCO design



Proposed change

DC-32 – Visualisations for Carkin Moor

Visualisations are indicative only.



DCO Design – Carkin Moor looking north west



DCO Design – Carkin Moor looking south east



Proposed change – Carkin Moor looking north west



Proposed change – Carkin Moor looking south east



DC-32 – Visualisations for Carkin Moor

Visualisations are indicative only.



DCO Design – Carkin Moor looking west



Proposed change – Carkin Moor looking west

Changes to the Limits of Deviation

Background to the changes

All road projects are designed with built-in Limits of Deviation (LoDs). These LoDs provide small degrees of flexibility in terms of where the road might lie once it is constructed. They allow for horizontal and vertical deviation from the lines and levels shown on the works plans and engineering section drawings which are submitted as part of the DCO application documentation.

The documents submitted for our DCO show the centre line of the road and then, in some cases, show limits (either side of the centre

line) within which the new road could be built. The standard LoDs included in our DCO are typically plus or minus 3m horizontally and plus or minus 1m vertically. Our DCO also sets out where we need different 'bespoke' LoDs in relation to particular works.

LoDs enable flexibility to deal with problems encountered during construction, such as difficult ground conditions. Without this flexibility, there would be a risk that the road could not be built if unforeseen issues arise during detailed design and/or once the construction team are on site.



Description of the changes

In some areas of the project, we are seeking to change (increase or decrease) the LoDs to provide greater or more limited flexibility in the design and /or construction.

The majority of these changes are required to provide increased flexibility in the alignment of the side roads connecting to the A66 main carriageway. In most cases they will allow us to tie the side road design in earlier to the existing roads which will help construction and reduce the land required for the project.

Some LoDs changes are also being requested to allow us to reduce the separation between the new A66 and the new side roads being provided.

Summary of benefits

LoDs changes will help us to:

- Carry out less complex engineering works
- Speed up construction and minimise impacts on road users
- Reduce the amount of land required for the project
- Reduce impacts on landowners and residents

The following pages outline the locations where we are looking to change the LoDs to allow us the flexibility to modify particular elements of the project design.

M6 Junction 40 to Kemplay Bank

DC-03 – Reorientation of Kemplay Bank junction

Background to the change

As one of the main points of access to Penrith, Kemplay Bank roundabout experiences high volumes of traffic from the M6, A66 and A6. This means it is prone to bottlenecks caused by high levels of congestion.

Vehicles slowing down as they approach Kemplay Bank can cause safety issues and create problems for both east/westbound traffic and north/southbound traffic as it passes through the roundabout. In our DCO application, we have introduced an underpass at this location to facilitate free-flowing traffic along the A66.

Building an underpass at Kemplay Bank, which will pass below a roundabout at ground level for the A6 and local traffic, is complex. It is also time-consuming to construct and will introduce several temporary traffic management phases which will change the roundabout configuration in order to keep traffic moving at this location during construction.

Description of the change

As we have moved into detailed design, we identified an opportunity to improve buildability, reduce the traffic management phases and shorten the overall construction period at Kemplay Bank. This will help minimise the potential disruption to the local community.

If we change the shape of the proposed roundabout from an oval with the longest axis running east west, to an oval with the longest axis running north south, we will be able to construct the new bridges, which carry the roundabout over the new underpass,

principally offline. This enables the traffic phases to be simplified and reduces the time during construction that the roundabout has to operate in a temporary configuration.

We are also looking at raising the mainline through the underpass, which will have several benefits. It reduces the amount of material which is required to be excavated and taken off site, reduces the length of retaining structures required on the approach to the underpass and shortens the construction programme. We are looking to introduce a central pier for these bridges which reduces the thickness of the bridge and allows us to further raise the mainline whilst maintaining the required headroom under the bridge.

This change would be an application to change the Limits of Deviation (LoDs) for the Kemplay Bank scheme.

Reason for the change

We would be able to construct the bridges (on which the new local road roundabout would be constructed) principally offline, speeding up the build programme and reducing the time traffic would be diverted and reducing any potential disruption.

By raising the mainline using a combination of methods including piers to the bridges, we can reduce the depth and weight of the structure above them. This change means we have to excavate and transport less material as well as build smaller retaining walls for the below ground level section of the road. This would also help to reduce the depth of the drainage for the underpass which is currently at a depth of around 13m below the road at its maximum.

This change will help us to reduce the time it takes to build the Kemplay Bank junction, reducing diversions and disruption caused to local drivers over this long build period. We think this change may help to reduce construction by approximately nine months.

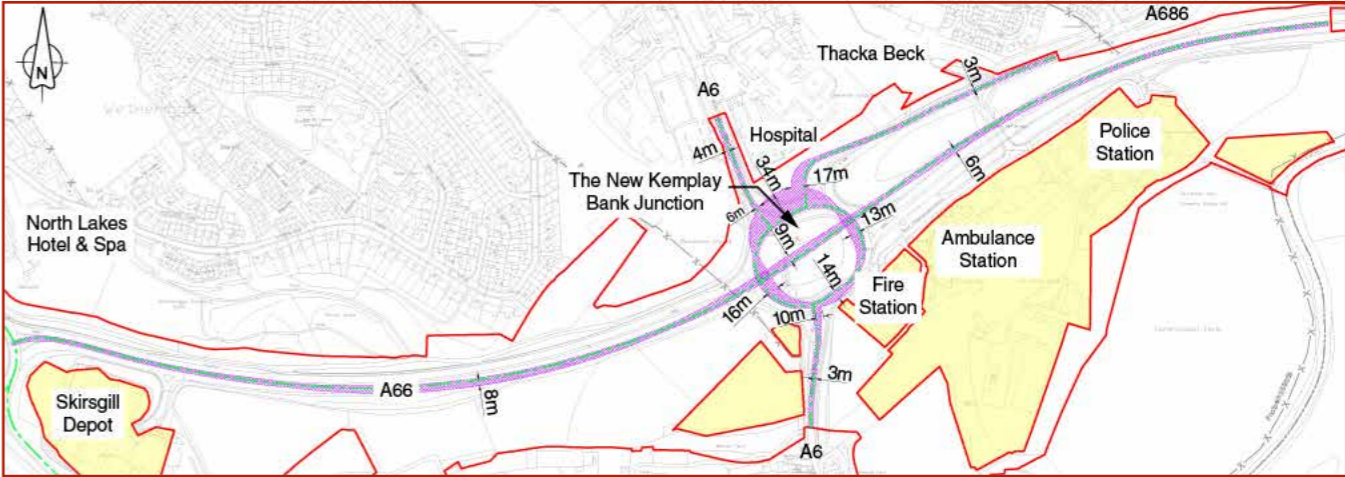
This change may affect the amount of land we need to acquire permanently and use temporarily, particularly on the north side of the roundabout, where we would need to acquire more land permanently to accommodate the changed shape of the roundabout. This would be the case both at the rugby playing fields where an additional slither is required and at the hospital grounds. We are in discussions with landowners around how we might mitigate these effects.

We will continue to engage with the blue light community to ensure our work does not adversely affect their ability to deliver their services.

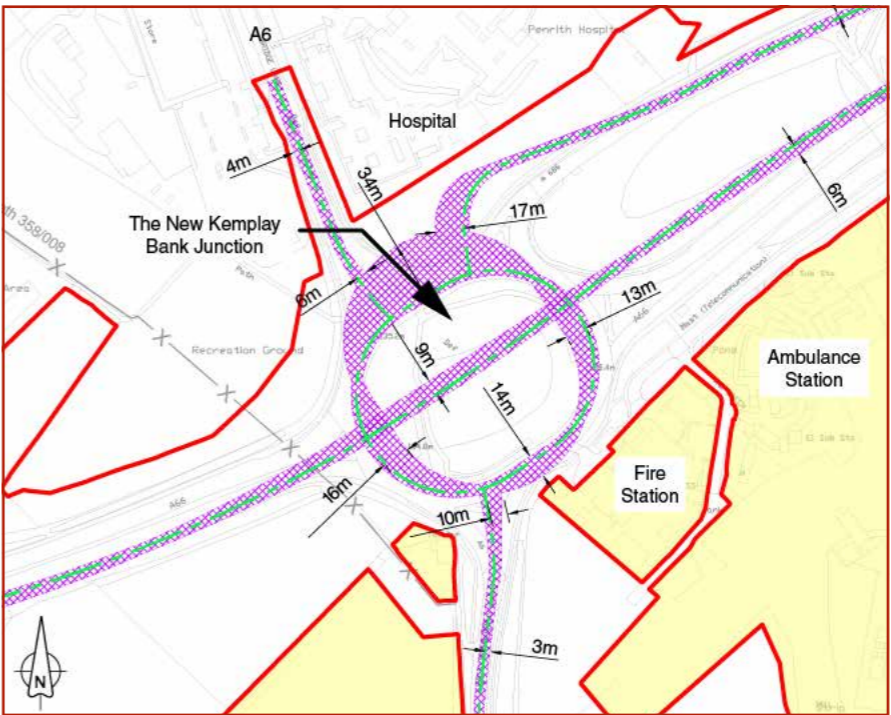
The change will also allow us to reduce the impacts on essential utility services. The Kemplay Bank area carries a large amount of utilities infrastructure – such as water, gas and electricity services underground. By building the structures offline, we will be able to divert these services once rather than multiple times with the associated outages while work is carried out.

It is considered that this proposed change has the potential to introduce new or different likely significant effects reported for the topics of Biodiversity, Landscape and Visual, Noise and Vibration, Population and Human Health, and Road Drainage and Water Environment in the Environmental Statement. See the Environmental Appendix to this brochure for further information.

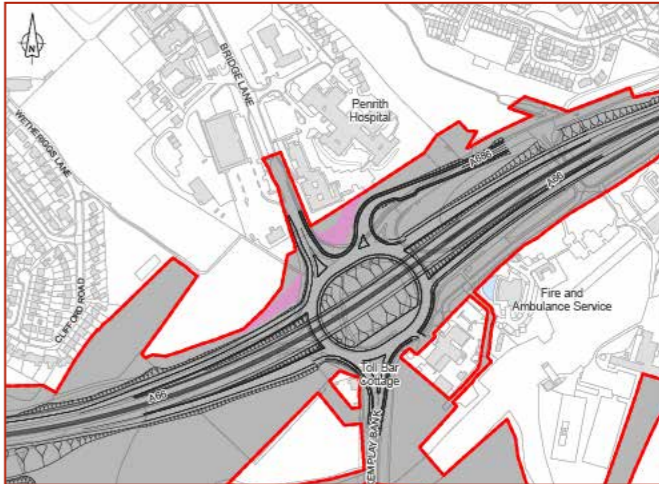




The purple area shows the area within which the final road might be built



Proposed change to Limits of Deviation at the new Kemplay Bank junction. The widths of the proposed changes to the LODs are shown on the image above



Reorientation of Kemplay Bank Junction. Previously land required temporarily is now required permanently in two locations.

Penrith to Temple Sowerby

DC-04 – Separation of, and greater flexibility for, shared public rights of way and private access track provision on the Penrith to Temple Sowerby scheme

In our DCO application we have included a shared walking/cycling and private access track to the north of the A66 from the western end of the scheme to the junction local to Center Parcs.

We have continued to engage with stakeholders and landowners to identify opportunities to improve provision. In our work with landowners and their agents, we

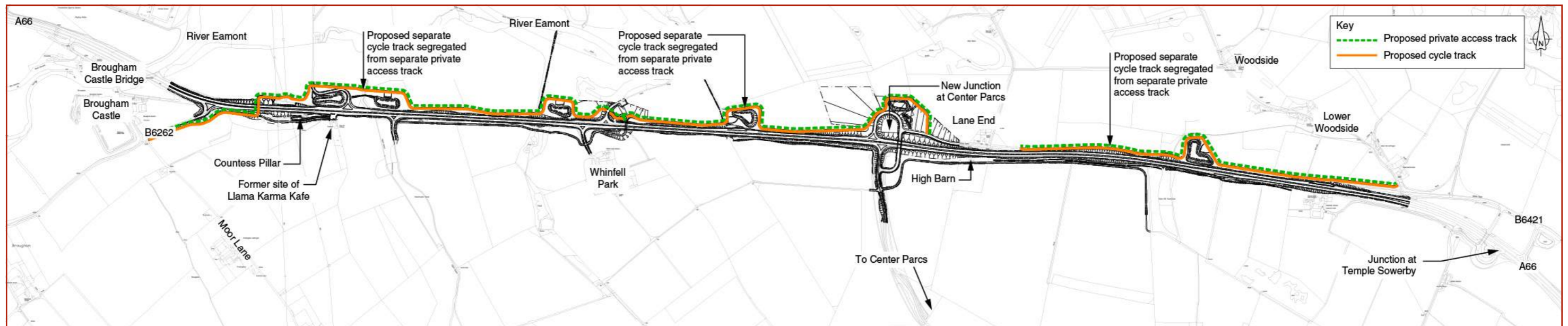
have had feedback about how these routes are shared. Some landowners are concerned there could be potential safety and security issues associated with the shared routes.

They tell us that separating the tracks could avoid any potential conflict between users and heavy farm machinery and provide better security for the estate, mitigating issues of potential anti-social behaviour.

We are therefore proposing that the DCO will include greater flexibility, via increased limits of deviation (LoDs), that will enable two separate routes to be developed. See plan below and page 60 for further information on LoDs.

This plan shows the public right of way to the north of the balancing ponds, however there would be flexibility in the LoD change for them to move to the south where possible.

It is considered that this proposed change has the potential to introduce new or different likely significant effects reported for the topics of Biodiversity and Road Drainage and Water Environment in the Environmental Statement. See the Environmental Appendix to this brochure for further information.



Proposed change

Penrith to Temple Sowerby

DC-06 – Increase in vertical Limits of Deviation local to Shell Pipeline

There is an underground, high-pressure fuel pipeline crossing under the A66, close to the Countess Pillar, in Brougham.

We have been in ongoing discussions with Shell about this pipeline and how we can minimise the impact that our project has on its operation. Please see page 19 DC-05 – Removal of junction for Sewage Treatment Works.

As part of these discussions, further details have been disclosed by Shell about how the design of the A66 project and its construction should be managed in this location. This information has led to a change in the assumptions made about how the pipeline crossing under the A66 needs to be treated. Due to these discussions, we are applying for a change to the LoDs in this area to allow us to raise the level of the road. This increase in the level of the road is required to allow for the permanent installation of a protective slab below the new road and above the existing pipeline.

We are proposing to extend the LoDs by 1m vertically upwards, which should allow us to accommodate any unforeseen issues at the construction stage, and to ensure adequate working space around the pipeline.

We have completed initial trial holes to investigate the area around the pipeline and discussions are ongoing with Shell. As part of the detailed design, additional ground investigation work will be required to provide supporting information to design this protective slab.

A bridge has been included in our DCO design in this location for landowner access. Depending on the outcome of these ground investigations, the bridge may also have to be lifted in order to provide adequate clearance and headroom.

The potential increase in height of the road would be over a distance of 100m and may mean associated earthworks also need to be increased.

It is considered that this proposed change has the potential to introduce new or different likely significant effects reported for the topics of Biodiversity and Noise and Vibration in the Environmental Statement. See the Environmental Appendix to this brochure for further information.

Limits of Deviation (LoDs) allow for some flexibility in where the road might lie once it is constructed

Penrith to Temple Sowerby

DC-09 – Flexibility to reuse the existing A66 carriageway

The vertical LoDs dictate how far up or down the road can deviate from the design shown in the engineering section drawings. Along part of the length of the Penrith to Temple Sowerby Scheme we are requesting flexibility in the vertical LoDs to better facilitate online widening.

In this area the existing road is relatively straight but has a number of slight undulations (ups and downs). By relaxing the LoDs to allow the road to rise and fall to a greater extent, we would be able to utilise more of the existing A66 as the westbound carriageway of the new A66. This would mean the road could be repurposed in the existing position without extensive earthworks to dig out a new alignment.

This change could not be applied in the vicinity of the Shell pipeline (the length of road in orange below) if change number DC-06 is

implemented. It would then apply only to the lengths coloured green in the plan.

This change would have a positive impact on the construction work required for the westbound lanes of the new A66, reducing it to overlaying a new road surface, which would, in turn, reduce earthworks and associated construction vehicle movements and the duration of the build period.

It is considered that this proposed change has the potential to introduce new or different likely significant effects reported for the topics of Biodiversity and Road Drainage and Water Environment in the Environmental Statement. See the Environmental Appendix to this brochure for further information.



Long section along the centre of the A66

Temple Sowerby to Appleby

DC-11 – Earlier tie-in of Cross Street to the existing road

To the north-west of Kirkby Thore, we are seeking flexibility in the LoDs to change the alignment of Cross Street as it crosses the new A66 on a bridge structure and on the section immediately to the north. This change will let us tie-in the realigned length of Cross Street with its existing alignment at a point up to 195m closer to the new A66, while keeping the same road width of 3.5m (with passing places) which was submitted in our DCO design. See plans below.

By keeping the new road (realigned Cross Street) closer to the existing Cross Street for a longer length, we can reduce the size of the structure and earthworks, therefore reducing construction time and impact. This will also make the road more in keeping with the local roads in the area. To achieve this, we are proposing a reduction in the speed limit to 30mph (from the existing 60mph speed limit, as retained in our DCO application).

The new alignment of Cross Street, which could be achieved if the LoDs were changed, would reduce the area of land required on the

inside of the A66 close to the school and the land identified for a new housing development. To the north, it would also tie-in earlier, which would reduce the amount of construction work and the area of land required for the realignment of Cross Street.

In the DCO application Priest Lane is designated as a 'quiet lane' which is a mixed-use road suitable for use by walkers, cyclists and horse riders as well as vehicles. Increasing the lateral LoDs for Priest Lane, Cross Lane and the connected Public Right of Way (PRoW) will enable a staggered connection.

This change will reduce the area of land required for permanent works.

It is considered that this proposed change has the potential to introduce new or different likely significant effects reported for the topic of Road Drainage and Water Environment in the Environmental Statement. See the Environmental Appendix to this brochure for further information.



DCO design



Proposed change

Temple Sowerby to Appleby

DC-13 – Realignment of Main Street

A change to the LoDs applying to the realignment of Main Street, to the east of Kirkby Thore, would enable us to remove a number of impacts on landowners and their premises.

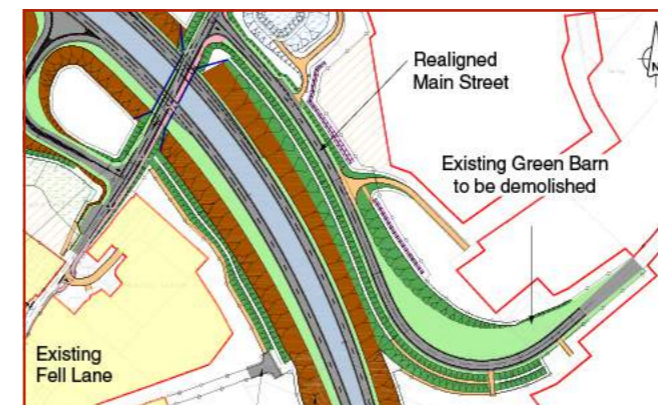
This slight change to the realignment of Main Street would require a reduction in the speed limit to 30mph (from the existing 60mph limit, as retained in our DCO application) as vehicles approach the village. This reduction in speed enables the verge widths to be reduced as drivers will be travelling at a slower speed meaning that the visibility at the curve of the road can be reduced.

By making this slight change we would be able to retain the landowner's barn and the existing private access track off Main Street,

also reducing our impact on neighbouring landowners where a replacement access road is currently proposed.

The change would also enable a reduction in the required earthworks and less land required for the realigned road.

It is considered that this proposed change does not have the potential to change the likely significant effects reported for any topic in the Environmental Statement. See the Environmental Appendix to this brochure for further information.



DCO design



Proposed change

Limits of Deviation (LoDs) allow for some flexibility in where the road might lie once it is constructed

Temple Sowerby to Appleby

DC-14 – Realignment of Sleastonhow Lane

By amending the LoDs at Sleastonhow Lane in Kirkby Thore, we would be able to introduce more flexibility to enable a reduction in the size of the bridge and associated earthworks, minimising impacts on the landowner in this location.

Sleastonhow Lane would be designed in line with guidance for rural roads and the proposed change would enable the road to cross the new A66 more directly at a right angle (see plans below). This more direct crossing would create two sharper bends where the new structures tie-in with the existing lane. To achieve this, we are

proposing to reduce the speed limit to 30 mph (from the existing 60mph, as retained in our DCO application). Sleastonhow Lane would remain in keeping with other local rural lanes with a width of 3.5m and passing places at a maximum spacing of 200m. This change would also enable us to maintain more of the field hedgerows in this location.

It is considered that this proposed change does not have the potential to change the likely significant effects reported for any topic in the Environmental Statement. See the Environmental Appendix to this brochure for further information.



DCO design



Proposed change

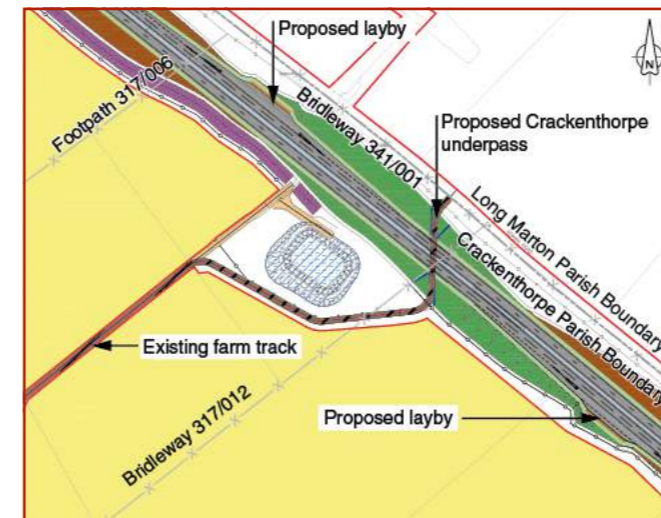
Limits of Deviation (LoDs) allow for some flexibility in where the road might lie once it is constructed

Temple Sowerby to Appleby

DC-15 – Realignment of Crackenthorpe underpass

Our DCO application proposes an underpass at Crackenthorpe for the use of the landowner and to accommodate a diverted footpath and bridleway. A change to the LoDs applying to the underpass and the footpath to the south of the A66, would enable us to straighten and shorten the alignment of the underpass and footpath. This would also reduce the area of land required and reduce the complexity of construction works.

It is considered that this proposed change does not have the potential to change the likely significant effects reported for any topic in the Environmental Statement. See the Environmental Appendix to this brochure for further information.



DCO design



Proposed change



DCO design WCH route



Proposed change WCH route

Appleby to Brough

DC-20 – Update to Limits of Deviation on eastbound connection to local road (immediately west of Hayber Lane)

On the Appleby to Brough stretch of the route, our DCO application built in some flexibility to move the mainline downward, if possible, during detailed design. This flexibility was included because we recognise that the road at this location has been built up and, in some areas, is as high as 14m above the current levels.

This change is to relax the vertical LoDs on the side road, which joins the de-trunked A66 to the new mainline. This would enable

the connecting road to move downwards to the same degree as the mainline during the detailed design.

It is considered that this proposed change does not have the potential to change the likely significant effects reported for any topic in the Environmental Statement. See the Environmental Appendix to this brochure for further information.



Limits of Deviation (LoDs) allow for some flexibility in where the road might lie once it is constructed

Appleby to Brough

DC-22 – Realignment of Warcop westbound junction

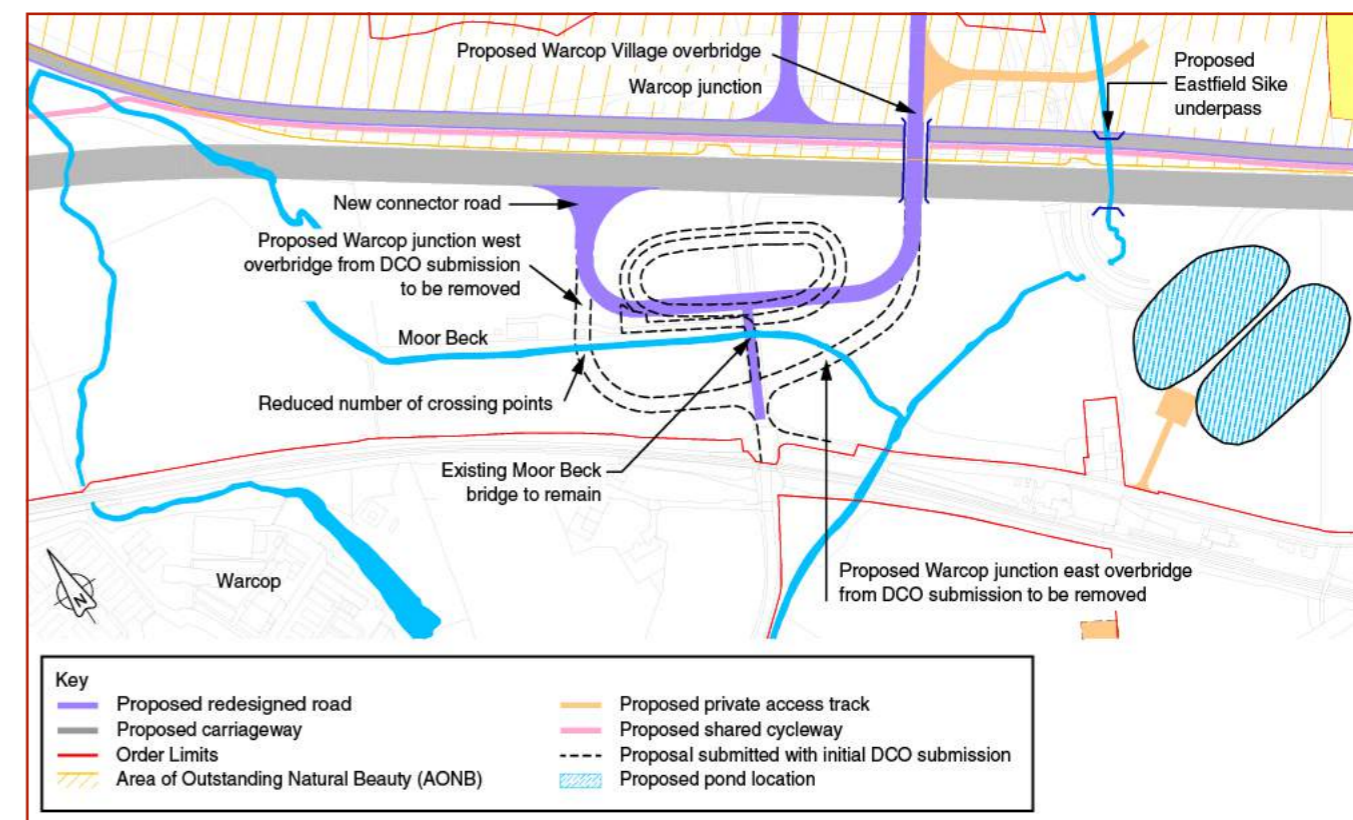
At Warcop our design includes an overbridge which will give access to the new A66 in both directions for people travelling to and from the village. In our DCO application the westbound junction and loop, on the south side of the A66, crosses the Moor Beck in two locations.

By seeking more flexibility in the LoDs we aim to move the loop closer to the new A66, which would narrow the gap between the loop and the A66 dual carriageway (see plan below).

This would require the relocation of the balancing pond from within the loop of the junction to an alternative location which will be developed during detailed design. The realignment of the south side of the bridge would have the

advantages of limiting impacts on the beck, removing the structures required for the two crossings, and the amount of construction required. The construction period would be shorter and disruption reduced as a result of the proposed change.

It is considered that this proposed change has the potential to introduce new or different likely significant effects reported for the topics of Biodiversity, Landscape and Visual, and Road Drainage and Water Environment in the Environmental Statement. See the Environmental Appendix to this brochure for further information.



This plan helps to compare the DCO design with the proposed change to the access arrangements. The DCO design is shown in dotted black with the proposed change (in principle) shown in colour. Further detailed design of aspects such as ponds and accesses continue to be developed.

Appleby to Brough

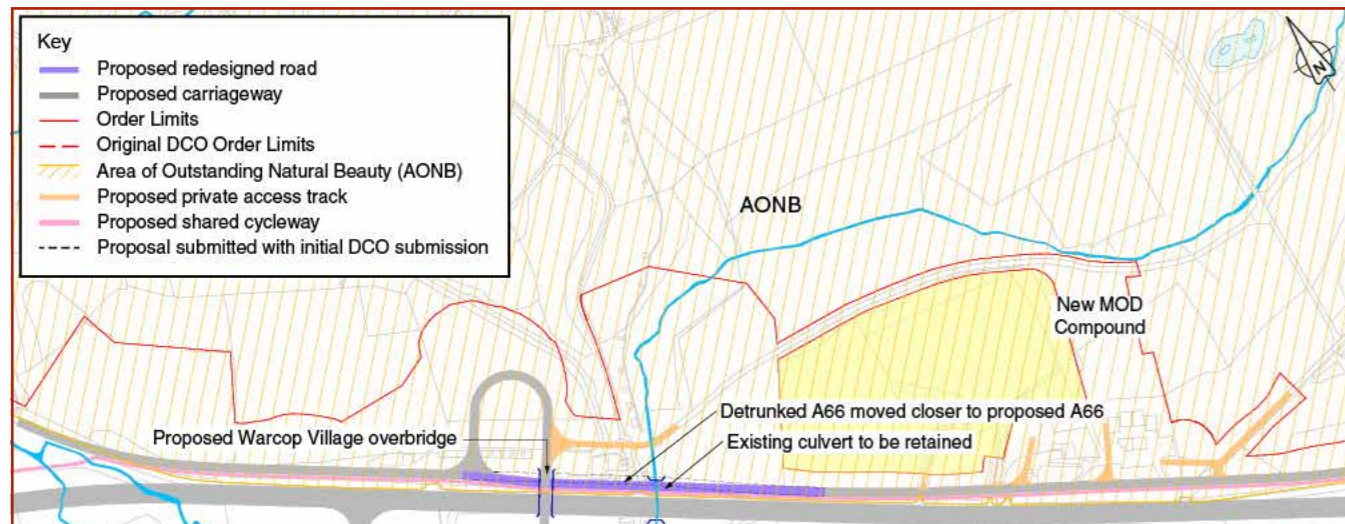
DC-23 – Realignment of de-trunked A66 to be closer to new dual carriageway at Warcop

Local to the junction at Warcop, our DCO design includes separation between the dual carriageway and the de-trunked length of the A66 to help us build the roads. Early detailed design has determined that this provision is no longer required. An increase in the horizontal LoDs will enable the de-trunked A66 to move southwards closer to the dual carriageway.

As a result of the proposed change, the bridge (that forms part of the junction) spanning the new A66 and the de-trunked section of the old A66 as well as the culvert at Eastfield Syke

can be reduced in length. This would reduce the area of land required from the Ministry of Defence land to the north and would reduce the size of the structure and therefore the construction period and associated disruption.

It is considered that this proposed change has the potential to introduce new or different likely significant effects reported for the topics of Biodiversity and Road Drainage and Water Environment in the Environmental Statement. See the Environmental Appendix to this brochure for further information.



For proposed changes south this location please see DC-22

Appleby to Brough

DC-24 – Reuse of existing A66 (north of Flitholme)

Our DCO proposes an underpass which leads under the new A66 road and onto the de-trunked section of the realigned old A66 to provide local access in both directions.

Currently the proposal is to rebuild the de-trunked section of the A66 to the north of the current road. A change to the LoDs applying to this would enable us to utilise more of the existing road. We would require a reduction in the speed limit to 30mph (from the existing 60mph limit, as retained in our DCO application) to achieve this on the de-trunked A66, which would bring it more in keeping with the local road network.

The proposed change would have a number of benefits. It would reduce tree loss, as an area of dense, mature woodland could be retained to the north of the existing A66. This

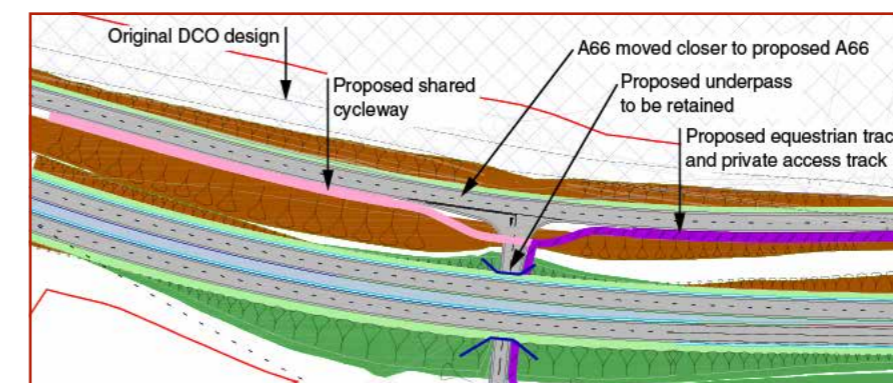
retention of trees could also help to reduce the areas of environmental mitigation land required for replacement woodland. It would also reduce the area of land required from the landowner and would enable more of the existing hedgerows and dry-stone boundary walls to be retained.

Construction time and associated disruption would also be reduced, and the earthworks, which would have been required to build the new de-trunked section, would also be minimised.

It is considered that this proposed change has the potential to introduce new or different likely significant effects reported for the topic of Road Drainage and Water Environment in the Environmental Statement. See the Environmental Appendix to this brochure for further information.



DCO design



Proposed change

Bowes Bypass

DCO-28 – Realignment of local access road to be closer to new dual carriageway east of Bowes

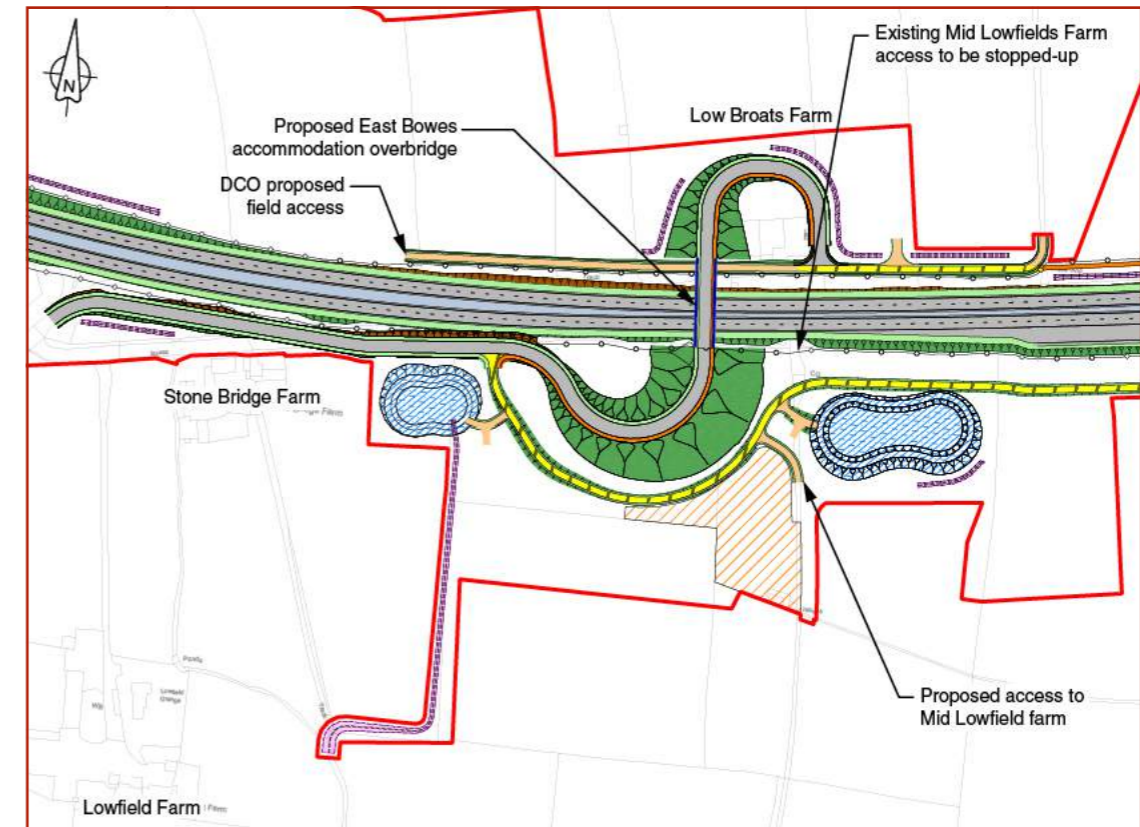
East of Bowes our DCO design includes separation between the dual carriageway and a private access track to help us build the road. Early detailed design has determined that this provision is no longer required. An increase in the lateral LoDs will enable the overbridge design to be simplified and moved closer to the dual carriageway.

As a result of the proposed change to the layout, a bridge over the A66, which carries a footpath and private access track, could be reduced in length by approximately 20m.

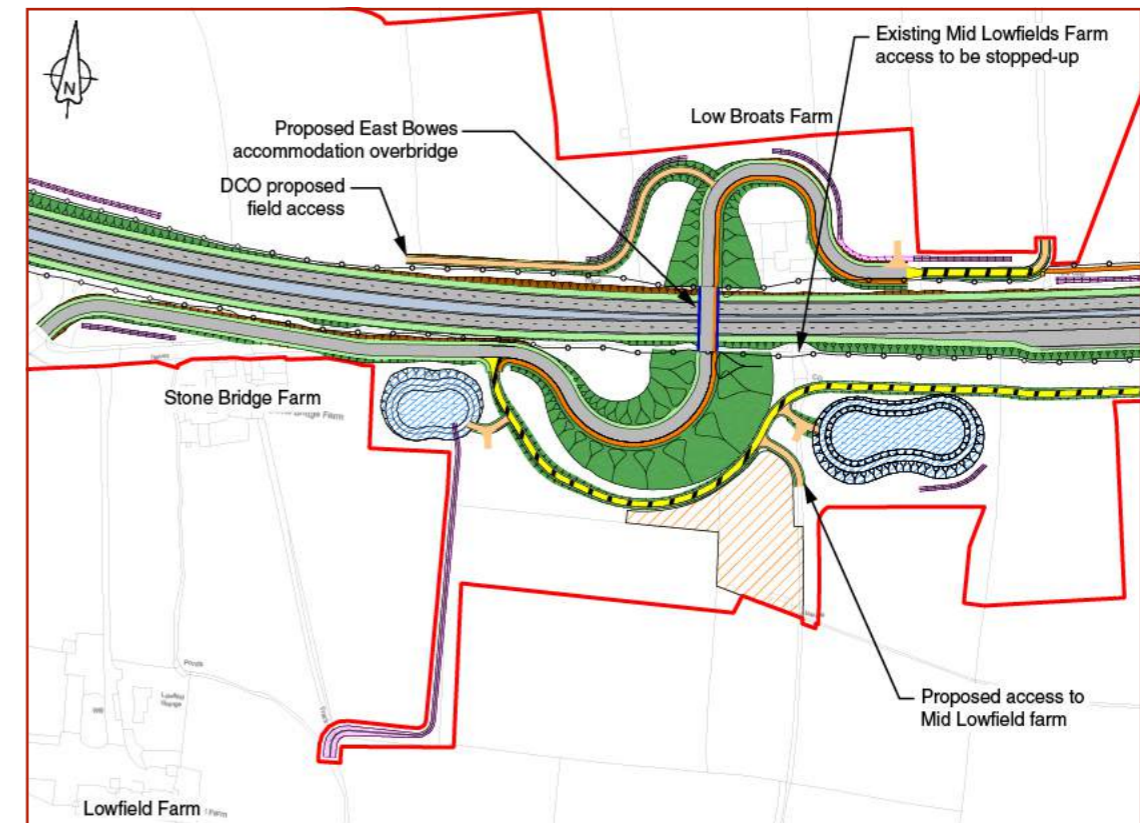
By reducing the size of the structure we can reduce the construction period, which would minimise disruption for local people and road users.

The visual impact of the bridge would also be reduced.

It is considered that this proposed change has the potential to introduce new or different likely significant effects reported for the topic of Landscape and Visual in the Environmental Statement. See the Environmental Appendix to this brochure for further information.



DCO design



Proposed change

Limits of Deviation (LoDs) allow for some flexibility in where the road might lie once it is constructed



Limits of Deviation (LoDs) allow for some flexibility in where the road might lie once it is constructed

Stephen Bank to Carkin Moor

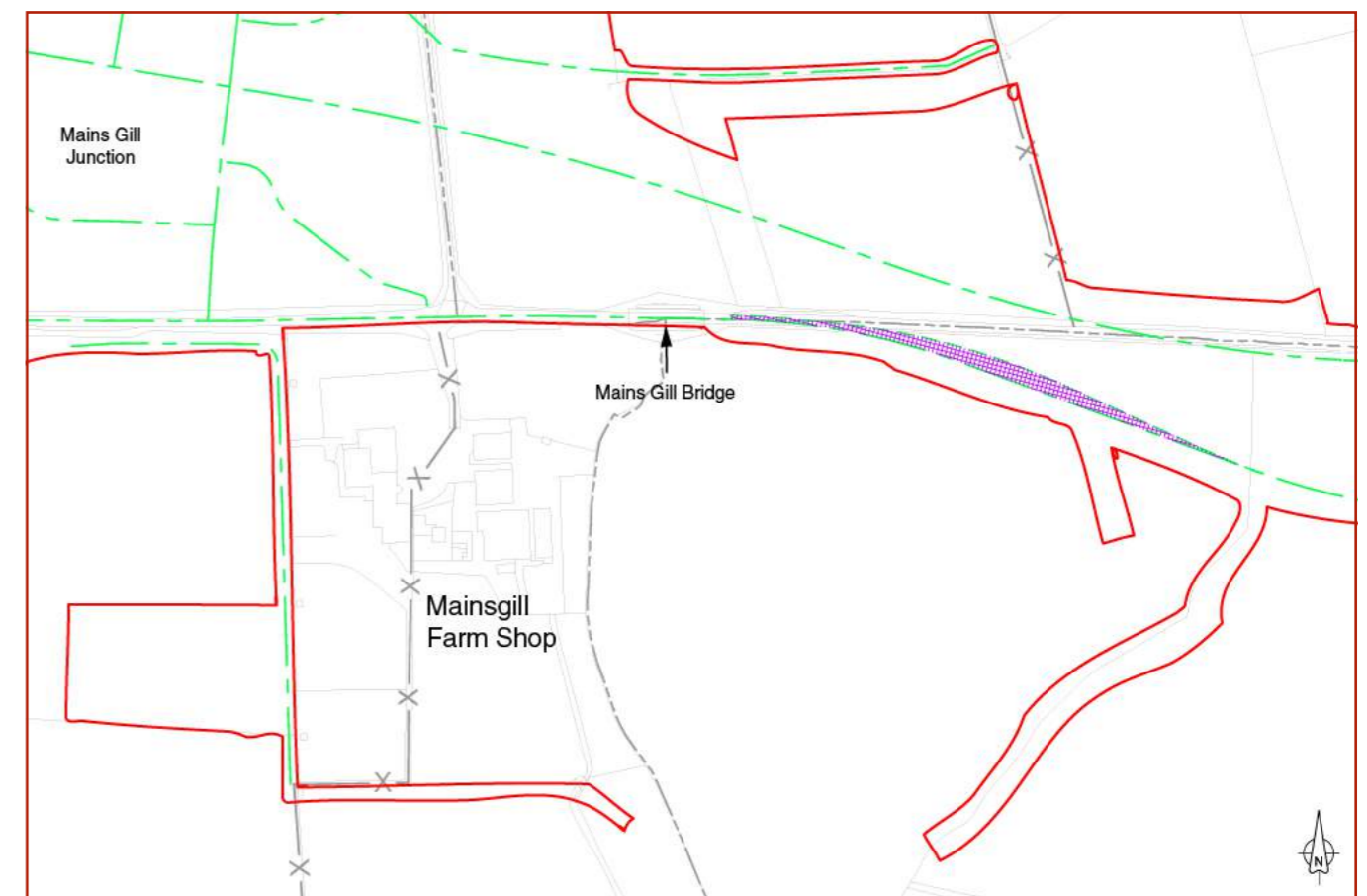
DC-31 – Realignment of Warrener Lane

In our DCO application we have designed Warrener Lane to connect with the de-trunked section of the A66, west of the all-movement junction close to Mainsgill Farm shop. See plan below.

A change to the LoDs in this location would provide us with an opportunity to move Warrener Lane northwards closer to the A66. This would be done without encroaching on

the Scheduled Monument. This proposed change would allow us to reduce the area of land required, shorten the construction period and reduce the impacts on local people.

It is considered that this proposed change does not have the potential to change the likely significant effects reported for any topic in the Environmental Statement.



This plan helps to compare the DCO design with the proposed change. The purple hatched area indicates the potential change northwards which is up to 12m at its widest point

What happens next

Following the consultation we will summarise the feedback we collect from you into a Change Consultation Report.

This will inform our change application to the Examining Authority, which may include some, or all, of the proposed changes set out in this consultation. The Examining Authority will then consider our proposed changes application and make the final decision on which of the changes can be accepted into the DCO examination.

We are currently in the examination period which launched in November 2022. The examination can take up to six months, following which the Examining Authority has three months to report to the Secretary of State. They will then have a further three months to make their decision. If the project is approved, construction will start in 2024.

The Planning Inspectorate's website will provide updates on the process – see below.

Keep in touch

You can contact us by email on **A66NTP@nationalhighways.co.uk** or call us on **0333 090 1192**.

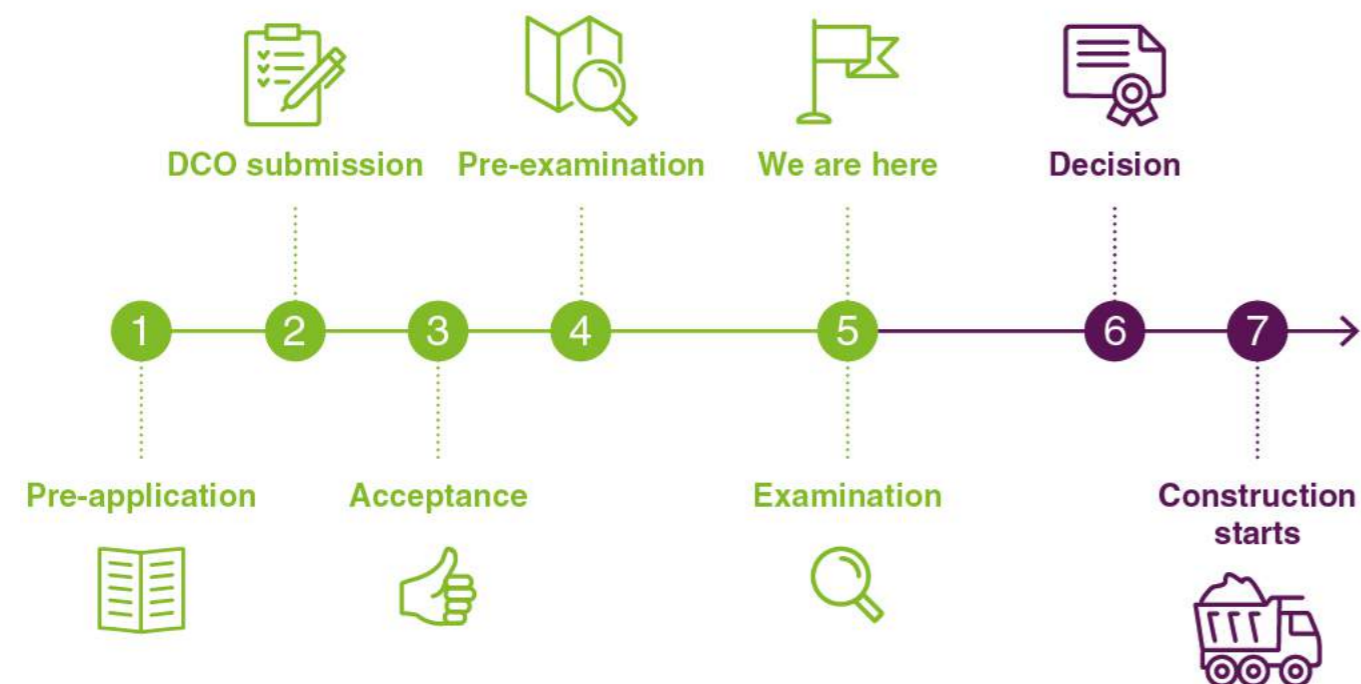
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Application process



For more information about the DCO process, please visit:
<https://infrastructure.planninginspectorate.gov.uk/application-process/the-process/>

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A66 Northern Trans-Pennine
project
**DCO Changes Consultation:
Environmental Appendix**

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1 Environmental Appendix

1.1 Introduction

- 1.1.1 The tables in this appendix set out where National Highways considers there is the potential for a proposed change to give rise to a new or different likely significant effect compared to those reported in the Environmental Statement submitted as part of the Development Consent Order (DCO) application. The purpose of the information presented in this appendix is to give consultees an understanding of the risks of new or different likely significant effects arising from these changes.
- 1.1.2 It should be noted that the risks reported within the tables in this appendix are based on the potential worst case scenario assumptions, which may differ by topic and by change, but which consider, for example, that the fullest extents of Limits of Deviation are used (or that the extent of Limits of Deviation used are those closest to receptors), or that all vegetation within new land or within the design footprint is lost. Unless stated otherwise, assumptions set out within the Environmental Statement (ES) (Examination Library reference APP-043 to APP-057) submitted as part of the DCO application have been applied in order to inform the assessment.
- 1.1.3 The assessment has also taken into consideration, where relevant, commitments proposed within the Environmental Management Plan (EMP) (Examination Library reference APP-019) and the Project Design Deliverables (PDP) (Examination Library reference APP-302)¹ to identify where potential effects may be managed through these documents in order to reduce the risk of new or different likely significant effects arising from a proposed change. This is expressly set out in the tables below, where relevant, and in such instances, both the unmitigated risk and the potential for mitigation via the PDP or EMP are noted, unless it is beyond doubt that mitigation via the PDP or EMP would be effective (in which case only the mitigated risk is reported). This is explained in either case.
- 1.1.4 For those proposed changes and topics where the commitments contained in the EMP and PDP do not have the potential to reduce the risk of a new or different likely significant effect, neither the PDP or EMP is referenced in the tables below. In such cases, we are continuing to consider and develop mitigation measures and, where possible, potential mitigation measures are noted within the tables. However, where mitigation measures are not yet developed or secured, this is noted and the 'worst case' (i.e. unmitigated) risk is reported in this appendix.
- 1.1.5 However, to note, notwithstanding the above, where we consider there is the potential for a proposed change to give rise to a Habitats Regulation Assessment-related likely significant effect, such an effect is also reported on an unmitigated basis with potential mitigation noted – this is specified where appropriate.
- 1.1.6 It should be noted that the assessments undertaken and reported in this appendix focus only on the aspects of a proposed change where the parameters or limits within which the Project can be constructed or operated (and secured by the DCO) would change. They therefore do not, for example, consider where other components of the Project could accommodate a proposed change within the parameters already secured in the DCO (e.g. in the case of ponds, their locations are not fixed and are subject to detailed design whether or not a proposed change comes forward – as

¹ Please note that revised versions of these documents were submitted at Deadline 3 of the Examination. Updated Examination Library references for these revised versions were not available at the time this document was produced.

such, this inherent flexibility is already assessed in the ES). Each of the changes in this consultation would have to be accepted by the Examining Authority before being included in our DCO. Where necessary or appropriate, we will provide further details of any proposed mitigation measures as they become available, to allow people to comment on those details as part of the examination of the DCO application.

- 1.1.7 Any commitments to further mitigation will be secured through the DCO, with the appropriate mechanism for securing it being confirmed when the mitigation measure is introduced into the DCO examination.

1.2 Cumulative Effects Between Changes

- 1.2.1 While these changes are considered in isolation in terms of the proposed changes to the DCO application, the environmental assessment set out in this appendix reports, where applicable, where there is a risk of cumulative effects between specific changes or where a single receptor is at risk across multiple topics .

- 1.2.2 In the topic of biodiversity, individual changes have the potential for non-significant changes to impacts on habitat and protected species which, in isolation are not anticipated to give rise to any new or different adverse significant effects, however, should all of the changes be accepted, there is a risk of new likely significant effects at a Project level to habitats and protected species. Further work is ongoing to develop mitigation. As part of National Highways' own commitment to reduce all impacts, there may be instances where mitigation is developed in response to non-significant effects at scheme or receptor level which is anticipated to reduce the risk of this Project-wide risk and risk of in-combination effects to the same receptor. For the purposes of this Appendix, it has been assumed that all changes will be pursued in their current form and, further, accepted by the Examining Authority into the DCO Examination. However, should any of the changes not be pursued and/or accepted by the Examining Authority, the risk of this significant effect may change.

1.3 Next Steps

- 1.3.1 An ES addendum will be developed and included alongside the design changes application. That addendum will reflect the assessment set out in this appendix, alongside any further development of the proposed change as a result of consultation and any identified mitigation solutions.

2 Glossary

Term	Definition
Accommodation overpass/underpass /structure	A bridge under or over the A66 that serves an affected area of land or property, not considered a public highway.
Accommodation/access road or track	A new or altered access road or track serving an affected area of land or property, not considered a public highway
Agricultural Land Classification (ALC)	A relative measure of agricultural land quality in England and Wales. In practice, the ALC grades are defined by reference to the land's physical characteristics. The most productive and flexible land falls into Grades 1 & 2 and Subgrade, 3a and collectively comprises about one-third of the agricultural land in England and Wales. About half the land is of moderate quality in Subgrade 3b or poor quality in Grade 4. The remainder is very poor-quality land in Grade 5, which mostly occurs in the uplands.
Air quality exceedance	An instance of pollutant concentrations exceeding an air quality standard.
Air quality objectives (AQO)	Policy targets generally expressed as a maximum ambient pollutant concentration to be achieved. The objectives are set out in the UK Government's Air Quality Strategy (Department for Environment Food & Rural Affairs, 2007) for the key air pollutants.
Application	This refers to an application for a Development Consent Order. An application consists of a series of documents and plans which are submitted to the Planning Inspectorate and published on its website.
Aquifer	An underground rock formation containing water, often used as a water source.
Area of Outstanding Natural Beauty (AONB)	An area designated under Section 82(1) of the Countryside and Rights of Way Act 2000 for the purpose of conserving and enhancing its natural beauty.
Assessment	A process by which information about effects of a proposed plan, project or intervention is collected, assessed and used to inform decision-making.
Best and most versatile (BMV) land	Land defined as grade 1, 2 or 3a of the Agricultural Land Classification. This land is considered the most flexible, productive and efficient and is most capable of delivering crops for food and non-food uses.
Biodiversity	Biological diversity: The variety of life forms in a given area, includes all species of plants and animals, their genetic variation and the complex ecosystems of which they are part.
Cumulative effects	The combined residual effects of a project in its entirety (all schemes), and the combined effects with other projects.
Design Manual for Roads and Bridges (DMRB)	A set of documents that provide a comprehensive manual system which accommodates all current standards, advice notes and other published documents relating to the design, assessment and operation of trunk roads.

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Design speed	The design speed is a tool used to determine geometric features of a new road design based on the anticipated vehicle speeds on the road.
Detailed Design	The process of taking on and developing the preliminary design.
Development Consent Order (DCO)	The means of obtaining permission for developments categorised as nationally significant infrastructure projects.
Do-Something (DS)	The road project under consideration in the Opening Year /Design Year (in the case of this scheme, 15 years after assumed opening).
Environmental Management Plan	Provides the framework for recording environmental risks, commitments and other environmental constraints and clearly identifies the structures and processes that will be used to manage and control these aspects. The EMP also seeks to ensure compliance with relevant environmental legislation, government policy objectives and scheme specific environmental objectives. It also provides the mechanism for monitoring, reviewing and auditing environmental performance and compliance.
Earthworks	The process of excavating or increasing level of soil.
Effect	Term used to express the consequence of an impact (expressed as the 'significance of effect'), which is determined by correlating the magnitude of the impact to the importance, or sensitivity, of the receptor or resource in accordance with defined significance criteria. For example, land clearing during construction results in habitat loss (impact), the effect of which is the significance of the habitat loss on the ecological resource.
Embankment	Artificially raised ground, commonly made of earth material, such as stone.
Environmental assessment	A method and a process by which information about environmental effects is collected, assessed and used to inform decision-making
Environmental Statement (ES)	A statutory report produced by the applicant including: 1) a description of the project 2) a description of the likely significant effects of the project on the environment 3) a description of the features of the project and/or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment 4) a description of the reasonable alternatives 5) a non-technical summary 6) any additional information relevant to the characteristics of a project.
Floodplain	A floodplain or flood plain is an area of land adjacent to a stream or river which stretches from the banks of its channel to the base of the enclosing valley walls and which experiences flooding during periods of high discharge.
Greenhouse Gas (GHG)	A gas that contributes towards global warming by trapping heat given off from the earth's surface. Under the United Nations' Kyoto Protocol, the 6 GHG gases are carbon dioxide, methane, nitrous oxide, perfluorocarbons, hydrofluorocarbons and sulphur hexafluoride.
Heritage Resources	Heritage Resources are those resources, both human and natural, created by activities from the past that remain to inform present and future societies of that past

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Historic Environment	All aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and landscaped and planted or managed flora.
Impact	Change that is caused by an action (for example land clearing (action) during construction which results in habitat loss (impact)).
Landscape character area (LCA)	Distinct, recognisable and consistent patterns of elements and activity that make one landscape different from another. Note these can be a combination of landscape, biodiversity, geodiversity and economic activity that follow natural, rather than administrative boundaries.
Light Detection and Ranging (LIDAR)	A remote sensing method that uses light in the form of a pulsed laser to measure ranges (variable distances) to the Earth.
Mineral sites	Operational sites or sites identified within strategic planning documents for the extraction of minerals
Mitigation	Measures including any process, activity, or design to avoid, reduce, remedy or compensate for negative environmental impacts or effects of a development.
Mitigation measures	Methods employed to avoid, reduce, remedy or compensate for significant adverse impacts of development proposals.
Monitoring	A continuing assessment of the performance of the Project, including mitigation measures. This determines if effects occur as predicted or if operations remain within acceptable limits, and if mitigation measures are as effective as predicted.
National Networks National Policy Statement 2014 (NPSNN)	A national policy document issued by the government which sets out the need for and the government's policies for the development of nationally significant infrastructure projects on road and rail networks in England. It is the basis for the examination of a Development Consent Order application by the Examining Authority and decisions by the Secretary of State. It was designated as national policy by the Government in January 2015.
Noise Barrier	A solid construction that reduces unwanted sound. It may take many forms including: engineering cutting; retaining wall; noise fence barrier; landscape earthworks; a 'low-level' barrier on a viaduct; a parapet barrier on a viaduct; or any combination of these measures. Also called an attenuation barrier.
Noise Important Areas (NIA)	These areas provide a framework for the local management of the Important Areas.
Opening Year	In the case of the A66 project, assumed to be 2029.
Operational	The functioning of a project on completion of construction.
Phase 1 Habitat Survey	Recognised standard methodology for collating information on the habitat structure of a particular site.
Project	This Project comprises of eight individual schemes. Scheme names are (west to east): <ul style="list-style-type: none"> • M6 Junction 40 to Kemplay Bank • Penrith to Temple Sowerby • Temple Sowerby to Appleby • Appleby to Brough • Bowes Bypass • Cross Lanes to Rokeby

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	<ul style="list-style-type: none"> • Stephen Bank to Carkin Moor • A1(M) Junction 53 Scotch Corner
Public Rights of Way (PRoW)	A way over which the public have a right to pass and repass. The route may be used on foot, on (or leading) a horse, on a pedal cycle or with a motor vehicle, depending on its status. Although the land may be owned by a private individual, the public may still gain access across that land along a specific route
Receptor	A defined individual environmental feature usually associated with population, fauna and flora that has potential to be affected by a project
Scheduled Monument	Historic building or site included in the Schedule of Monuments kept by the Secretary of State for Culture, Media and Sport under the regime set out in the Ancient Monuments and Archaeological Areas Act 1979.
Scheme	This Project comprises of eight individual schemes. Scheme names are (west to east): <ul style="list-style-type: none"> • 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
Setting	DMRB LA 106 defines setting as the surroundings in which a cultural heritage resource is experienced.
Significance (of effect)	A measure of the importance or gravity of the environmental effect, defined by significance criteria specific to the environmental topic.
Special Area of Conservation (SAC)	A site designated under the Habitats Directive as internationally important sites for threatened habitats and species. Following the UK's exit from the European Union, SACs now form part of the UK's National Site Network.
Visual Receptor	People who may have a view of a proposed development during construction or operation.
Walkers, cyclists and horse riders (WCH)	Walkers, cyclists and horse riders using the network.
Water Framework Directive (WFD)	The Water Framework Directive (2000/60/EC) (WFD) is a wide-ranging piece of European environmental legislation for the protection of water resources that is being transposed into UK Law
Zone of Theoretical Visibility (ZTV)	The zone from which the project is theoretically visible over 'bare earth.'
Zone of Visual Influence (ZVI)	The area within which a project may be visible and may influence the quality of views. The 'zone of visual influence' approximately covers all land from which the project is visible. It is limited by topographic features such as hill and valleys and by visual barriers such as woodland and buildings.

3 Proposed DCO Change Environmental Assessment

3.1 DC-01 – Change in speed limit west of M6 junction 40

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	<p>It is not currently anticipated that there will be any change in construction approach that will be of the scale to result in any new or different significant effects in construction emissions. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the construction dust mitigation measures outlined in the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction.</p> <p>An NO₂ concentration of 12.3µg/m³ was predicted at the closest human receptor (HSR 5 as shown on Figure 5.1 Air Quality Study Area and Constraints (APP-065)) in the operational Do Something scenario, which is well below the annual mean air quality objective. A reduction in speed limit from 70 to 30 mph in this location has the potential to create a minor worsening of effects as a result of car engines running less efficiently at 30mph than at 70mph. However, current concentrations are considered too low at HSR 5 for this proposed DCO change to have a risk of affecting the significance of the results, given the risk is so low at the closest receptor, it is not anticipated that any receptor is at risk. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p>
Biodiversity	There are no residual significant effects for construction or operation reported in the ES on any biodiversity receptor on the M6 junction 40 to Kemplay Bank scheme.	A change in speed limit is not anticipated to affect any biodiversity receptors as it not anticipated to alter the construction area as assessed with the ES. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction.

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>There are no ecologically sensitive receptors nor any water receptors in the proximity of the design change that would be affected by operational changes to air quality or drainage. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p>
Climate	<p>Greenhouse Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction or operation.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled by the measures within the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction or operation.</p>
Cultural Heritage	<p>There are residual significant effects in construction and operation reported in the ES for the M6 Junction 40 to Kemplay Bank scheme, however none of the affected receptors are in proximity of this proposed change.</p>	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. The proposed change is within the Order Limits used for the assessment within the ES therefore it is not anticipated that there would be any change to the assessment of the impact to buried archaeological remains. There may be a reduction of effect as the proposed change presents the opportunity to reduce the extent of works, however it is not considered of the scale to result in different significant effects. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is unlikely to substantially alter the mainline A66 and associated earthworks which is the dominant feature which may affect the setting of heritage features. Therefore, it is not anticipated that this</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.
Geology and Soils	<p>There are moderate impacts anticipated on Agricultural Land Classification (ALC) Grade 2 and Grade 3a soils (Best and Most Versatile (BMV) land) during construction, with between 1- 20ha of BMV land permanently lost in this scheme. This results in likely significant adverse effects.</p> <p>There are no likely significant effects predicted as a result of the operational phase of the Project.</p>	<p>The geology and soils assessment within the ES assessed the impacts to land within the Order Limits, taking a worst-case scenario of impacts. The proposed change does not change the Order Limits or require additional land .Therefore it is considered that the potential effects of the proposed change is captured within the ES assessment. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>
Landscape and Visual	<p>In relation to the DCO design in the location of the proposed change, there are no significant effects on Landscape Character Areas in construction and operation.</p> <p>There are significant effects identified in the construction phase and the first year of operation at a viewpoint as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105): Viewpoint 1.3A view from Public Right of Way 321008 looking north west. These are expected to reduce to non-significance by year 15.</p>	<p>The proposed change it is not considered to be of the scale that would result in a in significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is not anticipated to affect the road alignment, in the context of the mainline A66. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Materials and Waste	<p>No construction or operation significant effects have been identified for the M6 Junction 40 to Kemplay Bank scheme.</p>	<p>The ES assessment considered the Order Limits for each scheme and waste infrastructure on a scale beyond that of just the Project. The design change is not of a scale or nature that is anticipated to result in any change to the waste infrastructure required or the materials. While there is a reduction in works, it is not considered to be of a scale or nature to affect the</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>assessed materials required for the Project. There is no change in the Order Limits used in the assessment within the ES therefore there is no risk of different effects to minerals in the area. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES for construction or operation.</p>
<p>Noise and Vibration</p>	<p>Within the construction phase study area of 300m from the proposed design change, there are approximately 20 residential and non-residential properties. These were reported as temporary adverse likely significant effects in the ES. These receptors are located in the west of the M6 Junction 40.</p> <p>The operational phase study area of 600m for this location is limited to the area on the west of the M6 Junction 40 as the traffic on the M6 is the dominant noise source at the receptors located in the western side of the motorway. One residential receptor was reported as an adverse likely significant effect in the ES. This receptor is located at Skirsgill Lodge and within NIA ID 10284. Mitigation has been proposed in the form of a noise barrier, 2-4m in height and 35m in length (Ref. 52). With this mitigation in place for this receptor in a NIA (Noise Important Area), the identified significant effects would likely be removed. Provision of the mitigation is subject to consultation with the relevant stakeholders including the resident(s) at question. Should the barrier not be installed, then this receptor would be eligible for noise insulation under Noise Insulation Regulations (NIR) 1975.</p>	<p>It is not currently anticipated that there will be any change in construction approach that will be of the scale to result in any new or different significant effects in construction noise and vibration. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the measures outlined in the first iteration EMP (APP-019). Therefore it is not anticipated that this proposed change would result in any new or different significant effects to those reported in the ES in construction.</p> <p>In operation, the design change is anticipated to result in a reduction in speed on a section of the eastbound only. There may be a reduction in traffic noise levels, however it is not anticipated to be enough to reduce the level of significance of the identified adverse significant effect at Skirsgill Lodge. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Population and Human Health	There are nine and 28 residual likely significant effects during construction and operation, respectively, as reported in the ES for the M6 Junction 40 to Kemplay Bank scheme, however none of the affected receptors are in proximity of this proposed change.	<p>The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>The proposed change will not alter the level of access to land or businesses during operation and does not reduce the level of PRoW provision that currently exists. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects during operation.</p> <p>There is no change to the air quality, population or noise and vibration assessment results, therefore this proposed change is not anticipated to result in any different human health effects during construction or operation.</p>
Road Drainage and Water Environment	There are residual significant effects in construction and operation reported in the ES for the M6 Junction 40 to Kemplay Bank scheme, however none of the affected receptors are in proximity of this proposed change.	There are no watercourses likely to be impacted by the proposed change and it is not anticipated to change any floodplain. There are no changes to drainage and there no significant new cuttings. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES during construction or operation.

3.2 DC-02 – Realignment of walking and cycling route at Skirsgill

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	There are no sensitive human or ecological receptors within 200m of the proposed change which may be affected by changes in air quality. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction or operation.
Biodiversity	There are no residual significant effects for construction or operation reported in the ES on any biodiversity receptor on the M6 Junction 40 to Kemplay Bank scheme.	<p>The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species due to the realignment of the route. However, the proposed change is considered to result in a reduction in construction works as a result of realigning the walking and cycling through an area that has already been developed and there is therefore potential for a slight reduction in effects on biodiversity during the construction phase due to potential reduction in vegetation clearance required. Notwithstanding, the commentary above it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction.</p> <p>There may be minor changes to habitat impacts which in isolation are not considered significant as the potential new locations are situated within an area of limited value habitat. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects than as compared to those reported in the ES in operation. However as noted in section 1.2 of this document, there is a risk of cumulative effects on habitats and any associated protected species at a Project level as a result of potential non-significant effect on habitats across all changes.</p>
Climate	Green House Gas emissions – Following assessment as set out in DMRB LA 114 and	The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore,

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction or operation.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled by the measures within the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction or operation.</p>
Cultural Heritage	<p>There are residual significant effects in construction and operation reported in the ES for the M6 Junction 40 to Kemplay Bank scheme, however none of the affected receptors are in proximity of this proposed change.</p>	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. The proposed change to the Order Limits is not anticipated to lead to any change to the assessment of the impact to buried archaeological remains as they are within areas previously developed therefore risk of encountering buried archaeology is low. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is unlikely to substantially alter the mainline A66 and associated earthworks which is the dominant feature which may affect the setting of heritage features. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Geology and Soils	<p>There are moderate impacts anticipated on Agricultural Land Classification (ALC) Grade 2 and Grade 3a soils (Best and Most Versatile (BMV) land) during construction, with between 1- 20ha of BMV land permanently lost in this scheme. This results in likely significant adverse effects.</p>	<p>The proposed change does require a change the Order Limits however the land required for the proposed change is already developed and not ALC grade land, therefore there is no additional risk of contaminated land that could not be controlled by the first iteration EMP [APP-019]. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	There are no likely significant effects predicted as a result of the operational phase of the Project.	There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation . Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation
Landscape and Visual	In relation to the DCO design in the location of the proposed change, there are no significant effects on Landscape Character Areas in construction and operation. There are significant effects identified in the construction phase and the first year of operation at a viewpoint as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105): Viewpoint 1.2 Wetheriggs Country Park, Penrith, looking south. These are expected to reduce to non-significance by year 15.	The proposed change it is not considered to be of the scale that would result in a in significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction. The proposed realignment of footway away from M6 southbound on-slip to run through the Cumbria County Council depot at Skirsgill, connecting to the existing footpath southeast of the depot is anticipated to create a reduction of adverse effect for the users of the footway as this part of their journey will be away from the A66 alignment, though it is not anticipated to be of a scale to result in a new or different likely significant effect. It is considered that this proposed change will be barely perceptible to other landscape or visual receptors. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.
Materials and Waste	No construction or operation significant effects have been identified for the M6 Junction 40 to Kemplay Bank scheme.	The ES assessment considered the Order Limits of for each scheme and waste infrastructure on a scale beyond that of just the Project. The proposed change is located close to Mineral Consultation Area (MCA) for Sand and Gravel. However, there was no significant effect identified as impact minimal due to proximity of MCA to Penrith, limited scheme footprint beyond existing carriageway and does not diminish from wider resource. The change in Order Limits is not anticipated to be of a change to result in new or different likely significant effects. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.
Noise and Vibration	Within the construction phase, study area of 300m from the proposed design change,	It is not currently anticipated that there will be any change in construction approach that will be of the scale to result in any new or different significant

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>approximately 40 receptors were reported as temporary significant adverse effects including two non-residential receptors in the ES. These receptors are located on Clifford Road and Thirlmere Park to the north from the design change.</p> <p>No likely significant effects were reported in the ES for operational noise and vibration across the M6 Junction 40 to Kemplay Bank scheme.</p>	<p>effects in construction noise and vibration. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the measures outlined in the first iteration EMP (APP-019). Therefore it is not anticipated that this proposed change would result in any new or different significant effects to those reported in the ES in construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on noise and vibration during operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation</p>
Population and Human Health	<p>There are nine and 28 residual likely significant effects during construction and operation, respectively, as reported in the ES for the M6 Junction 40 to Kemplay Bank scheme, however none of the affected receptors are in proximity of this proposed change.</p>	<p>The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction</p> <p>The proposed PRow realignment is not anticipated to result in a likely significant effect as the length of the diversion is not considered materially different compared to the length assessed within the ES. The proposed change to the PRow route will not constrain the access to Skirsgill depot, and the additional requirement for land is not anticipated to affect the operation of the surrounding businesses. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p> <p>There is no change to the air quality, population or noise and vibration assessment results, therefore this proposed change is not anticipated to result in any different human health effects during construction or operation.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Road Drainage and Water Environment	There are residual significant effects in construction and operation reported in the ES for the M6 Junction 40 to Kemplay Bank scheme, however none of the affected receptors are in proximity of this proposed change.	There are no watercourses likely to be impacted by the proposed change, it is not anticipated to change any floodplain, there are no changes to drainage and there are no significant new cuttings. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction or operation.

3.3 DC-03 – Reorientation of Kemplay Bank junction

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	<p>During construction NO₂ concentrations were predicted to increase by 1.5µg/m³ over the annual mean objective (to 41.5µg/m³) at the closest human receptor (HSR 22 as shown on ES Figure 5.1 Air Quality Study Area and Constraints (APP-065)). With the new design changes, the new alignment may move away from receptor HSR 22 which may therefore slightly improve the concentrations at this receptor. The proposed change may result in differing construction methods and programme, however it is anticipated that any change in construction phase effects can be controlled by the requirements of the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction.</p> <p>During operation, an NO₂ concentration of 30.5µg/m³ was predicted at the closest human receptor (HSR 22 as shown on ES Figure 5.1 Air Quality Study Area and Constraints (APP-065)) in the operational Do Something scenario, which is well below the annual mean air quality objective. A movement of the alignment by 90 degrees and 30m closer to the closest sensitive human receptors in the north of the junction (including the hospital) is not likely to result in NO₂ concentrations exceeding the air quality objective as the modelled NO₂ concentrations are so low. Given the risk is so low at the closest receptor, it is not anticipated that any receptor is at risk. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p>
Biodiversity	There are no residual significant effects for construction or operation reported in the ES on any biodiversity receptor on the M6 Junction 40 to Kemplay Bank scheme.	The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species due to the realignment of the road. Notwithstanding the commentary above it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works.

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction.</p> <p>In operation, there may be a change in the drainage design required. A revised drainage design may result in changes in the impact to Thacka Beck which poses the risk of altered water quality in this watercourse. This watercourse is a tributary of the River Eamont which is a part of the River Eden Special Area of Conservation. This gives rise to a risk of a new adverse significant effect, including the potential for non-compliance with the Habitats Regulations Assessment, which may be reduced or removed as a revised drainage design continues to progress, and will be confirmed as the design progresses.</p>
Climate	<p>Green House Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction or operation.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled by the measures within the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction or operation.</p>
Cultural Heritage	<p>There is a likely significant effect (temporary construction) to one receptor specifically from the design of the Kemplay Bank roundabout. This is a moderate adverse effect on Toll Bar Cottage, resulting from the immediate proximity of construction activities. There are also non-significant adverse permanent</p>	<p>The realignment of the junction is not anticipated to change the significance of the effects on Toll Bar Cottage during construction or operation due to the building’s proximity to the works, which were already assessed as experiencing a significant adverse effect. Any change to construction phase is anticipated to be adequately addressed by the mitigation measures outlined in the first iteration EMP (APP-019) and Annex B3 Detailed Heritage Mitigation Strategy (APP-023). Therefore, it is not anticipated that this</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>construction and operational effects on Toll Bar Cottage.</p>	<p>proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction. In operation, the potential change in levels allowed for within the new Limit of Deviation may result in minor different effects to heritage assets within the within the Zone of Visual Influence, however it is not anticipated they would be of a scale to result in a new or different significant effect given the developed setting of the receptors and the final design still resulting in a roundabout and dualled through route on the mainline A66. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
<p>Geology and Soils</p>	<p>There are moderate impacts anticipated on Agricultural Land Classification (ALC) Grade 2 and Grade 3a soils (Best and Most Versatile (BMV) land) during construction, with between 1- 20ha of BMV land permanently lost in this scheme. This results in likely significant adverse effects. There are no likely significant effects predicted as a result of the operational phase of the Project.</p>	<p>The proposed change has the potential to alter the earthworks required for construction which may then encroach further into ALC Grade 2 soil. However, this encroachment is not anticipated to be of a scale to result in new or different significant effects. There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation . Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation</p>
<p>Landscape and Visual</p>	<p>In relation to the DCO design in the location of the proposed change, there are no residual significant effects on Landscape Character Areas. There are significant effects identified in the construction phase and the first year of operation at a number of viewpoint as shown on ES Figure 10.4 Zone of Theoretical</p>	<p>In construction, it is anticipated that the proposed change will likely require removal of mature vegetation to the eastern periphery of the recreational ground to the north west of Kemplay Bank Roundabout in addition to what was considered in the ES assessment. It is anticipated that this may result in a new significant effect for recreational users of Wetheriggs Country Park as a result of reduced the layering visual screening included within our DCO design. This is additional loss of mature vegetation provides visual screening to some users of the local area, and also contributes to the local landscape</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>Visibility (ZTV 3km) and Viewpoints (APP-105): Viewpoint 2.2 view from Wetheriggs Country Park, Clifford Road, and, Penrith Co-ordinates: NY 51947 29165 looking east, and viewpoint 2.5 view from Penrith Hospital Footpath, looking south east. These are anticipated to reduce to non-significance by year 15.</p>	<p>character, which may result in a new likely significant adverse effect to Landscape Character Area of Intermediate Farmland construction which may last into operation.</p> <p>The proposals for the slip road to be at grade with Footpath 358008 and the footway aside the A66 west bound carriageway may give negative visual effects for users of this Public Right of Way. This gives rise to a risk of new likely significant adverse effects to visual receptors noted in the previous column in construction which may last into operation.</p> <p>This proposed change will be subject to further design including the identification of solutions with which to reduce this risk, such as landscape planting and sensitive design.</p>
Materials and Waste	<p>No construction or operation significant effects have been identified for the M6 Junction 40 to Kemplay Bank scheme.</p>	<p>The ES assessment considered the Order Limits of for each scheme and waste infrastructure on a scale beyond that of just the Project. The design change is not of a scale that is anticipated to result in any change to the waste infrastructure required or the materials. While there is a reduction in works, it is not considered to be of a scale to affect the assessed materials required for the Project. There is no change in the Order Limits used in the assessment within the ES therefore there is no risk of different effects to minerals in the area. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.</p>
Noise and Vibration	<p>Within the construction phase study area of 300m from the proposed design change, approximately 70 residential and non-residential properties were reported as temporary significant adverse effects in the ES. These receptors are located on Clifford Road, Pategill Park, Carleton Hall Road, Carleton Hall Walk, The Green, Bridge Lane, at Toll Bar Cottage and Birbeck Medical Practice. The majority of these are located to</p>	<p>For this assessment of the Limit of Deviation change, it is considered that the alignment of the slip roads and roundabout are horizontally expanded to the north and slip roads and the horizontal alignment of the A66 mainline are not substantially different to the DCO design. The proposed change may result in differing construction methods and programme, however it is anticipated that any change in construction phase effects can be controlled by the requirements of the first iteration EMP (APP-019). With the design change, the adverse likely significant effect of vibration on Birbeck Medical practice would remain and no new adverse likely significant effects are identified. However, it should be noted that at this stage the details of indoor spaces</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>the north-west and north-east of the roundabout.</p> <p>Potential temporary significant vibration effects on human receptors were reported in the ES if any vibration sensitive receptors are located within a distance of 100m during start-up and run-down of vibratory roller/compactor, 70m during steady state of vibratory compactors and 50m during vibratory piling phases. Building layout of Birbeck Medical Practice is located adjacent to the edge of the slip roads heading north and east from the roundabout. As per the Table 12.24 of ES Chapter 12 Noise and Vibration, an adverse likely significant effect was identified at Birbeck Medical Practice.</p> <p>Within the operational phase study area of 600m from the proposed design change, one residential property and three non-residential properties were reported as likely significant beneficial effects in the ES. These receptors are located at Toll Bar Cottage and on The Green to the south and east from the roundabout.</p>	<p>where vibration sensitive equipment maybe in operate (i.e. surgery or laser device) are unknown. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction.</p> <p>In operation, the alignment of slip roads and roundabout will be located closer to Birbeck Medical Practice and there is a potential increase in the height of the A66 mainline, which is anticipated to be the dominant noise source in the operational phase. Raising this vertical alignment and moving the roundabout further north to the extents of the Limits of Deviation may increase the noise levels to surrounding receptors (including Birbeck Medical Practice) to the extent that it gives rise to a risk of a new likely significant adverse effect in operation. This proposed change will be subject to further development which include development of mitigation in order to reduce this risk.</p>
Population and Human Health	<p>There are nine and 28 residual likely significant effects during construction and operation, respectively, as reported in the ES for the M6 Junction 40 to Kemplay Bank scheme.</p> <p>Within the area of the design change there is one likely significant effect reported which is</p>	<p>There may be further minor encroachment into the Ullswater Community College Playing Field as a result of this proposed change during construction. However as there is already an adverse likely significant effect reported for this receptor, this potential minor further encroachment is not considered to be of a scale to result in a different likely significant effect at this receptor during construction.</p>

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	located at Ullswater Community College Playing Field which is of high sensitivity due to land take.	The proposed change to the design is anticipated to require additional permanent land owned by Penrith Hospital and Health Centre which may limit their future development, which gives rise to a risk of new likely significant adverse effects in construction that will last into operation.
Road Drainage and Water Environment	There are no residual significant effects to receptors surrounding the proposed change following suitable mitigation outlined in the ES Appendix 14.2 Flood Risk Assessment and Outline Drainage Strategy (APP-221) and ES Appendix 14.4 Hydromorphology Assessment (APP-223).	<p>The proposed change may require a change to the construction phase, potentially resulting differing construction methods, area and/or programme, however it is anticipated that any change in construction phase effects can be controlled by the requirements of the first iteration EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>The proposed change is anticipated to require a revised drainage design, which may require an outfall to Thacka Beck. This has the risk of a new likely significant adverse effect on water quality in a tributary of the River Eden Special Area of Conservation (see Biodiversity above in this table).</p> <p>It is possible that mitigation through design of drainage could be achieved to ensure the Highways England Water Risk Assessment Tool (HEWRAT) gives a passable score, this means ensuring that there will be appropriate levels of water quality in the discharge from the highways drainage system. This will be confirmed as the design progresses.</p>

3.4 DC-04 - Separation of, and greater flexibility for, shared public rights of way and private access track provision from Penrith to Temple Sowerby

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	<p>The proposed change may result in differing construction methods and programme, however it is anticipated that any change in construction phase effects can be controlled by the requirements of the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction.</p> <p>During operation, an NO₂ concentration of 6.3µg/m³ was predicted at the closest human receptor (HSR 46 as shown on Figure 5.1 Air Quality Study Area and Constraints (APP-065)) in the operational Do Something scenario, which is well below the annual mean air quality objective. The NO₂ concentration at this location is so low that it is not considered likely that there is a risk of change in significance of the results, therefore it is not anticipated to have an effect on any receptor further from the design change than this. Given the risk is so low at the closest receptor, it is not anticipated that any receptor is at risk. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p>
Biodiversity	There are no residual significant effects for construction or operation reported in the ES on any biodiversity receptor on the Penrith to Temple Sowerby scheme.	The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species due to the realignment of the public rights of way and private access track provision. Notwithstanding the commentary above it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects than compared to those reported in the ES in construction.

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>In operation, the proposed change may result in changes to the crossing of watercourses, including the Lightwater, which is hydrologically linked to the River Eden Special Area of Conservation (SAC), and where the crossing in the DCO design has been proposed as a culvert to be of a suitable design for bat crossing which requires specific clearance heights over the water level. This creates potential risk of new significant adverse effects on the ecological receptors of the Lightwater and subsequently the River Eden SAC and to a protected species such as bats, including the potential for non-compliance with the Habitats Regulations Assessment.</p> <p>This proposed change will be subject to further design including the identification of potential solutions to reduce this risk, such as alternative mitigation solutions and sensitive watercourse crossing design. There may be minor changes to habitat impacts which alone are not considered significant however, as noted in section 1.2 of this document, there is a risk of cumulative effects on habitats and any associated protected species at a Project level as a result of potential non-significant effect habitats on across all changes.</p>
Climate	<p>Green House Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction or operation.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled by the measures within the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.</p>
Cultural Heritage	<p>There are residual significant effects in construction and operation reported in the ES for the Penrith to Temple Sowerby scheme, however none of these residual effects are</p>	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. With no change to the Order Limits is not anticipated that there would be any change to the assessment of the impact to buried</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>related to the Public Right of Way or Private Means of Access.</p>	<p>archaeological remains as they are within areas previously developed therefore risk of encountering buried archaeology is low. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction.</p> <p>Given the proximity of the Public Right of Way route to the main road alignment, which is the dominant feature affecting the setting of heritage resources, it is not anticipated the change in operation would be of the scale to result in any different significant effects. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p>
<p>Geology and Soils</p>	<p>There are major impacts are anticipated on Agricultural Land Classification (ALC) Grade 2 with over 20 ha of land permanently lost in this scheme and moderate impacts to Grade 3a soils with between 1- 20ha of land permanently lost during construction. This results in likely significant adverse effects.</p> <p>There are no likely significant effects predicted as a result of the operational phase of this scheme.</p>	<p>The geology and soils assessment within the ES assessed the impacts to land within the Order Limits, taking a worst-case scenario of impacts. The proposed change does not change the Order Limits or require additional land .Therefore it is considered that the potential effects of the proposed change is captured within the ES assessment. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation . Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>
<p>Landscape and Visual</p>	<p>In relation to the DCO design in the location of the proposed change, there are no significant effects on Landscape Character Areas.</p> <p>There are no significant effects identified at any viewpoints as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105).</p>	<p>The proposed change it is not considered to be of the scale that would result in a in significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>In the context of the new mainline A66, the amended PRoW route is not anticipated to be of a scale or nature to result in different significant effects. Therefore, it is not anticipated that this proposed change would result in</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		any new or different likely significant effects as compared to those reported in the ES in operation.
Materials and Waste	No construction or operation significant effects have been identified for the Penrith to Temple Sowerby scheme.	The ES assessment considered the Order Limits for each scheme and waste infrastructure on a scale beyond that of just the Project. The design change is not of a scale or nature that is anticipated to result in any change to the waste infrastructure required. There is no change in the Order Limits used in the assessment within the ES therefore there is no risk of different effects to minerals in the area. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.
Noise and Vibration	<p>Within the construction study area of 300m from the proposed change there are no sensitive receptors. No significant effect was reported in the ES.</p> <p>Within the operational study area of 600m from the design change, four residential receptors were reported as adverse likely significant effects in the ES. These are located at Whinfell Park, approximately 350m to the west from the proposed design change.</p>	<p>It is not currently anticipated that there will be any change in construction approach that will be of the scale to result in any new or different significant effects in construction noise and vibration. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the measures outlined in the first iteration EMP (APP-019). Therefore it is not anticipated that this proposed change would result in any new or different significant effects to those reported in the ES in construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on noise and vibration during operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>
Population and Human Health	There are nine and one residual significant effects in construction and operation, respectively, reported in the ES for the Penrith to Temple Sowerby scheme.	<p>The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>The proposed PRow realignment is not anticipated to result in a likely significant effect as the length of the diversion is not considered materially</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>different compared to the length assessed within the ES. The proposed change to the PRow route will not constrain the access to land or businesses. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p> <p>There is no change to the air quality, population or noise and vibration assessments, therefore this proposed change is not anticipated to result in any different human health effects.</p>
Road Drainage and Water Environment	There are no residual significant effects to receptors surrounding the proposed change following suitable mitigation outlined in the ES Appendix 14.2 Flood Risk Assessment and Outline Drainage Strategy (APP-221) and ES Appendix 14.4 Hydromorphology Assessment (APP-223).	<p>The proposed change may require a change to the construction phase, potentially resulting differing construction methods, area and/or programme, however it is anticipated that any change in construction phase effects can be controlled by the requirements of the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is anticipated to require revised crossings of the Lightwater, and other watercourses which gives rise to the risk of new likely significant adverse effects to water quality and Water Framework Directive compliance in the Lightwater. This proposed change will be subject to further design including sensitive design of any new or different watercourse crossings, which is anticipated could reduce this risk, although this is not yet confirmed.</p>

3.5 DC-05 - Removal of junction for Sewage Treatment Works (and private residence) from A66, and provision of an alternative access from B6262

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	<p>There are no sensitive human sensitive receptors within 200m of the proposed change which may be affected by changes in air quality during construction. The proposed change may result in differing construction methods and programme, however it is anticipated that any change in construction phase effects can be controlled by the requirements of the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is anticipated to lead to a reduction in works which may result in a reduction of in pollutant concentrations at surrounding sensitive ecological receptors. However, there was no likely significant effect reported in this location and with the proposed change it is not anticipated that the scale of the change is sufficient to result in any significant benefit. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p>
Biodiversity	There are no residual significant effects for construction or operation reported in the ES on any biodiversity receptor on the Penrith to Temple Sowerby scheme.	<p>The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species due to the realignment of the public rights of way and private access track provision. Notwithstanding the commentary above it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects than compared to those reported in the ES in construction.</p> <p>In operation, the proposed change may result in changes to the crossing of watercourses, including the Lightwater, which is hydrologically linked to the</p>

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>River Eden Special Area of Conservation (SAC), and where the crossing in the DCO design has been proposed as to be of a suitable design for bat crossing which requires specific clearance heights over the water level. This creates potential risk of new likely significant adverse effects to the ecological receptors of the Lightwater and subsequently the River Eden SAC and to a protected species such as bats including the potential for non-compliance with the Habitats Regulations Assessment. This proposed change will be subject to further design including the identification of solutions with which to reduce this risk, such as alternative mitigation solutions and sensitive watercourse crossing design.</p> <p>There may be minor changes to habitat impacts which in isolation are not considered significant however, as noted in section 1.2 of this document, there is a risk of cumulative effects on habitats and any associated protected species at a Project level as a result of potential non-significant effects on habitats across all changes.</p>
Climate	<p>Green House Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction or operation.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled by the measures within the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction or operation.</p>
Cultural Heritage	<p>The ES concludes significant adverse effects on cultural heritage resulting from construction within the Brougham Roman fort (Brocavum) and civil settlement and Brougham Castle scheduled monument and</p>	<p>The proposed change is in the vicinity of the named scheduled monuments. The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. With no change to the Order Limits is not anticipated that there would be any change to the assessment of the impact to buried</p>

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	<p>from proximity of construction to the Countess Pillar (also a scheduled monument). There is a beneficial significant operational effect to the Countess Pillar as a result of the improved connection and visibility in the landscape design.</p>	<p>archaeological remains as they are within areas previously assessed. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>It is not anticipated that the scale of the change would alter setting of heritage resources within the Zone of Visual Influence. It is not anticipated the change in operation would be of the scale to result in any different significant effects. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
<p>Geology and Soils</p>	<p>There are major impacts anticipated on Agricultural Land Classification (ALC) Grade 2 with over 20ha of land permanently lost in this scheme and moderate impacts to Grade 3 soils with between 1- 20ha of land permanently sealed. The significance of the effect on BMV is moderate or large (Grade 3) and very large (Grade 2) and is considered significant.</p> <p>There are no likely significant effects predicted as a result of the operational phase of the Project.</p>	<p>The proposed design is anticipated to provide an opportunity to reduce the footprint of the works on ALC Grade 2 and 3a soils. However it is not guaranteed. Therefore it is considered that the potential effects of the proposed change is captured within the ES assessment. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation . Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>
<p>Landscape and Visual</p>	<p>In relation to the DCO design in the location of the proposed change, there are no significant effects on Landscape Character Areas.</p> <p>There are no significant effects identified at any viewpoints as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105).</p>	<p>While the proposed change includes a reduction of works, it is not considered to be of the scale that would result in a change of significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is not anticipated to have any substantial change to effects on landscape or visual receptors. It is noted that there is a small amendment to the alignment of the access track however in the context of the</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>new mainline A66, the amendment to the route is not anticipated to be of a scale to result in different significant effect. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Materials and Waste	<p>There are no significant effects for construction or operation reported in the ES on materials or waste as a result of the Penrith to Temple Sowerby scheme.</p>	<p>The ES assessment considered the Order Limits of for each scheme and waste infrastructure on a scale beyond that of just the Project. The design change is not of a scale that is anticipated to result in any change to the waste infrastructure required. There is no change in the Order Limits used in the assessment within the ES therefore there is no risk of different effects to minerals in the area. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.</p>
Noise and Vibration	<p>Within the construction phase study area of 300m from the design change, two residential properties, Lightwater Cottages, were assumed to be demolished, therefore no assessment was carried out at these two receptors.</p> <p>Three sensitive receptors were reported as temporary likely significant adverse effects in the ES. These are two residential properties, Barn Owl Cottage and Foxgloves, and one non-residential property, Lords House (also known as Llama Karma Kafe) are located immediately south to the scheme.</p> <p>Within the operational phase study area of 600m from the design change, one non-residential receptor was assessed as an adverse likely significant effect. This receptor is located at Lords House (also known as Llama Karma Kafe) which has been acquired by National Highways. This property is</p>	<p>It is not currently anticipated that there will be any change in construction approach that will be of the scale to result in any new or different significant effects in construction noise and vibration. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the measures outlined in the first iteration EMP (APP-019). Therefore it is not anticipated that this proposed change would result in any new or different significant effects to those reported in the ES in construction.</p> <p>The proposed design change does not affect the A66 mainline alignment, which is the dominant source of noise in the area. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p> <p>There is a risk of different in-combination significant effects with change DC-07. Two residential properties, Lightwater Cottages, to be retained would be assessed as adverse likely significant construction and operational effects. These two properties would also be eligible for Noise Insulation under NIR regulation 1975.</p>

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	<p>temporarily repurposed as National Highways' office. Because of that, this receptor was reported as not significant in the ES.</p> <p>Two residential properties, Lightwater Cottages, were assumed to be demolished. Therefore, these properties are not assessed in the ES.</p> <p>Overall, no likely significant adverse effect was reported in the ES.</p>	
Population and Human Health	<p>There are nine and one residual significant effects in construction and operation, respectively, reported in the ES for the Penrith to Temple Sowerby scheme.</p>	<p>The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction .</p> <p>The proposed PRow realignment is not anticipated to result in a likely significant effect as the length of the diversion is not considered materially different compared to the length assessed within the ES. The proposed change to the PRow route will not constrain the access to land or businesses. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p> <p>There is no change to the air quality, population or noise and vibration assessment results , therefore this proposed change is not anticipated to result in any different human health effects during construction or operation.</p>
Road Drainage and Water Environment	<p>There are no residual significant effects to receptors surrounding the proposed change following suitable mitigation outlined in the</p>	<p>The proposed change may require a change to the construction phase, potentially resulting differing construction methods, area and/or programme, however it is anticipated that any change in construction phase effects can be</p>

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	<p>ES Appendix 14.2 Flood Risk Assessment and Outline Drainage Strategy (APP-221) and ES Appendix 14.4 Hydromorphology Assessment (APP-223).</p>	<p>controlled by the requirements of the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is anticipated to require revised crossings of the Lightwater, and other watercourses which gives rise to the risk of new significant adverse effects to water quality and Water Framework Directive compliance in the Lightwater. This proposed change will be subject to further design including sensitive design of any new or different watercourse crossings, which could to reduce this risk, although this is not yet confirmed.</p>

3.6 DC-06 - Increase in vertical Limits of Deviation local to Shell Pipeline

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	<p>There are no sensitive human sensitive receptors within 200m of the proposed change which may be affected by changes in air quality. The proposed change may result in differing construction methods and programme, however it is anticipated that any change in construction phase effects can be controlled by the requirements of the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction.</p> <p>There was no likely significant effect reported in this location and the proposed change is not anticipated that the scale of the change is sufficient to result in any significant benefit. Therefore it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p>
Biodiversity	There are no residual significant effects for construction or operation reported in the ES on any biodiversity receptor on the Penrith to Temple Sowerby scheme.	<p>The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species due to potential changes to the road should the extent of the Limit of Deviation be utilised.</p> <p>Notwithstanding the commentary above it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>In operation, the proposed change may result in changes to the crossing of watercourses, including the Lightwater, which is hydrologically linked to the River Eden Special Area of Conservation (SAC), and where the crossing in the DCO design has been proposed as a culvert required for bat crossing point. A 1m raise in the Limit of Deviation is assumed to result in a potential</p>

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		<p>extension of earthworks by up to 3m. This creates potential risk of new significant effects to the ecological receptors of the Lightwater and subsequently the River Eden SAC including the potential for non-compliance with the Habitats Regulations Assessment. This proposed change will be subject to further design including the identification of solutions with which to reduce this risk, such as alternative mitigation solutions and sensitive watercourse crossing design.</p> <p>There may be minor changes to habitat impacts which in isolation are not considered significant however, as noted in section 1.2 of this document, there is a risk of cumulative effects on habitats and any associated protected species at a Project level as a result of potential non-significant effects on habitats across all changes</p>
Climate	<p>Green House Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction or operation.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled by the measures within the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction or operation.</p>
Cultural Heritage	<p>There are residual significant effects in construction and operation reported in the ES for the Penrith to Temple Sowerby scheme however none of the affected receptors are directly affected by this proposed change.</p>	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. With no change to the Order Limits is not anticipated that there would be any change to the assessment of the impact to buried archaeological remains as they are within areas previously developed therefore risk of encountering buried archaeology is low. Therefore, it is not anticipated that this proposed change would result in any new or</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is unlikely to substantially alter the mainline A66 and associated earthworks which is the dominant feature which may affect the setting of heritage features. Therefore, it is not anticipated that this proposed change would result in any new or different significant likely effects as compared to those reported in the ES in operation.</p>
Geology and Soils	<p>There are major impacts are anticipated on Agricultural Land Classification (ALC) Grade 2 with over 20 ha of land permanently lost in this scheme and moderate impacts to Grade 3a soils with between 1- 20ha of land permanently lost during construction. This results in likely significant adverse effects.</p> <p>There are no likely significant effects predicted as a result of the operational phase of this Project.</p>	<p>The proposed change may increase the extent of permanent land take of ALC Grade 2 soils in construction due to potential change in earthworks, during construction. However, the impact of loss of ALC Grade 2 is already assessed as significant and the additional loss is not anticipated to result in a change in significance as reported within the ES. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>During operation the pipeline is a potential contamination source, therefore mitigation measures will be in place to prevent any impact or damage to the pipeline in operation of the Project. There is no other aspect of this proposed change that would introduce new or different effects on geology and soils in operation . Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>
Landscape and Visual	<p>In relation to the DCO design in the location of the proposed change, there are no significant effects on Landscape Character Areas in construction and operation.</p> <p>There are no significant effects identified in the construction phase and operation at the viewpoints shown on ES Figure 10.4 Zone of</p>	<p>.While the proposed change includes a reduction of works. it is not considered to be of the scale that would result in a reduction of significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change may lead to an increase in height over this area of the road by an extra 1m vertically from the DCO design, which is anticipated to be noticeable locally. ,However, it is anticipated that this will be absorbed into</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105).	the overall change to the environment for both landscape and visual receptors. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.
Materials and Waste	There are no significant effects for construction or operation reported in the ES on materials or waste as a result of the Penrith to Temple Sowerby scheme.	The ES assessment considered the Order Limits of for each scheme and waste infrastructure on a scale beyond that of just the Project. The design change is not of a scale or nature that is anticipated to result in any change to the waste infrastructure required. There is no change in the Order Limits used in the assessment within the ES therefore there is no risk of different effects to minerals in the area. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.
Noise and Vibration	<p>Within the construction phase study area of 300m from the design change, two residential properties, Lightwater Cottages, were assumed to be demolished, no assessment was carried out at these two receptors. Three sensitive receptors were reported as temporary adverse likely significant effects in the ES. These are two residential properties, Barn Owl Cottage and Foxgloves, and one non-residential property, Lords House (also known as Llama Karma Kafe) are located immediately south to the scheme.</p> <p>Within the operational phase study area of 600m, one non-residential receptor was assessed as an adverse likely significant effect. This receptor is located at Lords House (also known as Llama Karma Kafe) which has been acquired by National Highways. This property is temporarily repurposed as National Highways' office.</p>	<p>It is not currently anticipated that there will be any change in construction approach that will be of the scale to result in any new or different significant effects in construction noise and vibration. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the measures outlined in the first iteration EMP (APP-019). Therefore it is not anticipated that this proposed change would result in any new or different significant effects to those reported in the ES in construction.</p> <p>Noise sensitive receptors at Llama Karma Kafe have been acquired by National Highways, and along the proposed A66 mainline in this area, there are no other noise sensitive receptors within the study area. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p> <p>There is a risk of different in-combination significant effects with change DC-07. Two residential properties, Lightwater Cottages, to be retained which would be assessed as adverse likely significant construction and operational effects. These two properties would also be eligible for Noise Insulation under NIR Regulations 1975.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>Because of that, this receptor was reported as not significant in the ES. Two residential properties, Lightwater Cottages, were assumed to be demolished. Therefore, these properties are not assessed in the ES. Overall, no likely significant adverse effect was reported in the ES.</p>	
Population and Human Health	<p>There are nine and one residual significant effects in construction and operation, respectively, reported in the ES for the Penrith to Temple Sowerby scheme.</p> <p>Llama Karma Café and Lightwater cottages are the only receptors which will be subject to acquisition or demolition.</p>	<p>The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>The proposed change does not propose any change in Order Limits, land take, access or Public Rights of Way assessed within the ES operation. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p> <p>There is no change to the air quality, population or noise and vibration assessment results, therefore this proposed change is not anticipated to result in any different human health effects during construction or operation.</p>
Road Drainage and Water Environment	<p>There are no residual significant effects to receptors surrounding the proposed change following suitable mitigation outlined in the ES Appendix 14.2 Flood Risk Assessment and Outline Drainage Strategy (APP-221)</p>	<p>The proposed change may require a change to the construction phase, potentially resulting differing construction methods, area and/or programme, however it is anticipated that any change in construction phase effects can be controlled by the requirements of the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	and ES Appendix 14.4 Hydromorphology Assessment (APP-223).	<p>any new or different significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is anticipated to require revised crossings of the Lightwater, and other watercourses which gives rise to the risk of new significant adverse effects to water quality and Water Framework Directive compliance in the Lightwater. This proposed change will be subject to further design including sensitive design of any new or different watercourse crossings, which could reduce this risk, although this is not yet confirmed.</p>

3.7 DC-07 - Retention of Lightwater Cottages

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	<p>The proposed change may result in differing construction methods and programme, however it is anticipated that any change in construction phase effects can be controlled by the requirements of the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is anticipated to allow opportunity for a reduction in works which may result in a reduction of in pollutant concentrations at surrounding sensitive receptors. However, there is no likely significant effect reported for the Project and it is not anticipated that the scale of the change is sufficient to result in any significant benefit. The retention of Lightwater Cottages introduces a new sensitive human receptor compared to what was assessed within the ES, however given predicted NO₂ levels in the area, therefore it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p>
Biodiversity	There are no residual significant effects for construction or operation reported in the ES on any biodiversity receptor on the Penrith to Temple Sowerby scheme.	<p>The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species however, the proposed change is considered to result in a reduction in construction demolition and new hardstanding required in construction. Notwithstanding the commentary above it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>There is a barn owl crossing point proposed at this location. Retention of the properties of Lightwater Cottages may make this crossing point unviable,</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>leading to a risk of a new likely significant adverse effect on barn owl. This proposed change will be subject to further development to determine where this mitigation can be retained or relocated to a suitable place in order to reduce this risk.</p> <p>There may be minor changes to habitat impacts which in isolation are not considered significant however, as noted in section 1.2 of this document, there is a risk of cumulative effects on habitats and any associated protected species at a Project level as a result of potential non-significant effects on habitats across all changes.</p>
Climate	<p>Greenhouse Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction or operation.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled by the measures within the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction or operation.</p>
Cultural Heritage	<p>No significant effects in construction or operation are reported in the ES for the Penrith to Temple Sowerby scheme however none of the affected receptors are directly affected by this proposed change.</p>	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. With no change to the Order Limits is not anticipated that there would be any change to the assessment of the impact to buried archaeological remains as they are within areas previously assessed. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The left-in/left-out junction to be removed and the demolition of the Lightwater cottages were not, in isolation, responsible for any significant effects on</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		cultural heritage receptors. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.
Geology and Soils	<p>There are major impacts are anticipated on Agricultural Land Classification (ALC) Grade 2 with over 20 ha of land permanently lost in this scheme and moderate impacts to Grade 3a soils with between 1- 20ha of land permanently lost during construction. This results in likely significant adverse effects.</p> <p>There are no likely significant effects predicted as a result of the operational phase of this Project.</p>	<p>The Lightwater Cottages are a former tannery pre-1960s and their demolition gave rise to a risk of encountering contaminated land site in the construction phase. While removing the demolition reduces this risk during construction, it is not considered to be of a scale or nature that is anticipated to result in any different significant effects. This does not change the Order Limits or require additional land, and while there is a reduction in works, the land is already developed. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation . Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation</p>
Landscape and Visual	<p>In relation to the DCO design in the location of the proposed change, there are no significant effects on Landscape Character Areas in construction and operation.</p> <p>There are no significant effects identified in the construction phase and operation at the</p>	<p>While the proposed change includes a reduction of works. it is not considered to be of the scale that would result in a change of significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	viewpoints shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105).	The retention of Lightwater Cottages and their associated boundary treatments, including mature vegetation will result in a minor reduction to adverse effects compared with the DCO design for both landscape and visual receptors, however it will not be of the scale that would result in a change in significance. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.
Materials and Waste	There are no significant effects for construction or operation reported in the ES on materials or waste as a result of the Penrith to Temple Sowerby scheme.	The ES assessment considered the Order Limits of for each scheme and waste infrastructure on a scale beyond that of just the Project. The proposed retention of the Lightwater Cottages is anticipated to reduce the volume of demolition waste, however it is not considered to be of a scale or nature that is anticipated to result in any change to the waste infrastructure required. There is no change in the Order Limits used in the assessment within the ES therefore there is no risk of different effects to minerals in the area. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.
Noise and Vibration	<p>Within the construction phase study area of 300m, the two residential properties located immediately south of the proposed A66 mainline were assumed to be demolished and no assessment was carried out in the ES. No temporary adverse no likely significant effects were reported in the ES</p> <p>Within the operational phase study area of 600m, two residential properties, Lightwater Cottages, located immediately south of the proposed A66 mainline were assumed to be demolished and no assessment was carried out and reported in the ES. No adverse likely significant effect was reported in the ES.</p>	<p>It is not currently anticipated that there will be any change in construction approach that will be of the scale to result in any new or different significant effects in construction noise and vibration. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the measures outlined in the first iteration EMP (APP-019). Therefore it is not anticipated that this proposed change would result in any new or different significant effects to those reported in the ES in construction.</p> <p>In operation, there is a risk of new adverse likely significant effects would be introduced at two residential properties, Lightwater Cottages due to their proximity to the mainline A66. These properties would potentially be eligible for noise insulation under the Noise Insulation Regulations 1975.</p> <p>It is anticipated that the area where Lightwater Cottages are located could be identified as Noise Important Area in the next round of the strategic noise</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		mapping exercise under the terms of the Environmental Noise (England) Regulations 2006.
Population and Human Health	There are nine and one residual significant effects in construction and operation, respectively, reported in the ES for the Penrith to Temple Sowerby scheme. This includes the demolition of the residences at the Lightwater Cottages.	<p>The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction .</p> <p>The proposed change includes the retention of Lightwater Cottages which has the potential to remove a permanent adverse likely significant effect during construction as reported in the ES. It is anticipated that access to these cottages and Haversheaf Hall will be provided further east with no loss of provision.</p>
Road Drainage and Water Environment	There are residual significant effects in construction and operation reported in the ES for the Penrith to Temple Sowerby scheme, however none of the affected receptors are in proximity of this proposed change.	There are no watercourses likely to be impacted by the proposed change, it is not anticipated to change any floodplain, there are no changes to drainage and there no significant new cuttings. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction or operation.

3.8 DC-08 – Inversion of the mainline alignment at the junction at Center Parcs

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	<p>In construction phase, an NO₂ concentration of 10.6µg/m³ was predicted at the closest human receptor (HSR 29 as shown on Figure 5.1 Air Quality Study Area and Constraints (APP-065)) which is well below the annual mean air quality objective. The proposed change may result in differing construction methods and programme, however it is anticipated that any change in construction phase effects can be controlled by the requirements of the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction.</p> <p>In operation, an NO₂ concentration of 8.1µg/m³ was predicted at the closest human receptor (HSR 29 as shown on Figure 5.1 Air Quality Study Area and Constraints (APP-065)) in the operational Do Something scenario, which is well below the annual mean air quality objective. While there is a vertical change in the design to the mainline A66 which is the dominant source of emissions, the Air Quality assessment does not use the comparative height of the road within its model, therefore it is anticipated that inversion of the junction will not result in a change in significance reported in at HSR29. Therefore it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p>
Biodiversity	There are no residual significant effects for construction or operation reported in the ES on any biodiversity receptor on the Penrith to Temple Sowerby scheme.	The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species due to the inversion of the junction. However, the proposed change is considered to result in a reduction in construction works as a result of inversion allowing the opportunity to remove the temporary road diversion to the south of the A66 and there is therefore potential for a slight reduction in effects on biodiversity during the construction phase due to potential reduction in vegetation clearance required for the temporary works. Notwithstanding the commentary above it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works.

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects than compared to those reported in the ES in construction.</p> <p>There are bat and red squirrel crossing points proposed in the locality of the proposed change which may be found to be less effective or unviable as a result of the proposed inversion, leading to a risk of a new likely significant adverse effect on red squirrel and bat. This proposed change will be subject to further development to determine where this mitigation can be retained or relocated to a suitable place in order to reduce this risk of new significant effect occurring.</p> <p>There may be minor changes to habitat impacts which in isolation are not considered significant however, as noted in section 1.2 of this document, there is a risk of cumulative effects on habitats and any associated protected species at a Project level as a result of potential non-significant effects on habitats across all changes.</p>
Climate	<p>Green House Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled by the measures within the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction or operation.</p>
Cultural Heritage	<p>There are residual significant effects in construction and operation reported in the ES for the Penrith to Temple Sowerby scheme, however none of these residual effects are specifically related to the junction at Center Parcs.</p>	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. With no change to the Order Limits is not anticipated that there would be any change to the assessment of the impact to buried archaeological remains as they are within areas previously assessed. Therefore, it is not anticipated that</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>The impact on the non-designated Whinfall farm buildings was considered. The embankment and underpass were considered to be a negligible adverse impact (neutral effect) at construction and operation.</p>	<p>this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The appearance of the proposed overbridge would be different to the DCO design assessed in the ES, however, it does not substantially stand out against the context of the dualling works themselves with respect to heritage resources and so it would not increase the impact to the setting of the Whinfall farm buildings. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
<p>Geology and Soils</p>	<p>There are major impacts are anticipated on Agricultural Land Classification (ALC) Grade 2 with over 20 ha of land permanently lost in this scheme and moderate impacts to Grade 3a soils with between 1- 20ha of land permanently lost during construction. This results in likely significant adverse effects. There are no likely significant effects predicted as a result of the operational phase of this Project.</p>	<p>The proposed design change would remove the need for a temporary road to be built offline during the construction phase and the removal of a large embankment that impacts ALC Grade 2 soils. There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>
<p>Landscape and Visual</p>	<p>In relation to the DCO design in the location of the proposed change, there are no residual significant effects on Landscape Character Areas. There are significant effects identified in the construction phase and operation at a number of viewpoints as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105):</p>	<p>The proposed change is considered a substantial change from the DCO design in both the construction phase and the form of the structure in operation which gives rise to a risk of new significant effects in both construction and operation to both landscape character areas and visual receptors.</p> <p>For landscape character area receptors, there is potential reduction in effect compared to the DCO design as there will be less change to the existing landscape, however, the introduction of a new overbridge will likely draw the eye more than the DCO design with slackened slopes. It is anticipated that the change has the potential introduce new significant effects to landscape character areas of Sandstone Ridge and Broad Valleys This built structure will likely replace the pine</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>Viewpoint 3.4 View from the junction of Public Right of Way (PRoW) 311013 bridleway and 31109 footpath looking south east;</p> <p>Viewpoint 3.5 Views from minor road south of High Moss Woodland looking south west; and</p> <p>Viewpoint 3.6 View from PRoW (footpath) 311004 near Center Parcs, Whinfell Forest looking north.</p> <p>These are expected to reduce to non-significant by year 15 of operation.</p>	<p>tree as the landmark feature of the entrance to Center Parcs. Retaining the main A66 alignment on similar levels as existing with the addition of an over bridge to the junction will require careful and considered landscape integration for replacement of landmark pine tree and any changed pond locations. This is anticipated to result in a new significant effect for Sandstone Ridge and Broad Valleys and Viewpoint 3.6 that may last into year 15. The proposed change will be subject to further design in order to identify solutions to integrate the proposed change into the landscape to reduce this risk.</p>
Materials and Waste	<p>There are no significant effects for construction or operation reported in the ES on materials or waste as a result of the Penrith to Temple Sowerby scheme.</p>	<p>The ES assessment considered the Order Limits of for each scheme and waste infrastructure on a scale beyond that of just the Project. The design change is not of a scale that is anticipated to result in any change to the waste infrastructure required or the materials. While there is a reduction in works, it is not considered to be of a scale to affect the assessed materials required for the Project. There is no change in the Order Limits used in the assessment within the ES therefore there is no risk of different effects to minerals in the area. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.</p>
Noise and Vibration	<p>Within the study area for 300m from the proposed design change, one residential receptor (1 Lane Ends) was reported as a likely significant adverse effect in the ES. This receptor is located to the east of the junction. Other receptors located in this area were not reported as significant adverse effects as the baseline noise levels at those properties are greater. The construction noise assessment criteria are based on the</p>	<p>It is not currently anticipated that there will be any change in construction approach that will be of the scale to result in any new or different significant effects in construction noise and vibration. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the measures outlined in the first iteration EMP (APP-019). Therefore it is not anticipated that this proposed change would result in any new or different significant effects to those reported in the ES in construction.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>existing noise environment, the other receptors have higher assessment criteria i.e. Category 'B' or 'C' (ref: BS5228, Annex E).</p> <p>Within the study area in the operational phase of 600m from the proposed design change, one residential receptor and one non-residential receptor were assessed and reported as likely significant beneficial effects in the ES. These receptors are located at School House and Brougham Institute to the east of the junction and directly facing the scheme.</p>	<p>The proposed design change does not affect the horizontal alignment of the mainline A66 and will result in a lowered in the vertical alignment, of the A66 mainline, which is the dominant noise source in the area. This lowering and the proposed overbridge may provide marginal noise attenuation at 1 Lane Ends however it is not considered be of the scale to be significant. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction or operation.</p>
Population and Human Health	<p>There are nine and one residual significant effects in construction and operation, respectively, reported in the ES for the Penrith to Temple Sowerby scheme, however none of the affected receptors are in proximity of this proposed change.</p>	<p>The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction</p> <p>The proposed change does not propose any change in Order Limits, access or Public Rights of Way assessed within the ES operation. The proposed change may present the opportunity to reduce the extent of land required to accommodate the temporary road to the south of the junction of Center Parcs, however it is not considered that this reduction in isolation is of a scale to result in a change in significance. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p> <p>There is no change to the air quality, population or noise and vibration assessment results , therefore this proposed change is not anticipated to result in any different human health effects during construction or operation.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Road Drainage and Water Environment	There are no residual significant effects to receptors surrounding the proposed change following suitable mitigation outlined in the ES Appendix 14.2 Flood Risk Assessment and Outline Drainage Strategy S (APP-221) and ES Appendix 14.4 Hydromorphology Assessment (APP-223.).	<p>The proposed change may require a change to the construction phase, potentially resulting differing construction methods, area and/or programme, however it is anticipated that any change in construction phase effects can be controlled by the requirements of the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change may require a revised drainage design which gives rise to risk a new significant adverse effects to the surrounding watercourses. It is likely that mitigation through design of drainage could be achieved to ensure the Highways England Water Risk Assessment Tool (HEWRAT) gives a passable score, this means that there will be appropriate levels of water quality in the discharge from the highways drainage system.</p>

3.9 DC-09 – Flexibility to reuse the existing A66 carriageway

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	There are no sensitive human or ecological receptors within 200m of the proposed change which may be affected by changes in air quality. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction or operation.
Biodiversity	There are no residual significant effects for construction or operation reported in the ES on any biodiversity receptor on the Penrith to Temple Sowerby scheme.	<p>The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species due to the vertical realignment of the route affecting the associated earthworks. However, the proposed change is considered to result in a reduction in construction works as a result of the opportunity to reuse existing carriageway and there is therefore potential for a slight reduction in effects on biodiversity during the construction phase due to a reduction in the construction of new hardstanding and associated infrastructure. Notwithstanding the commentary above it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works.</p> <p>Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>There are proposed terrestrial badger and barn owl crossing points along this scheme, and the structure of the crossing of the Lightwater is proposed to incorporate infrastructure that would support passage as mitigation for bat. Given this is a Limit of Deviation change, the mitigation proposed is anticipated to be retained in the proposed change, however there is a risk that the intention to reuse the existing carriageway may include the reuse of existing watercourse crossings. The DCO design crossings include new culverts to be of a suitable design for bat crossing which requires specific clearance heights over the water level which may not be feasible should the existing level of the road be retained in this location, giving rise to a risk of significant effect on bat. This design change will be</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		subject to further design in order to identify alternative solutions for the retention or relocation of this mitigation to reduce this risk.
Climate	<p>Greenhouse Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction or operation.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled by the measures within the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction or operation.</p>
Cultural Heritage	<p>The ES concludes significant adverse effects on cultural heritage resulting from construction within the Brougham Roman fort (Brocaum) and civil settlement and Brougham Castle scheduled monument and from proximity of construction to the Countess Pillar (also a scheduled monument). There is a beneficial significant operational effect to the Countess Pillar as a result of the improved connection and visibility in the landscape design.</p>	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. With no change to the Order Limits is not anticipated that there would be any change to the assessment of the impact to buried archaeological remains as they are within areas previously assessed. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>It is not anticipated that the proposed change would be of the scale to alter setting of heritage resources within the Zone of Visual Influence. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Geology and Soils	<p>There are major impacts are anticipated on Agricultural Land Classification (ALC) Grade 2 with over 20 ha of land permanently lost in this scheme and moderate impacts to Grade 3a soils with between 1- 20ha of land permanently lost during construction. This results in likely significant adverse effects.</p>	<p>The proposed design is anticipated to provide opportunity to reduce the construction footprint of the works within land that is ALC Grade 2 and 3a soils. The proposed design change could therefore give rise to a slight reduction in effect, however it is not considered to be of the scale to result in a different significant effect as reported in the ES for construction.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	There are no likely significant effects predicted as a result of the operational phase of this Project.	There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation . Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation
Landscape and Visual	<p>In relation to the DCO design in the location of the proposed change, there are no significant effects on Landscape Character Areas in construction and operation related to the locality of this design change.</p> <p>There are no significant effects identified in the construction phase and operation at any viewpoint as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105) related to the locality of this design change.</p>	<p>While the proposed change includes a reduction of works. it is not considered to be of the scale that would result in a change of significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change allows for the opportunity for reduction in works should the existing carriageway be retained, however, in the context of the wider A66 dualling, this proposed change is unlikely to be of the scale to result in a change in significance of the results. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in operation.</p>
Materials and Waste	There are no significant effects for construction or operation reported in the ES on materials or waste as a result of the Penrith to Temple Sowerby scheme.	<p>The ES assessment considered the Order Limits of for each scheme and waste infrastructure on a scale beyond that of just the Project. The design change is not of a scale or nature that is anticipated to result in any change to the waste infrastructure required or the materials. While there is a reduction in works, it is not considered to be of a scale or nature to affect the assessed materials required for the Project. There is no change in the Order Limits used in the assessment within the ES therefore there is no risk of different effects to minerals in the area.</p> <p>Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.</p>
Noise and Vibration	<p>Within the construction phase study area of 300m, two residential properties, Lightwater Cottages, were assumed to be demolished, no assessment was carried out at these two receptors.</p> <p>Seven sensitive receptors were reported as temporary adverse likely significant effects in</p>	<p>It is not currently anticipated that there will be any change in construction approach that will be of the scale to result in any new or different significant effects in construction noise and vibration. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the measures outlined in the first iteration EMP (APP-019).</p> <p>Therefore it is not anticipated that this proposed change would result in any</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>the ES. These are six residential properties at Barn Owl Cottage, Foxgloves and four residential receptors at Whinfell Park, and one non-residential property, Lords House (also known as Llama Karma Kafe) which has been acquired by National Highways. are located immediately south to the scheme.</p> <p>Within the operational phase study area of 600m from the design change, four residential receptors were reported as adverse likely significant effects in the ES. These are located at Whinfell Park, approximately 350m to the west from the proposed design change. There is one non-residential receptor at Lords House (also known as Llama Karma Kafe) which has been acquired by National Highways. This property is temporarily repurposed as National highways' office. Because of that, this receptor was reported as not significant in the ES.</p> <p>In addition to that, two residential properties, Lightwater Cottages, were assumed to be demolished. Therefore these properties were not assessed in the ES.</p>	<p>new or different significant effects to those reported in the ES in construction.</p> <p>The proposed design change provides the opportunity to alter the vertical alignment of the A66 mainline, however, it is anticipated the change would be minor within the context of the dual carriageway. Noise sensitive receptors located within the study area of the design change have all reported as adverse likely significant effects and the proposed change is unlikely to be of a scale or nature to result in any new or different significant effects. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES for construction or operation.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Population and Human Health	<p>There are nine and one residual significant effects in construction and operation, respectively, reported in the ES for the Penrith to Temple Sowerby scheme. This includes likely significant effects at both Llama Karma Café and Lightwater cottages due to the acquisition of the Café and the demolition of the residences at Lightwater Cottages.</p>	<p>The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>The proposed change does not propose any change in Order Limits, land take, access or Public Rights of Way assessed within the ES in construction or operation. It is anticipated that the access to St Ninian’s Church can be retained within the change. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p> <p>There is no change to the air quality, population or noise and vibration assessment results , therefore this proposed change is not anticipated to result in any different human health effects during construction or operation.</p>
Road Drainage and Water Environment	<p>There are no residual significant effects to receptors surrounding the proposed change following suitable mitigation outlined in the ES Appendix 14.2 Flood Risk Assessment and Outline Drainage Strategy (APP-221) and ES Appendix 14.4 Hydromorphology Assessment (APP-223).</p>	<p>The proposed change may require a change to the construction phase, potentially resulting differing construction methods, area and/or programme, however it is anticipated that any change in construction phase effects can be controlled by the requirements of the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is anticipated to require revised crossings of the Lightwater, and other watercourses which gives rise to the risk of new significant adverse effects to water quality and Water Framework Directive compliance in the Lightwater. This proposed change will be subject to further design including sensitive design of any new or different watercourse crossings, which is anticipated to reduce this risk.</p>

3.10 DC-10 – Removal of Priest Lane underpass

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	<p>The proposed change will result in a reduction of construction work, however in the construction an NO₂ concentration of 7.1 µg/m³ was predicted at the closest human receptor (HSR 33 as shown on Figure 5.1 Air Quality Study Area and Constraints (APP-065)) in the construction Do Something scenario, which is well below the annual mean air quality objective. The proposed change may result in differing construction methods and programme, however it is anticipated that any change in construction phase effects can be controlled by the requirements of the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction.</p> <p>In operation, an NO₂ concentration of 7.1 µg/m³ was predicted at the closest human receptor (HSR 33 as shown on Figure 5.1 Air Quality Study Area and Constraints (APP-065) in the operational Do Something scenario, which is well below the annual mean air quality objective. The proposed change is not anticipated to have an effect on the mainline A66 which is the dominant source of emissions, and therefore it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p>
Biodiversity	There is a residual significant effect on barn owl during operation of the Temple Sowerby to Appleby scheme as a result of high risk of mortality and/or injury of individuals due to collisions with road traffic. This is residual as the necessary mitigation is anticipated to require a deviation from the standard of the road design and therefore is not guaranteed.	<p>The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species however, the proposed change is considered to result in a reduction in construction works as a result of not building a new structure and there is therefore potential for a slight reduction in effects on biodiversity during the construction phase due to construction activity. Notwithstanding the commentary above it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>The proposed change would result in the removal of an underpass which is proposed to include a bat crossing point in order to mitigate the severance a bat commuting route. By removing this crossing point, there is a risk of a new significant adverse effect in operation. Should this mitigation be found to be feasibly retained within the design change, or relocated to a suitable place, then it possible that this risk can be reduce.</p> <p>There may be minor changes to habitat impacts which in isolation are not considered significant however, as noted in section 1.2 of this document, there is a risk of cumulative effects on habitats and any associated protected species at a Project level as a result of potential non-significant effects on habitats across all changes.</p>
Climate	<p>Green House Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES for construction or operation.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled within the EMP. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES for construction or operation.</p>
Cultural Heritage	<p>There are residual significant effects in construction and operation reported in the ES for the Temple Sowerby to Appleby scheme, however none of these residual effects are specifically related to the Priest Lane underpass.</p>	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. The proposed change is within the Order Limits used for the assessment within the ES therefore it is not anticipated that there would be any change to the assessment of the impact to buried archaeological remains. There may a reduction of works as the proposed change presents the opportunity to reduce the extent of works, however it is not considered of the scale to result in different significant effects. Therefore, it is not anticipated that this proposed change would</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is unlikely to substantially alter the mainline A66 and associated earthworks which is the dominant feature which may affect the setting of heritage features. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Geology and Soils	<p>A major and moderate magnitude of impact is anticipated as a result of the construction phase of the Project. Major impacts are anticipated on Agricultural Land Classification (ALC) Grade 2 and Grade 3a soils with over 20ha of BMV land permanently lost in this scheme. Between 1-20ha of Grade 3b soils will be permanently sealed. This results in likely significant adverse effects.</p> <p>There are no likely significant effects predicted as a result of the operational phase of the Project.</p>	<p>The geology and soils assessment within the ES assessed the impacts to land within the Order Limits, taking a worst-case scenario of impacts. The proposed change does not change the Order Limits or require additional land which therefore it is considered that the potential effects of the proposed change is captured within the ES assessment for both construction and operation. There is no aspect of this proposed change that would introduce new or different effects on geology and soils.</p> <p>Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES for construction or operation.</p>
Landscape and Visual	<p>In relation to the DCO design in the location of the proposed change, there are significant effects identified on landscape character areas of Broad Valleys which are anticipated to continue into year 15. There are significant effects identified in the construction phase and the first year of operation at a number of viewpoints as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105):</p>	<p>The proposed removal of the underpass may result in a minor reduction to the construction work required as compared to what was assessed in the ES, however it is not considered to be of the scale that would result in a change of significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>In operation, the dominant effect on the landscape and visual receptors is the new alignment of the mainline A66. The proposed change is not considered to be of the scale to result in new or different significant effects when considered in the context of the mainline A66. Therefore, it is not anticipated that this proposed change</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>Viewpoint 4.2 View from Priest Lane, Kirkby Thore looking east: Viewpoint 4.5 View from PRoW (footpath) 336017 and 336011 at Kirkby Thore looking north; and Viewpoint 4.3 view from Low Moor Park, A66 looking north north east, and viewpoint 4.27A PRoW (bridleway) 336018 South of Hale Grange, looking south. These are expected to reduce to non-significance by year 15.</p>	<p>would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Materials and Waste	<p>There are no significant effects for construction or operation reported in the ES on materials or waste as a result of the Penrith to Temple Sowerby scheme.</p>	<p>The ES assessment considered the Order Limits of for each scheme and waste infrastructure on a scale beyond that of just the Project. The design change is not of a scale that is anticipated to result in any change to the waste infrastructure required or the materials. While there is a reduction in works, it is not considered to be of a scale to affect the assessed materials required for the Project. There is no change in the Order Limits used in the assessment within the ES therefore there is no risk of different effects to minerals in the area. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.</p>
Noise and Vibration	<p>Within the construction phase study area of 300m from the proposed design change, no noise sensitive receptor is identified. No temporary likely significant effects were reported in the ES.</p> <p>Within the study area of 600m from the proposed design change, one residential receptor was reported as an adverse likely significant effect in the ES. This receptor is</p>	<p>As there is no sensitive receptor located within the study area from the design change, the proposed design change is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES for construction.</p> <p>The dominant noise source affecting the noise sensitive receptors in this area would be from the traffic on the A66 mainline and the removal of the underpass is not anticipated to result in a substantial change in this alignment. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>located at Halefield Farm to the north of the proposed design change. Approximately 40 residential receptors and one non-residential receptor were reported as beneficial likely significant effects in the ES. These receptors are located on Low Moor Row, Fell View, Horse and Farrier Courtyard, Eden View Cottages and Farm, Whistle Barn, Cross End, Priest Lane and Dunfell View to the south, south east and south west from the proposed design change.</p>	
<p>Population and Human Health</p>	<p>There are no residual significant effects to receptors that could be affected surrounding the proposed change. There is a non-significant adverse effect reported for Public Right of Way 336007 (bridleway) reported in the ES following mitigation including diversion.</p>	<p>The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>The proposed change will remove a Public Right of Way (PROW) connection from the DCO design. While PROW route is likely to be used for leisure purposes and users may committed to a longer distance, this route also provides some connection to Kirkby Thore Primary School even though it is likely that there would be infrequent use, the potential permanent increase in distance compared to the current PROW 336007 is anticipated to give rise to a risk of a new significant adverse operational effect when compared to those reported in the ES.</p> <p>There is no change to the air quality, population or noise and vibration assessment results , therefore this proposed change is not anticipated to result in any different human health effects during construction or operation.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Road Drainage and Water Environment	There are no residual significant effects to receptors surrounding the proposed change following suitable mitigation outlined in the ES Appendix 14.2 Flood Risk Assessment and Outline Drainage Strategy (APP-221) and ES Appendix 14.4 Hydromorphology Assessment (APP-223).	The proposed change may require a change to the construction phase, potentially resulting differing construction methods, area and/or programme, however it is anticipated that any change in construction phase effects can be controlled by the requirements of the first iteration EMP (APP-019). The proposed removal of the underpass may allow for a minor decrease in cuttings required which may have a reduction of effect on groundwater, however it is not anticipated to be of the scale to result in a change in significance. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.

3.11 DC-11 – Earlier tie-in of Cross Street to the existing road

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	There are no sensitive human or ecological receptors within 200m of the proposed change which may be affected by changes in air quality. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES for construction or operation.
Biodiversity	There is a residual significant effect on barn owl during operation of the Temple Sowerby to Appleby scheme as a result of high risk of mortality and/or injury of individuals due to collisions with road traffic. This is residual as the necessary mitigation is anticipated to require a deviation from the standard of the road design and therefore is not guaranteed.	<p>The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species however, the proposed change is considered to result in a reduction in construction works as a result of reducing the level of new highway to be constructed and there is therefore potential for a slight reduction in effects on biodiversity during the construction phase due to construction activity. Notwithstanding the commentary above it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works.</p> <p>. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>There is barn owl and bat mitigation proposed along this route and over the Cross Lanes bridge affected by the proposed change, is anticipated to be feasibly retained within this change. There may be minor changes to habitat impacts which in isolation are not considered significant. Therefore, there is no change in significance of the results as reported in the ES. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p> <p>However as noted in section 1.2 of this document, there is a risk of cumulative effects on habitats and any associated protected species at a Project level as a result of potential non-significant effects on habitats across all changes.</p>

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Climate	<p>Greenhouse Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES for construction or operation.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled within the EMP. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES for construction or operation.</p>
Cultural Heritage	<p>No significant effects in construction or operation reported in the ES for the Temple Sowerby to Appleby scheme in the locality of the design change.</p>	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. The proposed change is within the Order Limits used for the assessment within the ES therefore it is not anticipated that there would be any change to the assessment of the impact to buried archaeological remains. There may a reduction of effect as the proposed change presents the opportunity to reduce the extent of works, however it is not considered of the scale to result in different significant effects. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is unlikely to substantially alter the mainline A66 and associated earthworks which is the dominant feature which may affect the setting of heritage features. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Geology and Soils	<p>A major and moderate magnitude of impact is anticipated as a result of the construction phase of the Project. Major impacts are anticipated on Agricultural Land Classification (ALC) Grade 2 and Grade 3a</p>	<p>The geology and soils assessment within the ES assessed the impacts to land within the Order Limits, taking a worst-case scenario of impacts. The proposed change does not change the Order Limits or require additional land which therefore it is considered that the potential effects of the proposed change is captured within the ES assessment for both construction and operation. There is</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>soils with over 20ha of BMV land permanently lost in this scheme. Between 1-20ha of Grade 3b soils will be permanently sealed. This results in likely significant adverse effects.</p> <p>There are no likely significant effects predicted as a result of the operational phase of the Project.</p>	<p>no aspect of this proposed change that would introduce new or different effects on geology and soils.</p> <p>Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES for construction or operation.</p>
Landscape and Visual	<p>In relation to the DCO design in the location of the proposed change, there are significant effects identified for landscape character areas of Broad Valleys and Intermediate Farmland which are expected to continue into year 15.</p> <p>There are significant effects identified in the construction phase and the first year of operation at a number of viewpoints as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105):</p> <p>Viewpoint 4.2 View from Priest Lane, Kirkby Thore looking east;</p> <p>view from Low Moor Park, A66 looking north north east;</p> <p>Viewpoint 4.5 view from Public Right of Way (PRoW) (footpath) 336017 and 336011 at Kirkby Thore looking North; and</p> <p>Viewpoint 4.27A view from PRoW (bridleway) 336018 South of Hale Grange, looking south. These are expected to reduce to non-significance by year 15.</p>	<p>The proposed Limit of Deviation changes allow the opportunity for a minor reduction in the construction work required as compared to what was assessed in the ES, however it is not considered to be of the scale that would result in a reduction of significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>In operation, proposed realignment of the tie in at Cross Street and reduction of speed limit will not be discernible in the wider landscape scale. The proposed change is not considered to be of the scale to result in new or different significant effects when considered in the context of the mainline A66. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Materials and Waste	<p>There are no significant effects for construction or operation reported in the ES on materials or waste as a result of the Penrith to Temple Sowerby scheme.</p>	<p>The ES assessment considered the Order Limits of for each scheme and waste infrastructure on a scale beyond that of just the Project. The design change is not of a scale that is anticipated to result in any change to the waste infrastructure required or the materials. While there is a reduction in works, it is not considered to be of a scale to affect the assessed materials required for the Project. There is no change in the Order Limits used in the assessment within the ES therefore there is no risk of different effects to minerals in the area. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.</p>
Noise and Vibration	<p>Within the construction phase study area of 300m from the proposed design change, approximately 15 residential properties and 2 non-residential properties were reported as temporary adverse likely significant effects in the ES. These receptors are located on Dunfell View, Cross End and Priest Lane to the south of the proposed A66 mainline.</p> <p>Within the operational phase study area of 600m from the proposed design change, two residential receptors were reported as adverse likely significant effects in the ES. These receptors are located at Halefield Farm and Halefield Bungalow to the north of the design change and the proposed A66 mainline.</p> <p>Approximately 45 residential receptors and two non-residential receptors were reported as beneficial likely significant effects in the ES. These receptors are located on Priest Lane, Dunfell View, Cross End, Piper Lane</p>	<p>It is not currently anticipated that there will be any change in construction approach that will be of the scale to result in any new or different significant effects in construction noise and vibration. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the measures outlined in the first iteration EMP (APP-019). Therefore it is not anticipated that this proposed change would result in any new or different significant effects to those reported in the ES in construction.</p> <p>The dominant noise source affecting the noise sensitive receptors in this area would be from the traffic on the A66 mainline and the removal of the underpass is not anticipated to result in a substantial change in this alignment. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	and Centurion Park to the south of the design change and the proposed A66 mainline.	
Population and Human Health	There are 21 and 16 residual significant effects in construction and operation, respectively, reported in the ES for Temple Sowerby to Appleby scheme, however none of these are specifically associated with the Cross Lanes tie-in.	<p>The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>In operation, the proposed change is not anticipated to alter the level of access the road provides for users. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p> <p>There is no change to the air quality, population or noise and vibration assessment results, therefore this proposed change is not anticipated to result in any different human health effects during construction or operation.</p>
Road Drainage and Water Environment	There are no residual significant effects in construction and operation reported in the ES for the Temple Sowerby to Appleby scheme following the implementation of mitigation.	<p>The proposed change may require a change to the construction phase, potentially resulting differing construction methods, area and/or programme, however it is anticipated that any change in construction phase effects can be controlled by the requirements of the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change may result in change to drainage design. There is a risk of a new significant effect in operation as a result of this change in design to surrounding watercourses, however, mitigation through design of drainage could be achieved to ensure the Highways England Water Risk Assessment Tool (HEWRAT) gives a passable score, this means that there will be appropriate levels of water quality in the discharge from the highways drainage system. However, this is yet to be confirmed.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change

3.12 DC-12 – Green Lane bridge realignment

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	<p>The proposed change will result in a reduction of construction work, however in the construction an NO₂ concentration of 6.7µg/m³ was predicted at the closest human receptor (HSR 37 as shown on Figure 5.1 Air Quality Study Area and Constraints (APP-065)) in the construction Do Something scenario, which is well below the annual mean air quality objective. It is not currently anticipated that any change in construction will be of the scale to result in any new or different significant effects in construction emissions at this receptor and therefore no further receptor is considered at risk. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the construction dust mitigation measures outlined in the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction.</p> <p>The proposed is unlikely to affect operational emissions given the nature of the proposed change only affecting a private means of access. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p>
Biodiversity	There is a residual significant effect on barn owl during operation of the Temple Sowerby to Appleby scheme as a result of high risk of mortality and/or injury of individuals due to collisions with road traffic. This is residual as the necessary mitigation is anticipated to require a deviation from the standard of the road design and therefore is not guaranteed.	<p>The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species however, the proposed change is considered to result in a reduction in construction works as a result of reducing the level of new highway to be constructed and there is therefore potential for a slight reduction in effects on biodiversity during the construction phase due to construction activity. Notwithstanding the commentary above it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>There structure affected by the proposed change does not support any mitigation that would act as a crossing point for protected species, however there may be minor changes to habitat impacts which in isolation are not considered significant. Therefore, there is no change in significance of the results as reported in the ES. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p> <p>However as noted in section 1.2 of this document, there is a risk of cumulative effects on habitats and any associated protected species at a Project level as a result of potential non-significant effects on habitats across all changes.</p>
Climate	<p>Greenhouse Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction or operation.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled within the EMP. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction or operation.</p>
Cultural Heritage	<p>No significant effects in construction or operation reported in the ES for the Temple Sowerby to Appleby scheme in the locality of the design change.</p>	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. The proposed change is within the Order Limits used for the assessment within the ES therefore it is not anticipated that there would be any change to the assessment of the impact to buried archaeological remains. There may a reduction of effect as the proposed change presents the opportunity to reduce the extent of works, however it is not considered of the scale to result in different significant effects. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>The proposed change is unlikely to substantially alter the mainline A66 and associated earthworks which is the dominant feature which may affect the setting of heritage features. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
<p>Geology and Soils</p>	<p>A major and moderate magnitude of impact is anticipated as a result of the construction phase of the Project. Major impacts are anticipated on Agricultural Land Classification (ALC) Grade 2 and Grade 3a soils with over 20ha of BMV land permanently lost in this scheme. Between 1-20ha of Grade 3b soils will be permanently sealed. This results in likely significant adverse effects.</p> <p>There are no likely significant effects predicted as a result of the operational phase of the Project.</p>	<p>The geology and soils assessment within the ES assessed the impacts to land within the Order Limits, taking a worst-case scenario of impacts. The proposed change does not change the Order Limits or require additional land which therefore it is considered that the potential effects of the proposed change is captured within the ES assessment for both construction and operation. There is no aspect of this proposed change that would introduce new or different effects on geology and soils.</p> <p>Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES for construction or operation.</p>
<p>Landscape and Visual</p>	<p>In relation to the DCO design in the location of the proposed change, there are significant effects identified for landscape character areas of Broad Valleys and Intermediate Farmland which are expected to continue into year 15.</p> <p>There are significant effects identified in the construction phase and the first year of operation at a number of viewpoints as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105):</p>	<p>The proposed change allows the opportunity for a minor reduction to the construction work required as compared to what was assessed in the ES, however it is not considered to be of the scale that would result in a reduction of significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>In operation, the proposed realignment of the overbridge will not be discernible in the wider landscape scale. The proposed change is not considered to be of the scale to result in new or different significant effects when considered in the context of the mainline A66. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>Viewpoint 4.6 View from PRow (footpaths) 336013 and 336014 at British Gypsum works looking south west; and Viewpoint 4.7A view from open space near Sanderson Croft looking north east. These are expected to reduce to non-significance by year 15.</p>	
Materials and Waste	<p>There are no significant effects for construction or operation reported in the ES on materials or waste as a result of the Penrith to Temple Sowerby scheme.</p>	<p>The ES assessment considered the Order Limits of for each scheme and waste infrastructure on a scale beyond that of just the Project. The design change is not of a scale that is anticipated to result in any change to the waste infrastructure required or the materials. While there is a reduction in works, it is not considered to be of a scale to affect the assessed materials required for the Project. There is no change in the Order Limits used in the assessment within the ES therefore there is no risk of different effects to minerals in the area. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.</p>
Noise and Vibration	<p>Within the construction phase study area of 300m from the proposed design change, approximately 40 residential receptors were reported as temporary adverse likely significant effects in the ES. These receptors are located on Sandersons Croft and Cross End to the south of the A66 mainline.</p> <p>Within the operational study area of 600m from the proposed design change, approximately 55 residential receptors that were reported as adverse likely significant effects in the ES. These receptors are located on Sandersons Croft and Cross End to the south of the proposed design change.</p>	<p>It is not currently anticipated that there will be any change in construction approach that will be of the scale to result in any new or different significant effects in construction noise and vibration. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the measures outlined in the first iteration EMP (APP-019). Therefore it is not anticipated that this proposed change would result in any new or different significant effects to those reported in the ES in construction.</p> <p>The dominant noise source affecting the noise sensitive receptors in this area would be from the traffic on the A66 mainline and the removal of the underpass is not anticipated to result in a substantial change in this alignment or the traffic flows in the local area. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>Approximately 125 residential receptors and six non-residential receptors were reported as beneficial likely significant effects in the ES. These receptors are located on Dunfell View, Cross End, Centurion Park, Piper Lane, Chapel Lane, Main Street, Millerstone Rise, Townhead Garth, Sandersons Croft, Fell Lane, Priest Lane and Sleastonhow Lane to the further south of the proposed design change.</p>	
<p>Population and Human Health</p>	<p>There are residual significant effects in construction and operation reported in the ES for the Temple Sowerby to Appleby scheme, however none of these are specifically associated with Green Lane Bridge.</p>	<p>The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>The proposed change is anticipated to alter Public Rights of Way routes around the scheme with an increase in diversion of around circa 600m. However, the route is likely to be used recreationally so the additional journey length would not be significant. The retention of the Private Means of Access means that there is no difference in access. Therefore, the proposed design change is not anticipated to result in a new adverse likely significant effect in operation.</p> <p>There is no change to the air quality, population or noise and vibration assessment results, therefore this proposed change is not anticipated to result in any different human health effects during construction or operation.</p>
<p>Road Drainage and Water Environment</p>	<p>There are no residual significant effects in construction and operation reported in the ES for the Temple Sowerby to Appleby</p>	<p>The proposed change may require a change to the construction phase, potentially resulting differing construction methods, area and/or programme, however it is anticipated that any change in construction phase effects can be controlled by the requirements of the first iteration EMP (APP-019). Therefore, it is not</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	scheme following the implementation of mitigation.	anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.

3.13 DC-13 – Realignment of Main Street

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	There are no sensitive human or ecological receptors within 200m of the proposed change which may be affected by changes in air quality. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES for construction or operation.
Biodiversity	There is a residual significant effect on barn owl during operation of the Temple Sowerby to Appleby scheme as a result of high risk of mortality and/or injury of individuals due to collisions with road traffic. This is residual as the necessary mitigation is anticipated to require a deviation from the standard of the road design and therefore is not guaranteed.	<p>The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species however, the proposed change is considered to result in a reduction in construction works as a result of reducing the extent of new highway to be constructed and there is therefore potential for a slight reduction in effects on biodiversity during the construction phase due to construction activity. Notwithstanding the commentary above it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works.</p> <p>Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction.</p> <p>There is barn owl mitigation proposed along this route and over this bridge, that is anticipated to be feasibly retained within this proposed change. There may be minor changes to habitat impacts which in isolation are not considered significant. Therefore, there is no change in significance of the results as reported in the ES.</p> <p>Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p> <p>However as noted in section 1.2 of this document, there is a risk of cumulative effects on habitats and any associated protected species at a Project level as a result of potential non-significant effects on habitats across all changes.</p>
Climate	Greenhouse Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in	The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES.

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled within the EMP. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.</p>
Cultural Heritage	<p>No significant effects in construction or operation reported in the ES for the Temple Sowerby to Appleby scheme in the locality of the design change.</p>	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. The proposed change is within the Order Limits used for the assessment within the ES therefore it is not anticipated that there would be any change to the assessment of the impact to buried archaeological remains. There may be a reduction of effect as the proposed change presents the opportunity to reduce the extent of works, however it is not considered of the scale to result in different significant effects. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is unlikely to substantially alter the mainline A66 and associated earthworks which is the dominant feature which may affect the setting of heritage features. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Geology and Soils	<p>A major and moderate magnitude of impact is anticipated as a result of the construction phase of the Project. Major impacts are anticipated on Agricultural Land Classification (ALC) Grade 2 and Grade 3a soils with over 20ha of BMV land permanently lost in this scheme. Between 1-20ha of Grade 3b soils will be permanently sealed. This results in likely significant adverse effects.</p>	<p>The proposed design change may allow for a reduction in the construction footprint and therefore has the potential to allow for a non-significant reduction of effects on ALC Grade 3a and 2 soils as a consequence. However it is unlikely to be sufficient to be considered substantial enough to affect the significance of effects reported in the ES. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation. Therefore, it is not anticipated that</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>There are no likely significant effects predicted as a result of the operational phase of the Project.</p>	<p>this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation</p>
<p>Landscape and Visual</p>	<p>In relation to the DCO design in the location of the proposed change, there are significant effects identified for landscape character areas of Broad Valleys and Intermediate Farmland which are expected to continue into year 15.</p> <p>There are significant effects identified in the construction phase and the first year of operation at a number of viewpoints as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105): Viewpoint 4.7A View from open space near Sanderson Croft looking north east; and Viewpoint 4.6 View from PRow (footpaths) 336013 and 336014 at Co-ordinates: NY 64577 26377 British Gypsum works looking south west. These are expected to reduce to non-significance by year 15.</p>	<p>The proposed Limit of Deviation changes allows the opportunity for a minor reduction to the construction work required as compared to what was assessed in the ES, however it is not considered to be of the scale that would result in a change of significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>In operation, proposed realignment of the tie in at Main Street and reduction of speed limit will not be discernible in the wider landscape scale. The proposed change is not considered to be of the scale to result in new or different significant effects when considered in the context of the mainline A66. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
<p>Materials and Waste</p>	<p>There are no significant effects for construction or operation reported in the ES on materials or waste as a result of the Temple Sowerby to Appleby scheme.</p>	<p>The ES assessment considered the Order Limits of for each scheme and waste infrastructure on a scale beyond that of just the Project. The design change is not of a scale that is anticipated to result in any change to the waste infrastructure required or the materials. While there is a reduction in works, it is not considered to be of a scale to affect the assessed materials required for the Project. There is no change in the Order Limits used in the assessment within the ES therefore there is no risk of different effects to minerals in the area. Therefore, it is not anticipated that this proposed change would result in any new or different</p>

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>significant effects when compared to those reported in the ES for construction or operation.</p>
<p>Noise and Vibration</p>	<p>Within the construction phase study area of 300m from the design change, approximately 20 residential receptors were reported as adverse likely significant effects in the ES. These receptors are located on Sandersons Croft to the west of the proposed design change.</p> <p>Approximately 5 residential properties were reported as beneficial likely significant effects in the ES. These receptors are located on Cross End, Sleastonhow Lane and Fell Lane to the west of the proposed design in Kirby Thore.</p> <p>Potential temporary likely significant vibration effects on human receptors were reported in the ES if any vibration sensitive receptors are located within a distance of 100m during start-up and run-down of vibratory roller/compactor, 70m during steady state of vibratory compactors and 50m during vibratory piling phases. No vibration sensitive receptor is identified within the distance specified.</p> <p>Within the operational study area of 600m from the design change, approximately 60 residential receptors were reported as adverse likely significant effects in the ES. These receptors are located on Sandersons</p>	<p>It is not currently anticipated that there will be any change in construction approach that will be of the scale to result in any new or different significant effects in construction noise and vibration. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the measures outlined in the first iteration EMP (APP-019). Therefore it is not anticipated that this proposed change would result in any new or different significant effects to those reported in the ES in construction.</p> <p>The dominant noise source affecting the noise sensitive receptors in this area would be from the traffic on the A66 mainline and the Main Street realignment is not of a scale that would substantially change the operational noise and vibration effects assessed within the ES of the underpass is not anticipated to result in a substantial change in this alignment. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>Croft to the west of the proposed design change.</p> <p>Approximately 55 residential receptors were reported as beneficial likely significant effects in the ES. These receptors are located on Millerstone Rise, Cross End, Townhead Garth, Sandersons Croft, Fell Lane, Main Street and Sleastonhow Lane to the west of the proposed design change in Kirby Thore.</p>	
Population and Human Health	<p>There are 21 and 16 residual significant effects in construction and operation, respectively, reported in the ES for Temple Sowerby to Appleby scheme, including land surrounding this design change.</p>	<p>The proposed change may allow for a reduction in land required for the realignment of Main Street, however it is not considered likely to affect the significance of the effect. Otherwise, The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>In operation, the proposed change is not anticipated to alter the level of access the road provides for users. Therefore, the proposed design change is not anticipated to result in a new adverse likely significant effect in operation.</p> <p>There is no change to the air quality, population or noise and vibration assessment results, therefore this proposed change is not anticipated to result in any different human health effects during construction or operation.</p>
Road Drainage and Water Environment	<p>There are no residual significant effects in construction and operation reported in the ES for the Temple Sowerby to Appleby scheme following the implementation of mitigation.</p>	<p>There are no watercourses likely to be impacted by the proposed change, it is outside any floodplain, there are no changes to drainage and there no significant new cuttings. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.</p>

3.14 DC-14 – Realignment of Sleastonhow Lane

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	There are no sensitive human or ecological receptors within 200m of the proposed change which may be affected by changes in air quality. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES for construction or operation.
Biodiversity	There is a residual significant effect on barn owl during operation of the Temple Sowerby to Appleby scheme as a result of high risk of mortality and/or injury of individuals due to collisions with road traffic. This is residual as the necessary mitigation is anticipated to require a deviation from the standard of the road design and therefore is not guaranteed.	<p>The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species however, the proposed change is considered to result in a reduction in construction works as a result of reducing the extent of new highway to be constructed and there is therefore potential for a slight reduction in effects on biodiversity during the construction phase due to construction activity. Notwithstanding the commentary above it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>There is barn owl mitigation proposed along this route and over the Sleastonhow Lane bridge, that is anticipated to be feasibly retained within this proposed change. There may be minor changes to habitat impacts which in isolation are not considered significant. Therefore, there is no change in significance of the results as reported in the ES. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p> <p>However as noted in section 1.2 of this document, there is a risk of cumulative effects on habitats and any associated protected species at a Project level as a result of potential non-significant effects on habitats across all changes.</p>
Climate	Greenhouse Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes	The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>that the Project's GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled within the EMP. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.</p>
Cultural Heritage	<p>No significant effects in construction or operation reported in the ES for the Temple Sowerby to Appleby scheme in the locality of the design change.</p>	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. The proposed change is within the Order Limits used for the assessment within the ES therefore it is not anticipated that there would be any change to the assessment of the impact to buried archaeological remains. There may a reduction of effect as the proposed change presents the opportunity to reduce the extent of works, however it is not considered of the scale to result in different significant effects. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is unlikely to substantially alter the mainline A66 and associated earthworks which is the dominant feature which may affect the setting of heritage features. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Geology and Soils	<p>A major and moderate magnitude of impact is anticipated as a result of the construction phase of the Project. Major impacts are anticipated on Agricultural Land Classification (ALC) Grade 2 and Grade 3a soils with over 20ha of BMV land permanently lost in this scheme. Between 1-20ha of Grade 3b soils will be permanently</p>	<p>The proposed design change may allow for a reduction in construction footprint and therefore has the potential to allow for a non-significant reduction of effects on ALC Grade 3a soils as a consequence. However it is unlikely to be sufficient to be considered substantial enough to affect the significance of effects reported in the ES. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation . Therefore, it is not anticipated that</p>

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>sealed. This results in likely significant adverse effects.</p> <p>There are no likely significant effects predicted as a result of the operational phase of the Project.</p>	<p>this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation</p>
Landscape and Visual	<p>In relation to the DCO design in the location of the proposed change, there are significant effects identified for landscape character areas of Broad Valleys and Intermediate Farmland which are expected to continue into year 15.</p> <p>There are significant effects identified in the construction phase and the first year of operation at a viewpoint as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105).: Viewpoint 4.8 View from PRoW (footpath) 336005, Main Street Co-ordinates: NY 63890 25576 Kirkby Thore looking south east. These are expected to reduce to non-significance by year 15.</p>	<p>The proposed Limit of Deviation changes allows the opportunity for a minor reduction to the construction work required as compared to what was assessed in the ES, however it is not considered to be of the scale that would result in a change of significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>In operation, proposed realignment of the tie in at Main Street and reduction of speed limit will not be discernible in the wider landscape scale. The proposed change is not considered to be of the scale to result in new or different significant effects when considered in the context of the mainline A66. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Materials and Waste	<p>There are no significant effects for construction or operation reported in the ES on materials or waste as a result of the Temple Sowerby to Appleby scheme.</p>	<p>The ES assessment considered the Order Limits of for each scheme and waste infrastructure on a scale beyond that of just the Project. The design change is not of a scale that is anticipated to result in any change to the waste infrastructure required or the materials. While there is a reduction in works, it is not considered to be of a scale to affect the assessed materials required for the Project. There is no change in the Order Limits used in the assessment within the ES therefore there is no risk of different effects to minerals in the area. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Noise and Vibration	<p>Within the construction phase study area of 300m from the proposed design change, no temporary significant adverse effects were reported in the ES.</p> <p>Potential temporary significant vibration effects on human receptors were reported in the ES if any vibration sensitive receptors are located within a distance of 100m during start-up and run-down of vibratory roller/compactor, 70m during steady state of vibratory compactors and 50m during vibratory piling phases. No vibration sensitive receptor is identified within the distance specified.</p> <p>Within the operation phase study area of 600m from the centre of the design change, two residential receptors were reported as likely significant adverse effects in the ES. These receptors are located at Hare Cottage and Sleastonhow to the south east from the design change and to the east of the A66 mainline.</p> <p>Three residential receptors were reported as likely significant beneficial effects in the ES. These receptors are located at The Old Piggery, Kirkby Thore Hall and Field Head to the north west from the design change and to the west from the A66 mainline.</p>	<p>It is not currently anticipated that there will be any change in construction approach that will be of the scale to result in any new or different significant effects in construction noise and vibration. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the measures outlined in the first iteration EMP (APP-019). Therefore it is not anticipated that this proposed change would result in any new or different significant effects to those reported in the ES in construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on noise and vibration during operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation</p>
Population and Human Health	<p>There are 21 and 16 residual significant effects in construction and operation, respectively, reported in the ES for Temple</p>	<p>The proposed change may allow for a reduction in land required for the realignment of Sleastonhow Lane, however it is not considered likely to affect the significance of the effect. The proposed change is not anticipated to result in any</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>Sowerby to Appleby scheme, including land surrounding this design change.</p>	<p>material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>In operation, the proposed change is not anticipated to alter the level of access the road provides for users. Therefore, the proposed design change is not anticipated to result in a new adverse likely significant effect in operation.</p> <p>There is no change to the air quality, population or noise and vibration assessment results, therefore this proposed change is not anticipated to result in any different human health effects during construction or operation.</p>
<p>Road Drainage and Water Environment</p>	<p>There are no residual significant effects in construction and operation reported in the ES for the Temple Sowerby to Appleby scheme following the implementation of mitigation.</p>	<p>There are no watercourses likely to be impacted by the proposed change, it is not anticipated to change any floodplain, there are no changes to drainage and there no significant new cuttings. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.</p>

3.15 DC-15 – Realignment of Crackenthorpe underpass

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	There are no sensitive human or ecological receptors within 200m of the proposed change which may be affected by changes in air quality. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES for construction or operation.
Biodiversity	There is a residual significant effect on barn owl during operation of the Temple Sowerby to Appleby scheme as a result of high risk of mortality and/or injury of individuals due to collisions with road traffic. This is residual as the necessary mitigation is anticipated to require a deviation from the standard of the road design and therefore is not guaranteed.	<p>The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species however, the proposed change is considered to result in a reduction in construction works as a result of reducing the extent of new highway to be constructed and there is therefore potential for a slight reduction in effects on biodiversity during the construction phase due to construction activity. Notwithstanding the commentary above it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction.</p> <p>The structure affected by the proposed change does not support any mitigation that would act as a crossing point for protected species, however there may be minor changes to habitat impacts which in isolation are not considered significant. Therefore, there is no change in significance of the results as reported in the ES. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p> <p>However as noted in section 1.2 of this document, there is a risk of cumulative effects on habitats and any associated protected species at a Project level as a result of potential non-significant effects on habitats across all changes</p>
Climate	Greenhouse Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes	The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>that the Project's GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled within the EMP. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.</p>
Cultural Heritage	No significant effects in construction or operation reported in the ES for the Temple Sowerby to Appleby scheme in the locality of the design change.	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. The proposed change is within the Order Limits used for the assessment within the ES therefore it is not anticipated that there would be any change to the assessment of the impact to buried archaeological remains. There may be a reduction of effect as the proposed change presents the opportunity to reduce the extent of works, however it is not considered of the scale to result in different significant effects. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is unlikely to substantially alter the mainline A66 and associated earthworks which is the dominant feature which may affect the setting of heritage features. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Geology and Soils	A major and moderate magnitude of impact is anticipated as a result of the construction phase of the Project. Major impacts are anticipated on Agricultural Land Classification (ALC) Grade 2 and Grade 3a soils with over 20ha of BMV land permanently lost in this scheme during construction. Between 1-20ha of Grade 3b soils will be permanently sealed during	<p>The proposed design change may allow for a reduction in construction footprint and therefore has the potential to allow for a non-significant reduction of effects on ALC Grade 3a soils as a consequence. However it is unlikely to be sufficient to be considered substantial enough to affect the significance of effects reported in the ES. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation . Therefore, it is not anticipated that</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>construction. This results in likely significant adverse effects.</p> <p>There are no likely significant effects predicted as a result of the operational phase of the Project.</p>	<p>this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation</p>
Landscape and Visual	<p>In relation to the DCO design in the location of the proposed change, there are significant effects identified for landscape character areas of Broad Valleys and Intermediate Farmland in construction and year 1 of operation which are expected to continue into year 15.</p> <p>There are significant effects identified in the construction phase and the first year of operation at a viewpoint as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105): Viewpoint 4.13 View from PRow (bridleway) 317012 north-east of Co-ordinates: NY 66455 22549 Crackenthorpe looking East. These are expected to remain significant in Year 15.</p>	<p>The proposed Limit of Deviation changes allows the opportunity for a minor reduction to the construction work required as compared to what was assessed in the ES, however it is not considered to be of the scale that would result in a change of significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposal to reduce the skew in the underpass will likely have a minor effect on viewpoint 4.13 with more mature vegetation required to be removed than the DCO application, however this will only be discernible on the local level and is not large enough to influence landscape receptors. The proposed change is not considered to be of the scale to result in new or different significant effects when considered in the context of the mainline A66. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Materials and Waste	<p>There are no significant effects for construction or operation reported in the ES on materials or waste as a result of the Temple Sowerby to Appleby scheme.</p>	<p>The ES assessment considered the Order Limits of for each scheme and waste infrastructure on a scale beyond that of just the Project. The design change is not of a scale that is anticipated to result in any change to the waste infrastructure required or the materials. While there is a reduction in works, it is not considered to be of a scale to affect the assessed materials required for the Project. There is no change in the Order Limits used in the assessment within the ES therefore there is no risk of different effects to minerals in the area. Therefore, it is not anticipated that this proposed change would result in any new or different</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		significant effects when compared to those reported in the ES for construction or operation.
Noise and Vibration	<p>Within the construction phase study area of 300m from the proposed design change, no noise sensitive receptor is identified. No temporary adverse likely significant effects were reported in the Environment Statement.</p> <p>Within the operational phase study area of 600m from the proposed design change, no noise sensitive receptor is identified. No likely significant effects were reported in the Environment Statement.</p>	<p>As there is no sensitive receptor located within the study area the design change. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction.</p> <p>As there is no sensitive receptor located within 600m from the design change, the proposed design change would not result in new adverse likely significant effects. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p>
Population and Human Health	<p>There are 21 and 16 residual significant effects in construction and operation, respectively, reported in the ES for Temple Sowerby to Appleby scheme, however none of these are in the locality of the design change.</p>	<p>The proposed change may allow for a reduction in land required for the realignment of Crackenthorpe Underpass, however it is not considered likely to affect the significance of the effect. The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>In operation, the proposed change is not anticipated to alter the level of access the road provides for users. Therefore, the proposed design change is not anticipated to result in a new adverse likely significant effect in operation.</p> <p>There is no change to the air quality, population or noise and vibration assessment results, therefore this proposed change is not anticipated to result in any different human health effects during construction or operation.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Road Drainage and Water Environment	There are no residual significant effects in construction and operation reported in the ES for the Temple Sowerby to Appleby scheme following the implementation of mitigation.	There are no watercourses likely to be impacted by the proposed change, it is not anticipated to change any floodplain, there are no changes to drainage and there no significant new cuttings. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.

3.16 DC-16 – Removal of Roger Head Farm overbridge

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	<p>The proposed change will result in a reduction of construction work, however in the construction an NO₂ concentration of 7.6µg/m³ was predicted at the closest human receptor (HSR 42 as shown on Figure 5.1 Air Quality Study Area and Constraints (APP-065)) in the construction Do Something scenario, which is well below the annual mean air quality objective. It is not currently anticipated that any change in construction will be of the scale to result in any new or different significant effects in construction emissions at this receptor and therefore no further receptor is considered at risk. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the construction dust mitigation measures outlined in the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction.</p> <p>An NO₂ concentration of 6.4µg/m³ was predicted at the closest human receptor (HSR 42 as shown on Figure 5.1 Air Quality Study Area and Constraints (APP-065)) in the operational Do Something scenario, which is well below the annual mean air quality objective. The proposed change is not anticipated to have an effect on the mainline A66 which is the dominant source of emissions, and therefore it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p>

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Biodiversity	<p>There is a residual significant effect on barn owl during operation of the Temple Sowerby to Appleby scheme as a result of high risk of mortality and/or injury of individuals due to collisions with road traffic. This is residual as the necessary mitigation is anticipated to require a deviation from the standard of the road design and therefore is not guaranteed.</p>	<p>The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species however, the proposed change is considered to result in a reduction in construction works as a result of removal of a new structure and there is therefore potential for a slight reduction in effects on biodiversity during the construction phase due to construction activity. Notwithstanding the commentary above it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works.</p> <p>Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change would result in the removal of an underpass which is proposed to include a bat crossing point in order to mitigate the severance a bat commuting route. By removing this crossing point, there is a risk of a new likely significant effect in operation. Should this mitigation be found to be feasibly retained within the design change, or relocated to a suitable place, then it possible that this risk can be reduce.</p> <p>As noted in section 1.2 of this document, there is a risk of cumulative effects on habitats and any associated protected species at a Project level as a result of potential non-significant effects on habitats across all changes.</p>
Climate	<p>Greenhouse Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled within the EMP. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Cultural Heritage	No significant effects in construction or operation reported in the ES for the Temple Sowerby to Appleby scheme in the locality of the design change.	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. The proposed change is within the Order Limits used for the assessment within the ES therefore it is not anticipated that there would be any change to the assessment of the impact to buried archaeological remains. There may be a reduction of effect as the proposed change presents the opportunity to reduce the extent of works, however it is not considered of the scale to result in different significant effects. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is unlikely to substantially alter the mainline A66 and associated earthworks which is the dominant feature which may affect the setting of heritage features. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Geology and Soils	<p>A major and moderate magnitude of impact is anticipated as a result of the construction phase of the Project. Major impacts are anticipated on Agricultural Land Classification (ALC) Grade 2 and Grade 3a soils with over 20ha of BMV land permanently lost in this scheme during construction. Between 1-20ha of Grade 3b soils will be permanently sealed during construction. This results in likely significant adverse effects.</p> <p>There are no likely significant effects predicted as a result of the operational phase of the Project.</p>	<p>The proposed design change may allow for a reduction footprint and therefore has the potential to allow for a non-significant reduction of effects on ALC Grade 3b soils as a consequence, however, the inclusion of a Public Right of Way it is anticipated may further impact Agricultural Land Classification Grade 3b. It is unlikely that either of these effects are of the scale to result in a new or different significant effects. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation . Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Landscape and Visual	<p>In relation to the DCO design in the location of the proposed change, there are significant effects identified for landscape character areas of Broad Valleys and Intermediate Farmland in construction and year 1 of operation which are expected to continue into year 15.</p> <p>There are significant effects identified in the construction phase and the first year of operation at a viewpoint as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105): Viewpoint 4.13 View from Public Right of Way (PRoW) (bridleway) and viewpoint 4.14 View from PRoW (footpath) 317004 nr. Roman Road. 317012 north east of Co-ordinates: NY 66455 22549 Crackenthorpe looking East. These are expected to continue into year 15.</p>	<p>The proposed removal of Rogerhead Farm Bridge allows the opportunity for a minor reduction to the construction work required as compared to what was assessed in the ES, however it is not considered to be of the scale that would result in a change of significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>In operation, proposed removal of Rogerhead Farm Bridge may result in minor reduction of impacts on visual receptors, however it will not be discernible in the wider landscape. The proposed change is not considered to be of the scale to result in new or different significant effects when considered in the context of the mainline A66. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Materials and Waste	<p>There are no significant effects for construction or operation reported in the ES on materials or waste as a result of the Temple Sowerby to Appleby scheme.</p>	<p>The ES assessment considered the Order Limits of for each scheme and waste infrastructure on a scale beyond that of just the Project. The design change is not of a scale that is anticipated to result in any change to the waste infrastructure required or the materials. While there is a reduction in works, it is not considered to be of a scale to affect the assessed materials required for the Project. There is no change in the Order Limits used in the assessment within the ES therefore there is no risk of different effects to minerals in the area. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.</p>
Noise and Vibration	<p>Within the construction phase study area of 300m from the proposed design change, no noise sensitive receptor is identified, No</p>	<p>As there is no sensitive receptor located within the study area of the design change. Therefore, it is not anticipated that this proposed change would</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>temporary likely significant effects were reported in the ES.</p> <p>Within the operational study area of 600m from the proposed design change, three residential properties were reported as adverse likely significant effects in the ES. Two of which are at Old Byre and Roger Head located to the west of the proposed design change. The remaining one residential property, Castrigg House, is located to the north-east from the proposed design change. These receptors are approximately in a distance of 330m.</p> <p>One residential property was reported as a beneficial likely significant effect in the ES. This receptor, Oak Dene, is located to the west of the proposed A66 and approximately 100m to the east of the existing A66.</p>	<p>result in any new or different significant effects as compared to those reported in the ES during construction.</p> <p>The dominant noise source affecting the noise sensitive receptors in this area would be from the traffic on the A66 mainline and the removal of the overbridge is not anticipated to result in a substantial change in this alignment. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p>
Population and Human Health	<p>There are 21 and 16 residual significant effects in construction and operation, respectively, reported in the ES for Temple Sowerby to Appleby scheme, however none of these are in the locality of the design change.</p>	<p>The proposed change may allow for a reduction in land required by removing the Rogerhead Farm Bridge, however it is not considered likely to affect the significance of the effect reported during construction. The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>The proposed change will remove a Public Rights of Way crossing of the A66 is likely to require an increase in diversion length to link to the underpass to the</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		west. The route is likely to be used recreationally so the additional journey length would not be significant. Additionally, it is not anticipated to alter the level of access the road provides for users. Therefore, the proposed design change is not anticipated to result in a new adverse likely significant effect in operation.
Road Drainage and Water Environment	There are no residual significant effects in construction and operation reported in the ES for the Temple Sowerby to Appleby scheme following the implementation of mitigation.	There are no watercourses likely to be impacted by the proposed change, it is not anticipated to change any floodplain, there are no changes to drainage and there no significant new cuttings. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.

3.17 DC-17 – Café Sixty Six – Revised land plan

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	No significant effects for construction or operation reported in the ES for the Appleby to Brough scheme.	There is no change to the construction or operation of the scheme as the change is limited to the removal of area from the Order Limits that is not anticipated to change in the DCO design. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction or operation.
Biodiversity	There are no residual significant effects for construction or operation reported in the ES on any biodiversity receptor on the Appleby to Brough scheme.	There is no change to the construction or operation of the scheme as the change is limited to the removal of area from the Order Limits that is not ecologically sensitive nor required for mitigation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction or operation.
Climate	<p>Greenhouse Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled within the EMP. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.</p>
Cultural Heritage	No significant effects in construction or operation reported in the ES for the Appleby to Brough scheme in the locality of the design change.	There is no change to the construction or operation of the scheme as the change is limited to the removal of area from the Order Limits that is not a cultural heritage receptor. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction or operation.
Geology and Soils	Major impacts are anticipated on Agricultural Land Classification (ALC) Grade 3a with over 20ha of land permanently lost in this scheme during construction. Major	There is no change to the construction or operation of the scheme as the change is limited to the removal of area from the Order Limits that is not a geology and soils receptor. Therefore, it is not anticipated that this proposed change

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>impacts are anticipated to Grade 3b soils with approximately 50ha of land permanently sealed during construction. This results in likely significant adverse effects.</p> <p>There are no likely significant effects predicted as a result of the operational phase of the Project.</p>	<p>would result in any new or different significant effects as compared to those reported in the ES for construction.</p>
Landscape and Visual	<p>In relation to the DCO design in the location of the proposed change, there are significant effects identified for landscape character areas of Broad Valleys and Foothills in construction and year 1 of operation which are expected to reduce to non-significant by year 15.</p> <p>There are significant effects identified in the construction phase and the first year of operation at one viewpoint as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105): Viewpoint 6.1 view from Public Right of Way (footpath) 372028 north of Café Sixty Six. This is expected to reduce to non-significance by year 15.</p>	<p>There is no change to the construction or operation of the scheme as the change is limited to the removal of area from the Order Limits that is not anticipated to change in the DCO design. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction or operation.</p>
Materials and Waste	<p>There are no significant effects for construction or operation reported in the ES on materials or waste as a result of the Appleby Brough scheme.</p>	<p>The change is limited to the removal of an area from the Order Limits. This area did not affect the Materials and Waste assessment undertaken in the ES. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.</p>
Noise and Vibration	<p>Within the construction phase study area of 300m, one non-residential receptor, Café</p>	<p>There is no change to the construction or operation of the scheme as the change is limited to the removal of area from the Order Limits that is not anticipated to change in the DCO design. Therefore, it is not anticipated that this proposed</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>Sixty Six, was reported as an adverse likely significant effect in the ES.</p> <p>Within the operational phase study area of 600m, one non-residential receptor, Café Sixty Six, was reported as an adverse likely significant effect in the ES.</p>	<p>change would result in any new or different significant effects as compared to those reported in the ES in construction or operation.</p>
Population and Human Health	<p>There are 12 and 13 residual significant effects in construction and operation, respectively, reported in the ES for the Appleby to Brough scheme, however none of the receptors are in the locality of the design change.</p>	<p>The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>There is no change to the construction or operation of the scheme as the change is limited to the removal of area from the Order Limits that is not anticipated to change in the DCO design. The level of access provided to the Café Sixty Six is retained there should be no significant changes to the assessment. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.</p> <p>There is no change to the air quality, population or noise and vibration assessment results , therefore this proposed change is not anticipated to result in any different human health effects during construction or operation.</p>
Road Drainage and Water Environment	<p>There is one residual significant effect following suitable mitigation outlined in ES for the Appleby to Brough scheme following the implementation of mitigation.</p>	<p>There is no change to the construction or operation of the scheme as the change is limited to the removal of area from the Order Limits that is not anticipated to change in the DCO design. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.</p>

3.18 DC-18 – Revision to access for New Hall Farm and Far Bank End

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	There are no sensitive human or ecological receptors within 200m of the proposed change which may be affected by changes in air quality. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES for construction or operation.
Biodiversity	There are no residual significant effects for construction or operation reported in the ES on any biodiversity receptor on the Appleby to Brough scheme.	<p>The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species however, the proposed change is considered to result in a reduction in construction works as a result of removal of a new structure and there is therefore potential for a slight reduction in effects on biodiversity during the construction phase due to construction activity. Notwithstanding the commentary above it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>There is barn owl mitigation proposed in this area which is anticipated to be feasibly retained within this proposed change. There may be minor changes to habitat impacts which in isolation are not considered significant. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p> <p>However as noted in section 1.2 of this document, there is a risk of cumulative effects on habitats and any associated protected species at a Project level as a result of potential non-significant effects on habitats across all changes.</p>
Climate	Greenhouse Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in	The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES.

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled within the EMP. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.</p>
Cultural Heritage	<p>No significant effects in construction or operation reported in the ES for the Appleby to Brough scheme in the locality of the design change.</p>	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. The proposed change is within the Order Limits used for the assessment within the ES therefore it is not anticipated that there would be any change to the assessment of the impact to buried archaeological remains. There may a reduction of effect as the proposed change presents the opportunity to reduce the extent of works, however it is not considered of the scale to result in different significant effects. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is unlikely to substantially alter the mainline A66 and associated earthworks which is the dominant feature which may affect the setting of heritage features. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Geology and Soils	<p>Major impacts are anticipated on ALC Grade 3a with over 20ha of land permanently lost in this scheme. Major impacts are anticipated to Grade 3b soils with approximately 50ha of land permanently sealed during construction. This results in likely significant adverse effects.</p> <p>There are no likely significant effects predicted as a result of the operational phase of the Project.</p>	<p>The proposed design change may allow for a reduction footprint and therefore has the potential to allow for a non-significant reduction of effects on ALC Grade 3a soils as a consequence. However it is unlikely to be sufficient to be considered substantial enough to affect the significance of effects reported in the ES. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation . Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Landscape and Visual	<p>In relation to the DCO design in the location of the proposed change, there are significant effects identified for landscape character areas of Broad Valleys and Intermediate Farmland in construction and year 1 of operation. The effects are expected to reduce to non-significant by year 15.</p> <p>There are significant effects identified in the construction phase and the first year of operation at one viewpoint as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105): Viewpoint 6.1 view from Public Right of Way (footpath) 372028 north of Café Sixty Six. This is expected to reduce to non-significance by year 15.</p>	<p>The proposed realignment of the New Hall Farm and Far Bank End Access allows the opportunity for a minor reduction to the construction work required as compared to what was assessed in the ES, however it is not considered to be of the scale that would result in a change of significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction.</p> <p>In operation, the proposed change may result in minor reduction of impacts on visual receptors, however it will not be discernible in the wider landscape. The proposed change is not considered to be of the scale to result in new or different significant effects when considered in the context of the mainline A66. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p>
Materials and Waste	<p>There are no significant effects for construction or operation reported in the ES on materials or waste as a result of the Appleby to Brough scheme.</p>	<p>The ES assessment considered the Order Limits of for each scheme and waste infrastructure on a scale beyond that of just the Project. The design change is not of a scale that is anticipated to result in any change to the waste infrastructure required or the materials. While there is a reduction in works, it is not considered to be of a scale to affect the assessed materials required for the Project. There is no change in the Order Limits used in the assessment within the ES therefore there is no risk of different effects to minerals in the area. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.</p>
Noise and Vibration	<p>Within the construction phase study area of 300m from the design change, no temporary adverse likely significant effect was reported in the ES.</p>	<p>It is not currently anticipated that there will be any change in construction approach that will be of the scale to result in any new or different significant effects in construction noise and vibration. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the measures outlined in the first iteration EMP (APP-019). Therefore it is not anticipated that this proposed change would result in any</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>Within the operational phase study area of 600m, one non-residential receptor, Café Sixty Six, was reported as an adverse likely significant effect in the ES.</p>	<p>new or different significant effects to those reported in the ES in construction. There is no aspect of this proposed change that would introduce new or different effects on noise and vibration during operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation</p>
<p>Population and Human Health</p>	<p>There are 12 and 13 residual significant effects in construction and operation, respectively, reported in the ES for the Appleby to Brough scheme, however none of the receptors are in the locality of the design change.</p>	<p>The proposed change may allow for a reduction in land required by retaining the existing underpass however it is not considered to be of a scale whereby it is likely to affect the significance of the effect reported for construction in the ES. The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>The proposed change will not alter the level of access to land or businesses during operation and does not reduce the level of PRow provision that currently exists. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects during operation.</p> <p>There is no change to the air quality, population or noise and vibration assessment results, therefore this proposed change is not anticipated to result in any different human health effects during construction or operation.</p>
<p>Road Drainage and Water Environment</p>	<p>There is one residual significant effect following suitable mitigation outlined in ES for the Appleby to Brough scheme following the implementation of mitigation.</p>	<p>There are no watercourses likely to be impacted by the proposed change, it is not anticipated to change any floodplain, there are no changes to drainage and there no significant new cuttings. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.</p>

3.19 DC-19 – Realignment of cycleway local to Cringle and Moor Beck

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	<p>The proposed change will result in a reduction of construction work, however in the construction an NO₂ concentration of 10.4µg/m³ was predicted at the closest human receptor (HSR 46 as shown on Figure 5.1 Air Quality Study Area and Constraints (APP-065)) in the construction Do Something scenario, which is well below the annual mean air quality objective (40µg/m³). It is not currently anticipated that any change in construction will be of the scale to result in any new or different significant effects in construction emissions at this receptor and therefore no further receptor is considered at risk. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the construction dust mitigation measures outlined in the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>An NO₂ concentration of 6.3µg/m³ was predicted at the closest human receptor (HSR 46 as shown on Figure 5.1 Air Quality Study Area and Constraints (APP-065)) in the operational Do Something scenario, which is well below the annual mean air quality objective. The proposed change is not anticipated to have an effect on the mainline A66 which is the dominant source of emissions, and therefore it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>
Biodiversity	There are no residual significant effects for construction or operation reported in the ES on any biodiversity receptor on the Appleby to Brough scheme.	The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species however, the proposed change is considered to result in a reduction in construction works as a result of a new cycle track and associated infrastructure and there is therefore potential for a slight reduction in effects on biodiversity during the construction phase due to construction activity. Notwithstanding the commentary above it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works. Therefore, it is not anticipated that this proposed change would result in any new or different

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change will result in the proposed cycleway moving to detrunked A66, this removes the need to build new watercourse crossings. This may lead to a reduction in adverse effect however it is unlikely to be considered significant. There may be minor changes to habitat impacts which in isolation are not considered significant. Therefore, there is no change in significance of the results as reported in the ES. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p> <p>However as noted in section 1.2 of this document, there is a risk of cumulative effects on habitats and any associated protected species at a Project level as a result of potential non-significant effects on habitats across all changes.</p>
Climate	<p>Greenhouse Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled within the EMP. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.</p>
Cultural Heritage	<p>No significant effects in construction or operation reported in the ES for the Appleby to Brough scheme in the locality of the design change.</p>	<p>The proposed change requires a change to the Order Limits used for the assessment within the ES. However, the new area of Order Limits is within the alignment of the existing A66 which has already been developed, therefore it is not anticipated that there would be any change to the assessment of the impact to buried archaeological remains. There may be a reduction of effect as the proposed change presents the opportunity to reduce the extent of works within undeveloped land, however it is not considered of the scale to result in different significant effects. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>The proposed change is unlikely to substantially alter the mainline A66 and associated earthworks which is the dominant feature which may affect the setting of heritage features. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Geology and Soils	<p>Major impacts are anticipated on Agricultural Land Classification (ALC) Grade 3a with over 20ha of land permanently lost in this scheme during construction. Major impacts are anticipated to Grade 3b soils with approximately 50ha of land permanently sealed during construction. This results in likely significant adverse effects.</p> <p>There are no likely significant effects predicted as a result of the operational phase of the Project.</p>	<p>The proposed design change may allow for a reduction of construction footprint within ALC Grade 3b and 3a soils and therefore has the potential to allow for a non-significant reduction of effects. However, it is unlikely to be sufficient to be considered substantial enough to affect the significance of effects reported in the ES. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation</p>
Landscape and Visual	<p>In relation to the DCO design in the location of the proposed change, there are significant effects in the construction phase and year one for landscape character areas Broad Valleys and Foothills in construction and year 1 of operation. The effects are expected to reduce to non-significant by year 15 of operation.</p> <p>There are significant effects identified in the construction phase at one viewpoint as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105):</p>	<p>The proposed realignment of the proposed cycleway allows the opportunity for a minor reduction to the construction work required as compared to what was assessed in the ES, however it is not considered to be of the scale that would result in a change of significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>In operation, the proposed change may result in minor reduction of impacts on visual receptors as a result of a reduction of newbuilt infrastructure, however it will not be discernible in the wider landscape. The proposed change is not considered to be of the scale to result in new or different significant effects when considered in the context of the mainline A66. Therefore, it is not anticipated that this</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	Viewpoint 6.5 View from Minor road leading to Moor House Farm Co-ordinates: NY 74333 16789 looking South East shows significant effects in the construction phase. This is expected to reduce to non-significance by year 1 of operation.	proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.
Materials and Waste	There are no significant effects for construction or operation reported in the ES on materials or waste as a result of the Appleby to Brough scheme.	The ES assessment considered the Order Limits of for each scheme and waste infrastructure on a scale beyond that of just the Project. The design change is not of a scale that is anticipated to result in any change to the waste infrastructure required or the materials. While there is a reduction in works, it is not considered to be of a scale to affect the assessed materials required for the Project. There is a change in the Order Limits used in the assessment within the ES however, the new area of Order Limits is within the existing A66 and has already been developed. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.
Noise and Vibration	<p>Within the construction phase study area of 300m from the design change, two residential receptors were reported as adverse likely significant effects in the ES. These receptors are located immediately south of the existing A66.</p> <p>Within the operational study area of 600m, three residential receptors were reported as beneficial likely significant effects in the ES. These receptors are located at Wheatsheaf Farm, Wheatsheaf Cottage and Street House adjacent to the existing A66. One of which, Street House, located immediately north to the existing A66 is within NIA 10128.</p>	<p>It is not currently anticipated that there will be any change in construction approach that will be of the scale to result in any new or different significant effects in construction noise and vibration. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the measures outlined in the first iteration EMP (APP-019). Therefore it is not anticipated that this proposed change would result in any new or different significant effects to those reported in the ES in construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on noise and vibration during operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Population and Human Health	<p>There are 12 and 13 residual significant effects in construction and operation, respectively, reported in the ES for the Appleby to Brough scheme.</p> <p>Several new footpaths and cycleways will be introduced during operation. These are shown in the Walking, Cycling and Horse Riding Proposals (APP-010). The magnitude of impact is assessed to be minor beneficial as it will improve safety and access to a network of Public Rights of Ways. Overall, the scheme is likely to have a permanent slight beneficial effect on Walkers, Cyclists and Horse riders, which is not significant.</p>	<p>The proposed change may allow for a reduction in land required by relocating the cycleway onto the existing A66 however it is not considered that any change in land take would affect the significance of the effect reported in the ES. The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>The proposed change will relocate the new cycleway but will not alter the level of provision. There is a change in Order Limits required, however the additional land is the existing A66 carriageway and its acquisition is unlikely to have an effect on surrounding business. Therefore, the proposed design change is not anticipated to result in a new adverse likely significant effect in operation.</p>
Road Drainage and Water Environment	<p>There is one residual significant effect following suitable mitigation in the ES for the Appleby to Brough scheme following the implementation of mitigation.</p>	<p>There it is not anticipated to change any floodplain, there are no changes to drainage and there no significant new cuttings. The proposed change removes new watercourse crossings from the DCO design, which is considered a reduction in adverse effect, however it is unlikely to be of a scale to result in a change in significance. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.</p>

3.20 DC-20 – Update to Limits of Deviation on eastbound connection to local road (immediately west of Hayber Lane)

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	There are no sensitive human or ecological receptors within 200m of the proposed change which may be affected by changes in air quality. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES for construction or operation.
Biodiversity	No significant effects for construction or operation reported in the ES for the Appleby to Brough scheme.	<p>The proposed change to Limit of Deviation is to match the mainline A66 in the vertical Limit of Deviation which may result in differing construction areas as compared to what was assessed in the ES. The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species however, the proposed change is considered to result in a reduction in construction works should the road reduced in height compared to the DCO Design as earthworks would be reduced. There is therefore potential for a slight reduction in effects on biodiversity during the construction phase due to construction activity. Notwithstanding the commentary above it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is not anticipated to result in any changes in operation. There may be minor changes to habitat impacts which in isolation are not considered significant. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p> <p>However as noted in section 1.2 of this document, there is a risk of cumulative effects on habitats and any associated protected species at a Project level as a result of potential non-significant effects on habitats across all changes.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Climate	<p>Greenhouse Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled within the EMP. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.</p>
Cultural Heritage	<p>No significant effects in construction or operation reported in the ES for the Appleby to Brough scheme in the locality of the design change.</p>	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. The proposed change is within the Order Limits used for the assessment within the ES therefore it is not anticipated that there would be any change to the assessment of the impact to buried archaeological remains. There may be a reduction of effect as the proposed change presents the opportunity to reduce the extent of works, however it is not considered of the scale to result in different significant effects. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is unlikely to substantially alter the mainline A66 and associated earthworks which is the dominant feature which may affect the setting of heritage features. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Geology and Soils	<p>Major impacts are anticipated on Agricultural Land Classification (ALC) Grade 3a with over 20ha of land permanently lost in this scheme during construction. Major impacts are anticipated to Grade 3b soils with approximately 50ha of land permanently</p>	<p>The proposed design change may allow for a reduction in construction footprint should the height of the embankment be reduced and therefore has the potential to allow for a non-significant reduction of effects on ALC Grade 3a soils as a consequence. However it is unlikely to be sufficient to be considered substantial enough to affect the significance of effects reported in the ES. Therefore, it is not</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>sealed during construction. This results in likely significant adverse effects.</p> <p>There are no likely significant effects predicted as a result of the operational phase of the Project.</p>	<p>anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>
Landscape and Visual	<p>In relation to the DCO design in the location of the proposed change, there are significant effects identified for landscape character areas of Broad Valleys and Intermediate Farmland in construction and year 1 of operation. The effects are expected to reduce to non-significant by year 15.</p> <p>There are significant effects identified in the construction phase and the first year of operation at one viewpoint as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105): Viewpoint 6.5 view from Minor road leading to Moor House Farm Co-ordinates: NY 74333 16789 looking south east. This is expected to reduce to non-significance by year 15.</p>	<p>The proposed Limit of Deviation Change allows for the opportunity for a minor reduction to the construction work required as compared to what was assessed in the ES, however it is not considered to be of the scale that would result in a change of significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>In operation, the proposed change may result in minor reduction of impacts on visual receptors should the road be lowered alongside the mainline A66, however it will not be discernible in the wider landscape. The proposed change is not considered to be of the scale to result in new or different significant effects when considered in the context of the mainline A66. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Materials and Waste	<p>There are no significant effects for construction or operation reported in the ES on materials or waste as a result of the Appleby to Brough scheme.</p>	<p>The ES assessment considered the Order Limits of for each scheme and waste infrastructure on a scale beyond that of just the Project. The design change is not of a scale or nature that is anticipated to result in any change to the waste infrastructure required or the materials. While there is a reduction in works, it is not considered to be of a scale or nature to affect the assessed materials required for</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>the Project. There is no change in the Order Limits used in the assessment within the ES therefore there is no risk of different effects to minerals in the area. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.</p>
Noise and Vibration	<p>Within the construction phase study area of 300m from the design change, two residential receptors were reported as adverse likely significant effects in the ES. These receptors are at Walk Mill Barn and located immediately south of the existing A66 and north of the sideroad.</p> <p>Potential temporary significant vibration effects on human receptors were reported in the ES if any vibration sensitive receptors are located within a distance of 100m during start-up and run-down of vibratory roller/compactor, 70m during steady state of vibratory compactors and 50m during vibratory piling phases. No vibration sensitive receptor is identified within the study area.</p> <p>Within the operational phase study area of 600m from the design change, three residential receptors were reported as beneficial likely significant effects in the ES. These receptors are located at Wheatsheaf Farm, Wheatsheaf Cottage and Street House adjacent to the existing A66. One of which, Street House, located immediately north to the existing A66 is within NIA 10128.</p>	<p>It is not currently anticipated that there will be any change in construction approach that will be of the scale to result in any new or different significant effects in construction noise and vibration. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the measures outlined in the first iteration EMP (APP-019). Therefore it is not anticipated that this proposed change would result in any new or different significant effects to those reported in the ES in construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on noise and vibration during operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Population and Human Health	<p>There are 12 and 13 residual significant effects in construction and operation, respectively, reported in the ES for the Appleby to Brough scheme, however none of the receptors are in the locality of the design change.</p>	<p>The proposed change may allow for a reduction in land required should the side road be lowered within the Limit of Deviation however it is not considered likely to be a scale to affect the significance of the effect. The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>The proposed change will not alter the level of access to land or businesses and does not reduce the level of PRow provision that currently exists. Therefore, the proposed design change is not anticipated to result in a new adverse likely significant effect during operation.</p>
Road Drainage and Water Environment	<p>There is one residual significant effect following suitable mitigation in the ES for the Appleby to Brough scheme following the implementation of mitigation. The proposed change is linked to the DCO design viaducts which have been designed to allow movement of the channel, not constrain geomorphological and hydromorphological processes and to not increase flood risk downstream. This area is considered sensitive in terms of flood risk and the River Eden Special Area of Conservation.</p>	<p>The proposed change related to the side road connecting to the mainline A66 only, therefore is not anticipated to impact on the viaducts or the watercourses of Moor Beck and Cringle Beck which they cross. The design of the side road doesn't impact on the ability of the viaducts to meet all established mitigation criteria within the DCO application. There are no watercourses likely to be impacted by the proposed change, it is not anticipated to change any floodplain, there are no changes to drainage and there no significant new cuttings. The proposed change removes watercourse crossings from the DCO design, which is considered a reduction in adverse effect change, however it is unlikely to be of a scale or nature to result in a change in significance. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation</p>

3.21 DC-21 – Amendments to Order Limits within Ministry of Defence Land

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES on any biodiversity receptor on the Appleby to Brough scheme.	<p>The proposed change is anticipated to result in a reduction of construction work, however in the construction an NO₂ concentration of 10.4µg/m³ was predicted at the closest human receptor (HSR 46 as shown on Figure 5.1 Air Quality Study Area and Constraints (APP-065)) in the construction Do Something scenario, which is well below the annual mean air quality objective (40µg/m³). It is not currently anticipated that any change in construction will be of the scale to result in any new or different significant effects in construction emissions at this receptor and therefore no further receptor is considered at risk. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the construction dust mitigation measures outlined in the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>An NO₂ concentration of 6.3µg/m³ was predicted at the closest human receptor (HSR 46 as shown on Figure 5.1 Air Quality Study Area and Constraints (APP-065)) in the operational Do Something scenario, which is well below the annual mean air quality objective. The proposed change is not anticipated to have an effect on the mainline A66 which is the dominant source of emissions, and therefore it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>
Biodiversity	There are no residual significant effects for construction or operation reported in the ES on any biodiversity receptor on the Appleby to Brough scheme.	The proposed change may result in differing construction areas as compared to what was assessed in the ES, including a new area of Order Limits in order to accommodate mitigation that is not compatible with the operation of the Ministry of Defence facility. This additional area is within the existing A66 boundary and was surveyed as part of the Phase 1 surveys undertaken for the Project. The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species. Notwithstanding the commentary above it is considered that the existing controls within the first iteration

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>EMP (APP-019) are sufficient to be able to reduce the impacts of construction works.</p> <p>Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>There may be a non-significant adverse effects in operation compared to the ES assessment as the revised mitigation is anticipated to be less suitable for supporting the protected species, including Red Squirrel, in this area. Additionally, there may be minor changes to habitat impacts which in isolation are not considered significant. Therefore, there is no change in significance of the results as reported in the ES. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p> <p>However as noted in section 1.2 of this document, there is a risk of cumulative effects on habitats and any associated protected species at a Project level as a result of potential non-significant effects on habitats across all changes.</p>
Climate	<p>Greenhouse Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled within the EMP. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.</p>
Cultural Heritage	<p>There is one significant adverse effect in the locality of this design. This is a permanent moderate adverse, as a result of the removal of buried remains of the non-designated Sandford ring cairn.</p>	<p>The proposed change requires a change to the Order Limits used for the assessment within the ES. There is potential for a new minor impact and as a result two new effects, which are not significant, resulting from the inclusion of two non-designated earthworks identified from lidar and aerial photographs within the Order Limits. These are not considered to be of the scale to result in a change in significance due to the nature of the assets. Therefore, it is not anticipated that</p>

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is unlikely to substantially alter the mainline A66 and associated earthworks which is the dominant feature which may affect the setting of heritage features. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p>
Geology and Soils	<p>Major impacts are anticipated on ALC Grade 3a with over 20ha of land permanently lost in this scheme during construction. Major impacts are anticipated to Grade 3b soils with approximately 50ha of land permanently sealed during construction. This results in likely significant adverse effects.</p> <p>There are no likely significant effects predicted as a result of the operational phase of the Project.</p>	<p>This design change is anticipated to result in reduced land take within ALC 3a and 4 areas and increased land take in ALC 4 areas. This reduction in ALC 3a is anticipated to result in a reduction which means that the total area now falls below 20ha of land and therefore may result in a minor improvement of the potential significant adverse effect though this remains significant. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation</p>
Landscape and Visual	<p>In relation to the DCO design in the location of the proposed change, there are significant effects in the construction phase and year 1 for landscape character areas Broad Valleys and Foothills. The effects are expected to reduce to non-significant by year 15.</p> <p>There are significant effects identified in the construction phase at a number of viewpoints as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105):</p>	<p>The proposed change allows the opportunity for a minor reduction to the construction work required as compared to what was assessed in the ES, however it is not considered to be of the scale that would result in a change of significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change requires amendments to ecological mitigation planting which had been sensitively designed to avoid landscape effects in the sensitive area in the vicinity of the Northern Pennines Area of Outstanding Natural Beauty. In operation, the of removal of DCO design planting aside the existing A66, along with the introduction of linear planting to the east is anticipated to affect the landscape character in the local area. The introduction of two blocks of woodland planting on</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>Viewpoints 6.4 view from B6259 south of the Eden Valley Railway bridge looking north;</p> <p>Viewpoint 6.5 view from minor road leading to Moor House Farm looking south east, view from Public Right of Way 372008 south of Langford Farm, looking north east; and</p> <p>Viewpoint 6.7 view from PRoW (footpath) 372021 north of Warcop Training Centre looking north east.</p> <p>These are expected to reduce to non-significance by year 15.</p>	<p>the lower slopes of the Northern Pennines AONB is not consistent with the immediate local landscape character are of Foothills. There is a risk of a new significant effect lasting into year 15 on this Local Character Area. The proposed changes to planting will be subject to further design including consideration such as an open woodland habitat with glades and rides and kept within clearly defined retained field boundaries, which is anticipated to lessen the effect on the landscape character. Woodlands should be designed with larger species in the core of the area and irregularly edges lower species to the periphery. Visual receptors will experience a visual journey differently to the DCO design with the amended planting locations with open views where there had previously not been any and restricted views where there had been the ability to appreciate them. There is a risk of a new significant effect to viewpoint 6.6 view from PRoW (bridleway) 372008 south of Langford Farm, looking north-east. It is anticipated that with careful design of the two woodland blocks on the lower Pennine slopes will aid visual integration with the scheme and not restrict key views of the Northern Pennines.</p>
Materials and Waste	<p>No construction or operation significant effects have been identified for the Appleby to Brough scheme.</p>	<p>There is a change in the Order Limits used in the assessment within the ES. The proposed change requires a change in Order Limits. There is a potential Mineral Consultation Area (MCA) for sand and gravel along entire scheme length, particularly to the south of existing carriageway. The amendment of the Order Limits, when considered in context of wider resource the scheme, would not diminish access to this potential MCA, additionally as the new area of Order Limits is within the Ministry of Defence operational land it is unlikely the site would be used for mineral extraction. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.</p>
Noise and Vibration	<p>Within the construction phase study area of 300m, three residential properties in Sandford, nine residential receptors in Warcop, and four residential receptors in Broom Rigg were reported as adverse likely significant effects in the Environment Statement.</p>	<p>It is not currently anticipated that there will be any change in construction approach that will be of the scale to result in any new or different significant effects in construction noise and vibration. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the measures outlined in the first iteration EMP (APP-019). Therefore it is not anticipated that this proposed change would result in any new or different significant effects to those reported in the ES in construction.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>Within the operational phase study area of 600m, 14 residential receptors were reported in Warcop, and three residential receptors in Broom Rigg were reported as likely significant adverse effects in the ES.</p>	<p>There is no aspect of this proposed change that would introduce new or different effects on noise and vibration during operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation</p>
Population and Human Health	<p>The Appleby to Brough scheme requires a land take from the Ministry of Defence (MoD). This includes the permanent acquisition of land which contains a playing field and a helipad, which could be utilised by emergency services and which has a high sensitivity. The loss represents a major adverse impact, which would be significant, however the embedded mitigation within the scheme design means that both the playing field and helipad will be relocated to the south of the scheme, off Castlehill Road. The replacement facilities will be fully operational before the closure of the existing provisions due to the potential use as an emergency services helipad. As such the residual impact will be no change which will be a neutral effect.</p>	<p>The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>The proposed change will not alter the level of access to land or businesses and does not reduce the level of PRoW provision that currently exists. There is a change in Order Limits required, however this has been done in order to avoid impacts on the operational MoD facility. Therefore, the proposed design change is not anticipated to result in a new adverse likely significant effect during operation.</p>
Road Drainage and Water Environment	<p>There is one residual significant effect following suitable mitigation in the ES for the Appleby to Brough scheme following the implementation of mitigation.</p>	<p>There are no watercourses likely to be impacted by the proposed change, it is not anticipated to change any floodplain, there are no changes to drainage and there no significant new cuttings. The proposed change removes watercourse crossings from the DCO design, which is considered a reduction in adverse effect change, however it is unlikely to be of a scale or nature to result in a change in significance. Therefore, it is not anticipated that this proposed change would result in</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		different likely significant effects as compared to those reported in the ES in construction or operation

3.22 DC-22 – Realignment of Warcop Westbound Junction

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	No significant effects for construction or operation reported in the ES for the Appleby to Brough scheme.	<p>It is not anticipated that any change in construction will be of the scale to result in any new or different significant effects in construction emissions at this receptor and therefore no further receptor is considered at risk. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the construction dust mitigation measures outlined in the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>The ecological site Crooks Beck Alluvial Forest (part of the River Eden Special Area of Conservation) is located within 200m of this this design change. Sites such as this are not considered to be sensitive to nitrogen in-line with DMRB LA105 and the assessment reported in the ES identified that this ecological site is not predicted to increase nitrogen deposition greater than 1% of the lower critical load. The proposed change is not anticipated to affect the operational traffic volume. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p>
Biodiversity	There are no residual significant effects for construction or operation reported in the ES on any biodiversity receptor on the Appleby to Brough scheme.	<p>The proposed change to Limit of Deviation may result in differing construction areas as compared to what was assessed in the ES. The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species however, the proposed change is considered to result in a reduction in construction works should the junction be made smaller. There is therefore potential for a slight reduction in effects on biodiversity during the construction phase due to a smaller area of new highway to be constructed. Notwithstanding the commentary above it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction.</p> <p>In operation, there the potential for the removal of two new crossings, within the slip road of the Warcop junction. This may result in an area of the floodplain of Crooks Beck being cut off and the pond proposed within the loop of the junction needing to be relocated. There is little space to relocate the pond outside of surrounding flood plain. This gives rise to, a risk of a new significant adverse effect as a result of any changes to geomorphology, hydromorphology, water quality, and flood connectivity that might arise in the removal of the crossings as the Crooks Beck is hydrologically linked to the River Eden Special Area of Conservation, which means the area is highly sensitive. There is the potential for non-compliance with the Habitats Regulations Assessment.</p> <p>Should the proposed change show that removal of the crossings in the DCO design does not adversely affect the geomorphology, hydromorphology, water quality, and flood connectivity allow is potential for non-significant reduction in adverse effects as compared to the ES if it is possible to avoid the requirement for two new crossings of the Crooks Beck.</p>
Climate	<p>Greenhouse Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled within the EMP. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.</p>
Cultural Heritage	<p>No significant effects in construction or operation reported in the ES for the Appleby to Brough scheme in the locality of the design change.</p>	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. The proposed change is within the Order Limits used for the assessment within the ES therefore it is not anticipated that there would be any change to the</p>

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>assessment of the impact to buried archaeological remains. There may be a reduction of effect as the proposed change presents the opportunity to reduce the extent of works, however it is not considered of the scale to result in different significant effects. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is unlikely to substantially alter the mainline A66 and associated earthworks which is the dominant feature which may affect the setting of heritage features. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Geology and Soils	<p>Major impacts are anticipated on Agricultural Land Classification (ALC) Grade 3a with over 20ha of land permanently lost in this scheme during construction. Major impacts are anticipated to Grade 3b soils with approximately 50ha of land permanently sealed during construction. This results in likely significant adverse effects.</p> <p>There are no likely significant effects predicted as a result of the operational phase of the Project.</p>	<p>The proposed design change may allow for a reduction in construction footprint should the height of the embankment be reduced and therefore has the potential to allow for a non-significant reduction of effects on ALC Grade 3a and 3b soils as a consequence. However it is unlikely to be sufficient to be considered substantial enough to affect the significance of effects reported in the ES. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation . Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>
Landscape and Visual	<p>In relation to the DCO design in the location of the proposed change, there are significant effects in the construction phase and year one for landscape character area Broad Valleys and Foothills. The effects are expected to reduce to non-significant by year 15.</p>	<p>The proposed change allows the opportunity for a minor reduction to the construction work required as compared to what was assessed in the ES, however it is not considered to be of the scale that would result in a change of significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>There are significant effects identified in the construction phase and the first year of operation at one viewpoint as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105):</p> <p>Viewpoint 6.7 view at Public Rights of Way (footpath) 372021 north of Warcop Training Centre looking north east; and Viewpoint 6.8 View from adjacent to Warcop Railway Station entrance Co-ordinates: NY 75396 15638 looking north. These are expected to reduce to non-significance by year 15.</p>	<p>In operation, the proposed Limit of Deviation change may result in insufficient room for landscape integration such as slackening of embankments or mitigation planting of the southern elevation. This may result in a risk of a new significant effect to viewpoint 6.7 view at Public Rights of Way (footpath) 372021 north of Warcop Training Centre looking north east lasting into year 15. It is possible that detailed design solutions can be developed to integrate the junction into the surrounding landscape, thereby reducing this risk.</p>
Materials and Waste	<p>There are no significant effects for construction or operation reported in the ES on materials or waste as a result of the Appleby to Brough scheme.</p>	<p>The ES assessment considered the Order Limits of for each scheme and waste infrastructure on a scale beyond that of just the Project. The design change is not of a scale that is anticipated to result in any change to the waste infrastructure required or the materials. While there is a reduction in works, it is not considered to be of a scale to affect the assessed materials required for the Project. There is no change in the Order Limits used in the assessment within the ES therefore there is no risk of different effects to minerals in the area. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.</p>
Noise and Vibration	<p>Within the construction phase study area of 300m from the design change, seven residential receptors were reported as adverse likely significant effects in the ES. These receptors are located in Warcop to the south-west of the A66 and the proposed design change.</p> <p>Within the operational phase study area of 600m from the design change, seven</p>	<p>It is not currently anticipated that there will be any change in construction approach that will be of the scale to result in any new or different significant effects in construction noise and vibration. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the measures outlined in the first iteration EMP (APP-019). Therefore it is not anticipated that this proposed change would result in any new or different significant effects to those reported in the ES in construction.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	residential receptors were reported as adverse likely significant effects in the ES. These receptors are located in Warcop to the south-west of the A66 and the proposed design change.	There is no aspect of this proposed change that would introduce new or different effects on noise and vibration during operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation
Population and Human Health	There are 12 and 13 residual significant effects in construction and operation, respectively, reported in the ES for the Appleby to Brough scheme, however none of the receptors are in the locality of the design change.	<p>The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>The proposed change will not alter the level of access to land or businesses and does not reduce the level of PRow provision that currently exists. Therefore, the proposed design change is not anticipated to result in a new adverse likely significant effect in operation.</p>
Road Drainage and Water Environment	There is one significant effect in construction or operation reported in the ES for the Appleby to Brough scheme in the locality of the design change. The DCO design crossings were designed to allow movement of the channel, not constrain geomorphological and hydromorphological processes and to not increase flood risk downstream. The drainage pond is in a location that is not required for flood compensation storage.	<p>There is the potential for the removal of two new crossings, within the slip road of the Warcop junction which may result in reduction of adverse effects compared to the ES. However, their removal may result in an area of the floodplain of Crooks Beck being cut off and the pond proposed within the loop of the junction needing to be relocated. There is little space to relocate the pond outside of surrounding flood plain. This gives rise to, a risk of a new significant adverse effect as a result of any changes to flood risk that might arise in the removal of the crossings as the Crooks Beck is hydrologically linked to the River Eden Special Area of Conservation, which means the area is highly sensitive. Flood risk is a known sensitive issue in the local area and drainage design would need to be developed to reduce this risk – this is yet to be confirmed. This will be developed in engagement with local stakeholders and relevant Statutory Environmental Bodies.</p> <p>Additionally, it should be noted that any changes to geomorphology, hydromorphology, water quality, and flood connectivity as a result of the above gives rise to a risk of a new significant effect on watercourses which are</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		hydrologically linked to the River Eden Special Area of Conservation. See Biodiversity for additional detail.

3.23 DC-23 – Realignment of De-trunked A66 to be Closer to New Dual Carriageway at Warcop

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	There are no sensitive human or ecological receptors within 200m of the proposed change which may be affected by changes in air quality. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES for construction or operation.
Biodiversity	There are no residual significant effects for construction or operation reported in the ES on any biodiversity receptor on the Appleby to Brough scheme.	<p>The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species however, the proposed change is considered to result in a reduction in construction works should the road reduced in height compared to the DCO Design as earthworks would be reduced. There is therefore potential for a slight reduction in effects on biodiversity during the construction phase due to construction activity. Notwithstanding the commentary above it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change may affect a crossing of Eastfield Sike which is hydrologically linked to River Eden Special Area of Conservation (SAC). This may alter the flood and geomorphological regime. The potential changes to flood and geomorphological regime, and reduction of crossing infrastructure for otter which are a SAC linked species, there is a risk of a new significant effect on the River Eden SAC, including the potential for non-compliance with the Habitats Regulations Assessment. Should the proposed change be developed to avoid effects on flood and geomorphological regime, it is possible this risk can be reduced. The DCO design includes a replacement and widening of existing culvert in order to allow for otter passage. If crossing point is shorter that will be a potential reduction of effects, but if the current culvert is retained it is not passable for otter therefore an opportunity for improvement for otter is lost. There may be non-</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		significant benefit in terms of reducing the amount of tree removal required compared to the DCO design.
Climate	<p>Greenhouse Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled within the EMP. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.</p>
Cultural Heritage	No significant effects in construction or operation reported in the ES for the Appleby to Brough scheme in the locality of the design change.	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. The proposed change is within the Order Limits used for the assessment within the ES therefore it is not anticipated that there would be any change to the assessment of the impact to buried archaeological remains. There may be a reduction of effect as the proposed change presents the opportunity to reduce the extent of works, however it is not considered of the scale to result in different significant effects. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is unlikely to substantially alter the mainline A66 and associated earthworks which is the dominant feature which may affect the setting of heritage features. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Geology and Soils	Major impacts are anticipated on ALC Grade 3a with over 20ha of land permanently lost in this scheme during construction. Major impacts are anticipated to Grade 3b soils with	The proposed design change may allow for a reduction in construction footprint should the height of the embankment be reduced and therefore has the potential to allow for a non-significant reduction of effects on ALC Grade 3a and 3b soils as a consequence. However it is unlikely to be sufficient to be considered substantial enough to affect the significance of effects reported in the ES. Therefore, it is not

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>approximately 50ha of land permanently sealed during construction. This results in likely significant adverse effects.</p> <p>There are no likely significant effects predicted as a result of the operational phase of the Project.</p>	<p>anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation . Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>
Landscape and Visual	<p>In relation to the DCO design in the location of the proposed change, there are significant effects in the construction phase and year one for landscape character area Broad Valleys and Foothills. The effects are expected to reduce to non-significant by year 15. There are significant effects identified in the construction phase and the first year of operation at one viewpoint as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105): Viewpoint 6.7 view at Public Rights of Way (footpath) 372021 north of Warcop Training Centre looking north east; and Viewpoint 6.8 view from adjacent to Warcop Railway Station entrance Co-ordinates: NY 75396 15638 looking north. These are expected to reduce to non-significant by year 15.</p>	<p>The proposed change allows the opportunity for a minor reduction to the construction work required as compared to what was assessed in the ES, however it is not considered to be of the scale that would result in a change of significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>In operation, the proposed change may result in minor reduction of impacts on visual receptors should the de-trunked A66 be brought closer to the new mainline A66 however it will not be discernible in the wider landscape. The proposed change is not considered to be of the scale to result in new or different significant effects when considered in the context of the mainline A66. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Materials and Waste	<p>There are no significant effects for construction or operation reported in the ES on materials or waste as a result of the Appleby to Brough scheme.</p>	<p>The ES assessment considered the Order Limits of for each scheme and waste infrastructure on a scale beyond that of just the Project. The design change is not of a scale that is anticipated to result in any change to the waste infrastructure required or the materials. While there is a reduction in works, it is not considered to be of a scale to affect the assessed materials required for the Project. There is no change in the Order Limits used in the assessment within the ES therefore there is</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		no risk of different effects to minerals in the area. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.
Noise and Vibration	<p>Within the construction phase study area of 300m from the design change, three residential receptors were reported as adverse likely significant effects in the ES. These receptors are located in Warcop to the south west of the A66 and the proposed design change.</p> <p>Within the operational phase study area of 600m from the design change, seven residential receptors were reported as adverse likely significant effects in the ES. These receptors are located in Warcop to the south-west of the A66 and the proposed design change.</p>	<p>It is not currently anticipated that there will be any change in construction approach that will be of the scale to result in any new or different significant effects in construction noise and vibration. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the measures outlined in the first iteration EMP (APP-019). Therefore it is not anticipated that this proposed change would result in any new or different significant effects to those reported in the ES in construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on noise and vibration during operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation</p>
Population and Human Health	There are 12 and 13 residual significant effects in construction and operation, respectively, reported in the ES for the Appleby to Brough scheme, however none of the receptors are in the locality of the design change.	<p>It is not anticipated to result in any substantial worsening of the assumptions of construction method, programme and construction site boundary that were used within the ES assessment that could not be controlled by the requirements of the EMP. Therefore, the proposed design change is not anticipated to result in a new adverse likely significant effect in construction.</p> <p>The proposed change will not alter the level of access to land or businesses and does not reduce the level of PRow provision that currently exists. Therefore, the proposed design change is not anticipated to result in a new adverse likely significant effect during operation.</p>
Road Drainage and Water Environment	There is one residual significant effect following suitable mitigation in the ES for the Appleby to Brough scheme following the implementation of mitigation.	The proposed change includes an alteration to the crossing of Eastfield Sike compared to the DCO design and is anticipated to affect works within a sensitive area for flooding. Flood compensation was developed taking the DCO design crossing into account and may therefore be less effective with this crossing

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>changed. This gives rise to the risk of a new significant adverse effect to flood risk. Eastfield Sike is hydrologically linked to the River Eden Special Area of Conservation, therefore the potential impacts on flood risk and Eastfield Sike crossing gives rise to a risk of new significant effect to the River Eden SAC. The DCO design crossing is considered an improvement when compared to the current conditions which is not anticipated to be realised in this proposed change. Flood risk is a known sensitive issue in the local area and drainage design would need to be developed to reduce flood risk and resultant effects on the River Eden SAC, although this yet to be confirmed. This will be developed in engagement with local stakeholders and relevant Statutory Environmental Bodies.</p>

3.24 DC-24 – Reuse of Existing A66 (North of Flitholme)

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	There are no sensitive human or ecological receptors within 200m of the proposed change which may be affected by changes in air quality. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES for construction or operation.
Biodiversity	There are no residual significant effects for construction or operation reported in the ES on any biodiversity receptor on the Appleby to Brough scheme.	The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species however, the proposed change is considered to result in a reduction in construction works should the junction be made smaller. There is therefore potential for a slight reduction in effects on biodiversity during the construction phase due to a smaller area of new highway to be constructed. Notwithstanding the commentary above it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction. The proposed change is not anticipated to result in any changes in operation. There may be minor changes to habitat impacts which in isolation are not considered significant. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation. However as noted in section 1.2 of this document, there is a risk of cumulative effects on habitats and any associated protected species at a Project level as a result of potential non-significant effects on habitats across all changes.
Climate	Greenhouse Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in isolation, will not have a significant effect on climate.	The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES. The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled within the EMP. Therefore, it is not anticipated that this proposed change would result in different likely

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.	significant effects as compared to those reported in the ES in construction or operation.
Cultural Heritage	No significant effects in construction or operation reported in the ES for the Appleby to Brough scheme in the locality of the design change.	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. The proposed change is within the Order Limits used for the assessment within the ES therefore it is not anticipated that there would be any change to the assessment of the impact to buried archaeological remains. There may be a reduction of effect as the proposed change presents the opportunity to reduce the extent of works, however it is not considered of the scale to result in different significant effects. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is unlikely to substantially alter the mainline A66 and associated earthworks which is the dominant feature which may affect the setting of heritage features. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Geology and Soils	<p>Major impacts are anticipated on ALC Grade 3a with over 20ha of land permanently lost in this scheme during construction. Major impacts are anticipated to Grade 3b soils with approximately 50ha of land permanently sealed during construction. This results in likely significant adverse effects.</p> <p>There are no likely significant effects predicted as a result of the operational phase of the Project.</p>	<p>The proposed change to use the existing road would result in less land take and prevent a new highway to be built. However, to maintain the vertical clearance at the underbridge significant cutting may be required therefore this further impacts ALC Grade 3a soils. Therefore, it is unlikely to be sufficient to be considered substantial enough to affect the significance of effects reported in the ES. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation . Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>
Landscape and Visual	In relation to the DCO design in the location of the proposed change, there	The proposed change allows the opportunity for a minor reduction to the construction work within the North Pennines Area of Outstanding Natural Beauty

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>are significant effects identified for landscape character areas of Broad Valleys and Intermediate Farmland in construction and year 1 of operation. The effects are expected to reduce to non-significant by year 15.</p> <p>There are significant effects identified in the construction phase and the first year of operation at one viewpoint as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105): Viewpoint 6.9 view from PRoW (bridleway) 350017 south of Lowgill Beck . These are expected to reduce to non-significant by year 15.</p>	<p>required as compared to what was assessed in the ES, however it is not considered to be of the scale that would result in a change of significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>In operation, the proposed change may result in minor reduction of impacts on visual receptors should the existing A66 be able to be reused, be brought closer to the new mainline A66 however it will not be discernible in the wider landscape. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Materials and Waste	<p>There are no significant effects for construction or operation reported in the ES on materials or waste as a result of the Appleby to Brough scheme.</p>	<p>The ES assessment considered the Order Limits of for each scheme and waste infrastructure on a scale beyond that of just the Project. The design change is not of a scale that is anticipated to result in any change to the waste infrastructure required or the materials. While there is a reduction in works, it is not considered to be of a scale to affect the assessed materials required for the Project. There is no change in the Order Limits used in the assessment within the ES therefore there is no risk of different effects to minerals in the area. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.</p>
Noise and Vibration	<p>Within the construction phase study area, four residential receptors were reported as adverse likely significant effects in the ES. Of which, three receptors are located at Low Broomrigg, Thunderstones and Broomrigg House to the east of the proposed design change and one</p>	<p>It is not currently anticipated that there will be any change in construction approach that will be of the scale to result in any new or different significant effects in construction noise and vibration. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the measures outlined in the first iteration EMP (APP-019). Therefore it is not anticipated that this proposed change would result in any new or different significant effects to those reported in the ES in construction.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>property, High Wood Holme, is located to the south-west of the proposed design change.</p> <p>Potential temporary significant vibration effects on human receptors were reported in the ES if any vibration sensitive receptors are located within a distance of 100m during start-up and run-down of vibratory roller/compactor, 70m during steady state of vibratory compactors and 50m during vibratory piling phases. There are residential receptors are located within the distance.</p> <p>Within the operational phase study area of 600m, three residential receptors were reported as likely significant adverse effects in the ES. These receptors are located at Low Broomrigg, Thunderstones and Broomrigg House to the east of the proposed design change.</p>	<p>There is no aspect of this proposed change that would introduce new or different effects on noise and vibration during operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>
Population and Human Health	<p>There are 12 and 13 residual significant effects in construction and operation, respectively, reported in the ES for the Appleby to Brough scheme, however none of the receptors are in the locality of the design change.</p>	<p>The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>The proposed change will not alter the level of access to land or businesses and does not reduce the level of PRoW provision that currently exists. Therefore, the</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		proposed design change is not anticipated to result in a new adverse likely significant effect during operation.
Road Drainage and Water Environment	There is one residual significant effect following suitable mitigation in the ES for the Appleby to Brough scheme following the implementation of mitigation.	<p>The proposed change is not anticipated to result any substantial worsening of the assumptions of construction method, programme and construction site boundary that were used within the ES assessment that could not be controlled by the requirements of the first iteration EMP. However there may be new cuttings required should the full extent of the Limit of Deviation be utilised. This give rise to risk of a new significant adverse effect to groundwater</p> <p>The proposed change may result in change to drainage design. There is a risk of a new significant adverse effect in operation as a result of this change in design to surrounding watercourses, however, it is possible that mitigation through design of drainage could be achieved to ensure the Highways England Water Risk Assessment Tool (HEWRAT) gives a passable score, this means that there will be appropriate levels of water quality in the discharge from the highways drainage system. However, this is yet to be confirmed.</p>

3.25 DC-25 – Removal of Langrigg westbound junction, revision to Langrigg Lane link, and Shortening of Flitholme Road

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	<p>The proposed change is anticipated to reduce construction work in the vicinity of HSR 48 (as shown on Figure 5.1 Air Quality Study Area and Constraints (APP-065)), however construction phase NO₂ has not been modelled at this receptor. This is because only those receptors located at the worst case locations need to be assessed (i.e. the closest receptors to the road alignment) of which HSR 48 is not, as other receptors are closer to the proposed Scheme. Therefore if no significant effect is demonstrated at a worst case location the same can be said of properties further from the road, due to the decrease in NO₂ concentrations as distance increases from the roadside. However the modelled construction phase NO₂ is not anticipated to change in the DCO design for any human sensitive receptor on the Appleby to Brough scheme. It is not currently anticipated that any change in construction will be of the scale to result in any new or different significant effects in construction emissions. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the construction dust mitigation measures outlined in the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>An NO₂ concentration of 4.9µg/m³ was predicted at the closest human receptor (HSR 48 as shown on Figure 5.1 Air Quality Study Area and Constraints (APP-065)) in the operational Do Something scenario, which is well below the annual mean air quality objective. The proposed change is not anticipated to have an effect on the mainline A66 which is the dominant source of emissions, and therefore it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>
Biodiversity	There are no residual significant effects for construction or operation reported in	The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species however, the

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>the ES on any biodiversity receptor on the Appleby to Brough scheme.</p>	<p>proposed change is considered to result in a reduction in construction works with the removal of the left-in/left-out junction and movement of the sideroad. There is therefore potential for a slight reduction in effects on biodiversity during the construction phase due to a smaller area of new hardstanding and the opportunity to move the link road north, closer to the mainline A66 and further from an area of potential high value fen habitat. Notwithstanding the commentary above it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works</p> <p>Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is not anticipated to result in any changes in operation. There may be minor changes to habitat impacts which in isolation are not considered significant. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p> <p>However as noted in section 1.2 of this document, there is a risk of cumulative effects on habitats and any associated protected species at a Project level as a result of potential non-significant effects on habitats across all changes.</p>
Climate	<p>Greenhouse Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled within the EMP. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.</p>
Cultural Heritage	<p>No significant effects in construction or operation reported in the ES for the Appleby to Brough scheme in the locality of the design change.</p>	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. The proposed change requires a change to the Order Limits used for the assessment within the ES, however it is not anticipated that there would be any</p>

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		<p>change to the assessment of the impact to buried archaeological remains as the required land is not within an area of concern for archaeology. There may be a reduction of effect as the proposed change presents the opportunity to reduce the extent of works, however it is not considered of the scale to result in different significant effects. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is unlikely to substantially alter the mainline A66 and associated earthworks which is the dominant feature which may affect the setting of heritage features. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Geology and Soils	<p>Major impacts are anticipated on Agricultural Land Classification (ALC) Grade 3a with over 20ha of land permanently lost in this scheme during construction. Major impacts are anticipated to Grade 3b soils with approximately 50ha of land permanently sealed during construction. This results in likely significant adverse effects.</p> <p>There are no likely significant effects predicted as a result of the operational phase of the Project.</p>	<p>The proposed design change includes the removal of the junction which will have a reduced impact on Agricultural Land Classification Grade 3b soils. This has the potential to result in a slight reduction in effect, however it is unlikely to be sufficient to be considered substantial enough to affect the significance of effects reported in the ES. There is a new area of Order Limits required, however it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation</p>
Landscape and Visual	<p>In relation to the DCO design in the location of the proposed change, there are significant effects in construction phase and year 1 of operation for landscape character areas of Broad Valley and Foothills. The effects are expected to reduce to non-significant by year 15.</p>	<p>The proposed change allows the opportunity for a minor reduction to the construction work within the North Pennines Area of Outstanding Natural Beauty required as compared to what was assessed in the ES, however it is not considered to be of the scale that would result in a change of significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>There are significant effects identified in the construction phase and the first year of operation at one viewpoint as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105): Viewpoint 6.9 View from PRow (bridleway) 350017 south of Lowgill Beck Co-ordinates: NY 76727 14984 looking North. These are expected to reduce to non-significant by year 15.</p>	<p>In operation, proposed change may result in minor reduction of impacts on visual receptors as a result of the reduction in works. The proposed change will be subject to further design which will identify solutions to adapt landscape planting to integrate the proposed change into the surrounding landscape. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Materials and Waste	<p>There are no significant effects for construction or operation reported in the ES on materials or waste as a result of the Appleby to Brough scheme.</p>	<p>The ES assessment considered the Order Limits of for each scheme and waste infrastructure on a scale beyond that of just the Project. The design change is not of a scale that is anticipated to result in any change to the waste infrastructure required or the materials. While there is a reduction in works, it is not considered to be of a scale to affect the assessed materials required for the Project. There is a small change in the Order Limits used in the assessment within the ES, however due to the scale and location of the proposed extension, it is not considered to be a risk of different effects to minerals in the area. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.</p>
Noise and Vibration	<p>Within the construction phase study area, four residential receptors were reported as adverse likely significant effects in the ES. Of which, three receptors are located at Low Broomrigg, Thunderstones and Broomrigg House to the east of the proposed design change and one property, High Wood Holme, is located to the south-west of the proposed design change. Potential temporary significant vibration effects on human receptors were reported</p>	<p>It is not currently anticipated that there will be any change in construction approach that will be of the scale to result in any new or different significant effects in construction noise and vibration. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the measures outlined in the first iteration EMP (APP-019). Therefore it is not anticipated that this proposed change would result in any new or different significant effects to those reported in the ES in construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on noise and vibration during operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>in the ES if any vibration sensitive receptors are located within a distance of 100m during start-up and run-down of vibratory roller/compactor, 70m during steady state of vibratory compactors and 50m during vibratory piling phases. Thea residential receptors are located within the distance.</p> <p>Within the operational phase study area of 600m, three residential receptors were reported as likely significant adverse effects in the ES. These receptors are located at Low Broomrigg, Thunderstones and Broomrigg House to the east of the proposed design change.</p>	
Population and Human Health	<p>There are 12 and 13 residual significant effects in construction and operation, respectively, reported in the ES for the Appleby to Brough scheme, however none of the receptors are in the locality of the design change.</p>	<p>The proposed change may allow for a reduction in land required however it is not considered to be of a scale that is likely to affect the significance of the effect. The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>The proposed change will not alter the level of access to land or businesses and does not reduce the level of PRoW provision that currently exists. Therefore, the proposed design change is not anticipated to result in a new adverse likely significant effect during operation.</p>
Road Drainage and Water Environment	<p>There is a residual significant effect on Flitholme Fen which is a potential Ground Water Dependant Terrestrial Ecosystem</p>	<p>The proposed change gives rise to the is potential for a positive impact should the road alignment be moved northwards out of Flitholme Fen, removing a significant</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>(GWDTE) related to the location of the link road potentially affected by this change.</p>	<p>effect on GWDTE and Spring.</p> <p>There are no watercourses likely to be impacted by the proposed change, it is not anticipated to change any floodplain, and there no significant new cuttings. The proposed change has the potential to reduce an adverse effect on the Flitholme Fen GWDTE by moving the alignment of the link road further from it and allows for the avoidance of Flitholme Spring. It is acknowledged that there is a proposal to relocate the ponds within this design change, however, this proposed change is not anticipated to require a revised drainage design, the existing drainage design is anticipated to be sufficient. The proposed change allows for the opportunity to relocate the pond currently situated to the south of this link road further north. As this pond relocation is not required to accommodate the proposed change, its relocation is considered to be sufficiently controlled by requirements of detailed drainage design. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation</p>

3.26 DC-26 - Revision to West View Farm Accommodation Bridge and Removal of West View Farm Underpass

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	<p>The proposed change is anticipated to reduce construction work in the vicinity of HSR 50 (as shown on Figure 5.1 Air Quality Study Area and Constraints (APP-065)), however construction phase NO₂ has not been modelled at this receptor. This is because only those receptors located at the worst case locations need to be assessed (i.e. the closest receptors to the road alignment) of which HSR 50 is not, as other receptors are closer to the proposed Scheme. Therefore if no significant effect is demonstrated at a worst case location the same can be said of properties further from the road, due to the decrease in NO₂ concentrations as distance increases from the roadside. However the modelled construction phase NO₂ is not anticipated to change in the DCO design for any human sensitive receptor on the Appleby to Brough scheme. It is not currently anticipated that any change in construction will be of the scale to result in any new or different significant effects in construction emissions. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the construction dust mitigation measures outlined in the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>An NO₂ concentration of 7.0µg/m³ was predicted at the closest human receptor (HSR 50 as shown on Figure 5.1 Air Quality Study Area and Constraints (APP-065)) in the operational Do Something scenario, which is well below the annual mean air quality objective. The proposed change is not anticipated to have an effect on the mainline A66 which is the dominant source of emissions, and therefore it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>
Biodiversity	There are no residual significant effects for construction or operation reported in the ES on any biodiversity receptor on the Appleby to Brough scheme.	The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species however, the proposed change is considered to result in a reduction in construction works should the underpass be removed, and the overbridge made smaller. There is therefore

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>potential for a slight reduction in effects on biodiversity during the construction phase due to a smaller area of new hardstanding and one less new structure to be constructed. Notwithstanding the commentary above it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works</p> <p>Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is not anticipated to result in any changes in operation. There may be minor changes to habitat impacts which in isolation are not considered significant. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p> <p>However as noted in section 1.2 of this document, there is a risk of cumulative effects on habitats and any associated protected species at a Project level as a result of potential non-significant effects on habitats across all changes.</p>
Climate	<p>Greenhouse Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled within the EMP. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.</p>
Cultural Heritage	<p>The ES reports that there would be a temporary significant adverse effect on the Grade II listed Boundary Stone to north of Bullistone Cottage, which would need to be relocated from its current position for the construction of the Left In/Left Out junction. This would be a moderate</p>	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. The proposed change requires a change to the Order Limits used for the assessment within the ES, however it is not anticipated that there would be any change to the assessment of the impact to buried archaeological remains as the required land is not within an area of concern for archaeology. The change in the design may allow for the listed boundary stone to not need to be relocated.</p>

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>adverse effect lasting until reinstatement is possible, providing this is reinstated as close to its original position as possible.</p>	<p>However, it is still within the Order Limits so a worst-case assumption has been made that temporary relocation would still be required., however it is not considered of the scale to result in different significant effects. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is unlikely to substantially alter the mainline A66 and associated earthworks which is the dominant feature which may affect the setting of heritage features. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
<p>Geology and Soils</p>	<p>Major impacts are anticipated on ALC Grade 3a with over 20ha of land permanently lost in this scheme during construction. Major impacts are anticipated to Grade 3b soils with approximately 50ha of land permanently sealed during construction. This results in likely significant adverse effects.</p> <p>There are no likely significant effects predicted as a result of the operational phase of the Project.</p>	<p>The proposed design change includes the removal of the junction which will have a reduced impact on Agricultural Land Classification Grade 3b soils. This has the potential to result in a slight reduction in effect, however it is unlikely to be sufficient to be considered substantial enough to affect the significance of effects reported in the ES. There is a new area of Order Limits required, however it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation . Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation</p>
<p>Landscape and Visual</p>	<p>In relation to the DCO design in the location of the proposed change, there are significant effects in construction phase and year 1 of operation for landscape character areas of Broad Valleys and Foothills. The effects are expected to reduce to non-significant by year 15.</p> <p>There are significant effects identified in the construction phase and the first year of</p>	<p>The proposed change allows the opportunity for a minor reduction to the construction work within the North Pennines Area of Outstanding Natural Beauty required as compared to what was assessed in the ES, however it is not considered to be of the scale that would result in a change of significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change may allow for the a reduction of works to the southern alignment of this overbridge, with the overbridge moving towards the west there is</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>operation at one viewpoint as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105):</p> <p>Viewpoint 6.11A view from adjacent to PRow 309003 (bridleway) Co-ordinates: NY 78768 15045 and PRow (footpath) 309034 looking north west; and Viewpoint 6.12 view from PRow (footpath) 329001 between A66 Helbeck Road looking south west.</p> <p>These are expected to reduce to non-significant by year 15.</p>	<p>the potential to retain existing mature vegetation lining the track adjacent to Croft Cottage which is anticipated to reduce effects to the landscape receptor whilst also offering some visual screening for views towards the north west from Croft Cottage of the new overbridge, however this is not considered to be of the scale to result in new or different significant effects in the context of the A66 mainline. The inclusion of screen planting from sensitive visual receptors would likely lessen the visual effects experienced by the PRow. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Materials and Waste	<p>There are no significant effects for construction or operation reported in the ES on materials or waste as a result of the Appleby to Brough scheme.</p>	<p>The ES assessment considered the Order Limits of for each scheme and waste infrastructure on a scale beyond that of just the Project. The design change is not of a scale that is anticipated to result in any change to the waste infrastructure required or the materials. While there is a reduction in works, it is not considered to be of a scale to affect the assessed materials required for the Project. There is no change in the Order Limits used in the assessment within the ES, therefore it is not considered to be a risk of different effects to minerals in the area. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.</p>
Noise and Vibration	<p>Within the construction phase study area from the proposed design change, five receptors were reported as adverse likely significant effects in the ES. Of which, four are residential receptors and one is a non-residential receptor. These receptors are located at West View Farm to the west of the proposed design change, Croft Cottage is located immediately south of the proposed change and Grey Horse</p>	<p>A residential receptor, Croft Cottage, located immediately south of the design change may experience slightly less construction impacts due to the realignment of the junction and earthworks associated with that. It is not anticipated to result any substantial worsening of the assumptions of construction method, programme and construction site boundary that were used within the ES assessment that could not be controlled by the requirements of the EMP (APP-019). Therefore, the proposed design change is not anticipated to result in a new adverse likely significant effect in construction.</p>

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>Stables is located further south of the design.</p> <p>Within the operational phase study area of 600m, four receptors were reported as adverse likely significant effects in the ES. Of which, three are residential receptors and one is a non-residential receptor. These receptors are located at West View Farm to the west of the proposed design change.</p>	<p>There is no aspect of this proposed change that would introduce new or different effects on noise and vibration during operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation</p>
Population and Human Health	<p>There are 12 and 13 residual significant effects in construction and operation, respectively, reported in the ES for the Appleby to Brough scheme, however none of the receptors are in the locality of the design change.</p>	<p>The proposed change may allow for a reduction in land required however it is not considered to be of a scale that is likely to affect the significance of the effect. The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>The proposed change will not alter the level of access to land or businesses and does not reduce the level of PRoW provision that currently exists. Therefore, the proposed design change is not anticipated to result in a new adverse likely significant effect during operation.</p>
Road Drainage and Water Environment	<p>There is one residual significant effect following suitable mitigation in the ES for the Appleby to Brough scheme following the implementation of mitigation.</p>	<p>There are no watercourses likely to be impacted by the proposed change, it is not anticipated to change any floodplain, there are no changes to drainage. There is potential for a reduction in cuttings in the removal of the new underpass which may reduce adverse effects on groundwater, however it is not anticipated to be of a scale to result in new or different significant effects. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation</p>

3.27 DC-27 - Construction of Noise Barrier South of Brough

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	<p>The proposed change is anticipated to reduce construction work in the vicinity of HSR 52 and HSR 53 (as shown on Figure 5.1 Air Quality Study Area and Constraints (APP-065)), however construction phase NO₂ has not been modelled at this receptor. This is because only those receptors located at the worst case locations need to be assessed (i.e. the closest receptors to the road alignment) of which HSR 53 is not, as other receptors are closer to the proposed Scheme. Therefore if no significant effect is demonstrated at a worst case location the same can be said of properties further from the road, due to the decrease in NO₂ concentrations as distance increases from the roadside.</p> <p>However the modelled construction phase NO₂ is not anticipated to change in the DCO design for any human sensitive receptor on the Appleby to Brough scheme. It is not currently anticipated that any change in construction will be of the scale to result in any new or different significant effects in construction emissions. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the construction dust mitigation measures outlined in the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>An NO₂ concentration of 7.5µg/m³ and 7.0µg/m³ was predicted at the closest human receptor (HSR 52 and HSR 53 respectively as shown on Figure 5.1 Air Quality Study Area and Constraints (APP-065)) in the operational Do Something scenario, which is well below the annual mean air quality objective. The proposed change is not anticipated to have an effect on the mainline A66 which is the dominant source of emissions, and therefore it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>
Biodiversity	There are no residual significant effects for construction or operation reported in	The proposed change requires an additional area of Order Limits. While this area has not been subject to the full suite of surveys undertaken for the Order Limits of the DCO design, the area was picked up almost in its entirety in the Phase 1

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	<p>the ES on any biodiversity receptor on the Appleby to Brough scheme.</p>	<p>Habitat surveys undertaken for the DCO design which includes a 250m survey buffer. The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species due to the new areas of Order Limits. Notwithstanding the commentary above it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is not anticipated to result in any changes in operation. There may be minor changes to habitat impacts which in isolation are not considered significant. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in operation.</p> <p>However as noted in section 1.2 of this document, there is a risk of cumulative effects on habitats and any associated protected species at a Project level as a result of potential non-significant effects on habitats across all changes.</p>
Climate	<p>Greenhouse Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled within the EMP. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.</p>
Cultural Heritage	<p>No significant effects in construction or operation reported in the ES for the Appleby to Brough scheme in the locality of the design change.</p>	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. The proposed change requires a change to the Order Limits used for the assessment within the ES, however it is not anticipated that there would be any change to the assessment of the impact to buried archaeological remains as the</p>

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>required land is within the highways verge and has been previously developed. There may be a reduction of effect as the proposed change presents the opportunity to reduce the extent of works, however it is not considered of the scale to result in different significant effects. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is unlikely to substantially alter the mainline A66 and associated earthworks which is the dominant feature which may affect the setting of heritage features. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Geology and Soils	<p>Major impacts are anticipated on Agricultural Land Classification (ALC) Grade 3a with over 20ha of land permanently lost in this scheme during construction. Major impacts are anticipated to Grade 3b soils with approximately 50ha of land permanently sealed during construction. This results in likely significant adverse effects.</p> <p>There are no likely significant effects predicted as a result of the operational phase of the Project.</p>	<p>The proposed change introduces a new area within the Order Limits however it falls within the 250m study area that was assessed in the ES. Due to the location of the strip of land being between the highway boundary and a residential area, the land is considered Urban soils. No additional impacts are considered likely. Mitigation measures for construction in this area would require a Foundations Pile Risk Assessment and Aquifer Protection Measures due to the principal Penrith Sandstone Aquifer (depending on foundation / construction methods) which are outlined in the Environmental Management Plan [APP-019]. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation . Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>
Landscape and Visual	<p>In relation to the DCO design in the location of the proposed change, there are significant effects in for landscape character areas of Broad Valley which are anticipated to last into year 15. There are no significant effects identified at any viewpoint as shown on ES Figure 10.4</p>	<p>Though there is a change in Order Limits, any resultant change to the construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the mitigation measures outlined in the first iteration EMP (APP-019) and the Project Design Principles (APP-302). Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105).	The extension of the Order Limits to accommodate noise barriers will not be out of character with typical built forms found within this environment compared with the overall landscape scale transitioning from rural to urban. Visual receptors around Lady Anne Drive have a moderate sensitivity, there will be a negligible magnitude of change as the introduction of the built form for noise barriers is consistent with the existing landscape grain where residential properties are bounded by timber fences or walls. There will be a slight adverse significance for residential visual receptors, but this is not considered significant. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.
Materials and Waste	No construction or operation significant effects have been identified for the Appleby to Brough scheme.	There is requirement for a change of Order Limits within this design change. The new area of Order Limits is within a potential Mineral Consultation Area (MCA) for sand and gravel along entire route length, particularly to the south of existing carriageway. Widespread new engineering structures could impact or limit future extraction around the immediate vicinity of road. However, when considered in context of wider resource the scheme would not diminish access. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.
Noise and Vibration	<p>Within the construction phase study area of 300m there are no significant affects reported.</p> <p>With the study area of 600m, 16 residential receptors were reported as adverse likely significant effects in the ES. These receptors are located close to the existing A66 on Lady Anne Drive and Pembroke Close in Brough. Noise mitigation has been proposed in a form of noise barrier, 2-3m in height and 35m in length (Ref. 52). With this mitigation in</p>	Noise associated with the construction of the noise barrier fence may result in temporary noise impacts at the closest receptors. However, it is understood that such construction activities would be relatively short and would not exceed 10 or more days and/or night in any 15 consecutive days and/or nights or a total number of 40 or more days in any six consecutive months. Therefore, it is unlikely the proposed design change in this area would result in a new adverse likely significant effect. . Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the mitigation measures outlined in the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES in construction.

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	place, the identified significant effects would likely be removed.	The operational effects of the proposed design change in this area are already reported within the ES. Therefore, the proposed design change is not anticipated to result in a new adverse likely significant effect in operation.
Population and Human Health	There are 12 and 13 residual significant effects in construction and operation, respectively, reported in the ES for the Appleby to Brough scheme, however none of the receptors are in the locality of the design change.	<p>The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>There is a change in Order Limits required, however the area of Order Limits are within the highways verge of the existing A66 and is not anticipated to alter the level of access to land or businesses and does not reduce the level of PRow provision that currently exists. Therefore, the proposed design change is not anticipated to result in a new adverse likely significant effect during operation.</p>
Road Drainage and Water Environment	There is one residual significant effect following suitable mitigation in the ES for the Appleby to Brough scheme following the implementation of mitigation.	The proposed change requires additional area to be incorporated into the Order Limits, however there are no watercourses likely to be impacted by the proposed change, it is not anticipated to change any floodplain, there are no changes to drainage and there no significant new cuttings. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation

3.28 DC-28 - Realignment of Local Access Road to be Closer to New Dual Carriageway East of Bowes

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	There are no sensitive human or ecological receptors within 200m of the proposed change which may be affected by changes in air quality. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES for construction or operation.
Biodiversity	There are no residual significant effects for construction or operation reported in the ES on any biodiversity receptor on the Bowes Bypass scheme.	<p>The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species however, the proposed change is considered to result in a reduction in construction works should the junction be made smaller. There is therefore potential for a slight reduction in effects on biodiversity during the construction phase due to a smaller area of new highway to be constructed. Notwithstanding the commentary above it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works.</p> <p>Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>There is bat mitigation planting in the area of the proposed change which is anticipated to be feasibly retained within the change. Barn owl obstacle planting is proposed in this location and should be retained within the proposed change. . There may be minor changes to habitat impacts which in isolation are not considered significant. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p> <p>However as noted in section 1.2 of this document, there is a risk of cumulative effects on habitats and any associated protected species at a Project level as a result of potential non-significant effects on habitats across all changes.</p>
Climate	Greenhouse Gas emissions – Following assessment as set out in DMRB LA 114	The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>and in line with the NPSNN, the ES concludes that the Project's GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled within the EMP. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.</p>
Cultural Heritage	<p>There are significant adverse effects related to this design element (temporary construction, permanent construction and operation) to a group of three listed buildings at Stone Bridge Farmhouse.</p>	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. The proposed change requires a change to the Order Limits used for the assessment within the ES, however it is not anticipated that there would be any change to the assessment of the impact to buried archaeological remains as the required land is within the highways verge and has been previously developed. There may be a reduction of effect as the proposed change presents the opportunity to reduce the extent of works, however it is not considered of the scale to result in different significant effects. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>There would be changes to the East Bowes Accommodation Overpass, there would be no change to the area immediately north of the listed farmhouse group. The proposed change is unlikely to substantially alter the mainline A66 and associated earthworks which is the dominant feature which may affect the setting of heritage features. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Geology and Soils	<p>A moderate magnitude of impact is predicted, for the topic of geology and soils, as a result of the construction phase of the Project. Moderate impacts are anticipated to Agricultural Land Classification (ALC) Grade 3b soils with between 1- 20ha of land permanently</p>	<p>The proposed design change provides the opportunity to reduce the span of the East Bowes Accommodation Bridge which would have a minimal influence on reducing the impact on Agricultural Land Classification Grade 3b soils due to a potential reduction in land take. It is unlikely to be sufficient to be considered substantial enough to affect the significance of effects reported in the ES. Therefore, it is not anticipated that this proposed change would result in</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>sealed during construction. This results in likely significant adverse effects.</p> <p>There are no likely significant effects predicted as a result of the operational phase of the Project.</p>	<p>any new or different significant effects as compared to those reported in the ES for construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation . Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>
Landscape and Visual	<p>In relation to the DCO design in the location of the proposed change, there are no significant effects identified for landscape character areas.</p> <p>There are significant effects identified at a number of viewpoint as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105): Viewpoint 7.7A from PRow (footpath) no.8 adjacent to Mid Low Field Farm, looking north west. This is expected to reduce to non-significant by year 15.</p> <p>There are significant effects identified for viewpoints 7.7 View from The Street, looking north-east and 7.7B View from PRow (footpath) no.6, looking south which are expected to remain into year 15.</p>	<p>The proposed change it is not considered to be of the scale that would result in a change in significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change requires a change in the Limit of Deviation which may lead to a change in significance at visual receptors as reported in the previous column. Altering the Limit of Deviation from the DCO application will have an influence on the local landscape character, however it is not anticipated to be perceived on a larger scale due to the existing topography of the area. A change in the proposed height will be absorbed into the wider landscape.</p> <p>The proposals here for the LOD to be +/-2m from 1m (as in the DCO application) is anticipated to affect visual receptors as reported in the previous column. The combination of the worst-case scenario of+2m combined with the overbridge in this location gives rise to a risk of a new significant adverse effect for visual receptors.</p>
Materials and Waste	<p>No construction or operation significant effects have been identified for the Appleby to Brough scheme.</p>	<p>There is requirement for a change of Order Limits within this design change. The new area of Order Limits is within a potential Mineral Consultation Area (MCA) for sand and gravel along the entire route length, particularly to the south of existing carriageway. Widespread new engineering structures could impact or limit future extraction around the immediate vicinity of road. However, when considered in context of wider resource the scheme would not diminish access. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Noise and Vibration	<p>Within the construction phase study area of 300m from the design change, one residential receptor (Stone Bridge Farm) was reported as adverse likely significant effects in the ES. This receptor is located approximately 300m from the proposed design change and immediately south of the proposed A66.</p> <p>Within the operational phase study area of 600m from the design change, one residential receptor (Stone Bridge Farm) was reported as adverse likely significant effects in the ES. This receptor is located approximately 300m from the proposed design change and immediately south to the proposed A66.</p>	<p>It is not currently anticipated that there will be any change in construction approach that will be of the scale to result in any new or different significant effects in construction noise and vibration. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the measures outlined in the first iteration EMP (APP-019). Therefore it is not anticipated that this proposed change would result in any new or different significant effects to those reported in the ES in construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on noise and vibration during operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>
Population and Human Health	<p>There are 18 and four residual significant effects in construction and operation, respectively, reported in the ES for the Bowes scheme, however none of the receptors are in the locality of the design change.</p>	<p>The proposed change may allow for a reduction in land required however it is not considered likely to be of a scale to affect the significance of the effect. The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>The proposed change will not alter the level of access to land or businesses and does not reduce the level of PRoW provision that currently exists. Therefore, the proposed design change is not anticipated to result in a new adverse likely significant effect during operation.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Road Drainage and Water Environment	There is one residual significant effect following suitable mitigation in the ES for the Appleby to Brough scheme following the implementation of mitigation.	There are no watercourses likely to be impacted by the proposed change, it is not anticipated to change any floodplain, there are no changes to drainage and there no significant new cuttings. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation

3.29 DC-29 - Realignment of A66 Mainline and Collier Lane

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	There are no sensitive human or ecological receptors within 200m of the proposed change which may be affected by changes in air quality. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES for construction or operation.
Biodiversity	There is a residual significant effect on barn owl during operation of the Stephen Bank to Carkin Moor scheme as a result of high risk of mortality and/or injury of individuals due to collisions with road traffic. This is residual as the necessary mitigation is anticipated to require a deviation from the standard of the road design and therefore is not guaranteed.	<p>The proposed change may result in differing construction areas as compared to what was assessed in the ES as a result of new areas of Order Limits. While this area has not been subject to the full suite of surveys undertaken for the Order Limits of the DCO design, the area was picked up almost in its entirety in the Phase 1 Habitat surveys undertaken for the DCO design which includes a 250m survey buffer. The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species due to the new areas of Order Limits. Notwithstanding the commentary above it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works</p> <p>Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed underpass to be removed does not include any proposed crossing mitigation, therefore it is not anticipated to result in any changes in operation. There may be minor changes to habitat impacts which in isolation are not considered significant as the new bridleway is situated within arable fields.</p> <p>Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>However as noted in section 1.2 of this document, there is a risk of cumulative effects on habitats and any associated protected species at a Project level as a result of potential non-significant effects on habitats across all changes.</p>
Climate	<p>Greenhouse Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled within the EMP. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.</p>
Cultural Heritage	<p>No significant effects in construction or operation reported in the ES for the Stephen Bank to Carkin Moor scheme in the locality of the design change.</p>	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. The proposed change requires a change to the Order Limits used for the assessment within the ES, however it is not anticipated that there would be any change to the assessment of the impact to buried archaeological remains as the required land is in close proximity to the Order Limits as assessed and any change to construction phase effects are anticipated to be mitigated by the principles set out in the first iteration EMP (APP-019). Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is unlikely to substantially alter the mainline A66 and associated earthworks which is the dominant feature which may affect the setting of heritage features. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Geology and Soils	<p>Moderate impacts are anticipated to Agricultural Land Classification (ALC) Grade 3a soils (BMV land) with between 1- 20ha of land permanently sealed during</p>	<p>The proposed design change results in the removal of the underpass, this will provide benefits in reducing impacts on Agricultural Land Classification (ALC) Grade 3b soils by reduced works. This would give rise to a slight reduction in effect. The Order Limit changes (slightly widened to accommodate the Public</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>construction. Major impacts are anticipated to Grade 3b soils with over 20ha of land permanently sealed during construction. This results in likely significant adverse effects.</p> <p>There are no likely significant effects predicted as a result of the operational phase of the Project.</p>	<p>Right of Way) for the realigned Bridleway will have a minimal impact on ALC soils, there are no additional contaminated land sites to consider. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation . Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation</p>
Landscape and Visual	<p>In relation to the DCO design in the location of the proposed change, there are no significant effects identified for landscape character areas.</p> <p>There are significant effects identified at a number of viewpoints as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105): Viewpoint 9.1 View from Colliers Lane, south of West Layton, looking South. These are expected to reduce to non-significant by year 15.</p> <p>There are significant effects identified in for Viewpoint 9.1A View from Public Right of Way (footpath) no.20.55/1/1, looking north. This is expected to remain in year 15.</p>	<p>The proposed change it is not considered to be of the scale that would result in a change in significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The change in vertical alignment Limit of Deviation to +3m from –3m as assessed in the ES will have significant effects on the local landscape receptors and visual receptors. This change may not be absorbed easily into the landscape. The proposed change results in a Limit of Deviation change of potentially 3m above the alignment assessed within the ES (-3m/+1m). The proposed change has the potential to lift the road an additional 2m higher which gives rise to risk of a new significant effect to landscape character areas and visual receptors. This proposed change will be subject to further detailed design to develop solutions to integrate this change into the landscape.</p>
Materials and Waste	<p>No construction or operation significant effects have been identified for the Stephen Bank to Carkin Moor scheme.</p>	<p>There is a requirement for additional Order Limits. There is a Limestone Mineral Safeguarding Area (MSA) throughout entire scheme alignment, Sand and Gravel at Browson Bank farm, around Fox Well, north of New Lane. The scheme may impact on future extraction of limestone resource. However, the change will be localised widening and creation of new highway structures which is unlikely to impact the wider access to the resource which is extensive throughout the</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
		<p>county. Other areas of encroachment to other MSAs are very localised. Pockets of Building Stone (in particular at Carkin Moor bridleway). However, the scale of the encroachment is unlikely to alter with the proposed change. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.</p>
<p>Noise and Vibration</p>	<p>Within the construction phase study area of 300m, one residential receptor was reported as temporary adverse significant effect in the ES. This is situated at Ravensworth on Waitlands Lane and immediately next to the existing A66.</p> <p>Within the operational phase study area of 600m, there are eight residential receptors were reported as adverse likely significant effects. These receptors are situated on Layton Manor Road and Collier Lane, within the West Leyton community, to the north of the A66.</p> <p>Two residential receptors were reported as beneficial likely significant effects in the ES. These receptors are located on Waitlands Lane and immediately next to the existing A66 (and within NIA 10437).</p> <p>The Limits of Deviation in this area on the A66 mainline were +/-5m horizontally (both north and south), +1m vertically upwards and -3m downwards.</p>	<p>It is not currently anticipated that there will be any change in construction approach that will be of the scale to result in any new or different significant effects in construction noise and vibration. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the measures outlined in the first iteration EMP (APP-019). Therefore it is not anticipated that this proposed change would result in any new or different significant effects to those reported in the ES in construction.</p> <p>The Limit of Deviation in the vertical alignment of +3m (raising the vertical alignment by +2m) gives rise to risk of new or different significant effects compared to those reported in the ES.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on noise and vibration during operation including the removal of the underpass. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>
<p>Population and Human Health</p>	<p>There are six and two residual significant effects in construction and operation, respectively, reported in the ES for the Stephen Bank to Carkin Moor scheme,</p>	<p>The proposed change requires additional land however it is not considered likely to be of a scale that would alter the significance of the effect reported in the ES. The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>however none of the receptors are in the locality of the design change.</p>	<p>boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>The underpass that is proposed to be removed as part of the proposed change incorporated a Public Right of Way connection. This results in longer diversions for users of the bridleways. The likely length of diversion during operation would give rise to a new adverse likely significant effect during operation. It is possible that this risk could be reduced with revised Public Rights of Way design developed in engagement with relevant stakeholders, but this is yet to be confirmed.</p>
<p>Road Drainage and Water Environment</p>	<p>No significant effects in construction or operation reported in the ES for the Stephen Bank to Carkin Moor scheme in the locality of the design change.</p>	<p>There are no watercourses likely to be impacted by the proposed change, it is not anticipated to change any floodplain, there are no changes to drainage and there no significant new cuttings. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation</p>

3.30 DC-30 - Realignment of Maintenance/Footway Adjacent to Waitlands Lane

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	There are no sensitive human or ecological receptors within 200m of the proposed change which may be affected by changes in air quality. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES for construction or operation.
Biodiversity	There is a residual significant effect on barn owl during operation of the Stephen Bank to Carkin Moor scheme as a result of high risk of mortality and/or injury of individuals due to collisions with road traffic. This is residual as the necessary mitigation is anticipated to require a deviation from the standard of the road design and therefore is not guaranteed.	<p>The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species due to the relocation of the access track.</p> <p>However, the proposed change is located within low value habitat and it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works.</p> <p>Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>There may be minor changes to habitat impacts which in isolation are not considered significant as the potential new locations are situated within arable fields. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p> <p>However as noted in section 1.2 of this document, there is a risk of cumulative effects on habitats and any associated protected species at a Project level as a result of potential non-significant effects on habitats across all changes.</p>
Climate	Greenhouse Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in isolation, will not have a significant effect on climate.	<p>The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled within the EMP.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.	Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.
Cultural Heritage	No significant effects in construction or operation reported in the ES for the Stephen Bank to Carkin Moor scheme in the locality of the design change.	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. The proposed change is within the Order Limits used for the assessment within the ES therefore it is not anticipated that there would be any change to the assessment of the impact to buried archaeological remains. There may be a reduction of effect as the proposed change presents the opportunity to reduce the extent of works, however it is not considered of the scale to result in different significant effects. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is unlikely to substantially alter the mainline A66 and associated earthworks which is the dominant feature which may affect the setting of heritage features. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Geology and Soils	<p>Moderate impacts are anticipated to Agricultural Land Classification (ALC) Grade 3a soils (BMV land) with between 1- 20ha of land permanently sealed during construction. Major impacts are anticipated to Grade 3b soils with over 20ha of land permanently sealed during construction. This results in likely significant adverse effects.</p> <p>There are no likely significant effects predicted as a result of the operational phase of the Project.</p>	<p>The proposed design change potentially slightly increases the footprint of the embankment and the changes the locations of new access tracks which may result in changed impacts on Agricultural Land Classification Grade 3b soils. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation . Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Landscape and Visual	<p>In relation to the DCO design in the location of the proposed change, there are no significant effects identified for landscape character areas.</p> <p>There are significant effects identified in the construction phase and the first year of operation at a viewpoint as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105): Viewpoint 9.8A View from Public Right of Way (bridleway) 20.30/8/1, looking south. These are expected to reduce to non-significant by year 15.</p>	<p>The proposed change it is not considered to be of the scale that would result in a change of significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>In operation, the proposed change is unlikely to be of the scale that will not be discernible in the wider landscape. The proposed change is not considered to be of the scale to result in new or different significant effects when considered in the context of the mainline A66. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Materials and Waste	<p>There are no significant effects for construction or operation reported in the ES on materials or waste as a result of the Temple Sowerby to Appleby scheme.</p>	<p>The ES assessment considered the Order Limits of for each scheme and waste infrastructure on a scale beyond that of just the Project. The design change is not of a scale that is anticipated to result in any change to the waste infrastructure required or the materials. While there is a reduction in works, it is not considered to be of a scale to affect the assessed materials required for the Project. There is no change in the Order Limits used in the assessment within the ES therefore there is no risk of different effects to minerals in the area. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.</p>
Noise and Vibration	<p>Within the construction phase study area of 300m from the proposed design change, one residential receptor was reported as adverse likely significant effect in the ES. The receptor is situated on Waitlands Lane and immediately next to the existing A66 (within NIA 10437).</p> <p>Within the operational phase study area of 600m, three residential receptors reported</p>	<p>It is not currently anticipated that there will be any change in construction approach that will be of the scale to result in any new or different significant effects in construction noise and vibration. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the measures outlined in the first iteration EMP (APP-019). Therefore it is not anticipated that this proposed change would result in any new or different significant effects to those reported in the ES in construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on noise and vibration during operation. Therefore, it is not anticipated</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>as adverse likely significant effects in the ES. These receptors are at Squirrel House, Carking Moor Farm and Warriner House in Carking Moor Road located to the north of the proposed design change.</p> <p>Eight residential receptors were reported as adverse likely significant effect in the ES. These are situated on Layton Manor Road and Collier Lane, within the West Leyton community, to the north of the A66.</p> <p>Two residential receptors were reported as beneficial likely significant effects in the ES. These are located on Waitlands Lane in Lavensworth along the existing A66 (and within NIA 10437).</p>	<p>that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>
Population and Human Health	<p>There are six and two residual significant effects in construction and operation, respectively, reported in the ES for the Stephen Bank to Carkin Moor scheme, however none of the receptors are in the locality of the design change.</p>	<p>The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>The proposed change will not alter the level of access to land or businesses and does not reduce the level of PRow provision that currently exists. Therefore, the proposed design change is not anticipated to result in a new adverse likely significant effect during operation.</p>
Road Drainage and Human Health	<p>No significant effects in construction or operation reported in the ES for the Stephen Bank to Carkin Moor scheme in the locality of the design change.</p>	<p>There are no watercourses likely to be impacted by the proposed change, it is not anticipated to change any floodplain, there are no changes to drainage and there no significant new cuttings. Therefore, there is no change in significance of the results as reported in the ES in construction or operation.</p>

3.31 DC-31 - Realignment of Warrener Lane

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	There are no sensitive human or ecological receptors within 200m of the proposed change which may be affected by changes in air quality. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES for construction or operation.
Biodiversity	There is a residual significant effect on barn owl during operation of the Stephen Bank to Carkin Moor scheme as a result of high risk of mortality and/or injury of individuals due to collisions with road traffic. This is residual as the necessary mitigation is anticipated to require a deviation from the standard of the road design and therefore is not guaranteed	<p>The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species due to the potential realignment of Warrener Lane in the extent of the new Order Limits. However, the proposed change is within an area of low value habitat and it is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposal will allow a tie-in closer to A66 which would be within same arable field and is not anticipated to substantially change impacts on biodiversity receptors. There is mitigation for bats proposed in this locality which is anticipated to be feasibly retained within the design change. There may be minor changes to habitat impacts which in isolation are not considered significant as the potential new locations are situated within arable fields. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p> <p>However as noted in section 1.2 of this document, there is a risk of cumulative effects on habitats and any associated protected species at a Project level as a result of potential non-significant effects on habitats across all changes.</p>
Climate	Greenhouse Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes	The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	<p>that the Project's GHG emissions, in isolation, will not have a significant effect on climate.</p> <p>Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.</p>	<p>is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled within the EMP.</p> <p>Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation.</p>
Cultural Heritage	No significant effects in construction or operation reported in the ES for the Stephen Bank to Carkin Moor scheme in the locality of the design change.	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. The proposed change is within the Order Limits used for the assessment within the ES therefore it is not anticipated that there would be any change to the assessment of the impact to buried archaeological remains. There may be a reduction of effect as the proposed change presents the opportunity to reduce the extent of works, however it is not considered of the scale to result in different significant effects. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>The proposed change is unlikely to substantially alter the mainline A66 and associated earthworks which is the dominant feature which may affect the setting of heritage features. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Geology and Soils	Moderate impacts are anticipated to Agricultural Land Classification (ALC) Grade 3a soils (BMV land) with between 1- 20ha of land permanently sealed during construction. Major impacts are anticipated to Grade 3b soils with over 20ha of land permanently sealed during construction. This results in likely significant adverse effects.	<p>The proposed design change would potentially alter the construction footprint of the embankment and the changes to Warrener Lane. However it is unlikely to significantly vary the amount of Agricultural Land Classification Grade 3b soils lost as a result of the project. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation . Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>

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Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
	There are no likely significant effects predicted as a result of the operational phase of the Project.	
Landscape and Visual	<p>In relation to the DCO design in the location of the proposed change, there are no significant effects identified for landscape character areas.</p> <p>There are significant effects identified in the construction phase and the first year of operation at a viewpoint as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105): Viewpoint 9.8A View from Public Right of Way (PRoW) 20.30/8/1, looking south, and viewpoint 9.8PM View from PRoW 20.30/8/1, looking south. These are expected to reduce to non-significant in year 15.</p>	<p>The proposed change it is not considered to be of the scale that would result in a change of significant effects in the construction phase. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>In operation, the proposed change may result in Warrener Lane moving up to 12m laterally, however it is not anticipated to be of the scale that will not be discernible in the wider landscape. The proposed change is not considered to be of the scale to result in new or different significant effects to visual receptors when considered in the context of the mainline A66. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Materials and Waste	No construction or operation significant effects have been identified for the Stephen Bank to Carkin Moor scheme.	<p>The ES assessment considered the Order Limits of for each scheme and waste infrastructure on a scale beyond that of just the Project. The design change is not of a scale that is anticipated to result in any change to the waste infrastructure required or the materials. While there is a reduction in works, it is not considered to be of a scale to affect the assessed materials required for the Project. There is no change in the Order Limits used in the assessment within the ES therefore there is no risk of different effects to minerals in the area.</p> <p>Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.</p>
Noise and Vibration	Within the construction phase study area of 300m from the proposed design change, no	It is not currently anticipated that there will be any change in construction approach that will be of the scale to result in any new or different significant effects in construction noise and vibration. Any change to construction phase is

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	<p>adverse likely significant effect was reported in the ES.</p> <p>Within the operational phase study area of 600m from the design change, four residential receptors were reported as adverse likely significant effects in the ES. Three of these receptors are at Squirrel House, Carking Moor Farm and Warriner House in Carking Moor Road located to the north of the proposed design change. The remaining receptor is Monks Rest Farm on Moor Lane in East Layton.</p>	<p>not anticipated to introduce a construction methodology so novel it could not be mitigated via the measures outlined in the first iteration EMP (APP-019). Therefore it is not anticipated that this proposed change would result in any new or different significant effects to those reported in the ES in construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on noise and vibration during operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>
Population and Human Health	<p>There are six and two residual significant effects in construction and operation, respectively, reported in the ES for the Stephen Bank to Carkin Moor scheme, however none of the receptors are in the locality of the design change.</p>	<p>The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>The proposed change will not alter the level of access to land or businesses and does not reduce the level of PRow provision that currently exists. Therefore, the proposed design change is not anticipated to result in a new adverse likely significant effect during operation.</p>
Road Drainage and Human Health	<p>No significant effects in construction or operation reported in the ES for the Stephen Bank to Carkin Moor scheme in the locality of the design change.</p>	<p>The proposed change is not anticipated to change any floodplain, there are no changes to drainage and there no significant new cuttings. The proposed change allows for the shortening of the culvert/watercourse crossing may result in a slight reduction of impact identified within the Appendix 14.1 Water Framework Directive Compliance Assessment. However, it is unlikely to be of the scale to result in a change in significance. Therefore, there is no change in significance of the results as reported in the ES in construction or operation.</p>

3.32 DC-32 - Lower the A66 Mainline Levels East of Carkin Moor and Change an Underpass to an Overbridge

Environmental Topic	Reported Significant Effects in the DCO Environmental Assessment	Risk of Change in Assessed Significance as a Result of this Change
Air Quality	There are no residual significant effects for construction or operation reported in the ES for the DCO design in any scheme on any air quality receptor.	There are no sensitive human or ecological receptors within 200m of the proposed change which may be affected by changes in air quality. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES for construction or operation.
Biodiversity	There is a residual significant effect on barn owl during operation of the Stephen Bank to Carkin Moor scheme as a result of high risk of mortality and/or injury of individuals due to collisions with road traffic. This is residual as the necessary mitigation is anticipated to require a deviation from the standard of the road design and therefore is not guaranteed	<p>The proposed change may result in differing construction areas compared to the construction areas that were assessed in the ES. It is anticipated that there is the potential for different impacts on habitats and protected species due to the change in earthworks associated with the new structure.</p> <p>It is considered that the existing controls within the first iteration EMP (APP-019) are sufficient to be able to reduce the impacts of construction works.</p> <p>Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in construction.</p> <p>There is no mitigation associated with the crossing affected by this design change. There may be minor changes to habitat impacts which in isolation are not considered significant as the potential new locations are situated within arable fields. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p> <p>However as noted in section 1.2 of this document, there is a risk of cumulative effects on habitats and any associated protected species at a Project level as a result of potential non-significant effects on habitats across all changes.</p>
Climate	Greenhouse Gas emissions – Following assessment as set out in DMRB LA 114 and in line with the NPSNN, the ES concludes that the Project’s GHG emissions, in isolation, will not have a significant effect on climate.	<p>The proposed change is not considered to be of the scale that would alter the assessment of GHG emissions in either construction or operation. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES.</p> <p>The proposed change is not anticipated to be of the scale to result in any different climate change risk which cannot be controlled within the EMP. Therefore, it is not anticipated that this proposed change would result in</p>

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	Climate Change Risk - The assessment concludes no residual significant climate change risks for the Project.	different likely significant effects as compared to those reported in the ES in construction or operation.
Cultural Heritage	Significant adverse effects were assessed from the design of the carriageway through the Roman Fort and Prehistoric Enclosed Settlement 400m west of Carkin Moor Farm – a scheduled monument. The bridleway underpass forms a part of the embedded mitigation for the design as it meant that the carriageway could be raised within the existing cutting through the Roman fort, reducing the required land take. The resulting effect was a permanent construction effect of moderate adverse significance.	<p>The construction phase assessment for cultural heritage took the reasonable worst case approach in assuming impacts to archaeology within the extent of the Order Limits. The proposed change is within the Order Limits used for the assessment within the ES therefore it is not anticipated that there would be any change to the assessment of the impact to buried archaeological remains. The removal of the bridleway underpass would lower the carriageway from the designed levels through the scheduled Roman fort which would remove an element of the embedded mitigation related to the scheduled monument. This gives rise to the risk of a worsening significant adverse effect from moderate to potentially very large. There is potential to reduce this risk in further design to identify embedded mitigation and ensure sympathetic design of the new bridge in collaboration with relevant stakeholders.</p> <p>The new bridleway bridge would also add a new feature to the setting of the Roman fort, although this would not increase the operational effect. The proposed change is unlikely to substantially alter the mainline A66 and associated earthworks which is the dominant feature which may affect the setting of heritage features. Therefore, it is not anticipated that this proposed change would result in any new or different likely significant effects as compared to those reported in the ES in operation.</p>
Geology and Soils	Moderate impacts are anticipated to Agricultural Land Classification (ALC) Grade 3a soils (BMV land) with between 1- 20ha of land permanently sealed during construction. Major impacts are anticipated to Grade 3b soils with over 20ha of land permanently sealed during construction. This results in likely significant adverse effects.	<p>The new approach embankments for the bridleway overbridge may further impact Agricultural Land Classification Grade 3b soils during construction. However, reducing levels on the A66 is a benefit as earthworks are minimised. This would give rise to a slight reduction in effect. However, on balance this is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for construction.</p> <p>There is no aspect of this proposed change that would introduce new or different effects on geology and soils in operation . Therefore, it is not anticipated that</p>

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	There are no likely significant effects predicted as a result of the operational phase of the Project.	this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.
Landscape and Visual	In relation to the DCO design in the location of the proposed change, there are no significant effects identified for landscape character areas. There are significant effects identified in the construction phase and the first year of operation at a viewpoint as shown on ES Figure 10.4 Zone of Theoretical Visibility (ZTV 3km) and Viewpoints (APP-105): Viewpoint 9.8A view from Public Right of Way (bridleway) 20.30/8/1, looking South. These are expected to reduce to non-significant in year 15.	The proposed change from underpass to overbridge gives rise to the risk of new significant effects in both construction and operation to both landscape character areas and visual receptors as it is considered a substantial change from the DCO design in both the construction phase and the form of the structure in operation. The proposed change will be subject to further design development to identify solutions to manage the changes in construction phase and integrate the structure into the landscape in operation.
Materials and Waste	No construction or operation significant effects have been identified for the Stephen Bank to Carkin Moor scheme.	The ES assessment considered the Order Limits of for each scheme and waste infrastructure on a scale beyond that of just the Project. The design change is not of a scale or nature that is anticipated to result in any change to the waste infrastructure required or the materials. While there is a reduction in works, it is not considered to be of a scale or nature to affect the assessed materials required for the Project. There is no change in the Order Limits used in the assessment within the ES therefore there is no risk of different effects to minerals in the area. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects when compared to those reported in the ES for construction or operation.
Noise and Vibration	Within the construction phase study area of 300m from the design change, no significant effect was reported in the ES. Within the operational phase study area of 600m, three residential receptors were reported as adverse likely significant effects	It is not currently anticipated that there will be any change in construction approach that will be of the scale to result in any new or different significant effects in construction noise and vibration. Any change to construction phase is not anticipated to introduce a construction methodology so novel it could not be mitigated via the measures outlined in the first iteration EMP (APP-019). Therefore it is not anticipated that this proposed change would result in

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	<p>in the ES. These receptors are at Squirrel House, Carking Moor Farm and Warriner House in Carking Moor Road located to the north of the proposed design change.</p>	<p>any new or different significant effects to those reported in the ES in construction. There is no aspect of this proposed change that would introduce new or different effects on noise and vibration during operation. Therefore, it is not anticipated that this proposed change would result in any new or different significant effects as compared to those reported in the ES for operation.</p>
<p>Population and Human Health</p>	<p>There are six and two residual significant effects in construction and operation, respectively, reported in the ES for the Stephen Bank to Carkin Moor scheme, however none of the receptors are in the locality of the design change.</p>	<p>The proposed change is not anticipated to result in any material changes in terms of factors such as construction method, programme and construction site boundary that could impact on population and human health receptors and which are not already adequately controlled by the requirements of the EMP (APP-019). Therefore, based on the mitigation requirements in the EMP it is not anticipated that this proposed change would result in any new or different likely significant effect during construction.</p> <p>The proposed change will not alter the level of access to land or businesses and does not reduce the level of PRow provision that currently exists. Therefore, the proposed design change is not anticipated to result in a new adverse likely significant effect during operation.</p>
<p>Road Drainage and Water Environment</p>	<p>No significant effects in construction or operation reported in the ES for the Stephen Bank to Carkin Moor scheme in the locality of the design change.</p>	<p>There are no watercourses likely to be impacted by the proposed change, it is not anticipated to change any floodplain, there are no changes to drainage and there no significant new cuttings. Therefore, it is not anticipated that this proposed change would result in different likely significant effects as compared to those reported in the ES in construction or operation</p>