

M5 Junction 10 Improvements Scheme

Planning Statement and Schedule of Accordance with National Policy Statement TR010063 - APP 7.1

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7.1 Planning Statement and Schedule of Accordance with National Policy Statement

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Document accessibility

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Executive Summary

Scheme Overview

Gloucestershire County Council (GCC) is applying to the Secretary of State (SoS) for a Development Consent Order (DCO) under the Planning Act 2008 (“the Act”), for the carrying out of works to M5 Junction 10 and the surrounding highway network (“the Scheme”).

The Scheme will provide:

- An all-movements junction at M5 Junction 10 (Scheme element 1).
- A new West Cheltenham Link Road east of ~~J~~junction 10 from the A4019 to the B4634 (Scheme element 2).
- Widening of the A4019 to the east of ~~junction~~ Junction 10, including a bus lane on the A4019 eastbound carriageway from the West Cheltenham Fire Station to the Gallagher Junction (Scheme element 3).

The development is classified as a Nationally Significant Infrastructure Project (NSIP).

The Scheme falls within Section 22 (3) of the Act as the works constitute the alteration of M5 Junction 10, a motorway junction which forms part of the National Highways (NH) network.

The Act defines what constitutes an NSIP. Section 22 (4) relates to construction or alteration of highways. As part of the Scheme involves the alteration of Junction 10 of the M5, the threshold to qualify as an NSIP is defined as 15 hectares (ha) or more of land required for the construction of the Scheme. The element of the Scheme relating to motorway alteration requires approximately 53ha of land, and therefore the Scheme qualifies as an NSIP and requires a DCO.

Planning Framework

The purpose of this Planning Statement and Schedule of Accordance with the National Networks National Policy Statement (NN NPS) is to act as the primary reference document for the assessment of the Scheme against the relevant planning policy and legislative framework.

The Act is the primary legislation that establishes the legal framework for applying for, examining and determining DCO applications for NSIPs.

~~The NPS for NN NPS) (December 2014) and the revised NN NPS (March 2024) provide the primary basis for decision-making for the Scheme, although all relevant national, regional and local policy policies is important and relevant. This Statement will also make reference to the revised National Networks National Policy Statement which was designated on 24 May 2024. As stated by government guidance, ‘The 2024 NN NPS has effect for any applications for development consent accepted for examination after the designation of the revised NNNPS’¹. This does not apply to this application as it was accepted for examination [insert date] 16 January 2024. As such, 20145 NN NPS has effect.~~ This Planning Statement provides a broad overview confirming the Scheme’s compliance with the NN NPS and a commentary on how each of the relevant provisions of the NN NPS Chapters 3, 4 and 5 are met.

Full details of compliance with the ~~2014 published NN NPS- and the published NN NPS~~ are provided in Appendix B ~~and, and~~ Appendix C, whilst policy and legislative matters relevant to each theme are covered in more detail in the Environmental Statement (ES). ~~The designated the current published NNNPS on 24 May 2024, and it has been laid before Parliament (6 March 2024) and is subject to parliamentary consideration and debate for 21 days. The existing NPS NNNNNPS remains in force until the revised version has been designated and therefore Appendix B relates to the previously adopted NPS NNNNNPS in (December 2014). Appendix C provides an assessment~~

¹ Source: Gov.uk. 2024. Available at: <https://www.gov.uk/government/publications/national-networks-national-policy-statement>

of compliance against the draft revised NPS NNNNNPS in (March 2023).

Scheme Objectives

Gloucestershire faces significant challenges ~~to achieve~~in achieving its vision for economic growth. The Gloucester, Cheltenham and Tewkesbury Joint Core Strategy (JCS) adopted in December 2017, is a partnership between Gloucester City Council, Cheltenham Borough Council (CBC) and Tewkesbury Borough Council (TBC) which sets out a strategic planning framework for the three areas. The Adopted JCS 2011-2031 is a coordinated strategic development plan, which shows how the region will develop and includes a shared spatial vision targeting 35,175 new homes and 39,500 new jobs by 2031. A review of the JCS, is through the Cheltenham, Gloucester and Tewkesbury Strategic and Local Plan (CGTSLP), has commenced with Regulation 18 (1) Issues and Options document currently subject to consultation.

Major development of new housing (c.9,000 homes) and employment land is ~~proposed~~allocated in the JCS in strategic and safeguarded allocations to the west and north-west of Cheltenham, these being: West Cheltenham (Golden Valley); North West Cheltenham (Elms Park); and safeguarded land to the west and the north-west of Cheltenham. The West Cheltenham development, in turn, is linked to wider economic investment, including a ~~Government~~government-supported cyber business park (Cyber Central UK) adjacent to the Government Communications Headquarters (GCHQ) site in west Cheltenham.

The existing M5 Junction 10 only provides access and egress to and from the north, with no connectivity to the M5 south; this causes existing traffic to cross Cheltenham through various routes to access and leave the M5 from the south using other M5 junctions. This contributes significantly to existing traffic flows across Cheltenham, with significant congestion at peak times. To unlock the housing and job opportunities, a highway network is needed that has the capacity to accommodate the increased traffic it will generate, within a sustainable transport context.

Upgrading M5 Junction 10 to an all-movements junction has been identified as a key infrastructure requirement to enable the housing and economic development proposed by the JCS and supported in the Gloucestershire Local Enterprise Partnership's (GFirst LEP) Strategic Economic Plan and the transport network sought by GCC in the adopted Gloucestershire Local Transport Plan. Improvements to M5 Junction 10 are critical to maintaining the safe and efficient operation of the junction; and enabling the planned development and economic growth.

The Scheme objectives have been identified to respond to the planning and environmental context and the need for the Scheme.

The objectives for the Scheme are to:

- Support economic growth and facilitate growth in jobs and housing by providing improved transport network connections in west and north-west Cheltenham.
- Enhance the transport network in the west and north-west of the Cheltenham area with the resilience to meet current and future needs.
- Improve the connectivity between the Strategic Road Network (SRN) and the local transport network in west and north-west Cheltenham.
- Deliver a package of measures which is in keeping with the local environment, establishes biodiversity net gain and meets climate change requirements.
- Provide safe access to services for the local community, including for users of sustainable transport modes within and to west and north-west Cheltenham.

The Planning Balance and Conclusions

The analysis of planning policy in this Planning Statement demonstrates that the Scheme is compliant with relevant planning policy, including the NN NPS, and explains that, in the case of its location within the Green Belt, the Scheme is not an-inappropriate development within the Green Belt.

There is a 'compelling need' case for the Scheme and its delivery is in the public interest. The JCS

identifies future development and site allocations / safeguarded land in three areas: North West Cheltenham, West Cheltenham, and land safeguarded adjacent to M5 Junction 10. There is also direct support for the Sscheme within the Local Transport Plan which identifies improvements to M5 Junction 10 under Policy CPS1 as a strategic priority in supporting the delivery of the North West Cheltenham and West Cheltenham strategic allocations, and in addressing existing traffic congestion issues on the A4019 corridor.

Through public consultation and engagement, the Scheme design has been refined to mitigate the concerns of directly affected stakeholders so far as practicable and appropriate.

Adverse effects do not outweigh the benefits of the Scheme and the overall planning balance is therefore in favour of the making of the DCO for the Scheme.

1. Introduction

1.1.1. This Planning Statement outlines the relevant planning policy context and the overall case for the Scheme and making of the DCO. The Statement draws upon the conclusions of the supporting application documents and interprets these against planning policy considerations which have relevance to the Scheme. ~~A detailed appraisal of the Scheme compliance with National Planning Statement National Networks (NNNPS) is also presented within Appendix B of this document. Government guidance states that applications accepted for examination examination prior to the 24 May 2024 must adhere to the 2014 NN NPS. has revised the NPS NNNNNPS, and it has been laid before Parliament (6 March 2024) and is subject to parliamentary consideration and debate. Parliament has 21 sitting days in which to debate the revised NPS NNNNNPS after which it will come into force subject to Parliamentary approval and formal designation by government. The existing NPS NNNNNPS remains in force until the revised version has been designated and therefore Appendix B therefore assesses the compliance of the Scheme against the previously adopted NN NPS in 2014 and Appendix C provides an assessment of compliance against the revised NN NPS in March 2024.~~

1.1.1. —

1.2. Scheme Overview

1.2.1. The Scheme will upgrade the current ~~northbound~~ northbound-only junction to an all-movements junction enabling access/egress both south and north to the M5. The Scheme includes 3 key elements comprising of:

- The alterations to M5 Junction 10.
- Dualling along the A4019 east of the junction.
- Construction of the West Cheltenham Link Road.

1.2.2. The alterations to M5 Junction 10 consist of an all-movements elongated roundabout junction. Two new overbridges will be constructed over the M5, centred on either side of the existing Piffs Elm Interchange Bridge (carrying the A4019 over the M5), which will then be demolished. The A4019 will be ~~realigned~~ realigned, and the grade (ground level) significantly adjusted to provide an appropriate entry angle to the new roundabout. An underpass will be constructed under the A4109 immediately east of Junction 10 to provide a ~~traffic-traffic~~-free route for bats to cross under the road as well as pedestrians, cyclists and equestrians. To the south-east of the Junction, an area of land will be reprofiled by the excavation of material to provide compensatory flood storage for the operation of the Scheme and compensation for the loss of flood storage from the construction of the Scheme.

1.2.3. The A4019 will be dualled from M5 Junction 10 eastwards towards the Gallagher Retail Park where the Scheme will tie into the existing dual carriageway. Three new junctions will be created along this road, as well as changes to some of the existing junctions. The three junctions will be created to provide access to the proposed development sites allocated within the JCS. A segregated cycleway and pedestrian footways will be provided along the northern side of the A4019 (except a short section of shared use path through Uckington) and will tie into an existing shared use path at the eastern end of the Scheme and an existing footway at the western end of the Scheme.

1.2.4. The new West Cheltenham Link Road will be a ~~single~~ single-carriageway link road between the B4634 and the A4019 in order to allow traffic from the West Cheltenham development to use M5 Junction 10. The road will include a segregated cycleway and footway throughout the length of its west side. Two new signalised, ~~four~~ four-arm junctions will be provided at the northern (A4019) and southern (B4634) ends of the Link Road. A ~~single~~ single-span bridge will also be constructed over the River Chelt to facilitate the

road.

1.2.5. The total area of land within the Order Limits extends 199.7ha. The Scheme will require the acquisition of land outside of the Applicant's existing land ownership boundary to enable it to be built, operated and maintained. Land acquisition is split into three categories, with details shown on the Land Plans (application document TR010063-APP 2.2AS-053) and the Statement of Reasons (AS-005):

- Land to be acquired permanently - Outright acquisition of freehold where the land taken will be retained in the ownership of the Applicant after the works are complete. Approximately 54.1 ha of land will be taken permanently to build and operate the Scheme (i.e., the areas outside the existing highway boundary but within the proposed highway boundary).
- Land to be used temporarily - The land will be used to build the Scheme and returned to its original owners after construction is complete. Approximately 39.1 ha of land will fall into this category.
- Land to be used temporarily and rights to be acquired permanently - Acquisition of rights where the land will be used to build the Scheme and returned to its original owners after construction is complete, but where the Applicant seeks to retain rights (such as but not limited to rights of access) will remain over the land it for future maintenance operations, or other permanent rights or restrictions will remain. Approximately 41.7 ha of land will fall into this category. In order to construct the three elements of the Scheme, approximately 119ha of land will be taken to permanently build and operate the Scheme. The Applicant will require the temporary possession of approximately 80.9ha of land which will be used to build the Scheme and returned to its original owners after construction. However, rights and restrictions will remain over approximately 41.7ha of this land, including for future maintenance.

4.2.5.1.2.6. The acquisition of the land required for the Scheme will also result in the demolition of 33 32 properties (plus associated garages and outbuildings) and several farm buildings. Details of the properties to be demolished are set out and assessed within Chapter 2 of the ES.

4.2.6.1.2.7. A more detailed description of the Scheme can be found in Section 3.6 of this Planning Statement. It is provided in greater detail in the Introduction to the Scheme (APP-001 application document TR010063 APP 1.1) and Chapter 2 of the ES (APP-061 application document TR010063 APP 6.2).

4.2.7.1.2.8. Schedule 1 of the draft DCO (AS-003) application document TR010063 APP 3.1) and the Works Plans (APP-007 and APP-008) application document TR010063 APP 2.4) detail the precise works and works numbers for which development consent is sought.

1.3. Location

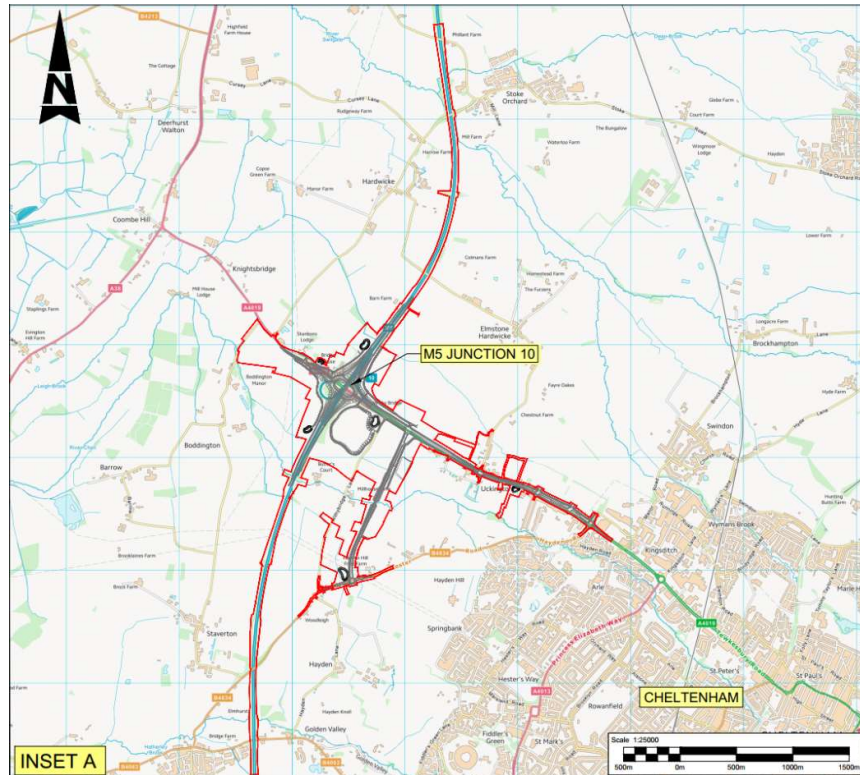
1.3.1. Figure 1-1 shows the location of the Scheme. The M5 links the Midlands with the South-west, running from Junction 8 of the M6 at West Bromwich near Birmingham to Exeter in Devon, and linking with the M4 north of Bristol. Junction 10 of the M5 is located 76km south of Birmingham, 64km north of Bristol, 8km south of Tewkesbury, 6.5km north-west of Cheltenham and 12km to the north-east of Gloucester.

1.3.2. The Junction is strategically important for the region, particularly as northern and western Cheltenham are the sites of a number of large retail parks and employment areas, and the location of planned future housing and nationally significant business development.

1.3.3. The Scheme falls within the administrative boundaries of Gloucestershire, Cheltenham and Tewkesbury. The Scheme crosses the administrative boundaries of CBC and TBC. The land to the east of the Hayden Road (B4634) along the A4019 is situated within

Cheltenham Borough, and the land to the west of Hayden Road including the M5 Junction 10 and the proposed Link Road is situated within Tewkesbury Borough.

Figure 1-1 Order Limits



1.4. Existing land uses and character

- 1.4.1. The greatest concentrations of private dwellings and community facilities in proximity to the Scheme are found in the main settlements of Tewkesbury, Cheltenham and Gloucester. The smaller villages of Staverton and Boddington to the west, Hayden to the east and Staverton Bridge to the south, the hamlet of Uckington as well as the north-west edge of Cheltenham are the largest settlements immediately surrounding the Scheme. There are also several isolated properties and farmsteads in the rural areas between these settlements, notably a cluster of 14 properties at Withybridge Gardens, adjacent to the south-east quadrant of the existing M5 Junction 10/ A4019.
- 1.4.2. An area of land is currently occupied by travellers, adjacent to the southbound carriageway of the M5, approximately 400m north of Junction 10. This site is directly adjacent to the Scheme boundary.
- 1.4.3. The area in which the Scheme is located is predominantly rural in nature, with the eastern extent of the Scheme in the built-up area of Cheltenham. The central and western areas of the Scheme are dominated by arable land and areas of grazing pasture, which extend into Tewkesbury Borough west of Junction 10 where there are some dispersed rural residential and commercial properties directly west of Junction 10. The Cotswolds National Landscape Area of Outstanding Natural Beauty (AONB) is located 6km to the east of M5 Junction 10, with the Cotswold scarp rising from the broad Severn Vale immediately to the east of Cheltenham. Traditional orchards are widespread, and the area also contains important areas of lowland meadow and floodplain grazing marsh.

- 1.4.4. Multiple watercourses cross land occupied by the Scheme, notably the River Chelt, Leigh Brook, and River Swilgate flowing east to west across the land occupied by the Scheme. These form tributaries to the River Severn, which they join 7.5km downstream of the Scheme, although the River Swilgate joins the River Avon at Tewkesbury.
- 1.4.5. The dominant arable and grassland habitats are interspersed with pockets of other terrestrial habitats, notably broadleaved and mixed plantation woodland, traditional orchards, and unimproved and semi-improved neutral grassland. Along with the watercourses, these areas provide the sites of greater nature conservation value within the land occupied by the Scheme. There are no designated nature conservation sites within the land occupied by the Scheme.
- 1.4.6. There are 31 designated heritage assets within 1km of the land occupied by the Scheme as well as 65 non-designated heritage assets. The most notable designated heritage asset impacted by the Scheme is Moat House, a moated site close to the A4019 in Uckington which is a Scheduled Monument.
- 1.4.7. The majority of the Scheme is located within the Gloucester and Cheltenham Green Belt. A small section of the Scheme to the north-west of the M5 Junction 10 is located outside of the Green Belt designation and is more rural in nature. The area of the Scheme along the A4019 has more urban characteristics and is dominated by dispersed residential and commercial properties of increasing density along the A4019 at the eastern extent of the Scheme.
- 1.4.8. There is little public green space as much of the Scheme aligns with the existing road network, as well as the predominance of agricultural activity in the rural parts of the area. There are a number of public rights of way (PRoW) within the land occupied by the Scheme, and the M5 and A4109 currently act as barriers limiting or funnelling movement for walkers, cyclists and horse riders (WCH).

1.5. The Applicant

- 1.5.1. Gloucestershire County Council (GCC) is the Applicant. The Scheme includes works to the Strategic Route Network (SRN), as well as the local road network. The SRN is made up of England's motorways and all-purpose trunk roads (the major A roads) and National Highways (NH) is responsible for operating, maintaining and improving the SRN. The M5 and Junction 10 of the M5 is part of the SRN. The remainder of the Scheme forms part of the local road network for which the GCC Highway Authority is responsible.

1.6. Requirement for Development Consent

- 1.6.1. The Act (as amended) defines what constitutes an NSIP. Section 22 (4) relates to construction or alteration of highways. As part of the Scheme involves the alteration of Junction 10 of the M5, the threshold to qualify as an NSIP is defined as 15ha or more of land required for the construction of the Scheme. The element of the Scheme relating to motorway alteration requires approximately 54.1ha of permanent land take which is currently outside of the existing highway boundary, and therefore the Scheme qualifies as an NSIP and requires a Development Consent Order (DCO).
- 1.6.2. Further detail as regards to the Scheme's qualification as an NSIP can be found in the Explanatory Memorandum (~~APP-032TR010063-APP 3.2~~).
- 1.6.3. As the Scheme is an NSIP, an application for development consent is to be considered by an examining authority, who will make a recommendation to the Secretary of State (SoS) in accordance with Section 37 of the ~~PA2008-Act-Act~~. Section 37 of the Act and associated regulations also govern the content of an application for a DCO, including the requirements of the necessary accompanying documents.

1.7. Order Limits and limits of deviation

- 1.7.1. The boundary of the Scheme known as the Order Limits (the Order Limits), as defined in the DCO, is the anticipated maximum extent of land which will be required to undertake the Scheme and is shown on the Works Plans (~~APP-007 and APP-008~~) application document TR010063-APP 2.4) and on the Land Plans (~~AS-053~~) application document TR010063-APP 2.2). The area within the Order Limits is approximately 199.7-ha. Approximately ~~118.854.1~~ 118.854.1 ha of this is required to be acquired permanently, which includes land already forming part of the existing highway. Temporary possession of approximately ~~80.9ha-8ha~~ 80.9ha-8ha of land is required, within which approximately 41.7ha of land will require permanent rights.
- 1.7.2. Although the Applicant has sought to minimise the extent of land over which it is seeking powers of compulsory acquisition, during detailed design it is possible that the land required may ultimately be less than that within the Order Limits, due to design and construction methodology of the Scheme.
- 1.7.3. If made, the DCO will give consent for the Scheme to be built including all the temporary construction works. The “Limits of Deviation” (LoD), as defined in the draft DCO, represent the area of land that may be used for the siting of works subject to detailed design. The LoD identify a maximum distance or measurement of variation within which the works are authorised to be constructed.

1.8. Purpose and Structure of Planning Statement

- 1.8.1. The purpose of the Statement is to set out the relevant planning policy context and the overall case for the Scheme and making of the DCO. The Statement draws upon the conclusions of the supporting application documents and interprets these against planning policy considerations which have relevance to the Scheme.
- 1.8.2. Although the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (“APFP 2009”) do not specifically require a Planning Statement to be provided as part of an application for development consent under the Act, this Statement has been prepared in accordance with Regulation 5(2) of the APFP 2009.
- 1.8.3. The Statement draws upon the following application documents and their subsequent revisions, references are provided on the ExA-Planning Inspectorate’s Website: TR010063-000482-M5 Junction 10 Examination Library.pdf (planninginspectorate.gov.uk):
- Consents and Agreements Position Statement (~~TR010063-APP 3.3~~).
 - Consultation Report (~~TR010063-APP 5.1~~).
 - Draft Development Consent Order (~~TR010063-APP 3.1~~).
 - Environmental Statement (ES) Chapters 1- 15 (~~TR010063-APP 6.1 to 6.13~~).
 - Explanatory Memorandum (~~TR010063-APP 3.2~~).
 - Land Plans (~~TR010063-APP 2.2~~).
 - Environmental Management Plan (~~TR010063-APP 7.3~~).
 - Register of Environmental Actions and Commitments (REAC) (~~TR010063-APP 7.4~~).
 - Statement of Reasons (~~TR010063-APP 4.1~~).
 - Transport Assessment (~~TR010063-APP 7.5~~).
 - Works Plans (~~TR010063-APP 2.4~~).
- 1.8.4. The Application documents included with the Scheme submission, and in subsequent submissions include those in Appendix 1 to the Inspectorate Advice Note 6: ‘Preparation and submission of application documents’ (February 2016) and reflecting those in APFP

2009 Regulation 5(2). Under the list of such 'other documents' listed in Advice Note 6, reference is made to '*any other document not listed above which the applicant chooses to support the application*'. A Planning Statement is provided as an example of such a document.

1.8.5. The Application will be determined in accordance with the Act. Section 104 of the Act provides for the decision in cases where an NPS has an effect. Section 104(2)(a) states that in deciding the Application, the SoS must have regard to '*a relevant NPS*'. Section 104(3) states that the SoS must decide an application in accordance with any relevant NPS. For the Scheme, the relevant NPS is the NPS National Networks (NN NPS). As the NN NPS is the primary policy reference for the SoS, it sets out the scope of matters for this Statement. A detailed schedule of in accordance of with the Scheme with the NN NPS is provided in Appendix B.

1.8.6. Section 104(2)(d) of the Act states that in deciding an application for development consent where an NPS is in effect, the SoS must also have regard to any other matters which the SoS thinks are both important and relevant to the SoS's decision. This Statement sets out other important and relevant considerations to be weighed by the Examining Authority ("ExA") and the SoS, including national and local planning and transport policy of relevance to the Scheme, as well as setting out the requirements of the NN NPS. This Statement assesses the Scheme against policy and important and relevant considerations, drawing on the information presented in the ES (~~TR010063 APP 6.1-6.15~~) and other assessments submitted in support of the Application.

1.8.7. The remainder of this Statement is structured as follows:

- Chapter two provides a description of the Scheme which is being applied for.
- Chapter three establishes the need for the Scheme, as well as its strategic importance and the Scheme's objectives.
- Chapter four explains how the Scheme has developed over time, detailing the options considered and how these were refined to arrive at the Scheme that is the subject of the DCO application, including through consultation and with regard to policy and legislative factors.
- Chapter five presents the monetised and non-monetised Scheme benefits and confirms the economic case for the Scheme.
- Chapter six sets out the transport case for the Scheme, with reference to the submitted Transport Assessment Report (~~TR010063 APP 7.5~~).
- Chapter seven provides justification of for the Scheme's conformity to policy at national to local levels, focusing on the NN NPS.
- Chapter eight reaches conclusions on the overall compliance of the Scheme with planning policy; principally that contained within NN NPS, along with other important and relevant considerations, providing a justification on the proposed weighting to be applied to each to assist the SoS in reaching a decision on the Application.
- The appendices associated with the Statement are provided at the end of the document. Appendix A provides a table of in accordance with local and regional planning policy. Appendix B provides a schedule of in accordance with the NN NPS, 2014 and Appendix C provides a scheduled of accordance with NN NPS, revised March 2024.

2. The Scheme

- 2.1.1. An explanation of the Scheme objectives and a detailed description of the Scheme proposals can be found in the Introduction to the Application (~~APP-001~~) (~~application document TR010063 APP 1.1~~) and in the ES Chapter 2 The Scheme (~~AS-011~~) (~~application document TR010063 APP 6.2~~). Since Stage 1 and optioneering, there have been changes to the Scheme design. A description of the Scheme which is being applied for and has resulted from the assessment process and statutory consultation is set out below.

M5 Junction 10

- 2.1.2. A new all-movements roundabout junction. Two new overbridges will be constructed over the M5, centred ~~on~~ either side of the existing Piffs Elm Interchange Bridge (carrying the A4019 over the M5), which will then be demolished. The new overbridges will create a new roundabout junction over the M5.
- 2.1.3. As part of the junction alterations the A4019 will be ~~realigned~~ realigned, and the grade lifted to provide ~~an~~ appropriate entry angle to the new roundabout. An underpass will also be constructed under the A4019 immediately east of Junction 10 to provide a ~~traffic-traffic-~~ free route for bats to cross under the road, as well as pedestrians, cyclists and equestrians.
- 2.1.4. To the south-east of M5 Junction 10, an area of land will be reprofiled by the excavation of material to provide compensatory flood storage as compensation for the loss of flood storage from the construction of the Scheme and provide habitat creation.

A4019 Widening

- 2.1.5. The A4019 will be dualled from Withybridge Lane eastwards to the Gallagher Retail Park, where the Scheme will tie into the existing dual carriageway. Widening through Uckington will predominantly be to the northern side of the A4019. Widening to the east and the west of Uckington will be to the northern side of the A4019.
- 2.1.6. Three new junctions will be created along this road, as well as some changes to existing junctions. The three new junctions will be created to provide access into the proposed North-~~W~~est Cheltenham Development site, Site Access A, and Site Access B.
- 2.1.7. For residents and businesses whose current access is directly onto the A4019, short sections of new access roads will be created alongside the dualled A4019 to facilitate ease of access both westbound and eastbound and will join the A4019 at signalised junctions.
- 2.1.8. The A4019 widening will include the provision of a bus lane on the A4019 eastbound carriageway from the West Cheltenham Fire Station to the Gallagher Junction.
- 2.1.9. The Scheme will include a segregated cycleway (3m width) and footway (2m width) on the northern side of the A4019, which with the exception of a short section of shared use path through Uckington will extend from the junction of the A4019 with Stanboro Lane in the west through to the Gallagher junction at the eastern end of the Scheme. This active travel corridor will provide connectivity for pedestrians and cyclists between north-west Cheltenham and the junction of the A4019 and Stanboro Lane (west of M5 Junction 10). It will tie into an existing ~~shared~~ shared-use path at the eastern end of the Scheme, and an existing footway at the western end. The layout and design of these facilities for pedestrians and cyclists ~~is~~ are shown in the General Arrangement Plans (~~A~~application document TR010063/~~APP~~/2.9).

West Cheltenham Link Road

- 2.1.10. The Scheme will also provide a new single-carriageway link road between the B4634 to the A4019, in order to allow traffic from the West Cheltenham development site to access M5 Junction 10 and thereby reduce pressure on Junction 11 and local roads. The link road includes a segregated cycleway and footway throughout the length of its west side.
- 2.1.11. Two new signalised, ~~four~~~~four~~-arm junctions will be provided at either end of the Link Road, as well as non-motorised users (NMU) crossing facilities. The A4019 junction will provide access to safeguarded development sites to the north, Cheltenham to the east and Junction 10 to the west. The B4634 junction will connect strategic allocations and safeguarded land to the M5 Junction 10 via the link road and the A4019.
- 2.1.12. A ~~single~~~~single~~-span bridge will be constructed over the River Chelt. The bridge will cross the River Chelt at an angle, with 2.8m clearance under the bridge to provide sufficient space for floodwater to pass underneath, and to allow access for small vehicles, and livestock along each riverbank. Flood mitigation measures will be provided underneath the Link Road in two locations between the River Chelt and the A4019 to ensure the Link Road does not impede the natural movement of floodwater.
- 2.1.13. PRoW AUC11 running north of the River Chelt will be realigned at the point where it crosses the Link Road, so that it crosses under the River Chelt Bridge along the north side of the river. PRoW ABO24 ~~that~~ which runs south of the River Chelt will not be affected by the scheme.

Scheme Wide items

- 2.1.14. The surface water drainage strategy will replicate the existing hydrology within the land occupied by the Scheme through Sustainable Drainage Systems (SuDS) principles. Offset gullies are proposed for the collection of rainwater runoff from the M5 mainline, which will connect to carrier drains. For the Link Road, swales and filter drains will serve as the collection systems. Attenuation basins will also be provided.
- 2.1.15. The lighting design for the Scheme will use directional full cut-off LED luminaires at a 12m mounting height to illuminate the carriageway to standard and minimise light spill on the surrounding areas.
- 2.1.16. The outer extents of the highway corridor will be fenced, typically with post and rail fencing (dependent on the functional requirements and its context). ~~Badger~~~~Badger~~-resistant fencing will be provided throughout much of the Link Road section of the Scheme, with short sections of ~~otter~~~~otter~~-specific fencing to funnel otters toward safe crossing points and prevent access to crossing points by agricultural livestock.
- 2.1.17. New road signage and markings will be installed across the Scheme to ensure ~~the~~ route legibility for road users travelling on new and improved sections of the road network. Advance direction signs will be provided at appropriate distances ahead of junctions to provide drivers with information about the road layout ahead. New and modified sections of the road will be permanently marked using a combination of road markings and road studs to improve drivers' understanding of the new road layout.

2.2. Planning and Environmental Context

- 2.2.1. The Scheme's objectives have been influenced by the environmental context of the land surrounding M5 Junction 10 and surrounding the A4019 and the proposed alignment of the West Cheltenham Link Road. The Biodiversity Sites and Features Plan (~~APP-020~~~~TR010063-APP-2.14~~) and Historic Sites and Features Plan (~~APP-021 - 026~~~~TR010063-APP-2.12~~) illustrate the environmental constraints and features within the Order Limits. The An ES (~~TR010063-APP-6.1-6.15~~) and other assessments support the

DCO application and provide an assessment of the Scheme, including the baseline environmental context. The following section highlights the key planning and environmental context.

Ecological designations

- 2.2.2. There are no ecologically designated sites within the Order Limits.
- 2.2.3. The Scheme is located within National Character Area 106: Severn and Avon Vales. There are two Special Protection Areas (SPA) within the National Character Area - Severn Estuary SPA (23 km south-west of the Scheme) and Walmore Common SPA (17.5 km south-west of the Scheme), designated for their internationally important populations of wintering wildfowl, including Bewick's swan and shelduck.
- 2.2.4. Bredon Hill, 12.5 km to the north-east of the Scheme is designated as a Special Area of Conservation (SAC) for its internationally important population of violet click beetle; and the Wye Valley and Forest of Dean SAC (21 km south-west of the Scheme) is designated for its importance for bat species. Cotswold Beechwoods SAC is 10km south of the Scheme and designated for its deciduous woodland. Coombe Hill Canal Site of Special Scientific Interest (SSSI) is a disused canal designated for its groups of nationally rare and scarce invertebrates and nationally scarce plants and is located 1.9 km west of the Scheme. At least five species of bat have been recorded within the land occupied by the Scheme. Preliminary studies have identified bat roosting sites in buildings and trees within the land occupied by the Scheme.
- 2.2.5. Multiple watercourses cross the land occupied by the Scheme, notably the River Chelt, Leigh Brook, and River Swilgate. These flow from east to west across the land occupied by the Scheme. These form tributaries to the River Severn, which they join 7.5km downstream of the Scheme, although the River Swilgate joins the River Avon at Tewkesbury.
- 2.2.6. The estuary of the River Severn is designated as a SAC, SPA, Ramsar and SSSI, reflecting its international biodiversity value and protecting it as an estuarine habitat supporting a wide range of important habitats and birds. From where the River Chelt joins the River Severn (>7.5km downstream of the Scheme), the Severn Estuary designations are a further 40 km downstream.

Landscape and designated heritage assets

- 2.2.7. There are 31 designated heritage assets within 1km of the land occupied by the Scheme as well as 65 non-designated heritage assets. The most notable of these in terms of being impacted by the Scheme are is the Moat House, a moated site close to the A4019 in Uckington which is a Scheduled Monument, two Grade II listed buildings to the north of the A4019 (also in Uckington), and three Grade II listed buildings at Withy Bridge (on Withybridge Lane halfway between the A4019 and the B4634). Previous investigations have identified the likelihood of buried archaeology across the land occupied by the Scheme.
- 2.2.8. The Cotswolds National Landscape Area of Outstanding Natural Beauty (AONB) is located 6 km to the east of M5 Junction 10.

Rights of way and access

- 2.2.9. There are Public Rights of Way (PRoWs) crossing and intersecting with the Scheme. Access to fields to the north and south of the A4019 is currently from the A4019 and Withybridge Lane, some of these accesses will be impacted by the proposed dualling of the A4019 and the construction of the Link Road. Additionally, PRoW AUC11 running

north of the River Chelt will be realigned at the point where it crosses the Link Road so that it crosses under the River Chelt Bridge along the north side of the river.

~~2.2.9.~~

- 2.2.10. The A4019 and M5 are barriers which limit and funnel the movement for walkers, cyclists and horse riders. Access along these transport corridors is therefore interrupted and the position of existing crossing infrastructure, which includes footbridges and subways is likely to have shaped the preferred routes for WCH for recreation and commuting within the land occupied by the Scheme.

Other land uses

- 2.2.11. Within the Order Limits, much of the land is designated as Green Belt. It has been confirmed that there is no special category land within the Order Limits.
- 2.2.12. The greatest concentrations of private dwellings and community facilities near to the Scheme are found in the main settlements of Tewkesbury and Cheltenham. The smaller villages of Staverton and Boddington to the west, Hayden to the east and Staverton Bridge to the south, as well as the north-west edge of Cheltenham, are the largest settlements within the study area, with the hamlet of Uckington spread on either side of the A4019 in a key location for the Scheme. There are several isolated properties and farmsteads in the rural areas between these settlements. Notably, there is a cluster of 14 properties at Withybridge Gardens, adjacent to the south-east quadrant of the existing M5 Junction 10 / A4109.
- 2.2.13. An area of commercial land use is located at the north-eastern extent of the A4019 at Gallagher Retail Park, which is adjacent to Kingsditch Trading Estate to the east.
- 2.2.14. An area of land is currently occupied by travellers, adjacent to the southbound carriageway of the M5, approximately 400 m north of Junction 10. It has been assumed that this site, which is deemed by TBC to be an illegally occupied site, will be occupied during the construction and operation of the Scheme.
- 2.2.15. For more detail see Chapter 13 Population and Human Health of the ES (AS-018)~~application reference TR010063 APP 6.11~~.

Topography, water resources and drainage

- 2.2.16. The low-lying nature of the land occupied by the Scheme and the presence of multiple watercourses means that much of the area is floodplain and subject to numerous flood risk issues. The design has therefore included appropriate mitigation where practicable. Detailed modelling and assessment have been undertaken to understand the baseline flood environment for the Scheme and the potential flood risks.
- 2.2.17. Further details are presented in Chapter 8 Road Drainage and the Water Environment (AS-016)~~application document TR010063 – APP 6.6~~, and the flood risk assessment in Appendix 8.1 (AS-024)~~application document TR010063 – APP 6.15~~.

Noise and Air Quality

- 2.2.18. Noise Important Areas (NIAs) are defined as the locations where the 1% of the population that are affected by the highest noise levels from major roads are located. While the land occupied by the Scheme is predominantly rural, there are clusters of residential properties throughout, and many of these are located within designated NIAs which have been established due to the traffic on the A4019.
- 2.2.19. There is one statutory designated Air Quality Management Area (AQMA) close to the

Scheme. The Scheme will result in changes to traffic flows through west Cheltenham and may have the potential to alter the air quality impacts, and also the noise impacts associated with the resultant changes in traffic flows on the road network. Air quality and noise modelling has been undertaken to understand the potential impacts.

- 2.2.20. Further details are presented in Chapter 5 Air Quality (~~AS-013~~[application document TR010063 - APP 6.3](#)) and Chapter 6 Noise and Vibration (~~AS-014~~[application document TR010063 - APP 6.4](#)) of the ES.

3. Need for the Scheme

3.1. Scheme Objectives

3.1.1. The Scheme objectives have been identified to respond to the planning and environmental context and the need for the Scheme.

3.1.2. The objectives for the Scheme are to:

- Support economic growth and facilitate growth in jobs and housing by providing improved transport network connections in west and north-west Cheltenham.
- Enhance the transport network in the west and north-west of the Cheltenham area with the resilience to meet current and future needs.
- Improve the connectivity between the SRN and the local transport network in west and north-west Cheltenham.
- Deliver a package of measures which is in keeping with the local environment, establishes biodiversity net gain and meets climate change requirements.
- Provide safe access to services for the local community, including for users of sustainable transport modes within and to west and north-west Cheltenham.

3.1.3. Paragraph 1.1 of the 2014 NN NPS sets out the need for, and Government policies to deliver, the development of NSIPs on the national road network and the following sections of this Planning Statement demonstrate the case for the Scheme.

3.2. Growth

3.2.1. Significant population and household growth is expected to take place in the area over the next 10-15 years. The JCS adopted in December 2017 includes two Strategic Allocations, and one area of land which is safeguarded for development:

- Policy A4 'Land at North West Cheltenham' – allocated land for 4,285 new homes, 10ha for office, and 13 ha for ~~employment~~ employment-generating land.
- Policy A7 'Land at West Cheltenham' – allocated land for 1,100 homes, 45ha of B-class led employment land.
- JCS Policy SD5 'Area of Restraint Safeguarded Area' – safeguards land directly east of M5 Junction 10 and north of the A4019 to meet ~~longer~~ longer-term development needs.

3.2.2. Regarding the Land at West Cheltenham, the Golden Valley Development Supplementary Planning Document (SPD) adopted in July 2020, ~~included~~ including the preparation of a development capacity study which highlights that, informed by the strategic master planning work undertaken for the SPD, the allocated site is likely to present the opportunity for a housing capacity of 2,370 dwellings. This assessment supplements rather than updates the provisions of the adopted policy in the JCS.

3.2.3. The volume and dispersed origin and destinations of trips anticipated to be generated by this development will present significant challenges in terms of accommodating all new trips via public transport or active travel modes. This coupled with uncompetitive journey times offered by public transport options, means that there will be a residual number of trips generated by the new developments that will need to be accommodated through highways-based solutions. This means that even with allowances for some changes in travel behaviour or changes ~~in~~ in-car technology, the pressures on M5 Junction 10 and on the A4019 are unlikely to diminish. Road improvements are essential to respond to future development and to accommodate the extra journeys that new residential and commercial developments will create. Further details and modelling of forecast growth

can be found in the Transport Assessment (~~AS-029Application document TR010063/APP/7.5~~).

3.2.4. The ability of GCC, CBC and TBC to deliver their planned housing and economic growth is partly contingent upon finding solutions to facilitate the smooth flow of traffic through this area. While the constraint on growth in the event of the Scheme not going ahead cannot be precisely quantified, the JCS, Local Transport Plan, Tewkesbury Borough Plan and Cheltenham Borough Plan state that the Scheme is necessary to enable the planning authorities to deliver their planned growth, as set out in Appendices A and B. The planned employment uses within the allocated Development Sites will be of importance to the UK as a whole, as evidenced through the provision of the proposed cyber security hub as part of the Land at West Cheltenham strategic allocation. This will provide supportive industries to the nationally important GCHQ facility, therefore not delivering the Scheme would have national consequences.

~~3.2.5. Monetisation~~ The monetisation of benefits and the economic case of the Scheme can be found in Chapter 5 of this Statement.

~~3.2.5-3.2.6.~~ The current review into of the JCS, the CGTSLP, has commenced in January 2014, and Regulation 18 (1) Issues and Options paper is currently subject to consultation. The allocated sites and safeguarded land are isalso includincluds ininge the Strategic Housing and Economic Land Availability Assessment (SHELA) evidence document to tas part of the Regulation 18 (1) consultation. The SHELA is the evidence base document to the Regulation 18 (1) consultation setting out potential sites for housing development.

~~3.2.6-3.2.7.~~ In summary, the Scheme is needed to support planned housing and economic growth around Cheltenham as the current highway provision would not be able to accommodate the additional journeys.

3.3. NPS NNNN NPS, Department for Transport 2014

3.3.1. The following section assesses the need for the Scheme against the ~~NPS NNNN NPS~~ NPS, version 2014. Appendix C provides a review of compliance with adopted 2024 NPS NNNN NPS (March 2024).

~~3.3.2. Paragraph 1.1 of NPS NNNN NPS states that the purpose of the NPS is to establish 'Sets out the need for, and government's policies to deliver, development of Nationally Significant Infrastructure Projects (NSIPs) on the national road and rail networks in England. For the purposes of this NPS these developments are referred to as national road, rail, and strategic rail freight interchangea (SRFI) developments.~~

~~3.3.2. need for, and Government's policies to deliver, development of nationally significant infrastructure projects (NSIPs) on the national road and rail networks in England. It provides planning guidance for promoters of nationally significant infrastructure projects on the road and rail networks, and the basis for the examination by the Examining Authority and decisions by the SoS.'~~

3.3.3. The Government recognises that 'improved connectivity and accessibility, both locally and interregionally, facilitates deeper labour markets giving individuals better access to jobs, and education, and businesses better access to skills. Improved connectivity can increase the economic density of an area, leading to increased productivity' well connected and high performing networks with sufficient capacity are vital to meet the country's long term needs and support a prosperous economy.' (NPS ~~NNN NPS~~ NPS paragraph 2.1). Paragraph 2.13 of the ~~NPS NNNN NPS~~ NPS recognises that the SRN provides critical links between cities, joins up communities, connects our major ports, airports and rail terminals and states that 'a well-functioning networks allow people and goods to flow more freely and reduce direct costs to individuals and businesses' ~~SRN is critical in enabling safe and reliable journeys and the movement of goods in support of the national and regional economies.'~~

~~3.3.4. A critical need to improve the national networks to address road congestion is recognised in NPS NNNPS NNNN NPS paragraph 2.2 in order ‘... to provide safe, expeditious and resilient networks that better support social and economic activity; and to provide a transport network that is capable of stimulating and supporting economic growth.’~~

~~3.3.5.~~ 3.3.4. Paragraph 4.3 states that in considering any proposed development, and in particular when weighing its adverse impacts against its benefits, the Examining Authority and the SoS should take into account:

- *‘Its potential benefits including the facilitation of economic development, including job creation, housing and environmental improvement, and any long-term wider benefits*
- *Its potential adverse impacts, including any longer-term and cumulative adverse impacts, as well as any measures to avoid, reduce or compensate for any adverse impacts.’*

~~3.3.6.~~ 3.3.5. The ~~NPS NNNPS NNNN NPS~~ notes in paragraph 2.22 that without improving the road network, including its performance, it will be difficult to support further economic development, employment and housing and this will impede economic growth and reduce people’s quality of life. The Government has therefore concluded that at a strategic level, there is a compelling need for the development of the national road network.

~~3.3.7.~~ 3.3.6. In the Summary of Needs of the ~~NPS NNNPS NNNN NPS~~, the following vision and strategic objectives are set out. The Government will deliver national networks that meet the country’s long-term needs; supporting a prosperous and competitive economy and improving overall quality of life, as part of a wider transport system. This means:

- *Networks with the capacity and connectivity to support national and local economic activity and facilitate growth and create jobs.*
- *Networks which support and improve journey quality, reliability, and safety.*
- *Networks which support the delivery of environmental goals and the move to a low carbon economy.*
- *Networks which join up our communities and link effectively to each other.’*

~~3.3.8.~~ 3.3.7. The conformity of the objectives of the Scheme with the vision and strategic objectives of the ~~NPS NNNPS NNNN NPS~~ are set out in Table 3-1 below:

Table 3-1 - Scheme conformity with ~~NPS NNNPS NNNN NPS~~ objectives

Government vision and strategic objectives	Scheme Conformity
The Government will deliver national networks that meet the country’s long-term needs; supporting a prosperous and competitive economy and improving overall quality of life, as part of a wider transport system.	The Scheme will help to increase highway capacity around M5 Junction 10 and on the A4019 which is crucial to unlock and support the planned development on site allocations West of Cheltenham, North West Cheltenham and safeguarded land east of M5 Junction 40, <u>and 10</u> and will therefore support the economy and improve quality of life.
Networks with the capacity and connectivity and resilience to support national and local economic activity and facilitate growth and create jobs.	The Scheme would be part of the national network, with M5 Junction 10 being a key junction and connection for the wider region and would support higher capacities and greater connectivity to the M5 and local road networks west of Cheltenham.
Networks which support and improve journey quality, reliability and safety.	The Transport Assessment found that the Scheme overall is likely to improve average journey times. Across the majority of routes,

Government vision and strategic objectives	Scheme Conformity
	journey time improvements, and a reduction in the length of queues on the South-bound off-slip are anticipated. The Scheme is also expected to improve road safety in the area.
Networks which support the delivery of environmental goals and the move to a low <u>low</u> -carbon economy.	The ES reports findings which demonstrate that the Scheme will support the delivery of environmental goals. The Scheme design includes provision for NMU and public transport access and therefore supports the move to a low carbon economy.
Networks which join up our communities and link effectively to each other.	The all-movements junction on the M5 will help to join the wider network by providing opportunity <u>opportunities</u> for north and south entrance and exits to the M5 allowing more efficient connection of Cheltenham to the wider SRN. New dedicated crossing points for pedestrians and cyclists, as well as realigned PRoW, will also be provided as part of the Scheme. This will include continuous provision for pedestrian and cyclist movement along the A4019 and facilities to link over the M5.

~~3.3.9.3.3.8.~~ The Scheme would be part of the national network, with M5 Junction 10 being a key junction and connection for the wider region. The contribution of the Scheme to the development and integration of national networks should be afforded significant weight. The Scheme, designed to increase capacity at M5 Junction 10 to futureproof the resilience of the road network and to support the delivery of planned development identified within local development plans, responds to the need for development identified in the ~~NPS NNNPS NNNN NPS~~ NPS NNNPS NNNN NPS. The need for the Scheme is established by the ~~NPS NNNPS NNNN NPS~~ NPS NNNPS NNNN NPS and the Scheme is in compliance with the ~~NPS NNNPS NNNN NPS~~ NPS NNNPS NNNN NPS strategic objectives.

3.4. National Planning Policy Framework (NPPF) (September December 2023)

3.4.1. The National Planning Policy Framework (NPPF) was ~~updated by the Ministry of Housing, Communities and Local Government and published in September-December 2023.~~ It sets out the Government's national planning policies for England and is an important and relevant consideration in planning decisions.

3.4.2. Delivery of the Scheme would provide improved capacity, safety and amenity to the SRN which would contribute towards the more efficient and sustainable functioning of the infrastructure of Gloucestershire County, and the wider M5 corridor between Birmingham and Bristol, particularly in consideration of the planned housing growth in the west and north-west Cheltenham area. Therefore, the Scheme objectives are consistent with NPPF paragraph 11 which has a presumption in favour of sustainable development.

3.4.3. NPPF paragraphs ~~137-151~~ 142-156 address planning policy in relation to the Green Belt. Paragraph 155 states that local transport infrastructure that can demonstrate a requirement for the Green Belt location and preserve its openness are not inappropriate. The Green Belt is addressed fully in the consideration of the ~~NPS NNNPS NNN NPS~~ NPS NNNPS NNN NPS policy framework in Section 7.5 of this Planning Statement. Development within the Green Belt is a key issue within the NPPF, and the impact of the Scheme on the Green Belt is addressed fully in the consideration of the ~~NPS NNNPS NNNN NPS~~ NPS NNNPS NNNN NPS policy framework above.

- 3.4.4. The impacts of the Scheme upon the Green Belt have been fully assessed due to the general presumption against inappropriate development within the Green Belt. Such development should not be approved except in very special circumstances. Applicants should therefore determine whether their proposal, or any part of it, is within an established Green Belt and, if so, whether their proposal may be considered inappropriate development within the meaning of Green Belt policy, as per paragraphs 5.170 and 5.171 of the ~~NPS NNNPS NNNN NPS~~. As such, the Scheme is consistent with the provisions and requirements of the NPPF. Especially paragraph paragraph 155 which states that local transport infrastructure which can demonstrate a requirement for a Green Belt location is not inappropriate provided the development preserves the purpose purpose of the land and does not clash with existing existing uses within the land.
- 3.4.5. The provision of the Scheme would support the NPPF's economic objective to help build a strong, responsive and competitive economy ~~through~~ by coordinating the provision of infrastructure. The Scheme will support economic growth in the area through the bringing forward of key strategic development sites by way of providing the necessary transport infrastructure to facilitate them. In this regard, the Scheme supports this objective.
- 3.4.6. The Scheme accords with the key aims of chapter 9 'promoting sustainable transport'. The Scheme gives priority first to pedestrian and cycle movements through the retention and provision of the PRow network and the provision for pedestrian and cyclist movement within the Order Limits, and the Scheme will not result in an unacceptable impact on highway safety. Furthermore, the Scheme includes bus stop, bus lane and bus gate provision within the Order Limits.

3.5. Local Policy

- 3.5.1. The NPSs are the primary planning policy documents for ~~decision~~ decision-making on NSIPs, but local planning policy is still relevant as it will be taken into account when the local authorities prepare their Local Impact Report. Local policy may also be taken into account by the SoS as an important and relevant matter.
- 3.5.2. This section provides a summary of the support for the Scheme in local policy documents, with ~~the a~~ a detailed assessment of the Scheme against relevant policies set out in Appendix A of this document.
- 3.5.3. The following local policies have been considered in the development of this Scheme and will be assessed against various topics of the ES in this Chapter.
- Joint Core Strategy (adopted 2017).
 - Minerals Local Plan for Gloucestershire 2018-2032 (adopted 2020).
 - Gloucestershire Waste Core Strategy 2012-2027 (adopted 2012).
 - Gloucestershire's Local Transport Plan (LTP) 2020-2041 (adopted 2020).
 - The Cheltenham Plan 2011-2031 (adopted 2020).
 - The Tewkesbury Borough Plan 2011-2031 (adopted 2022).
 - Golden Valley SPD (adopted 2020).
- 3.5.4. There is support for the Scheme across the Cheltenham, Tewkesbury and Gloucestershire local plans and transport plans for the potential the junction and highway improvements will have for unlocking safeguarded residential and employment land. Paragraph 4.1.12 of the JCS notes that there is agreement that junction improvements on the M5 at Junction 10 will support the economy of the JCS area and that of wider Gloucestershire. This would take place primarily by unlocking constraints to land currently designated in the JCS as safeguarded and allocated sites for development (Policy A7 Land at West Cheltenham, Policy A4 - Land at North West Cheltenham and Policy SD5 - Area of Restraint Safeguarded Area).

- 3.5.5. JCS Policy INF1: Transport Network states that development should provide safe and accessible connections to the transport network to enable travel choices for residents and commuters. This includes connections for existing walking, cycling and passenger transport networks. The Scheme provides segregated cycleways and footways as part of the A4019 improvements and new Link Road, as well as connections to the existing PRow network and ensures that these networks will remain an attractive option for those wishing to utilise sustainable transport modes.
- 3.5.6. The Tewkesbury Borough Plan (2011-2031) (2022) paragraphs 4.4 and 4.5 acknowledge that a key part of economic development in the area is centred around the M5 growth zone and there is support for investment to improve the highway infrastructure. The plan makes no allocations in this area so as not to prejudice the outcome of ongoing work on the M5 Junction 10 alterations.
- 3.5.7. Paragraph 3.9 of the Cheltenham Plan (2020) states that M5 Junction 10 is currently constrained through being two-way rather than four-way, and sites to the west of Cheltenham would stand to benefit further should investment be forthcoming to facilitate an all-movements junction.
- 3.5.8. Chapter 3 of the Cheltenham Plan is consistent with the Tewkesbury Borough Plan and states upgrading M5 Junction 10 will provide significant economic growth opportunities by unlocking the potential of additional land. The Plan indicates in paragraph 3.9 that the Council is committed to keeping up the pressure of lobbying to influence funding for the M5 Junction 10 alterations and is working closely with key partners on achieving a satisfactory outcome.
- 3.5.9. Overall, the Scheme will increase connectivity and support economic growth in the local area, as identified within the Economic Case set out in Section 5 of this document. It is therefore considered that the principle of the Scheme is compliant with the national and local guidance outlined above.

3.6. Transport Policies

- 3.6.1. Transport Strategies published by the Department for Transport (DfT), the Government and NH demonstrate the Government's commitment to investing in the SRN to meet future growth, maintain social sustainability and the operation of the UK economy, and stimulate economic growth. The Scheme which is identified as a location for major improvements to the SRN, contributes towards these national level strategic objectives.

Road Investment Strategy 2020-2025 (RIS2)

- 3.6.2. The Government published their second Roads Investment Strategy (RIS2) in March 2020 to cover the period to 2025. Following the initial RIS, the government has committed to spending £27.4 billion during the period to build new road capacity, improve the quality and reduce the negative impacts of the existing SRN.
- 3.6.3. The Strategic Vision for RIS2 recognises the need to create a network which supports the economy, creates a greener network, creates a safe and more reliable network, delivers a more integrated network and creates a smarter network.
- 3.6.4. Part 1c of the strategy outlines the strategic vision of the network for 2050, and highlights that the 'provision of strategic road capacity, developed together with wider transport provision, has mirrored the growth in housing so that new journeys can be accommodated without worsening conditions for existing travellers.'
- 3.6.5. Part 1d outlines how the vision will be delivered across the network and recognises that it is 'essential that the management of the road network is linked up with all those working to support growth and deliver the housing the nation needs.' It goes on to highlight that it

is important to ensure a lack of critical capacity on the SRN is not a barrier and it should be ready to enable new housing and commercial development.

- 3.6.6. Part 3 of the strategy outlines the Investment Plan for the network, and section A acknowledges that infrastructure is vital if our economy is to grow and if new housing is to be built across our nation and states that:

‘In many cases, the local road network (including cycleways and footpaths) will be the main link for new employment spaces and homes, but more sizeable developments may require enhancement of the SRN too if new traffic is to be accommodated without imposing unacceptable congestion and safety impacts on existing routes.’ In Part 3, the M5 Junction 10 Scheme is recognised as a Scheme that the Government has committed with funding under the Housing Infrastructure Fund (HIF). The Schemes listed under this fund are intended to be delivered alongside RIS2 funded projects, but they are subject to different governance arrangements to those funded through RIS2 and are not guaranteed by RIS2 should they not proceed with HIF funding.

National Infrastructure Delivery Plan (2016)

- 3.6.7. The National Infrastructure Delivery Plan 2016 (“NIDP”) was published by Her Majesty’s (“HM”) Treasury in May 2016. The plan brings together the Government’s plans for economic infrastructure with those to support the delivery of housing and social infrastructure from 2016-2021.

- 3.6.8. Chapter 3 of the plan acknowledges the importance of roads for the functioning of modern society and notes that ‘*the SRN of motorways and A roads is vital to businesses and the successful functioning of the economy.*’

National Infrastructure Strategy (2020)

- 3.6.9. The National Infrastructure Strategy was published by HM Treasury in 2020 and sets out plans to transform UK infrastructure in order to level up the country, strengthen the Union and achieve net zero emissions.

- 3.6.10. The executive summary recognises that ‘infrastructure underpins the economy. Transport, digital, energy and utility networks are vital for jobs, businesses, and economic growth.’

Department for Transport (DfT) Outcome Delivery Plan: 2021 to 2022 (2021)

- 3.6.11. The Outcome Delivery Plan sets out how DfT will continue to deliver priority outcomes, measure success and improve. The three Priority Outcomes are:

- *‘Improve connectivity across the UK and grow the economy by enhancing the transport network, on time and on budget.*
- *‘Build confidence in the transport network as the country recovers from COVID-19 and improve transport users’ experience, ensuring that the network is safe, reliable and inclusive.*
- *‘Tackle climate change and improve air quality by decarbonising transport’.*

- 3.6.12. Following on from the impact of the COVID-19 pandemic, an Acceleration Unit was formed by the Transport Secretary in October 2020, with a mission to speed_up the delivery of transport infrastructure projects and the implementation of policy initiatives, including national infrastructure projects.

Overall, the Scheme will increase connectivity and support economic growth in the local area and wider region, thereby complying with the national guidance outlined above.

4. Scheme Development

4.1. Introduction

- 4.1.1. This Chapter provides a summary of the option identification and option selection processes that led to the Scheme design set out within the DCO application. This process was shaped by public consultation as well as policy and legislative considerations.
- 4.1.2. A detailed description of the development and analysis of the alternative options considered of the Scheme can be found in Chapter 3 of the ES ([APP-062](#)) (~~application reference TR010063 APP 6.1~~).

4.2. Development history and alternatives considered

- 4.2.1. Prior to GCC making the Preferred Route Announcement (PRA) in June 2021 a series of optioneering processes were undertaken.
- 4.2.2. Initial proposals for addressing the strategic transport infrastructure requirements for increased housing numbers set out in the JCS have been under consideration since 2012. These included scenarios such as ‘do minimum’ – delivering only the committed network improvements to 2031, through to a number of ‘do something’ scenarios involving various transport infrastructure solutions.
- 4.2.3. Since the initial optioneering took place, a variety of studies, option identification and sifting exercises were carried out related to the improvement of the M5 Junction 10. These concept options were assessed in the Homes England Business Case and included upgrading the existing junction, as well as moving the junction to the north and south of its existing location.
- 4.2.4. Nine options were identified from the studies and sifting exercises. These included various alignments located both on the current footprint of M5 Junction 10, as well as to the north of the existing junction. These were sifted down to five options, and these were selected for further development and appraisal.
- 4.2.5. All five options were assessed in the Preliminary Environmental Assessment of Options Report (PEAOR). The assessment concluded that Options 2, 2A and 2B were taken forward to non-statutory public consultation, as it was decided that Options 1A and 5 provided a less sustainable option compared to Options 2, 2A and 2B, primarily in relation to affordability, value for money and environmental reasons. Options 2, 2A and 2B are described in Table 4-1 below.

Table 4-1 - Summary of options presented at consultation

Scheme element 1: Improvements to Junction 10 on the M5 and a new road linking Junction 10 to west Cheltenham		
Option 2: Upgrade the existing junction with grade grade-separated roundabout centred on the existing junction	Option 2A: Upgrade existing junction with grade grade-separated roundabout offset to the north	Option 2B: Upgrade existing junction with grade grade-separated roundabout offset to the south
Scheme element 2: A38/A4019 Junction Improvements at Coombe Hill		
Option 3: the existing left turn lane from the A38 onto the A4019 is replaced with a longer light light-controlled left turn lane		
Scheme element 3: A4019 widening, east of Junction 10		

Scheme element 1: Improvements to Junction 10 on the M5 and a new road linking Junction 10 to west Cheltenham

Option 1: the existing ~~single~~-~~single~~-carriageway would be converted to a ~~dual~~-~~dual~~-carriageway by widening the road, mostly on the northern side

4.2.6. In addition to the improvements at Junction 10, the options considered also included the dualling of the A4019, and a new Link Road.

4.2.7. Of the three options shortlisted from the sifting exercise, and considered at the non-statutory consultation, Option 2 was the option that GCC recommended should be taken forward to an application for statutory powers to construct the M5 Junction 10 Improvements Scheme. The details of this option are those set out above in the description of the Scheme elements. Options 2A and 2B were not taken forward for further consideration.

Legal and policy accordence matters

4.2.8. An assessment of the principal legal and policy tests in the ~~NPS NNNPS NNNN NPS~~, together with the associated legislation and other policies referenced in the ~~NPS NNNPS NNNN NPS~~, was undertaken to support the option selection process.

4.2.9. Paragraph 4.2 of the ~~NPS NNNPS NNN NPS~~ establishes a presumption in favour of development for NSIPs. However, there are some specific circumstances in which the ~~NPS NNNPS NNN NPS~~ directs that the SoS should refuse to grant development consent if a proposed scheme were to conflict with policy objectives or where the impacts of a development would outweigh its benefits. Effectively, these are the exceptions to the normal presumption in favour of national networks NSIPs established in paragraph 4.2 of the ~~NPS NNNPS NNNN NPS~~.

~~NPS NNNPS NNNN NPS~~ provisions

4.2.10. The following ~~NPS NNNPS NNN NPS~~ tests were given particular consideration during the assessment of options stage:

- Air Quality – where failure to ensure compliance with the EU Directive limit values would represent grounds for refusal (paragraph 5.13 of the ~~NPS NNNPS NNNN NPS~~).
- Road Safety – where failure to contribute to an overall improvement in the safety of the SRN would represent grounds for refusal (~~NPS NNNPS NNNN NPS~~ paragraph 4.66).
- Noise – where failure to avoid adverse impacts on health and quality of life would represent grounds for refusal (~~NPS NNNPS NNNN NPS~~ paragraph 5.195).

4.2.11. The ~~NPS NNNPS NNN NPS~~ establishes policy tests where very special circumstances or very substantial benefits can be used to justify allowing development as an exception to normal policy. The following tests are of particular relevance:

- Green Belt – where paragraph 5.170 of the ~~NPS NNNPS NNNN NPS~~ states that inappropriate development in Green Belts should not be approved except in very special circumstances and where paragraph 5.178 acknowledges that national network infrastructure projects may comprise inappropriate development and that very special circumstances will not exist unless the harm is clearly outweighed by other considerations.
- Designated heritage assets - where paragraph 5.133 of the ~~NPS NNNPS NNNN NPS~~ states that development consent should not be granted for works that will lead to substantial harm or total loss of significance of a designated heritage asset;

unless it can be demonstrated that the harm or loss is necessary to deliver substantial public benefits that outweigh that loss or harm.

•

4.2.12.

~~4.2.13.~~ 4.2.12. The above tests are relevant to the Scheme, as the majority of the land occupied by the Scheme is located within the Green Belt, and there are designated heritage assets alongside the A4019.

Other ~~NPS NNNPS NNNN NPS~~ presumptions against development

~~4.2.14.~~ 4.2.13. There are other circumstances in which the ~~NPS NNNPS NNNN NPS~~ directs the SoS to refuse development consent, unless it can be demonstrated that a scheme's benefits outweigh its impacts. However, in these instances, the ~~NPS NNNPS NNNN NPS~~ does not require a substantial level of benefit to be demonstrated. Those of most relevance are:

- Flood Risk – where paragraph 5.108 of the ~~NPS NNNPS NNNN NPS~~ states that development in areas at risk of flooding can only be consented to if the sequential and exception tests are satisfied. For the exception test to be passed it must be demonstrated that the project delivers wider sustainability benefits that outweigh the flood risk and that the project will be safe for its lifetime, without increasing the risk of flooding elsewhere and, where possible, will reduce flood risk overall.
- Water Quality – where paragraph 5.227 of the ~~NPS NNNPS NNNN NPS~~ states that schemes which give rise to adverse effects on the water environment can only be consented if all reasonable steps have been taken to resolve concerns and ~~that~~ the Environment Agency is satisfied with the outcome.

~~4.2.15.~~ 4.2.14. All these high-level policy tests are relevant to the Scheme. There are a number of watercourses within the land occupied by the Scheme, together with groundwater reserves within the land occupied by the Scheme.

Other Relevant Legal Considerations

~~4.2.16.~~ 4.2.15. There are other legislative provisions which were also taken into account, as they either impose a duty on ~~decision-~~decision-makers to have regard to certain matters or highlight considerations that are likely to be given great weight. For this reason, substantial weight was also given to those considerations in the option assessment and selection process. Those most applicable are:

- The duty ~~on-~~of the SoS under ~~regulation-~~Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (which transposes the Habitats Directive) is to make an appropriate assessment of a plan or project which is likely to have significant effects on a European site. In the light of the appropriate assessment, consent should not be granted where the plan or project will adversely affect the European site concerned, unless the derogation contained in regulation 64 (which transposes the derogation in Article 6(4)) is satisfied.
- The duty in Section 40 of the Natural Environment and Rural Communities Act 2006 is for ~~decision-~~decision-makers to have regard to conserving biodiversity generally and ~~to-~~restoring or enhancing a species' population or habitat.
- The duty in Regulation 7 of the Infrastructure Planning (Decisions) Regulations 2010 ~~which-~~ requires those making decisions on NSIPs to have regard to the international legally-binding treaty, the Convention of Biological Diversity. The objectives of the Convention most significantly include the conservation of biological diversity and the sustainable use of its components.
- The duty in Regulation 3 of the Infrastructure Planning (Decisions) Regulations 2010 ~~which-~~ requires those making decisions on NSIPs to have regard to the

desirability of preserving a listed building, its setting or any of the features of special architectural or historic interest that it possesses; preserving the character and appearance of a conservation area; and the desirability of preserving a scheduled ancient monument or its setting.

- The Protection of Badgers Act 1992, ~~which~~ makes it illegal to interfere with a badger sett for the purposes of facilitating development, unless authorised by a licence granted by Natural England.
- Section 122 of the Act requires the SoS to be satisfied that there is a compelling case in the public interest for any land to be acquired compulsorily. It also requires that the land to be acquired: is required for the development to which the development consent relates; is required to facilitate or is incidental to the development; or is replacement land which is given in exchange for the Order land under section 131 or 132 of the Act.

~~4.2.17.~~ 4.2.16. The design option was selected as the Preferred Route to be progressed to the next stage of development because it had the most support at the public consultation, it was the most direct route, had the least impact on properties, the second least impact on flood plain and generally the scale of environmental impacts would be less than the other corridors. This option also allows Withybridge Lane to remain open during construction to minimise impacts on existing users. Do minimum options ~~were~~ discounted because they failed to support the required JCS housing growth. Other ~~do-do~~ something options were discounted because the scenarios also failed to support the required housing growth, wider demands, and environmental constraints.

~~4.2.18.~~ 4.2.17. The option appraisal is set out in greater detail in Section 3.3 of Chapter 3 of the ~~Environmental Statement~~ ES (APP-062) (~~application reference TR010063 – /APP/6.2).~~

4.3. Preferred Route Announcement

Preliminary Design

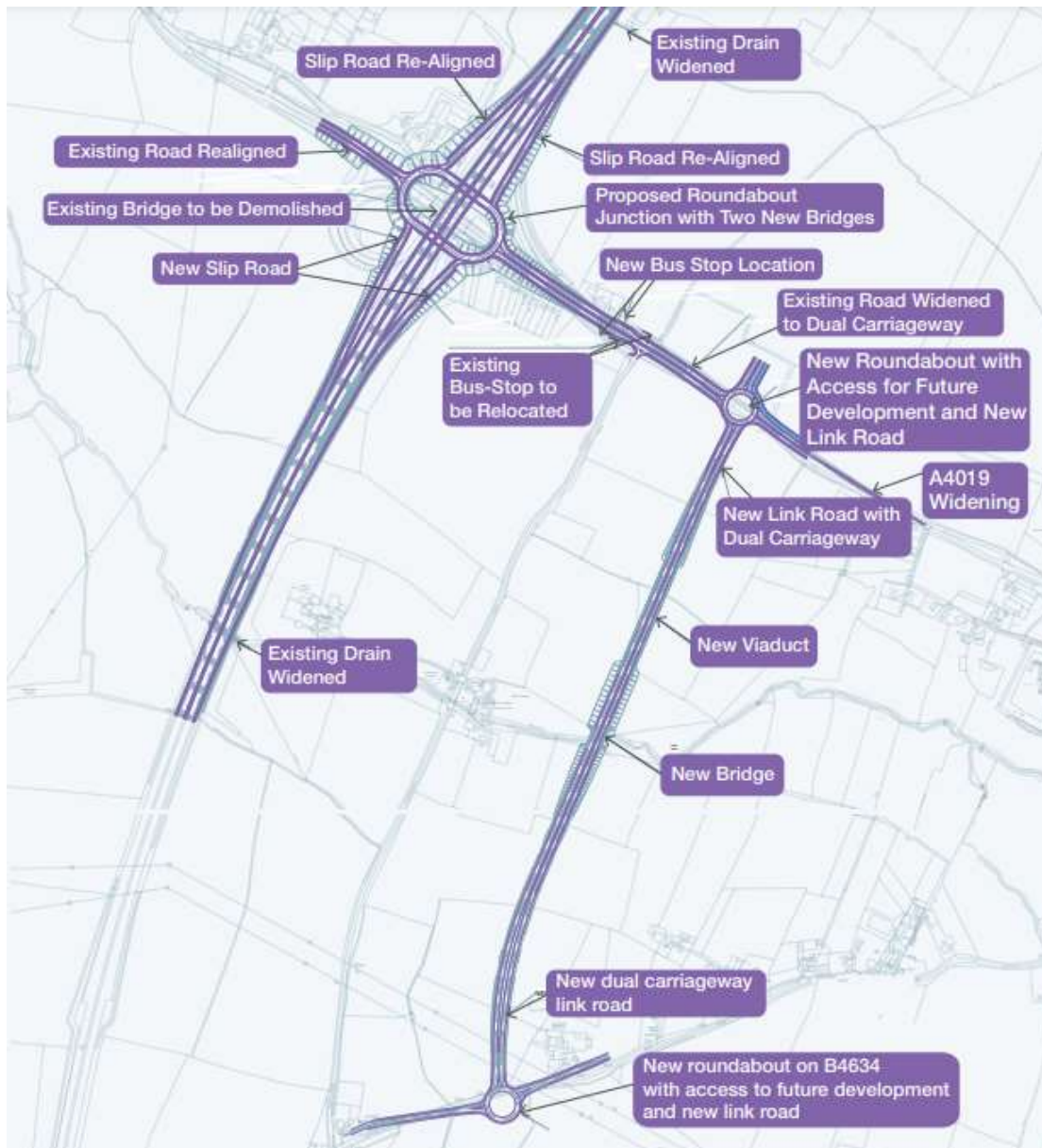
4.3.1. GCC made the PRA for the Scheme in June 2021, and the preliminary design commenced.

4.3.2. The scope of works as published in the PRA were:

- M5 Junction 10: upgrading the existing junction with a gyratory roundabout centred around the existing bridge. The existing bridge will be demolished.
- A4019: a standard dual carriageway with an active travel corridor on the northern side of the A4019.
- Link Road: a new road along route corridor 3.

4.3.3. The outline layout of the preferred Scheme at the PRA is shown in Figure 4-1 below.

Figure 4-1 Preferred Route Option 2



Consultation on the Scheme

- 4.3.4. The Applicant has undertaken a comprehensive programme of consultation with the local community and wider stakeholders. The consultation process has facilitated feedback which has been considered throughout the development of the Scheme.
- 4.3.5. Engagement first commenced on the proposals in March 2019 and October 2020 with stakeholders to inform early Scheme development.

- 4.3.6. A non-statutory consultation took place between 14 October to 25 November 2020, where options were presented to the public. Early consultation with the public at this non-statutory stage allowed members of the public to provide feedback on the options and influence the development of the Scheme.
- 4.3.7. A statutory consultation under section 42 of the Act (duty to consult) alongside consultations under section 47 (duty to consult the local community) and section 48 (duty to publicise) took place between 8 December 2021 and 15 February 2022.
- 4.3.8. The Applicant undertook an additional period of non-statutory targeted consultation following on from the main statutory consultation period, due to proposed changes made as a result of the feedback received in response to the statutory consultation. The targeted consultation took place between 8 August and 5 September 2022, and also from 21 December 2022 to 18 February 2023 to cover changes in the design since the statutory consultation, with information provided to prescribed consultees, affected landowners and to the informal Traveller site. -A face-to-face information share session was held on 8 September 2022 to provide information to local residents and affected landowners.
- 4.3.9. Full details of the consultation are included in the Consultation Report (~~APP-038~~[application document TR010063 APP 5.1](#)).

Changes to the Scheme following consultation

- 4.3.10. The Consultation Report (~~application document TR010063 APP 5.1~~) sets out how the Scheme has evolved in response to comments received during the consultation periods. Within the body of the report, topics and issues raised by consultees are considered and responses are made. Within the appendices, GCC's response is provided for each comment made, including whether that comment resulted in a change to the Scheme.

5. Economic Case

5.1. Introduction

5.1.1. This section sets out the details of the approach adopted for the estimation of economic benefits arising from the Scheme and summarises the results of the assessments. This section also seeks to establish the extent to which the Scheme provides good value for money in relation to the impact on public accounts by considering improvements to transport economic efficiency for all users, environmental impacts, effects on the wider economy and the social and distributional effects of the scheme.

5.1.2. This section also sets out how the economic benefits of the Scheme align with key national planning policy.

5.2. Economic assessment methodology

5.2.1. The appraisal of the economic elements associated with the Scheme has been undertaken in accordance with Transport Analysis Guidance (TAG) unit A1-1 Cost-Benefit Analysis. In summary, the scope of the economic appraisal comprises the assessment of:

- User benefits during normal operation, using Transport User Benefit Appraisal (TUBA) version 1.9.14 with economics file "Economics_TAG_db1_14_0.txt" based on TAG 1.14. This included sensitivity tests of low growth/optimistic scenarios.
- Construction user dis-benefits (an assessment of delays to travellers during construction and maintenance has been undertaken).
- Accident savings using COBA-LT version 2013.2 with economic parameters file version 2020.2.
- Land Value Uplift in line with TAG Unit A2-2.
- Monetised environmental impacts (the impact of the scheme on greenhouse gas emissions, local air quality and noise) in line with TAG Unit A3.
- Social impacts have been assessed in line with TAG Unit A4-1.
- Distributional impacts have been assessed in line with TAG Unit A4-2.
- Journey time reliability impacts have been assessed in line with TAG Unit A1-3.
- Wider economic impacts have been assessed in line with TAG Unit A2-2.

5.3. Scheme costs

5.3.1. To ensure value for public money and secure funding, the Scheme requires precise estimation of costs. Any unrealistic cost estimates could adversely affect the robustness of the assessment of affordability and value for money of a scheme.

5.3.2. The Scheme has a most likely estimate of £293.210 million including allowances for risk and inflation at the date of application. This estimate includes all costs to deliver the Scheme from the Options Stages through to the opening for traffic. It includes an allowance for compensation payments relating to the compulsory acquisition of land interests in, and rights over, land and the temporary possession and use of land. It also takes into account potential claims under Part 1 of the Land Compensation Act 1973, Section 10 of the Compulsory Purchase Act 1965 and s152(3) of the 2008 Act.

5.3.3. The estimate includes costs associated with works relating to the provision of an all-movements junction at M5 Junction 10, a new West Cheltenham Link Road east of ~~junction~~ Junction 10 from the A4019 to the B4634 and the widening of the A4019 to the

east of ~~junction~~ Junction 10, including a bus lane on the A4019 eastbound carriageway from the West Cheltenham Fire Station to the Gallagher Junction.

5.3.4. The Housing Infrastructure Fund (HIF) is a government capital grant programme of up to £2.3 billion, which will help to deliver approximately 100,000 new homes in England. Funding is awarded to local authorities on a competitive basis and provides grant funding for new infrastructure that will unlock new homes in the areas of greatest housing demand.

5.3.5. A HIF bid was submitted on behalf of GCC for £219.84 million in funding. The investment would support a commitment to growth, as outlined in the JCS. GCC entered a Grant Determination Agreement (GDA) with Homes England (HoE) in October 2020 to secure funding for the Scheme with a sum of £249.131 million. A further £4 million contribution is secured from GCC, totalling £253.131 million in available funding. Since entering the GDA, the Scheme estimates a further £72.25 million in funding to be required which has been identified to be secured through developer contributions.

5.3.6. The contributions would be sought and obtained through JCS policy INF7 which supports the arrangements for the direct implementation or financial contributions towards the provision of infrastructure and services required as a consequence of development. Financial contributions will be agreed upon with the developers and formalised through Section 106 agreements during the planning process; such payments would remain enforceable under the relevant planning legislation.

5.4. Value for money

5.4.1. The economic assessment for the Scheme seeks to establish the extent to which the Scheme provides good value for money in relation to impacts on public accounts by improving transport economic efficiency for all users.

5.4.2. The benefits of the Scheme have been assessed both in monetised form and through qualitative methods, as appropriate to the various components of benefit.

5.4.3. An initial Benefit Cost Ratio (BCR) has been calculated over the 60-year appraisal period that excludes the outputs of the journey time reliability assessment, with an adjusted BCR also reported that includes these impacts.

5.4.4. The Scheme is forecast to produce user benefits of £55.3m (PV) over the 60-year appraisal period.

5.4.5. The Scheme is forecast to generate wider economic impacts, but they are anticipated to be modest in scale as a result of the characteristics of the Scheme and its impacts on travel costs and the economic characteristics of the study area.

5.4.6. Further non-monetised benefits have been captured including social and distributional benefits and additional environmental benefits. These non-monetised impacts have all contributed to the assessment of value for money of the Scheme.

5.4.7. The final assessment of VfM for the Scheme has been rated as 'Medium to High'.

5.5. Policy assessment

5.5.1. Paragraph 2.2 of the ~~NPS~~ ~~NNNPS~~ ~~NNNN~~ NPS states that '*well connected and high performing networks with sufficient capacity are vital to meet the country's long-term needs and support a prosperous economy.*'

5.5.2. Paragraph 2.2 of the ~~NPS~~ ~~NNNPS~~ ~~NNNN~~ NPS states that there is a '*critical need to improve the national networks to address road congestion and crowding on the railways to provide safe, expeditious and resilient networks that better support social and economic*

activity; and to provide a transport network that is capable of stimulating and supporting economic growth.'

- 5.5.3. As per paragraph 8 of the NPPF, one of the three overarching objectives of the policy document is an economic objective to *'help build a strong, responsive and competitive economy.'*
- 5.5.4. Paragraph ~~84-85~~ of the NPPF states that *'planning policies and decisions should help create the conditions in which businesses can invest, expand and adapt. Significant weight should be placed on the need to support economic growth and productivity, taking into account both local business needs and wider opportunities for development.'*
- 5.5.5. The economic case for the Scheme demonstrates its compliance to the ~~NPS NINPS NNNN NPS~~ objective that strategic highway improvements benefit the economy. It assesses and monetises anticipated economic, environmental and social benefits of the Scheme based on a 60-year appraisal ~~period~~.
- 5.5.6. The Scheme is compliant with paragraphs 2.2 and 2.3 of the ~~NPS NINPS NNNN NPS~~ in that it will directly contribute towards an improvement in the strategic national road network through the provision of a new all-movements roundabout junction at M5 Junction 10. This will reduce congestion in and around the junction which will in turn contribute towards economic growth at the local and national scales.
- 5.5.7. The Scheme will bring forward proposed strategic allocation sites A4 (Land at North West Cheltenham) and A7 (Land at West Cheltenham), as set out in the JCS, by increasing the capacity of the road network. This increased capacity will also enable Safeguarded sites in north-west Cheltenham to come forward in future years. The Scheme will therefore directly contribute towards economic benefits through unlocking these planned development sites.

5.6. Summary

- 5.6.1. This section sets out the economic case for the Scheme, including the economic benefits arising from the Scheme and the extent to which the Scheme provides good value for money in relation to the impact on public accounts by considering improvements to transport economic efficiency for all users, environmental impacts, effects on the wider economy and the social and distributional effects of the scheme.
- 5.6.2. This section also demonstrates national policy compliance through delivering an improvement to the strategic highway network, as well as bringing forward key development sites, which will both result in the Scheme delivering economic benefits.

6. Transport Case

- 6.1.1. The proposals constitute a highways scheme which is subject to an application for a DCO due to the proposals including alterations to M5 Junction 10, a new link road and dualling of the A4019. As part of the suite of DCO deliverables, a Transport Assessment (TA) (~~application document TR010063 APP 7.5 APP-020~~) has been prepared in order to assess the likely impacts of the Scheme on traffic movements during both construction and operation.
- 6.1.2. The ~~NPS NNNPS NNNN NPS~~ is the primary policy document for the Scheme. The ~~NPS NNNPS NNNNNPS~~ outlines the requirement for the strategic road network to be developed, stating in paragraph 2.17 that *'the national road network is already under significant pressure. It is estimated that around 16% of all travel time in 2010 was spent delayed in traffic, and that congestion has significant economic costs: in 2010 the direct costs of congestion on the Strategic Road Network in England were estimated at £1.9 billion per annum.'*
- 6.1.3. The production of the TA is in line with NPPF Paragraph ~~443117~~, which states that *'all developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed.'*
- 6.1.4. Paragraph 2.23 states that *'the Government's wider policy is to bring forward improvements and enhancements to the existing Strategic Road Network to address the needs set out earlier.'* This will include *'junction improvements, new slip roads and upgraded technology to address congestion and improve performance and resilience at junctions, which are a major source of congestion'*, as well as *'improvements to trunk roads, in particular dualling of single carriageway strategic trunk roads and additional lanes on existing dual carriageways to increase capacity and to improve performance and resilience.'*
- 6.1.5. Paragraph 5.204 states that *'applicants should consult the relevant highway authority, and local planning authority, as appropriate, on the assessment of transport impacts.'* Furthermore, *'applicants should consider reasonable opportunities to support other transport modes in developing infrastructure'*, such as non-motorised users.
- 6.1.6. The NPPF provides further support for the Scheme, with paragraph ~~406-110~~ stating that policies should *'identify and protect, where there is robust evidence, sites and routes which could be critical in developing infrastructure to widen transport choice and realise opportunities for large scale development'*, as well as *'provide for high quality walking and cycling networks'* and *'provide for any large-scale transport facilities that need to be in the area, and the infrastructure and wider development required to support their operation, expansion, and contribution to the wider economy.'*
- 6.1.7. Paragraph ~~444-115~~ of the NPPF also states that *'development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.'*
- 6.1.8. Policy support is also found in the Gloucestershire LTP 2020-2041 (2021). Policy PD 0.3 – Maximising investment in a sustainable transport network notes that *'GCC will work with partners to ensure the delivery of a financially sustainable transport network, through maximising opportunities for inward investment.'*
- 6.1.9. The TA states that the existing transport conditions within the vicinity of the Scheme consist of poor existing walking, cycling and public transport facilities. The area benefits from access to bus routes and some pedestrian facilities on the A4019, but poor access to cycle facilities. A review of local accident data indicates that there ~~has~~ have been 30 personal injury accidents in the last five years, including one 'fatal' accident.

- 6.1.10. The Scheme proposes to provide dedicated pedestrian and cycle facilities throughout the Order Limits, including pedestrian crossing points, retained and enhanced PRoW, as well as continuous provision for pedestrian and cyclist movement along the A4019 and facilities to link over the M5. These provide an improvement compared to the existing situation for pedestrian and cycle users.
- 6.1.11. The assessment states that journey time improvements are predicted. In terms of queuing, the proposed Scheme reduces the length of the queue on the southbound offslip, which is predicted to exceed storage and extend into the mainline in the AM peak without the Scheme. The mean-max queue on the northbound offslip in the AM peak is not predicted to exceed available storage.
- 6.1.12. Overall, the M5 Junction 10 Improvement Scheme meets the minimum 70% standard for the LTN 1/20 Cycling Level of Service (CLOs) assessment, scoring strongly for safety and comfort. Safety is also a consistent strength of the junction designs within the scheme.
- 6.1.13. During the construction phase, there will be a requirement for traffic management and slip road closures at the M5 J10 for prolonged periods. This will result in changes in flow on the road network in the vicinity of the Scheme resulting from both the implementation of traffic management measures, and the M5 J10 slip road closures. However, the general magnitude of flow changes on the local road network is unlikely to result in severe impacts.
- 6.1.14. In terms of changes to journey times during construction, these are not considered to be severe, and any larger impacts would be subject to mitigation measures outlined in the CTMP. Overall, during construction, there would not be an unacceptable impact on highway safety, and the residual cumulative impacts on the road network will not be severe, in accordance with paragraph 1145 of the NPPF.
- 6.1.15. The evidence presented in the TA has demonstrated that operation is predicted to improve for pedestrian, cyclist and vehicle users with the inclusion of the Scheme. It is concluded that there would not be an unacceptable impact on highway safety, and that the residual cumulative impacts on the road network would not be severe.
- 6.1.16. It has been demonstrated that the Scheme creates networks with the capacity and connectivity to support national and local economic activity and facilitate growth. The modelling demonstrates that the Scheme creates networks which improve journey quality, reliability and safety.
- 6.1.17. The sustainable transport infrastructure improvements in the Scheme achieve the aims of the NPS to create networks which support the delivery of a low carbon economy and create networks which enable communities to link effectively to each other.
- 6.1.18. It is therefore concluded that the Scheme accords with the aims of the ~~NPS~~ NNNPS, NNNN NPS.

7. Planning Policy Considerations

7.1. Introduction

7.1.1. This Chapter explains that the Scheme is in accordance with the ~~NPS NNNPS NNNN NPS~~, the NPPF and other relevant and prescribed matters and demonstrates the Scheme's compliance with these policy and legislative requirements. A detailed table of compliance with national, local and regional planning policy is presented in Appendix A with a schedule ~~of-in~~ accordance with the ~~NPS NNNPS NNNN NPS 2014 and 2024~~ presented in Appendix B ~~and C~~ of this statement.

7.1.2. Local planning and transport policy documents can also be important and relevant to ~~decision~~ decision-making, particularly where they are relatively up ~~to~~ to-date. The Planning Inspectorate's Advice Note One: Local Impact Reports provides guidance for host authorities on the production of Local Impact Reports, which the SoS must have regard to when determining DCO applications. Advice Note One states that topics that may be of assistance in writing the report include:

'Relevant development plan policies, supplementary planning guidance or documents, development briefs or approved master-plans and an appraisal of their relationship and relevance to the proposals.'

7.1.3. It goes on to state that:

'It will also be very helpful to have the local authority's appraisal of the proposed development's compliance with local policy and guidance.'

7.1.4. The above further emphasises the view of the inspectorate that local planning policies are important and relevant in ~~decision~~ decision-making on DCO applications. Therefore, local relevant planning policies have been assessed in this section.

7.1.5. The assessment of the Scheme against the ~~NPS NNNPS NNN NPS~~ and relevant local planning policy in Sections 6.4 – 6.18 is organised by topic.

7.2. ~~NPS NNNPS NNNN NPS~~, Department for Transport (December 2014)

7.2.1. Section 104 of the Act states that when deciding the approval of an NSIP, the SoS must have regard to any NPS which relates to the development being considered.

7.2.2. The ~~NPS NNNPS NNNN NPS~~ sets out the Government's vision and policy against which the SoS will make decisions on applications for development consent for NSIPs on the strategic road and rail networks.

7.2.3. Paragraph 1.2 of the ~~NPS NNNPS NNNN NPS~~ explains that the SoS will use the ~~NPS NNNPS NNNN NPS~~ as the primary basis for making decisions on applications for development consent on national networks NSIPs in England.

7.2.4. The ~~NPS NNNPS NNNN NPS~~ is the primary basis for ~~decision~~ decision-making for the Scheme, except to the extent that one or more of the following apply (Section 104(3-8)):

1. 'the United Kingdom being in breach of any of its international obligations'.
2. 'the SoS being in breach of any duty imposed on the SoS by or under any enactment'.
3. 'the decision 'would be unlawful by virtue of any enactment'.

4. 'the adverse impact of the proposed development would outweigh its benefits'.
5. 'any condition prescribed for deciding an application otherwise than in accordance with a national policy statement is met'.

- 7.2.5. The Applicant has prepared this application with careful consideration of all legal obligations applying to it and the SoS and is therefore not aware of any respect in which deciding the application in accordance with the ~~NPS NNNPS NNNN NPS~~ would be in breach of the SoS's duties (b), would be unlawful (c) or contrary to any other condition prescribed for deciding the application (e).
- 7.2.6. Deciding the application in accordance with the ~~NPS NNNPS NNNN NPS~~ would not lead to the United Kingdom being in breach of any of its international obligations (a), nor would the adverse impact of the Scheme outweigh its benefits (d). The Scheme's conformity to these conditions is demonstrated through the assessment of the Scheme's compliance with the ~~NPS NNNPS NNNN NPS~~ provided in Appendix B, which is concerned with impacts on legislation, strategy and a range of environmental issues from the international to local scales.
- 7.2.7. The Scheme should therefore be decided in accordance with the decision-making framework set out in Paragraph 7.2.47-2.4.
- 7.2.8. Chapter 2 of ~~NPS NNNPS NNNN NPS~~ sets out the overall requirements for the need for the development of the national networks. The chapter includes policy on requiring high-performing networks with sufficient capacity in order to address road congestion, improving resilience on the networks to adapt to climate change, enabling safe and reliable journeys and the movement of goods and supporting further economic development, employment and housing. These policies and the Scheme's conformity to each policy is are set out in full in Appendix B. Appendix C provides a review of conformity to each policy set out in the revised NPS NNNN NPS adopted in March 2024.
- 7.2.9. This Planning Statement provides a broad overview which explains how the Scheme complies with the ~~NPS NNNPS NNNN NPS~~ and a commentary on how each of the relevant provisions of the ~~NPS NNNPS NNNN NPS~~ Chapters 3, 4 and 5 are met. Full details of compliance to with the ~~NPS NNNPS NNNN NPS, 2014~~ is are provided in Appendix B, whilst legislative matters relevant to each theme are covered in more detail in the ES_ (application document TR010063 APP 6.1-6.15).
- ~~7.2.10. A revised draft NPS NNNNNPS was published for public consultation in March 2023. The consultation closed in June 2023 and the current expectation is that the draft NPS NNNNNPS will take effect before the end of 2023. The Government has published details of the transitional arrangements for applications that are submitted before and after the adoption of the new NPS NNNNNPS. These confirm that the new NPS NNNNNPS will have effect in relation to applications accepted for examination after the new NPS NNNNNPS is adopted. For applications accepted before the new NPS NNNNNPS is adopted the current NPS NNNNNPS will continue to have effect. On that basis, the assessment for this Scheme is against the policies of the current NPS NNNNNPS.~~
- 7.2.1. Whilst the primary assessment for the Scheme is against the policies of the ~~NPS NNNPS NNNN NPS~~, the Applicant acknowledges that the draft revised NPS NNNPS NNNN NPS is an important and relevant consideration in the decision-making process. The extent of this is to be considered by the SoS within the framework of the Act and with regard to the specific circumstances of each DCO application. Therefore, in addition to the ~~NPS NNNPS NNN NPS~~ compliance table in Appendix B of this document, a full review of the Scheme against the draft revised NPS NNNPS NNNN NPS has also been completed and submitted with the application to assist the SoS in considering the extent to which the policies within the draft revised NPS NNNPS NNNN NPS are relevant. This can be found with Appendix C of this document.

7.3. National Planning Policy Framework (NPF) (September

December 2023)

- 7.3.1. The National Planning Policy Framework (NPPF) was updated by the Ministry of Housing, Communities and Local Government and published in ~~September~~ December 2023. It sets out the Government's national planning policies for England and is an important and relevant consideration in planning decisions.
- 7.3.2. The NPPF does not provide specific policies relating to NSIPs. Paragraph 1.17 of the ~~NPS~~ ~~NNNPS~~ ~~NNNN~~ NPS states that the NPS and NPPF are consistent, with paragraph 1.18 stating that the NPPF will be an important and relevant consideration 'but only to the extent relevant to [the] project'. Therefore, it is necessary to consider the extent of any such relevance and compliance with the policies that it contains.
- 7.3.3. The NPPF is explicit about the role of an n NPS being the primary decision-making document for NSIPs under the Act. Paragraph 5 of the NPPF states:

The Framework does not contain specific policies for nationally significant infrastructure projects. These are determined in accordance with the decisionmakingdecision making framework in the Planning Act 2008 (as amended)Act and relevant national policy statements for major infrastructure, as well as any other matters that are relevant (which may include the National Planning Policy Framework). National policy statements form part of the overall framework of national planning policy, and may be a material consideration in preparing plans and making decisions on planning applications~~The Framework does not contain specific policies for nationally significant infrastructure projects. These are determined in accordance with the decision-making framework in the Planning Act 2008 (as amended) and relevant national policy statements for major infrastructure, as well as any other matters that are relevant (which may include the National Planning Policy Framework). National policy statements form part of the overall framework of national planning policy and may be a material consideration in preparing plans and making decisions on planning applications.'~~

- 7.3.4. In accordance with the content of the ~~NPS~~ ~~NNNPS~~ ~~NNNN~~ NPS, the NPPF has been considered and to the extent relevant to the Scheme, however, ~~NPS~~ ~~NNNPS~~ ~~NNNN~~ NPS requirements have the greatest weight. The full policy assessment of the most up to date NPPF can be found in Appendix DA. Due to the long nature of the preparation of the application of the project, there have been a number of updates to the NN NPS.

7.4. Strategic road network and the delivery of sustainable development (December 2022)

- 7.4.1. This policy paper is the policy of the Secretary of State in relation to the SRN. The policies are considered important and relevant to decisions on NSIPs in the absence of a stated position in the ~~NPS~~ ~~NNNPS~~ ~~NNNN~~ NPS.
- 7.4.2. The policy paper is applicable to the whole of the SRN, comprising the trunk motorways and all-purpose trunk roads (APTRs) in England.
- 7.4.3. Paragraph 23 states that 'capacity enhancements such as modifications to existing junctions or road widening to facilitate development should be determined on a case-by-case basis. The general principle should be accepted where proposals would include measures to improve community connectivity and public transport accessibility.'

7.5. Regional and Local Policy

- 7.5.1. Although the ~~NPS~~ ~~NNNPS~~ ~~NNNN~~ NPS is the primary planning policy document for ~~decision~~ ~~decision~~ making on the Scheme, both regional and local planning policy policies

have importance and relevance to the Scheme. Transport policy in particular is governed at a regional level.

7.5.2. The local planning policy documents relevant to this Scheme include:

- The Joint Core Strategy (2017).
- Gloucestershire's Local Transport Plan 2020-2041 (2021).
- Gloucestershire Waste Core Strategy (2012).
- Minerals Local Plan for Gloucestershire 2018 - 2032 (2020).
- Gloucestershire Air Quality and Health Strategy.

7.5.3. The Gloucestershire Local Enterprise Partnership's Strategic Economic Plan (SEP) 2018 Update) also has relevance to the Scheme, noting that M5 Junction 10 is the only two-way junction on the whole of the M5 and is a major constraint in this regard. *'The upgrade of junction 10 to provide a four-way vehicle intersection enabling all vehicle movement on and off the M5, (the subject of a current bid to the Housing Infrastructure Fund), would bring forward a significant employment and mixed-use site within the vicinity of this junction, and would significantly increase the opportunity to develop land in the surrounding area.'*

7.5.4. In addition to the policies above there are also local policies for both CBC and TBC which have particular relevance to the Scheme as they allocate land for future development and generate the need for the Scheme. The development plans are important for helping to define the Scheme objectives, designing the Scheme and agreeing appropriate mitigation. Local authorities take into account development plan policies when preparing their LIR, which the ExA will invite the relevant local authorities to submit as part of the examination process.

7.5.5. This section considers whether the Scheme is in accordance with the policy framework at this level, as compliance with local policy is an important and relevant consideration in assessing the planning balance.

7.5.6. The CBC Local Plan documents relevant to this Scheme include:

- The Cheltenham Plan (2020).
- Civic Pride Urban Design Framework SPD (2008).
- Waste Minimisation in Development Projects (2006).

7.5.7. The TBC Local Plan Documents which are relevant to this Scheme include:

- Tewkesbury Borough Plan 2011 to 2031 (2022).
- TBC Local Plan to 2011 – Saved Policies (2006).
- Flood and Water Management SPD (2018).
- Golden Valley SPD (2020).

7.5.8. The Cheltenham Plan and the Tewkesbury Borough Plan provide the detail of how and where the higher level, strategic policies in the JCS will be implemented. The Cheltenham Plan and Tewkesbury Borough Plan address the more detailed local policies, non-strategic allocations, local infrastructure issues and development management policies relevant to Cheltenham and Tewkesbury. These documents are therefore afforded equal weight and should be considered alongside one another.

7.5.9. The following sections provide a summary of the national, regional and local policy position for the various environmental impacts of the Scheme.

7.6. Green Belt

7.6.1. The majority of the scheme is located within the Gloucester and Cheltenham Green Belt, as shown in Figure 7-1. A small section of the Scheme to the north-west of the M5 Junction 10 is located outside of the Green Belt designation.

Figure 7-1 Green Belt land



7.6.2. Paragraphs 5.170 and 5.171 of the NPS NNNPS NNNN NPS state:

'The general policies controlling development in the countryside apply with equal force in Green Belts but there is, in addition, a general presumption against inappropriate development within them. Such development should not be approved except in very special circumstances. Applicants should therefore determine whether their proposal, or any part of it, is within an established Green Belt and, if so, whether their proposal may be considered inappropriate development within the meaning of Green Belt policy. Metropolitan Open Land, and land designated as Local Green Space in a local or neighbourhood plan, are subject to the same policies of protection as Green Belt, and inappropriate development should not be approved except in very special circumstances.'

Linear infrastructure linking an area near a Green Belt with other locations will often have to pass through Green Belt land. The identification of a policy need for linear infrastructure will take account of the fact that there will be an impact on the Green Belt and as far as possible, of the need to contribute to the achievement of the objectives for the use of land in Green Belts.'

- 7.6.3. Paragraph ~~138-143~~ 143 of the NPPF states that the Green Belt serves five purposes:
- To check the unrestricted sprawl of large built-up areas.
 - To prevent neighbouring towns from merging into one another.
 - To assist in safeguarding the countryside from encroachment.
 - To preserve the setting and special character of historic towns.
 - To assist in urban regeneration, by encouraging the recycling of derelict and other urban land.
- 7.6.4. Paragraph ~~148-153~~ 153 of the NPPF states that local planning authorities should ensure that substantial weight is given to any harm to the Green Belt. *'Very special circumstances'* will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm resulting from the proposal, is clearly outweighed by other considerations.
- 7.6.5. Paragraph ~~150-155~~ 155 of the NPPF outlines other forms of development which are not inappropriate in the Green Belt provided they preserve its openness and do not conflict with the purposes of including land within it. These include engineering operations; and local transport infrastructure which can demonstrate a requirement for a Green Belt location.
- 7.6.6. The relevant local planning policy is JCS Policy SD5 'Green Belt', which states that development will be restricted to those limited types of development which are deemed appropriate by the NPPF. Therefore, the NPPF provides the key criteria in-on which the Green Belt assessment is based ~~upon~~.
- 7.6.7. Policy SD5 of the JCS goes on to list safeguarded areas which are identified for longer-term development needs. These include Strategic Allocations A4 (Land at North West Cheltenham) and A7 (Land at West Cheltenham), which are located in proximity to M5 Junction 10. Where further land could be released in safeguarded areas, the policy states that development proposals should, be well-integrated and planned as part of any urban extension of strategic scale; be well-related to public transport and other existing and planned infrastructure; and not lead to a piecemeal, isolated or inefficient use of land in this area.

Scheme analysis against Green Belt policy

- ~~7.6.8. The Scheme can predominantly be described as the redevelopment and subsequent improvement of the strategic highway, located at the existing Junction 10 of the M5. However, the Scheme does require some land take of Green Belt land, to allow for the construction of the West Cheltenham Link Road and to construct the various attenuation ponds.~~

Appropriate development

~~7.6.9.~~7.6.8. The Scheme can be described ~~as engineering operations and~~ the improvement of existing local transport infrastructure which can demonstrate a requirement for a Green Belt location, as per Paragraph ~~150-155~~ of the NPPF. As the majority of this infrastructure ~~is existing~~exists, with the exception of the proposed Link Road, it demonstrates a requirement for its location within the Green Belt. Therefore, the Scheme is considered to not be inappropriate in the Green Belt, providing the Scheme preserves the Green Belt's openness and does not conflict with the purposes of the Green Belt, as set out in Paragraph ~~138-143~~ of the NPPF. In terms of preserving the openness of the Green Belt, the conclusions of Chapter 9 Landscape and Visual of the ES (~~application document TR010063 APP 6.7~~APP-068) state that although initially, many views would change with an increased presence of roads and associated infrastructure, these features are not entirely incongruous with the existing context of views. Replanting to roadsides and other embedded mitigation would ensure that, in the long term, the Scheme would sit comfortably in the landscape and potentially provide an enhancement of the local environment.

Purposes of the Green Belt

~~7.6.10.~~7.6.9. Taking each of the five purposes of the Green Belt (as per paragraph ~~138-143~~ of the NPPF) in turn, the following text sets out the responses as to how the Scheme will not conflict with each of these.

To check the unrestricted sprawl of large built-up areas

~~7.6.11.~~7.6.10. The nearest built-up areas are Cheltenham to the south-east and Gloucester to the south-west. The Scheme would not lead to an extension of either of these urban areas as the Scheme is geographically separate from each of these urban areas and is being developed almost entirely on existing highway land.

To prevent neighbouring towns from merging into one another

~~7.6.12.~~7.6.11. Due to the predominantly rural nature of the site and its environs, and the fact that the Scheme is largely being developed on existing highway land, the Scheme will not result in neighbouring towns merging into one another. The Scheme itself will not result in the provision of additional residential or commercial buildings which could create urban sprawl from Cheltenham towards the west. Furthermore, the allocated sites ~~which that~~ the Scheme will enable do not fall within the Green Belt, therefore they should not be judged against Green Belt policy.

To assist in safeguarding the countryside from encroachment

~~7.6.13.~~7.6.12. Encroachment into the Green Belt has been minimised as much as possible. Whilst the majority of the Scheme is located on existing highway land, some land ~~take taking~~ is required in order to implement the proposed West Cheltenham Link Road. Any actual or perceived harm relating to encroachment into the countryside is outweighed by the effects of the Scheme with regards to supporting employment, residential/commercial development and growth opportunities, including the capacity of the SRN.

To preserve the setting and special character of historic towns

~~7.6.14.~~7.6.13. The Scheme will avoid any adverse impacts on the setting and special character of historic towns, due to the majority of the works' lack of proximity to historic towns within the Gloucester and Cheltenham Green Belt designation. Where works do take place ~~on~~ in the outer suburbs of west Cheltenham, in proximity to Gallagher Retail Park, these are limited to the dualling of the A4019.

To assist in urban regeneration by encouraging the recycling of derelict and other urban land

~~7.6.15.~~7.6.14. The Scheme will assist in urban regeneration through the promotion of planned development sites as set out in the JCS. The Scheme will also reuse and improve existing highway land, ensuring that the local highway network and pedestrian/cyclist infrastructure is safe, modern and fit for purpose.

Openness of the Green Belt

~~7.6.16.~~7.6.15. Whilst the proposed Link Road would be a new feature in the landscape, it is not anticipated that it would significantly reduce the feeling of openness in this small area. The proposed roadside planting would help embed the road, whilst also allowing filtered views through and across the Link Road. The Scheme proposes to replace lost vegetation ~~to~~with existing road verges reinstating the filtered openness provided by these features.

Requirement for Green Belt location

~~7.6.17.~~7.6.16. It would not be possible to improve the existing M5 Junction 10 without some land take being required within the Green Belt. The Scheme represents an improvement to the existing SRN infrastructure, rather than the implementation of an entirely new SRN infrastructure.

~~7.6.18.~~7.6.17. The Scheme also helps to meet the strategic improvements set out around Junction 10 of the M5, regarding the safeguarded land removed from the Green Belt at Strategic Allocations A4 (Land at North West Cheltenham) and A7 (Land at West Cheltenham), by enabling the housing and economic development proposed by the Gloucestershire Local Enterprise Partnership's (GFirst LEP) Strategic Economic Plan and unlocking the housing and job opportunities identified in the JCS through accommodating the increased traffic it will generate.

Summary

~~7.6.19.~~7.6.18. As set out above, the Scheme is not considered to be inappropriate development in policy definition terms, in the Green Belt. The Scheme preserves the Green Belt's openness and does not conflict with the purposes of the Green Belt, in line with paragraph ~~138-143~~143 of the NPPF.

Alternative Case for Very Special Circumstances

~~7.6.20.~~7.6.19. In the event that the SoS disagrees that the Scheme amounts to appropriate development within the Green Belt, the applicant has provided an alternative case relating to 'very special circumstances'. This is based on Paragraph 5.170 of the ~~NPS NNNPS~~NNNN NPS, which states '*a general presumption against inappropriate development within them. Such development should not be approved except in very special circumstances.*'

~~7.6.21.~~7.6.20. Paragraph 5.178 of the ~~NPS NNNPS NNNN NPS~~ and Paragraph ~~148-153~~153 of the NPPF state that '*very special circumstances*' will not exist unless the potential harm to the green belt by reason of inappropriateness, and any other harm resulting from the proposal, is clearly outweighed by other considerations.' Therefore, this case firstly considers the potential harm to the Green Belt, and then considers the factors in which the benefits of the Scheme would outweigh any harm.

~~7.6.22.~~7.6.21. In terms of potential harm to the Green Belt, the majority of the Scheme is located on the footprint of the existing M5 Junction 10 and the A4019. The Scheme does require some land take of greenfield land in order to construct the proposed West Cheltenham Link Road and attenuation ponds. Therefore, in terms of harm to the Green Belt, this takes place on specific elements of the Scheme, rather than the majority of the Scheme works

which are located on existing highway land. Any encroachment is limited, and any sprawl is restricted to a specific element of the Scheme. Furthermore, as the proposed landscape mitigation measures gradually fulfil their function, and certainly by year 15 of operation, it is anticipated that the Scheme could provide overall beneficial effects on landscape character.

~~7.6.23.~~7.6.22. In terms of key benefits of the Scheme which would amount to ‘*very special circumstances*’, the economic benefits of the Scheme form a key part of the case.

~~7.6.24.~~7.6.23. Another benefit of the Scheme which would contribute towards ‘*very special circumstances*’ is the provision of infrastructure which is required both at a local and regional level. Cheltenham currently experiences significant congestion at peak times which in turn results in adverse impacts on air quality at a local level. The existing M5 Junction 10 only provides access and egress to and from the north, with no connectivity to the M5 south. This drives existing traffic across Cheltenham through various routes to access and leave the M5 from the south which contributes significantly to existing traffic flows in the town. The Scheme would therefore alleviate congestion at a local level and would also improve connectivity on the strategic road network which provides access to Bristol to the south and Birmingham to the north.

~~7.6.25.~~7.6.24. Another consideration towards ‘*very special circumstances*’ is the Scheme providing the necessary infrastructure to bring forward key housing and employment sites which are set out in local development allocations in the JCS. The Scheme will facilitate and unlock the development of approximately 9,000 dwellings and employment land through the provision of a highways network that has the capacity to accommodate the increased traffic the allocated sites will generate.

~~7.6.26.~~7.6.25. In the event that the Scheme is not brought forward, the junction itself and the wider SRN would not benefit from the increased capacity for motorised users that is required. Furthermore, as a direct result, the local development allocations in the JCS would not be brought forward. This would have implications for the delivery of homes in the area, with the delivery pipeline of new housing largely being reliant on housing allocations in local plans. Regarding employment sites, these would provide employment opportunities for residents of Cheltenham, Gloucester and the surrounding settlements. Furthermore, these proposed sites will be of importance to the UK as a whole providing supportive industries to the nationally important GCHQ facility, therefore not delivering the Scheme would have both local and national consequences.

7.6.26. With these benefits considered cumulatively, the Scheme would therefore amount to ‘*very special circumstances*’ within the Green Belt, which would allow for development in the event that the Scheme is considered ‘*inappropriate development*’ within the Green Belt.

Summary of benefits which provide “*very special circumstances*”:

- Provision of infrastructure to alleviate existing congestion in Cheltenham and improve connectivity on the SRN which provides access to Bristol to the south and Birmingham to the north.
- Facilitate and unlock development of approximately 9,000 dwellings by providing a highway network that has the capacity to accommodate traffic growth.
- Employment sites unlocked by the Scheme would provide employment opportunities for residents of Cheltenham, Gloucester and the surrounding settlements and will be of importance to the UK as a whole providing supportive industries to the nationally important GCHQ facility.
- The junction itself and the wider SRN would benefit from the increased capacity for motorised users that is required and allow the development allocations in the JCS to be brought forward.
- Improve the connectivity between the SRN and the local transport network in west and north-west Cheltenham.
- Safe access to services for the local community, including for users of sustainable transport modes within and to west and north-west Cheltenham.

Summary

~~7.6.27. In conclusion, the principle of development for the Scheme within the Green Belt can be justified as follows:-~~

- ~~The Scheme can predominantly be described as engineering operations and the improvement of existing strategic transport infrastructure.~~
- ~~The Scheme is largely being developed on strategic highway land.~~
- ~~The Scheme will not result in unrestricted sprawl, merge neighbouring towns together nor result in adverse impacts on the setting and special character of historic towns.~~
- ~~The Scheme will upgrade existing strategic transport infrastructure, which is predominantly located within the Green Belt, and as such, there is a direct requirement for development within the Green Belt location.~~
- ~~Any adverse effects relating to developing on greenfield land or potential harm to the openness of the Green Belt will be outweighed by the benefits of strategic transport improvements and flood risk mitigation.~~
- ~~The consequence of no improvement works taking place would see key local plan employment and residential sites not coming forward, as well as the SRN not experiencing the primary benefit of increased capacity for motorised users.~~

~~7.6.28. The Scheme is therefore not inappropriate development within the Green Belt in this location, as set out in the NPPF. In the event that the Scheme is considered 'inappropriate development', a case is provided for the Scheme to be considered to benefit from 'very special circumstances, in accordance with Paragraphs 5.170 and 5.178 of the NPS NNNNNPS. This case focuses on how the key benefits of the Scheme outweigh any potential harm, as well as setting out the consequences of no improvement to M5 Junction 10.~~

7.7. Sustainable Development

7.7.1. The strategic aims of the ~~NPS NNNPS NNNN NPS~~ and NPPF are consistent in aiming to achieve sustainable development and paragraph 1.20 of the ~~NPS NNNPS NNNN NPS~~ states that 'both documents seek to achieve sustainable development and recognise that different approaches and measures will be necessary to achieve this.'

- 7.7.2. Paragraph 5.202 of the ~~NPS-NNNPS-NNNN NPS~~ recognises that the impacts ~~from~~ of transport infrastructure schemes can be economic, social and environmental and that consideration and mitigation of these impacts is an essential part of the Governments wider policy objectives for sustainable development. Paragraph 8 of the NPPF also acknowledges that achieving sustainable development has three overarching objectives which are interdependent and need to be pursued in mutually supportive ways, and these include economic, social and environmental objectives.
- 7.7.3. Paragraph 3.2 of the ~~NPS-NNNPS-NNNN NPS~~ states that *'for development of the national road and rail networks to be sustainable these should be designed to minimise social and environmental impacts and improve quality of life.'*
- 7.7.4. Paragraph 12 of the strategic road network and the delivery of sustainable development policy document states that *'new development should be facilitating a reduction in the need to travel by private car and focused on locations that are or can be made sustainable.'* Paragraph 43 goes on to state that *'development promoters are expected to enable a reduction in the need to travel by private car and prioritise sustainable transport opportunities ahead of capacity enhancements and new connections on the SRN.'*
- 7.7.5. Gloucestershire LTP policy PD0.2 states that *'GCC will work with District Councils and other partners, to minimise the impact of transport on landscapes, townscapes, heritage assets and the wider historic environment; to protect and enhance the water environment, air quality, soils and agricultural resources; to reduce the risk of flooding and the levels of noise pollution; to achieve biodiversity net gain and conserve geodiversity and the historic environment, from traffic or improvements on the highway network.'*
- 7.7.6. The Cheltenham Plan outlines a series of visions. Vision Theme B of the plan is focused on making Cheltenham a prosperous and enterprising economy, and objective (f) of this vision aims to *'Deliver a range of sustainable transport choices through appropriate infrastructure improvements including better cross-town and local links, prioritised junctions, and improved public transport.'*
- 7.7.7. The Tewkesbury Borough Plan sets out a series of objectives which will contribute to improving the quality of life for all and achieving sustainable growth and development in the Borough. Objective 3 of the plan is focused on *'Promoting sustainable transport (including public transport, cycling, walking issues around freight transport and the use of the private motor vehicle). This also includes the provision of infrastructure and issues of connectivity within and between modes of transport'*.
- 7.7.8. The Scheme design has incorporated sustainable design principles through the development of a Sustainability Framework Tool (SFT), a proactive optioneering of the designs and systematic ~~documenting-documentation~~ of the process. The SFT has been developed to align with NH's and GCC's sustainability requirements and maintains a focus on sustainable outcome performance improvement. By applying the bespoke SFT for the Scheme, sustainability outputs have been collated from across disciplines, aligning outcomes, influencing decisions and generating further innovation. This approach has integrated sustainability and environmental assessment within the design process. Application of the SFT has provided clarity, assigned practical actions at a project level and avoided mystifying sustainability subjects. It has helped make sustainable planning and design simple, developing a process within which to challenge the teams and drive them to achieve the best sustainability performance.
- 7.7.9. A comprehensive environmental impact assessment ("EIA") has been carried out, together with proposals for mitigation of likely significant environmental effects arising from the Scheme. This is reported in the ES_ ~~(application documents TR010063 APP 6.4 to 6.15).~~
- 7.7.10. When considered as a whole, the Scheme meets the requirements of the economic, social and environmental objectives of sustainable development as set out in the ~~NPS-NNNPS-NNNN NPS~~ and NPPF.

7.8. Traffic, transport and public rights of way

- 7.8.1. The Scheme is identified as a committed scheme in the RIS2 under the Housing Infrastructure Fund section of the document.
- 7.8.2. Paragraphs 5.203 – 5.205 of the ~~NPS-NNNPS-NNNN NPS~~ state that applicants should have regard to the policies set out in local plans, for example, policies on demand management being undertaken at the local level. Applicants should consult the relevant highway authority, and local planning authority, as appropriate, on the assessment of transport impacts.
- 7.8.3. The ~~NPS-NNNPS-NNNN NPS~~ goes on to state that applicants should consider reasonable opportunities to support other transport modes in developing infrastructure. The applicant should provide evidence that as part of the project they have used reasonable endeavours to address any existing severance issues that act as a barrier to non-motorised users.
- 7.8.4. Paragraph 3.15 of the ~~NPS-NNNPS-NNNN NPS~~ goes on to state that sustainable transport modes and making door-to-door journeys by sustainable means should be made to become ‘an attractive and convenient option. This is essential to reducing carbon emissions from transport.’
- 7.8.5. Paragraph 5.184 of the ~~NPS-NNNPS-NNNN NPS~~ states that public rights of way, National Trails, and other rights of access to land are important recreational facilities for walkers, cyclists and equestrians. Applicants are expected to take appropriate mitigation measures to address adverse effects on coastal access, National Trails, other public rights of way and open access land and, where appropriate, to consider what opportunities there may be to improve access. The NPPF paragraph ~~400-104~~ also highlights the need to protect and enhance public rights of way and access, including providing better facilities for users.
- 7.8.6. Paragraph ~~110-114~~ of the NPPF outlines that when considering applications for development it should be ensured that ‘(a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development (b) safe and suitable access to the site can be achieved for all users’. It also highlights that any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, should be ~~cost-cost~~-effectively mitigated to an acceptable level.
- 7.8.7. Paragraph 21 of the strategic road network and the delivery of sustainable development policy document states that a graduated and less restrictive approach to the formation of new connections on the remainder of the SRN will be adopted, with the preference for new development to make use of existing junctions. Paragraph 23 goes on to state that ‘capacity enhancements such as modifications to existing junctions or road widening to facilitate development should be determined on a case-by-case basis. The general principle should be accepted where proposals would include measures to improve community connectivity and public transport accessibility.’
- 7.8.8. Paragraph 48 states that where a transport assessment is required, ‘this should start with a vision of what the development is seeking to achieve and then test a set of scenarios to determine the optimum design and transport infrastructure to realise this vision. Where such development has not been identified in an up-to-date development plan (or an emerging plan that is at an advanced stage), developers should demonstrate that the development would be located in an area of high accessibility by sustainable transport modes and would not create a significant constraint to the delivery of any planned improvements to the transport network or allocated sites.’
- 7.8.9. The Connecting Places Strategy (CPS) policy CPS1 of the Gloucestershire LTP identifies M5 Junction 10 ‘All movements’ access and link road to West Cheltenham as a highway scheme for priority up to 2031 for the Central Severn Vale area. Paragraph 4.2.31 states that the improvements will be required to maintain the safe operation of the highway,

- support the delivery of North West and West Cheltenham strategic allocations and address existing traffic congestion issues on the A40 and A4019.
- 7.8.10. Policy LTP PD0.2 of the Gloucestershire LTP states that: *'Transport development proposals will need to demonstrate that significant adverse impact upon public rights of way, other routes with public access and recreational highways will be minimised, and suitable permanent diversions, or alternative routes are provided, if necessary. Temporary diversions or alternatives may be required during construction.'*
- 7.8.11. Policy INF1 of the JCS 2017 states that developers should provide safe and accessible connections to the transport network to enable travel choices for residents and commuters.
- 7.8.12. Policy INF1 states that developments should ensure that connections are provided, where appropriate to existing walking, cycling and passenger transport networks and links to ensure credible travel choices are provided by sustainable modes. The policy also states in point three that planning permission will only be granted where the impact of development is not considered to be severe.
- 7.8.13. Policy INF1 of the JCS also requires developers to assess the impact of proposals on the transport network through a Transport Assessment which demonstrates the impacts, including cumulative impacts of the development. This is expected to include congestion on the transport network, travel safety and noise and/ or atmospheric pollution.
- 7.8.14. Policy SD4 of the JCS requires new development to prioritise movement by sustainable transport modes through design.
- 7.8.15. The Cheltenham Plan further highlights the importance of policies INF1 and SD4 as being an important part of development proposals within the Borough.
- 7.8.16. Policy TRAC1 – Pedestrian Accessibility in the Tewkesbury Borough Plan states that pedestrian networks will be protected across the Borough and opportunities sought to extend and enhance them. Policy TRAC2 – Cycle Network & Infrastructure states that cycle infrastructure should be a fundamental consideration in a design-led process for new major development. The context for these policies is set out in the Gloucestershire Cycling Infrastructure Plan (2018), which states that Gloucestershire's cycleway network:
- Links the economic centres and business parks of the county.
 - Optimises the capacity of the road network.
 - Supports planned growth and job creation.
 - Provides a sustainable travel option.
- 7.8.17. Policy GRB2 – Gloucestershire Airport states that *'the Non-Essential Operational Area of Gloucestershire Airport will be extended as shown on the policies map. The Non-Essential Operational Area will be safeguarded for appropriate commercial uses or airport related development. Proposals involving non-conforming development will be resisted in order to protect the strategic economic importance of the airport and in accordance with Green Belt policy guidance within the NPPF.'*
- 7.8.18. Section 3.5 of this report outlines the Scheme Objectives. In achieving these objectives, the Scheme will support economic growth and facilitate better connection between the local road network and SRN by facilitating access to the motorway both north and south. This will contribute towards the delivery of up to 35,175 new homes and 39,500 new jobs by 2031 through enabling the allocated developments as set out in the JCS.
- 7.8.19. The Transport Assessment (TA) (application document TR010063-APP-7.5) states that the Scheme will not result in any unacceptable impacts on highway safety during construction, and any residual cumulative impacts on the road network will not be severe.

- 7.8.20. The Scheme will provide safe access to services for the local community and for users of sustainable transport modes within and to the west and north-west of Cheltenham. This includes new and improved routes for pedestrians, cyclists and equestrians and improving crossing facilities. In operation, the Scheme is predicted to improve access for pedestrians, cyclists and vehicle users of the Scheme.
- 7.8.21. Assessment of the environmental impacts and mitigation measures ensure the Scheme has no severe impacts. Improvements to the local road network and new link road will provide safe access to services for the local community, with the Scheme avoiding any unacceptable impacts on highway safety.

7.9. Air Quality

- 7.9.1. The ~~NPS~~ ~~NNPS~~ ~~NNNN~~ ~~NPS~~ paragraph 5.6 states that where the impacts of the project are likely to have significant air quality effects, the applicant should undertake an assessment of the impacts of the proposed project as part of the ES. The ~~NPS~~ ~~NNPS~~ ~~NNNN~~ ~~NPS~~ paragraphs 5.7 to 5.9 outline the methodological requirements for this assessment.
- 7.9.2. ~~NPS~~ ~~NNPS~~ ~~NNNN~~ ~~NPS~~ paragraph 5.10 states that where a project is likely to lead to a breach of the air quality thresholds, the applicant should work with the relevant authorities to secure appropriate mitigation measures with a view to ensuring so far as possible that those thresholds are not breached.
- 7.9.3. ~~NPS~~ ~~NNPS~~ ~~NNNN~~ ~~NPS~~ 5.12 states that ‘*the SoS must give air quality considerations substantial weight where, after taking into account mitigation, a project would lead to a significant air quality impact in relation to EIA and / or where they lead to a deterioration in air quality in a zone/ agglomeration*’.
- 7.9.4. ~~NPS~~ ~~NNPS~~ ~~NNNN~~ ~~NPS~~ paragraph 5.13 states that ‘the SoS should refuse consent where, after taking into account mitigation, the air quality impacts of the scheme will:

*‘result in a zone/ agglomeration which is currently reported as being compliant with the Air Quality Directive becoming non-compliant.
affect the ability of a non-compliant area to achieve compliance within the most recent timescales reported to the European Commission at the time of the decision.’*
- 7.9.5. Paragraph ~~186~~ 192 of the NPPF outlines the need for proposals to sustain and contribute to compliance with relevant limit values or national objectives for pollutants. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement.’
- 7.9.6. Policy PD 0.1 of the Gloucestershire LTP states that ‘*GCC will work with its partners to reduce transport carbon emissions by 2045 and improve air quality in the county by addressing travel demand, promoting the use of sustainable modes of transport and the uptake of ultra-low emission vehicles to tackle climate change*’. It goes on to state that ‘*Developers are required to design and implement their development to deliver sustainable transport, with appropriate connectivity to the existing transport network, good access to public transport, and a high permeability to walk, cycle and be mobility friendly.*’
- 7.9.7. Policy LTP PD0.2 of Gloucestershire LTP also states that GCC will work with Borough Councils to improve air quality by adopting the latest good design practices and to develop, adopt and deliver Air Quality Action Plans required where AQMAs have been declared in relation to transport emissions. It also requires developers to undertake assessments to determine if their scheme ‘*will be subject to or create poor air quality in excess of the thresholds advised by the Government and commit to mitigating those effects that address traffic impacts on the natural environment and designated sites.*

- 7.9.8. The JCS notes in policy SD3 that development proposals should demonstrate how they contribute to the aims of sustainability by ‘...avoiding the unnecessary pollution of air.’ Policy SD14 also states that ‘New development must: ii) Result in no unacceptable levels of air, noise, water, light or soil pollution or odour, either alone or cumulatively, with respect to relevant national and EU limit values.
- 7.9.9. Policy SD14 of the JCS states that new development must result in no unacceptable levels of air pollution, either alone or cumulatively, with respect to relevant national and EU limit values. Policy SD4 also states that new development should enhance comfort, convenience and enjoyment and avoid or mitigation of potential disturbances including smell and pollution.
- 7.9.10. Policy SL1 of the Cheltenham Plan outlines policy requirements in relation to safe and sustainable living. Part d) states that development will only be permitted where it would accord with policies SD4 and SD14 of the JCS and the principles of good design embodied within. In assessing the impacts of development, the Council will have regard to matters including potential disturbance from smells, dust and fumes.
- 7.9.11. Policy HEA1 of the Tewkesbury Borough Plan highlights that new developments will be expected to demonstrate how they will contribute to the creation and maintenance of healthy environments, and this will include preventing negative impacts on residential amenity amenities and wider public safety from air quality.
- 7.9.12. Chapter 5 Air Quality of the ES reports the findings of the environmental assessment for Air Quality (Application document TR010063-APP-6.3). The findings state that during construction, the site is at high risk for construction dust, and suggests appropriate mitigation measures which will be specified within contract documentation and are incorporated into the Environmental Management Plan. Through the adoption of the suggested mitigation measures, there is unlikely to be a significant effect on air quality due to the construction of the Scheme. Air quality modelling has indicated that the Scheme is unlikely to have an overall significant adverse effect on human health or on non-designated habitats.
- 7.9.13. Furthermore, the chapter states that construction traffic and local traffic management have been examined and there is unlikely to be a significant adverse effect as the projected changes in traffic during construction are below the DMRB LA 105 guidance traffic scoping criteria and are temporary in nature.
- 7.9.14. The findings of the ES for air quality satisfy the requirements of the ~~NPS NNNPS NNNN~~ NPS paragraphs 5.6, 5.10, 5.12 and 5.13 as the Scheme will not have breached air quality thresholds or caused a deterioration in air quality.
- 7.9.15. These findings also accord with the JCS policies SD3, SD4, SD14, LTP policy PD0.1 and 0.2 and paragraph ~~486-192~~ of the NPPF.
- 7.9.16. As outlined within Chapter 5 Air Quality of the ES (~~APP-012~~ application document ~~TR010063-APP-6.3~~) overall the scheme is consistent with the requirements set out in paragraphs 5.12 and 5.13 of the ~~NPS NNNPS NNNN~~ NPS as it would not trigger a significant adverse air quality effect.

7.10. Noise and Vibration

- 7.10.1. ~~NPS NNNPS NNNN~~ NPS paragraph 5.189 states that ‘where a development is subject to EIA and significant noise impacts are likely to arise from the proposed development, the applicant should include the following in the noise assessment, which should form part of the environment statement:
- the characteristics of the existing noise environment;

- *a prediction on how the noise environment will change with the proposed development;*
 - *measures to be employed in mitigating the effects of noise.'*
- 7.10.2. Paragraph 5.193 ensures that developments are 'undertaken in accordance with statutory requirements for noise.' Due regard must be given to the 'relevant sections of the Noise Policy Statement for England, NPPF and the Government's associated planning guidance on noise.'
- 7.10.3. ~~NPS NNN~~~~NPS NNNN~~ NPS paragraph 5.195 states that: 'the Secretary of State should not grant development consent unless satisfied that the proposals will meet the following aims, within the context of Government policy on sustainable development:
- *'Avoid significant adverse impacts on health and quality of life from noise as a result of the new development.*
 - *Mitigate and minimise other adverse impacts on health and quality of life from noise from the new development.*
 - *Contribute to improvements to health and quality of life through effective management and control of noise, where possible'.*
- 7.10.4. ~~NPS NNN~~~~NPS NNNN~~ NPS paragraphs 5.196 – 5.198 state that mitigation should ensure that the 'noise levels from the project do not exceed those described in the assessment or any other estimates on which the decision was based.' Mitigation measures for the project should be proportionate and reasonable.'
- 7.10.5. Paragraph ~~174-180~~ of the NPPF highlights the expectation for decisions to contribute to and enhance the natural and local environment. Part (e) of the paragraph outlines that new and existing development; should be prevented from, contributing to unacceptable risk from, or being adversely affected by, unacceptable levels of noise pollution.
- 7.10.6. Policy PD0.2 of the Gloucestershire LTP outlines that GCC will work with District Councils and other partners to minimise the impact of transport on landscapes, townscapes, heritage assets and the wider historic environment to reduce the levels of noise pollution. Policy SD14 of the JCS states that new development must result in no unacceptable, noise pollution, either alone or cumulatively, with respect to relevant national and EU limit values.
- 7.10.7. Policy SD4 of the JCS also states that new development should enhance comfort, convenience and enjoyment and either avoid; or provide mitigation for, potential disturbances including noise pollution.
- 7.10.8. Similarly, Policy INF1 of the JCS requires developers to assess the impact of proposals on the transport network through a transport assessment which demonstrates the impact, including cumulative impacts of the prospective development on noise pollution within the zone of influence of the development.
- 7.10.9. Policy SL1 of the Cheltenham Plan outlines policy requirements in relation to safe and sustainable living. Part d) states that development will only be permitted where it would accord with policies SD4 and SD14 of the JCS and the principles of good design embodied within. In assessing the impacts of development, the Council will have regard to matters including potential disturbance from noise and vibration.
- 7.10.10. Policy HEA1 of the Tewkesbury Borough Plan outlines that new developments will be expected to demonstrate how they will contribute to the creation and maintenance of healthy environments, and this will include preventing negative impacts on residential ~~amenity~~ amenities and wider public safety from noise and vibration.
- 7.10.11. Chapter 6 Noise and Vibration of the ES (~~application document TR010063 APP 6.4AS-014~~) details that a noise and vibration assessment of the Scheme has been undertaken,

comprising identification of the baseline conditions, identification of sensitive receptors, prediction of the expected noise and vibration impacts and the mitigation measures that may be required to avoid significant impacts.

- 7.10.12. Improved noise levels were predicted on the A4019, the M5 and Withybridge Lane, Staverton Park, Swindon Road, Marsland Road and Fiddlers Green Lane, Hayden Lane and Old Gloucester Road.
- 7.10.13. The report has concluded that properties at risk of significant noise effects during construction are close to the A4019 east of the M5. However, with suggested mitigation in place, as well as good community engagement, construction noise can be reduced. Where it is not possible to reduce noise at these locations it may be necessary to consider noise insulation or temporary rehoming. During some construction activities the levels of construction vibration are likely to lead to a minor to moderate effect, however, given the transitory nature of the works, it is unlikely to lead to a significant effect.
- 7.10.14. The report also states that whilst the Scheme construction works will result in a change of noise due to the diversion of M5 traffic onto local roads, the duration criteria would not be met during the bridge closures and will not lead to a significant effect.
- 7.10.15. Existing operational noise within the land occupied by the Scheme exceeds the Significant Observed Adverse Effect Level (SOAEL) at some receptors, and this means that significant noise effects would be reported when noise levels are above SOAEL at the baseline. When considering the mitigation measures proposed in Chapter 6 Noise and Vibration of the ES, operational noise from the Scheme is not predicted to result in moderate or major increases in noise by the future year in the daytime. At night there are additional properties with minor to moderate increases in noise where noise levels already exceed the SOAEL threshold. These are located in and around Princess Elizabeth Way. Changes in traffic on Stoke Road are expected to lead to a 1dB+ increase in noise at up to 40 receptors with noise levels which currently exceed the SOAEL. The Scheme has provided funding towards traffic calming measures that would be in place on Stoke Road before the Scheme opens. There are additional properties which experience a 1dB+ increase in noise with noise levels currently exceeding the SOAEL, including properties around Bishops Cleeve, Fiddlers Green Lane and Hayden Road. Mitigating these minor increases where noise levels already exceed the SOAEL would be difficult due to property access requirements. Therefore, it is considered the policy meets the aims of the ~~NPS NNNPS NNNN NPS~~ paragraph 5.195 as significant effects have been avoided where possible.
- 7.10.16. In accordance with ~~NPS NNNPS NNNN NPS~~ paragraph 5.195, design and mitigation measures have been included to minimise adverse impacts. Measures include a ~~noise noise-reducing~~ surface along high-speed sections of the M5, plus noise barriers along the A4019 and M5 to mitigate operational noise. Additionally, temporary noise barriers and the use of best practicable means are included to mitigate construction noise.
- 7.10.17. The policy also contributes to health and quality of life through the effective management and control of noise where possible, which accords with ~~NPS NNNPS NNNN NPS~~ requirements. The proposed mitigation measures will reduce noise emissions from construction and operation, and Noise Important Areas within the Scheme are provided with noise mitigation where possible. There are also reductions in operational noise at some receptors as a result of the Scheme. These proposals also ensure the Scheme is compliant with local policies within the JCS (SD4, SD14, INF1), LTP policy PD0.2, Cheltenham Plan policy SL1 and Tewkesbury Borough Plan policy HEA1.

7.11. Biodiversity

- 7.11.1. ~~NPS NNNPS NNNN NPS~~ paragraphs 5.20-5.37 of the ~~NPS NNNPS NNNN NPS~~ outline the national policy position with regard to biodiversity and the natural environment. Paragraphs 5.22-5.23 state:

'Where the project is subject to EIA the applicant should ensure that the ES clearly sets out any likely significant effects on internationally, nationally and locally designated sites of ecological or geological conservation importance (including those outside England) on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity and that the statement considers the full range of potential impacts on ecosystems. The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests.'

7.11.2. Paragraph 5.25 further states:

'As a general principle, and subject to the specific policies below, development should avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives. The applicant may also wish to make use of biodiversity offsetting in devising compensation proposals to counteract any impacts on biodiversity which cannot be avoided or mitigated. Where significant harm cannot be avoided or mitigated, as a last resort, appropriate compensation measures should be sought.'

7.11.3. Paragraph 5.27 discusses international sites, stating that they are *'the most important sites for biodiversity'* and are provided statutory protection under the Habitats Regulations.

7.11.4. Paragraph 5.28 states that *'many Sites of Special Scientific Interest (SSSI) are also designated as sites of international importance and will be protected accordingly.'* Paragraph 5.29 goes on to state that *'where a proposed development is likely to have an adverse effect on a SSSI, development consent should not normally be granted. Where an adverse effect on the site's notified special interest features is likely, an exception should be made only where benefits of the development at this site clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest, and any broader impacts on the national network of SSSIs.'*

7.11.5. Paragraph 5.36 states that *'applicants should include appropriate mitigation measures as an integral part of their proposed development'*, including during both construction and operation. Enhancements should also be sought relating to *'existing habitats and, where practicable, to create new habitats of value within the site landscaping proposals.'*

7.11.6. Paragraph 4.23 of ~~NPS NNNPS NNNN NPS~~ requires that any application should be accompanied by sufficient information to enable the examining authority to undertake an appropriate assessment under the Habitats Regulations. A Habitats Regulations Assessment (HRA) has been produced, which is included as an appendix to Chapter 7 Biodiversity of the ES (~~APP-066~~) ~~application document reference: TR010063 APP 6.5~~.

7.11.7. The NPPF also states that decisions should contribute to and enhance the natural and local environment. Paragraph ~~174~~ 180 states that this should be achieved by *'a) protecting and enhancing valued landscapes, sites of biodiversity...'*

7.11.8. Paragraph ~~180~~ 186 of the NPPF states that when determining planning applications, authorities should apply the following principles *'a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or as a last resort, compensated for, then planning permission should be refused'*.

7.11.9. LTP PD0.2 – Local Environmental Protection policy states that GCC will work with District Councils and other partners; to minimise the impact of transport on landscapes, townscapes, heritage assets and the wider historic environment; to protect and enhance the water environment, air quality, soils and agricultural resources; to reduce the risk of flooding and the levels of noise pollution; to achieve biodiversity net gain and conserve geodiversity and the historic environment, from traffic or improvements on the highway network. GCC will do this by implementing the following policy proposals:

- *'Protect and avoid harm to geodiversity and biodiversity associated with transport infrastructure in addition to taking opportunities to enhance the natural environment wherever practicable.*
 - *Comply with Gloucestershire Highways Biodiversity Guidance or subsequent guidance and the Green Infrastructure Pledge.*
 - *Maximise the opportunities for transport interventions to contribute towards major new initiatives, including Nature Recovery Networks and large scale woodland creation and other similar measures that would help achieve biodiversity net gain targets.*
 - *Support Natural England's work on the Green Transport Corridors and Green Infrastructure Agreements, as well as their recommendations of the Linear Infrastructure Network, ensuring that within or adjacent to the rail network and Major Road Network, green infrastructure can deliver biodiversity gains, ecological connectivity and ecosystem services.'*
- 7.11.10. Policy LTP PD 4.1 – Gloucestershire's Highway Network states that GCC will maintain a functioning highway network that supports Gloucestershire's transport network by ensuring the safe, accessible and expeditious movement of highway users. GCC will do this by implementing the following policy proposals:
- 'Follow green infrastructure principles in the design, maintenance and operation of highway asset as set out in the green infrastructure pledge as well as meeting Building with Nature standards.'*
- 7.11.11. Policy LTP PD 4.2 – Highway Network Resilience states that GCC will provide a resilient highway network that can withstand unforeseen events, including extreme weather events and long-term changes to the climate by regularly reviewing winter maintenance and vegetation clearance procedures and policies, in line with the Gloucestershire Highways Biodiversity Guidance (or subsequent guidance).
- 7.11.12. Policy LTP PD 4.3 – Highway Maintenance states that GCC will manage the local highway asset management in line with the Highways Asset Management Framework and other guidance or policies such as the Code of Practice for Well Managed Highway Infrastructure by complying with the Gloucestershire Highways Biodiversity Guidance or subsequent guidance. Enhance and restore the wildlife function of highway verges by continuing to work in partnership with Gloucestershire Wildlife Trust (GWT) through GCC's Conservation Road Verges Site Register to ensure that all road verges receive appropriate conservation management as part of highways maintenance and related schemes.'
- 7.11.13. The JCS Strategic Objective 4 – Conserving and enhancing the environment states that planning policy and decisions should *'Conserve, manage and enhance the area's unique natural environment and great biodiversity, including its waterways, Sites of Special Scientific Interest (SSSI), the Cotswold's AONB, and areas of landscape and biodiversity importance.'*
- 7.11.14. JCS Policy SD9: Biodiversity and Geodiversity outlines the stance that the biodiversity resource of the JCS area will be protected and enhanced through conserving and enhancing biodiversity on internationally, nationally and locally designated sites, as well as encouraging new development to contribute positively to biodiversity and geodiversity whilst linking with wider networks of green infrastructure.
- 7.11.15. The JCS states that it provides an opportunity to deliver some of the objectives and complement the work programme of the Gloucestershire Local Nature Partnership (GLNP). It refers to the Gloucestershire Nature Map, which sets out spatial priorities for ecological conservation and enhancement across the county. A key part of this is the identification of a number of Strategic Nature Areas (SNAs), which are the key landscape-scale blocks of land where characteristic habitats that typify the county can be expanded

and linked to support wildlife. SD9 encourages habitat creation and restoration within these SNAs and associated Nature Improvement Areas (NIAs).

- 7.11.16. Policy NAT1 of the Tewkesbury Borough Plan expects development proposals to conserve, restore and enhance biodiversity. Where applicable, proposals are required to deliver a biodiversity net gain across local and landscape scales, including designing wildlife into development proposals, the connection of sites and large-scale habitat restoration, enhancement, and re-creation. Development that is likely to result in the loss, deterioration, or harm to features, habitats or species of importance to biodiversity, environmental quality or geological conservation will not be permitted unless:
- a) *'The need and benefits of the development outweigh its likely impact on the local environment, or nature conservation value or scientific interest of the site*
 - b) *It can be demonstrated that the development could not reasonably be located on an alternative site with less harmful impacts; and*
 - c) *Measures can be provided (and secured through planning conditions or legal agreements), that would avoid, mitigate against or, as a last resort, compensate for the adverse effects likely to result from development.'*
- 7.11.17. Policy NAT1 states that the level of mitigation or protection should be proportionate to the status of the feature, habitat or species and its importance to the wider network.
- 7.11.18. Paragraph 10.27 of the Cheltenham Plan states that the Council will seek to protect all species and habitats listed in the UK Biodiversity Framework and Gloucestershire Nature Map from development that would harm those features in accordance with legislative requirements and policy SD9 of the JCS.
- 7.11.19. Chapter 7 Biodiversity of the ES (~~APP-066~~) ~~Application Document Reference TR010063 APP 6.5~~ outlines the potential impacts of the Scheme on biodiversity features, and opportunities for mitigation and enhancement are detailed. International sites within the study area have been considered within the report and separately under an HRA attached as a technical appendix to the Chapter. This demonstrates the Scheme's compliance with ~~NPS NNNPS NNNN NPS~~ paragraphs 4.23 5.22, 5.23 and 5.27. The report considers the potential impacts of the scheme on the Coombe Hill Canal SSSI to ensure compliance with ~~NPS NNNPS NNNN NPS~~ paragraphs 5.28 and 5.29.
- 7.11.20. Findings from the ecological baseline data, desk study and field surveys have been used to identify and evaluate biodiversity resources to undertake an assessment of the potential impacts ~~from of~~ the Scheme. These found that habitats suitable to support Badgers and other terrestrial habitats are considered to be of less than local value, and as such are not considered to be important biodiversity resources. Although not included in the impact assessment, appropriate mitigation is included to ensure legal compliance.
- 7.11.21. No impacts are anticipated on designated sites within the vicinity of the site including Wye Valley and Forest of Dean Bat Sites SAC, Walmore Common SPA/ Ramsar, Cotswold Beechwood SAC, Severn Estuary SPA, and Coombe Hill Canal SSSI. Similarly, no impacts are anticipated at non-statutory designated nature conservation sites, on veteran trees, or to priority habitats.
- 7.11.22. Potential impacts have been identified and a range of measures have been identified to avoid, mitigate, and compensate for the effects of these impacts. These include design specifications and construction management requirements.
- 7.11.23. The Scheme also proposes habitat creation throughout the Scheme which will offset ~~the~~ impacts of habitat loss and will enhance and improve ~~on the~~ habitats on site ~~through by~~ increasing the area and quality of more valuable habitats within the Order Limits. Notably, 15.38ha of wetland habitat will be created, comprising permanent and ephemeral waterbodies, ditches and associated wet grassland and marginal planting. Replanting of

locally native species to roadsides and other embedded mitigation measures will also ensure the Scheme will sit comfortably within the landscape in the long term and will contribute towards biodiversity enhancements. Hedgerow planting will be provided along the Link Road with supplementary blocks of wood and individual trees to reflect local character. This strongly accords with the JCS objective 4 and policy SD9.

- 7.11.24. When considering the embedded and essential mitigation measures proposed for the Scheme, significant residual effects in relation to biodiversity resources are not anticipated as a result of the Scheme. This demonstrates the Scheme's compliance with ~~NPS NNNPS NNNN NPS~~ as well as the local policies outlined above.

7.12. Road drainage and water environment

- 7.12.1. Section 5 of the ~~NPS NNNPS NNNN NPS~~ considers the generic impacts of national networks on flood risk and water quality and resources. A number of the paragraphs in the NPPF follow the same approach and objectives to the ~~NPS NNNPS NNNN NPS~~.

- 7.12.2. Paragraph 5.221 of the ~~NPS NNNPS NNNN NPS~~ states that '*where a development is subject to EIA and the development is likely to have significant adverse effect on the water environment, the applicant should ascertain the existing status of, and carry out an assessment of the impacts of the proposed project on water quality, water resources and physical characteristics as part of the ES.*'

- 7.12.3. Paragraph 5.223 of the ~~NPS NNNPS NNNN NPS~~ sets out the assessment elements ~~which that~~ the ES should include, such as '*the existing quality of waters affected by the proposed project*', '*the existing water resources affected by the proposed project*', '*any impacts of the proposed project on water bodies or protected areas under the Water Framework Directive and source protection zones (SPZs)*' and '*any cumulative effects*'.

- 7.12.4. ~~NPS NNNPS NNNN NPS~~ paragraph 2.222 also states that '*for those projects that are improvements to the existing infrastructure, such as road widening, opportunities should be taken, where feasible, to improve upon the quality of existing discharges where these identified and shown to contribute towards Water Framework Directive commitments.*'

- 7.12.5. ~~NPS NNNPS NNNN NPS~~ paragraph 5.226 states that the SoS should be satisfied that '*a proposal has had regard to the River Basin Management Plans and the requirements of the Water Framework Directive (including Article 4.7) and its daughter directives, including those on priority substances and groundwater.*'

- 7.12.6. The principles of how developments are to be assessed by the Examining Authority and the SoS with respect to pollution control and other environmental protection regimes are detailed in paragraphs 4.48 to 4.56 of the ~~NPS NNNPS NNNN NPS~~. The key requirements are that any discharges or emissions from a Scheme may be subject to separate regulation under the pollution control framework or other consenting and licensing regimes and relevant permissions will need to be obtained for such activities. The Environment Agency suggests that applicants should start work with permit applications at least six months prior to submission of a DCO.

- 7.12.7. With regard to flood risk and surface water drainage, the ~~NPS NNNPS NNNN NPS~~ supports the NPPF. In line with the Flood Risk section (paragraphs 5.90 to 5.115) of the ~~NPS NNNPS NNNN NPS~~, the Scheme would require an FRA that considers all sources of flood risk.

- 7.12.8. The NPPF paragraph ~~159-165~~ states that '*inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk (whether existing or future). Where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere.*'

- 7.12.9. Gloucestershire LTP policy LTP PD0.2 highlights that GCC will work with District Councils and other partners to minimise the impact of transport on landscapes, townscapes, heritage assets and the wider historic environment; to protect and enhance the water environment, and to reduce the risk of flooding. GCC will do this by:
- Promoting *'...water conservation, improvements in surface water run-off and provision of SuDS, in both new schemes and retrofitting of existing schemes (where opportunities arise).*
 - *Mitigation will be considered for the transport interventions that have significant adverse impact on water availability or quality or fail to achieve the targets of the Water Framework Directive.*
 - *Working with its partners and other statutory bodies, such as the Environment Agency and Natural England, Gloucestershire will use natural processes to promote greater flood resilience to the highway network, ensuring SuDS and Natural Flood Management (NFM) are employed wherever possible.*
- 7.12.10. Policy SD14 of the JCS states that new development must result in no unacceptable levels of water pollution either along-alone or cumulatively with respect to relevant national and EU limit values.
- 7.12.11. Policy INF2 of the JCS outlines flood risk considerations for development. It reiterates the principles outlined in the NPPF paragraph 459165, and states that:
- 'For sites of strategic scale, the cumulative impact of the proposed development on flood risk in relation to existing settlements, communities or allocated sites must be assessed and effectively mitigated.'*
- 7.12.12. The policy requires new development to contribute to a reduction in existing flood risk where possible and incorporate suitable Sustainable Drainage Systems (SuDS) where appropriate to manage surface water drainage.
- 7.12.13. Tewkesbury Flood and Water Management Supplementary Planning Document (2018) provides guidance on the approach that should be taken to manage flood risk and the water environment as part of new development proposals. The SPD highlights the documents which will be required to accompany planning applications including site-site-specific FRAs and drainage strategies (incorporating an appropriate approach to surface water drainage including suitability evidence).
- 7.12.14. Policy ENV2 of the Tewkesbury Borough Plan outlines the principles that the Council will apply to avoid and manage the risk of flooding to and from new development. These include, designing proposals appropriately to locally specific allowances for climate change for peak river flood flows and rainfall intensity, seeking opportunities to reduce the existing flood risk of flooding from all sources, and incorporating sustainable drainage systems where appropriate. Surface water drainage proposals should, where appropriate, achieve significant betterment on existing discharge rates for all corresponding storm events.
- 7.12.15. Policy NAT2 of the Tewkesbury Borough Plan states that where practical, the Council will seek *'appropriate opportunities offered by new development proposals to recreate more natural conditions and new habitat along watercourses, for example by requiring; the de-culverting, restoration or reprofiling of watercourses; the removal of barriers to fish migration; or the integration of watercourses with wider green/ blue infrastructure networks.'*
- 7.12.16. Paragraph 10.26 of the Cheltenham Plan outlines that the Council will seek to promote and enhance the natural water system in the Borough. This includes encouraging developers to fully integrate watercourses into their developments, and to encourage developers to apply sustainable drainage principles when designing land drainage systems.

- 7.12.17. In line with the ~~NPS NNNPS NNNN NPS~~ requirements Chapter 8 Road Drainage and the Water Environment of the ES (~~AS-016~~)~~application document TR010063 APP 6.6~~ ascertains the existing status of the water environment and undertakes an assessment of the impacts of the Scheme on the water environment.
- 7.12.18. The FRA and WFD compliance assessment have been completed and are included as appendices to Chapter 8 Road Drainage and the Water Environment of the ES (~~AS-023~~)~~application document TR010063 APP 6.13~~. These reports accord with ~~NPS NNNPS NNNN NPS~~ paragraphs 2.222 and 5.226.
- 7.12.19. The outcomes show that the Scheme is compliant with the requirements of the NPPF and is compliant with WFD objectives.
- 7.12.20. The assessment has found that there are potential localised significant effects to the River Chelt flood plain on existing farmland. Those effects are determined to cause no increase in flood risk, although they will still result in localised adverse impacts (increase in flood depth by 10 mm to 230 mm). The Scheme is consulting with the landowners on the increases in peak flood levels and has included these areas inside the Order limits.
- 7.12.21. All other impacts have been mitigated so as not to cause any significant impacts through the implementation of embedded and additional mitigation which has included updates to the Scheme design along with the implementation of best practice construction activities.
- 7.12.22. This accords with paragraphs 5.90 to 5.115 of the ~~NPS NNNPS NNNN NPS~~ which outline the requirements in regard to flood risk by demonstrating that the development is appropriately flood resilient and that flood risk will not be increased outside the Order Limits.

7.13. Landscape and visual impact

- 7.13.1. The criteria for 'good design' for national network infrastructure, in ~~NPS NNNPS NNNN NPS~~ Paragraph 4.29, outlines the requirement that '*visual appearance should be a key factor in considering the design of new infrastructure, as well as functionality, fitness for purpose, sustainability and cost. Applying 'good design' to national network projects should therefore produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction, matched by an appearance that demonstrates good aesthetics as far as possible.*'
- 7.13.2. ~~NPS NNNPS NNNN NPS~~ Paragraph 5.144 states that '*where the development is subject to EIA the applicant should undertake an assessment of any likely significant landscape and visual impacts in the environmental impact assessment and describe these in the environmental assessment. This should include reference to any landscape character assessment and any relevant policies based on these assessments in local development documents in England.*'
- 7.13.3. The assessment is expected to include visibility and conspicuousness of the project during construction and of the presence and operation of the project and potential impacts on views and visual ~~amenity~~ amenities. This should include any noise and light pollution effects, including on local amenity, tranquillity and nature conservation.
- 7.13.4. Paragraph 5.149 of the ~~NPS NNNPS NNNN NPS~~ states that projects should '*be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant constraints, the aim should be to avoid or minimise harm to the landscape, providing reasonable mitigation where possible and appropriate.*'
- 7.13.5. ~~NPS NNNPS NNNN NPS~~ Paragraph 5.151 states that the SoS should refuse development consent for NSIPs in nationally designated areas such as AONB and National Parks, except in exceptional circumstances and where it can be demonstrated that it is in the public interest. Furthermore, Paragraph 5.156 outlines that local landscape

designations should not be used in themselves as reasons to refuse consent, as this may unduly restrict acceptable development. However, developments should be carefully designed and seek to avoid or minimise harm to the landscape.

- 7.13.6. ~~NPS NINPS NINNN NPS~~ paragraphs 5.162 - 5.185 relate to land use including open space, green infrastructure and Green Belt. The guidance stipulates that the SoS should *'consider whether mitigation of any adverse effects on green infrastructure or open space is adequately provided for by means of any planning obligations'*.
- 7.13.7. Paragraph 5.158 of the ~~NPS NINPS NINNN NPS~~ states that *'the SoS will have to judge whether the visual effects on sensitive receptors, such as local residents, and other receptors, such as visitors to the local area, outweigh the benefits of the development.'*
- 7.13.8. Paragraph 130 of the NPPF asserts that policies and decisions should ensure that developments *'are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change.'*
- 7.13.9. Paragraph ~~174-180~~ of the NPPF states that the planning system should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes. As with biodiversity, protection should be commensurate with their status.
- 7.13.10. Paragraph ~~185-191~~ of the NPPF states that policies and decisions should ensure that new development is appropriate for its location, taking into account *'the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.'*
- 7.13.11. Gloucestershire LTP policy LTP PD0.2 states the GCC will work with district councils and other partners to minimise the impact on transport landscapes, townscapes and heritage assets and the wider historic environment. GCC will do this by implementing policy proposals which state:
- *'Working with partners and other statutory bodies, such as Historic England, the council will aim to minimise the impact of transport on heritage assets and protect and enhance the quality environment including buildings, structures, landscapes, townscapes...'*
 - *'Realise opportunities for green infrastructure enhancement associated with transport infrastructure resilience and performance through both the integration of green, blue and grey infrastructure, and the delivery of green naturally-based solutions to aid mitigation requirements.'*
 - *'Maximise the opportunities for transport interventions to contribute towards major new initiatives, including Nature Recovery Networks and large-scale woodland creation and other similar measures that would help to achieve biodiversity net gain targets.'*
 - *'Support Natural England's work on the Green Transport Corridors and Green Infrastructure Agreements, as well as their recommendations of the Linear infrastructure Network, ensuring that within or adjacent to the rail network and Major Road Network, green infrastructure can deliver biodiversity gains, ecological connectivity and ecosystem services.'*
- 7.13.12. Policy SD4 of the JCS notes that proposals may require a masterplan and design brief to clearly demonstrate how the following principles have been incorporated:

- 'i) New development should respond positively to, and respect the character of, the site and its surroundings, enhancing local distinctiveness, and addressing the urban structure, and grain of the locality in terms of street pattern, layout, mass and form.*
- 'iv) New development should ensure that the design of landscaped areas, open space and public realm are of high quality, provide clear structure and constitute an integral and cohesive element within the design.'*
- 7.13.13. Policy SD6 of the JCS states that *'development will seek to protect landscape character for its own intrinsic beauty and for its benefit to economic, environmental and social well-being'*.
- 7.13.14. Under this policy, proposals are expected to have regard to the local distinctiveness of the different landscapes in the JCS area and should draw upon existing Landscape Character Assessments and Landscape Character and Sensitivity Analysis (where appropriate). Proposals should *'demonstrate how the development will protect or enhance landscape character and avoid detrimental effects on types, patterns and features which make a significant contribution to the character, history and setting of a settlement or area'*.
- 7.13.15. The JCS Policy SD6 requires planning applications to be supported by a Landscape and Visual Impact Assessment where, at the discretion of the Local Planning Authority deemed one is required. Proposals for appropriate mitigation and enhancement measures should also accompany applications.
- 7.13.16. Policy SD7 of the JCS states that development within the setting of the Cotswold AONB (now Cotswolds National Landscape) will be required to conserve and, where appropriate, enhance its landscape, scenic beauty, wildlife, cultural heritage and other special qualities.
- 7.13.17. Policy INF3 of the JCS states that the green infrastructure network of local and strategic importance will be conserved and enhanced, in order to deliver a series of multifunctional, linked green corridors across the JCS area. Development proposals are expected to *'consider and contribute positively towards green infrastructure, including the wider landscape context and strategic corridors between major assets and populations.'*
- 7.13.18. Policy INF3 also states that existing green infrastructure will be protected in a manner that reflects its contribution to ecosystem service (including landscape/ townscape quality) and the connectivity of green infrastructure. It states that:
- 'Development proposals that will have an impact on woodlands, hedges and trees will need to include a justification for why this impact cannot be avoided and should incorporate measures acceptable to the local planning authority to mitigate the loss. Mitigation should be provided on-site or, where this is not possible, in the immediate environs of the site. Where assets are created, retained, or replaced within a scheme, they should be properly integrated into the design and contribute to local character and distinctiveness. Proposals also make provisions for future maintenance of green infrastructure.'*
- 7.13.19. Policy L1: Landscape and Setting of the Cheltenham Plan states that development will only be permitted where it would not harm the setting of Cheltenham including views into or out of areas of acknowledged importance.
- 7.13.20. Policy LAN2: Landscape Character of the Tewkesbury Borough Plan states that all development be appropriate to and integrated into their existing landscape setting through sensitive design, siting, and landscaping. All proposals which have potential for significant landscape and visual effects should be accompanied by an LVIA to identify the sensitivity of the landscape, and the magnitude and significance of landscape and visual effects resulting from the development, using a suitably robust methodology.

- 7.13.21. An assessment of the potential landscape and visual impacts associated with the construction and operation of the Scheme has been carried out and is presented in Chapter 9 Landscape and Visual of the ES (~~APP-068 application document TR010063 APP 6.7~~). In order to comply with paragraph ~~NPS NNNPS NNNN NPS~~ paragraph 5.144 the assessment has considered landscape character assessments and relevant policies as well as visibility and conspicuousness of the Scheme.
- 7.13.22. The assessment confirms that no further assessment is required ~~into for~~ development in relation to AONBs. The Scheme is not located within an AONB, and while there is some visual interaction with the Scheme, this is over a great distance which is barely discernible within the context of the views over Cheltenham. The Scheme also consulted with the Cotswold AONB Board which confirmed no further assessment is required. This demonstrates compliance with paragraph 5.151 of the ~~NPS NNNPS NNNN NPS~~.
- 7.13.23. The proposed landscape mitigation measures outlined in Chapter 9 Landscape and Visual of the ES seek to ensure an attractive visual appearance of the Scheme and demonstrates compliance with paragraph 4.29 of the ~~NPS NNNPS NNNN NPS~~ which outlines the 'good design criteria' for national network infrastructure.
- 7.13.24. Paragraphs 5.162 to 5.185 relate to mitigation of adverse effects on green infrastructure. The mitigation measures proposed for the Scheme demonstrate a strong effort to provide opportunities to conserve and enhance landscape value. Efforts have been made throughout to preserve as much of the landscape features offering landscape value as possible, e.g., ~~through by~~ avoiding the unnecessary loss of woodland and protected trees. Where landscape value has been degraded, mitigation measures have been proposed to either replace or replicate the features lost as a consequence of the Scheme. These include replanting of locally native species to roadsides, ~~and~~ hedgerow planting along the Link Road, with supplementary blocks of wood and individual trees to reflect local character.
- 7.13.25. The Scheme is within the SV6B Landscape Character Area 'Vale of Gloucester', with the very eastern end meeting the urban character of the edge of Cheltenham. It has been concluded that although there would be ~~an~~ increased presence of roads and associated infrastructure, these would be in keeping with the existing landscape character and context of views within the area. Replanting to roadsides and other embedded mitigation measures, including the retention of vegetation, avoiding destruction of habitats and inclusion of SuDS, will ensure the Scheme will sit comfortably within the landscape in the long term, and views would potentially provide an enhancement of the environment to improve the experience for residents, pedestrians, cyclists and vehicle users.
- 7.13.26. It is therefore concluded that the Scheme is compliant with ~~NPS NNNPS NNNN NPS~~ requirements and local policies listed above.

7.14. Geology and soils

- 7.14.1. Paragraph 5.22 of the ~~NPS NNNPS NNNN NPS~~ relates to sites of geological importance and states that where the project is subject to EIA the applicant should ensure that the ES clearly sets out any likely significant effects on internationally, nationally and locally designated sites of ecological or geological conservation importance. Furthermore, paragraph 5.25 states that development should avoid significant harm to geological conservation interests, including through mitigation and consideration of reasonable alternatives.
- 7.14.2. There are no Environmental Protection Areas in which the supporting soils could be directly affected or geological features of local, regional national or international importance. These receptors were therefore scoped out of the assessment.
- 7.14.3. Paragraph 5.168 of the ~~NPS NNNPS NNNN NPS~~ relates to soils resources and land contamination and states that applicants should take into account the benefits of ~~the~~ best

and most versatile (BVM) agricultural land. Where significant development of agricultural land is demonstrated to be necessary, applicants should seek to use areas of poorer quality land in preference to that of a higher quality. Applicants should also identify any effects, and seek to minimise impacts on soil quality, taking into account any mitigation measures proposed. Impacts ~~to~~ on BMV agricultural land have been assessed and mitigation measures have been identified to minimise impacts on soil quality. In order to comply with this paragraph, a risk assessment and impact assessment has been undertaken to assess the risk posed by current and historical potentially contaminative land uses on and surrounding the Scheme.

- 7.14.4. Paragraph 5.169 goes on to state that *'applicants should safeguard any mineral resources on the proposed site as far as possible.'*
- 7.14.5. Paragraph 5.179 also states that applicants should minimise the direct effects of a project by the application of good design principles, including the layout of the project and the protection of soils during construction. Mitigation measures which will be implemented to minimise impacts are considered as part of the assessment section in this Chapter.
- 7.14.6. Paragraph ~~174-180~~ of the NPPF is of particular relevance to geological and soil conservation, stating that policies and decisions should contribute to and enhance the natural and local environment by *'protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan)'* as well as recognising the *'economic and other benefits of the best most versatile agricultural land, and of trees and woodland.'*
- 7.14.7. Paragraph ~~174-180~~ also states that plans should prevent new and existing development from contributing to, being put at an unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Where significant development of agricultural land is demonstrated to be necessary, local planning authorities should seek to use areas of poorer quality land in preference to ~~that~~ those of higher quality.
- 7.14.8. Paragraph ~~183-189~~ states that policies and decisions should ensure that a site is suitable for its proposed use taking account of ground conditions and any risks arising from land instability and contamination.
- 7.14.9. Building on the NPPF, Planning Practice Guidance (PPG) published in 2014 provides the guiding principles on how planning can deal with contaminated land.
- 7.14.10. Policy LTP PD0.2 of the Gloucestershire LTP states that GCC will work with district councils and other partners to minimise the impact of transport on landscapes, townscapes, heritage assets and the wider historic environment to protect and enhance soils and agricultural resources and conserve geodiversity. GCC will do this by implementing policy proposals which state:
- *'Protect and avoid harm to geodiversity and biodiversity associated with transport infrastructure in addition to taking opportunities to enhance the natural environment wherever practicable.'*
 - *'Measures will be taken to prevent soil from being adversely affected either physically or by pollution during transport intervention development.'*
 - *'Where possible, protect geological sites from degradation and removal caused by transport interventions and where practicable provide enhancements to the geological site and to its accessibility.'*
 - *'Any potential direct or indirect impacts that may arise from new or upgraded transport intervention will be appropriately assessed, mitigated and/or compensated for, in line with existing best practice and relevant legislation on statutory and non-statutory designated sites that are protected for their importance to nature conservation.'*

- 7.14.11. Policy SD9: Biodiversity and Geodiversity of the JCS aims to ensure that individual assets and the quality of the natural environment in the future ~~is~~ are planned, protected and enhanced at a strategic scale, recognising that networks extend across local authority boundaries. Harm to the biodiversity or geodiversity of an undesignated site or asset should be avoided where possible. Where there is a risk of harm as a consequence of development, this should be mitigated by integrating enhancements into the Scheme that are appropriate to the location.
- 7.14.12. Policy SD14 of the JCS requires new development to consider the quality and versatility of any agricultural land affected by proposals, recognising that the best agricultural land is a finite resource.
- 7.14.13. Policy NAT1 of the Tewkesbury Plan (2022) states that development likely to result in the loss, deterioration, or harm to features, habitats or species of importance to ‘...*geological conservation*’ either directly or indirectly will not be permitted unless:
- ‘*The need for, and benefits of the development clearly outweigh its likely impact on the local environment, or the nature conservation value or scientific interest of the site.*
 - *measures can be provided (and secured through planning conditions or legal agreements), that would avoid, mitigate against or, as a last resort, compensate for the adverse effects likely to result from development.*
 - *The level of protection and mitigation should be proportionate to the status of the feature, habitat or species and its importance individually and as part of a wider network.*’
- 7.14.14. Chapter 10 Geology and Soils of the ES outlines the environmental assessment of the Scheme for Geology and Soils (application document reference ~~TR010063-APP 6.8~~APP-069).
- 7.14.15. The Chapter outlines that a total of 20.13 ha of subgrade 3a BMV agricultural land is anticipated to be lost in a large adverse effect which is significant. A total of 26.61 ha of subgrade 3b agricultural land is also anticipated to be lost resulting in a moderate effect which is significant. A further 1.13ha of subgrade 3b agricultural land is anticipated to have permanent restriction due to being located within a flood storage area returning to agricultural use. This results in a moderate effect which is significant.
- 7.14.16. Land take for the Scheme has been minimised as much as possible and the permanent loss of this agricultural land is required for the development of the Scheme, no suitable alternatives are available, and the location and route selection has been justified in options selection processes. While there is no mitigation for the permanent loss of agricultural land, the Scheme will sustainably re-use soils generated from the footprint of the Scheme. Additionally, the agricultural land lost to the creation of the Flood Storage area adjacent to the junction is anticipated to bring significant biodiversity and flood risk benefits which outweigh this adverse effect and is therefore in compliance with the ~~NPS NNNPS NNNN~~NPS and local policies.
- 7.14.17. Land returning to agriculture after temporary use is expected to be of the same quality as baseline and is anticipated to have a slight adverse temporary effect, with no residual effects.

7.15. Cultural Heritage

- 7.15.1. ~~NPS NNNPS NNNN~~ NPS paragraphs 5.120 to 5.142 consider the impacts on the historic environment. Paragraphs 5.120 and 5.121 recognise that both the construction and operation of national networks ~~has~~ have the potential to result in adverse impacts on the historic environment.

- 7.15.2. In accordance with ~~NPS NNNPS NNNN NPS~~ Paragraph 5.127, Chapter 11 Cultural Heritage of the ES (~~application document TR010063 APP 6.9APP-070APP-070~~) describes the significance of any heritage assets affected, including the contribution made by their setting in a level of detail proportionate to the asset's importance. The relevant Historic Environment Record has been consulted and the heritage assets assessed using appropriate expertise. A geophysical survey has also been conducted for the area of the Scheme covered by the proposed Link Road to inform the assessment of heritage impacts including evaluation trenching across the extent of the proposed link road to further understand the significance of buried archaeology.
- 7.15.3. Paragraph 5.130 of the ~~NPS NNNPS NNNN NPS~~ states that *'the SoS should take into account the desirability of sustaining and, where appropriate, enhancing the significance of heritage assets, the contribution of their settings and the positive contribution that their conservation can make to sustainable communities – including their economic vitality.'*
- 7.15.4. ~~NPS NNNPS NNNN NPS~~ paragraph 5.131 states that when considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation. Given that heritage assets are irreplaceable, harm or loss affecting any designated heritage asset should require clear and convincing justification. Substantial harm to or loss of a grade II Listed Building or a grade II Registered Park or Garden should be exceptional. Substantial harm to or loss of designated assets of the highest significance, including World Heritage Sites, Scheduled Monuments, grade I and II* Listed Buildings, Registered Battlefields, and grade I and II* Registered Parks and Gardens should be wholly exceptional.
- 7.15.5. ~~NPS NNNPS NNNN NPS~~ paragraph 5.132 states *'any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of development, recognising that the greater the harm to the significance of the heritage asset, the greater the justification that will be needed for any loss.'*
- 7.15.6. ~~NPS NNNPS NNNN NPS~~ paragraph 5.133 states that *'where the proposed development will lead to substantial harm to or total loss of significance of a designated heritage asset, the SoS should refuse consent unless it can be demonstrated that the harm is necessary to deliver substantial public benefits that outweigh that harm.'*
- 7.15.7. ~~NPS NNNPS NNNN NPS~~ paragraph 5.134 states *'where the proposed development will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal, including securing its optimum viable use.'*
- 7.15.8. ~~NPS NNNPS NNNN NPS~~ paragraph 5.136 states that *'where the loss of significance of any heritage asset has been justified by the applicant based on the merits of the new development and the significance of the asset in question, the SoS should consider imposing a requirement that the applicant will prevent the loss occurring until the relevant development or part of development has commenced.'*
- 7.15.9. Paragraph 5.137 of the ~~NPS NNNPS NNNN NPS~~ states that applicants should look for opportunities for new development within the setting of heritage assets to *'enhance or better reveal their significance. Proposals that preserve those elements of the setting that make a positive contribution to or better reveal the significance of the asset should be treated favourably.'* Paragraph 5.138 goes on to state that *'where there is evidence of deliberate neglect of or damage to a heritage asset the SoS should not take its deteriorated state into account in any decision.'*
- 7.15.10. ~~NPS NNNPS NNNN NPS~~ paragraph 5.142 states *'where there is a high probability that a development site may include as yet undiscovered heritage assets with archaeological interest, the SoS should consider requirements to ensure that appropriate procedures are in place for the identification and treatment of such assets discovered during construction.'*

- 7.15.11. Chapter 16 of the NPPF considers the conservation and enhancement of the historic environment through development and includes similar requirements and ~~NPS NINPS~~ ~~NNNN NPS~~ paragraphs noted above. Paragraph ~~194-200~~ requires applicants to describe the significance of any heritage assets affected, including any contribution made by their setting. Where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.
- 7.15.12. Paragraph 2074 of the NPPF outlines that where a proposed development will lead to substantial harm to (or total loss of significance of) a designated heritage asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or total loss is necessary to achieve substantial public benefits that outweigh harm or loss.
- 7.15.13. Policy LTP PD0.2 of the Gloucestershire LTP outlines that GCC will work with District Councils and other partners to minimise the impact of transport on the wider historic environment. Policy proposals relevant to this scheme include:
- *'Working with partners and other statutory bodies, such as Historic England, the council will aim to minimise the impact of transport on heritage assets and protect and enhance the quality environment including buildings, structures, landscapes, townscapes and archaeological remains and their settings and ensure that due regard is given to the need to undertake archaeological investigations.'*
 - *'Promote transport schemes which tackle traffic congestion in Gloucestershire's historic villages, towns and city.'*
 - *'Improve physical access and/ or interpretation, understanding and appreciation of the significance of heritage assets as part of transport development where appropriate.'*
- 7.15.14. Policy SD8 of the JCS states that development should make a positive contribution to local character and distinctiveness, having regard to valued and distinctive elements of the historic environment. It requires designated and undesignated heritage assets and their settings to be conserved and enhanced appropriate to their significance. Consideration is also given to the contribution made by heritage assets to supporting sustainable communities and the local economy. It also states that:
- 'Development proposals at Strategic Allocations must have regard to the findings and recommendations of the JCS Historic Environment Assessment (or a subsequent revision) demonstrating that the potential impacts on heritage assets and appropriate mitigation measures have been addressed.'*
- 7.15.15. Policy HE2 of the Cheltenham Plan notes that there will be a presumption in favour of the physical preservation in situ of nationally important archaeological remains in their settings. Development sites affecting sites of local archaeological importance will be permitted where the remains are preserved (Note1): In situ; or by record, if preservation is not feasible.
- 7.15.16. Policy HER2 of the Tewkesbury Borough Plan states that development within the setting of Listed buildings will be expected to have no adverse impact on those elements which contribute to their special architectural or historic interest, including their settings. Any proposals which adversely affect such elements or result in the significant loss of historic fabric will not be permitted.
- 7.15.17. Policy HER4 of the Tewkesbury Borough Plan states that scheduled monuments and sites of national archaeological importance will be preserved in situ. Development which would lead to substantial harm or loss of these sites and their setting should be wholly exceptional and will not normally be permitted. Where development will cause harm or

loss, provision should be made for excavation and recording with an appropriate assessment and evaluation.

- 7.15.18. Policy HER5 of the Tewkesbury Borough Plan states that local heritage assets will be conserved having regard to the significance of the asset and its contribution to the historic character of the area. Proposals affecting a locally important heritage asset and/ or its setting will be expected to sustain or enhance the character, appearance and significance of the asset.
- 7.15.19. Chapter 11 Cultural Heritage of the ES (~~APP-070~~)~~application document TR010063 APP 6-9~~ sets out that the cultural heritage assessment of the Scheme has considered impacts on heritage assets that may occur during the construction and operation of the Scheme. This includes direct physical impacts as well as indirect impacts ~~to on~~ heritage assets and their settings.
- 7.15.20. The assessment found that significant adverse effects are anticipated due to impacts ~~to on~~ known and ~~as-yet-yet~~ unknown archaeological remains. A robust programme of archaeological investigation and recording following an Archaeological Management Plan (AMP) prepared in consultation with the local planning authority's archaeological advisor would mitigate these impacts to a slight adverse effect which is not significant and will ensure the Scheme's compliance with ~~NPS-NNNPS-NNNN NPS~~ paragraph 5.142. This will also ensure compliance with Chapter 16 of the NPPF, LTP PD0.2, policy HE2 and policy HER4.
- 7.15.21. Impacts to the settings of heritage assets would be mitigated through design, and landscaping, resulting in slight adverse effects which are not significant. This complies with the requirements of ~~NPS-NNNPS-NNNN NPS~~ paragraphs 5.131 to 5.134, and local policies SD8, HER2 and HER5.
- 7.15.22. Considering the above, the Scheme is considered to be in accordance with the requirements of national and local policy with regard to cultural heritage.

7.16. Materials and waste

- 7.16.1. Section 5 of the ~~NPS-NNNPS-NNNN NPS~~ considers the generic impacts associated with National Networks and includes waste management. The resource and waste management measures outlined in the 'Waste Management' Chapter should be adhered to and considered throughout all stages of the Scheme. Management measures are inclusive of but not limited to, the implementation of the waste hierarchy, the correct management of waste both on-site and off-site and ensuring the use of appropriate waste infrastructure for waste treatment and disposal.
- 7.16.2. ~~NPS-NNNPS-NNNNNPS~~ Paragraphs 5.42 and 5.43 address waste management and state that the applicant should set out the arrangements that are proposed for managing any waste produced.
- 7.16.3. ~~NPS-NNNPS-NNNN NPS~~ paragraph 5.44 states that '*where necessary, the SoS should use requirements or planning obligations to ensure that appropriate measures for waste management are applied*', as secured in the draft Development Consent Order (application document TR010063/APP/3.1).
- 7.16.4. ~~NPS-NNNPS-NNNN NPS~~ paragraph 5.44 states that '*where the project will be subject to the Environment Agency's environmental permitting regime, waste management arrangements during operations will be covered by the permit and the considerations set out in paragraphs 4.48 to 4.56 will apply.*' These will be obtained as set out in the Environmental Management Plan (~~application document TR010063/APP/7.3AS-026~~) and the Consents and Agreements Position Statement (~~application document TR010063/APP/3.3APP-033~~).

- 7.16.5. Paragraph ~~210-216~~ of the NPPF states that planning policies should, so far as is practicable, take account of the secondary and recycled materials and minerals waste supply before considering the extraction and use of primary materials.
- 7.16.6. Policy LTP PD 0.2 of the Gloucestershire LTP states that GCC will work with District Councils and other partners to minimise the impact of transport on landscapes, townscapes, heritage assets and the wider historic environment from traffic or improvements on the highway network. GCC will do this by implementing policy proposals, those of relevance include:
- 'Promote the use of increasingly more sustainable waste management practices with transport related infrastructure projects in line with the waste ~~hierarchy~~ hierarchy'.*
- 7.16.7. Policy SD3 of the JCS requires development proposals to demonstrate how they contribute to the aims of sustainability by increasing energy efficiency, and minimising waste.
- 7.16.8. The Minerals Local Plan for Gloucestershire highlights the importance of minerals to building our homes, infrastructure and even day ~~to to~~-day products. The plan establishes the value of sourcing minerals from secondary and recycled supplies. Policy SR02 part b, states that non-mineral development proposals will be permitted where they adopt sustainable design principles, construction methods and procurement policies that are in line with the adopted Gloucestershire Waste Core Strategy policy WCS2: Waste Reduction.
- 7.16.9. The Gloucestershire Waste Core Strategy policy WCS2 sets the expectation for all development to incorporate principles of waste minimisation and re-use. Planning applications for 'major development' must be supported by a statement setting out how any waste arising during the demolition, construction and subsequent occupation of the development will be minimised and managed.
- 7.16.10. Chapter 12 Materials and Waste of the ES (~~APP-071~~ application document TR010063 APP-6.10) reports the assessed impacts of materials and waste associated with the Scheme during its construction, demolition and excavation phases. This Chapter has been written in line with DMRB LA110 Material ~~assets~~ Assets and ~~waste~~ Waste which sets out the requirements for assessing and reporting the effects on material assets and waste from the delivery of motorway and all-purpose trunk road projects.
- 7.16.11. Following the application of the mitigation measures during construction, the effect of material asset use and waste generation is estimated to be slightly adverse, however, this is not a significant effect. The project achieves overall 70-99% material recovery ~~+~~ / recycling (by weight) of non-hazardous Construction and Demolition Waste (CDW) to substitute the use of primary materials. Materials imported to the site comprise re-used/ recycled content in line with the relevant regional percentage target. In terms of waste, it is anticipated there will be a $\leq 1\%$ reduction or alteration in the regional capacity of the landfill, and it has been assessed that within the region, the waste infrastructure has sufficient capacity to accommodate waste from the project without compromising its integrity. This accords with the Gloucestershire Waste Core Strategy, the Minerals Local Plan for Gloucestershire, policy SD3 of the JCS and paragraph ~~210-216~~ of the NPPF.
- 7.16.12. The ~~NPS NNNPS NNNN NPS~~ outlines the importance of managing resources and wastes to prevent and minimise environmental impacts (paragraphs 5.39 to 5.66). Compliance with ~~NPS NNNPS NNNN NPS~~ has been demonstrated through the description of mitigation measures e.g., implementation of the waste hierarchy, correct management of waste both on-site and off-site, and identifying the appropriate waste infrastructure for waste treatment and disposal. This will lead to material asset use and waste generation prevention, reduction, reuse, recycling and recovery. In particular, during construction, this includes the reuse of waste, the use of aggregates with a minimum of 22% recycled content and the recovery of 95% of wastes that are managed off-site. A description of all

mitigation measures is provided in section 12.8 of Chapter 12 Materials and Waste of the ES (~~APP-071~~ ~~application document TR010063 APP 6.10~~).

- 7.16.13. In consideration of the above findings, the Scheme is considered to be in accordance with the national and local planning policies with regards to material use and waste.

7.17. Population and Human Health

7.17.1. ~~NPS NNNPS NNNN NPS~~ paragraph 3.17 states that there is a direct role for the national road network to play in helping pedestrians and cyclists. The Government expects applicants to use reasonable endeavours to address the needs of cyclists and pedestrians in the design of new schemes. The Government also expects applicants to identify opportunities to invest in infrastructure in locations where the national road network serves communities and acts as a barrier to cycling and walking, by correcting historic problems, retrofitting the latest solutions and ensuring that it is easy and safe for cyclists to use junctions.

7.17.2. Paragraph 3.3 of ~~NPS NNNPS NNNN NPS~~ establishes the expectation that delivery of new schemes will improve quality of life and avoid and mitigate environmental, and social impacts in line with the principles set out in the NPPF and the Governments' planning guidance.

7.17.3. It is acknowledged in the ~~NPS NNNPS NNNN NPS~~ that new or enhanced national network infrastructure can have direct (paragraph 4.79) and indirect (paragraph 4.80) impacts on the health, well-being and the quality of life on of the population. Paragraphs 4.81 and 4.82 states that where a proposed project has likely significant environmental impacts that would have an effect on human beings, any ES should identify and set out the assessments of any likely significant adverse health impacts. Applicants are expected to identify measures to avoid, reduce or compensate for adverse health impacts as appropriate, including cumulative effects on health.

7.17.4. Although the ~~NPS NNNPS NNNN NPS~~ provides no specific guidance on Population and Human Health impacts, section 5 outlines land use considerations which ~~is~~ are of relevance to this assessment. Paragraph 5.162 states that access to ~~high-high~~ quality open spaces, PRow, the countryside and opportunities for sport and recreation can be a means for providing mitigation and/ or compensation requirements for developments.

7.17.5. ~~NPS NNNPS NNNN NPS~~ paragraph 5.83 states that *'for nationally significant infrastructure projects of the type covered by this NPS, some impact on amenity for local communities is likely to be unavoidable. Impacts should be kept to a minimum and should be at a level that is acceptable.'*

7.17.6. ~~NPS NNNPS NNNN NPS~~ paragraph 5.165 states that *'the applicant should identify existing and proposed land uses near the project.'* Paragraphs 5.166 and 5.167 go on to state that *'during any pre-application discussions with the applicant, the local planning authority should identify any concerns it has about the impacts of the application on land-use, having regard to the development plan and relevant applications.'*

7.17.7. ~~NPS NNNPS NNNN NPS~~ paragraph 5.184 states that applicants are expected to take appropriate mitigation measures to address adverse effects on PRow and open access land where appropriate to consider what opportunities there may be to improve access.

7.17.8. Paragraph ~~84-85~~ of the NPPF states that planning decisions should help create the conditions in which businesses can invest, expand and adapt. Furthermore, paragraph 92 states that planning policies and decisions should aim to achieve healthy, inclusive and safe places that:

- Promote social interaction.
 - Are safe and accessible.
 - Enable and support healthy lifestyles.
- 7.17.9. Paragraph ~~412-116~~ of the NPPF encourages walking, cycling and public transport use and applications for development should:
- *'Give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas.'*
 - *'Address the needs of people with disabilities and reduced mobility in relation to all modes of transport.'*
 - *'Create places that are safe, secure and attractive- which minimise the scope for conflicts between pedestrians, cyclists and vehicles.'*
- 7.17.10. Paragraph 2.3.1 of the Gloucestershire LTP states that Gloucestershire's vision for transport is *'a resilient transport network that enables sustainable economic growth by providing travel choices for all, making Gloucestershire a better place to live, work and visit.'* Paragraph 2.3.4 goes on to state that a key objective of the LTP is to improve community health and well-being and promote equality of opportunity.
- 7.17.11. Policy LTP PD 0.5 Community Health and Wellbeing ensures that people from all social and economic groups and those with disabilities are encouraged to use safe and affordable multi-modal travel options. Furthermore, there is a focus on *'improving air quality; and connecting people to services, employment, housing, education, health services, social and leisure amenities to allow equality of opportunity to health, social and economic wellbeing and remove barriers that can create social isolation.'*
- 7.17.12. Policy LTP PD 4.4 – Road Safety pledges to *'contribute to improved safety, security and health by reducing the risk of death, injury or illness arising from transport, working with partners to improve personal safety perceptions and the promotion of transport that contributes to good health and wellbeing.'*
- 7.17.13. Policy LTP PD 6.1 – Gloucestershire's Pedestrian Network states that *'GCC will work with interested parties to provide an inclusive safe, reliable and efficient highway environment that encourages walking, and provides pedestrian links to connect communities, employment and services.'*
- 7.17.14. Policy LTP PD 6.2 – Rights of Way ensures that GCC will *'support the Rights of Way and Countryside Access Improvement Plan in identifying and seeking to support measures to improve safety, accessibility and the quality of the experience for walkers, horse riders, carriage drivers and those travelling by bicycle.'*
- 7.17.15. Policy LTP PD 6.4 – Pedestrian Safety states that *'GCC will contribute towards improved safety, security and health by reducing the risk of death, injury or illness arising from journeys on foot or by mobility mode.'*
- 7.17.16. The JCS Strategic Objective 1 – Building a strong and competitive urban economy seeks to provide the right conditions and sufficient land in appropriate locations to support existing businesses and attract new ones.
- 7.17.17. JCS policy SD14: Health and Environmental Quality states that new development must result in no unacceptable levels of air, noise, water, light or soil pollution or odour, either alone or cumulatively, with respect to relevant national and EU limit values.
- 7.17.18. JCS policy INF1: Transport Network states that developers should provide safe and accessible connections to the transport network to enable travel choices for residents and commuters. Of particular relevance to the Scheme is the notion that proposals should

- ensure that safe and efficient access to the highway network is provided for all transport modes.
- 7.17.19. Policy HM3 of the Cheltenham Plan states that development which involves the loss of residential accommodation through the demolition of existing housing will not be permitted, except where *'the proposed use would be beneficial to the wider economy and the local community.'*
- 7.17.20. Policy SL1 of the Cheltenham Plan Safe and Sustainable Living requires new development to avoid *'unacceptable harm to the amenity of adjoining land users'*.
- 7.17.21. Cheltenham Borough Local Plan (2006) Saved Policy CP4 states that development should not result in levels of traffic to and from the site attaining an environmentally unacceptable level.
- 7.17.22. Policy HEA1 of the Tewkesbury Borough Plan states that major development should be designed in line with 'active design' principles. Policy TRAC1 Pedestrian Accessibility outlines the stance that pedestrian networks will be protected across Tewkesbury Borough, as well as extended and enhanced.
- 7.17.23. Chapter 13 Population and Human Health of the ES (~~application document reference TR010063 APP 6.11 APP(-AS-018)~~) provides an assessment of the likely positive and negative effects of the construction and operation of the Scheme, and opportunities for improving health and reducing inequalities. The Chapter also includes an assessment of the effect of the Scheme on agricultural land holdings and associated infrastructure.
- 7.17.24. The assessment includes reference to the informal Traveller site located adjacent to the southbound carriageway of the M5, approximately 250 m to the north of the existing M5 Junction 10. This land is occupied informally and is home to approximately 30 separate caravans within the site curtilage, although the nature of the use of the land is such that occupation levels can change.
- 7.17.25. Arising from the sensitivity assessment undertaken to understand the likely traffic impacts arising from the closure the slip roads, the chapter provides a qualitative consideration of the in-combination effects of the resulting air quality and noise impacts, as well as changes to traffic levels and traffic composition. This has resulted in an in-combination cumulative effect on amenity and established characteristics of the affected residences/residential settlements.
- 7.17.26. The assessment has enabled analysis of the consequential air quality and noise implications of traffic reassignment across the local road network during the temporary period of M5 slip road closures, within the construction phase of the Scheme. Beneficial effects on noise are expected along the A4019 due to decreased traffic flows, which will result in beneficial effects relating to the characteristics of the transport environment and accessibility. Furthermore, although noise increases are expected on the southern slip roads of the Gallagher Road Junction, in the daytime and night-time, the predicted change at the junction is unlikely to be perceptible at any noise-sensitive receptor.
- 7.17.27. The sensitivity assessment concludes that there may be significant adverse cumulative human health effects for the more sensitive affected receptors, on a precautionary basis, for residents at Uckington and for families with children and adolescents. However, there is the potential for the M5 Junction 10 slip road closures to contribute to some beneficial effects for the students and staff at Greensteps, National Star, due to the reduction in traffic flows along the A4019.
- 7.17.28. In terms of engagement, section 42 notices were served on the site as part of targeted consultation from 21 December 2022 to 03 February 2023. Attempts were made to contact the owner of the site, but no response was received. It is understood that TBC ~~have~~ has also been liaising with the site occupants. It has been assumed that this site, which is deemed by TBC to be an illegally occupied site, will be occupied during the

construction and operation of the Scheme. Whilst the assessment of effects on the site is being made as it presently exists, it will be relevant to the weight to be attached to any adverse impacts in the decision-making process, to consider whether the site is lawful and the likelihood that it will cease to be occupied during construction and/or operation of the Scheme.

- 7.17.29. The assessments comply with ~~NPS-NNNPS-NNNN NPS~~ paragraph 2.23 which states the Government's overall vision to improve overall quality of life, journey quality, reliability and safety and link up communities. Junction improvement is stated as being a key driver for this. The Scheme seeks to provide an all-movements junction which will contribute towards unlocking housing and job opportunities in and around Cheltenham. The planned 35,175 new homes and 39,500 new jobs by 2031 will improve the quality of life within and around Cheltenham, and the Scheme will increase the capacity of the highways network, ensuring that the infrastructure is in place to enable housing and economic development. The Scheme is therefore considered to align with this policy. This also aligns with the objectives (paragraph 2.3.1.) of the Gloucestershire LTP, and local policy HM3.
- 7.17.30. The assessments presented in Chapter 13 Population and Human Health of the ES comply with paragraph 3.3 of the ~~NPS-NNNPS-NNN NNPS~~ which ensures that the delivery of new schemes will improve quality of life and avoid and mitigate environmental and social impacts, as well as improve accessibility and inclusivity and reduce community severance. The Scheme design has been finalised after an options assessment process whereby the most favourable option from an environmental perspective has been taken forward. Where adverse environmental and social impacts have been anticipated, such as increased severance to community, recreational, educational and open space facilities, appropriate mitigation has been included to ensure that any significant adverse effects are minimised. Examples of mitigation measures include traffic management to maintain traffic flows during the construction of Junction 10, a clear and consistent signage strategy and the production of a Community Engagement Plan. The Scheme therefore conforms with this policy and policy LTP PD 0.5.
- 7.17.31. The assessments presented in Chapter 13 Population and Human Health of the ES (~~AS-018~~)~~application document TR010063 APP 6.11~~ comply with paragraph 3.19 of the ~~NPS-NNNPS-NNNNNPS~~ which ensures that schemes will improve accessibility, reduce community severance, and connect people with jobs, services, friends and family. The Scheme will ensure that any community severance is largely confined to the construction phase, as a result of construction works and traffic management measures. The operational Scheme will improve connectivity to key employment and housing sites both within and beyond the study as a result of the increased capacity on of the road network. The Scheme is therefore considered to align with this policy.
- 7.17.32. The assessments presented in Chapter 13 Population and Human Health of the ES comply with paragraphs 5.162 and 5.184 of the ~~NPS-NNNPS-NNN NNPS~~ which highlight access to open space, PRoW, the countryside and opportunities for sport and recreation as potential means for providing mitigation and/or compensation for schemes. The Scheme will provide a new PRoW at the revised Junction 10, and the Scheme will seek to preserve and enhance the network of PRoW in proximity to the works which provide access to open space, and sport and recreation facilities both within and beyond the study area. The Scheme is considered to align with this policy and shows compliance with local policies LTP PD 6.2 and HEA1.
- 7.17.33. In light of the above, it is considered that the Scheme is in accordance with both national and local planning policy with regard to population and human health.

7.18. Climate

- 7.18.1. ~~NPS-NNNPS-NNNN NPS~~ paragraph 4.40 states that new national networks infrastructure will typically be ~~long-long~~ term investments which will need to remain operational over many decades in the face of a changing climate. This paragraph of the ~~NPS-NNNPS~~

- ~~NNNN NPS~~ requires that climate change is considered when planning the location, design, build and operation of a new project and any accompanying ES should set out how the proposal would take account of the projected impacts of climate change.
- 7.18.2. ~~NPS NNNPS NNNN NPS~~ paragraph 3.6 states that *'transport will play an important part in meeting the Government's legally binding carbon targets and other environmental targets. As part of this there is a need to shift to greener technologies and fuels, and to promote lower carbon transport choices.'* Paragraph 3.7 goes on to state that *'the impact of road development on aggregate levels of emissions is likely to be very small. Impacts of road development need to be seen against significant projected reductions in carbon emissions and improvements in air quality as a result of current and future policies to meet the Government's legally binding carbon budgets and the European Union's air quality limit values.'*
- 7.18.3. ~~NPS NNNPS NNNN NPS~~ paragraph 4.38 states that *'new development should be planned to avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the provision of green infrastructure.'*
- 7.18.4. ~~NPS NNNPS NNNN NPS~~ paragraphs 4.41, 4.42 and 4.43 concern the impacts climate change which a development can have on the UK Climate Projections 2009 (UKCOP09), which state that any ES that is prepared should identify *'appropriate mitigation or adaptation measures. This should cover the estimated lifetime of the new infrastructure.'*
- 7.18.5. ~~NPS NNNPS NNNN NPS~~ paragraph 5.17 highlights that *'carbon impacts will be considered as part of the appraisal of scheme options (in the business case) prior to the submission of an application for DCO.'* The NPS acknowledges that it is very unlikely that the impact of a road project will, in isolation, affect the ability of the Government to meet its carbon reduction plan targets. However, applicants are required to provide evidence of the carbon impact of the project and an assessment against the Government's carbon budgets. The ES Chapter 14 Climate (~~document reference TR010063 APP 6.12 APP-062 APP-073 APP-073 APP-073~~) provides an assessment of the Scheme against UK Carbon budgets which demonstrates compliance with the NPS.
- 7.18.6. ~~NPS NNNPS NNNN NPS~~ paragraph 5.18 states that any increase in carbon emissions, is not a reason to refuse development consent; unless the increase in carbon emissions resulting from the Scheme ~~are is~~ so significant that it would have a material impact on the ability of the Government to meet its carbon reduction targets. The Scheme is considered compliant with this paragraph, the ES Chapter 14 Climate (~~AS-020 document reference TR010063 APP 6.12~~) reports that in all cases the contribution to the carbon budgets is 0.005% or less which is negligible and will not materially impact the Government's ability to meet the budgets.
- 7.18.7. ~~NPS NNNPS NNNN NPS~~ paragraph 5.19 outlines the need for appropriate mitigation measures to be implemented in both design and construction. The effectiveness of such mitigation will be considered by the SoS in order to ensure the carbon footprint is not *'unnecessarily high'*, with the adequacy of the measures constituting a material factor in the decision-making process. The Scheme includes mitigation measures during both construction and operation that mitigate emissions by applying the carbon reduction hierarchy as detailed in DMRB LA114 and are detailed in ES Chapter 14 Climate (~~APP-020 document reference TR010063 APP 6.12~~).
- 7.18.8. One of the mitigation measures for the operation of the Scheme includes NMU routes that encourage the use of alternative means of transport to help achieve the goal of creating a more integrated and sustainable transport network whilst reducing emissions. There is also a provision within the design for public transport use from the Scheme opening. This complies with ~~NPS NNNPS NNNN NPS~~ paragraph 5.19 as well as the Gloucestershire Climate Change Strategy (2019) and local transport policy LTP PD0.1 which aims to reduce transport carbon emissions by 2045 and create a ~~carbon-carbon~~-neutral county

by 2050 by addressing travel demand and promoting sustainable modes of transport and expects developers to deliver sustainable transport with *'appropriate connectivity to the existing transport network, good access to public transport, and high permeability to walk, cycle and be mobility friendly'*.

Climate Vulnerability

- 7.18.9. Chapter 14 Climate of the ES (~~document reference TR010063 APP 6. (AS-073)~~ also considers how projected climate changes in the project area could affect the Scheme. The assessments ~~find~~ found that the Scheme could be vulnerable to operational impacts ~~linking~~ linked to expected changes in the climate, including warmer winters, hotter summers, heavier rain and wetter winters. Mitigation measures that are embedded with the design, including ensuring structures can adapt to expected future variations in temperature, would ensure that the Scheme either avoids these impacts, minimises them or reduces their consequences to acceptable levels. Therefore, it is concluded that none of the potential climate vulnerability impacts are found to be adverse.
- 7.18.10. This also demonstrates compliance with paragraph ~~154~~ 159 of the NPPF which states that: *'New development should be planned for in ways that avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure.'*
- 7.18.11. Policy LTP PD0.2 of the Gloucestershire LTP states that GCC will 'realise the opportunities for green infrastructure enhancement associated with transport infrastructure resilience and performance through both the integration of green, blue and grey infrastructure, and the delivery of green naturally-based solutions to aid mitigation requirements.' The embedded landscape design for the Scheme will futureproof the Scheme in relation to climate change, through measures such as diverse planting species including drought tolerant species, use of ecological best practices, a number of attenuation ponds, and retention of existing trees and vegetation where possible. The Scheme will therefore provide mitigation for changes to extreme weather, heavier rain, and hotter and drier weather. These measures, therefore, demonstrate compliance to local policy requirements.
- 7.18.12. The JCS has the ambition to create a sustainable, natural, built and historic environment. Strategic objective 6 is focused on meeting the challenges of climate change, with the plan aiming to make the *'fullest contribution possible to the mitigation of, and adaptation to, climate change and the transition to a low-carbon economy'*.
- 7.18.13. The Cheltenham Plan outlines a series of themed objectives. Theme C is focused on ensuring the quality and sustainability of the Borough's cultural assets and natural and built environment are valued and recognised locally, nationally, and internationally. Objective (d) aims to contribute to this vision by addressing the challenge of climate change, ensuring that development meets high design and sustainability standards, which ~~is~~ are built to be acceptable over the long term.
- 7.18.14. Given the above, the Scheme is considered to accord with both national and local policy with regard to climate change.

7.19. Cumulative Impacts

- 7.19.1. ~~NPS NNNPS NNNN NPS~~ paragraph 4.3 states that when considering any proposed development, the examining authority should consider the potential adverse impacts including any cumulative adverse impacts. Chapter 15 Assessment of Cumulative Effects of the ES (~~APP-074~~) ~~application document reference TR010063 APP 6.13~~ presents the cumulative effects assessment (CEA) for the Scheme and demonstrates compliance with ~~NPS NNNPS NNNN NPS~~ and the requirements of EIA Regulations 2017.

- 7.19.2. Paragraph 4.16 of the ~~NPS NNNPS NNNN NPS~~ states that when considering significant cumulative effects, the ES should provide information on how the effects of the applicant's proposal would combine and interact with the effects of other development (including projects for which consent has been granted, as well as those already in existence). Paragraph 4.17 of the ~~NPS NNNPS NNNN NPS~~ states that the examining authority should consider how significant cumulative effects and the interrelationship between effects might, as a whole, affect the environment, even though they may be acceptable when considered on an individual basis with mitigation measures in place. The CEA demonstrates compliance with these two ~~NPS NNNPS NNNN NPS~~ requirements. The methodology used for the CEA explores how predicted effects of the Scheme on receptors/ resources may alter when they are considered in their totality (i.e. across all topic assessments) (Intra-Scheme), as well as in the context of Reasonably Foreseeable Future Projects (RFFPs) that could potentially interact with the Scheme (Inter-Scheme).
- 7.19.3. Paragraph ~~185-191~~ of the NPPF states that planning decisions should ensure that new development is appropriate for its location, taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development.
- 7.19.4. Policy SD14 of the JCS (2017) states that new development must '*result in no unacceptable levels of air, noise, water light or soil pollution or odour, either alone or cumulatively, with respect to relevant national and EU limit values*'.
- 7.19.5. Policy INF1 of the JCS (2017) requires developers to assess the impact of proposals on the transport network through a Transport Assessment which demonstrates the impact, including cumulative impacts of the prospective development on congestion on the transport network, travel safety, and noise/ atmospheric pollution within the zone of influence of the development. This policy also states that:
- 'Planning permission will be granted where the impact of development is not considered to be severe. Where severe impacts that are attributable to the development are considered likely, including as a consequence of cumulative impacts, they must be mitigated to the satisfaction of the Local Planning Authority in consultation with the Highway Authorities and in line with the Local Transport Plan.'*
- 7.19.6. Chapter 15 Assessment of Cumulative Effects of the ES (~~APP-074~~)~~application document reference TR010063 APP 6.13~~ presents an assessment of the in-combination and cumulative effects of the Scheme. The chapter states that there are potential interactions with four other projects which could lead to significant cumulative inter-project effects. However, all four are developments dependent upon the Scheme, and the conclusions take into account ~~of the~~ assumptions around the phasing of the other developments in relation to the Scheme, as well as the requirement for the other developments to adhere to all relevant environmental legislation regarding the impacts of their own proposals.
- 7.19.7. Cross-topic intra-~~Scheme~~-~~scheme~~ impacts with the potential to give rise to cumulative effects have also been assessed. Chapter 15 has identified the potential for significant cumulative intra-Scheme effects at three receptors, as follows:
- Residents of Uckington – in construction, changes to key rural characteristics (moderate adverse) and demolition of three residential properties to the south of the A4019 (large adverse).
 - Residents on Stanboro Lane – in construction, changes to landscape characteristics for residents of Sheldon Cottages (moderate adverse) and the demolition of three properties in the vicinity of Sheldon Nurseries on Stanboro Lane to the north of the A4019 and west of the M5 (large adverse).
 - Residents of Uckington (retained residential properties) – in operation, impacts on key characteristics of the settlement from demolition of buildings and urbanisation

(moderate adverse) and improvements to access for a range of modes for <30 homes at Uckington (moderate beneficial).

7.19.8. Mitigation measures proposed in relation to the work of a Project Liaison Officer (PLO) and set out within the REAC (TR010063 – APP 7.4) largely address the cumulative construction effects identified. Further targeted engagement is advised with the community of Uckington.

7.19.9. Given the above, the Scheme is considered to accord with both national and local policy.

7.20. Planning Balance

7.20.1. The analysis of the planning policy above provides an assessment of the Scheme's compliance with relevant planning policy, including the ~~NPS NNNPS NNN NNPS~~. It firstly sets out the need for the Scheme, supported by both national policy through the ~~NPS NNNPS NNNN NPS~~, NPPF and RIS2, and through local and regional planning policy.

7.20.2. Section 7.6 explains that, in the case of its location within the Green Belt, it is the Applicant's view that the Scheme does not constitute inappropriate development and presents a compelling case for the Scheme to come forward.

7.20.3. The Scheme is needed to support planned housing and economic growth around Cheltenham as the current highway provision would not be able to accommodate the additional traffic and associated journeys. The existing junction is constrained through being two-way rather than four-way, therefore an all-movements junction would increase the options for vehicular access into west Cheltenham from the M5.

7.20.4. An extensive assessment of alternative options for the Scheme has been explored which provides justification for the chosen design, as set out in Chapter 3 Assessment of Alternatives of the ES (~~APP-062~~)~~application document reference TR010063 APP 6.2~~. Nine options have been identified from three studies undertaken between 2012 and 2018. Five options were taken forward to the appraisal stage and were assessed with regards to environmental impact, buildability and programme, compatibility with key design considerations, option cost, ~~benefit~~-~~benefit~~-cost ratio (BCR) and value for money (VfM).

7.20.5. Three options were then taken forward to be considered in the non-statutory consultation held in Autumn 2020. Option 2 was then taken forward as the preferred route for the Scheme. Since this announcement, further assessment and design development took place which involved feedback received during public consultation and the results of further survey and assessment work. Further design development work was also undertaken following the statutory consultation held in December 2021 – February 2022.

7.20.6. As set out above, consultation feedback received and the consideration of a range of sustainability criteria has led to changes to the design of the Scheme which is included in this application for development consent and is considered the best option for addressing the need for the Scheme and the Scheme objectives.

7.20.7. An assessment of the environmental effects of the Scheme has been carried out and documented within the ES and summarised within the Non-Technical Summary of the ES (~~APP-059~~)~~application document reference TR010063 APP 6.1~~. The mitigation measures proposed to offset the impacts identified include, but are not limited to:

- Targeted engagement will be required to manage the potential cumulative adverse construction effects for residents in Uckington, such as adverse noise and air quality impacts.
- Coordination of works alongside a PLO.
- Impacts relating to extreme weather are to be mitigated by adherence to best practices.

- Implementation of a Traffic Management Plan.
 - Implementation of a Community Communications Plan and Community Engagement Plan.
- 7.20.8. Notwithstanding this, it is noted through the ES that there are residual significant effects expected as a result of the Scheme. These include:
- Adverse intra-Scheme cumulative operational effect on residents of Uckington to the north of the A4019 (residents of North Uckington).
 - Beneficial intra-Scheme cumulative operational effect on receptors (biodiversity, agricultural land and WCH) in the M5 Junction 10 southern quadrant.
- 7.20.9. The full set of mitigation measures are set out within the Environmental Management Plan (EMP) (~~application document reference TR010063 APP 7.3AS-025~~) which supports this DCO application and reflects the mitigation measures set out in the REAC (~~application document TR010063 APP 7.4AS-027~~). These mitigation measures significantly reduce the adverse impacts of the Scheme and have been developed utilising best practice measures, liaison with relevant LPA representatives and ~~through~~ engagement with affected landowners.
- 7.20.10. The environmental mitigation measures have been subject to discussion with ecologists from the local planning authorities, Natural England and the Environment Agency and constitute a significant package of mitigation measures.
- 7.20.11. The economic case for the Scheme in Section 5 has identified that the proposal would constitute medium to high value for money when compared to the DM scenario.
- 7.20.12. It is necessary to prove a balance of the compelling need for the Scheme against those effects outlined, taking into account the substantial set of mitigation measures proposed. The key effects identified in the suite of submission documents and their associated mitigation measures are set out in Table 7-1 below.

Table 7-1 - Effects and mitigation measures

Key Scheme effects	Proposed mitigation
Construction impacts relating to reduced air quality and elevated dust deposition.	Best practice construction mitigation measures, including regular water-spraying and sweeping of unpaved and paved roads to minimise dust and remove mud and debris.
Increased congestion and decreased access for vehicles during construction.	Traffic management will be implemented to maintain traffic flows during the construction of Junction 10. A minimum of one eastbound and one westbound traffic lane will typically be maintained on the A4019 throughout the construction period.
Demolition of residential properties.	Appropriate consultation with affected landowners and financial compensation through the compulsory purchase process.
Stopping up of PRow affecting WCH movement and active travel.	The Scheme reinstates WCH routes along different alignments and these are realised within the construction phase.

Key Scheme effects	Proposed mitigation
The Scheme sits within Green Belt land.	The Scheme preserves the Green Belt's openness and does not conflict with the purposes of the Green Belt. Replanting to roadsides and other embedded mitigation would ensure that, in the long term, the Scheme would sit comfortably in the landscape and potentially provide an enhancement of the local environment.
Adverse landscape effects may be experienced during construction and initially upon completion of the Scheme.	Once the designed-in (embedded) mitigation is established and matured, the Scheme would not have any long-term significant adverse effects on landscape character or visual amenity, and in some cases may provide beneficial effects.
Effects are anticipated due to impacts to known and as-yet-yet unknown archaeological remains.	A robust programme of archaeological investigation and recording following an Archaeological Management Plan prepared in consultation with the local planning authority's archaeological advisor would mitigate these impacts.
Potential impacts have been identified in relation to biodiversity resources.	A range of measures have been identified to avoid, mitigate and compensate for the effects of these impacts. These include design specifications and construction management requirements.
Potential localised adverse effects to the River Chelt floodplain on the existing farmland.	Effects are determined to cause no increase in flood risk, although they will still result in localised adverse impacts (increase in flood depth by 10 mm to 230 mm). The Scheme is consulting with the landowners on the increases in peak flood level, and level and has included these areas inside the Order limits. All other impacts have been mitigated so as not to cause any significant impacts through the implementation of embedded and essential mitigation.

7.20.13. The key benefits of the Scheme clearly outweigh any actual and perceived harm. The Scheme is critical to maintaining the safe and efficient operation of the junction and enabling the planned development and economic growth. This is evidenced through the Scheme bringing forward new housing (c.9,000 homes) and employment land proposed in the JCS, in strategic and safeguarded allocations. Some of these allocations are linked to wider economic investment, including a ~~Government government~~-supported cyber business park (Cyber Central UK) adjacent to the GCHQ site in west Cheltenham. This demonstrates that whilst the Scheme will result in local benefits in terms of increased capacity on the road network around M5 Junction 10, as well as the bringing forward of housing and employment land, the Scheme will also result in key benefits which are of national significance.

7.20.14. Those benefits of national significance are the improvement of the junction itself resulting in the increased capacity of a key section of the SRN which provides the primary link between Birmingham, Bristol and Exeter. Furthermore, the employment sites to be brought forward will provide supportive industries to the GCHQ facility, a site which is of national importance.

- 7.20.15. By way of contrast, any identified adverse effects resulting from the Scheme, such as those set out in the Green Belt assessment, relating to encroachment on the countryside, or those within the ES, are strictly localised and will not have nationally significant consequences. These adverse effects are also accompanied by proposed mitigation, a summary of which is provided in Table 7-1 ~~Table 7-1 - Effects and mitigation measures~~ ~~Table 7-1 - Effects and mitigation measures~~ ~~Table 7-1 - Effects and mitigation measures~~ ~~Table 7-1 - Effects and mitigation measures~~ above.
- 7.20.16. In light of the above, it is considered that the adverse effects do not outweigh the significant benefits of the Scheme and the overall planning balance is therefore in favour of making the DCO for the Scheme.

8. Conclusion

- 8.1.1. This Statement and accompanying appendices set out the policy context against which the Scheme should be viewed. It demonstrates that there is a clear justification and need for the Scheme which is grounded in national, regional and local planning policy.
- 8.1.2. As per Section 104(3) of the Act, the Scheme is in accordance with the ~~NPS-NNNPS~~ NNNN NPS. Furthermore, none of the exceptions detailed between Section 104(4)-(8) apply to the Scheme.
- 8.1.3. The ~~NPS-NNNPS-NNNN NPS~~ and RIS2 set out a strong position of support in delivering national networks that meet the county's long-term needs, whilst supporting a prosperous and competitive economy and improving the quality of life for all.
- 8.1.4. There is a pressing need identified for the Scheme which accords with the Government's national objectives highlighted in ~~the NSP-NNNN NPS~~, NPPF and RIS2, as well as regional and local policies within GCC, CBC and TBC, particularly to enable the planned growth ~~on~~ of safeguarded and allocated land within the JCS on land west ~~of~~ north-west of Cheltenham. These are set out in detail in Appendices A and B.
- 8.1.5. The Scheme has been shown to be in accordance with policies within the JCS and the Gloucestershire Local Transport Plan. An assessment has also been provided to demonstrate the accordance of the Scheme with the relevant environmental policies of the CBC and TBC adopted Local Plans.
- 8.1.6. An assessment has been provided of the Scheme's accordance with Green Belt policy and demonstrates that there is a clear case that the Scheme does not constitute inappropriate development and should be considered acceptable.
- 8.1.7. The Scheme is supported by the ES ~~(application documents TR010063 APP 6.1 to 6.15)~~ to establish the impacts and mitigation measures needed to meet the Scheme objective to keep environmental impacts to a minimum.
- 8.1.8. An assessment of the merits of this Scheme against the policy within the ~~NPS-NNNPS~~ NNNN NPS has been undertaken and a review of the planning balance has been completed which determines that the benefits of the Scheme are considered to outweigh any harm identified. The Scheme is considered to accord with the policies within the ~~NPS-NNNPS-NNNN NPS~~ NNNN NPS.

Appendices



Appendix A. Scheme accordance with national, regional and local development plan policies

A.1. Introduction

- A.1.1. This Appendix provides an assessment of the Scheme's alignment with key national and local policy documents.
- A.1.2. These policy documents form material considerations in the planning policy framework for the Scheme.
- A.1.3. The following policy documents are included in this appendix:
- National Planning Policy Framework (~~2024~~2023).
 - Strategic road network and the delivery of sustainable development (2022).
 - Joint Core Strategy 2011- 2031 (2017).
 - Gloucestershire Local Transport Plan (2020-2041).
 - Tewkesbury Borough Local Plan – Saved Policies (2011).
 - Gloucester City Council Local Plan – Saved Policies (2002).
 - Gloucestershire Air and Health Strategy.
 - Minerals Local Plan for Gloucestershire (2018 -2031).
 - Gloucestershire Waste Core Strategy (2012-2027).
 - The Cheltenham Plan (2020).
 - The Cheltenham Plan Saved policies (2006).
 - Tewkesbury Borough Plan (2022).
 - GLEP Strategic Economic Plan for Gloucestershire 2.0 (2018 Update).
 - Golden Valley SPD (July 2020)

Planning Policy Document	Key Policies and Objectives	Scheme Conformity with Policy
National Planning Policy Framework (NPPF)	<p>Paragraph 8 – three overarching objectives: An economic objective: to help build a strong, responsive and competitive economy A social objective: to support strong, vibrant and healthy communities An environmental objective: to protect and enhance our natural, built and historic environment</p>	<p>Section 3 of this Statement outlines the need for the Scheme and outlines the wider beneficial effects of the Scheme for the local community and wider economy. ES Chapter 13 Population and Human Health (application document TR010063 APP 6.11 APP-072AS-014) considers the Scheme's impact on <u>the</u> population and the health of the communities within the Scheme boundary and beyond. Each chapter of the ES deals with each environmental sub-topic in turn and sets out how the Scheme will enhance the environment and mitigate adverse impacts.</p>
	<p>Paragraph 81-85 – planning <u>Planning</u> policies and decisions should help create the conditions in which businesses can invest, expand and adapt. Significant weight should be placed on the need to support economic growth and productivity, taking into account both local business needs and wider opportunities for development.'</p>	<p>The Scheme will support economic growth through improving transport connections and enabling the JCS to deliver up to 35,175 new homes and 39,500 new jobs by 2031.</p>
	<p>Paragraph 92-96 - Planning policies and decisions should aim to achieve healthy, inclusive and safe places which:</p> <ul style="list-style-type: none"> a) promote social interaction. b) are safe and accessible. c) enable and support healthy lifestyles. 	<p>The Scheme proposes a number of new WCH assets for the operational phase, which will enhance access to local amenities, including new and revised WCH links to connect the community and promote active travel. Chapter 13 Population and Human Health of the ES (application document TR010063/APP/6.11APP-072) includes consideration of those with disabilities, and covers accessibility in varying forms including physical accessibility, access to local amenities, and access to information.</p>
	<p>Paragraph 99-103 - Existing open space, sports and recreational buildings and land, including playing fields, should not be built on unless certain criteria is met, including the open space, buildings or land being surplus to requirements or alternative facilities being provided as part of the scheme.</p>	<p>ES Chapter 13 Population and Human Health (application document TR010063 APP 6.11 APP-072AS-014) considers the Scheme's impact on open space, sports and recreational buildings in full. These receptors are not subject to land take as part of the Scheme. The effects associated with these types of receptors are largely based on <u>the</u> separation of the population from these receptors/facilities during construction.</p>

Planning Policy Document	Key Policies and Objectives	Scheme Conformity with Policy
	<p>Paragraph 100-104 – ‘Planning policies and decisions should protect and enhance public rights of way and access, including taking opportunities to provide better facilities for users, for example by adding links to existing rights of way networks including National Trails.’</p>	<p>As stated above, the Scheme will provide a number of new WCH assets for the operational phase, which will enhance access to local amenities. Chapter 13 Population and Human Health of the ES (application document TR010063/APP/6.11APP-072) assesses the impact of the Scheme on PRoWs and includes suggested mitigation of any adverse impacts including temporary diversions, and permanent diversions.</p>
	<p>Paragraph 105-109 – ‘the planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making.’</p>	<p>The Scheme will support housing and economic growth through improving transport connections and enabling the JCS to deliver up to 35,175 new homes and 39,500 new jobs by 2031.</p> <p>The Scheme will provide a number of new WCH assets for the operational phase which will promote sustainable modes of transport and active travel. The Scheme will also provide new/replacement bus stops on the A4019 and improved pedestrian crossing facilities.</p>
	<p>Paragraph 110-114 – ‘In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:</p> <ul style="list-style-type: none"> a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up. b) safe and suitable access to the site can be achieved for all users. c) the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance. d) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.’ 	<p>The Scheme will bring forward proposed strategic allocation sites A4 (Land at North West Cheltenham) and A7 (Land at West Cheltenham), as set out in the JCS, by increasing the capacity of the road network. Capacity will also enable Safeguarded sites in north-west Cheltenham to come forward in future years.</p> <p>The Scheme objectives include providing safe access to services for the local community and including for users of sustainable transport modes within and to west and north-west Cheltenham. This includes new and improved routes for pedestrians, cyclists and equestrians and improving crossing facilities, as well as the provision of a bus lane on the A4019 eastbound carriageway.</p> <p>A detailed description of the Scheme design can be found in ES Chapter 2 (application document TR010063 APP 6.2APP-062).</p>

Planning Policy Document	Key Policies and Objectives	Scheme Conformity with Policy
	<p>Paragraph 412-116 - applications for development should:</p> <ul style="list-style-type: none"> a) give priority first to pedestrian and cycle movements. b) address the needs of people with disabilities and reduced mobility. c) create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles. d) allow for the efficient delivery of goods, and access by service and emergency vehicles. e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations. <p>Paragraph 430-135 – ‘Planning policies and decisions should ensure that developments:</p> <ul style="list-style-type: none"> a) will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development. b) are visually attractive as a result of good architecture, layout and appropriate and effective landscaping. c) are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change (such as increased densities). d) establish or maintain a strong sense of place, using the arrangement of streets, spaces, building types and materials to create attractive, welcoming and distinctive places to live, work and visit. 	<p>A Transport Assessment (application document TR010063 APP 7.5APP-020) has been submitted with the DCO application which considers the impact of the Scheme on the transport network, including impacts on congestion and travel safety.</p> <p>Chapter 13 Population and Human Health of the ES (application document TR010063 APP 6.11APP-072AS-014) provides details of the replacement and enhanced PRoW included in the Scheme, which will improve connectivity and <u>amenity amenities</u> for walkers, cyclists and equestrians.</p> <p>The Transport Assessment (application document TR010063 APP 7.5APP-020) considers the safety impacts of the Scheme as well as movement and connectivity. The assessment concludes that no unacceptable impacts on highway safety will occur, both during construction and operation. Furthermore, the general magnitude of flow changes on the local road network is unlikely to result in severe impacts.</p> <p>Chapter 9 Landscape and Visual (application document TR010063 APP 6.7APP-068) details the landscape impacts of the Scheme. The chapter states that although there would be <u>an</u> increased presence of roads and associated infrastructure, these would be in keeping with the existing landscape character and context of views within the area.</p> <p>Chapter 13 Population and Human Health of the ES (application document TR010063 APP 6.11APP-072AS-014) takes into account green and open space which is affected by the Scheme. There will be no direct development/land take and all negative health outcomes relate to the construction stage (relating to temporary reduced access and ease of movement). Positive health outcomes are predicted for the operational phase concerning access to these community assets.</p>

Planning Policy Document	Key Policies and Objectives	Scheme Conformity with Policy
	<p>e) optimise the potential of the site to accommodate and sustain an appropriate amount and mix of development (including green and other public space) and support local facilities and transport networks.</p> <p>f) create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users; and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience.'</p> <p>Paragraph 137-142 – 'The Government attaches great importance to Green Belts. The fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open; the essential characteristics of Green Belts are their openness and their permanence.'</p> <p>Paragraph 150-155 – 'Certain other forms of development are also not inappropriate in the Green Belt provided they preserve its openness and do not conflict with the purposes of including land within it.' This includes local transport infrastructure which can demonstrate a requirement for a Green Belt location.</p>	<p>Chapter 13 Population and Human Health of the ES (application document TR010063 APP 6.11APP-072AS-014) assesses amenity amenities as part of the human health assessment. This forms a cumulative assessment of criteria including amenity, physical health, mental health and accessibility to human health and community facilities.</p> <p>The Scheme does not result in the provision of additional residential or commercial buildings which could create urban sprawl from Cheltenham towards the west. Furthermore, the allocated sites which that the Scheme enables do not fall within the Green Belt. Full details on the Green Belt assessment for the Scheme are found in section 7.5.</p> <p>The Scheme is not considered to be inappropriate development in policy definition terms, in the Green Belt. The Scheme preserves the Green Belt's openness and does not conflict with the purposes of the Green Belt, in line with paragraph 155 of the NPPF. The Scheme can be described as engineering operations and the improvement of existing local transport infrastructure which can demonstrate a requirement for a Green Belt location.</p> <p>In terms of preserving the openness of the Green Belt, the conclusions of Chapter 9 Landscape and Visual of the ES (application document TR010063 APP 6.7APP-068) state that although initially, many views would change with an increased presence of roads and associated infrastructure, these features are not entirely incongruous with the existing context of views. Replanting to roadsides and other embedded mitigation would ensure that, in the long term, the Scheme would sit comfortably in the landscape and potentially provide an enhancement of the local environment.</p>

Planning Policy Document	Key Policies and Objectives	Scheme Conformity with Policy
		<p><u>Full details on the Green Belt assessment for the Scheme is found in section 7.5. As outlined in paragraphs 7.6.8 to 7.6.27 of this Statement, the Scheme is not considered to be inappropriate development in policy definition terms, in the Green Belt. The Scheme preserves the Green Belt's openness and does not conflict with the purposes of the Green Belt.</u></p> <p><u>Section 7.6 of this document also provides an alternative case for very special circumstances, in the event that the SoS disagrees that the Scheme amounts to appropriate development within the Green Belt. These include the economic benefits of the Scheme, the provision of infrastructure and the bringing forward of key housing and employment sites.</u></p> <p><u>In terms of preserving the openness of the Green Belt, the conclusions of Chapter 9 Landscape and Visual of the ES (APP-068) state that although initially, many views would change with an increased presence of roads and associated infrastructure, these features are not entirely incongruous with the existing context of views. Replanting to roadsides and other embedded mitigation would ensure that, in the long term, the Scheme would sit comfortably in the landscape and potentially provide an enhancement of the local environment. Full details on the Green Belt assessment for the Scheme is found in section 7.6.</u></p>
	<p>Paragraph 1572 – the <u>The</u> planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure.'</p>	<p>Chapter 14 Climate of the ES (document reference TR010063 APP 6.12AS-020) sets out the Scheme assessment on climate, detailing the likely effects of the Scheme on climate and the vulnerability of the Scheme to climate change.</p> <p>Although the Scheme could be vulnerable to operational impacts linked to these changes in the climate, the assessment offers mitigation measures that either avoid</p>

Planning Policy Document	Key Policies and Objectives	Scheme Conformity with Policy
	<p>Paragraph 154-159 - New development should be planned for in ways that:</p> <ul style="list-style-type: none"> a) avoid increased vulnerability to the range of impacts arising from climate change, including through adaptation measures such as green infrastructure. b) can help to reduce greenhouse gas emissions, such as through its location, orientation, and design. Any local requirements for the sustainability of buildings should reflect the Government’s policy for national technical standards. <p>Paragraph 159-165 – ‘Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk (whether existing or future). Where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere.’</p> <p>Paragraph 174-180 – ‘Planning policies and decisions should contribute to and enhance the natural and local environment by:</p> <ul style="list-style-type: none"> (a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan). (b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland. 	<p>these impacts, minimise them or reduce their consequences to acceptable levels.</p> <p>Chapter 14 Climate of the ES (AS-020)document reference TR010063-APP-6.42 considers how projected climate changes could affect the Scheme, and provides an assessment of vulnerability to climate change and extreme weather events. The Chapter concludes that the Scheme will improve transport resilience by replacing old degrading assets that were designed with less resilience to climate change than the assets that will replace them.</p> <p>Regarding greenhouse gas emissions, the chapter concludes that emissions arising from the construction phase and <u>the</u> opening year of the Scheme together contribute 0.005% to the fourth carbon budget, which would not have a significant effect on climate.</p> <p>The Flood Risk Assessment (application document TR010063-APP-6.15APP-070) describes how the Scheme is considered to be essential infrastructure. The Scheme passed the Exception Test subject to <u>the</u> implementation of the flood mitigation measures as set out within the FRA and drainage strategy. The Scheme’s adherence to the requirements of the Exception Test is detailed in the FRA.</p> <p>Chapter 9 Landscape and Visual of the ES (application document TR010063-APP-6.7APP-068) sets out the potential landscape and visual impacts associated with the construction and operation of the Scheme. The proposed landscape mitigation measures seek to ensure an attractive visual appearance of the Scheme. The chapter also states that although significant adverse effects may be experienced during construction and initially upon completion, once the designed-in mitigation has <u>been</u> established and matured, the Scheme would not have any long-term significant adverse effects on landscape character or visual amenity, and in some cases may provide beneficial effects.</p>

Planning Policy Document	Key Policies and Objectives	Scheme Conformity with Policy
	<ul style="list-style-type: none"> (c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate. (d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures. (e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. (f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.' 	<p>Chapter 10 Geology and Soils of the ES (application document TR010063 APP 6.8APP-069 APP-069) assesses the impact of the Scheme on agricultural land, including the impact on farms and land-based enterprises with particular emphasis on agricultural quality of soils and <u>the best</u> and most versatile (BMV) land. The chapter states that although agricultural land is anticipated to have permanent restrictions due to being located within land used for flood mitigation, with the exception of the large flood storage basin, the land will be returned to its original use upon operation of the Scheme.</p> <p>As part of the Scheme's objectives, the Scheme is targeting a net gain in biodiversity.</p> <p>The Ground Investigation Report (application document TR010063 APP 6.15APP-070) sets out the land instability assessment associated with the Scheme. The report includes a technical framework for identifying and remediating contamination through the application of a risk management process. The report states that the overall contamination risk associated with the site is considered to be low for human health receptors.</p> <p>Chapter 5 Air Quality (application document TR010063 APP 6.3AS-012AS-013), Chapter 6 Noise and Vibration (application document TR010063 APP 6.4AS-014) and Chapter 8 Road Drainage and the Water Environment (application document TR010063 APP 6.6AS-013) set out their respective assessments in relation to the Scheme.</p>
	<p>Paragraph 179-185 – plans should protect and enhance biodiversity through the identification, mapping and safeguarding of 'components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors that connect them; and areas identified by national and local partnerships for habitat management, enhancement restoration and creation'. Furthermore, plans should 'promote the conservation, restoration and enhancement of priority habitats,</p>	<p>The ES Chapter 7 Biodiversity (application document TR010063 APP 6.5 (APP-066)) considers the safeguarding, protection and enhancement of habitats. Where impacts have been identified, a range of measures have been identified to avoid, mitigate and compensate for the effects of these impacts. These include design specifications and construction management requirements.</p>

Planning Policy Document	Key Policies and Objectives	Scheme Conformity with Policy
	<p>ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.'</p> <p>Paragraph 180-186 - When determining planning applications, local planning authorities should apply the following principles:</p> <ul style="list-style-type: none"> a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused. b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest. c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists. d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.' 	<p>Significant residual effects in relation to biodiversity resources are not anticipated as a result of the Scheme.</p> <p>The Scheme has the potential to achieve a net gain for terrestrial habitats, hedgerows, rivers and streams, and ditches within the Order limits, with the potential to achieve in excess of 10% for all elements.</p> <p>The ES Chapter 7 Biodiversity (application document TR010063 APP 6.5 APP-066) considers the effects on biodiversity in detail. 19.20 ha of species-species-rich road verge will be created within the Order Limits, which will more than compensate for the loss of approximately 0.1 ha of lowland meadow priority habitat along the A4019.</p> <p>The Biodiversity Net Gain Report (application document TR010063 APP 6.15 APP-070) sets out the biodiversity enhancements to be provided as part of the Scheme.</p>

Planning Policy Document	Key Policies and Objectives	Scheme Conformity with Policy
	<p>Paragraph 183<u>189</u> – states that policies and decisions should ensure that a site is ‘suitable for its proposed use taking account of ground conditions and any risks arising from land instability and contamination.’</p>	<p>ES Chapter 10 Geology and Soils (TR010063-APP-6.8<u>APP-069</u>) sets out the baseline in terms of the ground conditions, soil and geology characteristics for the Scheme. The baseline conditions section states that it is unlikely that there is an unacceptable risk to human health from soils across the M5, A4019 and the-Link Road areas. No visual indicators of contamination were recorded in any of the locations progressed during the investigation.</p>
	<p>Paragraph 185 – ‘Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development.’</p>	<p>The ES Chapter 13 Population and Human Health (application document TR010063-APP-6.11<u>AS-014</u>) considers the likely effects of the Scheme on human health. This forms a cumulative assessment of criteria including amenity, physical health, mental health and accessibility to human health and community facilities.</p> <p>During construction, adverse health and wellbeing outcomes associated with changes to air quality, noise, landscape amenity and separation from open space and recreational routes are expected. These outcomes will be temporary and will be subject to mitigation measures including targeted community engagement to provide advance notice of works activities and best practice construction mitigation measures.</p> <p>The slip road closures sensitivity assessment also identified adverse cumulative human health effects for the more sensitive affected receptors, on a precautionary basis. This <u>is</u> related to changes to amenity<u>ies</u> due to the slip road closures. These effects will also be temporary and subject to the same construction stage mitigation measures.</p> <p>Beneficial health and well-being outcomes associated to<u>with</u> access improvements for a range of modes and to community facilities are expected at<u>in</u> the opening year scenario and future year scenario.</p>
	<p>Paragraph 186<u>192</u> – ‘Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the</p>	<p>Chapter 5 Air Quality of the ES (application document TR010063-APP-6.3<u>AS-012</u>) states that the air quality impacts</p>

Planning Policy Document	Key Policies and Objectives	Scheme Conformity with Policy
	<p>presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement.'</p>	<p>identified in the operational period are not significant and no mitigation measures have been recommended.</p> <p>The construction assessment concludes that any air quality effects would be temporary and could be suitably minimised by the application of standard and appropriate mitigation measures. Furthermore, there are unlikely to be any significant adverse air quality effects relating to construction traffic and local traffic management.</p>
	<p>Paragraph 194-200 – 'In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.'</p>	<p>Chapter 11 Cultural Heritage of the ES (application document TR010063 APP 6.9APP-070) provides details of the existing historic environment and how the design mitigation for landscape and visual impacts will serve to protect this.</p> <p>Consultation with the Gloucestershire County archaeological advisor has been ongoing, including the review of design options, written schemes of investigation and the results of geophysical survey and trial trenching. Consultation is also underway with Historic England regarding the potential impacts on designated heritage assets.</p>
	<p>Paragraph 197-203 - 'In determining planning applications, local planning authorities should take account of:</p> <ul style="list-style-type: none"> a) The desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation; b) The positive contribution that conservation of heritage assets can make to sustainable communities including their economic vitality; and c) The desirability of new development making a positive contribution to local character and distinctiveness.' 	<p>As stated in Chapter 11 Cultural Heritage of the ES (application document TR010063 APP 6.15APP-070), the Scheme seeks to avoid adverse impacts to known and as-yet <u>yet</u>-unknown archaeological remains. The Scheme has been developed with <u>a</u> design to minimise the impacts to on the historic built environment, including the designated assets at Moat House and the historic character at Uckington.</p> <p>Although the Scheme would inevitably introduce additional modern highway infrastructure close to heritage assets, landscape design and planting will help to create a sympathetic character around the road.</p>

Planning Policy Document	Key Policies and Objectives	Scheme Conformity with Policy
	<p>Paragraph 200-206 – ‘Any harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting) should require clear and convincing justification. Substantial harm to or loss of:</p> <ul style="list-style-type: none"> a) Grade II Listed Buildings or grade II registered park or garden should be exceptional; and b) Assets of the highest significance, notably Scheduled Monuments, protected wreck sites, battlefields, grade I and II* Listed Buildings, grade I and II* registered parks and gardens, and World Heritage Sites, should be wholly exceptional.’ 	<p>As stated in Chapter 11 Cultural Heritage of the ES (application document TR010063-APP-6.15APP-070), six above-ground heritage sites are to be removed in part or in whole as a result of construction activities.</p> <p>These sites are:</p> <ul style="list-style-type: none"> • GHER 29641: Ditches, pits, and post-holes probably representing a Roman field system. • GHER 5437: Roman site. • GHER 8637: Area of cropmarks of later prehistoric or Romano-British settlement and field systems. • GHER 22314: post-holes and linear features associated with post-medieval pottery. • GHER 48027: Linear and curvilinear cropmarks visible on aerial photographs. • GHER 27052: Site of World War Two heavy anti-aircraft battery (A12) composed of mounted four 3.7-inch static guns and GL Mark II radar, mostly demolished by 1970. <p>Five of these sites are low sensitivity, one is negligible and one is medium in sensitivity. None of the sites listed are sites which are set out in the policy.</p> <p>Although during operation the Scheme will result in impacts on scheduled monuments and listed buildings, mitigation measures will ensure that the effects are not significant.</p>
	<p>Paragraph 204-207 – ‘Where a proposed development will lead to substantial harm to (or total loss of significance of) a designated heritage asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or total loss is necessary to achieve substantial public benefits that outweigh that harm or loss, or all of the following apply:</p> <ul style="list-style-type: none"> a) the nature of the heritage asset prevents all reasonable uses of the site. 	<p>Chapter 11 Cultural Heritage of the ES (application document TR010063-APP-6.15APP-070) describes the heritage impacts through an assessment of effects and with information on topographical, geological and archaeological conditions.</p> <p>The chapter states that consideration of the level of harm to a heritage asset as a result of the Scheme is a primary concern for the decision-taker with regards to planning consent. As no significant effects are expected once all embedded and additional mitigation measures are in place, the Scheme is</p>

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	<p>b) no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation.</p> <p>c) conservation by grant-funding or some form of not for profit, charitable or public ownership is demonstrably not possible.</p> <p>d) the harm or loss is outweighed by the benefit of bringing the site back into use.'</p> <p>Paragraph 202-208 – 'Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal, including, where appropriate, securing its optimum viable use.'</p> <p>Paragraph 2093 – 'The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that effect directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset.'</p>	<p>considered to have less than substantial harm on to the historic environment.</p> <p>The Scheme seeks to mitigate adverse impacts to on known heritage assets and are is considered sufficient to mitigate impacts to on the settings of heritage assets affected by the Scheme. Opportunities are also sought to enhance the historic environment through the application of National Highways' Designated Funds to help protect the settings of designated heritage assets within the study area.</p> <p>Any residual impacts are balanced against the benefits of the Scheme, which include bringing forward future development and site allocations/ safeguarded land in three areas and increasing capacity on the road network.</p>
<p>Strategic road network and the delivery of sustainable development (2022)</p>	<p>Paragraph 12 states that 'new development should be facilitating a reduction in the need to travel by private car and focused on locations that are or can be made sustainable.'</p> <p>Paragraph 16 goes on to state that 'decision-taking should ensure that developments optimise the potential of sites to support local facilities and sustainable transport networks.'</p> <p>Paragraph 43 directs development promoters to ensure that proposals seek to 'enable a reduction in the need to travel by private car and prioritise sustainable transport opportunities ahead of capacity enhancements and new connections on the SRN.'</p>	<p>The Scheme's objectives include providing safe access to services for the local community and for users of sustainable transport modes within and to the west and north-west of Cheltenham. This includes new and improved routes for pedestrians, cyclists and equestrians and improving crossing facilities, as well as the provision of a bus lane on the A4019 eastbound carriageway.</p> <p>The Transport Assessment (application document TR010063 APP 7.5APP-020) considers the impact of the Scheme on the transport network. The assessment concludes that the Scheme is predicted to improve access for pedestrians, cyclists and vehicle users of the Scheme. This in turn will reduce the reliance on the use of the car by making routes more convenient, safe and attractive by improving <u>the</u></p>

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		<p>provision of existing public transport and sustainable transport modes.</p>
	<p>Paragraph 4 outlines the principal purpose of the SRN, which is to 'enable safe, reliable, predictable, efficient, often long distance, journeys of both people (whether as drivers or passengers) and goods in England between our:</p> <ul style="list-style-type: none"> • main centres of population. • major ports, airports and rail terminals. • geographically peripheral regions of England. • chief cross-border routes to Scotland and Wales.' 	<p>The M5 links the Midlands with the Southsouth-west, running from Junction 8 of the M6 at West Bromwich near Birmingham to Exeter in Devon, and linking with the M4 north of Bristol. Junction 10 of the M5 is strategically important for the region, particularly as northern and western Cheltenham are the sites of a number of large retail parks and employment areas, and the location of planned future housing and nationally significant business development.</p> <p>The capacity improvements at the junction therefore directly adhere to this policy as the improvements will provide an improved connection between <u>the</u> main centres of population at Bristol and Birmingham through the increased reliability and efficiency of long journeys on this section of the SRN.</p>

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	<p>Paragraph 21 states that NH will 'adopt a graduated and less restrictive approach to the formation of new connections on the remainder of the SRN, determining each case on its own merits. However, the preference will always be that new development should make use of existing junctions.'</p> <p>Paragraph 23 states that 'capacity enhancements such as modifications to existing junctions or road widening to facilitate development should be determined on a case-by-case basis. The general principle should be accepted where proposals would include measures to improve community connectivity and public transport accessibility, and this will be weighed against any negative safety, traffic flow, environmental and deliverability considerations, impacts on the permeability and attractiveness of local walking, wheeling and cycling routes, and alternative options to manage down the traffic impact of planned development or improve the local road network as a first preference.'</p>	<p>The Scheme primarily amounts to the alteration of the existing junction 10 of the M5, making alterations and improvements to an existing connection to the SRN.</p> <p>The Scheme's objectives include providing safe access to services for the local community and including for users of sustainable transport modes within and to west and north-west Cheltenham. This includes new and improved routes for pedestrians, cyclists and equestrians and improving crossing facilities, as well as the provision of a bus lane on the A4019 eastbound carriageway.</p> <p>Chapter 13 Population and Human Health of the ES (application document reference TR010063 APP 6.11AAS-018) provides detail on how the Scheme will promote community connectivity, through measures such as public transport infrastructure provision and the provision of improved WCH access.</p> <p>The Transport Assessment (application document TR010063 APP 7.5APP-020) sets out the likely impacts of the Scheme in relation to transport. The ES for the Scheme assesses the likely significant environmental impacts arising from the Scheme, including those arising from impacts on transport networks where relevant.</p>
	<p>Paragraph 42 states that 'development promoters are encouraged to identify any potential impacts on the SRN that may result from development proposals and discuss them with the company at the earliest opportunity. In the first instance, new developments should give priority to walking, wheeling and cycle movements and facilitate access to high-quality public transport where possible. The needs of people with disabilities and reduced mobility should be appropriately addressed in relation to all modes of transport.'</p>	<p>NH have <u>has</u> been subject to continued consultation through the development of the Statements of Common Ground (SoCG) with key stakeholders.</p> <p>It is also worth noting that, separate to NH's role as a statutory consultee, NH also acted as a project technical reviewer, providing review comments on the suite of technical deliverables which form the DCO application.</p> <p>Chapter 13 Population and Human Health of the ES (application document TR010063 APP 6.11AS-014) includes consideration of those with disabilities, and covers accessibility in varying forms including physical accessibility, access to amenity <u>amenities</u>, and access to information.</p>

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	<p>Paragraph 48 states that transport assessments should ‘start with a vision of what the development is seeking to achieve and then test a set of scenarios to determine the optimum design and transport infrastructure to realise this vision.’</p>	<p>Mitigation measures to be implemented which help to ensure accessibility for disabled users include the provision of new/replacement bus stops on the A4019, as well as a Community Engagement Plan being prepared and implemented, outlining the methods in which the local and surrounding community will be engaged during construction of the Scheme, which will ensure accessibility requirements of the disabled are taken into account.</p> <p>The Transport Assessment (application document TR010063 APP 7.5APP-020) sets out the overall vision of the Scheme in terms of the Scheme background and how the Scheme seeks to address congestion on the M5 at peak times, as well as to enable forthcoming housing and economic development sites as set out in the JCS.</p> <p>The assessment includes a set of traffic modelling scenarios used to estimate the forecast traffic flows in future year scenarios, with and without the Scheme, and then in a cumulative scenario including the Scheme and the associated JCS developments which are dependent on <u>the</u> provision of the Scheme.</p>
<p>Joint Core Strategy (JCS) 2011- 2031 (adopted 2017)</p>	<p>Strategic Objective 1 – Building a strong and competitive urban economy. Building a strong and competitive urban economy seeks to provide the right conditions and sufficient land in appropriate locations to support existing businesses and attract new ones.</p> <p>Strategic Objective 4 Conserving and enhancing the environment states that planning policy and decisions should ‘Conserve, manage and enhance the area’s unique natural environment and great biodiversity, including its waterways, Sites of Special Scientific Interest (SSSI),</p>	<p>Section 3 of this document (Planning Statement and Schedule of Accordance with National Planning Policy Statement) outlines the need for the Scheme.</p> <p>It highlights that the ability of GCC, CBC and TBC to deliver their planned housing and economic growth is partly contingent upon finding solutions to facilitate the smooth flow of traffic through this area, which the proposed Scheme will enable.</p> <p>The Scheme design and landscaping proposals will conserve and enhance the environment through embedded mitigation measures. ES Chapter 7 Biodiversity (document reference TR010063 APP 6.5APP-066) and Chapter 9 Landscape and Visual (document reference TR010063 APP 6.7APP-068) outline the specific mitigation measures and landscape</p>

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	<p>the Cotswold's AONB, and areas of landscape and biodiversity importance.'</p> <p>Strategic Objective 6 – Meeting the challenges of climate change</p> <p>The JCS has the ambition to create a sustainable, natural, built and historic environment. Strategic objective 6 is focused on meeting the challenges of climate change, with the plan aiming to make the 'fullest contribution possible to the mitigation of, and adaptation to, climate change and the transition to a low-carbon economy'.</p> <p>Strategic Objective 9 – Promoting healthy communities</p> <p>A healthy population will be maintained through ensuring that environmental quality and air quality is protected, and encouraging healthy lifestyles and a well society through access to key community facilities and services, including sport, recreation and leisure facilities, open spaces and sustainable transport, including public transport</p>	<p>design features which ensure the conservation and enhancement of the environment with reference to areas of landscape and biodiversity importance.</p> <p>Chapter 14 Climate of the ES (AP-073document reference TR010063 APP 6.12APP-062APP-073APP-073APP-073) considers how projected climate changes could affect the Scheme. The assessments findfound that the Scheme could be vulnerable to operational impacts linkinglinked to expected changes in the climate. Mitigation measures that are embedded within the Scheme design either avoid these impacts, minimise them or reduce their consequences to acceptable levels. Therefore, it is concluded that none of the potential climate vulnerability impacts are found to be significantly ly adverse.</p> <p>Chapter 13 Population and Human Health assessment Assessment of the ES (application document reference TR010063 APP 6.11APS-018) provides an assessment of the likely positive and negative effects on health. The chapter also sets out how the Scheme seeks to reduce severance to key community facilities.</p> <p>Key effects relating to healthy lifestyles and access to community facilities and services during construction mostly concern temporary reduced access, temporary disruptions to access due to construction works and traffic management, stopped up PRow resulting in negative effects on health and changes to key rural characteristics from construction works. These effects will be temporary and mitigation measures will be implemented including targeted community engagement to provide advance notice of works activities, as well as construction signage strategies.</p>

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	<p>SP 1- The Need for New Development</p> <p>During the plan period, provision will be made to meet the need for 35,175 new homes to be delivered and a minimum of 192 hectares of B-class employment land to support approximately 39,500 new jobs.</p> <p>This will be delivered by development within existing urban areas through District plans, existing commitments, urban extensions to Cheltenham and Gloucester and provision of Strategic Allocations at Ashchurch.</p> <p><u>SD1: Employment – except retail development</u></p> <p><u>The policy supports employment-related development at differing locations within the JCS boundary area including strategic allocations under SA1.</u></p> <p><u>Of note, is that under the policy area series of paragraphs related to the ‘M5 growth corridor’. Paragraph highlights agreement across relevant partners that the upgrading of Junction 10 to an all movements junction will support the economy of the JCS area and that of wider Gloucestershire. Supports accelerated growth of the economy, enabling land to be delivered for mixed use including high value employment.</u></p> <p><u>Here the JCS acknowledges that at the time of adoption there was no certainty that funding for the junction improvements would be released and it is not therefore possible to anticipate any delivery within the JCS plan period; but states that should funding become</u></p>	<p>During operation, improvements to access for a range of modes arising from Scheme implementation are expected to result in beneficial effects and beneficial health and wellbeing outcomes.</p> <p>Section 3 of this document (Planning Statement and Schedule of Accordance with National Planning Policy Statement) outlines the need for the Scheme.</p> <p>It highlights that the ability of GCC, CBC and TBC to deliver their planned housing and economic growth is partly contingent upon finding solutions to facilitate the smooth flow of traffic through this area. Tewkesbury Borough Plan, and the Cheltenham Plan consider the Scheme is necessary to enable the planning authorities to deliver their planned growth.</p> <p><u>The Scheme complies with this policy as it supports employment related development through the unlocking of strategic land allocated for employment development.</u></p> <p><u>The Scheme will deliver the infrastructure that the policies acknowledge is needed. The need results from the infrastructure of Junction 10 being required to support the economy of the JCS area and that of wider Gloucestershire.</u></p> <p><u>The need for the M5 J10 all-movement junction is derived from the excess traffic that will be caused by the additional development generating demands on the junction.</u></p> <p><u>The Transport Assessment (“TA”) (AS-029) provides evidence that the Scheme will support the local economic activity and facilitate growth by easing the impacts of the excess demand on both the regional and local network.</u></p>

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	<p><u>available, then the JCS authorities would consider a Strategic Allocation through a JCS Review</u></p>	<p><u>It also describes the current situation in the area in section 1.8 Need for the Scheme. The existing M5 Junction 10 only provides access and egress to and from the north, with no connectivity to M5 south. This lack of southern egress and access causes traffic to cross Cheltenham through various routes to access and leave the M5 from the south using other M5 junctions, most notably Junction 11. This contributes significantly to existing traffic flows across Cheltenham, with significant congestion at peak times. In the baseline (section 3), the TA observes that during the AM peak there can be traffic on the A4019 extending back from Cheltenham to the motorway junction, resulting in instances where the southbound off-slip queue extends into the M5 mainline.</u></p> <p><u>The TA considered three future scenarios: in which to measure impacts against. These were Scenario P which consisted of the future year scenario without the Scheme, and without the dependent development. Local improvements included in Scenario P are the Coombe Hill improvement Scheme and upgrading Arle Court Roundabout. It represents a scenario without any improvement along the Scheme extent</u></p> <p><u>Scenario S consisted of the future year scenario with the Scheme. The network is based on the Scheme, with all other elements identical to the Scenario P network. This scenario does not include the traffic associated with dependent developments. As such, it captures the impact of the Scheme in isolation.</u></p>

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		<p><u>Scenario R consisted of the future year scenario with the Scheme and dependent development. This scenario includes the traffic associated with Scheme dependent developments. It represents a cumulative scenario.</u></p> <p><u>The TA predicts much larger increases in flows in the Scheme area between Scenario R and Scenario P. This results from the trips generated by the dependent development rather than Scheme itself.</u></p> <p><u>It also concludes that the Scheme reduces the length of the queue on the southbound off-slip, which is predicted to exceed storage and extend into the mainline in the AM peak without the Scheme.</u></p>
	<p>SD3- Sustainable Design and Construction Development proposals should demonstrate how they contribute to the aims of sustainability by increasing energy efficiency, minimising waste and avoiding the unnecessary pollution of air, harm to the water environment, and contamination of land or interference in other natural systems.</p>	<p>A comprehensive ES (APP-059 to APP-133) documents TR010063 APP 6.1 to 6.15 has been prepared, together with proposals for mitigation of the likely significant effects arising from the Scheme. This has been prepared in accordance with the Infrastructure Planning EIA Regulations 2017. The following Chapters demonstrate the contributions of the Scheme to the aims of sustainability for:</p>

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	<p>SD4- Design Requirements</p> <p>Where appropriate, proposals for development – which may be required to be accompanied by a masterplan and design brief will need to clearly demonstrate how the following principles have been incorporated:</p> <ol style="list-style-type: none"> i. Context, Character and Sense of Place. ii. Legibility and Identity. iii. Amenity and Space. iv. Public Realm and landscape. v. Safety and Security. vi. Inclusiveness and adaptability. vii. Movement and connectivity. 	<ul style="list-style-type: none"> • Increasing energy efficiency: Chapter 14: Climate (AS-020) (TR010063 APP 6.12APP 062). • Minimising Waste: Chapter 12: Materials and Waste (APP-071)(TR010063 APP 6.10APP 071). • Avoiding air pollution: Chapter 5 Air Quality (TR010063 APP 6.3). • Avoiding harm to the water environment Chapter 8: Road Drainage and the Water Environment (TR010063 APP 6.6APP-067). • Contamination of Land: Chapter 10 Geology and Soils (TR010063 APP 6.8APP-069). • Interference in other natural systems Chapter 7: Biodiversity (TR010063 APP 6.4). <p>The DCO application includes a set of General Arrangement Plans (APP-014 and APP-015TR010063 APP 2.9) and an Environment Masterplan (APP-017 and APP-028TR010063 APP 2.13) which clearly demonstrate the Scheme design, landscaping design and environmental mitigation features embedded within the design which incorporate the design principles required with this policy.</p> <p>ES Chapter 9 Landscape and Visual (TR010063 APP 6.7APP-068) includes details on the scheme design and assesses its impact on the context and character of the local area.</p> <p>The Transport Assessment (TR010063 APP 7.5) considers the safety impacts of the Scheme as well as movement and connectivity, including that of NMUs.</p> <p>ES Chapter 13 (TR010063 APP 6.11APP-072) Population and Human Health also considers the design’s impact on population, and the health impacts which consider the inclusiveness principles required by this policy.</p>
	SD5 Green Belt	<u>As outlined in paragraphs 7.6.8 to 7.6.27 of this Statement, the Scheme is not considered to be inappropriate</u>

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	<p>To ensure the Green Belt continues to serve its key functions, it will be protected from harmful development. Within its boundaries, development will be restricted to those limited types of development which are deemed appropriate by the NPPF, unless very special circumstances can be demonstrated. That is 'whether very special circumstances exist to outweigh the harm automatically caused to the Green Belt virtue of the development being inappropriate and any other harm caused'.</p> <p>Safeguarded areas- i. An area of land west of Cheltenham will be safeguarded for longer term development needs. ii. An area of land north west of Cheltenham, as show in Strategic Allocation plan A4 will be safeguarded for longer-term development needs. Iv. Safeguarded areas are not allocated for development at the present time. Planning permission for the permanent development of safeguarded land (except for uses that would not be deemed inappropriate within the Green Belt) will only be granted if a future review of the JCS deems the release of this land necessary and appropriate and purposes the development.</p>	<p><u>development in policy definition terms, in the Green Belt. The Scheme preserves the Green Belt's openness and does not conflict with the purposes of the Green Belt, in line with paragraph 143 of the NPPF.</u></p> <p><u>With the benefits considered cumulatively, the Scheme would therefore amount to 'very special circumstances' within the Green Belt, which would allow for development in the event that the Scheme is considered 'inappropriate development' within the Green Belt.</u></p> <p>The principle of development for the Scheme within the Green Belt can be justified as follows:-</p> <ul style="list-style-type: none"> -the Scheme can predominantly be described as engineering operations and the improvement of existing strategic transport infrastructure; -the Scheme is largely being developed on strategic highway land; -the Scheme will not result in unrestricted sprawl, merge neighbouring towns together nor result in adverse impacts on the setting and special character of historic towns; -the Scheme will upgrade existing strategic transport infrastructure, which is predominantly located within the Green Belt, and as such, there is a direct requirement for the development within the Green Belt location; and -any adverse effects relating to developing on greenfield land or potential harm to the openness of the Green Belt will be outweighed by the benefits of strategic transport improvements and flood risk mitigation. <p>The Scheme is therefore not inappropriate development within the Green Belt in this location, as set out in the NPPF.</p>

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	<p>SD6 Landscape</p> <p>This policy requires planning applications to be supported by a Landscape and Visual Impact Assessment where, at the discretion of the Local Planning Authority deem one is requiring. Proposals for appropriate mitigation and enhancement measures should also accompany applications.</p> <p>Under this policy, proposals are expected to have regard to local distinctiveness of the different landscapes in the JCS area and should draw upon existing Landscape Character Assessments and Landscape Character and Sensitivity Analysis (where appropriate).</p> <p>Proposals should demonstrate how the development will protect or enhance landscape character and avoid detrimental effects on types, patterns and features which make a significant contribution to the character, history and setting of a settlement or area'</p>	<p>ES Chapter 9 Landscape and Visual (APP-068TR010063 APP-6.7) includes an assessment of the expected landscape and visual effects of the Scheme on the local distinctiveness of different landscapes and draws upon existing Landscape Character Assessments for the local area including the 'Vale of Gloucester' and the urban character of Cheltenham.</p> <p>The findings reported in this Chapter demonstrate how the development will avoid detrimental effects on features which make a significant contribution to the character, history and setting of the settlement. The report concludes that although adverse effects may be experienced during construction and initially upon completion, once the designed mitigation has established and matured the Scheme would not have any long-term significant adverse effects on landscape character or visual amenity, and in some cases may provide beneficial effects.</p>
	<p>SD7 The Cotswolds Area of Outstanding Natural Beauty</p> <p>Development within the setting of the Cotswold AONB will be required to conserve and, where appropriate, enhance its landscape, scenic beauty, wildlife, cultural heritage and other special qualities</p>	<p>ES Chapter 9 – Landscape and Visual (APP-068TR010063 APP-6.7) outlines that the AONB boundary is located 4.5km from the closest extent of the works; and 6km from M5 Junction 10. Consultation with the Cotswold AONB Board confirmed that there is not likely to be a significant impact on the special qualities or setting of the AONB.</p>
	<p>SD8 Historic Environment</p> <p>This policy seeks to that development makes a positive contribution to local character and distinctiveness, having regard to valued and distinctive elements of the historic environment. It goes on to state that:</p> <p><i>'Designated and undesignated heritage assets and their settings will be conserved and enhanced as appropriate to their significance, and for their important contribution to local character, distinctiveness and sense of place.'</i></p>	<p>ES Chapter 11 – Cultural Heritage (TR010063-APP-6.9APP-070) considers the impacts of the Scheme on the valued and distinctive elements of the local historic environment. This includes consideration of both designated and undesignated heritage assets. Overall, the Scheme would have a slight adverse effect on the historic environment which is not considered to be significant. Adverse impacts to on buried archaeological remains would be mitigated by preservation by the record in the form of excavation, recording and reporting through the creation of a site archive to preserve significant evidential values of the remains.</p>

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	<p>SD9 Biodiversity and Geodiversity Biodiversity and geological resource of the JCS area will be protected and enhanced in order to establish and reinforce ecological networks that are resilient to current and future pressures. Improved community access will be encouraged so far as is compatible with the conservation of special features and interests.</p> <p>‘Harm to the biodiversity or geodiversity of an undesignated site or asset should be avoided where possible. Where there is a risk of harm as a consequence of development, this should be mitigated by integrating enhancements into the scheme that are appropriate to the location and satisfactory to the Local Planning Authority. If harm cannot be mitigated on-site then, exceptionally, compensatory enhancements off-site may be acceptable.’</p> <p>SD14 Health and Environmental Quality High-quality development should protect and seek to improve environmental quality. Development should not create or exacerbate conditions that could impact on human health or cause health inequality. Developments should:</p>	<p>Impacts to on the settings of heritage assets would be mitigated through sympathetic design elements and landscaping.</p> <p>ES Chapter 7 Biodiversity (TR010063-APP-6.5APP-066) and Chapter 10 Geology and Soils (TR010063-APP-6.8APP-069) assess the impact of the scheme on biodiversity and geology.</p> <p>There are no international statutory designated ecological conservation sites within the land occupied by the Scheme, however, the assessment considers those within proximity and those with ecological links to the Scheme. The assessment concludes that the embedded and essential mitigation measures included with the Scheme mean that there are no residual effects anticipated in relation to Biodiversity resources.</p> <p>As a result of the Scheme, agricultural land is anticipated to be lost resulting in adverse effects. Further impacts are expected to agricultural land as a result of <u>a</u> change of land uses to flood mitigation resulting in moderate effects. This is attributed to the permanent land taken for the new road layout, flood storage areas and attenuation basins, and moderate to very large adverse residual effects are anticipated, which is a significant effect. There is no mitigation for this effect as it is essential for the construction of the Scheme. Surplus soils from this land generated from the footprint of the Scheme are expected to be sustainably re-used, which should add benefits with regards to materials and waste for the Scheme.</p> <p>With respect to land contamination, it is anticipated there will be no significant effects.</p> <p>A comprehensive ES has been prepared, together with proposals for mitigation of likely significant environmental effects arising from the Scheme. This is reported in the ES, prepared in accordance with the Infrastructure Planning (Environmental Impact</p>

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	<ul style="list-style-type: none"> i. 'Cause no unacceptable harm to local amenity including the amenity of neighbouring occupants. ii. Result in no unacceptable levels of air, noise, water, light or soil pollution or odour, either alone or cumulatively, with respect to relevant national and EU limit values. iii. Result in no exposure to unacceptable risk from existing or potential sources of pollution. For example, by avoiding placing sensitive uses in locations where national or EU limit values are exceeded, or by incorporating acceptable mitigation measures into development. iv. Incorporate, as appropriate, the investigation and remediation of any land contamination within the site. v. Ensure that any risks associated with land instability are satisfactorily resolved. vi. Take into account the quality and versatility of any agricultural land affected by proposals, recognising that the best agricultural land is a finite resource. vii. Have regard to any areas of tranquillity that are identified in adopted or emerging District plans and neighbourhood plans. viii. Avoid any adverse impact from artificial light on intrinsically dark landscapes. 	<p>Assessment) Regulations 2017. The environmental aspects covered are:</p> <p>Chapter 1 Introduction (application document TR010063 APP 6.2APP-062).</p> <p>Chapter 2 Scheme Description (application document TR010063 APP 6.2APP-062).</p> <p>Chapter 3 Assessment of Alternatives (application document TR010063 APP 6.2APP-062).</p> <p>Chapter 4 Environmental Assessment Methodology (application document TR010063 APP 6.2APP-062).</p> <p>Chapter 5 Air Quality (application document TR010063 APP 6.3AS-012AS-012).</p> <p>Chapter 6 Noise and Vibration (application document TR010063 APP 6.4AS-014).</p> <p>Chapter 7 Biodiversity (application document TR010063 APP 6.5APP-066APP-066).</p> <p>Chapter 8 Road Drainage and the Water Environment (application document TR010063 APP 6.6APP-067AS-016AS-016).</p> <p>Chapter 9 Landscape and Visual (application document TR010063 APP 6.7APP-068).</p> <p>Chapter 10 Geology and Soils (application document TR010063 APP 6.8APP-069APP-069).</p> <p>Chapter 11 Cultural Heritage (application document TR010063 APP 6.9APP-070APP-070).</p> <p>Chapter 12 Materials and Waste (application document TR010063 APP 6.10APP-071).</p> <p>Chapter 13 Population and Human Health (application document TR010063 APP 6.11APP-072AS-014).</p>

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		<p>Chapter 14 Climate (application document TR010063 APP 6.12APP-062AS-020).</p> <p>Chapter 15 Cumulative Effects (application document TR010063 APP 6.13APP-074).</p> <p>As part of the overall mitigation proposals, a REAC (application document TR010063 APP 7.4AS-027) has been prepared. This details the environmental mitigation measures that would be implemented both during construction and operation, why they are required, who is responsible for delivering them, and any ongoing maintenance arrangements.</p>
	<p>INF1 – Transport Network</p> <p>Developers will be required to assess the impact of proposals on the transport network through a Transport Assessment. The assessment will demonstrate the impact, including cumulative impacts of the prospective development on:</p> <ul style="list-style-type: none"> • Congestion on the transport network. • Travel safety within the zone of influence of the development. • Noise and / or atmospheric pollution within the zone of influence of the development. <p>All proposals should ensure that:</p> <ul style="list-style-type: none"> • Safe and efficient access to the highway network is provided for all transport modes. • Connections are provided, where appropriate, to existing walking, cycling and passenger transport networks and should be designed to encourage maximum potential use. • All opportunities are identified and taken where appropriate, to extend and / or modify existing walking, cycling and public transport networks and links, to ensure that credible travel choices are provided by sustainable transport modes. 	<p>A Transport Assessment (application document TR010063 APP 7.5APP-020) has been submitted with the DCO application which considers the impact of the Scheme on the transport network. This demonstrates the impacts on congestion and travel safety. The assessment has also provided the basis for <u>the</u> assessment of the Scheme's impacts on noise and atmospheric pollution within the zone of influence as reported in ES Chapter 5 Air Quality (TR010063 APP 6.3) and Chapter 6 Noise and Vibration (TR010063 APP 6.4).</p> <p>The Scheme's objectives include providing safe access to services for the local community and for users of sustainable transport modes within and to the west and north-west of Cheltenham. This includes new and improved routes for pedestrians, cyclists and equestrians and improving crossing facilities, as well as the provision of a bus lane on the A4019 eastbound carriageway.</p> <p>The Transport Assessment concludes that no severe impacts are anticipated as a result of the Scheme, and reports that in operation, the Scheme is predicted to improve access for pedestrians, cyclists and vehicle users of the Scheme. No unacceptable impacts are anticipated on highway safety.</p>

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	<p>Planning permission will be granted only where the impact of development is not considered to be severe. Where severe impacts that are attributable to the development are considered likely, including as a consequence of cumulative impacts, they must be mitigated to the satisfaction of the Local Planning Authority in consultation with the Highway Authorities and in line with the Local Transport Plan.</p>	
	<p>INF 2: Flood Risk Management</p> <p>For sites of a strategic scale, the cumulative impact of the proposed development on flood risk in relation to existing settlements, communities or allocated sites must be assessed and effectively mitigated.</p> <p>The policy also requires new development that could cause or exacerbate flooding to be subject to a flood risk assessment which conforms to national policy and incorporates the latest available updates to modelling and climate change data and historic data and information and guidance contained in the authorities' Strategic Flood Risk Assessments and SPDs, in order to demonstrate it will be safe, without increasing flood risk elsewhere.</p>	<p>An FRA and WFD compliance assessment have been completed and are included as appendices to Chapter 8 Road Drainage and the Water Environment of the ES (application document TR010063 APP 6.13APP-074). The assessment has been prepared in accordance with the national DMRB standards LA 113 and LA 104 and incorporates the latest available data provided by the Environment Agency and the Lead Local Flood Authority.</p> <p>There are potential localised significant adverse effects to the River Chelt floodplain on the existing farmland. Those effects are determined to cause no increase in flood risk, although they will still result in localised adverse impacts (increase in flood depth by 10 mm to 230 mm).</p> <p>All other impacts have been mitigated so as not to cause any significant impacts through the implementation of embedded and essential mitigation which has included updates to the Scheme design along with the implementation of best practice construction activities.</p>
	<p>INF 3: Green Infrastructure</p> <p>Development proposals are expected to 'consider and contribute positively towards green infrastructure, including the wider landscape context and strategic corridors between major assets and populations.'</p> <p>Development proposals that will have an impact on woodlands, hedges and trees will need to include a justification for why this impact cannot be avoided and should incorporate measures acceptable to the local planning authority to mitigate the loss.</p>	<p>Chapter 9 Landscape and Visual of the ES (application document TR010063 APP 6.7APP-068) reports that the Scheme is within the SV6B Landscape Character Area 'Vale of Gloucester', with the very eastern end meeting the urban character of the edge of Cheltenham. It has been concluded that although there would be <u>an</u> increased presence of roads and associated infrastructure, these would be in keeping with the existing landscape character and context of views within the area. Replanting to roadsides and other embedded</p>

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	<p>Mitigation should be provided on-site or, where this is not possible, in the immediate environs of the site. Where assets are created, retained, or replaced within a scheme, they should be properly integrated into the design and contribute to local character and distinctiveness. Proposals also make provisions for future maintenance of green infrastructure.</p> <p>Where assets are created, retained or replaced within a scheme, they should be properly integrated into the design and contribute to the local character and distinctiveness.</p>	<p>mitigation measures will ensure the Scheme will sit comfortably within the landscape in the long term and would potentially provide an enhancement of the environment to improve the experience for residents, pedestrians, cyclists and vehicle users.</p> <p>Regarding mitigation of impacts relating to woodland, hedges and trees, the Scheme will provide replacement of woodland and scrub along the M5 and around the new junction to reinstate <u>the</u> screening effect and integrate <u>it</u> back into the landscape. Individual trees to central reserves and verges to integrate the realigned A4019 route will also be provided. Hedgerow will also be provided along the Link Road with supplementary blocks of wood and individual trees to reflect <u>the</u> local character of road infrastructure and provide some screening for visual receptors.</p> <p>The Scheme also proposes habitat creation throughout the Scheme which will offset <u>the</u> impacts of habitat loss and will enhance and improve on the habitats on site through <u>by</u> increasing the area and quality of more valuable habitats within the Order Limits. Notably, 15.38ha of wetland habitat will be created, comprising permanent and ephemeral waterbodies, ditches and associated wet grassland and marginal planting.</p>
	<p>INF 6: Infrastructure Delivery</p> <p>'Where need for additional infrastructure and services and / or impacts on existing infrastructure and services is expected to arise, the Local Planning Authority will seek to secure appropriate infrastructure which is necessary, directly related, and fairly and reasonably related to the scale and kind of the development proposal, including the highway network, traffic management, sustainable transport and disabled people's access.'</p>	<p>The Scheme will enable the planned housing and economic growth around Cheltenham as the current capacity provision on the highway network would not be able to accommodate the additional traffic journeys.</p>

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	<p><u>INF 7: Developer ContributionsContributions</u></p> <p><u>'1. Arrangements for direct implementation or financial contributions towards the provision of infrastructure and services required as a consequence of development, including its wider cumulative impact, and provision where appropriate for its maintenance, will be negotiated with developers before the grant of planning permission. Financial contributions will be sought through the S106 and CIL mechanisms as appropriate.</u></p> <p><u>2. Where, having regard to the on- and / or off-site provision of infrastructure, there is concern relating to the viability of the development, an independent viability assessment, funded by the developer and in proportion with the scale, nature and / or context of the proposal, will be required to accompany planning applications. Viability assessments will be undertaken in accordance with an agreed methodology and published in full prior to determination for all non-policy compliant schemes. Where necessary the JCS authorities will arrange for them to be independently appraised at the expense of the applicant.'</u></p>	<p><u>As explained in section 3.2 of the documentthis document and evidenced within the Transport Assessment (AS-029), road improvements are essential to respond to future development. As stated in INF 7, infrastructure required for development including wider cumulative impacts will have arrangements for direct implementation and financial contrintuins-contributions negotiated before the grant of planning permission.</u></p> <p><u>Section 3.3 of the Funding Statement (APP-036) explains the application of the INF 7. GCC have used scheme transport modelling to demonstrate the relative benefits that each of the JCS sites gains from the Scheme in terms of dependent vehicle trips for housing and for employment at the design year (2042).</u></p>
<p>Gloucestershire Local Transport Plan (2020-2041)</p>	<p>LTP PD0.1</p> <p>GCC will work with partners to reduce transport carbon emissions by 2045 and improve air quality in the county by addressing travel demand, promoting the use of sustainable modes of transport and the uptake of ultra low emission vehicles to tackle climate change.</p> <p>In order to achieve this GCC proposes to implement proposals such as:</p> <ul style="list-style-type: none"> - 'Developers are required to design and implement their development to deliver sustainable transport, with appropriate connectivity to the existing transport network, good access to public transport, and high permeability to walk, cycle and be mobility friendly.' 	<p>Chapter 14 Climate of the ES (application document TR010063 APP 6.12APP-062AS-020) provides an assessment of carbon emissions arising from the construction and operation of the Scheme, which informs <u>the</u> identification of appropriate mitigation measures. The assessment notes that transport was the largest emitting proportion of UK greenhouse gas (GHG) emissions in 2020, contributing 24% of emissions. Applying the carbon reduction hierarchy described in the Chapter will reduce the GHG emissions from the Scheme and therefore the effects on climate. Mitigation of the Scheme's in-use emissions will be explored based on examination of traffic management scenarios over the network. Inclusion <u>The inclusion</u> of NMU routes encourages the utilisation of alternative means of transport and helps to achieve the goal of creating a more integrated and sustainable transport network, whilst reducing GHG emissions.</p>

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	<p>LTP PD0.2</p> <p>GCC will work with District Councils and other partners, to minimise the impact of transport on landscapes, townscapes, heritage assets and the wider historic environment; to protect and enhance the water environment, air quality, soils and agricultural resources; to reduce the risk of flooding and the levels of noise pollution; to achieve biodiversity net gain and conserve geodiversity and the historic environment, from traffic or improvements on the highway network.</p>	<p>A comprehensive ES has been prepared, together with proposals for mitigation of likely significant environmental effects arising from the Scheme. This is reported in the ES, prepared in accordance with the Infrastructure Planning (Environmental Impact Assessment (EIA) Regulations 2017. The environmental aspects covered are:</p> <p>Chapter 1 Introduction (application document TR010063 APP 6.2APP-062).</p> <p>Chapter 2 Scheme Description (application document TR010063 APP 6.2APP-062).</p> <p>Chapter 3 Assessment of Alternatives (application document TR010063 APP 6.2APP-062).</p> <p>Chapter 4 Environmental Assessment Methodology (application document TR010063 APP 6.2APP-062).</p> <p>Chapter 5 Air Quality (application document TR010063 APP 6.3AS-012AS-012).</p> <p>Chapter 6 Noise and Vibration (application document TR010063 APP 6.4AS-014).</p> <p>Chapter 7 Biodiversity (application document TR010063 APP 6.5APP-066APP-066).</p> <p>Chapter 8 Road Drainage and the Water Environment (application document TR010063 APP 6.6APP-067AS-016AS-016).</p> <p>Chapter 9 Landscape and Visual (application document TR010063 APP 6.7APP-068).</p> <p>Chapter 10 Geology and Soils (application document TR010063 APP 6.8APP-069APP-069).</p> <p>Chapter 11 Cultural Heritage (application document TR010063 APP 6.9APP-070APP-070).</p> <p>Chapter 12 Materials and Waste (application document TR010063 APP 6.10APP-071).</p>

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		<p>Chapter 13 Population and Human Health (application document TR010063 APP 6.11APP-072AS-014).</p> <p>Chapter 14 Climate (application document TR010063 APP 6.12APP-062AS-020).</p> <p>Chapter 15 Cumulative Effects (application document TR010063 APP 6.13APP-074).</p> <p>As part of the overall mitigation proposals, a REAC (application document TR010063 APP 7.4AS-027) has been prepared. This details the environmental mitigation measures that would be implemented both during construction and operation, why they are required, who is responsible for delivering them, and any ongoing maintenance arrangements.</p>
	<p>LTP PD0.2</p> <p>Transport development proposals will need to demonstrate that significant adverse impact upon public rights of way, other routes with public access and recreational highways will be minimised, and suitable permanent diversions, or alternative routes are provided, if necessary. Temporary diversions or alternatives may be required during construction.'</p>	<p>The land occupied by the Scheme contains several footpaths and bridleways, including the Long-Distance Footpath of Cheltenham Circular and baseline conditions. ES Chapter 13 Population and Human Health (TR010063 APP 6.11APP-072) assesses the impact of the Scheme on PRoWs and includes suggested mitigation of any adverse impacts including temporary diversions, and permanent diversions. The Scheme will also provide a new PRoW at the revised Junction 10, and the Scheme will seek to preserve and enhance the network of PRoW in proximity to the works which provide access to open space, sports and recreation facilities both within and beyond the study area.</p>
	<p>LTP PD 0.2</p> <p>Reduce the risk of flooding and the levels of noise pollution. It outlines requirements for developers to 'undertake assessments to determine if their development or scheme will be subject to or create poor air quality or noise in excess of the thresholds as advised by Government and commit to mitigating those effects that address traffic impacts on the natural environment and designated sites, particularly those within 200m of a main road.</p>	<p>A comprehensive ES has been prepared, together with proposals for mitigation of likely significant environmental effects arising from the Scheme. This is reported in the ES, prepared in accordance with the Infrastructure Planning (Environmental Impact Assessment (EIA) Regulations 2017. The environmental aspects addressed which are relevant to LTP Policy PD 0.2 are:</p>

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		<p>Chapter 5 Air Quality (application document TR010063 APP 6.3AS-012AS-012).</p> <p>Chapter 6 Noise and Vibration (application document TR010063 APP 6.4AS-014).</p> <p>Chapter 8 Road Drainage and the Water Environment (application document TR010063 APP 6.6APP-067AS-016AS-016).</p> <p>Chapter 13 Population and Human Health (application document TR010063 APP 6.11APP-072AS-014).</p> <p>Chapter 14 Climate (application document TR010063 APP 6.12APP-062AS-020).</p> <p>Chapter 15 Cumulative Effects (application document TR010063 APP 6.13APP-074).</p> <p>As part of overall mitigation proposals, a REAC (application document TR010063 APP 7.4AS-027) has been prepared. This details the environmental mitigation measures that would be implemented both during construction and operation, why they are required, who is responsible for delivering them, and any ongoing maintenance arrangements.</p>
	<p>LTP PD 0.2</p> <p>Proposals should protect and avoid harm to geodiversity and biodiversity associated with transport infrastructure in addition to taking opportunities to enhance the natural environment wherever practicable.</p> <p>Comply with Gloucestershire Highways Biodiversity Guidance or subsequent guidance and the Green Infrastructure Pledge.</p> <p>Maximise the opportunities for transport interventions to contribute towards major new initiatives, including Nature Recovery Networks and large-scale woodland creation and other similar measures that would help achieve biodiversity net gain targets.</p> <p>Support Natural England’s work on the Green Transport Corridors and Green Infrastructure Agreements, as well as their</p>	<p>ES Chapter 7 Biodiversity (TR010063 APP 6.5APP-066) and Chapter 10 Geology and Soils (TR010063 APP 6.8APP-069) assess the impact of the scheme on biodiversity and geology.</p> <p>The Scheme includes a significant level of Green Infrastructure which is both embedded mitigation for the impacts of the Scheme and aims to provide biodiversity enhancements. The Scheme also maximises the opportunities to contribute to Nature Recovery Networks and seeks to ensure green infrastructure within and adjacent to the road network can deliver biodiversity gains. Overall, the Scheme is predicted to deliver in excess of 10% BNG. ES Appendix 7.18 Biodiversity Net Gain (application document TR010063 APP 6.15APP-070) sets out the headline BNG results for the Scheme.</p>

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	<p>recommendations of the Linear Infrastructure Network, ensuring that within or adjacent to the rail network and Major Road Network, green infrastructure can deliver biodiversity gains, ecological connectivity and ecosystem services.</p> <p>LTP PD 0.2 Promote energy saving, water conservation, improvements in surface water run-off and provision of Sustainable Drainage Systems (SuDS), in both new schemes and retrofitting of existing schemes (where opportunities arise).</p> <ul style="list-style-type: none"> • Mitigation will be considered for the transport interventions that have significant adverse impact on water availability or quality or fail to achieve the targets of the Water Framework Directive. • Working with its partners and other statutory bodies, such as the Environment Agency and Natural England, Gloucestershire will use natural processes to promote greater flood resilience to the highway network, ensuring SuDS and Natural Flood Management (NFM) are employed wherever possible. <p>LTP PD 0.2 Working with partners and other statutory bodies, such as Historic England, the council will aim to minimise the impact of transport on heritage assets and protect and enhance the quality environment including buildings, structures, landscapes, townscapes, and archaeological remains and their settings and ensure that due regard is given to the need to undertake archaeological investigations.</p>	<p>The proposed junction upgrades for the Scheme present an increase in the impermeable footprint of the existing highway, which will generate greater amounts of surface water runoff compared to the current situation. The proposed highway drainage strategy (ES Appendix 2.1 and 2.2 (TR010063 APP 6.15)) outlines the applicant's proposed approach to drainage which will replicate the site's existing hydrology through SuDS principles.</p> <p>ES Chapter 8 Road Drainage and Water Environment (TR010063 APP 6.6APP-067) outlines the Applicant's consultation with statutory bodies such as the Environment Agency and the Lead Local Flood Authority throughout the design development of the Scheme to ensure it is compliant with WFD objectives and flood risk guidance.</p> <p>Based on <u>the</u> embedded and additional mitigation proposed, the Scheme is compliant with the requirements of the WFD objectives and NPPF requirements.</p> <p>ES Chapter 11 – Cultural Heritage (TR010063 APP 6.9APP-070) considers the impacts of the Scheme on the valued and distinctive elements of the local historic environment. This includes consideration of both designated and undesignated heritage assets. Overall, the Scheme would have a slight adverse effect on the historic environment which is not considered to be significant. Adverse impacts to buried archaeological remains would be mitigated by preservation by <u>the</u> record in the form of excavation, recording and reporting through the creation of a site archive to preserve significant evidential values of the remains.</p>

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	<p>LTP PD 0.2</p> <p>-‘Protect and avoid harm to geodiversity and biodiversity associated with transport infrastructure in addition to taking opportunities to enhance the natural environment wherever practicable.’</p> <p>-‘Measures will be taken to prevent soil from being adversely affected either physically or by pollution during transport intervention development.’</p> <p>-‘Where possible, protect geological sites from degradation and removal caused by transport interventions and where practicable provide enhancements to the geological site and to its accessibility.’</p> <p>-‘Any potential direct or indirect impacts that may arise from new or upgraded transport interventional will be appropriately assessed, mitigated and/or compensated for, in line with existing best practice and relevant legislation on statutory and non-statutory designated sites that are protected for their importance to nature conservation.’</p> <p>LTP PD 0.2</p> <p>‘Promote the use of increasingly more sustainable waste management practices with transport related infrastructure projects in line with the waste hierarchy.’</p> <p>LTP PD 0.5</p> <p>Community Health and Wellbeing ensures that people from all social and economic groups and those with disabilities are encouraged to use safe and affordable multi-modal travel options. Furthermore, there is a focus on ‘improving air quality; and connecting people to services, employment, housing, education,</p>	<p>Impacts to the settings of heritage asserts would be mitigated through sympathetic design elements and landscaping.</p> <p>Chapter 10 Geology and Soils (TR010063-APP 6.8APP-069) confirms that there are no EU or UK-UK-designated sites, or non-statutory designated sites, Geological Conservation Sites and Local nature reserves present in the land occupied by the Scheme where sensitive soils could be directly affected.</p> <p>As a result of the Scheme agricultural land is anticipated to be lost resulting in adverse effects. The implementation of the waste hierarchy includes measures which aim to reduce the footprint of junctions, <u>and</u> road connection lengths and rationalise/ reduce site compounds to ensure the footprint of the Scheme is as small as possible. There is no further mitigation possible for this effect as it is essential for the construction of the Scheme.</p> <p>The Applicant has implemented the waste hierarchy to prevent, reduce, reuse, recycle and recover materials in the construction and operation of the Scheme. ES Chapter 12 – Materials and Waste (TR010063-APP 6.10APP-071) outlines details of how design and embedded mitigation measures have been incorporated within the Scheme.</p> <p>ES Chapter 13 – Population and Human Health (TR010063-APP 6.11APP-072) provides an assessment of the impacts of the Scheme on the community health and wellbeing.</p> <p>The Scheme proposes a number of new WCH assets which will be available for the operational phase. These will enhance access to local amenities and <u>the</u> provision of</p>

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	<p>health services, social and leisure amenities to allow equality of opportunity to health, social and economic wellbeing and remove barriers that can create social isolation.'</p> <p>Paragraph 2.3.4 goes on to state that a key objective of the LTP is to 'improve community health and wellbeing and promote equality of opportunity'</p>	<p>signalised crossings at junctions on the A4019 will improve the connectivity for WCH and safety for NMUs.</p> <p>The Equality Impact Assessment report (TR010063-APP 7.6APP-144) assesses the Scheme's impact on equality of opportunity and concludes that there will be a neutral impact on the gender, sexual orientation, gender reassignment and marriage/civil partnership equality groups.</p> <p>Negative impacts have been identified in relation to religion, age, disability, ethnicity and pregnancy/maternity. However, it has been assumed within the assessment that there is some assumed mitigation through the development of an inclusive consultation and communication strategy. Furthermore, other potential impacts identified will need to be monitored going forward in the Scheme development.</p> <p>Further mitigation includes the Scheme design and embedded mitigation including a combination of approaches that will avoid and/or seek to control many of the factors that contribute to changes in determinants of health. Of particular relevance are the controls on traffic management and sources of pollution.</p>
	<p>LTP PD 4.1</p> <p>Follow green infrastructure principles in the design, maintenance and operation of highway asset as set out in the green infrastructure pledge as well as meeting Building with Nature standards.</p>	<p>The Scheme design follows green infrastructure principles and mitigation measures are embedded within the design. The principles for landscape design are focused <u>around-on</u> retaining existing vegetation as far as possible, replacing any habitat losses and creating additional habitat to ensure a net gain to biodiversity, and retaining the natural character of the area through planting locally native species. Full details are outlined within ES Chapter 7 Biodiversity (TR010063-APP 6.5APP-066).</p>
	<p>LTP PD 4.2</p> <p>GCC will provide a resilient highway network that can withstand unforeseen events, including extreme weather events and long-term changes to the climate.</p>	<p>ES Chapter 14 Climate (TR010063-APP 6.12APP-062) confirms the Scheme could be vulnerable to operational impacts linked to change in climate, however after consideration of embedded mitigation and additional mitigation, including the monitoring of structures throughout</p>

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	<p>LTP PD 4.3 GCC will manage the local highway asset management in line with the Highways Asset Management Framework and other guidance or policies such as the Code of Practice for Well Managed Highway Infrastructure by complying with the Gloucestershire Highways Biodiversity Guidance or subsequent guidance. Enhance and restore the wildlife function of highway verges by continuing to work in partnership with Gloucestershire Wildlife Trust (GWT) through GCC's Conservation Road Verges Site Register to ensure that all road verges receive appropriate conservation management as part of highways maintenance and related schemes.</p> <p>LTP PD 4.4 Road Safety pledges to 'contribute to improved safety, security and health by reducing the risk of death, injury or illness arising from transport, working with partners to improve personal safety</p>	<p>the life of the Scheme, as well as the review of maintenance schedules during heatwaves, none of the potential climate vulnerability impacts are found to be adverse.</p> <p>Chapter 9 Landscape and Visual (application document TR010063-APP-6.7APP-068) details the landscape impact of the Scheme including landscaping details. Replanting to roadsides and other embedded mitigation measures will ensure the Scheme will sit comfortably within the landscape in the long term, and would potentially provide an enhancement of the environment to improve the experience for residents, pedestrians, cyclists and vehicle users.</p> <p>The wildlife function of the highway verges affected by the Scheme will be enhanced and restored through <u>by</u> replacing lost vegetation to in the existing road verges, therefore reinstating the filtered openness provided by these features. The Scheme also proposes habitat creation throughout, which will offset the impacts of habitat loss and will enhance and improve on the habitats on site through <u>by</u> increasing the area and quality of more valuable habitats within the Order Limits. The Scheme will provide the replacement of woodland and scrub along the M5 and around the new junction to reinstate the screening effect and integrate back into the landscape. Individual trees to central reserves and verges to integrate the realigned A4019 route will also be provided. Hedgerow will also be provided along the Link Road with supplementary blocks of wood and individual trees to reflect the local character of road infrastructure and provide some screening for visual receptors. In addition, 15.38ha of wetland habitat will be created, comprising permanent and ephemeral waterbodies, ditches and associated wet grassland and marginal planting.</p> <p>ES Chapter 13 – Population and Human Health (TR010063-APP-6.11APP-072) reports that positive health outcomes are identified for the operational phase of the Scheme based on the safety enhancements incorporated within the Scheme.</p>

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	<p>perceptions and the promotion of transport that contributes to good health and wellbeing.'</p>	<p>These benefits will be further supported by the preparation of a communication plan to share information about the improvements to accessibility, connectivity and journey times.</p>
	<p>LTP PD 6.1 Gloucestershire's Pedestrian Network states that 'GCC will work with interested parties to provide an inclusive safe, reliable and efficient highway environment that encourages walking, and provides pedestrian links to connect communities, employment and services.'</p>	<p>The Scheme has been designed to improve safety for all users of the transport network, this includes segregated provision for walkers and cyclists alongside the A4019 and the Link Road, signalised crossings at key junctions and along desire lines, renewed public transport infrastructure and an enhanced WCH network for leisure and recreation.</p>
	<p>LTP PD 6.2 Rights of Way ensures that GCC will 'support the Rights of Way and Countryside Access Improvement Plan in identifying and seeking to support measures to improve safety, accessibility and the quality of the experience for walkers, horse riders, carriage drivers and those travelling by bicycle.'</p>	<p>The Scheme has been designed to improve safety for all users of the transport network, this includes segregated provision for walkers and cyclists alongside the A4019 and Link Road, signalised crossings at key junctions and along desire lines, renewed public transport infrastructure and an enhanced WCH network for leisure and recreation. These improvements are also likely to improve the quality of experience for WCH groups as consultation reports issues with the existing network in relation to cyclist facilities, and poor-quality infrastructure for pedestrians as reported in ES Chapter 13 Population and Human Health (TR010063 APP 6.11APP-072).</p>
	<p>LTP PD 6.4 GCC will contribute towards improved safety, security and health by reducing the risk of death, injury or illness arising from journeys on foot or by mobility mode.</p>	<p>ES Chapter 13 – Population and Human Health (TR010063 APP 6.11APP-072) reports that positive health outcomes are identified for the operational phase of the Scheme based on the safety enhancements incorporated within the Scheme, which include segregated provision for walkers and cyclists, signalised crossings and an enhanced WCH network. These benefits will be further supported by the preparation of a communication plan to share information about the improvements to accessibility, connectivity and journey times</p>
	<p>CPS 1 – Connecting Places Strategy Central Severn Vale CPS1 identifies M5 Junction 10 'All movements' access and link road to West Cheltenham as a highway scheme for priority up to 2031 for the Central Severn Vale area. Paragraph 4.2.31 states</p>	<p>Section 3 of this document (Planning Statement and Schedule of Accordance with National Planning Policy Statement) outlines the need for the Scheme.</p>

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	<p>that the improvements will be required to maintain the safe operation of the highway, support the delivery of the North West and West Cheltenham strategic allocations and address existing traffic congestion issues on the A40 and A4019.</p>	<p>It highlights that the ability of GCC, CBC and TBC to deliver their planned housing and economic growth is partly contingent upon finding solutions to facilitate the smooth flow of traffic through this area. Tewkesbury Borough Plan, and Cheltenham Borough Plan consider the Scheme necessary to enable the planning authorities to deliver their planned growth.</p> <p><u>It also highlights agreement across relevant partners that the upgrading of Junction 10 to an all movements junction will support the economy of the JCS area and that of wider Gloucestershire. Supports accelerated growth of the economy, enabling land to be delivered for mixed use including high value employment.</u></p> <p><u>However, whereas CPS1 is explicit regarding the need for M5 Junction 10 'All movements' access and link road to West Cheltenham it is less explicit regarding the improvements needed to the A4019 as a result of these works. As is demonstrated in the submitted Transport Assessment [AS-029] the throughflow of traffic along the A4019 as a result of these proposed works would in itself require improvements to the A4019 in order to accommodate the volume of traffic and to ensure the safety of both the LRN and SRN.</u></p>
<p>Tewkesbury Borough Local Plan – Saved Policies (2011)</p>	<p>EVT4 – Air Quality 'Appropriate measures should be taken to ensure there is no risk to public health from the release of airborne pollutants.'</p>	<p>ES Chapter 5 – Air Quality (TR010063 APP 6.3) states that with the adoption of mitigation measures secured within an EMP, there would be no residual effects to air quality as a result of the construction of the Scheme. No significant impacts were reported for the operation of the Scheme, and it will therefore meet statutory obligations and national targets on air quality.</p>
<p>Gloucester City Council Local Plan – Saved Policies (2002)</p>	<p>FRP.11 – Pollution 'Development that may be liable to cause pollution of water, air or soil, or pollution through noise, dust, vibration, light, heat or</p>	<p>ES Chapter 13 – Population and Human Health (TR010063 APP 6.11APP-072) provides a cumulative assessment of health determinants which includes assessments on noise, air quality and water. Where the amenity of those wishing to</p>

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	radiation will only be permitted if the quality and enjoyment of the environment would not be unduly damaged or put at risk.'	enjoy the environment may be adversely affected, the Scheme proposes mitigation measures where necessary as set out in the Register of Environmental Actions and Commitments (application document TR010063 APP 7.4AS-027).
Gloucestershire Air and Health Strategy	<p>4.2 Strategy Aims</p> <p>The key aims of the strategy relevant to the Scheme include: Bring about a significant and measurable improvement to air quality in Gloucestershire through joined up working to implement cost-effective measures. Reduce the impact of poor air quality on the health of residents, workers and visitors, and the environment. Meet and exceed statutory obligations and national targets on air quality.</p>	ES Chapter 5 – Air Quality (TR010063 APP 6.3) states that with the adoption of mitigation measures secured within an EMP, there would be no residual effects to on air quality as a result of the construction of the Scheme. No significant impacts were reported for the operation of the Scheme, and it will therefore meet statutory obligations and national targets on air quality.
Minerals Local Plan for Gloucestershire (2018 -2031)	Policy SR02 Non-mineral development proposals will be permitted where they adopt sustainable design principles, construction methods and procurement policies that are in line with the adopted Gloucestershire Waste Core Strategy Policy WCS 2 Waste reduction.	The Applicant has implemented the waste hierarchy to prevent, reduce, reuse, recycle and recover materials in the construction and operation of the Scheme. ES Chapter 12 – Materials and Waste (TR010063-APP 6.10APP-071) outlines details of how suitable design and embedded mitigation measures have been incorporated with the Scheme.
Gloucestershire Waste Core Strategy (2012-2027)	<p>Policy WCS2 – Waste Reduction</p> <p>All development will be expected to incorporate the principles of waste minimisation and re-use. Planning applications for 'major' development must be supported by a statement setting out how any waste arising during the demolition, construction and subsequent occupation of the development will be minimised and managed.</p>	The Applicant has implemented the waste hierarchy to prevent, reduce, reuse, recycle and recover materials in the construction and operation of the Scheme. ES Chapter 12 – Materials and Waste (TR010063-APP 6.10APP-071) outlines details of how suitable design and embedded mitigation measures have been incorporated with the Scheme.
The Cheltenham Plan (2020)	<p>Vision Theme B – Objective F</p> <p>'Deliver a range of sustainable transport choices through appropriate infrastructure improvements including better cross-</p>	The Scheme has been designed to improve safety for all users of the transport network, this includes segregated provision for walkers and cyclists alongside the A4019 and Link Road, signalised crossings at key junctions and along

Planning Policy Document	Key Policies and Objectives	Scheme Conformity with Policy
	town and local links, prioritised junctions, and improved public transport;'	desire lines, renewed public transport infrastructure and an enhanced WCH network for leisure and recreation. The Transport Assessment (application document TR010063 APP 7.5 APP-020) reports that in operation, the Scheme is predicted to improve for pedestrians, cyclists and vehicle users of the Scheme.
	Vision Theme C – Objective D 'Address the challenge of climate change, ensuring that development meets high design and sustainability standards and is built to be adaptable over the long-term;'	Chapter 14 Climate of the ES (document reference TR010063 APP 6.12 APP-062APP-073APP-073) considers how projected climate changes could affect the Scheme. The assessments find found that the Scheme could be vulnerable to operational impacts linking linked to expected changes in the climate. Mitigation measures that are embedded within the Scheme design either avoid these impacts, minimise them or reduces their consequences to acceptable levels. Therefore, it is concluded that none of the potential climate vulnerability impacts are found to be adverse and would make a significant contribution to the mitigation and adaptation to climate change. Mitigation measures will include the monitoring of structures throughout the life of the Scheme, as well as the review of maintenance schedules during heatwaves. Full details of mitigation measures are set out in Chapter 14 Climate of the ES (document reference TR010063 APP 6.12 APP-062APP-073APP-073APP-073).
	<u>EM1: Employment Land and Buildings</u> <u>EM1 designates sites in the Cheltenham Plan Proposals Map as being safeguarded for employment purposes.</u> <u>Under the title of Spatial Characteristics, paragraph 3.9 identifies that the identified employment land has resulted in a 'greater concentration of sites towards the west of Cheltenham,</u> <u>particularly along the A4019 and the A40'.</u> <u>The paragraph then shows the support for the Scheme within the Cheltenham plan by stating;</u>	<u>The economic need for the Scheme is in-built into the JCS which supports the need. As part of the plan adoption, extensive traffic modelling was carried out to ensure the achieveabilityachievability of the plan as well as understand any foreseeable futurefuture impacts. It considered a number of Do Something (DS) scenarios to measure the impact of the Scheme Proposal in the JCS on the wider area.</u> <u>For context, the JCS was an iterative process, with assessment of the transport impacts and resultant mitigation.</u>

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	<p><u>'Whilst Junction 10 is still constrained through being two-way rather than four-way, sites to the west of Cheltenham would stand to benefit further should investment be forthcoming to facilitate an all-movements junction in future. The Council is committed to keep up the pressure of lobbying to influence this and is working closely with key partners on achieving a satisfactory outcome, namely to get Junction 10 included on the post-2020 Roads Investment Strategy'. Additionally, there is also agreement within the plan that the junction upgrade would 'provide significant economic growth opportunities by unlocking the potential of additional land'.</u></p>	<p><u>The evidence base shows five iterations of transport impacts, mitigation and analysis up to October 2016. In response to Inspector's Interim Report on re-Submission Joint Core Strategy (July 2016) Highways Modelling [Autumn 2016], the fifth iteration (DS5) outlines details of the revised mitigation package that represents a departure from DS3a and focuses on road building (including major link roads) and the upgrade of high frequency public transport bus corridors. It also includes a number of schemes which are not JCS dependant, but due to changes in scheme status they have been included as it is assumed that the impact of the schemes will be significant on the transport network (JCS Transport Evidence Base – May 2017). They include:</u></p> <ul style="list-style-type: none"> <u>• M5 J10 – Full Movements (including upgrading of existing slips and junction on the A4019 corridor to Coombe Hill)</u> <u>• A417 Missing Link</u> <p><u>The DS6 scenario tested the revised land use scenario in line with the proposals included in the JCS Proposed Main Modifications document (February 2017). Critical to the scenario were the access arrangements into the West Cheltenham Strategic Site. Within this scenario these are provided via Junction 10 of the M5 and a new distributor road linking into the site from the motorway. The motorway junction improvement comprised a minimum upgrade to allow full movements, with additional capacity provided on the slip roads. -The infrastructure included in this scenario did not mitigate the impacts of the scale of development.</u></p> <p><u>DS7 includes an 'All Movements' junction improvements including complementary measures to M5 mainline. This</u></p>

Planning Policy Document	Key Policies and Objectives	Scheme Conformity with Policy
		<p><u>includes a high capacity upgrade of M5 J10 junction including three lane motorway off slips and a three circulatory lane grade separated roundabout with A4019, and a new signal controlled junction immediately west of the M5 to accommodate the associated West of Cheltenham development access road. There would also be new signals on the A4019 westbound entry to the new grade separated motorway junction.</u></p> <p><u>DS7 concluded that the J10 scheme is required to unlock all of the strategic allocations within the JCS. Note this does not include unlocking of the safeguarded land as this safeguarded land was not tested as part of the transport evidence base. Only the actual Strategic allocations were included in the JCS transport modelling.</u></p> <p><u>In line with the DS7 conclusion, the JCS makes reference to the economic benefits of the M5 Junction 10 scheme.</u></p>
	<p>SL1 - Safe and Sustainable Living Part d) states that development will only be permitted where it would accord with policies SD4 and SD14 of the JCS.</p>	<p>See earlier in table the Scheme compliance with JCS policies SD4 and SD14.</p>
	<p>BG1 - Cotswold Beechwoods SAC Recreation Pressure 'Development will not be permitted where it would be likely to lead directly or indirectly to an adverse effect upon the integrity of the European Site network (alone or in combination) and the effects cannot be mitigated. In order to retain the integrity of the Cotswold Beechwoods SAC, all development within the borough that leads to a net increase in dwellings will be required to mitigate any adverse effects.'</p>	<p>ES Chapter 7 Biodiversity (TR010063-APP-6.5APP-066) details the Scheme impacts on the European Site network. The Cotswold Beechwoods SAC has been scoped out of the assessment as it is at a distance of 7.4 km south of the Scheme, and with no hydrological connection.</p>
	<p>BG2 - Cotswold Beechwoods SAC Air Quality Development which is likely to generate additional road traffic emissions to air which are capable of affecting the Cotswold Beechwoods SAC will be screened against the Habitats</p>	<p>As stated above, the Cotswold Beechwoods SAC has been scoped out of the assessment as it is at a distance of 7.4 km south of the Scheme.</p>

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	<p>Regulations Assessment Framework in line with Natural England’s guidance ‘Natural England’s approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations (NEA001)’.</p>	
	<p>L1 – Landscape and Setting Development will only be permitted where it would not harm the setting of Cheltenham including views into or out of acknowledged importance.</p>	<p>Chapter 9 Landscape and Visual of the ES (application document TR010063-APP-6.7APP-068) details the landscape impact of the Scheme including landscaping details. Replanting to roadsides and other embedded mitigation measures will ensure the Scheme will sit comfortably within the landscape in the long term, and would potentially provide an enhancement of the environment to improve the experience for residents, pedestrians, cyclists, and vehicle users.</p>
	<p>HE1 - Buildings of Local Importance and Non-designated Heritage Assets Development proposals that would affect a locally important or non-designated heritage asset, including its setting, will be required to have regard to the scale of any harm or loss to the significance of the heritage asset.</p>	<p>Chapter 11 Cultural Heritage of the ES (application document TR010063-APP-6.15APP-070) describes the heritage impacts through an assessment of effects and with information on topographical, geological and archaeological conditions. The chapter states that consideration of the level of harm to a heritage asset as a result of the Scheme is a primary concern for the decision-taker with regards to planning consent. As no significant effects are expected once all embedded and additional mitigation measures are in place, the Scheme is considered to have less than substantial harm on to the historic environment.</p>
	<p>HE2 – National and local archaeological remains of importance There will be a presumption in favour of the physical preservation in situ of nationally important archaeological remains and their settings.</p>	<p>Chapter 11 Cultural Heritage of the ES (application document TR010063-APP-6.9APP-070APP-070) sets out that the cultural heritage assessment of the Scheme has considered impacts on heritage assets that may occur during the construction and operation of the Scheme. A robust programme of archaeological investigation and recording following an Archaeological Management Plan prepared in consultation with the local planning authority’s archaeological advisor would mitigate the potential anticipated adverse impacts <u>of</u> archaeological remains.</p>

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	<p>HM3 – Loss of residential accommodation</p> <p>Development which involves the loss of residential accommodation through the demolition of existing housing will not be permitted, except where ‘the proposed use would be beneficial to the wider economy and the local community...’</p>	<p>In the construction phase, the Scheme requires the demolition of a number of private properties, which represents an adverse effect. There is no mitigation for this and is a matter of compensation with landowners.</p> <p>Section 3 of this document (Planning Statement and Schedule of Accordance with National Planning Policy Statement) outlines the need for the Scheme and outlines the wider beneficial effects of the Scheme for the local community and wider economy.</p> <p>The Scheme seeks to provide an all-movements junction which will contribute towards unlocking housing and job opportunities in and around Cheltenham. The planned 35,175 new homes and 39,500 new jobs by 2031 will improve the quality of life within and around Cheltenham, and the Scheme will increase the capacity of the highways network, ensuring that the infrastructure is in place to enable these housing and economic developments. The Scheme is therefore considered to align with this policy.</p>
	<p>Paragraph 10.27 – Development proposals and biodiversity</p> <p>The Council will seek to protect all species and habitats listed in the UK Biodiversity Framework and Gloucestershire Nature Map from development that would harm those features in accord with legislative requirements and Policy SD9 of the JCS.</p>	<p>ES Chapter 7 – Biodiversity of the ES (application document TR010063 APP 6.5 APP-066 APP-066) assesses the impact of the Scheme on biodiversity and geology.</p> <p>The Scheme includes a significant level of Green Infrastructure in the form of planting and habitat creation, which is both embedded mitigation for the impacts of the Scheme and aims to provide biodiversity enhancements. The Scheme also maximises the opportunities to contribute to Nature Recovery Networks and seeks to ensure green infrastructure within and adjacent to the road network can deliver biodiversity gains. Overall, the Scheme is predicted to deliver in excess of 10% BNG. ES Appendix 7.18 Biodiversity Net Gain (application document TR010063 APP 6.15 APP-070) sets out the headline BNG results for the Scheme. This demonstrates compliance with this policy as well as the requirements of policy SD9 of the JCS.</p>

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	<p>Paragraph 10.26 – The water-based environment</p> <p>The Borough Council seeks to promote and enhance the natural water system in the Borough by making decisions that encourage developers to fully integrate watercourses into their developments and encourage developers to apply sustainable drainage principles when designing land drainage systems.</p>	<p>The FRA (application document TR010063 APP 5.5AS-023) reports that the drainage system will be designed in line with current NH Standards (DMRB) to ensure that runoff from the new impermeable area does not exceed the greenfield rate up to the 1 in 100 (1%) annual probability event, taking into account climate change. The Scheme design has incorporated a drainage strategy that centres on the application of SuDS, appropriate to local conditions, to manage surface water runoff.</p>
<p><u>Golden Valley SPD (2020)</u></p>	<p><u>Connectivity is key for The Golden Valley Development to maximise its potential, ensuring both direct access to the motorway and the effectiveness of the local highway network, through physical connections and suitable linkages for sustainable transport options. The 2020 budget (11th March 2020) announced funding of the upgrade to M5 Junction 10 through the hHomes England Housing Infrastructure Fund, with the works anticipated for 2024, these works support the JCS strategic allocations at North West and West Cheltenham.</u></p> <p><u>This work is complemented by the Connecting Cheltenham report which clearly sets out the long term strategy and delivery plan for transport in Cheltenham. Further analysis of the transport context is provided within Appendix A2 of the Golden Valley SPD.</u></p> <p><u>1.1.11 Significant challenges will need to be addressed to help realise the potential, but collaborative and co-ordinated action is now being taken to address these issues. Land has been safeguarded for further phases of growth. As well as providing supplementary guidance to help co-ordinate new development within the allocated site, this SPD also looks beyond the current plan period towards further phases of growth, highlighting the potentially very significant benefits associated with the relocation of the Hayden Sewage Treatment Works.</u></p>	<p><u>Enhancing connectivity to allow for economic growth is a key justification of the Scheme. The Golden Valley development will benefit from enhanced connectivityconnectivity as well as the additionaladditional southbound slip-road. More details of the enhanced connectivity are available in the Transport Assessment (AS-029)</u></p> <p><u>The Scheme provides network resilience and provides for future capacity. The sScheme is forward looking and provides mitigation for both planned and future development. More details of the enhanced connectivity are available in the Transport Assessment (AS-029).</u></p>

Planning Policy Document	Key Policies and Objectives	Scheme Conformity with Policy
The Cheltenham Plan Saved policies (2006)	<p>CP4 – Safe and sustainable living</p> <p>Development should not result in levels of traffic to and from the site attaining an environmentally unacceptable level.</p>	<p>Impacts The impacts of the Scheme on the SRN, surrounding roads and on the PRow network have been considered in the Transport Assessment (APP-138 application document TR010063 APP 7.5 APP-020).</p> <p>Considering specific journey times for routes within the model, the results in the assessment indicate that there are journey time improvements, alongside increases to journey time caused by the demand demand-dependent development.</p> <p>There would not be an unacceptable impact on highway safety, and the residual cumulative impacts on the road network would not be severe.</p>
Tewkesbury Borough Plan (2022)	<p>Objective 3</p> <p>‘Promoting sustainable transport (including public transport, cycling, walking, issues around freight transport and use of the private motor vehicle). This also includes the provision of infrastructure and issues of connectivity within and between modes of transport.’</p> <p>NAT1 – Biodiversity, Geodiversity and Important Natural Features</p> <p>‘Development proposals that will conserve, restore and enhance biodiversity will be permitted.’</p> <p>‘Proposals will, where applicable, proposals are required to deliver a biodiversity net gain across local and landscape scales, including designing wildlife into development proposals, the connection of</p>	<p>The Scheme objectives set out in this Planning Statement include providing safe access to services for the local community and including for users of sustainable transport modes. This includes providing convenient, accessible and attractive routes for pedestrians, cyclists and equestrians and improving crossing facilities.</p> <p>Chapter 13 Population and Human Health of the ES (application document TR010063 APP 6.11 AS-014) provides details of the replacement and enhanced PRow included in the Scheme, which will improve connectivity and amenity <u>amenities</u> for walkers, cyclists and equestrians.</p> <p>ES Chapter 7 Biodiversity (APP-066 TR010063 APP 6.5 APP-066) and Chapter 10 Geology and Soils (TR010063 APP 6.8 APP-069) assess the impact of the scheme on biodiversity and geology.</p> <p>The Scheme includes a significant level of Green Infrastructure which is both embedded mitigation for the impacts of the Scheme and aims to provide biodiversity enhancements. The Scheme also maximises the opportunities to contribute to Nature Recovery Networks and seeks to ensure green infrastructure within and adjacent to</p>

Planning Policy Document	Key Policies and Objectives	Scheme Conformity with Policy
	<p>sites and large-scale habitat restoration, enhancement, and re-creation.’</p> <p>‘Development that is likely to result in the loss, deterioration, or harm to features, habitats or species of importance to biodiversity, environmental quality or geological conservation will not be permitted unless:</p> <ul style="list-style-type: none"> a) The need for, and benefits of the development clearly outweigh its likely impact on the local environment, or the nature conservation value or scientific interest of the site; b) It can be demonstrated that the development could not reasonably be located on an alternative site with less harmful impacts; and c) Measures can be provided that would avoid, mitigate against, or as a last resort, compensate for the adverse effects likely to result from development. ‘ <p>‘The level of protection and mitigation should be proportionate to the status of the feature, habitat or species and its importance to the wider network.’</p>	<p>the road network can deliver biodiversity gains. Overall, the Scheme is predicted to deliver in excess of 10% BNG. ES Appendix 7.18 Biodiversity Net Gain (application document TR010063-APP-6.15APP-070) sets out the headline BNG results for the Scheme.</p> <p>As part of overall mitigation proposals, a REAC (application document TR010063-APP-7.4AS-027) has been prepared. This details the environmental mitigation measures that would be implemented both during construction and operation, why they are required, who is responsible for delivering them, and any ongoing maintenance arrangements.</p>
	<p>NAT2 – The water environment</p> <p>Where practical, the council will seek ‘appropriate opportunities offered by new development proposals to recreate more natural conditions and new habitat along watercourses, for example by requiring; the de-culverting, restoration or reprofiling of watercourses; the removal of barriers to fish migration; or the integration of watercourses with wider green/ blue infrastructure networks.’</p>	<p>The Scheme design incorporates ecologically sensitive design of structures such as culverts which will be incorporated into the Scheme, to maintain connectivity, continuity of flow, and natural substrate establishment. A detailed description of the Scheme design can be found in ES Chapter 2 (AS-010application document TR010063-APP-6.2APP-062)</p>
	<p>NAT3 – Green Infrastructure:</p>	<p>The Scheme design follows green infrastructure principles and mitigation measures are embedded within the design.</p>

Planning Policy Document	Key Policies and Objectives	Scheme Conformity with Policy
	<p>'Building with Nature Development must contribute, where appropriate to do so and at a scale commensurate to the proposal, towards the provision, protection and enhancement of the wider green infrastructure network. All proposals for major development will be required to provide a high standard of design for green infrastructure in accordance with established, recognisable standards – including the National Design Guide and Building with Nature Standards.'</p> <p>ENV2 – Flood risk and water management The Borough will apply the following principles in order to manage the risk of flooding:</p> <ul style="list-style-type: none"> Proposals (including surface water drainage schemes) should be designed to appropriate, locally specific allowances for climate change for peak flood flows and rainfall intensity and undertake new hydraulic modelling where necessary. Opportunities to reduce the existing risk of flooding from all sources in the Borough will be sought. All proposals will be expected to incorporate sustainable drainage systems where appropriate and proportionate to the scale and nature of development proposed. Surface water drainage proposals should, where appropriate, achieve significant betterment on existing discharge rates for all corresponding storm events. <p>HEA1 – Healthy and active communities To promote healthy active communities, new major development should be designed in accordance with 'Active Design' principles. Where there is expected to be a significant impact on the health or wellbeing the Borough Council will require a Health Impact Assessment to be undertaken.</p>	<p>The principles for landscape design are focused around retaining existing vegetation as far as possible, replacing any habitat losses and creating additional habitat to ensure a net gain to biodiversity, and retaining the natural character of the area through planting locally native species. Full details are outlined within ES Chapter 7 Biodiversity (application document TR010063 APP 6.5APP-066).</p> <p>The surface water drainage strategy will replicate the existing hydrology within the land occupied by the Scheme through SuDS principles. Offset gullies are proposed for the collection of rainwater runoff from the M5 mainline, which connects to carrier drains. For the Link Road, swales and filter drains serve as the collection systems. Attenuation basins are also provided.</p> <p>Detailed modelling and assessment have been undertaken to understand the baseline flood environment for the Scheme and the potential flood risks.</p> <p>Further details are presented in Chapter 8 Road Drainage and the Water Environment (application document TR010063 APP 6.6APP-067AS-016AS-016), and the Flood Risk Assessment in Appendix 8.1 (application document TR010063 APP 6.15APP-070).</p> <p>Chapter 13 Population and Human Health of the ES (application document reference TR010063 APP 6.14AS-018) provides an assessment of the likely positive and negative effects of the construction and operation of the Scheme, and opportunities for improving health and reducing inequalities.</p> <p>The Scheme design has been finalised after an options assessment process whereby the most favourable option from an environmental perspective has been taken forward.</p>

Planning Policy Document	Key Policies and Objectives	Scheme Conformity with Policy
	<p>Where significant impacts are identified, measures to mitigate the adverse impact of the development will be provided and/ or secured by planning obligations.</p>	<p>Where adverse environmental and social impacts have been anticipated, appropriate mitigation has been included to ensure that any significant adverse effects are minimised.</p> <p>In terms of mitigation for land take, this is a matter for compensation through the compulsory purchase process and sits outside the scope of the assessment.</p> <p>Essential mitigation has been proposed that includes further engagement and the development of collaborative solutions with the affected residents as well as dynamic feedback opportunities that will allow emerging issues to be addressed through the construction phase.</p>
	<p>HER2 – Listed Buildings ‘Alterations, extensions or changes of use to Listed Buildings, or development within their setting, will be expected to have no adverse impact on those elements which contribute to their special architectural or historic interest, including their settings.’</p>	<p>Chapter 11 Cultural Heritage of the ES (application document TR010063 APP 6.9 APP-070) sets out that the cultural heritage assessment of the Scheme has considered impacts on heritage assets that may occur during the construction and operation of the Scheme. This includes direct physical impacts as well as indirect impacts to heritage assets and their settings.</p> <p>Impacts to the settings of heritage assets would be mitigated through sympathetic design elements and landscaping, resulting in slight adverse effects which are not significant.</p>
	<p>HER4 – Archaeological Sites and Scheduled Monuments ‘Scheduled Monuments and sites of national archaeological importance will be preserved in situ. Development which would lead to substantial harm or loss of these sites and their setting should be wholly exceptional and will not normally be permitted.’</p>	<p>Chapter 11 Cultural Heritage of the ES (application document TR010063 APP 6.9 APP-070) sets out that the cultural heritage assessment of the Scheme has considered impacts on heritage assets that may occur during the construction and operation of the Scheme.</p> <p>The assessment found that significant adverse effects are anticipated due to impacts to known and as-yet-yet-unknown archaeological remains. A robust programme of archaeological investigation and recording following an Archaeological Management Plan prepared in consultation with the local planning authority’s archaeological advisor would mitigate these impacts to a slight adverse effect which</p>

Planning Policy Document	Key Policies and Objectives	Scheme Conformity with Policy
		<p>is not significant and will ensure the Scheme's compliance with this policy.</p>
	<p>HER5 – Non-designated Heritage Assets Non-designated heritage assets will be conserved having regard to the significance of the asset and its contribution to the historic character of the area.</p>	<p>Chapter 11 Cultural Heritage of the ES (application document TR010063-APP-6.9APP-070) sets out that the cultural heritage assessment of the Scheme has considered impacts on heritage assets (including non-designated heritage assets) that may occur during the construction and operation of the Scheme. This includes direct physical impacts as well as indirect impacts to heritage assets and their settings. Impacts to the settings of heritage assets would be mitigated through sympathetic design elements and landscaping, resulting in slight adverse effects which are not significant.</p>
	<p>TRAC1 – Pedestrian accessibility Pedestrian networks will be protected across the Borough and opportunities sought to extend and enhance them. New development should, through its design and layout, encourage walking by providing good quality permeable and legible routes both through the development, to local services and to the surrounding area.</p>	<p>The Scheme provides dedicated pedestrian and cycle facilities throughout the extent of the works. These provide an improvement compared to the existing situation for pedestrian and cycle users. Chapter 13 Population and Human Health of the ES (application document TR010063/APP/6.11APP-072) provides details of the replacement and enhanced PRoW included in the Scheme, which will improve connectivity and amenity <u>amenities</u> for walkers, cyclists and equestrians.</p>
	<p>TRAC2 – Cycle network and infrastructure 'Cycle infrastructure should be a fundamental consideration in a design-led process for new major development, including any Design and Access Statements.' The protection and enhancement of the cycle network, infrastructure and facilities across the Borough will be sought through the following measures:</p>	<p>The Scheme's design includes improving safety for walkers and cyclists during its operation. This is addressed through the provision of dedicated NMU facilities (footways, crossings, Public Rights of Way) and upgraded signalling and crossing points.</p>

Planning Policy Document	Key Policies and Objectives	Scheme Conformity with Policy
	<ul style="list-style-type: none"> Safeguarding, developing, and promoting a borough-wide network of safe and convenient cycle routes, segregated from motorised traffic where this does not detract from the pedestrian environment and where it confers an advantage to the cyclist in terms of journey directness and cycle trip experience. Requiring the needs of cyclists to be met in the design of new highway and traffic management schemes. <p>GRB2 – Gloucestershire Airport ‘The Non-Essential Operational Area of Gloucestershire Airport will be extended as shown on the policies map. Within the Non-Essential Operational Area, commercial development that would directly support the economic and operational viability of the airport uses will be supported. In all cases, proposals within the Non-Essential Operational Area must incorporate appropriate measures designed to mitigate the impact of the development on the surrounding Green Belt. The Non-Essential Operational Area will be safeguarded for appropriate commercial uses or airport related development. Proposals involving non-conforming development will be resisted in order to protect the strategic economic importance of the airport and in accordance with Green Belt policy guidance within the NPPF.’</p> <p>LAN2 – Landscape Character ‘All development must, through sensitive design, siting, and landscaping, be appropriate to, and integrated into, their existing landscape setting. -In doing so, relevant landscape features and characteristics must be conserved and where possible enhanced, having regard to the Gloucestershire Landscape Character Assessment 2006 and the Cotswolds AONB Landscape Character Assessment 2003.’</p>	<p>The Scheme does not encroach on to the Non-Essential Operational Area of Gloucestershire Airport. The Scheme will provide a beneficial link for users of Gloucestershire Airport by way of improving the capacity on the strategic road network in proximity to the airport.</p> <p>ES Chapter 9 Landscape and Visual of the ES (application document TR010063 APP 6.7 APP-068) includes an assessment of the expected landscape and visual effects of the Scheme on the local distinctiveness of different landscapes and draws upon existing Landscape Character Assessments for the local area including the ‘Vale of Gloucester’ and the urban character of Cheltenham.</p> <p>Replanting to roadsides and other embedded mitigation measures will ensure the Scheme will sit comfortably within the landscape in the long term, and would potentially provide an</p>

Planning Policy Document	Key Policies and Objectives	Scheme Conformity with Policy
		<p>enhancement of the environment to improve the experience for residents, pedestrians, cyclists and vehicle users. The Scheme will provide <u>the</u> replacement of woodland and scrub along the M5 and around the new junction to reinstate <u>the</u> screening effect and integrate back into the landscape. Individual trees to central reserves and verges to integrate the realigned A4019 route will also be provided. Hedgerow planting will be provided along the Link Road with supplementary blocks of wood and individual trees to reflect <u>the</u> local character of road infrastructure and provide some screening for visual receptors.</p>
<p>GLEP Strategic Economic Plan for Gloucestershire 2.0 (2018 Update)</p>	<p>Sections 1.2 and 1.4 The existing M5 Junction 10 is cited as a restricted junction which links to capacity constraints on the highways network. M5 Junction 10 is the ‘the only 2-way junction on the whole of the M5 and a major constraint to us achieving one of our primary aims. The upgrade of junction 10 to provide a four-way vehicle intersection enabling all vehicle movement on and off the M5, (the subject of a current bid to the Housing Infrastructure Fund), would bring forward a significant employment and mixed-use site within the vicinity of this junction, and would significantly increase the opportunity to develop land in the surrounding area.’</p>	<p>Section 3 of this document (Planning Statement and Schedule of Accordance with National Planning Policy Statement) outlines the need for the Scheme. It highlights that the ability of GCC, CBC and TBC to deliver their planned housing and economic growth is partly contingent upon finding solutions to facilitate the smooth flow of traffic through this area. The Scheme, designed to increase capacity at M5 Junction 10, responds to the need for development identified in the GLEP Strategic Economic Plan.</p>

Appendix B. National Policy Statement for National Networks (2014) (NPS ~~NNNPS NNNN NPS~~) accordance table

B.1. Introduction

- B.1.1. This Appendix provides an assessment of the Scheme's strategic alignment and conformity with the ~~NPS NNNPS NNNN NPS~~. The Appendix is set out as follows:
- Scheme conformity with ~~NPS NNNPS NNNN NPS~~ Chapter 2: Need for development of the national networks and Government's policy.
 - Scheme conformity with ~~NPS NNNPS NNNN NPS~~ Chapter 3: Wider Government policy on the national networks.
 - Scheme conformity with ~~NPS NNNPS NNNN NPS~~ Chapter 4: Assessment principles.
 - Scheme conformity with ~~NPS NNNPS NNNN NPS~~ Chapter 5: Generic impacts.
- B.1.2. The tables signpost other relevant documentation submitted as part of the application for development consent and provides a summary of the findings where appropriate.

<u>NPS NNNPS NNNN NPS</u> Paragraph No.	Relevant requirement of the National Networks NPS	Scheme compliance with the National Networks NPS
Scheme conformity with <u>NPS NNNPS NNNN NPS</u> Chapter 2, need for development of the national networks and government's policy		
1.2	The <u>NPS NNNPS NNNN NPS</u> is the primary basis for decision making for the Scheme, except where doing so involves any of the following (under Section 104 of the Act (3-8)): a. 'the United Kingdom being in breach of any of its international obligations' b. 'the SoS being in breach of any duty imposed on the SoS by or under any enactment' c. The decision 'would be unlawful by virtue of any enactment' d. 'the adverse impact of the proposed development would outweigh its benefits' e. 'any condition prescribed for deciding an application otherwise than in accordance with a NPS is met'	The Applicant has prepared this application with careful consideration of all legal obligations applying to it. The applicant is not aware of any issues in which deciding the application, in accordance with the <u>NPS NNNPS NNNN NPS</u> , would be in breach of the SoS's duties (b), would be unlawful (c) or contrary to any other condition prescribed for deciding the application (e).
2.1	'Well connected and high performing networks with sufficient capacity are vital to meet the country's long-term needs and support a prosperous economy.'	The RIS2 recognises M5 Junction 10 improvements as being a key investment on the SRN that the Government has committed funding under the HIF in delivering the vision and objectives of the RIS2. The Schemes listed under the HIF funding are intended to be delivered alongside RIS2 funded projects, but they are subject to different governance arrangements to those funded through RIS2. Significant population and household growth is expected to take place in the area in proximity to the Scheme over the next 10-15 years, with two Strategic Allocations, and one area of land which is safeguarded for development identified in the JCS. The Scheme, designed to increase capacity at M5 Junction 10, responds to the need for development identified in the <u>NPS NNNPS NNNN NPS</u> .
2.2	Recognises that there is a critical need to improve the national networks to address road congestion in order '... to provide safe, expeditious and resilient networks that better suppose social and	The Scheme objectives, outlined in full in Section 3.1 of this Planning Statement, are in line with the strategic objectives of the <u>NPS NNNPS NNNN NPS</u> to provide safe, expeditious and

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	economic activity; and to provide a transport network that is capable of stimulating and supporting economic growth'	resilient networks; support and promote social and economic activity; and address quality of life and environmental impacts.
2.4	The pressure on our networks is expected to increase even further as the long-term drivers for demand to travel - GDP and population - are forecast to increase substantially over coming years. Under central forecasts, road traffic is forecast to increase by 30% and rail journeys by 40%, rail freight has the potential to nearly double by 2030.	The Scheme seeks to support projected traffic increases, population and economic growth. The Transport Assessment (AS-029 application document TR010063/APP/7.5) takes future increases in demand for travel into account.
2.6	<u>There is also a need for development on the national networks to support national and local economic growth and regeneration, particularly in the most disadvantaged areas. Improved and new transport links can facilitate economic growth by bringing businesses closer to their workers, their markets and each other. This can help rebalance the economy.</u>	<u>The Scheme is required to unlock housing but it also supports the development of employment land as part of the allocated sites are needed to support employment.</u> <u>The Golden Valley development will see the creation of over 1 million sq.ft. of employment space alongside 1000 homes.</u>
2.7	In some cases there may be a need for development to improve resilience on the networks to adapt to climate change and extreme weather events rather than just tackling a congestion problem.	Chapter 14 Climate of the ES (AS-020 application document TR010063/APP/6.12) provides an assessment of vulnerability to climate change and extreme weather events. The Chapter concludes that the Scheme will improve transport resilience by replacing old degrading assets that were designed with less resilience to climate change than the assets that will replace them.
2.9	Broader environment, safety and accessibility goals will also generate requirements for development. In particular, development will be needed to address safety problems, enhance the environment or enhance accessibility for NMUs. In their current state, without development, the national networks will act as a constraint to sustainable economic growth, quality of life and wider environmental objectives.	The Scheme's objectives include providing safe access to services for the local community and for users of sustainable transport modes within and to the west and north-west of Cheltenham. This includes routes for pedestrians, cyclists and equestrians and improving crossing facilities, as well as the provision of a bus lane on the A4019 eastbound carriageway. The Scheme's objectives also seek to support economic growth through improving transport connections whilst ensuring that the Scheme is in keeping with the local environment. The Scheme

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		will also seek to deliver biodiversity net gain and will meet climate change requirements.
2.10	The Government has therefore concluded that at a strategic level there is a compelling need for development of the national networks - both as individual networks and as an integrated system. The Examining Authority and the SoS should therefore start their assessment of applications for infrastructure covered by this NPS on that basis.	The RIS2 recognises M5 Junction 10 improvements as being a key investment on the SRN that the Government has committed funding under the HIF in delivering the vision and objectives of the RIS2. The Schemes listed under the HIF funding are intended to be delivered alongside RIS2 funded projects, but they are subject to different governance arrangements to those funded through RIS2. The Scheme will directly support the planned housing and economic growth at Cheltenham, as well as reduce congestion on the strategic and local road network.
2.13	Recognises that the SRN provides critical links between cities, joins up communities, connects our major ports, airports and rail terminals and states that 'a well functioning SRN is critical in enabling safe and reliable journeys and the movement of goods in support of the national and regional economies.'	The Scheme principally concerns the M5, a key strategic link between the Midlands and the South-south-west, running from Junction 8 of the M6 at West Bromwich near Birmingham to Exeter in Devon, and linking with the M4 north of Bristol. The Scheme will contribute towards improved links to the north and south of the junction, allowing for the increased movement of goods and increased reliability of journey times on a key element of the SRN.
2.17	'The national road network is already under significant pressure. It is estimated that around 16% of all travel time in 2010 was spent delayed in traffic, and that congestion has significant economic costs: in 2010 the direct costs of congestion on the SRN in England were estimated at £1.9 billion per annum.'	Cheltenham currently experiences significant congestion at peak times. The Scheme will enable additional capacity on the road network whilst acting as a catalyst for economic growth and relieving traffic congestion on the existing road network.
2.18	'The pressure on the road network is forecast to increase with economic growth, substantial increases in population and a fall in the cost of car travel from fuel efficiency improvements. Under the Department's 2014 estimates, it is forecast that a quarter of travel time will be spent delayed in traffic by 2040, with direct costs rising to £9.8 billion per annum by 2040 on the SRN in England, without any intervention. Under our low and high	The Transport Assessment (application document TR010063 APP 7.5 APP-020) modelled future network performance in 2027 and 2042 for Scenario P (future year scenario without the Scheme), Scenario S (future year scenario with the Scheme) and Scenario R (future year scenario with the Scheme including traffic associated with dependent developments).

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	<p>demand scenarios, the proportion of travel time spent delayed in traffic could range between 12.1% and 21.8% on the SRN. When considering all the roads within England, our central estimates would amount to:</p> <p>A 71% increase in the number of hours households spend delayed in traffic each year, from 45 hours in 2010 to 76 hours in 2040.</p> <p>A 150% increase in the number of working days lost to congestion each year (from 42 million in 2010 to 106 million in 2040).'</p>	<p>Overall, the Scheme improves average journey times and increases average speeds across the modelled area. The assessment demonstrates that operation is predicted to improve for pedestrian, cyclist and vehicle users with the inclusion of the Scheme, and there would not be an unacceptable impact on highway safety.</p>
2.20	<p><u>Annex B sets out the Department’s latest road traffic forecasts for all roads and the Strategic Road Network. Traffic forecasts are not a policy goal and do not in themselves generate a need for development – the need for development arises from the pressures created by increases in traffic. Increased traffic without sufficient capacity will result in more congestion, greater delays and more unpredictable journeys. As with the congestion forecasts, these traffic forecasts will change over time as our understanding improves and circumstances change. Updated forecasts will be published, generally on an annual basis. Local forecasts will be used for the assessment of any specific road scheme being assessed under the NN NPS.</u></p>	<p><u>The Traffic forecasts set out in Traffic Forecasting Report (APP-142) show that the forecast traffic flows do not generate a need themselves; they show that increased traffic, as a result of the development of the Strategic Allocations, without sufficient capacity would results in problemsmore traffic related issues on the road network. The Scheme therefore adheres to Paragraph 2.20 in that it provides the additional capacity required to unlock the Strategic Allocations in response to the pressures created by the increased traffic associated with the development sites. reduce congestion, improve delays and provide for more predictable journeys.</u></p>
2.22	<p>‘Without improving the road network, including its performance, it will be difficult to support further economic development, employment and housing and this will impede economic growth and reduce people’s quality of life. The Government has therefore concluded that at a strategic level there is a compelling need for development of the national road network.’</p>	<p>The Scheme will facilitate both planned growth in strategic site allocations and unlock adjacent safeguarded land for both housing and employment enabled by the HIF bid.</p>
2.23	<p>‘The Government’s wider policy is to bring forward improvements and enhancements to the existing SRN to address the needs set</p>	<p>The Scheme is a junction improvement, with the following key features:</p>

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	<p>out earlier. Enhancements to the existing national road network will include:</p> <ul style="list-style-type: none"> • junction improvements, new slip roads and upgraded technology to address congestion and improve performance and resilience at junctions, which are a major source of congestion. • implementing "smart motorways" (also known as "managed motorways") to increase capacity and improve performance. • improvements to trunk roads, in particular dualling of single carriageway strategic trunk roads and additional lanes on existing dual carriageways to increase capacity and to improve performance and resilience.' 	<ul style="list-style-type: none"> • upgrading of existing roundabout and slip roads. • widening of carriageways in proximity to the junction. • provision of new road infrastructure in proximity to the junction.
2.24	<p><u>The Government's policy on development of the Strategic Road Network is not that of predicting traffic growth and then providing for that growth regardless. Individual schemes will be brought forward to tackle specific issues, including those of safety, rather than to meet unconstrained traffic growth (i.e. 'predict and provide').</u></p>	<p><u>This is not a predict and provide Scheme.- rather it has been brought forward to tackle specific issues i.e. to unlock development without imposing severe congestion (and safety) issues on the road network. The Scheme will address matters of safety associated with the induced traffic increase, providing traffic forecasts do not generate a need but increased traffic without sufficient capacity would result in the problems identified in 2.20 within the road network to unlock the Strategic Allocations.</u></p>
2.25	<p>'On the road network different approaches and measures will be appropriate for different places. This reflects differences in local preferences and choices and differing scope for alternatives to road travel. The network must also offer a coherent mode of transport for national journeys and must combine to form a single, usable network. In general, the nature of some journeys on the SRN mean that there will tend to be less scope for the use of alternative transport modes.'</p>	<p>Different approaches to resolving the problems identified on the local and SRN were assessed during the development of the Scheme, with the preferred option being that deemed most appropriate in the local context. The options considered, and method of assessment are described in Chapter 3 of this Planning Statement.</p>
<p>Scheme conformity with <u>NPS NNNPS NNNN NPS</u> Chapter 3, wider Government policy on the national networks</p>		

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Environmental and social impacts		
3.2	Government recognition that ‘for development of the national road and rail networks to be sustainable these should be designed to minimise social and environmental impacts and improve quality of life.’	A comprehensive ES has been prepared, together with proposals for mitigation of likely significant environmental effects arising from the Scheme. The Scheme design, embedded mitigation and the subsequent essential mitigation measures seek to minimise any social and environmental impacts associated with the Scheme. This is reported in the ES, prepared in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. The environmental aspects covered are:

		<ul style="list-style-type: none">• Chapter 1 Introduction (APP-060application document TR010063-APP 6.2APP-062).• Chapter 2 Scheme Description (APP-061application document TR010063-APP 6.2APP-062).• Chapter 3 Assessment of Alternatives (application document TR010063-APP 6.2APP-062).• Chapter 4 Environmental Assessment Methodology (application document TR010063-APP 6.2APP-063).•• Chapter 5 Air Quality (application document TR010063-APP 6.3AS-012).• Chapter 6 Noise and Vibration (application document TR010063-APP 6.4AS-014).• Chapter 7 Biodiversity (application document TR010063-APP 6.5APP-066APP-066).• Chapter 8 Road Drainage and the Water Environment (application document TR010063-APP 6.6APP-067AS-016AS-016).• Chapter 9 Landscape and Visual (application document TR010063-APP 6.7APP-068).• Chapter 10 Geology and Soils (application document TR010063-APP 6.8APP-069APP-069).• Chapter 11 Cultural Heritage (application document TR010063-APP 6.9APP-070APP-070).• Chapter 12 Materials and Waste (application document TR010063-APP 6.10APP-071).• Chapter 13 Population and Human Health (application document TR010063-APP 6.11APP-072AS-014).• Chapter 14 Climate (application document TR010063-APP 6.12APP-062AS-020).
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		<ul style="list-style-type: none"> Chapter 15 Cumulative Effects (application document TR010063 APP 6.13APP-074). <p>As part of overall mitigation proposals, a REAC (application document TR010063 APP 7.4AS-027) has been prepared. This details the environmental mitigation measures that would be implemented both during construction and operation, why they are required, who is responsible for delivering them, and any ongoing maintenance arrangements.</p>
3.3	Establishes the expectation that delivery of new schemes will improve quality of life and avoid and mitigate environmental, and social impacts in line with the principles set out in the NPPF and the Governments' planning guidance.	Each chapter of the ES demonstrates how environmental and social impacts have been assessed and mitigated in line with the relevant planning policies and guidance. The design firstly seeks to avoid adverse impacts and then where possible, details how the design of the Scheme and mitigation measures provide opportunities to deliver environmental and social enhancements. Identifying further opportunities for environmental and social benefit will be an aim of the detailed design process.
3.4	'The Appraisal of Sustainability accompanying this NPS recognises that some developments will have some adverse local impacts on noise, emissions, landscape/visual amenity, biodiversity, cultural heritage and water resources. The significance of these effects and the effectiveness of mitigation is uncertain at the strategic and non-locationally specific level of this NPS.'	The ES has considered the significance of all environmental effects at the local level and proposes mitigation measures where necessary.
3.5	'Outside the nationally significant infrastructure project regime, Government policy is to bring forward targeted works to address existing environmental problems on the SRN and improve the performance of the network. This includes reconnecting habitats and ecosystems, enhancing the settings of historic and cultural heritage features, respecting and enhancing landscape character, improving water quality and reducing flood risk,	Wider Government policy in relation to specific environmental topics is addressed in the relevant Chapters of the ES. In terms of reconnecting habitats and ecosystems, as part of the Biodiversity Net Gain initiative, the Scheme will provide new planting which will strengthen the linear vegetation features within the Scheme and improve connectivity to the wider landscape. Wildlife crossing points will also be provided which will ensure continued habitat connectivity for badgers and prevent badger

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	avoiding significant adverse impacts from noise and vibration and addressing areas of poor air quality.'	access onto the carriageway. Ecologically sensitive design of structures such as culverts will also be incorporated into the Scheme, to maintain connectivity, continuity of flow, and natural substrate establishment.
Emissions		
3.6	'Transport will play an important part in meeting the Government's legally binding carbon targets and other environmental targets. As part of this there is a need to shift to greener technologies and fuels, and to promote lower carbon transport choices. Over the next decade, the biggest reduction in emissions from domestic transport is likely to come from efficiency improvements in conventional vehicles, specifically cars and vans, driven primarily by EU targets for new vehicle CO2 performance. Electrification of the railway will also support reductions in carbon.'	Chapter 14 Climate of the ES (application document TR010063 APP 6.12APP 062AS-020) provides an assessment of carbon emissions arising from the construction and operation of the Scheme, which informs <u>the</u> identification of appropriate mitigation measures. The assessment notes that transport was the largest emitting section of UK GHG emissions in 2020, contributing 24% of emissions. However, operational impacts associated with emissions are likely to be offset by the predicted future fleet <u>fleet</u> -wide shift toward electric and hybrid vehicles. Applying the carbon reduction hierarchy described in the Chapter will reduce the GHG emissions from the Scheme and therefore the effects on climate. Mitigation of the Scheme's in-use emissions will be explored based on examination of traffic management scenarios over the network. Inclusion <u>The inclusion</u> of NMU routes encourages <u>the</u> utilisation of alternative means of transport and <u>helps</u> to achieve the goal of creating a more integrated and sustainable transport network, whilst reducing GHG emissions.
3.8	'The impact of road development on aggregate levels of emissions is likely to be very small. Impacts of road development need to be seen against significant projected reductions in carbon emissions and improvements in air quality as a result of current and future policies to meet the Government's legally binding carbon budgets and the European Union's air quality limit values. For example:	Chapter 14 Climate of the ES (application document TR010063 APP 6.12APP 062AS-020) indicates that GHG emissions arising from the construction phase and opening year of the Scheme together contribute 0.005% to the fourth carbon budget, which would not have a significant effect on climate. Chapter 5 Air Quality of the ES (application document TR010063 APP 6.3AS-012) states that there are no exceedances of the PM ₁₀ AQS objectives in the base year (2019), therefore,

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	<p>Carbon – the annual CO2 impacts from delivering a programme of investment on the SRN of the scale envisaged in Investing in Britain's Future amount to well below 0.1% of average annual carbon emissions allowed in the fourth carbon budget. This would be outweighed by additional support for ULEVs also identified as overall policy.</p> <p>Air quality – aggregate air quality impacts from delivering a programme of investment on the SRN of the scale envisaged in Investing in Britain's Future are small. Total PM₁₀ and NO_x might be expected to increase slightly, but this needs to be seen in the context of projected reductions in emissions over time. PM₁₀ and NO_x are expected to decrease over the next decade or so as a result of tighter vehicle emission standards, then flatten, with further falls over time due to greater levels of electric and other ultra-low emission vehicles.'</p>	<p>assessment of PM₁₀ concentrations in the Scheme opening year (2027) has not been undertaken. Overall, the air quality impacts identified in the operational period are not significant and no mitigation measures have been recommended.</p>
Safety - Roads		
3.10	<p>'The Government's overall vision and approach on road safety is set out in the Strategic Framework for Road Safety. It is a vision in which Britain remains a world leader in road safety; where highway authorities are empowered to take informed decisions within their area; where driver and rider training gives learners the skills they need to be safe on our roads; and where tough measures are taken against the minority of offenders who deliberately choose to drive dangerously. As set out in paragraphs 4.60 to 4.66, scheme promoters are expected to take opportunities to improve road safety, including introducing the most modern and effective safety measures where proportionate.'</p>	<p>The Scheme is a highways improvements <u>improvement</u> project which aims to provide safe access to services for the local community and for users of sustainable transport modes. Therefore, it is expected that the Scheme will help to improve road safety in the area.</p> <p>The Scheme reduces the length of the queue on the southbound off slip. This is considered as a safety benefit of the Scheme as queues will no longer extend onto the live lane of the M5.</p> <p>The Scheme seeks to provide safe access to services for the local community, which will include reducing annual collision frequency and severity.</p> <p>The Transport Assessment (application document TR010063 APP 7.5 <u>APP-020</u>) states that the Scheme provides a number of walking and cycling infrastructure improvements along the entire Scheme extent. Overall, the Scheme scores strongly for safety</p>

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		and comfort. Safety is also a consistent strength of the junction designs within the Scheme.
Sustainable transport		
3.15	‘The Government is committed to providing people with options to choose sustainable modes and making door-to-door journeys by sustainable means an attractive and convenient option. This is essential to reducing carbon emissions from transport.’	The Scheme objectives set out in this Planning Statement include providing safe access to services for the local community and for users of sustainable transport modes. This includes providing convenient, accessible and attractive routes for pedestrians, cyclists and equestrians and improving crossing facilities, as well as the provision of a bus lane on the A4019 eastbound carriageway. Chapter 13 Population and Human Health of the ES (application document TR010063 APP 6.11 APP 072AS-014) provides details of the replacement and enhanced PRoW included in the Scheme, which will improve connectivity and amenity <u>amenities</u> for walkers, cyclists and equestrians.
3.17	‘There is a direct role for the national road network to play in helping pedestrians and cyclists. The Government expects applicants to use reasonable endeavours to address the needs of cyclists and pedestrians in the design of new schemes. The Government also expects applicants to identify opportunities to invest in infrastructure in locations where the national road network serves communities and acts as a barrier to cycling and walking, by correcting historic problems, retrofitting the latest solutions and ensuring that it is easy and safe for cyclists to use junctions.’	The Scheme objectives set out in this Planning Statement include providing safe access to services for the local community and for users of sustainable transport modes. This includes providing convenient, accessible and attractive routes for pedestrians, cyclists and equestrians and improving crossing facilities, as well as the provision of a bus lane on the A4019 eastbound carriageway. Chapter 13 Population and Human Health of the ES (application document TR010063 APP 6.11 APP 072AS-014) provides details of the replacement and enhanced PRoW included in the Scheme, which will improve connectivity and amenity <u>amenities</u> for walkers, cyclists and equestrians.
Accessibility		

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3.19	<p>'The Government is committed to creating a more accessible and inclusive transport network that provides a range of opportunities and choices for people to connect with jobs, services and friends and family.'</p>	<p>The Scheme objectives, set out in this Planning Statement include to provide <u>providing</u> safe access to services for the local community and for users of sustainable transport modes within and to the west and north-west of Cheltenham.</p> <p>Chapter 13 Population and Human Health of the ES (application document TR010063 APP 6.11 APP-072AS-014) also assesses whether the Scheme impacts (and specifically whether it disproportionately impacts) on protected characteristic groups. This includes consideration of highway users, public transport and walking / <u>cycl</u>ing routes, along with assessing impacts on accessibility to the amenities surrounding the land occupied by the Scheme. Although disproportionate impacts are expected on vulnerable groups, many of the disproportionate impacts on protected characteristic groups are confined to the construction period, such as the construction works manifesting uncertainty which could disproportionately impact those reliant on public transport, or construction activities disproportionately affecting those with pre-existing health (respiratory) conditions.</p>
3.20 – 3.21	<p>'The Government's strategy for improving accessibility for disabled people is set out in Transport for Everyone: an action plan to improve accessibility for all. In particular:</p> <p>The Government will continue to work to ensure that the bus and train fleets comply with modern access standards by 2020, and to improve rail station access for passengers with reduced mobility. The private car will continue to play an important role, providing disabled people with independence where other forms of transport are not accessible or available.</p> <p>The Government expects applicants to improve access, wherever possible, on and around the national networks by designing and delivering schemes that take account of the accessibility requirements of all those who use, or are affected by, national networks infrastructure, including disabled users. All reasonable</p>	<p>Chapter 13 Population and Human Health of the ES (application document TR010063 APP 6.11 APP-072AS-014) includes consideration of those with disabilities, and covers accessibility in varying forms including physical accessibility, access to amenity <u>amenities</u>, and access to information.</p> <p>The baseline conditions section utilises Census data which allows for an understanding of which areas of the study area are home to higher levels of people who live with disabilities which impairs access. The assessment then takes this data and ensures that the sensitivity of receptor clusters reflects <u>this</u>.</p> <p>Mitigation measures to be implemented which help to ensure accessibility for disabled users include the provision of new/replacement bus stops on the A4019, as well as a Community Engagement Plan being prepared and implemented,</p>

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	<p>opportunities to deliver improvements in accessibility on and to the existing national road network should also be taken wherever appropriate.'</p> <p>There is a duty to promote equality and to consider the needs of disabled people as part of their normal practice. Applicants are expected to comply with any obligations under the Equalities Act 2010.</p>	<p>outlining the methods in which the local and surrounding community will be engaged during construction of the Scheme, which will ensure accessibility requirements of the disabled are taken into account.</p>
3.22	<p>'Severance can be a problem in some locations. Where appropriate applicants should seek to deliver improvements that reduce community severance and improve accessibility.'</p>	<p>Chapter 13 Population and Human Health of the ES (application document TR010063 APP 6.11 APP-072AS-014) assesses the impacts of the Scheme on community severance and accessibility. The Scheme is anticipated to maintain the connectivity offered by recreational routes for NMUs and will include new, altered and improved PRow which will improve conditions and accessibility for NMUs.</p>
Scheme conformity with NPS NNNPS NNNN NPS Chapter 4, assessment principles		
General Principles of assessment		
4.3	<p>'In considering any proposed development, and in particular when weighing its adverse impacts against its benefits, the Examining Authority and the SoS should take into account:</p> <ul style="list-style-type: none"> - Its potential benefits including the facilitation of economic development, including job creation, housing and environmental improvement, and any long-term wider benefits - Its potential adverse impacts, including any longer-term and cumulative adverse impacts, as well as any measures to avoid, reduce or compensate for any adverse impacts.' 	<p>This Planning Statement sets out the Scheme's objectives, which are to:</p> <ul style="list-style-type: none"> Support economic growth and facilitate growth in jobs and housing by providing improved transport network connections in west and north-west Cheltenham. Enhance the transport network in the west and north-west of the Cheltenham area with the resilience to meet current and future needs. Improve the connectivity between the SRN and the local transport network in west and north-west Cheltenham. Deliver a package of measures which is in keeping with the local environment, establishes biodiversity net gain and meets climate change requirements.

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		<p>Provide safe access to services for the local community and for users of sustainable transport modes within and to the west and north-west of Cheltenham.</p> <p>Chapter 4 Economic Case of this Planning Statement provides an overview of the economic, social and environmental benefits associated with the Scheme.</p> <p>The ES sets out, by topic, the potential residual adverse effects associated with each environmental topic, including cumulative effects and proposed mitigation measures where necessary.</p>
4.3-4.4	When considering any proposed development, the examining authority should consider the potential adverse impacts including any cumulative adverse impacts. 'In this context, environmental, safety, social and economic benefits and adverse impacts, should be considered at national, regional and local levels.'	<p>The ES reports on the Environmental Impact Assessment, which has been carried out with consideration for potential effects at national, regional and local levels.</p> <p>Chapter 15 Assessment of Cumulative Effects of the ES (application document TR010063 APP 6.13APP-074) states the intra-Scheme and inter-project cumulative impacts. There are potential adverse intra-Scheme effects at four receptors, and potential interactions with four other schemes/allocations. Mitigation measures are to be discussed and developed with GCC around how to co-ordinate construction activities in the local and wider area to the Scheme, as well as through the Project Liaison Officer (PLO).</p>
4.5	Applications for road projects for which the position is covered in paragraph 4.8 will normally be supported by a business case prepared in accordance with Treasury Green Book principles including business, economic, environmental, social impacts cases proportionate to the development.	Chapter 5 of this Statement sets out the economic case for the Scheme, including the economic benefits arising from the Scheme and the extent to which the Scheme provides good value for money in relation to the impact on public accounts by considering improvements to transport economic efficiency for all users, environmental impacts, effects on the wider economy and the social and distributional effects of the scheme.
4.6	'Applications for road and rail projects should usually be supported by a local transport model to provide sufficiently	Strategic and local transport modelling has been undertaken in line with Department for Transport guidelines. Details are

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	accurate detail of the impacts of a project. The modelling will usually include national level factors around the key drivers of transport demand such as economic growth, demographic change, travel costs and labour market participation, as well as local factors. The Examining Authority and the SoS do not need to be concerned with the national methodology and national assumptions around the key drivers of transport demand. We do encourage an assessment of the benefits and costs of Schemes under high and low growth scenarios, in addition to the core case. The modelling should be proportionate to the scale of the Scheme and include appropriate sensitivity analysis to consider the impact of uncertainty on project impacts.'	provided in the Transport Assessment Report (application document TR010063-APP 7.5 APP-020).
4.9	'The Examining Authority should only recommend, and the SoS should only impose, requirements in relation to a development consent, that are necessary, relevant to planning, relevant to the development to be consented, enforceable, precise, and reasonable in all other respects. Guidance on the use of planning conditions or any successor to it, should be taken into account where requirements are proposed.'	The Draft Development Consent Order and Schedules (application document TR010063-APP 3.1 AS-003) includes the draft requirements which are considered necessary and relevant in Schedule 2. The Explanatory Memorandum (application document TR010063 APP 3.2 APP-032) explains the purpose and effect of each provision in the draft order.
Linear infrastructure		
4.13	'This NPS does not identify locations at which development of the road and rail networks should be brought forward. However, the road and rail networks provide access for people, business and goods between places and so the location of development will usually be determined by economic activity and population and the location of existing transport networks.'	The Scheme constitutes an upgrade to existing transport infrastructure. It is hence located on the existing transport network. M5 Junction 10 is located on a key strategic link between the Midlands and the South south-west, running from Junction 8 of the M6 at West Bromwich near Birmingham to Exeter in Devon, and linking with the M4 north of Bristol. The Scheme is also located in proximity to proposed strategic allocation sites A4 (Land at North West Cheltenham) and A7 (Land at West Cheltenham), as set out in the JCS, which the Scheme seeks to bring forward by increasing the capacity of the road network.

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Environmental Impact Assessment		
4.15	‘All proposals for projects that are subject to the European Union’s Environmental Impact Assessment (EIA) Directive and are likely to have significant effects on the environment, must be accompanied by an ES, describing the aspects of the environment likely to be significantly affected by the project. The Directive specifically requires an EIA to identify, describe and assess effects on human beings, fauna and flora, soil, water, air, climate, the landscape, material assets and cultural heritage, and the interaction between them. Schedule 4 of the Infrastructure Planning (EIA) Regulations 2009 sets out the information that should be included in the ES including a description of the likely significant effects of the proposed project on the environment, covering the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the project, and also the measures envisaged for avoiding or mitigating significant adverse effects. Further guidance can be found in the online planning portal. In this NPS, the terms ‘effects’, ‘impacts’ or ‘benefits’ should accordingly be understood to mean likely significant effects, impacts or benefits.’	The DCO is accompanied by an ES which details the significant effects on the environment and, where necessary, mitigation measures to reduce any residual effects of the Scheme. This meets the requirements of the European Union’s Environmental Impact Assessment Directive as transposed into UK legislation in May 2017 as the IP (EIA) Regulations 2017.
4.16	‘When considering significant cumulative effects, the ES should provide information on how the effects of the applicant’s proposal would combine and interact with the effects of other development (including projects for which consent has been granted, as well as those already in existence).’	Chapter 15 Cumulative Effects of the ES (application document TR010063-APP-6.13 APP-074) provides an assessment of the likely significant effects of the Scheme in combination with other past, present and reasonably foreseeable developments, as well as impact interactions. Past and present developments are considered as part of the baseline and in some cases reflects the sensitivity of the receptors assessed. The developments considered in the assessment were identified using local knowledge, published information and consultation with the local planning authorities, and fall under the following categories:

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		<ul style="list-style-type: none"> • Trunk road and motorway projects which have been confirmed. • Development projects with valid planning permissions as granted by the local planning authority and for which formal EIA is a requirement or for which non-statutory EIA has been undertaken. • Applications for consent which have been made but have not yet been determined. • Allocated sites in emerging or adopted Local Plans. • Other types of applications which could have implications for the Scheme.
4.17	‘The examining authority should consider how significant cumulative effects and the interrelationship between effects might, as a whole, affect the environment, even though they may be acceptable when considered on an individual basis with mitigation measures in place.’	An assessment of cumulative effects can be found in Chapter 15 Cumulative Effects of the ES (application document TR010063 APP 6.13 APP-074), which identifies the intra-Scheme and inter-project cumulative impacts as a result of the Scheme. There are potential adverse intra-Scheme effects at four receptors, and potential interactions with four other schemes/allocations. Mitigation measures are to be discussed and developed with GCC around how to co-ordinate construction activities in the local and wider area to the Scheme, as well as through the Project Liaison Officer (PLO).
4.18	‘In some instances, it may not be possible at the time of the application for development consent for all aspects of the proposal to have been settled in precise detail. Where this is the case, the applicant should explain in its application which elements of the proposal have yet to be finalised, and the reasons why this is the case.’	Detail of the Scheme design is shown on the Engineering Section Drawings (application document TR010063 APP 2.10 APP-016, APP-017 and APP-018), General Arrangement Plans (application document TR010063 APP 2.9) and Works Plans (application document TR010063 APP 2.4). The DCO will secure consent for the Scheme to be undertaken within the Order Limits (subject to DCO requirements) including all the temporary construction works. The Limits of Deviation within the Order Limits represent the area of land that may be used for the siting of infrastructure. The Limits of Deviation thus

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Habitats Regulations Assessment		
4.22	'The applicant should seek the advice of Natural England and, where appropriate, for cross-boundary impacts, Natural Resources Wales and Scottish Natural Heritage to ensure that impacts on European sites in Wales and Scotland are adequately considered.'	<p>identify a maximum distance or measurement of variation within which the works must be constructed. This and other parameters are secured in the draft DCO and Schedules (application document TR010063 APP 3.1AS-003).</p> <p>A Habitats Regulations Assessment (application document TR010063/APP/6.15APP-124) has been undertaken, to assess <u>the</u> potential significant effects of the Scheme on European sites and all others subject to the same policy protection. Within the vicinity of the Scheme, the following fall under this category:</p> <ul style="list-style-type: none"> • Wye Valley and Forest of Dean Bat Sites SAC. • Walmore Common SPA/Ramsar. • Severn Estuary SAC/SPA/Ramsar. • Cotswold Beechwoods SAC. <p>Appendix N of the Habitats Regulations Assessment details the consultation undertaken with Natural England.</p>
4.23	Any application should be accompanied by sufficient information to enable examining authority to undertake an Appropriate Assessment under the Habitats Regulations.	A statement to inform the SoS's Appropriate Assessment has been prepared for the Scheme (application document TR010063 APP 6.15APP-070) – Appendix 7.14.
Alternatives		
4.26	<p>'Applicants should comply with all legal requirements and any policy requirements set out in this NPS on the assessment of alternatives. In particular:</p> <p>The EIA Directive requires projects with significant environmental effects to include an outline of the main alternatives studied by the applicant and an indication of the main reasons for the applicant's choice, taking into account the environmental effects.</p>	<p>Chapter 3 Scheme Development of this Planning Statement and Chapter 3 of the ES (application document TR010063 APP 6.2APP-062) set out the alternative options considered during <u>the</u> development of the Scheme. Assessment of these alternatives, taking account of the environmental effects, <u>have has</u> provided the basis for arriving at the preferred option.</p> <p>Other specific legal and policy requirements for the consideration of alternatives are:</p>

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	<p>There may also be other specific legal requirements for the consideration of alternatives, for example, under the Habitats and Water Framework Directives.</p> <p>There may also be policy requirements in this NPS, for example the flood risks sequential test and the assessment of alternatives for developments in National Parks, the Broads and Areas of Outstanding Natural Beauty (AONB).'</p>	<p>The European Directive 2008/50/EC, Ambient Air Quality and Cleaner Air for Europe, transposed to UK legislation by the Air Quality Standards Regulations 2010.</p> <p>The European Directive 2000/60/EC, Establishing a Framework for the Community Action in the Field of Water Policy, transposed in-to UK legislation by the Water Environment (Water Framework Directive) (England and Wales) Regulations 2003 and the Water Industry Act 1991 (Amendment) (England) Regulations 2009.</p> <p>The European Directives 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna and 2009/147/EC on the Conservation of Wild Birds, which are transposed into UK legislation by the Conservation of Habitats and Species Regulations 2010 (as amended by the Conservation of Habitats and Species (Amendment) Regulations 2012).</p> <p>The European Habitats Directive 92/43/EEC and Habitats Regulations 2017.</p> <p>The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act 2000.</p> <p>These requirements have been taken into consideration in the assessment of alternatives for the Scheme.</p>
4.27	<p><u>All projects should be subject to an options appraisal. The appraisal should consider viable modal alternatives and may also consider other options (in light of the paragraphs 3.23 to 3.27 of this NPS). Where projects have been subject to full options appraisal in achieving their status within Road or Rail Investment Strategies or other appropriate policies or investment plans, option testing need not be considered by the examining authority or the decision maker. For national road and rail schemes, proportionate option consideration of alternatives will have been</u></p>	<p><u>The Applicant notes that RIS 2 refers to this Scheme, M5 and Link Road and the governance processes which has been adopted. Essentially, with DfT being on the delivery board this would replicate what would be the position if the Scheme were promoted through the PCF governance process operated by National Highways equivalent schemes. The Scheme has been subject to full an options appraisal and broader governance in a manner comparable to that achieved in obtaining RIS2 status and that proportionate option consideration was undertaken as part of</u></p>

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	<u>undertaken as part of the investment decision making process.61 It is not necessary for the Examining Authority and the decision maker to reconsider this process, but they should be satisfied that this assessment has been undertaken.</u>	<u>that investment decision-making process and therefore is in accordance with Paragraph 4.27.</u>
Criteria for 'good design' for national network infrastructure		
4.29	Outlines the requirement that 'visual appearance should be a key factor in considering the design of new infrastructure, as well as functionality, fitness for purpose, sustainability and cost. Applying 'good design' to national network projects should therefore produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction, matched by an appearance that demonstrates good aesthetics as far as possible.'	The Scheme objectives include the notion of delivering a Scheme which is in keeping with the local environment. The Planning Statement sets out in Chapter 3 how the design has evolved, including the options considered and changes carried out as a result of consultation. Chapter 9 Landscape and Visual of the ES (application document TR010063-APP-6.7APP-068) states that the proposed landscape mitigation measures seek to ensure an attractive visual appearance of the Scheme. Although there would be increased presence of roads and associated infrastructure, these would essentially be in keeping with the existing landscape character and context of views within the area. Replanting to roadsides and other embedded and essential mitigation measures would ensure that, in the long term, the Scheme would sit comfortably in the landscape and views and potentially provide an enhancement of the environment to improve the experience for residents, pedestrians, cyclists and vehicles users.
4.32	'Scheme design will be a material consideration in decision making. The SoS needs to be satisfied that national networks infrastructure projects are sustainable and as aesthetically sensitive, durable, adaptable and resilient as they can reasonably be (having regard to regulatory and other constraints and including accounting for natural hazards such as flooding).'	Chapter 9 Landscape and Visual of the ES (application document TR010063-APP-6.7APP-068) states that the proposed landscape mitigation measures seek to ensure an attractive visual appearance of the Scheme. The Scheme will improve transport resilience by replacing old degrading assets that were designed with less resilience to climate change than the assets that will replace them.

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		The Scheme will not be at significant risk of flooding, and the Scheme should not result in a material increase in flood risk to third parties.
4.33	'The applicant should therefore take into account, as far as possible, both functionality (including fitness for purpose and sustainability) and aesthetics (including the Scheme's contribution to the quality of the area in which it would be located). Applicants will want to consider the role of technology in delivering new national networks projects. The use of professional, independent advice on the design aspects of a proposal should be considered, to ensure good design principles are embedded into infrastructure proposals.'	Chapter 9 Landscape and Visual (application document TR010063-APP-6.7 APP-068) of the ES also sets out the potential landscape and visual impacts associated with the construction and operation of the Scheme. The assessment confirms that no further assessment is required into development in relation to AONBs. The Scheme is not located within an AONB, and while there is some visual interaction with the Scheme, this is over a great distance which is barely discernible within the context of the views over Cheltenham. Furthermore, the proposed landscape mitigation measures seek to ensure an attractive visual appearance of the Scheme. Regarding functionality, the Scheme provides a fit-for-purpose design which is in keeping with the current baseline. The south/east embankment at Junction 10 also provides dam functionality. It is recommended that planting is provided at detailed design to further enhance screening to the junction. Works to install signage and technology equipment will be undertaken along the M5 to the north and south of Junction 10. The exact locations of these works will be determined at detailed design and will be limited to works at discrete locations in the existing highway verge.
4.34	'Whilst the applicant may only have limited choice in the physical appearance of some national networks infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting and design measures relative to existing landscape and historical character and function, landscape permeability, landform and vegetation.'	The following Chapters of the ES identify embedded and additional mitigation measures, where necessary, in relation to existing landscape, historical character and function, landscape permeability, landform and vegetation: Chapter 9 Landscape and Visual (application document TR010063-APP-6.7 APP-068) details how the selection and

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		<p>refinement of the preferred Scheme option has have reduced potential impacts on loss of trees, hedgerows and woodland.</p> <p>Chapter 11 Cultural Heritage (application document TR010063 APP 6.9APP-070) provides details of the existing historic environment and how the design mitigation for landscape and visual impacts will serve to protect this.</p> <p>Chapter 13 Population and Human Health (application document TR010063 APP 6.11AS-014) establishes how Scheme design will reduce severance and improve accessibility of local routes to NMUs.</p>
4.35	‘Applicants should be able to demonstrate in their application how the design process was conducted and how the proposed design evolved. Where a number of different designs were considered, applicants should set out the reasons why the favoured choice has been selected.’	<p>Chapter 3 of this Planning Statement details the Scheme Development which includes the evolution of the design.</p> <p>The Consultation Report – Main Report (application document TR010063 APP 5.1) explains the consultation undertaken and how it has influenced the design development of the Scheme.</p>
Climate change adaptation		
4.38	‘Adaptation is therefore necessary to deal with the potential impacts of these changes that are already happening. New development should be planned to avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the provision of green infrastructure.’	<p>Chapter 14 Climate of the ES (application document TR010063 APP 6.12AS-020) takes account of <u>the</u> predicted impacts of the Scheme on climate change, and the vulnerability of the Scheme to the impacts of climate change. It proposes mitigation measures for climate-related impacts. The Chapter concludes that the Scheme will improve transport resilience by replacing old degrading assets that were designed with less resilience to climate change than the assets that will replace them.</p> <p>The Flood Risk Assessment (application document TR010063 APP 6.15APP-070) also takes into account the impacts on climate change and resilience over the life-time of the development. The Scheme will not be at significant risk of flooding, and the Scheme should not result in a material increase in flood risk to third parties.</p>

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4.40	'New national networks infrastructure will typically be long term investments which will need to remain operational over many decades in the face of a changing climate. This paragraph of the <u>NPS NNNPS NNNN NPS</u> requires that climate change is considered when planning the location, design, build and operation of a new project and any accompanying ES should set out how the proposal would take account of the projected impacts of climate change.'	Chapter 15 Climate of the ES (application document TR010063 APP-6.12AS-020) takes account of <u>the</u> predicted impacts of the Scheme on climate change, and the vulnerability of the Scheme to the impacts of climate change. It proposes mitigation measures for climate-related impacts. The Chapter concludes that the Scheme will improve transport resilience by replacing old degrading assets that were designed with less resilience to climate change than the assets that will replace them. The Scheme will be designed to be <u>flood-free</u> during the 1% annual exceedance probability event (1 in a 100-year return period) with climate change allowance, ensuring hydraulic conveyance of both fluvial and surface water flows. As such, climate change should have no specific impact on this Scheme.
4.41	'Where transport infrastructure has safety-critical elements and the design life of the asset is 60 years or greater, the applicant should apply the UK Climate Projections 2009 (UKCOP09) high emissions scenario (high impact, low likelihood) against the 2080 projections at the 50% probability level.'	Chapter 14 Climate of the ES (application document TR010063 APP-6.12AS-020) is based on an assessment that uses the latest UKCP18 data. The climate vulnerability assessment presents UKCP18 data for an RCP8.5 scenario (an extreme emissions scenario) – for this scenario, the assessment presents 50 th percentile results but also 90 th percentile data.
4.42	'The applicant should take into account the potential impacts of climate change using the latest UK Climate Projections available at the time and ensure any environment statement that is prepared identifies appropriate mitigation or adaptation measures. This should cover the estimated lifetime of the new infrastructure.'	Chapter 14 Climate of the ES (application document TR010063 APP-6.12AS-020) presents the mitigation measures in the form of avoid, <u>reduce-reducing</u> and <u>remediate-remediating</u> . This includes: Avoid: maximising potential for re-using and refurbishing existing assets, as well as exploring alternative lower carbon options to deliver the project objectives. Reduce: applying low carbon solutions to minimise resource consumption during the construction, operation, user's use of the project, and at end-of-life. Remediate: identify, assess and integrate measures to further reduce carbon through on or off-site offsetting or sequestration.

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4.43	'The applicant should demonstrate that there are no critical features of the design of new national networks infrastructure which may be seriously affected by more radical changes to the climate beyond that projected in the latest set of UK climate projections. Any potential critical features should be assessed taking account of the latest credible scientific evidence on, for example, sea level rise (e.g. by referring to additional maximum credible scenarios such as from the Intergovernmental Panel on Climate Change or Environment Agency) and on the basis that necessary action can be taken to ensure the operation of the infrastructure over its estimated lifetime through potential further mitigation or adaptation.'	Chapter 14 Climate of the ES (application document TR010063 APP-6.1AS-020) discusses the impacts of consequences based on the probabilistic nature of the projections. The analysis of projections for the Scheme location is carried out under the 50 th percentile but also <u>the</u> 90th percentile data. Whilst the chapter does not cite critical features which would be affected, the study area's future climate is considered with regard to average and extreme weather variables including warmer and wetter winters, <u>and</u> hotter and drier summers. Mitigation measures are proposed to reduce the Scheme's vulnerability to <u>the</u> impacts of climate change during construction and operation. These measures will manage the risks set out above.
4.45-4.47	'If any proposed adaptation measures themselves give rise to consequential impacts the SoS should consider the impact in relation to the application as a whole.' 'Adaptation measures can be required to be implemented at the time of construction where necessary and appropriate to do so.'	The impacts of proposed adaptation measures have been included in the assessments of residual effects in each ES topic Chapter and have informed the assessment of <u>the</u> overall effects of the Scheme.
Pollution control and other environmental protection regimes		
4.48-4.56	The principles of how developments are to be assessed by the Examining Authority and the SoS with respect to pollution control and other environmental protection regimes are detailed in paragraphs 4.48 to 4.56 of the NPS NNNPS NNNN NPS . The key requirements are that any discharges or emissions from a Scheme may be subject to separate regulation under the pollution control framework or other consenting and licensing regimes and relevant permissions will need to be obtained for such activities with permit applications submitted at least six months prior to submission of a DCO.	Chapter 6 Planning Policy Considerations of this Planning Statement sets out how the Scheme conforms to planning policy and is an acceptable use of the land. The impacts of that use are considered throughout the ES. Where feasible and expedient for the project, GCC has sought the agreement of relevant consenting bodies to be able to include other consenting requirements within the scope of the DCO. For other consents that may need to be obtained separately from the DCO, GCC is either seeking to obtain these in parallel with the DCO process or has sought assurances from the relevant

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		consenting bodies that such consents will not be unreasonably withheld later.
Common law nuisance and statutory nuisance		
4.58	'It is very important that during the examination of a nationally significant infrastructure project, possible sources of nuisance under section 79(1) of the 1990 Act, and how they may be mitigated or limited are considered by the Examining Authority, so they can recommend appropriate requirements that the SoS might include in any subsequent order granting development consent. More information on the consideration of possible sources of nuisance is at paragraphs 5.81-5.89.'	Consideration of the possible sources of nuisance relating to the Scheme is covered in the Statement on Statutory Nuisances (application document TR010063-APP-6-16 APP-134). The ES Appendices (application document TR010063-APP-7.4AS-027) contains a REAC which details the environmental mitigation measures that should be implemented, how they mitigate or limit nuisance and who is responsible for delivering them, as well as any ongoing maintenance arrangements. This will be secured as part of the draft DCO requirements, reported in the draft DCO and Schedules (application document TR010063-APP-3.1AS-003).
Safety		
4.61	'The applicant should undertake an objective assessment of the impact of the proposed development on safety including the impact of any mitigation measures.' This should use the methodology outlined in the guidance from DfT (WebTAG) and from NH.	The Transport Assessment (application document TR010063-APP-7.4AS-027) provides an assessment of <u>the</u> overall impact of the Scheme on road safety, in accordance with WebTAG and NH guidance. The assessment concludes that there will be no unacceptable impact on highway safety, both during construction and operation.
4.62	'They should also put in place arrangements for undertaking the road safety audit process. Road safety audits are a mandatory requirement for all trunk road highway improvement Schemes in the UK (including motorways).'	A Stage 1 Road Safety Audit has commenced for the Scheme. This is the first stage in an ongoing audit to be progressed at a later stage of design, as per DfT and NH guidance.
4.64	'The applicant should be able to demonstrate that their Scheme is consistent with the Highways Agency's Safety Framework for the SRN and with the National Strategic Framework for Road	Measures to minimise the risk of death and injury arising from the construction of the Scheme are specified within the Environmental Management Plan (application document TR010063-APP-7.3AS-025).

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	Safety. Applicants will wish to show that they have taken all steps that are reasonably required to: minimise the risk of death and injury arising from their development. contribute to an overall reduction in road casualties. contribute to an overall reduction in the number of unplanned incidents. contribute to improvements in road safety for walkers and cyclists.’	The Scheme’s contribution to reducing road casualties and improving safety for walkers and cyclists during its operation is addressed through the provision of dedicated NMU facilities (footways, crossings, Public Rights of Way) and upgraded signalling and crossing points.
4.65	‘They will also wish to demonstrate that they have considered the safety implications of their project from the outset; and they are putting in place rigorous processes for monitoring and evaluating safety.’	Safety is a key objective of the Scheme, in terms of providing safe access to services for the local community. The process for monitoring and evaluating safety has been commenced with a Stage 1 Road Safety Audit.
4.66	‘The SoS should not grant development consent unless satisfied that all reasonable steps have been taken and will be taken to: Minimise the risk of road casualties arising from the Scheme. Contribute to an overall improvement in the safety of the SRN.’	The Scheme seeks to provide safe access to services for the local community, which will include reducing annual collision frequency and severity, as set out in the Stage 1 Road Safety Audit.
Health		
4.81-4.82	Where a proposed project has likely significant environmental impacts that would have an effect on human beings, any ES should identify and set out the assessments of any likely significant adverse health impacts. Applicants are expected to identify measures to avoid, reduce or compensate for adverse health impacts as appropriate, including cumulative effects on health.	The ES Chapter 13 Population and Human Health (application document TR010063-APP-6.11AS-014) considers the likely effects of the Scheme on human health. This forms a cumulative assessment of criteria including amenity, physical health, mental health and accessibility to human health and community facilities. The assessment identifies mitigation measures for the construction and operation of the Scheme to avoid, reduce or compensate for adverse health outcomes, as well as enhancement measures by which the Scheme can provide an opportunity to improve human health.

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		The chapter also includes a slip road closures sensitivity assessment in order to account for the requirement for the existing M5 Junction 10 slip roads to be closed, and to detail the potential effects on amenity as a result.
Scheme conformity with NPS NNNPS NNNN NPS Chapter 5, Generic impacts		
Air quality		
5.6-5.9	<p>'Where the impacts of the project (both on and off Scheme) are likely to have significant air quality effects in relation to meeting EIA requirements and / or affect the UK's ability to comply with the Air Quality Directive, the applicant should undertake an assessment of the impacts of the proposed project as part of the ES. The ES should describe:</p> <ul style="list-style-type: none"> Existing air quality levels. Forecasts of air quality at the time of opening, assuming that the Scheme is not built (the future baseline) and taking account of the impact of the Scheme. Any significant air quality effects, their mitigation and any residual effects, distinguishing between the construction and operation stages and taking account of the impact of road traffic generated by the project. <p>Defra publishes future national projections of air quality based on evidence of future emissions, traffic and vehicle fleet. Projections are updated as the evidence base changes. Applicant's assessment should be consistent with this but may include more detailed modelling to demonstrate local impacts. In addition to information on the likely significant effects of a project in relation to EIA, the SoS must be provided with a judgement on the risk as to whether the project would affect the UK's ability to comply with the Air Quality Directive.'</p>	<p>The ES Chapter 13 Air Quality (application document TR010063 APP-6.3AS-012) assesses the Scheme's compliance with Air Quality Regulations (The Air Quality Standards Regulations 2010 (SI 2010/1001) for EU limit values and the Air Quality (England) Regulations (SI 2000/928) as amended (2002/3043) for national objectives). The assessment includes:</p> <ul style="list-style-type: none"> Analysis of existing air quality levels ('baseline conditions'). Assessment of air quality for the following scenarios: base year (2019), opening year (2027) and future year (2042). Identification of significant air quality effects, mitigation and residual effects arising from construction traffic and activities and operational road traffic of the Scheme. <p>The assessment concludes that any air quality effects due to construction would be temporary and could be suitably minimised by the application of standard and appropriate mitigation measures. During operation, air quality modelling has indicated that the Scheme is unlikely to have any overall significant adverse effects on human health or on designated habitats. There are no estimated exceedances of the annual mean NO2 air quality limit value in the Defra Pollution Climate Mapping (PCM) model links within the affected road network in 2019.</p>

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5.10	‘The SoS should consider air quality impacts over the wider area likely to be affected, as well as in the near vicinity of the Scheme. In all cases the SoS must take account of relevant statutory air quality thresholds set out in domestic and European legislation. Where a project is likely to lead to a breach of the air quality thresholds, the applicant should work with the relevant authorities to secure appropriate mitigation measures with a view to ensuring so far as possible that those thresholds are not breached.’	The local and wider study area for the air quality assessment is detailed in Chapter 5 Air Quality of the ES (application document TR010063-APP-6.3AS-012). The assessment concludes that the Scheme is not anticipated to have a significant adverse effect on air quality, and there is not expected to be a compliance risk as regards the UK’s ability to comply with the EU Air Quality Directive. The impact on the wider area has also been considered in the assessment. The Chapter 5 Air Quality of the ES (application document TR010063-APP-6.3AS-012) concludes that there is unlikely to be a significant adverse effect as the projected changes in traffic during construction are below the DMRB LA 105 guidance traffic scoping criteria and are temporary in nature .
5.12	‘The SoS must give air quality considerations substantial weight where, after taking into account mitigation, a project would lead to a significant air quality impact in relation to EIA and / or where they lead to a deterioration in air quality in a zone/ agglomeration’.	The local and wider study area for the air quality assessment is detailed in Chapter 5 Air Quality of the ES (application document TR010063-APP-6.3AS-012). The assessment concludes that the Scheme is not anticipated to have a significant adverse effect on air quality, and there is not expected to be a compliance risk as regards the UK’s ability to comply with the EU Air Quality Directive.
5.13	‘The SoS should refuse consent where, after taking into account mitigation, the air quality impacts of the scheme will: <ul style="list-style-type: none"> • result in a zone/ agglomeration which is currently reported as being compliant with the Air Quality Directive becoming non-compliant. • affect the ability of a non-compliant area to achieve compliance within the most recent timescales reported to the European Commission at the time of the decision.’ 	The local and wider study area for the air quality assessment is detailed in Chapter 5 Air Quality of the ES (application document TR010063-APP-6.3AS-012). The assessment concludes that the Scheme is not anticipated to have a significant adverse effect on air quality, and there is not expected to be a compliance risk as regards the UK’s ability to comply with the EU Air Quality Directive.
5.14-5.15	‘The SoS should consider whether mitigation measures put forward by the applicant are acceptable. A management plan may help codify mitigation at this stage. The proposed mitigation	It is not anticipated that there would be any significant adverse effects on air quality during the Scheme’s construction or operation, provided standard construction best practice is

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	<p>measures should ensure that the net impact of a project does not delay the point at which a zone will meet compliance timescales.’</p> <p>‘Mitigation measures may affect the project design, layout, construction, operation and/or may comprise measures to improve air quality in pollution hotspots beyond the immediate locality of the Scheme. Measures could include, but are not limited to, changes to the route of the new Scheme, changes to the proximity of vehicles to local receptors in the existing route, physical means including barriers to trap or better disperse emissions and speed control. The implementation of mitigation measures may require working with partners to support their delivery.’</p>	<p>adhered to, as detailed in Chapter 5 Air Quality of the ES (application document TR010063 APP 6.3AS-012). As such no specific mitigation measures for air quality are proposed.</p>
Carbon emissions		
5.17	<p>‘Carbon impacts will be considered as part of the appraisal of scheme options (in the business case) prior to the submission of an application for DCO. Where the development is subject to EIA, any ES will need to describe an assessment of any likely significant climate factors in accordance with the requirements in the EIA Directive. It is very unlikely that the impact of a road project will, in isolation, affect the ability of the Government to meet its carbon reduction plan targets.’ Applicants are required to provide evidence of the carbon impact of the project and an assessment against the Governments carbon budgets.’</p>	<p>The ES Chapter 14 Climate (application document TR010063 APP 6.12AS-020) considers the impact of the Scheme on emissions, as detailed in paragraph 3.6 of this Appendix. The assessment notes that transport was the largest emitting section of UK GHG emissions in 2020, contributing 24% of emissions. However, operational impacts associated with emissions are likely to be offset by the predicted future fleet fleet-wide shift toward electric and hybrid vehicles.</p> <p>The emissions due to the Scheme would represent 0.005% of the fourth Carbon Budget (2023-27), 0.002% of the fifth Carbon Budget (2028-33) and 0.005% of the sixth Carbon Budget (2033-37).</p>
5.18	<p>‘Any increase in carbon emissions is not a reason to refuse development consent, unless the increase in carbon emissions resulting from the Scheme are so significant that it would have a material impact on the ability of the Government to meet its carbon reduction targets.’</p>	<p>The Scheme is not anticipated to have a significant or material impact on carbon reduction targets.</p> <p>The emissions due to the Scheme would represent 0.005% of the fourth Carbon Budget (2023-27), 0.002% of the fifth Carbon</p>

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5.19	Outlines the need for appropriate mitigation measures to be implemented in both design and construction. The effectiveness of such mitigation will be considered by the SoS in order to ensure the carbon footprint is not 'unnecessarily high', with the adequacy of the measures constituting a material factor in the decision-making process.	<p>Budget (2028-33) and 0.005% of the sixth Carbon Budget (2033-37).</p> <p>Design measures for carbon reduction are embedded in the design of the Scheme. Appropriate construction phase mitigation measures for the Scheme's carbon emissions are set out in the Environmental Management Plan (application document TR010063-APP 7.3AS-025) and the REAC (application document TR010063-APP 7.4AS-027).</p> <p>Reduction of materials consumption will be carried out in accordance with the mitigation measures outlined in the ES Chapter 12 Materials and Waste (application document TR010063-APP 6.10APP-071). These sets of measures, alongside embedded design features of the Scheme, will ensure that the Scheme's carbon footprint is minimised.</p>
Biodiversity and ecological conservation		
5.20	'Government policy for the natural environment is set out in the Natural Environment White Paper (NEWP). The NEWP sets out a vision of moving progressively from net biodiversity loss to net gain, by supporting healthy, well-functioning ecosystems and establishing more coherent ecological networks that are more resilient to current and future pressures'	<p>The ES Chapter 7 Biodiversity (application document TR010063-APP 6.5APP-066) considers the effects on biodiversity in detail.</p> <p>19.20 ha of species-species-rich road verge will be created within the Order Limits, which will more than compensate for the loss of approximately 0.1 ha of lowland meadow priority habitat along the A4019. Furthermore, taking into account the embedded and essential mitigation measures proposed, significant residual effects in relation to biodiversity resources are not anticipated as a result of the Scheme.</p> <p>In terms of reconnecting habitats and ecosystems, as part of the Biodiversity Net Gain initiative the Scheme will provide new planting which will strengthen the linear vegetation features within the Scheme and improve connectivity to the wider landscape. Wildlife crossing points will also be provided which will ensure continued habitat connectivity for badgers and prevent badger access onto the carriageway. Ecologically sensitive design of</p>

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		<p>structures such as culverts will also be incorporated into the Scheme, to maintain connectivity, continuity of flow, and natural substrate establishment.</p> <p>As part of the Scheme's objectives, the Scheme is targeting a net gain in biodiversity.</p> <p>An agreement of<u>on</u> a package of measures to minimise, mitigate and compensate for the Scheme's biodiversity impacts wherever possible has also taken place following consultation with Natural England.</p>
5.22-5.23	<p>'Where the project is subject to EIA the applicant should ensure that the ES clearly sets out any likely significant effects on internationally, nationally and locally designated sites of ecological or geological conservation importance (including those outside England) on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity and that the statement considers the full range of potential impacts on ecosystems.'</p> <p>'The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests.'</p>	<p>The ES Chapter 7 Biodiversity (application document TR010063 APP 6.5APP-066) outlines the effects on sites, habitats and species. The Chapter identifies a full range of likely significant effects; however, the Scheme also includes mitigation measures for all construction operations, as set out in the Environmental Management Plan.</p> <p>All bat mitigation measures, including embedded and additional measures, are detailed in Appendix 7.15, the Bat Mitigation Strategy (application document TR010063 APP 6.15APP-070).</p> <p>The Biodiversity Net Gain Report (application document TR010063 APP 6.15APP-070) sets out the biodiversity enhancement to be provided as part of the Scheme.</p> <p>The REAC (application document TR010063 APP 7.4AS-027) details the environmental mitigation and enhancement measures that would be implemented as part of the Scheme. This includes habitat creation at the south-east of Junction 10, as well as native species-species<u>species</u>-rich hedgerows.</p>
5.25	<p>'As a general principle, and subject to the specific policies below, development should avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives. The applicant may also wish to make use of biodiversity offsetting in devising</p>	<p>The ES Chapter 7 Biodiversity (application document TR010063 APP 6.5APP-066) outlines the effects on sites, habitats and species.</p> <p>This demonstrates that with the mitigation and compensation measures in place, no long-term residual impacts of significance</p>

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	compensation proposals to counteract any impacts on biodiversity which cannot be avoided or mitigated. Where significant harm cannot be avoided or mitigated, as a last resort, appropriate compensation measures should be sought.'	are predicted for any notable species. Significant residual effects in relation to biodiversity resources are not anticipated as a result of the Scheme.
5.26	'In taking decisions, the Secretary of State should ensure that appropriate weight is attached to designated sites of international, national and local importance, protected species, habitats and other species of principal importance for the conservation of biodiversity, and to biodiversity and geological interests within the wider environment.'	The ES Chapter 7 Biodiversity (application document TR010063 APP-6.5APP-066) presents a detailed assessment of the Scheme on designated sites of international, national and local importance, protected species, habitats and other species.
5.27	'The most important sites for biodiversity' and are provided statutory protection under the Habitats Regulations. The National Planning Policy Framework states that the following wildlife sites should have the same protection as European sites: <ul style="list-style-type: none"> • Potential Special Protection Areas and possible Special Areas of Conservation. • Listed or proposed Ramsar sites. • Sites identified, or required, as compensatory measures for adverse effects on European sites, potential Special Protection Areas, possible Special Areas of Conservation and listed or proposed Ramsar sites.' 	The ES Chapter 7 Biodiversity (application document TR010063 APP-6.5APP-066) sets out the assessments relating to these receptors: <ul style="list-style-type: none"> • Walmore Common SPA/Ramsar. • Wye Valley and Forest of Dean Bat Sites SAC. • Severn Estuary SAC/SPA/Ramsar. • Cotswold Beechwoods SAC. • The Wye Valley and Forest of Dean Bat Sites SAC, the Walmore Common SPA/Ramsar and the Cotswold Beechwoods SAC were scoped out of the assessment as these receptors would clearly not be impacted by the Scheme. • The Severn Estuary SAC/SPA/Ramsar recorded a neutral effect in the residual effects assessment.
5.28-5.29	'Many Sites of Special Scientific Interest (SSSI) are also designated as sites of international importance and will be protected accordingly.' Paragraph 5.29 goes on to state that 'Where a proposed development is likely to have an adverse effect on a SSSI,	The ES Chapter 7 Biodiversity (application document TR010063 APP-6.5APP-066) sets out the assessments relating to SSSIs. It assesses the potential impacts of the Scheme on the Coombe Hill Canal SSSI.

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	development consent should not normally be granted. Where an adverse effect on the site's notified special interest features is likely, an exception should be made only where benefits of the development at this site clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest, and any broader impacts on the national network of SSSIs.'	This demonstrates that no significant adverse impacts are anticipated on SSSIs as a result of the Scheme.
5.31	'Sites of regional and local biodiversity and geological interest (which include Local Geological Sites, Local Nature Reserves and Local Wildlife Sites and Nature Improvement Areas) have a fundamental role to play in meeting overall national biodiversity targets, in contributing to the quality of life and the well-being of the community, and in supporting research and education. The SoS should give due consideration to such regional or local designations. However, given the need for new infrastructure, these designations should not be used in themselves to refuse development consent.'	The ES Chapter 7 Biodiversity (application document TR010063 APP-6.5APP-066) sets out the assessment approach in terms of taking into account the relative importance of receptors having different designations. Receptors potentially affected by the Scheme include Norton (A38) Conservation Road Verge, Cotswold Farm, The Leigh Conservation Road Verge and four Local Wildlife Sites.
5.32	'The Secretary of State should not grant development consent for any development that would result in the loss or deterioration of irreplaceable habitats including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the national need for the benefits of the development, in that location, clearly outweigh the loss.'	The ES Chapter 7 Biodiversity (application document TR010063 APP-6.5APP-066) sets out the assessment of the Scheme on trees including ancient woodland. The assessment states that there are no recorded ancient woodlands within 1 km of the Order Limits.
5.33	'Development proposals potentially provide many opportunities for building in beneficial biodiversity or geological features as part of good design. When considering proposals, the SoS should consider whether the applicant has maximised such opportunities in and around developments. The SoS may use requirements or planning obligations where appropriate in order to ensure that such beneficial features are delivered.'	Consultation with Natural England between 2020 and 2022 has enabled <u>the</u> agreement of a package of measures to minimise, mitigate and compensate for the Scheme's biodiversity impacts wherever possible. These are recorded within the REAC (application document TR010063 APP-7.4AS-027).

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5.35	<p>‘Other species and habitats have been identified as being of principal importance for the conservation of biodiversity in England and Wales and therefore requiring conservation action. The Secretary of State should ensure that applicants have taken measures to ensure these species and habitats are protected from the adverse effects of development. Where appropriate, requirements or planning obligations may be used in order to deliver this protection. The Secretary of State should refuse consent where harm to the habitats or species and their habitats would result, unless the benefits of the development (including need) clearly outweigh that harm.’</p>	<p>The ES Chapter 7 Biodiversity (application document TR010063 APP-6.5APP-066) considers all ecological features; identifies those that are of principal importance and assesses the residual effects appropriately. Alongside the identified embedded and enhanced mitigation measures, the chapter states that the Scheme includes habitat enhancement and new hedgerow planting. The Scheme will also provide bird nesting boxes on mature trees.</p> <p>The Register of Environmental Actions and Commitments (REAC) (application document TR010063 APP 7.4AS-027) details the environmental mitigation measures that would be implemented both during construction and operation, why they are required, who is responsible for delivering them and detailing any ongoing maintenance arrangements.</p>
5.36	<p>‘Applicants should include appropriate mitigation measures as an integral part of their proposed development, including identifying where and how that:</p> <p>During construction, they will seek to ensure that activities will be confined to the minimum areas required for the works.</p> <p>During construction and operation, best practice will be followed to ensure that risk of disturbance or damage to species or habitats is minimised (including as a consequence of transport access arrangements).</p> <p>Habitats will, where practicable, be restored after construction works have finished.</p> <p>Developments will be designed and landscaped to provide green corridors and minimise habitat fragmentation where reasonable.</p> <p>Opportunities will be taken to enhance existing habitats and, where practicable, to create new habitats of value within the site landscaping proposals, for example through techniques such as</p>	<p>The ES Chapter 7 Biodiversity (application document TR010063 APP-6.5APP-066) considers all ecological features; identifies those that are of principal importance and assesses the residual effects appropriately. Alongside the identified embedded and enhanced mitigation measures, the chapter states that the Scheme includes habitat enhancement and new hedgerow planting. The Scheme will also provide bird nesting boxes on mature trees.</p> <p>The REAC (application document TR010063 APP 7.4AS-027) details the environmental mitigation measures that would be implemented both during construction and operation, why they are required, who is responsible for delivering them and detailing any ongoing maintenance arrangements.</p>

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	the 'greening' of existing network crossing points, the use of green bridges and the habitat improvement of the network verge.'	
Waste management		
5.42	'The applicant should set out the arrangements that are proposed for managing any waste produced. The arrangements described should include information on the proposed waste recovery and disposal system for all waste generated by the development. The applicant should seek to minimise the volume of waste produced and the volume of waste sent for disposal unless it can be demonstrated that the alternative is the best overall environmental outcome.'	Measures for managing waste and materials are proposed, alongside details of their implementation, measuring and monitoring, within Chapter 12 Materials and Waste of the ES (application document TR010063 APP 6.10 APP-071). The REAC (application document TR010063 APP 7.4 AS-027) contains the waste mitigation measures that would be implemented, why they are required, who is responsible for delivering them, and any ongoing maintenance arrangements.
5.43	'The SoS should consider the extent to which the applicant has proposed an effective process that will be followed to ensure effective management of hazardous and non-hazardous waste arising from the construction and operation of the proposed development.'	Chapter 12 Materials and Waste of the ES (application document TR010063 APP 6.10 APP-071) states that during construction, the effect of material asset use and waste generation is estimated to be slightly adverse. During operation, there will be negligible material asset use or waste generation. Mitigation that follows the waste hierarchy is expected to be applied during detailed design and construction which will lead to material asset use and waste generation prevention, reduction, reuse, recycling, and recovery. In particular, during construction, this includes <u>the</u> reuse of waste, <u>the</u> use of aggregates with <u>a</u> minimum <u>of</u> 22% recycled content and <u>the</u> recovery of 95% of wastes that are managed offsite.
5.44	'Where necessary, the SoS should use requirements or planning obligations to ensure that appropriate measures for waste management are applied.'	Waste management requirements can be secured within the Requirements in Schedule 2 of the draft Development Consent Order (application document TR010063 APP 3.1 AS-003).
5.45	'Where the project will be subject to the Environment Agency's environmental permitting regime, waste management arrangements during operations will be covered by the permit	Any necessary waste management permits will be obtained as set out in the Environmental Management Plan (application document TR010063 APP 7.3 AS-025) and the Consents and

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	and the considerations set out in paragraphs 4.48 to 4.56 will apply.'	Agreements Position Statement (application document TR010063 APP 3.3APP-033).
Dust, odour, artificial light, smoke, steam		
5.81	'As well as noise and vibration (paragraphs 5.186 to 5.200) the construction and operation of national networks infrastructure has the potential to create a range of emissions such as odour, dust, steam, smoke and artificial light. All have the potential to have a detrimental impact on amenity or cause a common law nuisance or statutory nuisance under Part III, Environmental Protection Act 1990. Note that pollution impacts from some of these emissions (e.g. dust, smoke) are covered in the section on air emissions and that these and others (e.g. odour) may also be covered by pollution control or other environmental consenting regimes so that paragraphs 4.48 to 4.56 and 5.3 to 5.15 will apply.'	The Statement of Statutory Nuisances (application document TR010063 APP 6.16) considers nuisance caused by dust, odour, artificial light, smoke and steam. The ES Chapter 5 Air Quality (application document TR010063 APP 6.3AS-012AS-012) considers effects relating to air quality. The construction activities that have the potential to create a nuisance will be controlled through strict compliance with the implementation of the environmental measures identified in the Environmental Management Plan (application document TR010063 APP 7.3AS-025).
5.83	'For nationally significant infrastructure projects of the type covered by this NPS, some impact on amenity for local communities is likely to be unavoidable. Impacts should be kept to a minimum and should be at a level that is acceptable.'	The ES Chapter 13 Population and Human Health (application document TR010063 APP 6.11APP-072AS-014) assesses the impact on amenity for local communities in the human health element of the assessment. Recommended mitigation measures include noise barriers and suitable dust control measures. Full mitigation details can be found in the REAC (application document TR010063 APP 7.4AS-027). As part of the slip road closures sensitivity assessment, this assessment identified that Heavy Duty Vehicle (HDV) movements on some of the roads were predicted to result in a significant change in noise. The Scheme has secured mitigation through the REAC (application document TR010063 – APP 7.4) in the form of measures to divert traffic from using the B4079, the Green and the road through Boddington, in order to effectively mitigate adverse noise effects where significant changes in noise would occur.

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5.84-5.86	Where the development is subject to an EIA, the applicant should assess any likely significant effects on amenity from emissions of odour, dust, steam, smoke and artificial light and describe these in the ES.	The cumulative effects on amenity <u>amenities</u> from emissions arising from the construction and operation of the Scheme have been covered in Chapter 13 Population and Human Health (application document TR010063 APP 6.11 <u>APP-072AS-014</u>). This includes odour and air quality. The likely significant effects relating to dust, steam and smoke are considered in Chapter 5 Air Quality (application document TR010063 APP 6.3 <u>AS-012AS-012</u>). Effects relating to light pollution are considered in Chapter 9 Landscape and Visual (application document TR010063 APP 6.7 <u>APP-068</u>).
Flood risk		
5.91	'The National Planning Policy Framework (paragraphs 100 to 104) makes clear that inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk. But where development is necessary, it should be made safe without increasing flood risk elsewhere. The guidance supporting the National Planning Policy Framework explains that essential transport infrastructure (including mass evacuation routes), which has to cross the area at risk, is permissible in areas of high flood risk, subject to the requirements of the Exception Test.'	The Flood Risk Assessment (application document TR010063 APP 6.15 <u>APP-070</u>) describes how the Scheme is considered to be essential infrastructure. The Scheme passed the Exception Test subject to <u>the</u> implementation of the flood mitigation measures set out within the FRA and drainage strategy. The Scheme's adherence to the requirements of the Exception Test is detailed in the FRA.
5.92-5.94	The FRA should 'identify and assess the risks of all forms of flooding to and from the project and demonstrate how these flood risks will be managed, taking climate change into account.' 'In preparing an FRA the applicant should:	The FRA was carried out in accordance with the requirements of the National Planning Policy Framework (NPPF) (DCLG, 2023) and its accompanying Technical Guidance (DCLG, 2014). The FRA has considered the risk from all sources of flooding to and from the Scheme and demonstrates how the risks will be managed, taking account of climate change. With mitigation measures, the Scheme will not be at significant risk of flooding, and the Scheme should not result in a material increase in flood risk to third parties.

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	<ul style="list-style-type: none"> consider the risk of all forms of flooding arising from the project (including in adjacent parts of the United Kingdom), in addition to the risk of flooding to the project, and demonstrate how these risks will be managed and, where relevant, mitigated, so that the development remains safe throughout its lifetime. take the impacts of climate change into account, clearly stating the development lifetime over which the assessment has been made. consider the vulnerability of those using the infrastructure including arrangements for safe access and exit. include the assessment of the remaining (known as 'residual') risk after risk reduction measures have been taken into account and demonstrate that this is acceptable for the particular project. consider if there is a need to remain operational during a worst case flood event over the development's lifetime. provide the evidence for the SoS to apply the Sequential Test and Exception Test, as appropriate.' 	
5.96	'Applicants for projects which may be affected by, or may add to, flood risk are advised to seek sufficiently early pre-application discussions with the Environment Agency, and, where relevant, other flood risk management bodies such as lead local flood authorities, Internal Drainage Boards, sewerage undertakers, highways authorities and reservoir owners and operators.'	Discussions with stakeholders, including the Environment Agency, has have taken place regarding the FRA. This included four telephone meetings with the EA. The Baseline and Scheme models and their accompanying reports were also reviewed by external consultants on behalf of the EA. The EA deemed both models appropriate, such that the results from the models can be used to support the FRA and the ES.
5.99	'When determining an application, the SoS should be satisfied that flood risk will not be increased elsewhere and only consider development appropriate in areas at risk of flooding where (informed by a flood risk assessment, following the Sequential	The Scheme's adherence to the requirements of the Exception Test is detailed in the FRA (application document TR010063 APP 6-15 APP-070). The FRA concludes that the Scheme would be at

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	<p>Test and, if required, the Exception Test), it can be demonstrated that:</p> <ul style="list-style-type: none"> • within the site, the most vulnerable development is located in areas of lowest flood risk unless there are overriding reasons to prefer a different location; and • development is appropriately flood resilient and resistant, including safe access and escape routes where required, and that any residual risk can be safely managed, including by emergency planning; and priority is given to the use of sustainable drainage systems.' 	<p>an acceptable level of flood risk and would not increase flood risk elsewhere.</p>
5.100	<p>'For construction work which has drainage implications, approval for the project's drainage system will form part of any development consent issued by the SoS. The SoS will therefore need to be satisfied that the proposed drainage system complies with any National Standards published by Ministers under Paragraph 5(1) of Schedule 3 to the Flood and Water Management Act 2010. In addition, the development consent order, or any associated planning obligations, will need to make provision for the adoption and maintenance of any Sustainable Drainage Systems (SuDS), including any necessary access rights to property. The SoS, should be satisfied that the most appropriate body is being given the responsibility for maintaining any SuDS, taking into account the nature and security of the infrastructure on the proposed site. The responsible body could include, for example, the applicant, the landowner, the relevant local authority, or another body such as the Internal Drainage Board.'</p>	<p>The FRA (application document TR010063 APP 5.5AS-023) reports that the drainage system will be designed in line with current NH Standards (DMRB) to ensure that runoff from the new impermeable area does not exceed the greenfield rate up to the 1 in 100 (1%) annual probability event, taking into account climate change. The Scheme design has incorporated a drainage strategy that centres on the application of SuDS, appropriate to local conditions, to manage surface water runoff.</p>
5.102	<p>'The SoS should expect that reasonable steps have been taken to avoid, limit and reduce the risk of flooding to the proposed infrastructure and others. However, the nature of linear infrastructure means that there will be cases where:</p>	<p>The Scheme constitutes an upgrade to existing infrastructure in an area at risk of flooding. Nevertheless, all reasonable steps have been taken to avoid, limit and reduce the risk of flooding to proposed infrastructure.</p>

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	<ul style="list-style-type: none"> • Upgrades are made to existing infrastructure in an area at risk of flooding. • Infrastructure in a flood risk area is being replaced. • Infrastructure is being provided to serve a flood risk area. • Infrastructure is being provided connecting two points that are not in flood risk areas, but where the most viable route between the two passes through such an area.' 	
5.109	Any project that is classified as 'essential infrastructure' and proposed to be located in Flood Zone 3a or b should be designed and constructed to remain operational and safe for users in times of flood; and any project in Zone 3b should result in no net loss of floodplain storage and not impede water flows.	<p>The Scheme crosses the floodplains of the River Chelt and Leigh Brook. The FRA (application document TR010063-APP-5.5AS-023) reports that the Scheme will not affect floodplain storage</p> <p>The Scheme will result in a significant reduction in baseline flood levels in the Leigh Brook floodplain, upstream and downstream of the motorway, due to the Scheme removing the culverts under the A4019 and also raising the A4019 and preventing extreme floods from overtopping this road and entering the Leigh Brook catchment.</p> <p>There are potentially significant adverse effects localised to the River Chelt floodplain on the existing farmland. Those effects are determined to cause no increase in flood risk.</p>
Land instability		
5.117-5.118	<p>'Land stability should be considered in respect of new development, as set out in the National Planning Policy Framework and supporting planning guidance.'</p> <p>'A preliminary assessment of ground instability should be carried out at the earliest possible stage before a detailed application for development consent is prepared.'</p>	<p>The Ground Investigation Report (application document TR010063-APP-6.15APP-070) sets out the potential ground stability hazards and impacts on land instability arising from the Scheme. Potential instability is identified relating to existing earthwork stability and instability of excavations.</p> <p>In terms of compressible ground, the assessment states that settlements are not expected to be significant, but settlement analysis will be undertaken during the design stage and included in the Geotechnical Design Report.</p>

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The historic environment		
5.124 – 5.125	‘Non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to Scheduled Monuments, should be considered subject to the policies for designated heritage assets. The absence of designation for such heritage assets does not indicate lower significance.’	Chapter 11 Cultural Heritage of the ES (application document TR010063-APP-6.15 APP-070) sets out all known cultural heritage assets which have been considered as per DMRB guidance.
5.127	‘The applicant should describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the asset’s importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant Historic Environment Record should have been consulted and the heritage assets assessed using appropriate expertise. Where a site on which development is proposed includes or has the potential to include heritage assets with archaeological interest, the applicant should include an appropriate desk-based assessment and, where necessary, a field evaluation.’	Chapter 11 Cultural Heritage of the ES (application document TR010063-APP-6.15 APP-070) describes the heritage impacts through an assessment of effects and with information on topographical, geological and archaeological conditions Consultation with the Gloucestershire County archaeological advisor has been ongoing, including the review of design options, written schemes of investigation and the results of geophysical survey and trial trenching. Consultation is also underway with Historic England regarding the potential impacts on designated heritage assets, with particularly emphasis on the contributions of setting to the significance of the Scheduled Monuments and Listed Buildings within the study area.
5.129	‘In considering the impact of a proposed development on any heritage assets, the Secretary of State should take into account the particular nature of the significance of the heritage asset and the value that they hold for this and future generations. This understanding should be used to avoid or minimise conflict between their conservation and any aspect of the proposal.’	Chapter 11 Cultural Heritage of the ES (application document TR010063-APP-6.15 APP-070) describes the value of the heritage assets within the study area within the baseline conditions section of the chapter, through the assigning of sensitivity as per DMRB guidance.
5.130	‘The SoS should take into account the desirability of sustaining and, where appropriate, enhancing the significance of heritage assets, the contribution of their settings and the positive contribution that their conservation can make to sustainable communities – including their economic vitality. The SoS should also take into account the desirability of new development	Chapter 11 Cultural Heritage of the ES (application document TR010063-APP-6.15 APP-070) identifies mitigation measures within the document. The chapter also states that there are opportunities to enhance the historic environment through the application of NH’s Designated Funds to help protect the settings of designated heritage assets within the study area.

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	making a positive contribution to the character and local distinctiveness of the historic environment. The consideration of design should include scale, height, massing, alignment, materials, use and landscaping (for example, screen planting).'	
5.131	'When considering the impact of a proposed development on the significance of a designated heritage asset, the SoS should give great weight to the asset's conservation. The more important the asset, the greater the weight should be. Once lost, heritage assets cannot be replaced and their loss has a cultural, environmental impact. Guidance on the available sources of information can be found in English Heritage guidance PPS5 Planning for the Historic Environment: Historic Environment Planning Practice Guide (or any successor document). economic and social impact. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. Given that heritage assets are irreplaceable, harm or loss affecting any designated heritage asset should require clear and convincing justification. Substantial harm to or loss of a grade II Listed Building or a grade II Registered Park or Garden should be exceptional. Substantial harm to or loss of designated assets of the highest significance, including World Heritage Sites, Scheduled Monuments, grade I and II* Listed Buildings, Registered Battlefields, and grade I and II* Registered Parks and Gardens should be wholly exceptional.'	Chapter 11 Cultural Heritage of the ES (application document TR010063-APP 6.15APP-070) sets out the assessment methodology for this topic, which includes weighting of assets' significance. The Environmental Management Plan (application document TR010063-APP 7.3AS-025) also describes measures to reduce or avoid impacts of construction activities on the settings of heritage assets. The chapter identifies residual effects on seven heritage assets, none of which are significant.
5.132	'Any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of development, recognising that the greater the harm to the significance of the heritage asset, the greater the justification that will be needed for any loss.'	Chapter 11 Cultural Heritage of the ES (application document TR010063-APP 6.15APP-070) sets out the assessment of designated heritage assets. The chapter states that consideration of the level of harm to a heritage asset as a result of the Scheme is a primary concern for the decision-taker with regards to planning consent. The determination of what constitutes substantial harm is not straightforward, and no specific test exists for it. In terms of EIA regulations, it is presumed that only

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		significant effects would rise to the level of substantial harm. As no significant effects are expected once all embedded and additional mitigation measures are in place, the Scheme is considered to have less than substantial harm on <u>to</u> the historic environment.
5.133	<p>'Where the proposed development will lead to substantial harm to or total loss of significance of a designated heritage asset, the SoS should refuse consent unless it can be demonstrated that the harm is necessary to deliver substantial public benefits that outweigh that harm or alternatively that all of the following apply:</p> <ul style="list-style-type: none"> • The nature of the heritage asset prevents all reasonable uses of the site. • No viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation. • Conservation by grant-funding or some form of charitable or public ownership is demonstrably not possible. • The harm or loss is outweighed by the benefit of bringing the site back into use.' 	Chapter 11 Cultural Heritage of the ES (application document TR010063 APP 6.15 APP-070) sets out the potential significant effects of the Scheme in relation to Cultural Heritage. The conclusion states that although significant adverse effects are anticipated due to impacts to known and as yet yet unknown archaeological remains, a robust programme of archaeological investigation and recording following an Archaeological Management Plan (AMP) prepared in consultation with the local planning authority's archaeological advisor would mitigate these impacts to a slight adverse effect, which is not significant. The Scheme is therefore compliant in this regard.
5.134	'Where the proposed development will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal, including securing its optimum viable use.'	As the residual adverse effects are not significant, the sustainability and overall long-term benefits of the Scheme are considered to outweigh any harm to known historic environment assets.
5.135	'Not all elements of a World Heritage Site or Conservation Area will necessarily contribute to its significance. The SoS should treat the loss of a building (or other element) that makes a positive contribution to the site's significance either as substantial harm or less than substantial harm, as appropriate, taking into account the relative significance of the elements affected and	There are no World Heritage Sites or Conservation Areas within the study area for the Scheme.

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	their contribution to the significance of the Conservation Area or World Heritage Site as a whole.'	
5.136	'Where the loss of significance of any heritage asset has been justified by the applicant based on the merits of the new development and the significance of the asset in question, the SoS should consider imposing a requirement that the applicant will prevent the loss occurring until the relevant development or part of development has commenced.'	An Archaeological Management Plan (AMP) is proposed to provide a programme of works and <u>an</u> over-arching Written Scheme of Investigation (WSI) to further identify, characterise, and record the significant archaeological remains impacted by the Scheme construction. This is included in the REAC (application document TR010063 APP 7.4 <u>AS-027</u>).
5.137-5.138	'Applicants should look for opportunities for new development within Conservation Areas and World Heritage Sites, and within the setting of heritage assets, to enhance or better reveal their significance. Proposals that preserve those elements of the setting that make a positive contribution to or better reveal the significance of the asset should be treated favourably.' 'Where there is evidence of deliberate neglect of or damage to a heritage asset the SoS should not take its deteriorated state into account in any decision.'	An Archaeological Management Plan (AMP) is proposed to provide a programme of works and <u>an</u> over-arching Written Scheme of Investigation (WSI) to further identify, characterise, and record the significant archaeological remains impacted by the Scheme construction. This is included in the REAC (application document TR010063 APP 7.4 <u>AS-027</u>).
5.140-5.142	'Where the loss of the whole or part of a heritage asset's significance is justified, the Secretary of State should require the applicant to record and advance understanding of the significance of the heritage asset before it is lost (wholly or in part). The extent of the requirement should be proportionate to the importance and the impact. Applicants should be required to deposit copies of the reports with the relevant Historic Environment Record. They should also be required to deposit the archive generated in a local museum or other public depository willing to receive it.' The Secretary of State should consider requirements to ensure that appropriate procedures are in place for the identification and treatment of yet undiscovered archaeological remains discovered during construction.	Chapter 11 Cultural Heritage of the ES (application document TR010063 APP 6.15 <u>APP-070</u>) sets out the potential significant effects of the Scheme in relation to Cultural Heritage. Where significant adverse effects may occur to buried archaeological remains, this would be mitigated through preservation by record in the form of archaeological excavation, recording, and reporting through the creation of a site archive to preserve the significant evidential values of the remains.

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Landscape and visual impacts		
5.144 – 5.146	<p>‘Where the development is subject to EIA the applicant should undertake an assessment of any likely significant landscape and visual impacts in the environmental impact assessment and describe these in the environmental assessment.’ This should include ‘reference to any landscape character assessment and any relevant policies based on these assessments in local development documents in England.’</p> <p>‘The assessment should include visibility and conspicuousness of the project during construction and of the presence and operation of the project and potential impacts on views and visual amenity. This should include any noise and light pollution effects, including on local amenity, tranquillity and nature conservation.’</p>	<p>Chapter 9 Landscape and Visual of the ES (application document TR010063-APP-6.7APP-068) identifies the potentially significant landscape and visual effects that may arise from the construction and operation of the Scheme.</p> <p>The assessment was carried out with current best practice guidelines including:</p> <ul style="list-style-type: none"> Sustainability & Environmental Appraisal, LA 107 Landscape and Visual Effects, Design Manual for Roads and Bridges (DMRB), Revision 2. Guidelines for Landscape and Visual Impact Assessment Third Edition (2013). GLVIA3 Statement of Clarification 1/13 (2013). Landscape Institute Advice Note 01/11, Photography and Photomontage in Landscape and Visual Impact Assessment (2011). An Approach to Landscape Character Assessment (2014).
5.149	<p>‘Landscape effects depend on the nature of the existing landscape likely to be affected and nature of the effect likely to occur. Both of these factors need to be considered in judging the impact of a project on landscape. Projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant constraints, the aim should be to avoid or minimise harm to the landscape, providing reasonable mitigation where possible and appropriate.’</p>	<p>Chapter 9 Landscape and Visual of the ES (application document TR010063-APP-6.7APP-068) describes the landscape mitigation and enhancement measures for the Scheme. These include retention of vegetation, avoiding destruction of habitats and the inclusion of SuDS. Full details of mitigation measures can be found in the Environmental Master Plan (application document TR010063/-APP-2.13) and the Environmental Management Plan (application document TR010063 APP 7.3AS-025).</p> <p>Once the designed in mitigation has <u>been</u> established and matured, the Scheme would not have any long-term significant adverse effects on landscape character or visual amenity, and in some cases may provide beneficial effects.</p>

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5.154	The duty to have regard to the purposes of nationally designated areas also applies when considering applications for projects outside the boundaries of a National Park, the Broads and Areas of Outstanding Natural Beauty which may have impacts within them. 'The aim should be to avoid compromising the purposes of designation and such projects should be designed sensitively given the various siting, operational, and other relevant constraints.'	Chapter 9 Landscape and Visual of the ES (application document TR010063-APP-6.7APP-068) states that the Cotswolds AONB was scoped out of the assessment following site visits and consultation with the Cotswolds AONB Board. The Scheme will not impact on any National Park or Broads designations.
5.156 – 5.157	'Local landscape designations should not be used in themselves as reasons to refuse consent, as this may unduly restrict acceptable development.' However, developments should be carefully designed and seek to avoid or 'minimise harm to the landscape.'	Chapter 9 Landscape and Visual of the ES (application document TR010063-APP-6.7APP-068) considers the effects of the proposed Scheme on <u>the</u> local landscape. As stated above, the Environmental Master Plan (application document TR010063-APP-2.13) Environmental Master Plan Part 1 and Part 2 (APP-027 and APP-028 respectively) also provides details on mitigation measures for screening and planting. Although significant adverse effects may be experienced during construction and initially upon completion, largely due to <u>the</u> introduction of earthworks and loss of landscape links in the form of boundary vegetation and change of land use, once the designed in mitigation has <u>been</u> established and matured, the Scheme would not have any long-term significant adverse effects on landscape character or visual amenity, and in some cases may provide beneficial effects.
5.158	'The SoS will have to judge whether the visual effects on sensitive receptors, such as local residents, and other receptors, such as visitors to the local area, outweigh the benefits of the development.'	Chapter 9 Landscape and Visual of the ES (application document TR010063-APP-6.7APP-068) identifies the significant visual effects during construction and operation. The assessment states that the Scheme may cause adverse effects on local road users at construction, but upon completion, this would reduce and at year 15 when mitigation planting has <u>been</u> established, the overall effect is expected to be beneficial for all road users.

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5.159 – 5.161	Sets out the requirements for mitigation to avoid or reduce adverse effects of a scheme, including appropriate siting of infrastructure, design (including choice of materials), and landscaping schemes, as well as offsite planting.	Chapter 9 Landscape and Visual of the ES (application document TR010063-APP 6.7APP-068) sets out the embedded and essential landscape mitigation measures. Embedded mitigation measures include the retention of vegetation, avoiding destruction of habitats and inclusion of SuDS. Essential mitigation measures include keeping the construction programme to the minimum practicable time and the appropriate siting of <u>the</u> construction plant and materials storage areas. Full details of the proposed Scheme mitigation measures are set out in the Environmental Master Plan (Figures 1- 14, application document TR010063 APP 2.13) and set out in the Environmental Management Plan (application document TR010063-APP 7.3AS-025).
Land use including open space, green infrastructure and green belt		
5.165	‘The applicant should identify existing and proposed land uses near the project.’	Chapter 13 Population and Human Health of the ES (application document TR010063-APP 6.11AS-014) identifies existing and proposed land uses in the vicinity of the Scheme. The chapter covers the potential effects of the Scheme on existing land uses, development land and planning applications.
5.166 – 5.167	‘Existing open space, sports and recreational buildings and land should not be developed unless the land is surplus to requirements or the loss would be replaced by equivalent or better provision in terms of quantity and quality in a suitable location. Applicants considering proposals which would involve developing such land should have regard to any local authority’s assessment of need for such types of land and buildings.’ ‘During any pre-application discussions with the applicant, the local planning authority should identify any concerns it has about the impacts of the application on land-use, having regard to the development plan and relevant applications, and including, where relevant, whether it agrees with any independent assessment	Chapter 13 Population and Human Health of the ES (application document TR010063-APP 6.11AS-014) identifies the residual adverse effects arising from the works. With regards to the development land and businesses assessment, large adverse residual construction effects have been identified at Gloucester Detailing valeting service and the premises at Sheldon Nurseries. There is no mitigation for this – it is a matter <u>for_of</u> compensation and sits outside the scope of the assessment.

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	that the land is surplus to requirements. These are also matters that local authorities may wish to include in their Local Impact Report which can be submitted after an application for development consent has been accepted.'	The private property assessment also identifies properties to be demolished. There is also no mitigation for this and is a matter for compensation. The assessment also takes into account community assets, such as educational and healthcare facilities, as well as green and open space which is affected by the Scheme. There will be no direct development/land take that would impact these facilities and all negative health outcomes relate to the construction stage (relating to temporary reduced access and ease of movement). Positive health outcomes are predicted for the operational phase concerning access to these community assets.
5.168	Applicants should take into account the benefits of best and most versatile agricultural land. 'Where significant development of agricultural land is demonstrated to be necessary, applicants should seek to use areas of poorer quality land in preference to that of a higher quality.' Applicants should also identify any effects, and seek to minimise impacts on soil quality, taking into account any mitigation measures proposed. Where possible, developments should be on previously developed (brownfield) sites. 'For developments on previously developed land, applicants should ensure that they have considered the risk posed by land contamination.'	Chapter 10 Geology and Soils of the ES (application document TR010063-APP-6.8APP-069) assesses the impact of the Scheme on agricultural land, including the impact on farms and land-based enterprises with particular emphasis on agricultural quality of soils and <u>the</u> best and most versatile (BMV) land. The Scheme has been designed so as to minimise the permanent loss of BMV. Impacts to BMV agricultural land have been assessed and mitigation measures have been identified to minimise impacts on soil quality. With respect to land contamination, potential land contamination effects during construction have been assessed as not significant.
5.169	'Applicants should safeguard any mineral resources on the proposed site as far as possible.'	Chapter 10 Geology and Soils of the ES (application document TR010063-APP-6.8APP-069) states that two areas licenced for mineral extraction are recorded adjacent to the A4019 approximately 100 m and 220 m north-east of the Scheme.
5.170 - 5.171	'The general policies controlling development in the countryside apply with equal force in Green Belts but there is, in addition, a general presumption against inappropriate development within them. Such development should not be approved except in very	The Scheme is located partially within the Gloucester and Cheltenham Green Belt. <u>As outlined in paragraphs 7.6.8 to 7.6.27 of this Statement, the Scheme is not considered to be inappropriate development in</u>

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	<p>special circumstances. Applicants should therefore determine whether their proposal, or any part of it, is within an established Green Belt and, if so, whether their proposal may be considered inappropriate development within the meaning of Green Belt policy. Metropolitan Open Land, and land designated as Local Green Space in a local or neighbourhood plan, are subject to the same policies of protection as Green Belt, and inappropriate development should not be approved except in very special circumstances.'</p> <p>'Linear infrastructure linking an area near a Green Belt with other locations will often have to pass through Green Belt land. The identification of a policy need for linear infrastructure will take account of the fact that there will be an impact on the Green Belt and as far as possible, of the need to contribute to the achievement of the objectives for the use of land in Green Belts.'</p>	<p><u>policy definition terms, in the Green Belt. The Scheme preserves the Green Belt's openness and does not conflict with the purposes of the Green Belt.</u></p> <p><u>With the benefits considered cumulatively, the Scheme would therefore amount to 'very special circumstances' within the Green Belt, which would allow for development in the event that the Scheme is considered 'inappropriate development' within the Green Belt.</u></p> <p>The Scheme can be described as an engineering operation and the alteration of existing local transport infrastructure which can demonstrate a requirement for a Green Belt location, as set out in Paragraph 150 of the NPPF. As this infrastructure is existingexists, it demonstrates a requirement for its location within the Green Belt. Therefore, the Scheme is considered to not be inappropriate in the Green Belt, providing the Scheme preserves the Green Belt's openness and does not conflict with the purposes of the Green Belt, as set out in Paragraph 138 of the NPPF.</p> <p>The conclusions of Chapter 9 Landscape and Visual of the ES (application document TR010063 APP 6.7APP-068) state that although initially many views would change with an increased presence of roads and associated infrastructure, these features are not entirely incongruous with the existing context of views. Replanting to roadsides and other embedded mitigation would ensure that, in the long term, the Scheme would sit comfortably in the landscape and potentially provide an enhancement of the local environment. Full details on the Green Belt assessment for the Scheme is <u>are</u> found in section 7.5.</p> <p>Furthermore, the majority of the Scheme is adjacent to the SRN, which is not where the openness of the Green Belt can be fully enjoyed due to the infrastructure embedded within this area.</p>

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5.179	Applicants should minimise the direct effects of a project by the 'application of good design principles, including the layout of the project and the protection of soils during construction.'	Chapter 10 Geology and Soils of the ES (application document TR010063-APP-6.8APP-069) identifies the mitigation measures to be implemented which would protect agricultural land and soil. Land <u>The land</u> will be restored to a condition equivalent to its original state. It will be subject to an aftercare period (duration to be agreed), during which time problems with settlement, drainage and weed infestation will be rectified. A Soil Handling Management Plan (SHMP) will be produced prior to any construction to ensure that the quality of soil in areas within the temporary footprint of the Scheme is maintained.
5.180	'Where green infrastructure is affected, applicants should aim to ensure the functionality and connectivity of the green infrastructure network is maintained and any necessary works are undertaken, where possible, to mitigate any adverse impact and, where appropriate, to improve that network and other areas of open space, including appropriate access to new coastal access routes, National Trails and other PRoW.'	The functionality and connectivity of the green infrastructure network will be maintained, with adverse impacts mitigated and enhanced where possible, through measures outlined in the REAC (application document TR010063-APP-7.4AS-027) and the Environmental Management Plan (application document TR010063-APP-7.3AS-025).
5.184	'Applicants are expected to take appropriate mitigation measures to address adverse effects on PRoW and open access land where appropriate to consider what opportunities there may be to improve access.'	Chapter 13 Population and Human Health of the ES (application document TR010063-APP-6.11AS-014) provides details of the impact of the Scheme on WCH - including changes to severance, accessibility, journey amenity and length. It sets out, where necessary, specific mitigation measures to address significant adverse effects on routes and access during <u>the</u> construction and operation of the Scheme. The Scheme also contains in-built enhancements for connectivity and amenity for users of PRoW.
Noise and vibration		
5.187	'Noise resulting from a proposed development can also have adverse impacts on wildlife and biodiversity. Noise effects of the proposed development on ecological receptors should be	The impacts of noise upon ecological receptors have been assessed in ES Chapter 7 Biodiversity (application document TR010063-APP-6.5APP-066). Ecological receptors that are

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5.189	<p>assessed in accordance with the Biodiversity and Geological Conservation section of this NPS.'</p> <p>'Where a development is subject to EIA and significant noise impacts are likely to arise from the proposed development, the applicant should include the following in the noise assessment, which should form part of the environment statement: The characteristics of the existing noise environment. A prediction on how the noise environment will change with the proposed development. Measures to be employed in mitigating the effects of noise.'</p>	<p>noise-sensitive and could be affected by changes to in noise and vibration are considered in the assessment.</p> <p>Chapter 6 Noise and Vibration of the ES (application document TR010063-APP-6.11AS-014) considers the potential noise and vibration impacts of the Scheme. The baseline conditions section sets out the description of the current noise sources within the study area.</p> <p>The assessment considers three types of noise sources associated with the Scheme: construction activities, construction traffic, and road traffic during the operation phase. The construction noise assessment determined locations where construction noise at a number of representative noise-noise-sensitive properties has the potential to lead to a significant noise effect. Properties that are particularly at risk are those close to the A4019, East of the M5.</p> <p>The construction noise assessment also considers the effect of diversion traffic, resulting from the closure of the two slip roads at Junction 10, on changes to noise at receptors local roads.</p> <p>The operational assessment considered the changes in noise due to traffic and Scheme layout, in both the short term and long term. Mitigation measures were included in the assessment where possible, to reduce noise levels in the noise important area as well as the informal Travellers Site.</p> <p>The mitigation measures to reduce noise and vibration levels during the construction and operation phases, such as the use of low-low-noise road surfacing, noise barriers and traffic calming measures, are detailed in the REAC (application document TR010063-APP-7.4AS-027).</p>
5.191	<p>'Operational noise, with respect to human receptors, should be assessed using the principles of the relevant British Standards and other guidance. The prediction of road traffic noise should be</p>	<p>Chapter 6 Noise and Vibration of the ES (application document TR010063-APP-6.11AS-014) details the assessment methodology used for determining the noise and vibration</p>

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	based on the method described in Calculation of Road Traffic Noise.' 'For the prediction, assessment and management of construction noise, reference should be made to any relevant British Standards and other guidance which also give examples of mitigation strategies.'	impacts resulting from construction noise and vibration, construction traffic and operational traffic. The chapter states that the construction and operational noise assessments have been carried out in accordance with <u>the</u> NH Design Manual for Roads and Bridges (DMRB) LA 111 'Noise and Vibration' - 2020 Revision 2.
5.192	'The applicant should consult Natural England with regard to assessment of noise on designated nature conservation sites, protected landscapes, protected species or other wildlife. The results of any noise surveys and predictions may inform the ecological assessment. The seasonality of potentially affected species in nearby sites may also need to be taken into account.'	Table 7-5 in Chapter 7 Biodiversity of the ES (application document TR010063-APP-6.5APP-066) sets out the consultation carried out with Natural England from 2020-2022. The table states the information which has been provided to Natural England, including: <ul style="list-style-type: none"> • Habitats Regulations Assessment (HRA) Screening Report. • Document A document outlining survey work proposed/currently underway in 2022. • Draft bat and badger mitigation licences.
5.193	'Developments must be undertaken in accordance with statutory requirements for noise. Due regard must have been given to the relevant sections of the Noise Policy Statement for England, National Planning Policy Framework and the Government's associated planning guidance on noise.'	Chapter 6 Noise and Vibration of the ES (application document TR010063-APP-6.11AS-014) identifies the legislation, policy, regulations, guidance and standards that are relevant to this assessment, including the Noise Policy Statement for England.
5.194	'The project should demonstrate good design through optimisation of Scheme layout to minimise noise emissions and, where possible, the use of landscaping, bunds or noise barriers to reduce noise transmission. The project should also consider the need for the mitigation of impacts elsewhere on the road and rail networks that have been identified as arising from the development, according to Government policy.'	Chapter 6 Noise and Vibration of the ES (application document TR010063-APP-6.11AAS-014) sets out the mitigation measures related to reducing noise levels. These include low-low noise road surfacing, noise barriers and traffic calming measures.

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5.195	<p>'The SoS should not grant development consent unless satisfied that the proposals will meet the following aims, within the context of Government policy on sustainable development:</p> <p>Avoid significant adverse impacts on health and quality of life from noise as a result of the new development.</p> <p>Mitigate and minimise other adverse impacts on health and quality of life from noise from the new development.</p> <p>Contribute to improvements to health and quality of life through effective management and control of noise, where possible'.</p>	<p>Table 6-31 in Chapter 6 Noise and Vibration of the ES (application document TR010063-APP 6.11AS-014) sets out how the Scheme meets these aims. These are set out below, aligned to each aim identified in the NPS NNNPS NNNN NPS:</p> <p>Construction noise will be limited where possible through the programme. Operational noise from the Scheme is not predicted to result in moderate or major increases in noise by the future year in the daytime.</p> <p>Design and mitigation measures include a noise-noise-reducing surface along high-speed sections of the M5, plus noise barriers alongside the A4019 and M5, to mitigate operational noise. Temporary noise barriers and the use of the best practicable means will be implemented to mitigate construction noise.</p> <p>Noise emissions from the construction and operation of the Scheme will be reduced. Furthermore, there will be reductions in operational noise at some receptors as a result of the Scheme.</p>
5.196 – 5.198	<p>'In determining an application, the SoS should consider whether requirements are needed which specify that the mitigation measures put forward by the applicant are put in place to ensure that the noise levels from the project do not exceed those described in the assessment or any other estimates on which the decision was based.'</p> <p>'Mitigation measures for the project should be proportionate and reasonable.'</p>	<p>Chapter 6 Noise and Vibration of the ES (application document TR010063-APP 6.11AS-014) provides an assessment of noise impacts during the construction and operation of the Scheme and identifies appropriate mitigation where necessary. Existing operational noise within the study area already exceeds the SOAEL at some receptors. Operational noise from the Scheme, taking into account the application of the proposed mitigation measures detailed in the assessment, is not predicted to result in moderate or major increases in noise by the future year in the daytime.</p> <p>The Scheme includes the provision of funding towards traffic calming measures that would be in place on Stoke Road before</p>

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		the Scheme opens, providing mitigation where a potentially significant adverse noise effect may occur.
Impacts on transport networks		
5.202	'Development of national networks can have a variety of impacts on the surrounding transport infrastructure including connecting transport networks. Impacts may include economic, social and environmental effects. The consideration and mitigation of transport impacts is an essential part of Government's wider policy objectives for sustainable development.'	Impacts The impacts of the Scheme on the SRN, surrounding roads and on the PRoW network have been considered in the Transport Assessment (application document TR010063 APP 7.5 APP-020). Considering specific journey times for routes within the traffic model, the results in the assessment indicate that there are journey time improvements, alongside increases to in journey time caused by the demand demand -dependent development. The Scheme provides dedicated pedestrian and cycle facilities throughout the extent of the works. These provide an improvement compared to the existing situation for pedestrian and cycle users. There would not be an unacceptable impact on highway safety, and that the residual cumulative impacts on the road network would not be severe.
5.203 - 5205	'Applicants should have regard to the policies set out in local plans, for example, policies on demand management being undertaken at the local level.' 'Applicants should consult the relevant highway authority, and local planning authority, as appropriate, on the assessment of transport impacts.' 'Applicants should consider reasonable opportunities to support other transport modes in developing infrastructure.' 'The applicant should provide evidence that as part of the project they have used reasonable endeavours to address any existing severance issues that act as a barrier to non-motorised users.'	The Transport Assessment (application document TR010063 APP 7.5 APP-020) sets out the key local plan policies which relate to transport, which have informed the assessment alongside relevant national policy. The Scheme's dedicated non-motorised user features maximise the opportunity to support other transport modes and address existing severance issues.

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5.206	'For road and rail developments, if a development is subject to EIA and is likely to have significant environmental impacts arising from impacts on transport networks, the applicant's ES should describe those impacts and mitigating commitments. In all other cases the applicant's assessment should include a proportionate assessment of the transport impacts on other networks as part of the application.'	The ES for the Scheme assesses the likely significant environmental impacts arising from the Scheme, including those arising from impacts on transport networks where relevant. In particular, Chapter 13 Population and Human Health (application document TR010063 APP 6.11AS-014) assesses the impact on non-motorised users.
5.207	'If a project is likely to have significant transport impacts it should include a Transport Assessment, using the WebTAG methodology stipulated in Department for Transport guidance, or any successor to such methodology. If a development is subject to EIA and is likely to have significant environmental impacts arising from impacts on transport networks, the applicant's ES should describe those impacts.'	The Transport Assessment (application document TR010063 APP 7.5APP-020) sets out the likely impacts of the Scheme in relation to transport. The ES for the Scheme assesses the likely significant environmental impacts arising from the Scheme, including those arising from impacts on transport networks where relevant. Chapter 13 Population and Human Health of the ES (application document TR010063 APP 6.11AS-014) details the assessment on of severance and accessibility relating to private property, development land/businesses and community land/assets.
<u>5.211</u>	<u>The Examining Authority and the Secretary of State should give due consideration to impacts on local transport networks and policies set out in local plans, for example, policies on demand management being undertaken at the local level.</u>	<u>Appendix A to this Planning Statement shows that local policy supports the M5J10 sScheme. The Transport Assessment (APP-138) sets out the consideration of the impacts of the Scheme on local transport networks.</u>
5.215 – 5.217	'Mitigation measures for Schemes should be proportionate and reasonable, focussed on promoting sustainable development.' 'Where development would worsen accessibility such impacts should be mitigated so far as reasonably possible. There is a very strong expectation that impacts on accessibility for non-motorised users should be mitigated.'	Embedded mitigation measures concerning the design, layout and operation of the Scheme promote sustainable development through <u>by</u> improving <u>the</u> resilience of the road network and improving non-motorised user accessibility.
Water quality and resources		
5.221	'Applicants should make early contact with the relevant regulators, including the Environment Agency, for abstraction	There has been ongoing consultation with the Environment Agency throughout the design process relating to climate change,

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	<p>licensing and with water supply companies likely to supply the water.'</p> <p>'Where a development is subject to EIA and the development is likely to have significant adverse effect on the water environment, the applicant should ascertain the existing status of, and carry out an assessment of the impacts of the proposed project on water quality, water resources and physical characteristics as part of the ES.'</p>	<p>flood risk, ecological protection, ground conditions and water quality.</p> <p>Chapter 8 Road Drainage and the Water Environment of the ES (application document TR010063 APP 6.11AS-014) ascertains the existing status of, and assesses the impacts of the proposed Scheme on, water quality, water resources and physical characteristics. The key conclusions of the assessment are that the Scheme is compliant with the requirements of the NPPF and is compliant with WFD objectives.</p>
5.222	<p>'For those projects that are improvements to the existing infrastructure, such as road widening, opportunities should be taken, where feasible, to improve upon the quality of existing discharges where these identified and shown to contribute towards Water Framework Directive commitments.'</p>	<p>The Scheme complies with the Water Framework Directive requirements as described in paragraph 5.221 of this Appendix.</p> <p>The Water Framework Directive Compliance Assessment (application document TR010063 APP 6.15APP-070) states that the Scheme is likely to be WFD-compliant with the River Chelt, Leigh Brook, Severn Vale - Secondary Combined and Warwickshire Avon - Secondary Mudrocks.</p>
5.223	<p>'Any ES should describe:</p> <p>The existing quality of waters affected by the proposed project.</p> <p>Existing water resources affected by the proposed project and the impacts of the proposed project on water resources.</p> <p>Existing physical characteristics of the water environment (including quantity and dynamics of flow) affected by the proposed project, and any impact of physical modifications to these characteristics.</p> <p>Any impacts of the proposed project on water bodies or protected areas under the Water Framework Directive and source protection zones (SPZs) around potable groundwater abstractions.</p>	<p>Chapter 8 Road Drainage and the Water Environment of the ES (application document TR010063 APP 6.112AS-014) describes all relevant features of the water environment within 1 km of the Order Limits and assesses <u>the</u> impacts of the Scheme in accordance with guidance provided in the Design Manual for Roads and Bridges (DMRB) Standards LA 113 and LA 104.</p> <p>The water environment assessment includes consideration of water quality (both surface water and groundwater), the Water Framework Directive (WFD) and flood risk.</p>

NPS NNPS NNNN NPS Paragraph No.	Relevant requirement of the National Networks NPS	Scheme compliance with the National Networks NPS
	Any cumulative effects.'	
5.227	'The Examining Authority and the SoS should consider proposals put forward by the applicant to mitigate adverse effects on the water environment and whether appropriate requirements should be attached to any development consent and/or planning obligations. If the Environment Agency continues to have concerns and objects to the grant of development consent on the grounds of impacts on water quality/resources, the SoS can grant consent, but will need to be satisfied before deciding whether or not to do so that all reasonable steps have been taken by the applicant and the Environment Agency to try to resolve the concerns, and that the Environment Agency is satisfied with the outcome.'	Chapter 8 Road Drainage and the Water Environment of the ES (application document TR010063-APP 6.11AS-014) includes details of mitigation measures for any potential adverse effects on the water environment, comprising those for surface water, groundwater, flood risk and Water Framework Directive elements, for both construction and operational phases of the Scheme. With the implementation of mitigation measures, only one potential localised significant adverse effect may occur – at the River Chelt floodplain on the existing farmland. Those effects are determined to cause no increase in flood risk, although they will still result in localised adverse impacts (increase in flood depth by 10 mm to 230 mm). The Environment Agency has been consulted on the Water Framework Directive Compliance Assessment (application document TR010063-APP 6.15APP-070) and the water quality assessment included within Chapter 8 Road Drainage and the Water Environment of the ES (application document TR010063-APP 6.11AS-014). At the detailed design stage, further assessment and consultation with the Environment Agency will take place.
5.229	'The SoS should consider whether the mitigation measures put forward by the applicant which are needed for operation and construction (and which are over and above any which may form part of the project application) are acceptable. A construction management plan may help codify mitigation.'	Mitigation measures have been proposed spanning construction and operation. The Environmental Management Plan (application document TR010063-APP 7.3AS-025) details the measures to be carried out during construction, and who would be responsible for implementing these.

Appendix C. ~~Draft~~ Revised National Policy Statement for National Networks, 2024 (~~NPS~~ ~~NNNPS~~ ~~NNNN~~ NPS) Accordance Table

C.1. Introduction

C.1.1. This Appendix provides an assessment of the Scheme's strategic alignment and conformity with the ~~draft~~ revised ~~NPS NNNPS NNNN NPS~~, published in March 2024~~3~~. The Appendix is set out as follows:

- Scheme conformity with draft revised ~~NPS NNNPS NNNN NPS~~ Chapter 2: National networks.
- Scheme conformity with draft revised ~~NPS NNNPS NNNN NPS~~ Chapter 3: The need for development of the national networks (Statement of Need).
- Scheme conformity with draft revised ~~NPS NNNPS NNNN NPS~~ Chapter 4: General policies and considerations.
- Scheme conformity with draft revised ~~NPS NNNPS NNNN NPS~~ Chapter 5: Generic impacts.

	Relevant requirement of the draft revised NPS NNNPS NNNN NPS	Scheme compliance with the draft revised NPS NNNPS NNNN NPS
Chapter 2: National networks		
2.6	<p>Roads facilitate active travel, such as walking, wheeling, and cycling. In 2021, 33% of personal journeys were taken by bike or walking. It is a government commitment for more than half of personal journeys in our towns and cities to be made by active travel by 2030s.</p> <p>Roads facilitate active travel, such as walking, wheeling, and cycling. In 2022, 33% of personal journeys were taken by bike or walking. Government sets out its ambitions for cycling and walking in the second Cycling and Walking Investment Strategy and is investing in active travel to support the delivery of this commitment. A vision-led approach to local transport planning is advocated by the Strategic Road *(SRN) and the delivery of sustainable development circular. It also advocates for the prioritisation of sustainable transport interventions along with pedestrians and other vulnerable road users within all plans to improve the local transport network. commitment for more than half of personal journeys in our towns and cities to be made by active travel by 2030s.</p>	<p>The Scheme will provide a number of new WCH assets for the operational phase which will promote sustainable modes of transport and active travel. The Scheme therefore directly contributes towards the government's commitment for <u>to</u> increased active travel infrastructure.</p> <p>The Scheme will provide a number of new WCH assets for the operational phase which will promote sustainable modes of transport and active travel. The Scheme therefore directly contributes towards the government's commitment to <u>increased</u> active travel infrastructure.</p> <p>Additionally, vulnerable road users and their needs are considered throughout the Scheme with Chapter 13 Population and Human Health of the ES (AS-018) assessing impacts on vulnerable road users and receptors and ensuring the required mitigation is implemented within the Scheme proposal.</p>
2.31	<p>Accessible and functioning transport infrastructure is fundamental to day-to-day life but can face interruptions from climate challenges such as flooding, heat, erosion, subsidence, and extreme weather. While climate change mitigation is essential in minimising the most dangerous impacts of climate change, the severity of these risks is projected to increase, putting additional stresses on transport infrastructure. The UK's National Adaptation Programme recognises and responds to the impacts of climate change already seen in the UK as well as those impacts expected over coming years.</p>	<p>Table 14-14 – Potential operational impacts on asset receptors (including their operation, maintenance, and refurbishment)</p> <p>Road surfaces and pavements</p> <p>Structures (including embankments, earthworks, bridges)</p> <p>Drainage infrastructure</p> <p>Road technology and street furniture (including signs and signals)</p> <p>Landscaping</p> <p>Maintenance workers</p> <p>Driver experience – not significant</p> <p>14.24.6. Climate change is projected to make summers drier, with occasional heavier convectional rainfall. Water quality in the</p>

	Relevant requirement of the draft revised NPS <u>NNNPS</u> <u>NNNN NPS</u>	Scheme compliance with the draft revised NPS <u>NNNPS</u> <u>NNNN NPS</u>
		<p><u>watercourses that will receive surface water runoff due to the Scheme may therefore, in the future, become more vulnerable to impacts from first flush events. This is when long periods of dry weather enable contaminants to build up on road surfaces. These then mobilise in surface water runoff following a heavy rainfall event and enter aquatic systems via surface water runoff and drainage infrastructure at higher than normal concentrations. Pollutants in this runoff can be harmful to aquatic life.</u></p> <p><u>14.24.7. Water quality impacts on the water environment are avoided by inclusion of adequate treatment within the Scheme (SuDS) infrastructure. This treatment is sized with regard to flood flows with a climate change allowance. The SuDS intercept any polluted run-off and treat it prior to discharge to a watercourse. The water treatment processes provided by the SuDS primarily comprises filtration and biological treatment within attenuation basins. The configuration of the SuDS and other treatment infrastructure is designed to manage the types of pollutant typically expected in road runoff.</u></p> <p><u>Climate projections from UKCP18 have been examined. They confirm that the study areas climate is expected to change in the future. The climate change risk assessment finds that the Scheme could be vulnerable to operational impacts linked to these changes in the climate. Mitigation measures that either avoids these impacts, minimises them or reduces their consequences to acceptable levels are presented. After consideration of this mitigation none of the potential climate vulnerability impacts are found to be significant adverse. The assessment of potential inter scheme and intra scheme (ICC1) cumulative effects also did not identify any significant adverse impacts.</u></p>
<p>Chapter 3: The need for development of the national networks (Statement of Need)</p>		

	Relevant requirement of the draft revised NPS NNNPS NNNN NPS	Scheme compliance with the draft revised NPS NNNPS NNNN NPS
3.8	Transport infrastructure is a catalyst and key driver of growth, and it is important that the planning and development of infrastructure fully considers the role it can play in delivering sustainable growth, how it can support local and regional development plans and the growth aspirations of local authority areas. This will include exploring options to unlock sites for housing and employment growth made accessible by sustainable transport and the regenerative impact major infrastructure can play in driving urban renewal, increasing density, as well as creating new places and communities.	Through the implementation of the Scheme, the Scheme will directly facilitate both planned growth in strategic site allocations and unlock adjacent safeguarded land for both housing and employment. The Scheme will therefore facilitate and unlock the development of approximately 9,000 dwellings and employment land through the provision of a highways network that has the capacity to accommodate the increased traffic the allocated sites will generate.
3.9	Resilience in the networks is about responding to risks and taking opportunities to enable transport networks to perform as expected. But importantly, resilience is also about ensuring the network remains fit for purpose, meeting the needs of the country for the movement of goods and people by anticipating, responding and being able to quickly adapt to those changing needs, and ensuring the network continues to evolve as technology advances.	Through the implementation of the Scheme, the network will be enhanced providing resilience ensuring the network provides improved connectivity and future technology.
3.16	Interventions can also help to address the strategic resilience of the network, responding to the changing needs of the economy and the underlying imperative set out in chapter 2 to ensure goods, people and services can traverse the network safely and efficiently through, for example, the provision of a reliable alternative or complementary strategic route. Network resilience also means optimising the outcomes of transport infrastructure delivery at a local, regional and national level, taking opportunities to improve connectivity and capitalising on all of the benefits infrastructure delivery brings.	Through the implementation of the Scheme, the network will be enhanced providing resilience ensuring the network provides improved connectivity, safety, supports economic and housing growth, therefore capitalising on the benefits of enhanced infrastructure.
3.46	The government's wider policy is to bring forward improvements and enhancements to the existing SRN where necessary to address the needs set out earlier. Enhancements to the existing national road network will include but are not limited to:	The Scheme will become part of the SRN, with M5 Junction 10 being a key junction and connection for the wider region and would support higher capacities and greater connectivity to the M5 and local road networks west of Cheltenham as required by

	Relevant requirement of the draft revised NPS NNNPS NNNN NPS	Scheme compliance with the draft revised NPS NNNPS NNNN NPS
	<p>new and improved junctions and slip roads</p> <p>•improvements to trunk roads, in particular, dualling of single carriageway</p> <p>-strategic trunk roads and additional lanes on existing dual carriageways</p> <p>- measures to enhance capacity of the motorway network</p>	<p>the Scheme objective in accordance with Paragraph 2.23. Enhancements to the existing national road network as a result of the Scheme will include:</p> <ul style="list-style-type: none"> — new and improved junctions and slip roads — improvements to Junction 10 of the M5; — improvements to trunk roads, in particular, dualling of single carriageway strategic trunk roads and additional lanes on existing dual carriageways [Improvements to the A4019]; — measures to enhance capacity of the motorway network (all three components of the Scheme).
Chapter 4: General policies and considerations		
4.9	<p>Applications for road and rail projects should be supported by a local transport model to provide sufficiently accurate detail of the impacts of a project. The modelling will usually include national level factors around the key drivers of transport demand such as economic growth, demographic change, travel costs and labour market participation, as well as local factors. The Examining Authority and the Secretary of State do not need to be concerned with the national methodology and national assumptions around the key drivers of transport demand. An assessment of the benefits and costs of schemes under a range of scenarios should reflect future uncertainty, in addition to the core case. The modelling should be proportionate to the scale of the scheme and include appropriate sensitivity analysis to consider the impact of uncertainty on project impacts.</p>	<p>Strategic and local transport modelling has been undertaken in line with Department for Transport guidelines. Details are provided in the Transport Assessment Report (application document TR010063 APP 7.5/APP 020).</p>
4.10	<p>NSIP applications need to include an environmental assessment. This assessment is undertaken under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) framework which requires projects to be accompanied by an Environmental Statement. Regulation 14 of</p>	<p>The DCO is accompanied by an ES which details the significant effects on the environment and, where necessary, mitigation measures to reduce any residual effects of the Scheme. This meets the requirements of the European Union's Environmental</p>

	Relevant requirement of the draft revised NPS <u>NNNPS</u> <u>NNNN NPS</u>	Scheme compliance with the draft revised NPS <u>NNNPS</u> <u>NNNN NPS</u>
	and Schedule 4 to the Environmental Impact Assessment (EIA) Regulations set out the information that should be included in the environmental statement.	Impact Assessment Directive as transposed into UK legislation in May 2017 as the IP (EIA) Regulations 2017.
4.121	A key part of environmental assessment is the consideration of cumulative effects. The applicant should provide information on how the effects of the proposal would combine and interact with the effects of other development, where relevant. For most practical purposes this means that the applicant should consider the impact of other existing and committed developments within an appropriate geographical area and assess the additional impact of their own development. Other evidence for example, from a Transport Business Case, appraisals of sustainability of relevant NPSs or strategic environmental assessment of development plans, may assist the Secretary of State in reaching decisions on proposals and on mitigation measures that may be required.	Chapter 15 Cumulative Effects of the ES (application document TR010063 APP 6.13 APP 074) provides an assessment of the likely significant effects of the Scheme in combination with other past, present and reasonably foreseeable developments, as well as impact interactions. Past and present developments are considered as part of the baseline and in some cases reflects the sensitivity of the receptors assessed. The developments considered in the assessment were identified using local knowledge, published information and consultation with the local planning authorities, and fall under the following categories: <ul style="list-style-type: none"> ● Trunk road and motorway projects which have been confirmed. ● Development projects with valid planning permissions as granted by the local planning authority and for which formal EIA is a requirement or for which non-statutory EIA has been undertaken. ● Applications for consent which have been made but have not yet been determined. ● Allocated sites in emerging or adopted Local Plans. ● Other types of applications which could have implications for the Scheme.
4.163	The applicant should seek the early advice of the appropriate Statutory Nature Conservation Body and provide the Secretary of State with such information as the Secretary of State may reasonably require, to determine whether or not the plan or project should proceed to the Appropriate Assessment stage of Habitats Regulation Assessment.	A Habitats Regulations Assessment (HRA) has been produced, which is included as an appendix to Chapter 7 Biodiversity of the ES (application document reference: TR010063 APP 6.5 APP 066). Early consultation meetings with the EA were undertaken on 16 January 2020 and 15 July 2021 as part of the development of the preliminary design.

	Relevant requirement of the draft revised NPS <u>NNNPS</u> <u>NNNN</u> <u>NPS</u>	Scheme compliance with the draft revised NPS <u>NNNPS</u> <u>NNNN</u> <u>NPS</u>
		<p>Natural England was consulted on an Interim HRA Screening Report and has provided comments. On 7 November 2022₁ the updated HRA was provided to Natural England. On 9 November 2022₁ Natural England responded with regard to the Screening report that they are in agreement with the conclusion that likely significant effects as a result of recreational impacts to the Cotswold Beechwood SAC and the Severn Estuary designations can be ruled out; that likely significant effects on the Severn Estuary SPA and Walmore Common SPA can be ruled out; and that likely significant effects as a result of air quality impacts can be ruled out. Comments from Natural England's freshwater team were received on 30 November 2022 with regard to the SIAA, and these have been addressed in the SIAA report.</p>
<p>4.2017 – 4.2118</p>	<p>Applicants should comply with all legal requirements, and any policy requirements set out in this NPS, on the assessment of alternatives.</p> <p>National road or rail schemes that have been identified in relevant Road or Rail Investment Strategies will have been subject to an options appraisal process where relevant in line with existing Transport Appraisal Guidance, and proportionate consideration of alternatives will have been undertaken as part of the investment decision making process. The options appraisal may include other viable options for achieving the objectives of the project, including (where appropriate) other modes of travel, regulation, or other ways of influencing behaviour in line with Department for Transport guidance. The Examining Authority and the Secretary of State should satisfy themselves that the options appraisal process has been undertaken.</p>	<p>Chapter 3 Scheme Development of this Planning Statement and Chapter 3 of the ES (application document TR010063 APP 6.2APP-062) set out the alternative options considered during the development of the Scheme. Assessment of these alternatives, taking account of the environmental effects, has provided the basis for arriving at the preferred option.</p> <p>Other specific legal and policy requirements for the consideration of alternatives are:</p> <p>The European Directive 2008/50/EC, Ambient Air Quality and Cleaner Air for Europe, transposed to UK legislation by the Air Quality Standards Regulations 2010.</p> <p>The European Directive 2000/60/EC, Establishing a Framework for the Community Action in the Field of Water Policy, transposed in to UK legislation by the Water Environment (Water Framework Directive) (England and Wales) Regulations 2003 and the Water Industry Act 1991 (Amendment) (England) Regulations 2009.</p> <p>The European Directives 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna and</p>

	Relevant requirement of the draft revised NPS NNNPS NNNN NPS	Scheme compliance with the draft revised NPS NNNPS NNNN NPS
		<p>2009/147/EC on the Conservation of Wild Birds, which are transposed into UK legislation by the Conservation of Habitats and Species Regulations 2010 (as amended by the Conservation of Habitats and Species (Amendment) Regulations 2012).</p> <p>The European Habitats Directive 92/43/EEC and Habitats Regulations 2017.</p> <p>The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act 2000.</p> <p>These requirements have been taken into consideration in the assessment of alternatives for the Scheme.</p>
4.230	<p><u>Biodiversity net gain delivers measurable improvements for biodiversity by</u> <u>creating, enhancing, maintaining and monitoring habitats in association with developments. Biodiversity net gain should be applied in conjunction with the mitigation hierarchy and does not change or replace existing environmental obligations. In addition to providing net gains for biodiversity, applicants should also identify and deliver appropriate opportunities for nature recovery and wider environmental enhancements. Biodiversity net gain is an approach to development that delivers measurable improvements for biodiversity by creating or enhancing habitats in association with developments. Applicants should therefore not just look to mitigate direct harms, but also identify and deliver appropriate opportunities for nature recovery and wider environmental opportunities for enhancements by providing net gains for biodiversity.</u></p>	<p>The Scheme includes a significant level of Green Infrastructure which is both embedded mitigation for the impacts of the Scheme and aims to provide biodiversity enhancements. The Scheme also maximises the opportunities to contribute to Nature Recovery Networks and seeks to ensure green infrastructure within and adjacent to the road network can deliver biodiversity gains. Overall, the Scheme is predicted to deliver in excess of 10% BNG. ES Appendix 7.18 Biodiversity Net Gain (application document TR010063 APP 6.15 APP-070) sets out the headline BNG results for the Scheme.</p>
4.241	<p>Applicants should use the most appropriate version of the Department of Environment, Food and Rural Affairs (Defra) biodiversity metric (as advised by Defra) to calculate their biodiversity baseline and inform their biodiversity net gain outcomes, and to present this data as part of their application.</p>	<p>The BNG assessment, which is included as an appendix to Chapter 7 Biodiversity of the ES (application document reference: TR010063 APP 6.5 APP-066), uses Biodiversity Metric 3.0. This metric provides a way of measuring and accounting for biodiversity losses and gains resulting from development and/or</p>

	Relevant requirement of the draft revised NPS NNNPS NNNN NPS	Scheme compliance with the draft revised NPS NNNPS NNNN NPS
	<p>Biodiversity net gain should be applied in conjunction with the mitigation hierarchy and does not change or replace existing environmental obligations.</p> <p><u>Applicants are encouraged to use the latest version of the biodiversity metrics to calculate their biodiversity baseline and inform their biodiversity net gain outcomes, and should present this data as part of their application.</u></p>	<p>land management change. Biodiversity Metric 3.1, an update to the previously published Biodiversity Metric 3.0, was published in April 2022, and Biodiversity Metric 4.0 was published in March 2023. However, for this Scheme, given that metric 3.0 was used to undertake an initial BNG feasibility assessment at the start of 2022, version 3.0 will continue to be used, and has been used to undertake the calculations. This is in line with advice from Natural England (Natural England Joint Publication JP039 (April 2022) Biodiversity Metric 3.1 Frequently Asked Questions).</p>
4.22	<p>Biodiversity net gain can be delivered onsite or wholly or partially off-site and should also be set out within the application for development consent. When delivering biodiversity net gain off-site, developments should do this in a manner that best contributes to the achievement of relevant wider strategic outcomes, for example by increasing habitat connectivity or enhancing other ecosystem service outcomes. Reference should be made to any Local Nature Recovery Strategy (which should be the primary reference point for those delivering biodiversity net gain off-site) and other relevant national or local plans and strategies, such as green infrastructure strategies, used to inform Biodiversity net gain delivery.</p>	<p>The landscape plans (shown in the Environmental Masterplan, application reference TR010063 APP 2.13) have been used to inform the on-site post development habitat creation.</p> <p>The BNG assessment states that no off-site habitat and/or hedgerow creation or enhancement is proposed for the Scheme.</p>
4.23	<p><u>Biodiversity net gain delivers measurable improvements for biodiversity by creating, enhancing, maintaining and monitoring habitats in association with developments. Biodiversity net gain should be applied in conjunction with the mitigation hierarchy and does not change or replace existing environmental obligations. In addition to providing net gains for biodiversity, applicants should also identify and deliver appropriate opportunities for nature recovery and wider environmental enhancements.</u></p>	<p><u>The Scheme includes a significant level of Green Infrastructure which is both embedded mitigation for the impacts of the Scheme and aims to provide biodiversity enhancements. The Scheme also maximises the opportunities to contribute to Nature Recovery Networks and seeks to ensure green infrastructure within and adjacent to the road network can deliver biodiversity gains. Overall, the Scheme is predicted to deliver in excess of 10% BNG. ES Appendix 7.18 Biodiversity Net Gain (APP 070) sets out the headline BNG results for the Scheme.</u></p>

	Relevant requirement of the draft revised NPS NNNPS NNNN NPS	Scheme compliance with the draft revised NPS NNNPS NNNN NPS
4.274—4.296	<p>Applicants should include design as an integral consideration from the outset of a proposal. Applying good design to national network projects should not be limited to general aesthetics. High quality and inclusive design goes far beyond aesthetic considerations. It demonstrates an understanding of context, local needs, history and culture, enhances local landscape character and is adaptable to future needs and technologies.</p> <p>A good design should meet the principal objectives of the scheme by applying the mitigation hierarchy to avoid, eliminate or substantially mitigate the identified problems and existing adverse impacts, by improving operational conditions, simultaneously minimising adverse impacts and contributing to the conservation and enhancement of the natural, built and historic environment. A good design will also be one that sustains the improvements to operational efficiency for as many years as is practicable, taking into economic, social and environmental impacts.</p> <p>In light of the above, scheme design will be a material consideration in decision making. The Secretary of State needs to be satisfied that national networks infrastructure projects are sustainable, having regard to appropriate industry good design guidance, and the applicant has considered, as far as possible, both functionality (including fitness for purpose and sustainability) and aesthetics (including the scheme's contribution to the quality of the area in which it would be located).</p>	<p>The Scheme objectives include the notion of delivering a Scheme which is in keeping with the local environment. The Planning Statement sets out in Chapter 3 how the design has evolved, including the options considered and changes carried out as a result of the consultation, having taken into account local context, history and culture, as well as both current and future needs.</p> <p>ES Chapter 9 Landscape and Visual (TR010063 APP 6.7 APP 068) includes details on the scheme design and assesses its impact on the context and character of the local area.</p> <p>The Transport Assessment (APP 7.5 TR010063 APP 7.5) considers the safety impacts of the Scheme as well as movement and connectivity, including that of NMUs.</p> <p>ES Chapter 13 (TR010063 APP 6.11 APP 072) Population and Human Health also considers the design's impact on population, and the health impacts which consider the inclusiveness principles required by this policy.</p> <p>Chapter 14 Climate of the ES (application document TR010063 APP 6.12 APP 062 AS 020) covers the issues of improving efficiency, reducing emissions and unnecessary pollution of air, which in turn cover the wider topic of sustainability.</p>
4.3128	<p>In their application, applicants should be able to demonstrate how the design process was conducted, effective engagement with communities and stakeholders and how the proposed design evolved to maximise design outcomes. Where a number of different designs were considered, applicants should set out the reasons why the favoured choice has been selected with a clear articulation of its benefits. The Examining Authority and Secretary of State should consider the ultimate purpose of the infrastructure</p>	<p>A detailed description of the development and analysis of the alternative options considered for the Scheme can be found in Chapter 3 of the ES (application reference TR010063 APP 6.1).</p> <p>The Consultation Report (application document TR010063 APP 5.1) sets out how the Scheme has evolved in response to comments received during the consultation periods.</p>

	Relevant requirement of the draft revised NPS <u>NNNPS</u> <u>NNNN NPS</u>	Scheme compliance with the draft revised NPS <u>NNNPS</u> <u>NNNN NPS</u>
	and the operational, safety and security requirements which the design must satisfy.	
4.3 <u>85</u>	In preparing measures to support climate change, adaptation applicants should consider whether nature-based solutions could provide a basis for such adaptation. In addition to avoiding further greenhouse gas emissions when compared with some more traditional adaptation approaches, nature-based solutions can also result in biodiversity benefits as well as increasing absorption of carbon dioxide from the atmosphere (see also paragraphs 5.170 to 5.194 on the role of green infrastructure). In preparing measures to support climate change adaptation, applicants should consider whether nature-based solutions could provide a basis for such adaptation. In addition to avoiding further carbon emissions when compared with some more traditional adaptation approaches, nature-based solutions can also result in biodiversity benefits as well as increasing absorption of carbon dioxide from the atmosphere (see also paragraphs 5.179 to 5.203 on the role of green infrastructure).	The Scheme includes a significant level of Green Infrastructure which is both embedded mitigation for the impacts of the Scheme and aims to provide biodiversity enhancements. Chapter 14 Climate of the ES (application document TR010063 APP 6.12APP 062AS 020) states that the construction and operation of the Scheme has <u>have</u> the potential to create and enhance carbon stocks in vegetation and soils, encouraging increased removals of greenhouse gases from the atmosphere.
4.3 <u>96</u> —4.37-4.40	New national networks infrastructure will typically be a long term investment and will need to remain operational over many decades, in the face of a changing climate. Consequently, applicants must consider the direct (e.g. flooding of road or rail infrastructure) and indirect (e.g. flooding of other parts of the road or rail network) impacts of climate change when planning the location, design, build, operation and maintenance. The Secretary of State will need information on how the proposal will take account of the projected impacts of climate change and remain resilient. The Secretary of State should be satisfied that applications for new national networks infrastructure have taken into account the potential direct and indirect impacts of climate change. This should include using the latest UK Climate Projections and	Chapter 14 Climate of the ES (application document TR010063 APP 6.12APP 062AS 020) takes account of <u>the</u> predicted impacts of the Scheme on climate change, and the vulnerability of the Scheme to the impacts of climate change. It proposes mitigation measures for climate-related impacts. The Chapter concludes that the Scheme will improve transport resilience by replacing old degrading assets that were designed with less resilience to climate change than the assets that will replace them. The Flood Risk Assessment (application document TR010063 APP 6.15APP 070) also takes into account the impacts of climate change and resilience over the life time of the development. The Scheme will not be at significant risk of flooding, and the Scheme

	Relevant requirement of the draft revised NPS NNNPS NNNN NPS	Scheme compliance with the draft revised NPS NNNPS NNNN NPS
	<p>associated research and expert guidance (such as the Environment Agency's Climate Change Allowances for Flood Risk Assessments⁸¹) applicable at the time the environmental assessment was prepared as part of their Development Consent Order application, to ensure they have identified mitigation or adaptation measures. This should cover the estimated lifetime of the new infrastructure, with a high level of climate resilience built in from the outset. The applicant should also be able to demonstrate how proposals can be adapted over their predicted lifetimes to remain resilient to a credible maximum climate change scenario. Should a revised set of UK Climate Projections or associated research be applicable after the preparation of the environmental assessment, the Examining Authority should consider whether they need to request further information from the applicant.</p>	<p>should not result in a material increase in flood risk to third parties.</p>
<p>4.4138</p>	<p>The Secretary of State should be satisfied that there are no features of the design of new national networks infrastructure critical to its safety or operation which may be seriously affected by more radical changes to the climate beyond that projected in the latest set of UK climate projections and taking account of the latest credible scientific evidence on, for example, sea level rise. The Secretary of State should also be satisfied that necessary action can be taken to ensure the operation of the infrastructure over its estimated lifetime.</p>	<p>DMRB LA 114 states that climate assessments should use the H++ climate scenarios to test the sensitivity of vulnerable safety-critical features, to ensure that such features would not be affected by more radical changes to the climate beyond that projected in the latest set of UK Climate Projections. Within Chapter 14 Climate of the ES (application document TR010063 APP 6.12APP-062AS-020), the UKCP09 H++ scenarios are considered a credible maximum climate change scenario and they are used to assess the impacts of low probability, high impact climate events including heat waves, drought, extreme winds, sea level rise and storm surge.</p> <p>The chapter presents measures to mitigate the effects of changes to climate which either avoids these impacts, minimises them or reduces their consequences to acceptable levels. None of the potential climate vulnerability impacts are found to be significantly adverse, so the Scheme is compliant in this regard.</p>

	Relevant requirement of the draft revised NPS NNNPS NNNN NPS	Scheme compliance with the draft revised NPS NNNPS NNNN NPS
4.486	<p>Applicants are encouraged to begin pre-application discussions with relevant regulators, such as the Environment Agency and the Marine Management Organisation, as early as possible. Where applicants wish to parallel track Development Consent Order and Environmental Permit applications, applicants should start work towards submitting the permit application at least 6 months prior to the submission of an application for a Development Consent Order. This will help ensure that applications take account of all relevant environmental considerations and that the relevant regulators are able to provide timely advice and assurance to the Examining Authority.</p>	<p>Where feasible and expedient for the project, GCC has sought the agreement of relevant consenting bodies to be able to include other consenting requirements within the scope of the DCO. For other consents that may need to be obtained separately from the DCO, GCC is either seeking to obtain these in parallel with the DCO process or has sought assurances from the relevant consenting bodies that such consents will not be unreasonably withheld later.</p>
4.575	<p>Highways developments provide an opportunity to make significant safety improvements and significant incident reduction benefits when they are well designed. Some developments may have safety as a key objective, but even where safety is not the main aim of a development, the opportunity should be taken to improve safety, including introducing the most modern and effective safety measures where proportionate. Consideration should also be given to wider transport objectives, including expanding active travel, creating safe and attractive walking, wheeling and cycling environments, enabling modal shift to sustainable transport options including public transport and decarbonisation. In developing roads schemes the applicant should have due regard to the needs of drivers and the imperative to ensure driver safety.</p>	<p>Safety is a key objective of the Scheme, in terms of providing safe access to services for the local community. The process for monitoring and evaluating safety has been commenced with a Stage 1 Road Safety Audit. Measures to minimise the risk of death and injury arising from the construction of the Scheme are specified within the Environmental Management Plan (application document TR010063 APP 7.3AS-025).</p>
4.586	<p>The applicant should undertake an objective assessment of the impact of the proposed development on safety including the impact of any mitigation measures. This should use the methodology outlined in the guidance from Department for Transport's Transport Appraisal Guidance and from National Highways. They should also put in place arrangements for undertaking the road safety audit process and ensuring their implementation. Road safety audits are a mandatory requirement</p>	<p>A Stage 1 Road Safety Audit has commenced for the Scheme. This is the first stage in an ongoing audit to be progressed at a later stage of design, as per DfT and NH guidance.</p>

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	<p>for highway improvement schemes in the UK (including motorways). Road safety audits are intended to ensure that operational road safety experience is applied during the design and construction process so that the number and severity of collisions is as low as is reasonably practicable.</p>	
<p>4.597 – 4.6159</p>	<p>The applicant should be able to demonstrate that their scheme is consistent with the national Strategic Framework for Road Safety and with the National Highways Safety Framework for the Strategic Road Network. Applicants will wish to show that they have taken all steps that are reasonably required to:</p> <ul style="list-style-type: none"> minimise the risk of death and injury arising from their development contribute to an overall reduction in road casualties contribute to an overall reduction in the number of unplanned incidents contribute to improvements in road safety for walkers and cyclists <p>They will also wish to demonstrate that:</p> <ul style="list-style-type: none"> they have considered the safety implications of their project from the outset they are putting in place rigorous processes for monitoring and evaluating safety <p>The Secretary of State should not grant development consent unless satisfied that all reasonable steps have been taken and will be taken to:</p> <ul style="list-style-type: none"> minimise the risk of road casualties arising from the scheme contribute to improvements in the safety of the SRN <p><u>The applicant should be able to demonstrate that their scheme is consistent with government Road Safety policy and with the</u></p>	<p>Measures to minimise the risk of death and injury arising from the construction of the Scheme are specified within the Environmental Management Plan (application document TR010063 APP 7.3AS 025). Risk of injury and death is also a key factor in Chapter 13 Population and Human Health of the ES (application reference TR010063 APP 6.11APP 072AS 018). The Scheme's contribution to reducing road casualties and improving safety for walkers and cyclists during its operation is addressed through the provision of dedicated NMU facilities (footways, crossings, Public Rights of Way) and upgraded signalling and crossing points.</p>

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	<p><u>National Highways Safety Framework for the Strategic Road Network. Applicants must show that they have taken all steps that are reasonably required to minimise the risk of death and injury arising from their development, including:</u></p> <ul style="list-style-type: none"> <u>• contributing to an overall reduction in road casualties</u> <u>• contributing to an overall reduction in the number of unplanned incidents</u> <u>• contributing to improvements in road safety for pedestrians and cyclists⁹⁵</u> <p><u>4.60 The applicant must also demonstrate that:</u></p> <ul style="list-style-type: none"> <u>• they have considered the safety implications of their project from the outset</u> <u>• they are putting in place rigorous processes for monitoring and evaluating safety</u> <p><u>4.61 The Secretary of State should not grant development consent unless satisfied that all reasonable steps have been taken and will be taken to:</u></p> <ul style="list-style-type: none"> <u>• minimise the risk of road casualties arising from the scheme</u> <u>• contribute to improvements in the safety of the strategic road network.</u> 	
4.721	<p>As described in the relevant sections of this NPS, where the proposed project has an effect on human beings, the applicant should assess these effects, identifying any potential adverse health impacts, and identify measures to avoid, reduce or compensate for adverse health impacts as appropriate.</p>	<p>ES Chapter 13 Population and Human Health (application document TR010063 APP 6.11/APP 072AS 014) considers the Scheme's impact on the population and the health of the communities within the Scheme boundary and beyond.</p>

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	Enhancement opportunities should be identified by promoting local improvements for active travel and horse riders driven by the principles of good design to create safe and attractive routes to encourage health and wellbeing; this includes potential impacts on vulnerable groups within society, i.e. those groups within society which may be differentially impacted by a development compared to wider society as a whole.	The chapter also provides details of the replacement and enhanced PRow included in the Scheme, which will improve connectivity and amenity amenities for walkers, cyclists and equestrians. The chapter also includes consideration of vulnerable groups including those with disabilities, and covers accessibility in varying forms including physical accessibility, access to local amenities, and access to information.
4.743—4.754	The government's strategy for achieving equal access for disabled people is set out in the Inclusive Transport Strategy. The government expects applicants to improve access, wherever possible, on and around the national networks by designing and delivering schemes that take account of the accessibility requirements of all those who use, or are affected by, national networks infrastructure, including disabled users. Applicants must comply with any obligations under the Equality Act 2010. Public authority applicants are reminded of their duty to promote equality and to consider the needs of disabled people as part of their normal practice.	The Equality Impact Assessment report (TR010063 APP 7.6 APP 144) assesses the Scheme's impact on equality of opportunity and concludes that there will be a neutral impact on the gender, sexual orientation, gender reassignment and marriage/civil partnership equality groups. Negative impacts have been identified in relation to religion, age, disability, ethnicity and pregnancy/maternity. However, it has been detailed within the assessment that there is some assumed mitigation through the development of an inclusive consultation and communication strategy. Furthermore, other potential impacts identified will need to be monitored going forward in the Scheme development.
4.77	Applicants should demonstrate the following where relevant: All reasonable opportunities to deliver improvements in accessibility on and to the existing national road network should be taken, including improvements for non-motorised users Severance can be a problem in some locations; where appropriate, applicants should seek to deliver improvements that reduce community severance and improve accessibility National Network infrastructure should incorporate good design, as expanded on in paragraphs 4.24 to 4.29, which includes improving accessibility of infrastructure for users and inclusive design.	Chapter 13 Population and Human Health of the ES (application document TR010063 APP 6.11 APP 072AS 014) assesses the impacts of the Scheme on community severance and accessibility. The Scheme is anticipated to maintain the connectivity offered by recreational routes for NMUs and will include new, altered and improved PRow which will improve conditions and accessibility for NMUs. The Scheme objectives set out in this Planning Statement include providing safe access to services for the local community and for users of sustainable transport modes. This includes providing convenient, accessible and attractive routes for pedestrians, cyclists and equestrians and improving crossing facilities, as well

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		as the provision of a bus lane on the A4019 eastbound carriageway.
4.78	<p>Applicants should demonstrate the following where relevant:</p> <ul style="list-style-type: none"> — all reasonable opportunities to deliver improvements in accessibility on and to the existing national road network should be taken, including improvements for non-motorised users [see Scheme as a whole for access on and to existing NRN as well as the network and connectivity of shared use paths provided throughout the Scheme] — severance can be a problem in some locations; where appropriate, applicants should seek to deliver improvements that reduce community severance and improve accessibility [severance not an issue but Scheme improves accessibility] • national network infrastructure should incorporate good design (which is inclusive by default), as expanded on in paragraphs 4.27 to 4.32, which includes delivering accessible infrastructure for users [see above]. 	<p>Chapter 13 Population and Human Health of the ES (APP-072AS-014) assesses the impacts of the Scheme on community severance and accessibility. The Scheme is anticipated to maintain the connectivity offered by recreational routes for NMUs and will include new, altered and improved PRow which will improve conditions and accessibility for NMUs.</p> <p>The Scheme objectives set out in this Planning Statement include providing safe access to services for the local community and for users of sustainable transport modes. This includes providing convenient, accessible and attractive routes for pedestrians, cyclists and equestrians and improving crossing facilities, as well as the provision of a bus lane on the A4019 eastbound carriageway.</p>
Chapter 5: Generic impacts		
5.3	Applicants should engage with relevant and statutory bodies regarding their proposal at the pre-application stage.	<p>The Applicant undertook formal, statutory consultation with the local authorities, landowners and persons with an interest in land. Each consultee received a consultation pack which included information explaining the Scheme and a feedback survey.</p> <p>The project team have engaged with the three host authorities (GCC, TBC and CBC) throughout the progression of the Scheme through a series of planning liaison meetings, where representatives from each local authority were invited to comment on various elements of the design of the Scheme and</p>

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		<p>to help develop the Statement of Common Ground (SoCG) with the host authorities.</p> <p>The project team have included NH in consultation discussions throughout the development of the Scheme. NH, as a statutory consultee, responded to the non-statutory consultation, the statutory consultation and the first round of targeted consultation. NH have also been subject to continued consultation through the development of the SoCG with key stakeholders.</p> <p>The full list of stakeholders who have been consulted in order to develop SOCGs are:</p> <ul style="list-style-type: none"> The Host Authorities <u>The Joint Councils</u>. Natural England. Environment Agency. Historic England. Stagecoach. UK Health Security Agency (UK HSA). Elms Park Developers (Bloor Homes and Persimmon Homes). Golden Valley Developers (Midland Land Portfolio). Developers of Safeguarded Land at North West Cheltenham. <p>The applicant has also liaised with statutory bodies such as the Environment Agency and the Lead Local Flood Authority throughout the design development of the Scheme.</p> <p>The Consultation Report – Main Report (application document TR010063 APP 5.1) explains the consultation undertaken and how it has influenced the Scheme prior to submission.</p>

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5.121—5.143	<p>Where a project is likely to have adverse effects on air quality and/or where a project could lead to a deterioration in air quality in an area or lead to a new area where air quality breaches any national air quality limits or statutory air quality objectives, the applicant should undertake an assessment as part of their Development Consent Order application.</p> <p><u>The applicant should undertake an assessment as part of their Development Consent Order application where the impacts of the project (both on and off scheme) are likely to have significant air quality effects in relation to meeting environmental assessment requirements or affect the UK's ability to comply with the Air Quality Standards Regulations 2010, or impact the relevant local authority's ability to comply with The Air Quality (England) Regulations 2000. Applicants should also refer to the Environmental Assessment section in chapter 4 and paragraph 5.4.</u></p> <p>The assessment should describe:</p> <ul style="list-style-type: none"> • any air pollutant emissions, that would lead to a deterioration in air quality and their mitigation, distinguishing between the project stages, including construction and operation and taking account of emissions such as from any road traffic generated by the project • the predicted absolute emission levels of the proposed project after mitigation methods have been applied • existing air quality levels, how they are monitored and the relative change in air quality from existing levels • any potential impacts on nearby protected habitats from air pollutant emissions <p>Defra publishes future projections of UK air pollutant emissions based on evidence of future emissions, traffic and vehicle fleet. Projections are updated as the evidence base changes. The</p>	<p>The ES Chapter 13 Air Quality (application document TR010063 APP 6.3AS 012AS 012) assesses the Scheme's compliance with Air Quality Regulations (The Air Quality Standards Regulations 2010 (SI 2010/1001) for EU limit values and the Air Quality (England) Regulations (SI 2000/928) as amended (2002/3043) for national objectives). The assessment includes:</p> <p>Analysis of existing air quality levels ('baseline conditions').</p> <p>Assessment of air quality for the following scenarios: base year (2019), opening year (2027) and future year (2042).</p> <p>Identification of significant air quality effects, mitigation and residual effects arising from construction traffic and activities and operational road traffic of the Scheme.</p> <p>The assessment concludes that any air quality effects due to construction would be temporary and could be suitably minimised by the application of standard and appropriate mitigation measures. During operation, air quality modelling has indicated that the Scheme is unlikely to have any overall significant adverse effects on human health or on designated habitats.</p> <p>There are no estimated exceedances of the annual mean NO2 air quality limit value in the Defra Pollution Climate Mapping (PCM) model links within the affected road network in 2019.</p>

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	applicant's assessment should be consistent with this but may include more detailed modelling to demonstrate local impacts.	
5.145.17-5.18	<p>Mitigation measures may affect the project design, layout, construction, operation and/or may consist of measures to improve air quality in pollution hotspots beyond the immediate locality of the scheme. Measures could include, but are not limited to, changes to the route of the new scheme, changes to the proximity of vehicles to local receptors in the existing route, physical means including barriers to trap or better disperse emissions, and/or speed control. Applicants should routinely look for opportunities within the design of the proposed development to embed nature based solutions, such as urban woodlands and trees to assist with pollutant reduction and dispersal along major transport corridors. In addition to avoiding further greenhouse gas emissions when compared with some more traditional approaches, nature based solutions can also result in biodiversity benefits as well as increasing absorption of carbon dioxide from the atmosphere.</p> <p>Mitigation measures may affect the project design, layout, construction, operation and/or may consist of measures to improve air quality beyond the immediate locality of the scheme. Measures could include, but are not limited to, changes to the route or design of the new scheme, changes to the proximity of vehicles to local receptors in the existing route, physical means including barriers to better disperse emissions, and/or speed control.</p> <p>Where a project is likely to lead to a breach of any relevant statutory air quality limits, objectives or targets, the applicant should work with the relevant authorities to secure appropriate mitigation measures. Where a project is located within, or in close proximity to, an Air Quality Management Area or Clean Air Zone, applicants should engage with the relevant local authority to</p>	<p>It is not anticipated that there would be any significant adverse effects on air quality during the Scheme's construction or operation, provided standard construction best practice is adhered to, as detailed in Chapter 5 Air Quality of the ES (application document TR010063 APP 6.3AS-012AS-012). As such no specific mitigation measures for air quality are proposed.</p>

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	<u>ensure the project is compatible with the Local Air Quality Action Plan.</u>	
5.29 31 5.30	<p>A whole life carbon assessment should be used to measure greenhouse gas emissions at every stage of the proposed development to ensure that emissions are minimised as far as possible as we transition to net zero. This includes the construction, maintenance, operation and use of the asset across its entire lifecycle. This is critical at early stages of project planning, for example, the conception stage, because the ability to reduce whole life carbon emissions is increasingly more limited as the project passes through detailed design and enters construction.</p> <p>All proposals for national network infrastructure projects should include a whole life carbon assessment at critical stages in the project lifecycle, for example the submission of a major business case. This should be conducted according to the guidance, standards and methodologies set out in Transport Appraisal Guidance Unit A3.</p>	<p>Chapter 14 Climate of the ES (application document TR010063 APP 6.12 APP 062AS 020) provides an assessment of the likely carbon emissions against the UK Carbon Budgets across the Scheme's entire life cycle. This runs from the construction phase and then provides cumulative figures until 2087.</p> <p>The magnitude of emissions from the Scheme will not materially impact the Government's ability to meet the budget, and therefore will not have a significant effect on climate.</p> <p>This information can be found in Section 14.10 of the Climate chapter of the ES.</p>
5.34	<p>Having regard to current knowledge, a carbon management plan should be produced as part of the Development Consent Order submission and include:</p> <ul style="list-style-type: none"> an explanation of the steps that have been taken to drive down the climate change impacts at each of those stages how operational emissions and, where applicable, emissions from maintenance activities, have been reduced as much as possible through the application of best available technology for that type of technology (recognising that in the case of road projects while the developer can estimate the likely emissions from road traffic, it is not solely responsible for controlling them) 	<p>Chapter 14 Climate of the ES (application document TR010063 APP 6.12 APP 062AS 020) states that a comprehensive carbon management plan is being developed for the Scheme, which would be implemented from the Detailed Design stage and through construction. This would follow a data collection and analysis methodology which adheres to the requirements of the PAS 2080—Carbon Management in Infrastructure verification technical standard.</p> <p>The Principal Contractor will produce a Carbon Management Plan (CMP) as part of their contract. The CMP will set out how GHG emissions will be managed and reduced over the lifetime of the scheme. The Principal Contractor will also set targets for GHG emissions reductions for each stage of the scheme which will be included within the CMP.</p>

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	<p>whether and how any residual carbon emissions will be (voluntarily) offset or removed using a recognised framework</p> <p>where there are residual emissions, the level of emissions and the impact of these on national and international efforts to limit climate change, both alone and where relevant in combination with other developments at a regional or national level, or sector level, if statutory sectoral targets are developed and come into force</p>	
5.32—5.33	<p>Applicants should look for opportunities within the design of the proposed development to embed nature-based or technological solutions to mitigate, capture or offset the emissions of construction.</p> <p>Steps taken to minimise, capture and offset emissions in design and construction, should be set out in a Greenhouse Gas Reduction Strategy, secured under the Development Consent Order. This Strategy could include, for example, mitigation through woodland creation on or adjacent to the site and registered with the Woodland Carbon Code, contributing significantly to offsetting residual emissions. Applicants may wish to refer to the Institute of Environmental Management and Assessment Greenhouse Gas Management Hierarchy guidance when drafting their Greenhouse Gas Reduction Strategy.</p>	<p>Mitigation measures are set out in sections 14.9 and 14.22 of Chapter 14 Climate of the ES (application document TR010063 APP 6.12APP 062AS 020). These are applied through the carbon reduction hierarchy set out in DMRB LA114: Avoid / Prevent, Reduce, Remediate.</p> <p>A Greenhouse Gas Reduction Strategy has not been produced, as there is no requirement to produce such a document under the current version of NNNPS.</p>
5.36	<p>The Secretary of State should be content that the applicant has taken all reasonable steps to reduce the total greenhouse gas emissions from a whole life carbon perspective. The Secretary of State should also give positive weight to projects that embed nature-based or technological processes to mitigate or offset the emissions of construction and within the proposed development. However, given the important role national network infrastructure plays in supporting the process of economy wide</p>	<p>Regarding greenhouse gas emissions, Chapter 14 Climate of the ES (document reference TR010063 APP 6.12APP 062APP 073APP 073APP 073) concludes that emissions arising from the construction phase and opening year of the Scheme together contribute 0.005% to the fourth carbon budget, which would not have a significant effect on climate.</p> <p>In terms of within the proposed development, the assessment also notes that transport was the largest emitting section of UK</p>

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	<p>decarbonisation, the Secretary of State accepts that there are likely to be some residual emissions from construction of national network infrastructure.</p>	<p>GHG emissions in 2020, contributing 24% of emissions. However, operational impacts associated with emissions are likely to be offset by the predicted future fleet wide shift toward electric and hybrid vehicles.</p> <p>Chapter 14 Climate of the ES (document reference TR010063 APP 6.12APP 062APP 073APP 073APP 073) also covers operational emissions impacts cumulatively over the period 2027-2087.</p>
<p>5.41 – 5.42</p>	<p>The applicant should consider the full range of potential impacts on ecosystems (including habitats and protected species) and provide environmental information proportionate to the likely impacts of the infrastructure on biodiversity and nature.</p> <p>The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests as well as consider how their proposal will deliver Biodiversity net gain in line with the requirements in a Biodiversity Gain Statement.</p>	<p>The ES Chapter 7 Biodiversity (application document TR010063 APP 6.5APP 066APP 066) considers the effects on biodiversity in detail.</p> <p>19.20 ha of species rich road verge will be created within the Order Limits, which will more than compensate for the loss of approximately 0.1 ha of lowland meadow priority habitat along the A4019. Furthermore, taking into account the embedded and essential mitigation measures proposed, significant residual effects in relation to biodiversity resources are not anticipated as a result of the Scheme.</p> <p>In terms of reconnecting habitats and ecosystems, as part of the Biodiversity Net Gain initiative the Scheme will provide new planting which will strengthen the linear vegetation features within the Scheme and improve connectivity to the wider landscape. Wildlife crossing points will also be provided which will ensure continued habitat connectivity for badgers and prevent badger access onto the carriageway. Ecologically sensitive design of structures such as culverts will also be incorporated into the Scheme, to maintain connectivity, continuity of flow, and natural substrate establishment.</p> <p>As part of the Scheme's objectives, the Scheme is targeting a net gain in biodiversity.</p> <p>An agreement of on a package of measures to minimise, mitigate and compensate for the Scheme's biodiversity impacts wherever</p>

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		possible has also taken place following consultation with Natural England.
5.43—545	<p>To avoid harm or disturbance in line with the mitigation hierarchy the applicant should demonstrate that:</p> <p>developments are designed to avoid the risk of harm and to minimise the footprint of the development and/or to retain the site's important habitat features</p> <p>developments are designed and landscaped to provide green corridors and minimise habitat fragmentation (for example using underpasses or green bridges to link habitats)</p> <p>during construction, they will seek to ensure that activities will be confined to the minimum areas required for the works</p> <p>during construction and operation, best practice will be followed to ensure that risk of disturbance or damage to species or habitats follows the mitigation hierarchy (including as a consequence of transport access arrangements). For example, plan for construction work to be carried out at specific times to avoid sensitive times and location, such as the breeding season for wild birds and lifecycles of migratory fish.</p> <p>If avoidance or reduction of harm is not possible, applicants should include appropriate mitigation measures, in line with the mitigation hierarchy, as an integral part of their proposed development, including identifying where and how these will be secured in the long term.</p> <p>If avoidance or bespoke mitigation measures are insufficient or not possible, as a last resort, appropriate compensation measures should be sought and implemented. For example, moving protected species out of the development site and where</p>	<p>The ES Chapter 7 Biodiversity (application document TR010063 APP 6.5APP 066APP 066) considers all ecological features; identifies those that are of principal importance and assesses the residual effects appropriately. Alongside the identified embedded and enhanced mitigation measures, the chapter states that the Scheme includes habitat enhancement and new hedgerow planting. The Scheme will also provide bird nesting boxes on mature trees.</p> <p>The Scheme design has sought to minimise risks and impacts as far as is possible given the constraints of the Scheme. Where impacts could not be avoided appropriate mitigation measures have been proposed in line with the mitigation hierarchy. This is seen through some mitigation, compensation and enhancement measures being embedded at the design stage to minimise or compensate for impacts on biodiversity, or to provide enhancements, as secured in the EMP (application document reference TR010063 APP 7.3AS 025).</p> <p>The REAC (application document TR010063 APP 7.4AS 027) details the environmental mitigation measures that would be implemented both during construction and operation, why they are required, who is responsible for delivering them and detailing any ongoing maintenance arrangements.</p>

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	practicable, restore habitats after construction works have finished.	
5.46	The applicant should not just look to mitigate direct harms but should show how the project has taken advantage of opportunities to conserve and enhance biodiversity, having regard to any relevant Local Nature Recovery Strategy. Opportunities will be taken to enhance or expand existing habitats and create new habitats in accordance with biodiversity net gain requirements. Habitat creation, enhancement and management proposals should include measures for climate resilience, including appropriate species selection. Maintaining habitat connectivity is important for climate resilience and the biodiversity of ecological networks.	The ES Chapter 7 Biodiversity (application document TR010063 APP 6.5APP 066APP 066) states that the Scheme will result in the creation of replacement habitat, which includes a net increase in broadleaved woodland, hedgerow planting and the creation of species rich grasslands, shrubs and scrub. These new habitats are likely to support an abundance of invertebrate prey providing a foraging habitat for bats. These new replacement habitats contribute towards the overall Scheme BNG, as set out in the BNG assessment, which is included as an appendix to Chapter 7 Biodiversity of the ES (application document reference: TR010063 APP 6.5APP 066).
5.54	As a general principle, and subject to the specific policies below, development should, at first avoid significant harm to biodiversity and geological conservation interests, including through consideration of reasonable alternatives. If avoidance is not possible, mitigation needs to be considered (as set out in paragraphs 5.43 to 5.49 above). Where significant harm cannot be avoided or mitigated it should be compensated for as a last resort, with on-site mitigation being considered prior to off-site. The Secretary of State will give significant weight to any residual harm.	The ES Chapter 7 Biodiversity (application document TR010063 APP 6.5APP 066APP 066) outlines the effects on sites, habitats and species. The chapter states that mitigation, compensation and enhancement measures have been embedded at the design stage to minimise or compensate for impacts on biodiversity, or to provide enhancements. Existing vegetation has been retained as far as possible. Embankments have also been designed to retain habitats as far as possible. Full details of avoidance measures within the Scheme design are set out in ES Chapter 7 Biodiversity (application document TR010063 APP 6.5APP 066APP 066). This demonstrates that with the avoidance, mitigation and compensation measures in place, no long term residual impacts of significance are predicted for any notable species. Significant residual effects in relation to biodiversity resources are not anticipated as a result of the Scheme.
5.66	The applicant should demonstrate that they will adhere to the waste hierarchy, minimising the volume of waste produced and	Chapter 12 Materials and Waste of the ES (application document TR010063 APP 6.10APP 071) states that during construction,

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	<p>maximising reuse and recycling for waste that cannot be avoided. Where possible, applicants are encouraged to use low carbon materials, sustainable sources, and local suppliers. Consideration should be given to circular economy principles wherever practicable, for example by using longer lasting materials efficiently, optimising the use of secondary materials and how the development will be maintained and decommissioned. Applicants should consider and take into account emerging government policy, including the Waste Prevention Programme for England and Defra's Construction Code of Practice for the Sustainable Use of Soils on Construction Sites, which provides practical guidance on how to improve appropriate soil reuse on construction sites and reducing the volume that is sent to landfill.</p>	<p>the effect of material asset use and waste generation is estimated to be slight adverse. During operation there will be negligible material asset use or waste generation.</p> <p>Mitigation that follows the waste hierarchy is expected to be applied during detailed design and construction which will lead to material asset use and waste generation prevention, reduction, reuse, recycling, and recovery. In particular during construction this includes reuse of waste, use of aggregates with minimum 22% recycled content and recovery of 95% of wastes that are managed offsite.</p> <p>Regarding soils, surplus soils from the footprint of the Scheme are expected to be sustainably re-used, which should add benefits with regards to materials and waste for the Scheme.</p>
5.69	<p>Large infrastructure projects may generate hazardous and non-hazardous waste during construction and operation. The Environmental Permitting regime, regulated by the Environment Agency in England, incorporates operational waste management requirements for certain activities. Applicants should therefore give consideration to the Environmental Permitting regime and whether this applies to their development.</p>	<p>Any necessary waste management permits will be obtained as set out in the Environmental Management Plan (application document TR010063 APP 7.3AS-025) and the Consents and Agreements Position Statement (application document TR010063 APP 3.3APP-033).</p>
5.74	<p>The Secretary of State should consider the extent to which the applicant has proposed an effective process that will be followed to ensure safe and effective management of waste arising from the construction and operation of the proposed development. It is advised that this is detailed in the dedicated plans summarising the sustainable use of resources and waste for both construction and operation as part of the application documentation. The Secretary of State should be satisfied that the process sets out:</p> <ul style="list-style-type: none"> how waste will be managed, both on-site and off-site that consideration has been given to available waste management infrastructure capacity to manage wastes arising from the development 	<p>Measures for managing waste and materials are proposed, alongside details of their implementation, measuring and monitoring, within Chapter 12 Materials and Waste of the ES (application document TR010063 APP 6.10APP-071).</p> <p>The REAC (application document TR010063 APP 7.4AS-027) contains the waste mitigation measures that would be implemented, why they are required, who is responsible for delivering them, and any ongoing maintenance arrangements.</p>

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	adequate steps have been taken to minimise the volume of waste arising and maximise opportunities for reuse and recycling	
5.114—5.116	<p>The applicant should assess the potential for emissions of odour, dust, steam, smoke and artificial light to have a detrimental impact on amenity.</p> <p>In particular, the assessment provided by the applicant should describe:</p> <ul style="list-style-type: none"> the type and quantity of emissions aspects of the development which may give rise to emissions during construction, operation and decommissioning premises, locations or species that may be affected by the emission effects of the emission on identified premises or locations measures to be employed in preventing or mitigating the emissions <p>The applicant is advised to consult the relevant local environmental health team and, where appropriate, the Environment Agency about the scope and methodology of the assessment.</p>	<p>The Statement of Statutory Nuisances (application document TR010063 APP 6.16) considers nuisance caused by dust, odour, artificial light, smoke and steam. The ES Chapter 5 Air Quality (application document TR010063 APP 6.3AS 012AS 012) considers effects relating to air quality.</p> <p>The construction activities that have the potential to create a nuisance will be controlled through strict compliance with the implementation of the environmental measures identified in the Environmental Management Plan (application document TR010063 APP 7.3AS 025).</p>
5.117	<p>The Secretary of State should ensure the applicant has provided sufficient information to show that any necessary mitigation will be put into place. In particular, the Secretary of State should consider whether to require the applicant to abide by a scheme of management and mitigation concerning emissions of odour, dust, steam, smoke, artificial light from the development to reduce any loss to amenity which might arise during the construction and operation of the development. This should be detailed within a Statement Relating to Statutory Nuisance.</p>	<p>The Statement of Statutory Nuisances (application document TR010063 APP 6.16) considers nuisance caused by dust, odour, artificial light, smoke and steam. The document sets out measures for:</p> <ul style="list-style-type: none"> Mitigating the generation of dust on construction sites Measures to control dust during construction Lighting arrangements for night <u>night</u> time working to mitigate the effects of lighting Measures to reduce noise effects during construction

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		These measures are also outlined within the REAC (application document TR010063 APP 7.4AS_027).
5.121	The National Planning Policy Framework (paragraphs 159 to 169) makes clear that inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk. But where development is necessary, it should be made safe without increasing flood risk elsewhere. The guidance at Annex 3 to the National Planning Policy Framework explains that essential transport infrastructure (including mass evacuation routes), which has to cross the area at risk, is permissible in areas of high flood risk, subject to the requirements of the Exception Test. The Exception Test assesses the safety of a site, including whether the proposed development will be safe from flooding for its lifetime, including the impact of climate change.	The Flood Risk Assessment (application document TR010063 APP 6.15APP_070) describes how the Scheme is considered to be essential infrastructure. The FRA demonstrates that the Exception Test has been passed, making clear that although there will be a minor increase in flood levels and the probability and duration of flooding in very small areas of the Scheme, that the impacts are acceptable and there will be no material change in flood risk. Even though some of the impacts are significant in EIA terms, due to the application of DMRB methodology, there is no material increase in flood risk and therefore the Scheme passes the Exception Test.
5.122	Applications for projects in the following flood zone locations should be accompanied by a Flood Risk Assessment: Applications in flood Zones 2 and 3, which represent a medium and high probability of river and sea flooding Applications in flood Zone 1 which represent a low probability of river and sea flooding. This includes projects of 1 hectare or greater, projects which may be subject to other sources of flooding (local watercourses, surface water, groundwater or reservoirs), or where the Environment Agency has notified the local planning authority that there are critical drainage problems Applications where there is less than 1 ha in flood zone 1, including a change of use in development type to a more vulnerable class (for example from commercial to residential), where they could be affected by sources of flooding other than rivers and the sea (for example surface water drains, reservoirs)	The Scheme crosses the floodplains of the River Chelt and Leigh Brook. The FRA (application document TR010063 APP 6.15APP_070) reports that the Scheme will not affect floodplain storage. The Flood Risk Assessment (application document TR010063 APP 6.15APP_070) presents a final detailed assessment of flood risk to the Scheme.
5.123 – 5.124	The Flood Risk Assessment should identify and assess the risks of all forms of flooding and coastal erosion to and from the project	The Flood Risk Assessment (application document TR010063 APP 6.15APP_070) presents a final detailed assessment of flood

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	<p>and demonstrate how these flood risks will be managed, taking climate change into account.</p> <p>In preparing a Flood Risk Assessment the applicant should:</p> <ul style="list-style-type: none"> ● consider the risk of all forms of flooding arising from the project (including in adjacent parts of the United Kingdom), in addition to the risk of flooding to the project, and demonstrate how these risks will be managed and, where relevant, mitigated, so that the development remains safe throughout its lifetime ● take the impacts of climate change into account, clearly stating the development lifetime over which the assessment has been made ● demonstrate how residual risks to and from reservoirs will be safely managed and/ or mitigated ● consider the vulnerability of those using the infrastructure including arrangements for safe access and escape ● include the assessment of the remaining (known as 'residual') risk after risk reduction measures have been taken into account and demonstrate that this is acceptable for the particular project ● consider if there is a need to remain operational during a worst case flood event over the development's lifetime ● provide the rationale for the Secretary of State on the application of the Sequential Test and Exception Test, as appropriate 	<p>risk to the Scheme. The fluvial assessment demonstrates that the Scheme is appropriate in terms of flood risk, having passed Part B of the Exception Test, by demonstrating that flood risk is not increased elsewhere as a result of those measures.</p> <p>The Scheme's embedded mitigation (including compensatory floodplain and storage areas) ensures that any fluvial flood effects are acceptable in the context of receptor vulnerability and sensitivity.</p> <p>The assessment of surface water flood risk has shown that the Scheme is not at significant risk from this source of flooding. While there are parts that intersect areas at pluvial flood risk any flood risks associated with this can readily be mitigated through incorporating appropriate landform and drainage measures.</p> <p>The assessment also takes into account the impacts on climate change and resilience over the life time of the development. The Scheme will not be at significant risk of flooding, and the Scheme should not result in a material increase in flood risk to third parties.</p>
5.125	<p>Applicants for projects which may be affected by, or may add to, flood risk should seek sufficiently early pre-application discussions, before the official preapplication stage of the NSIP process with the Environment Agency, and, where relevant, other flood risk management bodies such as lead local flood authorities, Internal Drainage Boards, sewerage undertakers, and</p>	<p>Discussions with stakeholders, including the Environment Agency, has taken place regarding the FRA from the start of the project. This continues to take place through the development of the SoCGs.</p> <p>Consultation was undertaken with Gloucestershire County Council as the Lead Local Flood Authority (LLFA), specifically for</p>

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	highways authorities. Such discussions can be used to identify the likelihood and possible extent and nature of the flood risk, to help scope the Flood Risk Assessment, and identify the information that will be required by the Secretary of State to reach a decision on the application once it has been submitted and examined. If the Environment Agency has concerns about the proposal on flood risk grounds, the applicant should discuss these concerns with the Environment Agency and look to agree ways in which the proposal might be amended, or additional information provided, which would satisfy the Environment Agency's concerns, before the application for development consent is submitted.	the flood risk elements relating to the Leigh Brook (an Ordinary Watercourse) and the minor watercourses at the B4634. For matters relating to the River Chelt and Leigh Brook, the LLFA referred to the Environment Agency. For the minor watercourses, at the B4634, the LLFA challenged the findings and further modelling was undertaken. The resulting technical note and findings were subsequently accepted by the LLFA with no objections. The Baseline and Scheme models and their accompanying reports were also reviewed by external consultants on behalf of the EA. The EA deemed both models appropriate, such that the results from the models can be used to support the FRA and the ES.
5.127	Proposals should prioritise the use of sustainable drainage systems unless there is clear evidence that this would be inappropriate. A drainage strategy should also be produced and submitted as part of the Flood Risk Assessment.	The proposed junction upgrades for the Scheme present an increase in the impermeable footprint of the existing highway, which will generate greater amounts of surface water runoff compared to the current situation. The proposed highway drainage strategy (ES Appendix 2.1 and 2.2 (TR010063 APP 6.15)) outlines the applicant's proposed approach to drainage which will replicate the site's existing hydrology through SuDS principles.
5.128	Preference should be given to locating projects in areas of lowest flood risk. The Secretary of State should not consent development in flood risk areas (including flood zones 2 and 3 and locations at risk of flooding from local watercourses, surface water, groundwater or reservoirs) accounting for the predicted impacts of climate change unless they are satisfied that the sequential test requirements have been met. The Secretary of State should not consent development in Flood Zone 3 unless they are satisfied that the Sequential and Exception Test	The Flood Risk Assessment (application document TR010063 APP 6.15 APP 070) demonstrates that the Scheme is appropriate in terms of flood risk, having passed Part B of the Exception Test, by demonstrating that although there will be a minor increase in flood levels and the probability and duration of flooding in very small areas of the Scheme, that the impacts are acceptable and there will be no material change in flood risk. Even though some of the impacts are significant in EIA terms, due to the application of DMRB methodology, there is no material increase in flood risk and therefore the Scheme passes the Exception Test.

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	requirements have been met. All projects should apply the sequential approach to locating development within the site.	
5.129 — 5.131	<p>If, following application of the Sequential Test, it is not possible, consistent with wider sustainability objectives, for the project to be located in zones of lower probability of flooding than Flood Zone 3a, the Exception Test can be applied. Flood Zone 3a applies when land has a 1 in 100 or greater annual probability of river flooding. The Exception Test provides a method of managing flood risk while still allowing necessary development to occur.</p> <p>The Exception Test should only be applied once the Sequential Test has been satisfactorily applied.</p> <p>Both elements of the test will have to be passed for development to be consented. For the Exception Test to be passed: it must be demonstrated that the project provides wider sustainability benefits to the community that outweigh flood risk. a Flood Risk Assessment must demonstrate that the project will be safe for its lifetime, without increasing flood risk elsewhere and, where possible, will reduce flood risk overall.</p>	<p>The Scheme's adherence to the requirements of the Exception Test is detailed in the FRA (application document TR010063 APP 6.15/APP 070). The FRA concludes that although there will be a minor increase in flood levels and the probability and duration of flooding in very small areas of the Scheme, that the impacts are acceptable and there will be no material change in flood risk. Even though some of the impacts are significant in EIA terms, due to the application of DMRB methodology, there is no material increase in flood risk and therefore the Scheme passes the Exception Test.</p>
5.133 — 5.137	<p>To satisfactorily manage flood risk and the impact of the natural water cycle on people, property and ecosystems, good design and infrastructure may need to be secured using requirements or planning obligations. This may include the use of Sustainable Drainage Systems but could also include vegetation to help to slow runoff, hold back peak flows and make landscapes more able to absorb the impact of severe weather events.</p> <p>Site layout and surface water drainage systems should cope with events that exceed the design capacity of the system, so that excess water can be safely stored on or conveyed from the site without adverse impacts.</p>	<p>The proposed highway drainage strategy (ES Appendix 2.1 and 2.2 (TR010063 APP 6.15)) outlines the applicant's proposed approach to drainage which will replicate the site's existing hydrology through SuDS principles.</p> <p>The surface water drainage strategy will replicate the existing hydrology within the land occupied by the Scheme through SuDS principles. Offset gullies are proposed for the collection of rainwater runoff from the M5 mainline, which connects to carrier drains. For the Link Road, swales and filter drains serve as the collection systems. Attenuation basins are also provided.</p> <p>The FRA (application document TR010063 APP 6.15/APP 070) reports that the drainage system will be designed in line with</p>

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	<p>The surface water drainage arrangements for any project should be such that the volumes and peak flow rates of surface water leaving the site are no greater than the rates prior to the proposed project unless specific off-site arrangements are made and result in the same net effect.</p> <p>If there are no viable Sustainable Drainage Systems options available, it may be necessary to provide surface water storage and infiltration to limit and reduce both the peak rate of discharge from the site and the total volume discharged from the site. There may be circumstances where it is appropriate for infiltration attenuation storage to be provided outside the project site, if necessary, through the use of a planning obligation.</p> <p>The sequential approach should be applied to the layout and design of the project. Vulnerable uses should be located on parts of the site at lower probability and residual risk of flooding. Applicants should seek opportunities to use open space for multiple purposes such as amenity, wildlife habitat and flood storage uses. Opportunities can be taken to lower flood risk by improving flow routes, flood storage capacity and using Sustainable Drainage Systems.</p>	<p>current NH Standards (DMRB) to ensure that runoff from the new impermeable area does not exceed the greenfield rate up to the 1 in 100 (1%) annual probability event, taking into account climate change. The Scheme design has incorporated a drainage strategy that centres on the application of SuDS, appropriate to local conditions, to manage surface water runoff.</p>
5.144—5.145	<p>The design of linear infrastructure and the use of embankments in particular, may mean that linear infrastructure can reduce the risk of flooding for the surrounding area while also offering opportunities to enhance biodiversity. It should be demonstrated that there is no increase in flood risk elsewhere. In such cases the Secretary of State should take account of any positive benefits to placing linear infrastructure in a flood risk area.</p> <p>Where linear infrastructure has been proposed in a flood risk area, the Secretary of State should expect reasonable mitigation measures to have been made, to ensure that infrastructure remains functional in the event of predicted flooding.</p>	<p>The FRA (application document TR010063 APP 6.15 APP 070) sets out the Scheme's adherence to the requirements of the Exception Test as although there will be a minor increase in flood levels and the probability and duration of flooding in very small areas of the Scheme, the impacts are acceptable and there will be no material change in flood risk. Even though some of the impacts are significant in EIA terms, due to the application of DMRB methodology, there is no material increase in flood risk and therefore the Scheme passes the Exception Test.</p> <p>Embedded mitigation measures include the development of a flood management plan and a construction drainage strategy to address the temporary management of surface waters to ensure flood risk to the surrounding area is not increased.</p>

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		<p>Consultation with affected landowners is being undertaken to ensure that they are fully aware of the small increases in peak flood levels and find them acceptable.</p> <p>A right is also being sought through the DCO process to permit some increased depth of flood:</p> <ul style="list-style-type: none"> on farmland both upstream and downstream of the Link Road. on farmland between the B4634 and Withybridge Lane.
5.148—5.149	<p>Where necessary, land contamination and stability should be considered in respect of new development. Specifically, proposals should be appropriate for the location, including preventing unacceptable risks from land contamination or instability. If land stability could be an issue, applicants should seek appropriate technical and environmental expert advice from a competent person to assess the likely consequences of proposed developments on sites where subsidence, landslides and ground compression is known or suspected. Applicants should liaise with the Coal Authority, Environment Agency and Local Authority if necessary.</p> <p>For developments on previously developed land, applicants should ensure and demonstrate that they have considered the risk posed by land contamination, through engagement in pre-application discussions, and how it is proposed to address these. A preliminary assessment for land and groundwater contamination to determine the rendition and mitigation is needed under Land Contamination Risk Management. A preliminary assessment of land contamination and ground instability should be carried out at the earliest possible stage before a detailed application for development consent is prepared. Applicants should ensure that any necessary investigations are undertaken to ascertain that their sites are, and will, remain stable or can be made so as part of the development. The site needs to be assessed in the context of surrounding areas where subsidence,</p>	<p>The Ground Investigation Report (application document TR010063 APP 6.15 APP 070) sets out the land instability assessment associated with the Scheme. The report includes a technical framework for identifying and remediating contamination through the application of a risk management process. The report states that the overall contamination risk associated with the site is considered to be low for human health receptors.</p> <p>ES Chapter 10 Geology and Soils (TR010063 APP 6.8 APP 069) sets out the baseline in terms of the ground conditions, soil and geology characteristics for the Scheme. The baseline conditions section states that it is unlikely that there is an unacceptable risk to human health from soils across the M5, A4019 and the Link Road areas. No visual indicators of contamination were recorded in any of the locations progressed during the investigation.</p>

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	landslides and land compression could threaten the development during its anticipated life or damage neighbouring land or property. This could be in the form of a land stability or slope stability risk assessment report.	
5.150	<p>Applicants have a range of mechanisms available to mitigate and minimise risks of land instability. These include:</p> <ul style="list-style-type: none"> Establishing the principle and layout of new development, for example avoiding mine entries and other hazards Ensuring proper design of structures to cope with any movement expected, and other hazards such as mine and/or ground gases Requiring ground improvement techniques, usually involving the removal of poor material and its replacement with suitable inert and stable material. For development on land previously affected by mining activity, this may mean prior extraction of any remaining mineral resource 	Section 8 of the Ground Investigation Report (application document TR010063 APP 6.15APP-070) sets out the Geotechnical Risk Register which includes various mitigation measures relating to land instability.
5.153—5.154	<p>The applicant should carry out a landscape and visual impact assessment. A number of guides have been produced to assist in addressing landscape issues. The landscape and visual assessment for the proposed project should include the impacts during construction and operation, and reference to any operational landscape character assessment and associated studies. The applicant's assessment should also take account of any relevant policies based on these assessments in local development documents in England. For seascapes, applicants should consult the Seascape Character Assessment and the Marine Plan Seascape Character Assessments, and any successors to them.</p> <p>The assessment should include the visibility and conspicuousness of the project during construction and of the</p>	Chapter 9 Landscape and Visual of the ES (application document TR010063 APP 6.7APP-068) sets out the potential landscape and visual impacts associated with the construction and operation of the Scheme. The proposed landscape mitigation measures seek to ensure an attractive visual appearance of the Scheme. The chapter also states that although significant adverse effects may be experienced during construction and initially upon completion, once the designed in mitigation has been established and matured, the Scheme would not have any long-term significant adverse effects on landscape character or visual amenity, and in some cases may provide beneficial effects.

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	presence and operation of the project, potential impacts on views (including protected views) and visual amenity. This should include any noise and light pollution effects, including on local amenity, tranquillity, and nature conservation. The assessment should also demonstrate how noise and light pollution from construction and operational activities on residential amenity and on sensitive locations, receptors, and views will be minimised.	
5.156—5.158	<p>The scale of a project should be minimised to avoid or mitigate the visual and landscape effects, during construction and operation, so far as is possible while maintaining the operational requirements of the scheme. In exceptional circumstances a reduction in operational requirements might be warranted, and the Secretary of State may decide that the benefits to reduce the landscape effects outweigh the marginal loss of scale or function. Projects need to be designed carefully, taking account of the potential impact on the landscape.</p> <p>Adverse landscape and visual effects may be minimised through appropriate siting of infrastructure, design (including choice of materials), and topographical interventions (for example, creation of bunds or lowering of ground level). Also, landscaping schemes (including screening options and design elements that soften the built form such as green or brown roofs, or living walls); depending on the size and type of the proposed project. Materials and designs for infrastructure should always be given careful consideration in terms of environmental standards.</p>	<p>The Scheme design and landscaping proposals will conserve and enhance the environment through embedded mitigation measures. ES Chapter 7 Biodiversity (document reference TR010063 APP 6.5APP-066APP-066) and Chapter 9 Landscape and Visual (document reference TR010063 APP 6.7APP-068) outline the specific mitigation measures and landscape design features which ensure the conservation and enhancement of the environment with reference to areas of landscape and biodiversity importance.</p> <p>Replanting to roadsides and other embedded mitigation measures will ensure the Scheme will sit comfortably within the landscape in the long term, and would potentially provide an enhancement of the environment to improve the experience for residents, pedestrians, cyclists, and vehicle users.</p>
5.160	Applicants should consider how landscapes can be enhanced using landscape management plans, as this will help to enhance environmental assets where they contribute to landscape and townscape quality, and can reinforce or enhance landscape features and character.	Chapter 9 Landscape and Visual of the ES (application document TR010063 APP 6.7 APP-068) describes the landscape mitigation and enhancement measures for the Scheme. Full details of mitigation measures can be found in the Environmental Master Plan (application document TR010063 APP 2.13) <u>Environmental Master Plan Part 1 and Part 2 (APP-027 and APP-028 respectively)</u> which includes details on screening and planting.

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5.177	<p>The general policies controlling development in the countryside apply with equal force in Green Belts but there is, in addition, a general presumption against inappropriate development within them. Such development should not be approved except in very special circumstances. Applicants should therefore determine whether their proposal, or any part of it, is within an established Green Belt and, if so, whether their proposal may be considered inappropriate development within the meaning of Green Belt policy. Metropolitan Open Land, and land designated as Local Green Space in a local or neighbourhood plan, are subject to the same policies of protection as Green Belt, and inappropriate development should not be approved except in very special circumstances</p>	<p>The Scheme is located partially within the Gloucester and Cheltenham Green Belt.</p> <p>The Scheme can be described as an engineering operation and the alteration of existing local transport infrastructure which can demonstrate a requirement for a Green Belt location, as set out in Paragraph 150 of the NPPF. As this infrastructure is existingexists, it demonstrates a requirement for its location within the Green Belt. Therefore, the Scheme is considered to not be inappropriate in the Green Belt, providing the Scheme preserves the Green Belt's openness and does not conflict with the purposes of the Green Belt, as set out in Paragraph 138 of the NPPF.</p> <p>Full details on the Green Belt assessment for the Scheme is found in Section 7.5 of this document.</p>
5.178	<p>The applicant should identify existing and proposed land uses near the project, any effects of replacing an existing development or use of the site with the proposed project or preventing a development or use on a neighbouring site from continuing. Applicants should also assess any effects of precluding a new development or use proposed in the development plan. The assessment should be proportionate.</p>	<p>ES Chapter 13 Population and Human Health (application document TR010063 APP 6.11APP-072AS-014) considers the existing and proposed land uses within the Scheme study area and assesses the effect of the Scheme on the identified receptors.</p>
5.180—5.181	<p>Applicants should take into account the economic and other benefits of the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification). Where significant development of agricultural land is demonstrated to be necessary, applicants should seek to use areas of poorer quality land in preference to that of a higher quality. Applicants should also identify any effects, and seek to minimise impacts, on soil health and protect and improve soils, taking into account any mitigation measures proposed. Soil is an important natural capital resource, providing many essential services such as storing carbon (also known as a carbon sink),</p>	<p>Chapter 10 Geology and Soils of the ES (application document TR010063 APP 6.8APP-069APP-069) assesses the impact of the Scheme on agricultural land, including the impact on farms and land-based enterprises with particular emphasis on agricultural quality of soils and the best and most versatile (BMV) land.</p> <p>The Scheme has been designed so as to minimise the permanent loss of BMV. Impacts to on-BMV agricultural land have been assessed and mitigation measures have been identified to minimise impacts on soil quality.</p>

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	<p>reducing the risk of flooding, providing wildlife habitats and delivering global food supplies. Guidance on sustainable soil management can be found in Defra's Construction Code of Practice for the Sustainable Use of Soils on Construction Sites. As a first principle, developments should be on previously developed (brownfield) sites provided that it is not of high environmental value (see paragraphs 5.146 to 5.151). The Agricultural Land Classification is the only approved system for grading agricultural quality in England and Wales. If necessary, field surveys should be used to establish the Agricultural Land Classification grades in accordance with the current grading criteria, or any successor to it and identify the soil types to inform soil management at the construction, operation and decommissioning phases in line with the Defra Construction Code. Applicants are encouraged to develop and implement a Soil Resources and Management Plan which could help to use and manage soils sustainably and minimise adverse impacts on soil health and potential land contamination. This is to be in line with the ambition set out in the 25 Year Environment Plan to manage all of England's soils sustainably by 2030.</p>	<p>The chapter states that although agricultural land is anticipated to have permanent restrictions due to being located within a flood storage area, the land will be returned to its original use upon operation of the Scheme.</p> <p>Chapter 13 Population and Human Health of the ES (application document TR010063 APP 6.11 APP 072AS 014) includes an assessment on agricultural land holdings. This includes the grading of agricultural quality as part of the baseline conditions.</p>
5.182	<p>The applicant should engage in pre-application discussions with the local planning authority and other regulatory bodies at the earliest opportunity. It is essential that engagement is meaningful and supported where necessary by Statements of Common Ground. Discussions will cover a range of potential local impacts and issues, and the local planning authority should identify any concerns it has about the impacts of the application on land use, having regard to the development plan and relevant applications. This includes, where relevant, whether it agrees with any independent assessment that the land is surplus to requirements. These are also matters that local authorities may wish to include in their Local Impact Report which is submitted during</p>	<p>The project team have liaised with the three host authorities and other regulatory bodies from the earliest available opportunity. This has resulted in the development of the Statements of Common Ground (SoCG) with key stakeholders.</p> <p>It should also be noted that, separate to NH's role as a statutory consultee, NH also acted as a project technical reviewer, providing review comments on the suite of technical deliverables which form the DCO application.</p>

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	examination and after an application for development consent has been accepted.	
5.183	Applicants should safeguard any mineral resources on the proposed site as far as possible. Taking into account the policies of the Minerals Planning Authority, applicants should consider whether prior extraction of the minerals would be appropriate.	The Applicant has implemented the waste hierarchy to prevent, reduce, reuse, recycle and recover materials in the construction and operation of the Scheme. ES Chapter 12 – Materials and Waste (TR010063 APP 6.10 <u>APP-071</u>) outlines details of how suitable design and embedded mitigation measures have been incorporated with the Scheme.
5.184	Applicants can avoid, or minimise, the direct effects of a project on the existing use of the proposed site or proposed uses near the site, by the application of good design principles, including the layout of the project and the protection of soils during construction.	The full set of mitigation measures are set out within the Environmental Management Plan (EMP) (application document reference TR010063 APP 7.3 <u>AS-025</u>) which supports this DCO application and reflects the mitigation measures set out in the REAC (application document TR010063 APP 7.4 <u>AS-027</u>). These mitigation measures significantly reduce the adverse impacts of the Scheme and have been developed utilising best practice measures, liaison with relevant LPA representatives and through engagement with affected landowners.
5.185	Where green infrastructure is affected, applicants should aim to ensure the functionality and connectivity of the green infrastructure network is maintained and any necessary works are undertaken, where possible, to mitigate any adverse impact. Applicants should endeavour to improve networks and other areas of open space, including appropriate access to new coastal access routes, National Trails and other public rights of way.	Chapter 13 Population and Human Health of the ES (application document TR010063 APP 6.11 <u>APP-072AS-014</u>) provides details of the replacement and enhanced PRoW included in the Scheme, which will improve connectivity and amenity <u>amenities</u> for walkers, cyclists and equestrians. This PRoW network will be preserved and enhanced in order to retain access to green space and the green infrastructure network which is largely located outside of the study area.
5.187	Existing trees and woodlands should be retained where possible. The applicant should assess the impacts on, and loss of, all trees and woodlands within the project boundary and develop mitigation measures to minimise adverse impacts and any risk of net deforestation as a result of the scheme. Mitigation may include the use of buffers to enhance resilience, improvements to connectivity, and improved woodland management. Where	Chapter 9 Landscape and Visual (application document TR010063 APP 6.7 <u>APP-068</u>) details how the selection and refinement of the preferred Scheme option has reduced potential impacts on <u>the</u> loss of trees, hedgerows and woodland. The Scheme will provide <u>the</u> replacement of woodland and scrub along the M5 and around the new junction to reinstate <u>the</u>

	Relevant requirement of the draft revised NPS NNNPS NNNN NPS	Scheme compliance with the draft revised NPS NNNPS NNNN NPS
	woodland loss is unavoidable, compensation schemes will be required, and the long term management and maintenance of newly planted trees should be secured.	screening effect and integrate back into the landscape. Individual trees to central reserves and verges to integrate the realigned A4019 route will also be provided. Hedgerow will also be provided along the Link Road with supplementary blocks of wood and individual trees to reflect the local character of road infrastructure and provide some screening for visual receptors.
5.190 – 5.191	Public rights of way, National Trails, and other rights of access to land (for example, open access land) are important recreational facilities for walkers, wheelers, cyclists and equestrians. Applicants are expected to take appropriate mitigation measures to address adverse effects on coastal access, National Trails, other public rights of way and open access land, and to consider what opportunities there may be to improve access and connectivity. In considering revisions to an existing right of way, consideration needs to be given to the use, character, attractiveness and convenience of the right of way. The Secretary of State should consider whether the mitigation measures put forward by an applicant are acceptable and whether requirements in respect of these measures might be attached to any grant of development consent. Public rights of way can be extinguished under section 136 of the Planning Act if the Secretary of State is satisfied that an alternative has been or will be provided or is not required.	Chapter 13 Population and Human Health of the ES (application document TR010063-APP-6.11APP-072AS-014) provides details of the replacement and enhanced PRow included in the Scheme, which will improve connectivity and amenity amenities for walkers, cyclists and equestrians. The Human Health element of the assessment allows for consideration of effects on the amenity of users of WCH, which includes the character and attractiveness of the asset.
5.195	Inappropriate development is, by definition, harmful to the Green Belt and should not be approved except in very special circumstances. When considering any Development Consent Order, the Examining Authority and Secretary of State should ensure that substantial weight is given to any harm to the Green Belt. 'Very special circumstances' will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm resulting from the proposal, is clearly	The Scheme is located partially within the Gloucester and Cheltenham Green Belt. The Scheme can be described as an engineering operation and the alteration of existing local transport infrastructure which can demonstrate a requirement for a Green Belt location, as set out in Paragraph 150 of the NPPF. As this infrastructure is existingexists, it demonstrates a requirement for its location within the Green Belt. Therefore, the Scheme is considered to not

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	<p>outweighed by other considerations. When located in the Green Belt, elements of many national networks infrastructure projects will comprise inappropriate development. In such cases, scheme promoters will need to demonstrate very special circumstances if projects are to proceed. Such very special circumstances may include the safety benefits associated with improvements to the relevant section of the national network.</p>	<p>be inappropriate in the Green Belt, providing the Scheme preserves the Green Belt's openness and does not conflict with the purposes of the Green Belt, as set out in Paragraph 138 of the NPPF.</p> <p>Section 7.6 of this document also provides an alternative case for very special circumstances, in the event that the SoS disagrees that the Scheme amounts to appropriate development within the Green Belt. These include the economic benefits of the Scheme, the provision of infrastructure and the bringing forward of key housing and employment sites.</p>
5.202	<p>The applicant should undertake an assessment of any significant heritage impacts of the proposed project and should describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the asset's importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum, the relevant Historic Environment Record should have been consulted and the heritage assets assessed using appropriate expertise. Where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, the applicant should include an appropriate desk-based assessment and, where necessary, a field evaluation.</p>	<p>Chapter 11 Cultural Heritage of the ES (application document TR010063 APP 6.15APP-070) describes the heritage impacts through an assessment of effects and with information on topographical, geological and archaeological conditions</p> <p>Consultation with the Gloucestershire County archaeological advisor has been ongoing, including the review of design options, written schemes of investigation and the results of geophysical survey and trial trenching. Consultation is also underway with Historic England regarding the potential impacts on designated heritage assets, with particular emphasis on the contributions of setting to the significance of the Scheduled Monuments and Listed Buildings within the study area.</p>
5.203	<p>The discovery of heritage assets has potential to have a significant delay on scheme development, and applicants should ensure that protection of the historic environment is considered early in the development process.</p>	<p>Chapter 11 Cultural Heritage of the ES (application document TR010063 APP 6.15APP-070) sets out all known cultural heritage assets which have been considered as per DMRB guidance.</p> <p>The assessment of the historic environment for the Scheme has been informed by desk-based research as well as non-intrusive geophysical survey and intrusive archaeological evaluation trenching. A geophysical</p>

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		survey of the land proposed for the link road was also conducted.
5.208	<p>In determining applications, the Secretary of State should seek to identify and assess the particular significance of any heritage asset that may be affected by the proposed development (including by development affecting the setting of a heritage asset). The Secretary of State should take account of the available evidence and any necessary expertise from:</p> <ul style="list-style-type: none"> relevant information provided with the application and, where applicable, relevant information submitted during examination of the application any designation records the relevant Historic Environment Record(s), and similar sources of information representations made by interested parties during the examination expert advice, where appropriate, and when the need to understand the significance of the heritage asset demands it 	<p>Chapter 11 Cultural Heritage of the ES (application document TR010063 APP 6.15APP 070) sets out the potential significant effects of the Scheme in relation to Cultural Heritage. The conclusion states that although significant adverse effects are anticipated due to impacts to known and as yet yet unknown archaeological remains, a robust programme of archaeological investigation and recording following an Archaeological Management Plan (AMP) prepared in consultation with the local planning authority's archaeological advisor would mitigate these impacts to a slight adverse effect, which is not significant. The Scheme is therefore compliant in this regard.</p>
5.209	<p>In considering the impact of a proposed development on any heritage assets, the Secretary of State should take into account the particular nature of the significance of the heritage asset, and the value that they hold for this and future generations. This understanding should be used to avoid or minimise conflict between their conservation and any aspect of the proposal.</p>	<p>Chapter 11 Cultural Heritage of the ES (application document TR010063 APP 6.15APP 070) sets out the potential significant effects of the Scheme in relation to Cultural Heritage.</p>
5.210	<p>The Secretary of State should take into account the desirability of sustaining and, where appropriate, enhancing the significance of heritage assets, the contribution of their settings and the positive contribution that their conservation can make to sustainable communities – including their economic vitality. The Secretary of State should also take into account the desirability of new</p>	<p>Chapter 11 Cultural Heritage of the ES (application document TR010063 APP 6.15APP 070) sets out where there are opportunities to enhance the historic environment through the application of National Highways' Designated Funds to help protect the settings of designated heritage assets within the study area.</p>

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	development making a positive contribution to the character and local distinctiveness of the historic environment. The consideration of design should include scale, height, massing, alignment, materials, use and landscaping (for example, screen planting).	
5.211	When considering the impact of a proposed development on the significance of a designated heritage asset, the Secretary of State should give great weight to the asset's conservation. The more important the asset, the greater the weight should be. Once lost, heritage assets cannot be replaced, and their loss has a cultural, environmental, economic and social impact. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. Given that heritage assets are irreplaceable, harm or loss affecting any designated heritage asset should require clear and convincing justification. Substantial harm to or loss of a grade II Listed Building, or a grade II Registered Park or Garden should be exceptional. Substantial harm to, or loss of, designated assets of the highest significance, including World Heritage Sites, Scheduled Monuments, grade I and II* Listed Buildings, Registered Battlefields, and grade I and II* Registered Parks and Gardens should be wholly exceptional.	Chapter 11 Cultural Heritage of the ES (application document TR010063 APP 6.15 APP 070) states that consideration of the level of harm to a heritage asset as a result of the Scheme is a primary concern for the decision taker with regards to planning consent. As no significant effects are expected once all embedded and additional mitigation measures are in place, the Scheme is considered to have less than substantial harm on <u>to</u> the historic environment.
5.212	Any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of development, recognising that the greater the harm to the significance of the heritage asset, the greater the justification that will be needed for any loss.	Chapter 11 Cultural Heritage of the ES (application document TR010063 APP 6.15 APP 070) sets out the assessment of designated heritage assets. The chapter states that consideration of the level of harm to a heritage asset as a result of the Scheme is a primary concern for the decision taker with regards to planning consent. The determination of what constitutes substantial harm is not straightforward, and no specific test exists for it. In terms of EIA regulations, it is presumed that only significant effects would rise to the level of substantial harm. As no significant effects are expected once all embedded and additional mitigation measures are in place, the Scheme is

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		considered to have less than substantial harm on the historic environment.
5.213—5.214	<p>Where the proposed development will lead to substantial harm to, or total loss of, significance of a designated heritage asset, the Secretary of State should refuse consent unless it can be demonstrated that it is necessary to deliver substantial public benefits that outweigh that loss or harm. Alternatively, that all of the following apply:</p> <ul style="list-style-type: none"> the nature of the heritage asset prevents all reasonable uses of the site no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation conservation by grant funding or some form of charitable or public ownership is demonstrably not possible the harm or loss is outweighed by the benefit of bringing the site back into use <p>Where the proposed development will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal, including securing its optimum viable use.</p>	Chapter 11 Cultural Heritage of the ES (application document TR010063 APP 6.15 APP 070) concludes that the Scheme is considered to have less than substantial harm on <u>to</u> the historic environment.
5.222	<p>Where noise impacts are likely to arise from the proposed development, the applicant should include the following in its noise assessment:</p> <ul style="list-style-type: none"> a description of the noise sources including likely usage in terms of number of movements, fleet mix and diurnal pattern. For any associated fixed structures, such as ventilation fans for tunnels, information about the noise sources including the identification of any distinctive 	<p>Chapter 6 Noise and Vibration of the ES (application document TR010063 APP 6.11 APP 072 AS 014) provides an assessment of noise impacts during the construction and operation of the Scheme.</p> <p>The chapter sets out the noise sources within the noise survey. The noise sensitive premises, noise sensitive areas and the characteristics of the existing noise environment are set out in the baseline conditions.</p>

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	<p>tonal, impulsive or low frequency characteristics of the noise</p> <p>identification of noise sensitive premises and noise sensitive areas that may be affected</p> <p>the characteristics of the existing noise environment</p> <p>a prediction on how the noise environment will change with the proposed development:</p> <p>in the shorter term such as during the construction period</p> <p>in the longer term during the operating life of the infrastructure</p> <p>at particular times of the day, evening and night (and weekends) as appropriate</p> <p>an assessment of the effect of predicted changes in the noise environment on any noise sensitive premises and noise sensitive areas, including identifying whether any particular groups are more likely to be affected</p> <p>measures to be employed in mitigating the effects of noise applicants should consider using best available techniques to reduce noise impacts</p>	<p>The prediction of how the noise environment would change and the assessment of effects from <u>of this change</u> is provided in the assessment of <u>the effects of the Scheme</u>.</p> <p>Mitigation measures are described in Section 6.8 of the ES chapter.</p>
5.223	<p>The potential noise impact elsewhere that is directly associated with the development, such as changes in road and rail traffic movements elsewhere on the national networks, should be considered as appropriate.</p>	<p>Chapter 6 Noise and Vibration of the ES (application document TR010063 APP 6.11APP 072AS 014) includes an assessment of road traffic noise as a result of the Scheme. This has been predicted using the traffic data provided as part of the assessment.</p>
5.224	<p>Operational noise, with respect to human receptors, should be assessed using the principles of the relevant British Standards and other guidance. The prediction of road traffic noise should be based on the method described in the Calculation of Road Traffic Noise and Common Noise Assessment Methods (CNOSSOS). The prediction of noise from new railways should be based on the method described in Calculation of Railway Noise and</p>	<p>Chapter 6 Noise and Vibration of the ES (application document TR010063 APP 6.11APP 072AS 014) states that the Calculation of Road Traffic Noise, 1988 (CRTN) is used to predict the noise from existing and potential future roads. CRTN is also the preferred noise calculation method</p> <p>The calculation of construction noise levels follows the methodology in BS 5228 Part 1. The predicted noise levels from</p>

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	Common Noise Assessment Methods (CNOSSOS). For the prediction, assessment and management of construction noise, reference should be made to any relevant British Standards and other guidance which also give examples of mitigation strategies.	construction noise sources have been compared against the assessment criteria shown in the DMRB LA 111.
5.225	The applicant should consult Natural England with regard to assessment of noise on designated nature conservation sites, protected landscapes, protected species or other wildlife. The results of any noise surveys and predictions may inform the ecological assessment. The seasonality of potentially affected species in nearby sites may also need to be taken into account.	The project team have consulted Natural England as detailed in ES Chapter 7 Biodiversity (application document TR010063 APP 6.5APP 066APP 066). The assessment includes consideration of disturbance to protected species as a result of changes in noise levels. Full details of the consultation undertaken for the noise assessment are provided in the Consultation Report (TR010063 APP 5.1 and TR010063 APP 5.2).
5.227	Mitigation measures for the project should be proportionate and reasonable and may include one or more of the following: engineering: containment of noise generated materials: use of materials that reduce noise, (for example, low noise road surfacing) lay out: adequate distance between source and noise-sensitive receptors incorporating good design: to minimise noise transmission through landscaping and screening by natural or purpose built barriers including topographical changes administration: specifying acceptable noise limits or times of use (for example, in the case of railway station public address systems)	Chapter 6 Noise and Vibration of the ES (application document TR010063 APP 6.11APP 072AS 014) sets out the approach to mitigation relating to noise and vibration. The approach aligns with the aims of the Noise Policy Statement for England (NPSE). Key measures include the use of a low noise construction plant and undertaking one high noise generating activity during construction, and the use of permanent noise barriers during operation. Full details of mitigation measures can be found in this chapter of the ES. With regards to administration, there are no noise limits set by National Highways for the operation of the Scheme.
5.229	Applicants should consider opportunities to address the noise issues associated with the Important Areas as identified through the noise action planning process.	The operational assessment considered the changes in noise due to traffic and Scheme layout, in both the short term and long term. Mitigation measures were included in the assessment where possible, to reduce noise levels in the noise important area as well as the informal Travellers Site.

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5.230	Developments must be undertaken in accordance with statutory requirements for noise. Due regard must have been given to the relevant sections of the Noise Policy Statement for England, National Planning Policy Framework and the government's associated planning guidance on noise.	Chapter 6 Noise and Vibration of the ES (application document TR010063 APP 6.11APP-072AS-014) has been undertaken in accordance with the assessment criteria shown in the DMRB LA 111. By assessing against the criteria in DMRB LA 111, the Scheme can be measured against the policy requirements of the NPSE and the NPPF.
5.231	The project should demonstrate good design through optimisation of scheme layout to minimise noise emissions and, where possible, the use of landscaping, bunds or noise barriers to reduce noise transmission. The project should also consider the need for the mitigation of impacts elsewhere on the road and rail networks that have been identified as arising from the development, according to government policy.	Chapter 6 Noise and Vibration of the ES (application document TR010063 APP 6.11APP-072AS-014) states that the design of the M5 Junction 10 itself provides an embedded mitigation measure for operational road traffic noise. The slip roads on either side of the M5 maximise screening of noise from the road, such as for Sheldon Cottages. The alignment of the A4019 to the east of the M5 Junction 10 repositions the road further away from noise sensitive receptors located within three Noise Important Areas, which reduces road traffic noise contributions from this road within the Noise Important Area The Scheme includes low low noise road surfacing on all of the new and altered sections of the M5, which reduces noise generated from the interaction between the tyres of moving vehicles and the road. Permanent environmental noise barriers were included in the Scheme's design to reduce road traffic noise levels.
5.235—5.236	Where the project is likely to have socio-economic impacts at local or regional levels, the applicant should undertake and include in their application an assessment of these impacts. This assessment should consider all relevant socio-economic impacts, which may include: the creation of jobs and training opportunities. Applicants may wish to provide information on the sustainability of the jobs created, including where they will help to	The ES has reported relevant socio-economic impacts in relation to wider determinants of human health in ES Chapter 13 Population and Human Health (application document TR010063 APP 6.11APP-072AS-014). One of the five Scheme objectives is to “support economic growth and facilitate growth in jobs and housing by providing improved transport network connections in west and north-west Cheltenham.”

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	<p>develop the skills needed for the UK's transition to net zero</p> <p>the value of increased connectivity on productivity and access to jobs, services and housing</p> <p>the provision of additional local services and improvements to local infrastructure, including the provision of educational and visitor facilities. Applicants should engage with local businesses and the local community at the pre-construction phase to understand opportunities for businesses and the community throughout construction, such as employment or educational programmes</p> <p>any indirect beneficial impacts for the region hosting the infrastructure, particularly in relation to use of local support services and supply chains</p> <p>effects on tourism</p> <p>cumulative effects – if development consent were to be granted to for a number of projects within a region and these were developed in a similar timeframe, there could be some short term negative effects, for example a potential shortage of construction workers to meet the needs of other industries and major projects within the region</p>	<p>Upgrading M5 Junction 10 to an all-movements junction has been identified as a key infrastructure requirement to enable the housing and economic development proposed by the JCS and supported in the Gloucestershire Local Enterprise Partnership's (GFirst LEP) Strategic Economic Plan and the transport network sought by GCC in the adopted Gloucestershire Local Transport Plan. Improvements to M5 Junction 10 are critical to maintaining the safe and efficient operation of the junction; and enabling the planned development and economic growth.</p> <p>Section 3 of this Statement outlines the overall need for the Scheme and outlines the wider beneficial effects of the Scheme for the local community and wider economy.</p>
5.237	<p>Applicants should describe the existing socio-economic conditions in the areas surrounding the proposed development and should also refer to how the development's socio-economic impacts correlate with local planning policies.</p>	<p>ES Chapter 13 Population and Human Health (application document TR010063 APP 6.11 APP 072AS 014) sets out the baseline conditions in proximity to the Scheme. This includes some information relating to the socio-economic conditions in the areas surrounding the Scheme and the health profile of the locations in proximity to the Scheme.</p> <p>Appendix A of this Statement provides the range of local planning policies and sets out how the Scheme accords with these local planning policies.</p>

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5.239—5.240	<p>The Secretary of State should consider whether mitigation measures are necessary to mitigate any adverse socio-economic impacts of the development. For example, high quality design can improve the visual and environmental experience for visitors and the local community alike.</p> <p>This could include the potential for jobs to be created in the area as a result of a major scheme, the impact on local businesses and the supply chain, and potentially require the provision of additional local services. This is more relevant to Strategic Rail Freight Interchanges than road or rail schemes.</p>	<p>ES Chapter 13 Population and Human Health (application document TR010063 APP 6.11 <u>APP 072AS 014</u>) provides mitigation measures which cover the socio-economic impacts of the development, including impacts on local businesses particularly during the construction phase.</p>
5.245	<p>Applicants should make early contact with the relevant regulators, including the Environment Agency, for abstraction licensing or water quality activity or groundwater activity permits, and with water supply companies likely to supply the water. Where development is likely to have adverse effects on the water environment, the applicant should undertake an assessment of the existing status and impacts of the proposed project on water quality, water resources and physical characteristics of the water environment as part of the Environmental Statement or equivalent. The assessment should also include how this might change due to the impact of climate change on rainfall patterns and consequently water availability across the water environment.</p>	<p>Discussions have taken place during the development of the ES relating to licences and permits required for the construction and operation of the Scheme. The full list can be found in the Consents and Agreements Position Statement (application document TR010063 APP 3.3 <u>APP 033</u>).</p> <p>Effects of the Scheme relating to the water environment can be found in ES Chapter 8 Road Drainage and the Water Environment of the ES (application document TR010063 APP 6.13 <u>APP 074</u>).</p>
5.246	<p>For those projects that are improving the existing infrastructure, such as road widening, opportunities should be taken, where feasible, to improve the quality of existing discharges where these are identified and shown to contribute towards Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (“Water Framework Regulations”) commitments. A permit under the Environmental Permitting Regulations may also be required where improvements are being</p>	<p>ES Appendix 8.3 Surface Water Quality Assessment (application document TR010063 APP 6.15 <u>APP 070</u>) sets out the assessments used to determine the likely operational significant effects of the Scheme on surface water quality.</p> <p>The surface water quality assessment has been undertaken in accordance with the DRMB LA 113 and LA 104 (Environmental assessment and monitoring). The assessment is against the Highways England Water Risk Assessment Tool (HEWRAT).</p>

	Relevant requirement of the draft revised NPS NNNPS NNNN NPS	Scheme compliance with the draft revised NPS NNNPS NNNN NPS
	made to existing infrastructure, for example, the discharge of contaminated water from roads.	The ES Appendix 8.2 WFD Compliance Assessment (application document TR010063 APP 6.15APP_070) assesses the potential impacts against the Scheme design including embedded mitigation to determine if the Scheme is compliant with WFD objectives.
5.247	Under Environmental Permitting Regulations, applicants are required to manage surface water during construction by treating surface water runoff from exposed topsoil prior to discharging and to limit the discharge of suspended solids. For example, from car parks or other areas of hard standing, during operation. Consent may be required for working near to a river from the Environment Agency and a pollution incident response plan is recommended.	The Ground Investigation Report (application document TR010063 APP 6.15APP_070) sets out the land instability assessment associated with the Scheme. The report includes a technical framework for identifying and remediating contamination through the application of a risk management process. The report states that the overall contamination risk associated with the site is considered to be low for human health receptors. ES Chapter 8 Road Drainage and the Water Environment (application document TR010063 APP 6.6APP_067AS-016AS-016) states that subject to the implementation of all mitigation measures, the overall effect on surface water during construction has been assessed as Neutral which is not considered significant.
5.248	Applicants should consider protective measures to control the risk of pollution to groundwater beyond those outlined in Environmental Management Plans – this could include, for example, the use of protective barriers.	Chapter 8 Road Drainage and the Water Environment of the ES (application document TR010063 APP 6.11APP_072AS-014) includes details of mitigation measures for any potential adverse effects on the water environment, including those relating to pollution to groundwater. The REAC (application document TR010063 APP 7.4AS_027) also sets out mitigation measures to negate adverse effects on groundwater quality and contamination. Such mitigation measures include providing bunded areas where contaminated water may be generated, such as oil storage areas.

	Relevant requirement of the draft revised NPS NNNPS NNNN NPS	Scheme compliance with the draft revised NPS NNNPS NNNN NPS
5.249—5.250	<p>Any assessment for both the construction and operational phases of the development should describe:</p> <ul style="list-style-type: none"> the existing quality of waters affected by the proposed project, and how climate change will impact on this existing water resources affected by the proposed project, the impacts of the proposed project on water resources, and how climate change will impact on this existing physical characteristics of the water environment (including quantity and dynamics of flow) affected by the proposed project, and any impact of physical modifications to these characteristics any impacts of the proposed project on water bodies or protected areas under the Water Framework Regulations and source protection zones around potable groundwater abstractions; and how climate change will impact on this any cumulative effects <p>The assessment should also identify protected areas and other water usages within the vicinity of any discharge, such as bathing waters, abstractions and fisheries at risk from proposed works and the permits/consents required. It should also identify opportunities to improve water quality, for example, through nature-based approaches or solutions, and as part of environmental and biodiversity net gain.</p>	<p>Chapter 8 Road Drainage and the Water Environment of the ES (application document TR010063 APP 6.11 APP 072AS 014) sets out:</p> <ul style="list-style-type: none"> the baseline conditions of the water environment, including a desk-based assessment and primary information collected during 2019 and 2022 site visits the receptors that are potentially affected and their importance the potential impacts from the Scheme to surface water quality, hydromorphology, flood risk and groundwater the cumulative effects of the Scheme and the Scheme interacting with other RFFPs <p>The chapter also identifies potential improvements to water receptors, including at Leigh Brook as a result of cumulative impacts of the North West Cheltenham Development Area and safeguarded land to the north west of Cheltenham developments, in combination with the Scheme.</p> <p>Vegetation management will also take place, which will result in BNG condition class improvements.</p>
5.251	<p>The impact on local water resources can be minimised through planning and design for the efficient use of water, including water recycling. If an applicant needs new water infrastructure, significant supplies or impacts other water supplies, the applicant should consult with the local water company and the Environment Agency.</p>	<p>The Scheme design includes attenuation basins. The Environment Agency and LLFA have been consulted on issues including climate change adaptation, fluvial flood risk, ecological protection/enhancement and ground conditions.</p> <p>Full details of the consultation can be found in the Consultation Report (application document TR010063 APP 5.1) and Chapter 8 Road Drainage and the Water Environment of the ES (application document TR010063 APP 6.11 APP 072AS 014).</p>

	Relevant requirement of the draft revised NPS NNNPS NNNN NPS	Scheme compliance with the draft revised NPS NNNPS NNNN NPS
5.252—5.253	<p>The Secretary of State should consider whether the mitigation measures put forward by the applicant which are needed for operation and construction (and which are over and above any which may form part of the project application) are acceptable. A construction management plan may help codify mitigation.</p> <p>The project should adhere to any National Standards for Sustainable Drainage Systems. The Sustainable Drainage Systems Technical Standards introduced a hierarchical approach to drainage design that promotes the most sustainable approach but recognises feasibility and use of conventional drainage systems as part of a sustainable solution for any given site given its constraints.</p>	<p>The full set of mitigation measures are set out within the EMP (application document reference TR010063 APP 7.3AS-025). These also reflect the mitigation measures set out in the REAC (application document TR010063 APP 7.4AS-027).</p> <p>The EMP contains an appropriate level of detail for this preliminary design stage and has been prepared in accordance with the National Highways Design Manual for Roads and Bridges (DMRB) LA 120 Environmental management plans. In accordance with LA 104 Environmental assessment Assessment and monitoring Monitoring, the results of monitoring will be used to update the EMP during the construction and handover stages. As requested through consultation with the LLFA, the design of the Scheme drainage systems is in accordance with the CIRIA SuDS Manual C753.</p>
5.254	<p>The project should identify opportunities and secure measures to protect and improve water quality and resources through green and blue infrastructure, sustainable drainage and environmental and biodiversity net gain. This will help to achieve 25-Year Environment Plan objectives and potentially provide greater capacity to support infrastructure needs.</p>	<p>Chapter 8 Road Drainage and the Water Environment of the ES (application document TR010063 APP 6.11APP-072AS-014) includes consideration of water quality (both surface water and groundwater), the Water Framework Directive (WFD) and flood risk.</p> <p>ES Appendix 8.3 Surface Water Quality Assessment (application document TR010063 APP 6.15APP-070) sets out the Scheme mitigation which will contribute towards protecting and improving water quality. These include the attenuation basins, swales and vegetated ditches.</p>
5.262—5.265	<p>Applicants should consult the relevant highway authority, local planning authority, and Network Rail, as appropriate, on the assessment of transport impacts. This should include agreement on alignment to policies outlined in existing or emerging local plans and Local Transport Plans.</p> <p>Different transport networks may need to share space within an area, even whilst serving different travel needs. For example, bus</p>	<p>The three host authorities have been regularly consulted throughout the progression of the Scheme. This includes GCC as the local highway authority.</p> <p>The Scheme conformity to relevant local planning policy has been set out in Appendix A of this Statement.</p>

	Relevant requirement of the draft revised NPS <u>NNNPS</u> <u>NNNN NPS</u>	Scheme compliance with the draft revised NPS <u>NNNPS</u> <u>NNNN NPS</u>
	<p>lanes, shared-cycle lanes, green lanes, or bus and rail routes on the same corridor.</p> <p>Applicants should seek to offer an integrated transport outcome, significantly considering opportunities to support other sustainable transport modes, as well as improving local connectivity and accessibility in developing infrastructure. The needs of pedestrian and other vulnerable road users should be considered, where appropriate, in line with the principles of the road user hierarchy.</p> <p>The applicant should provide evidence that as part of the project they have addressed any new or existing severance issues and/or safety concerns that act as a barrier to non-motorised users, unless it is unsafe or unviable to do so.</p>	<p>Transport impacts, including on local roads, have been assessed in the TA (<u>AS-029</u> application document TR010063-APP 7.5<u>APP-020</u>).</p> <p>The Scheme provides integrated public transport infrastructure including bus stop, bus lane and bus gates within the Order Limits.</p> <p>The Scheme considers the needs of NMU throughout the design. This is evidenced through the provision of replacement and enhanced PRoW included in the Scheme, which will improve connectivity and amenity for walkers, cyclists and equestrians.</p> <p>Chapter 13 Population and Human Health of the ES (application document TR010063-APP 6.11<u>APP-072AS-014</u>) sets out the baseline and provides an assessment of severance to a number of receptor categories, including on the PRoW network.</p>
5.266	<p>For road and rail developments, the applicant's assessment should include an assessment of the transport impacts on other networks as part of the application, based on discussions with the Local Highway Authority/Local Planning Authority.</p>	<p>The TA (<u>AS-029</u> application document TR010063-APP 7.5<u>APP-020</u>) states that the impacts of the Scheme have been assessed using the Gloucestershire Countywide Traffic Model (GCTM). The GCTM is a SATURN strategic model which has been used to test the impact of the Scheme on the wider road network. This recognises that the Scheme has the potential to affect wider strategic movements on the highway network.</p>
5.272 – 5.274	<p>Mitigation measures for schemes should be proportionate and reasonable, focussed on facilitating journeys by active travel, public transport, and cleaner fuels.</p> <p>Where development would worsen accessibility, there is a strong expectation that such impacts should be mitigated. Where impacts cannot be mitigated, the applicant is required to provide reasoning as to why impacts cannot be mitigated.</p>	<p>Chapter 13 Population and Human Health of the ES (application document TR010063-APP 6.11<u>APP-072AS-014</u>) provides details of the impact of the Scheme on WCH – including changes to severance, accessibility, journey amenity and length. It sets out, where necessary, specific mitigation measures to address significant adverse effects on routes and access during the construction and operation of the Scheme. The Scheme also contains in-built enhancements for connectivity and amenity for users of PRoW.</p>

	<u>Relevant requirement of the draft revised NPS NNNPS NNNN NPS</u>	<u>Scheme compliance with the draft revised NPS NNNPS NNNN NPS</u>
	The applicant should provide evidence that the development improves the operation of the network and assists with capacity issues.	The Scheme will enable public transport use through by providing public transport infrastructure including bus stops, bus lanes and bus gates. The TA (application document TR010063 APP 7.5 APP 020) provides evidence that the Scheme will create networks with the capacity and connectivity to support national and local economic activity and facilitate growth.
<u>NNNPS Paragraph No.</u>	<u>Relevant requirement of the National Networks NPS</u>	<u>Scheme compliance with the National Networks NPS</u>
<u>2.6</u>	Roads facilitate active travel, such as walking, wheeling, and cycling. In 2022, 33% of personal journeys were taken by bike or walking. Government sets out its ambitions for cycling and walking in the second Cycling and Walking Investment Strategy and is investing in active travel to support the delivery of this commitment. A vision-led approach to local transport planning is advocated by the Strategic Road *(SRN) and the delivery of sustainable development circular. It also advocates for the prioritisation of sustainable transport interventions along with pedestrians and other vulnerable road users within all plans to improve the local transport network. commitment for more than half of personal journeys in our towns and cities to be made by active travel by 2030s.	The Scheme will provide a number of new WCH assets for the operational phase which will promote sustainable modes of transport and active travel. The Scheme therefore directly contributes towards the government's commitment to increased active travel infrastructure. Additionally, vulnerable road users and their needs are considered throughout the Scheme with Chapter 13 Population and Human Health of the ES (AS-018APP-072) assessing impacts on vulnerable road users and receptors and ensuring the required mitigation is implemented within the Scheme proposal.
<u>2.31</u>	Accessible and functioning transport infrastructure is fundamental to day-to-day life but can face interruptions from climate challenges such as flooding, heat, erosion, subsidence, and extreme weather. While climate change mitigation is essential in minimising the most dangerous impacts of climate change, the severity of these risks is projected to	Table 14-14 of ES Chapter (AS-013)- Potential operational impacts on asset receptors (including their operation, maintenance, and refurbishment)

<u>NNNPS Paragraph No.</u>	<u>Relevant requirement of the National Networks NPS</u>	<u>Scheme compliance with the National Networks NPS</u>
	<p><u>increase, putting additional stresses on transport infrastructure. The UK's National Adaptation Programme recognises and responds to the impacts of climate change already seen in the UK as well as those impacts expected over coming years.</u></p>	<ul style="list-style-type: none"> • <u>Road surfaces and pavements</u> • <u>Structures (including embankments, earthworks, bridges)</u> • <u>Drainage infrastructure</u> • <u>Road technology and street furniture (including signs and signals)</u> • <u>Landscaping</u> • <u>Maintenance workers</u> • <u>Driver experience - not significant</u> <p><u>ES Chapter 14: Climate 14.24.6. (AS-013) Climate change is projected to make summers drier, with occasional heavier convectional rainfall. Water quality in the watercourses that will receive surface water runoff due to the Scheme may therefore, in the future, become more vulnerable to impacts from first flush events. This is when long periods of dry weather enable contaminants to build up on road surfaces. These then mobilise in surface water runoff following a heavy rainfall event and enter aquatic systems via surface water runoff and drainage infrastructure at higher than normal concentrations. Pollutants in this runoff can be harmful to aquatic life.</u></p> <p><u>ES Chapter 14: Climate, 14.24.7 (AS-013). Water quality impacts on the water environment are avoided by inclusion of adequate treatment within the Scheme (SuDS) infrastructure. This treatment is sized with regard to flood flows with a climate change allowance. The SuDS intercept any polluted run-off and treat it prior to discharge to a watercourse. The water treatment processes provided by the SuDS primarily comprises filtration and biological treatment within attenuation basins. The configuration of the SuDS and</u></p>

<u>NNNPS Paragraph No.</u>	<u>Relevant requirement of the National Networks NPS</u>	<u>Scheme compliance with the National Networks NPS</u>
		<p><u>other treatment infrastructure is designed to manage the types of pollutant typically expected in road runoff.</u></p> <p><u>Climate projections from UKCP18 have been examined. They confirm that the study areas climate is expected to change in the future. The climate change risk assessment finds that the Scheme could be vulnerable to operational impacts linked to these changes in the climate. Mitigation measures that either avoids these impacts, minimises them or reduces their consequences to acceptable levels are presented. After consideration of this mitigation none of the potential climate vulnerability impacts are found to be significant adverse. The assessment of potential inter scheme and intra scheme (ICCI) cumulative effects also did not identify any significant adverse impacts.</u></p>
<p><u>Chapter 3: The need for development of the national networks (Statement of Need)</u></p>		
<p><u>3.8</u></p>	<p><u>Transport infrastructure is a catalyst and key driver of growth, and it is important that the planning and development of infrastructure fully considers the role it can play in delivering sustainable growth, how it can support local and regional development plans and the growth aspirations of local authority areas. This will include exploring options to unlock sites for housing and employment growth made accessible by sustainable transport and the regenerative impact major infrastructure can play in driving urban renewal, increasing density, as well as creating new places and communities.</u></p>	<p><u>Through the implementation of the Scheme, the Scheme will directly facilitate both planned growth in strategic site allocations and unlock adjacent safeguarded land for both housing and employment. The Scheme will therefore facilitate and unlock the development of approximately 9,000 dwellings and employment land through the provision of a highway network that has the capacity to accommodate the increased traffic the allocated sites will generate.</u></p>
<p><u>3.39</u></p>	<p><u>Developments on the SRN need to be sensitive to, respond to, and contribute to their environmental context. Recent legislation through, for example, the Environment Act 2021 has introduced more stringent</u></p>	<p><u>The Environment Act has been adhered to and considered throughout all the relevant Environmental Chapters within the Environmental Statement.</u></p>

<u>NNNPS Paragraph No.</u>	<u>Relevant requirement of the National Networks NPS</u>	<u>Scheme compliance with the National Networks NPS</u>
	<u>environmental protection, and opportunities for enhancement of the natural environment.</u>	
3.40	<u>Any scheme needs to comply with the environmental legislative requirements and address the policy context appropriately. Infrastructure improvements may help to facilitate a reduction in emissions (such as carbon, air pollution, noise or discharges to water resources), improvements to the natural and built environment (such as landscapes, biodiversity, or cultural heritage improvements) or increased accessibility for non-motorised users and reduced severance. For example, reducing the time vehicles spend in congestion may reduce carbon and air quality emissions at that particular location.</u>	<u>The assessments presented in Chapter 13 Population and Human Health of the ES (APP-072) demonstrates that the Scheme complies with paragraph 3.19 of the NNNPS which seeks to ensure that schemes will improve accessibility, reduce community severance, and connect people with jobs, services, friends and family. The Scheme will ensure that any community severance is largely confined to the construction phase, as a result of construction works and traffic management measures. The operational Scheme will improve connectivity to key employment and housing sites both within and beyond the study as a result of the increased capacity of the road network. The Scheme is therefore considered to align with this policy.</u>
3.42	<u>There are interdependencies between the efficient operation of the SRN and its impact on the local road network and vice versa. Effective operation and optimisation of both the SRN and the local road network are essential to achieve the outcomes set by the Transport Decarbonisation Plan. There are a range of measures that can be employed to make the best use of all road capacity (not just the SRN) which may impact upon demand for the SRN. These include:</u>	<u>The assessments presented in Chapter 13 Population and Human Health of the ES (AS-018APP-072) comply with paragraph 3.19 of the NNNPS which ensures that schemes will improve accessibility, reduce community severance, and connect people with jobs, services, friends and family. The Scheme will ensure that any community severance is largely confined to the construction phase, as a result of construction works and traffic management measures. The operational Scheme will improve connectivity to key employment and housing sites both within and beyond the study as a result of the increased capacity of the road network. The Scheme is therefore considered to align with this policy.</u>

- Promoting journey choice by enabling more active travel and public transport (including buses, coaches and rail) in urban areas whilst not restricting other transport options. The creation of mobility hubs and improving integration between modes through park-and-ride services, cycle parking provision at rail stations, and the coordination of bus / rail timetables, can all contribute
- Providing genuine choice in transport mode by increasing accessibility to public transport, connecting places and by improving the environment for journeys by active travel, in both urban and rural areas. The government has committed to transforming local transport systems through Bus Back Better strategy and the City Region Sustainable Transport Settlements. In addition, Bus Back Better sets out measures enabling buses to be used by all thereby enhancing levels of accessibility.
- Integrating with spatial planning can support walking, wheeling and cycling or public transport as the natural first choice for journeys. Where developments are located, how they are designed and how well public transport services are integrated has a huge impact on whether people's natural first choice for short journeys is on foot or by cycle, by public transport or by private car. The Strategic Road Network and the delivery of sustainable development Circular 01/2022 establishes how additional spatial considerations in transport decisions can help tackle congestion and support better journeys for all road users.

<u>NNNPS Paragraph No.</u>	<u>Relevant requirement of the National Networks NPS</u>	<u>Scheme compliance with the National Networks NPS</u>
	<ul style="list-style-type: none"> • <u>Greater deployment of technology can support more effective use of the network. Such technological interventions might include greater use of digital signalling, greater provision of route information to drivers, alternative fuels, self-driving vehicles or digital connectivity.</u> • <u>Bringing forward maintenance schemes and small-scale enhancements to ensure that the SRN is operating as effectively as possible.</u> 	
3.46	<p><u>The government's wider policy is to bring forward improvements and enhancements to the existing SRN where necessary to address the needs set out earlier. Enhancements to the existing national road network will include but are not limited to:</u></p> <ul style="list-style-type: none"> • <u>new and improved junctions and slip roads</u> • <u>improvements to trunk roads, in particular, dualling of single carriageway</u> • <u>strategic trunk roads and additional lanes on existing dual carriageways</u> • <u>measures to enhance capacity of the motorway network</u> 	<p><u>The government's wider policy is to bring forward improvements and enhancements to the existing SRN where necessary to address the needs set out [within the NNNPS]. Enhancements to the existing national road network will include but are not limited to:</u></p> <ul style="list-style-type: none"> • <u>new and improved junctions and slip roads [M5 J10 improvements]</u> • <u>improvements to trunk roads, in particular, dualling of single carriageway strategic trunk roads and additional lanes on existing dual carriageways [A4019 Improvements]</u> • <u>measures to enhance capacity of the motorway network.</u>
<u>Chapter 4: General policies and considerations</u>		
4.6	<p><u>Applications for road and rail projects (with the exception of those for strategic rail freight interchanges, for which the position is covered in paragraph 4.10 below) will normally be supported by a business case prepared in accordance 39 with Treasury Green Book principles, and the Department's Transport Business Case guidance and Transport</u></p>	<p><u>Chapter 5 of this Statement sets out the economic case for the Scheme, including the economic benefits arising from the Scheme and the extent to which the Scheme provides good value for money in relation to the impact on public accounts by considering improvements to transport economic efficiency for all users, environmental impacts, effects on the wider</u></p>

<u>NNNPS Paragraph No.</u>	<u>Relevant requirement of the National Networks NPS</u>	<u>Scheme compliance with the National Networks NPS</u>
	<p><u>Analysis Guidance. Transport Appraisal Process assesses the costs, benefits and risks of alternative ways to meet government objectives. It helps decision makers to understand the potential effects, tradeofftrade-offs and overall impact of options by providing an objective evidence base for decision making. The purpose of the economic dimension of the business case is to identify the proposal that delivers best public value to society, including wider social and environmental benefits. The business case provides the basis for investment decisions, and the economic, environmental and social impacts of a development that underpin it will also be important for the consideration by the Examining Authority or the Secretary of State of the impacts and benefits of a proposal. However, the purpose of the business case is not to ascribe a monetary value to every factor in the planning balance. It should also be noted that the economic case is one of five cases that comprise the business case, and government decisions on funding are based on all five.</u></p>	<p><u>economy and the social and distributional effects of the scheme.</u></p>
<p><u>4.7</u></p>	<p><u>The information provided on the economic, environmental and social impacts of a development that underpins the business case will be proportionate to the development. This information will be important for the Examining Authority and the Secretary of State's consideration of the benefits and impacts of a proposed development. It is expected that schemes brought forward through the Development Consent Order process by virtue of section 35 of the Planning Act 2008Act, should also meet this requirement.</u></p>	<p><u>Since the initial optioneering took place, a variety of studies, option identification and sifting exercises were carried out related to the improvement of the M5 Junction 10. These concept options were assessed in the Homes England Business Case and included upgrading the existing junction, as well as moving the junction to the north and south of its existing location</u></p>
<p><u>4.9</u></p>	<p><u>-Applications for road and rail projects should be supported by a local transport model to provide</u></p>	<p><u>Strategic and local transport modelling has been undertaken in line with Department for Transport</u></p>

<u>NNNPS Paragraph No.</u>	<u>Relevant requirement of the National Networks NPS</u>	<u>Scheme compliance with the National Networks NPS</u>
	<p><u>sufficiently accurate detail of the impacts of a project. The modelling will usually include national level factors around the key drivers of transport demand such as economic growth, demographic change, travel costs and labour market participation, as well as local factors. The Examining Authority and the Secretary of State do not need to be concerned with the national methodology and national assumptions around the key drivers of transport demand. An assessment of the benefits and costs of schemes under a range of scenarios should reflect future uncertainty, in addition to the core case. The modelling should be proportionate to the scale of the scheme and include appropriate sensitivity analysis to consider the effects of uncertainty on project impacts.</u></p>	<p><u>guidelines. Details are provided in the Transport Assessment Report APP-020).</u></p>
<p><u>4.12</u></p>	<p><u>A key part of environmental assessment is the consideration of cumulative effects. The applicant should provide information on how the effects of the proposal would combine and interact with the effects of other development, where relevant. For most practical purposes this means that the applicant should consider the impact of other existing and committed developments within an appropriate geographical area and assess the additional impact of their own development. Other evidence for example, from a Transport Business Case, appraisals of sustainability of relevant NPSs or strategic environmental assessment of development plans, may assist the Secretary of State in reaching decisions on proposals and on mitigation measures that may be required.</u></p>	<p><u>Chapter 15 Cumulative Effects of the ES APP-074) provides an assessment of the likely significant effects of the Scheme in combination with other past, present and reasonably foreseeable developments, as well as impact interactions. Past and present developments are considered as part of the baseline and in some cases reflect the sensitivity of the receptors assessed. The developments considered in the assessment were identified using local knowledge, published information and consultation with the local planning authorities, and fall under the following categories:</u></p>

<u>NNNPS Paragraph No.</u>	<u>Relevant requirement of the National Networks NPS</u>	<u>Scheme compliance with the National Networks NPS</u>
	<p><u>A key part of environmental assessment is the consideration of cumulative effects. The applicant should provide information on how the effects of the proposal would combine and interact with the effects of other development, where relevant. For most practical purposes this means that the applicant should consider the impact of other existing and committed developments within an appropriate geographical area and assess the additional impact of their own development. Other evidence for example, from a Transport Business Case, appraisals of sustainability of relevant NPSs or strategic environmental assessment or plan level Habitats Regulation Assessment of development plans, may assist the Secretary of State in reaching decisions on proposals and on mitigation measures that may be required.</u></p>	<ul style="list-style-type: none"> • <u>Trunk road and motorway projects which have been confirmed.</u> • <u>Development projects with valid planning permissions as granted by the local planning authority and for which formal EIA is a requirement or for which non-statutory EIA has been undertaken.</u> • <u>Applications for consent have been made but have not yet been determined.</u> • <u>Allocated sites in emerging or adopted Local Plans.</u> • <u>Other types of applications which could have implications for the Scheme.</u>
4.16-4.17	<p><u>The applicant should seek the early advice of the appropriate Statutory Nature Conservation Body and provide the Secretary of State with such information as the Secretary of State may reasonably require, to determine whether or not the plan or project should proceed to the Appropriate Assessment stage of Habitats Regulations Assessment.</u></p> <p><u>Where a proposed plan or project is considered likely to have a significant effect on a habitats site, the applicant must provide sufficient information with the application to enable the competent authority to make an appropriate assessment of these likely effects in view of the site's conservation objectives. The assessment may consider the effect of any mitigation measures and the Statutory Nature Conservation</u></p>	<p><u>A Habitats Regulations Assessment (HRA) has been produced, which is included as an appendix to Chapter 7 Biodiversity of the ES (APP-066APP-066).</u></p> <p><u>Early consultation meetings with the EA were undertaken on 16 January 2020 and 15 July 2021 as part of the development of the preliminary design.</u></p> <p><u>Natural England was consulted on an Interim HRA Screening Report and has provided comments. On 7 November 2022, the updated HRA was provided to Natural England. On 9 November 2022, Natural England responded with regard to the Screening report that they are in agreement with the conclusion that likely significant effects as a result of recreational impacts to the Cotswold Beechwood SAC and the Severn Estuary designations can be ruled out; that likely significant effects on the Severn Estuary SPA</u></p>

<u>NNNPS Paragraph No.</u>	<u>Relevant requirement of the National Networks NPS</u>	<u>Scheme compliance with the National Networks NPS</u>
	<p><u>Body must be formally consulted on the assessment and its advice considered. The applicant should also consider agreeing an Evidence Plan with the Statutory Nature Conservation Body to help determine the information required.</u></p>	<p><u>and Walmore Common SPA can be ruled out; and that likely significant effects as a result of air quality impacts can be ruled out. Comments from Natural England's freshwater team were received on 30 November 2022 with regard to the SIAA, and these have been addressed in the SIAA report.</u></p>
<p><u>4.20 – 4.21</u></p>	<p><u>Applicants should comply with all legal requirements, and any policy requirements set out in this NPS, on the assessment of alternatives.</u></p> <p><u>National road or rail schemes that have been identified in relevant Road or Rail Investment Strategies will have been subject to an options appraisal process where relevant in line with existing Transport Appraisal Guidance, and proportionate consideration of alternatives will have been undertaken as part of the investment decision making process. The options appraisal may include other viable options for achieving the objectives of the project, including (where appropriate) other modes of travel, regulation, or other ways of influencing behaviour in line with Department for Transport guidance. The Examining Authority and the Secretary of State should satisfy themselves that the options appraisal process has been undertaken.</u></p>	<p><u>Chapter 3 Scheme Development of this Planning Statement and Chapter 3 of the ES (APP-062APP-062) set out the alternative options considered during the development of the Scheme. Assessment of these alternatives, taking account of the environmental effects, has provided the basis for arriving at the preferred option.</u></p> <p><u>Other specific legal and policy requirements for the consideration of alternatives are:</u></p> <p><u>The European Directive 2008/50/EC, Ambient Air Quality and Cleaner Air for Europe transposed to UK legislation by the Air Quality Standards Regulations 2010.</u></p> <p><u>The European Directive 2000/60/EC, Establishing a Framework for the Community Action in the Field of Water Policy, transposed into UK legislation by the Water Environment (Water Framework Directive) (England and Wales) Regulations 2003 and the Water Industry Act 1991 (Amendment) (England) Regulations 2009.</u></p> <p><u>The European Directives 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna and 2009/147/EC on the Conservation of Wild</u></p>

<u>NNNPS Paragraph No.</u>	<u>Relevant requirement of the National Networks NPS</u>	<u>Scheme compliance with the National Networks NPS</u>
		<p><u>Birds, which are transposed into UK legislation by the Conservation of Habitats and Species Regulations 2010 (as amended by the Conservation of Habitats and Species (Amendment) Regulations 2012).</u></p> <p><u>The European Habitats Directive 92/43/EEC and Habitats Regulations 2017.</u></p> <p><u>The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act 2000.</u></p> <p><u>These requirements have been taken into consideration in the assessment of alternatives for the Scheme.</u></p>
4.22	<p><u>Where an options appraisal process has been undertaken, it should not be necessary to consider alternatives except where paragraph 4.20 applies or where the “exceptional circumstances” test set out in case law is met. In those exceptional circumstances where alternatives might be relevant, consideration of them should be proportionate. Where alternative schemes proposed are vague or inchoate, or have no real possibility of coming about, they are either irrelevant, or where relevant, will be given little or no weight, and the extent to which they are considered should be determined accordingly.</u></p>	<p><u>The Applicant notes that RIS 2 refers to this Scheme, M5 and Link Road and the governance processes which has been adopted. Essentially, with DfT being on the delivery board this would replicate what would be the position if the Scheme were promoted through the PCF governance process operated by National Highways equivalent schemes. The Scheme has been subject to full options appraisal in a manner comparable to that achieved in obtaining RIS2 status and that proportionate option consideration was undertaken as part of that investment decision-making process and therefore is in accordance with Paragraph 4.22.</u></p>
4.23	<p><u>Biodiversity net gain delivers measurable improvements for biodiversity by creating, enhancing, maintaining and monitoring habitats in association with developments. Biodiversity net gain should be applied</u></p>	<p><u>The Scheme includes a significant level of Green Infrastructure which is both embedded mitigation for the impacts of the Scheme and aims to provide biodiversity enhancements. The Scheme also</u></p>

<u>NNNPS Paragraph No.</u>	<u>Relevant requirement of the National Networks NPS</u>	<u>Scheme compliance with the National Networks NPS</u>
	<p><u>in conjunction with the mitigation hierarchy and does not change or replace existing environmental obligations. In addition to providing net gains for biodiversity, applicants should also identify and deliver appropriate opportunities for nature recovery and wider environmental enhancements.</u></p>	<p><u>maximises the opportunities to contribute to Nature Recovery Networks and seeks to ensure green infrastructure within and adjacent to the road network can deliver biodiversity gains. Overall, the Scheme is predicted to deliver in excess of 10% BNG. ES Appendix 7.18 Biodiversity Net Gain (APP-070) sets out the headline BNG results for the Scheme.</u></p>
<p><u>4.24</u></p>	<p><u>Applicants are encouraged to use the latest version of the biodiversity metric to calculate their biodiversity baseline and inform their biodiversity net gain outcomes, and should present this data as part of their application.</u></p>	<p><u>The BNG assessment, which is included as an appendix to Chapter 7 Biodiversity of the ES (APP-066), uses Biodiversity Metric 3.0. This metric provides a way of measuring and accounting for biodiversity losses and gains resulting from development and/or land management change. Biodiversity Metric 3.1, an update to the previously published Biodiversity Metric 3.0, was published in April 2022, and Biodiversity Metric 4.0 was published in March 2023. However, for this Scheme, given that metric 3.0 was used to undertake an initial BNG feasibility assessment at the start of 2022, version 3.0 will continue to be used, and has been used to undertake the calculations. This is in line with advice from Natural England (Natural England Joint Publication JP039 (April 2022) Biodiversity Metric 3.1 Frequently Asked Questions).</u></p>
<p><u>4.25</u></p>	<p><u>Biodiversity net gain can be delivered onsite or wholly or partially off-site and should also be set out within the application for development consent. When delivering biodiversity net gain off-site, developments should do this in a manner that best contributes to the achievement of relevant wider strategic outcomes, for example by increasing habitat connectivity or enhancing other ecosystem service outcomes. Reference should be made to any local nature recovery strategies (which should be the primary</u></p>	<p><u>The landscape plans (shown in the Environmental Masterplan, Part 1 and Part 2 (APP-027 and APP-028 respectively) have been used to inform the on-site post-development habitat creation. The BNG assessment, which is included as an appendix to Chapter 7 Biodiversity of the ES (APP-066), states that no off-site habitat and/or hedgerow creation or enhancement is proposed for the Scheme.</u></p>

<u>NNNPS Paragraph No.</u>	<u>Relevant requirement of the National Networks NPS</u>	<u>Scheme compliance with the National Networks NPS</u>
	<p><u>reference point for those delivering biodiversity net gain off-site) and other relevant national or local plans and strategies, such as green infrastructure strategies, used to inform biodiversity net gain delivery.</u></p>	
<p><u>4.27 – 4.29</u></p>	<p><u>Applicants should include design as an integral consideration from the outset of a proposal. Applying good design to national network projects should not be limited to general aesthetics. High quality and inclusive design goes far beyond aesthetic considerations. The National Infrastructure Commission have developed four Design Principles:</u></p>	<p><u>The Scheme objectives include the notion of delivering a Scheme which is in keeping with the local environment. Theis Planning Statement sets out in Chapter 3 how the design has evolved, including the options considered and changes carried out as a result of the consultation, having taken into account local context, history and culture, as well as both current and future needs.</u></p> <p><u>ES Chapter 9 Landscape and Visual (APP-068) includes details on the scheme design and assesses its impact on the context and character of the local area.</u></p> <p><u>The Transport Assessment (AS-029) considers the safety impacts of the Scheme as well as movement and connectivity, including that of NMUs.</u></p> <p><u>ES Chapter 13 (APP-072) Population and Human Health also considers the design’s impact on population, and the health impacts which consider the inclusiveness principles required by this policy.</u></p> <p><u>Chapter 14 Climate of the ES (APP-073) covers the issues of improving efficiency, reducing emissions and unnecessary pollution of air, which in turn cover the wider topic of sustainability.</u></p>

- Climate – mitigate carbon emissions and adapt to climate change. It includes opportunities to enable decarbonisation, incorporates flexibility, and builds resilience against climate change. The functionality of projects, including fitness for purpose, resilience and sustainability, is equally important.
- People – helping to improve the quality of life for local communities. It promotes inclusion, cohesion and increases accessibility. It creates safe spaces with clean air that improve health and wellbeing.
- Places – well designed infrastructure gives places a strong sense of identity, and through that forms part of our national cultural heritage. Creating a sense of place, connecting communities, addressing community severance and integrating into its surroundings. It makes a positive contribution to local landscapes within and beyond the project boundary. Good design enhances local culture and character and supports local ecology, delivering net biodiversity gain, while protecting wildlife corridors and irreplaceable natural assets and habitats.
- Value - adding value by defining issues clearly from the outset. Good design also finds opportunities to add value beyond the main purpose of the infrastructure to consider the wider benefits savings on cost, the environment, materials and space. It is efficient in the use of natural resources, sustainable materials and energy used in construction.

<u>NNNPS Paragraph No.</u>	<u>Relevant requirement of the National Networks NPS</u>	<u>Scheme compliance with the National Networks NPS</u>
	<p><u>A good design should meet the principal objectives of the scheme by applying the mitigation hierarchy to avoid, eliminate or substantially mitigate the identified problems and existing adverse impacts, by improving operational conditions, simultaneously minimising adverse impacts and contributing to the conservation and enhancement of the natural, built and historic environment. A good design will also be one that sustains the improvements to operational efficiency for as many years as is practicable, taking into economic, social and environmental impacts.</u></p> <p><u>In light of the above, scheme design will be a material consideration in decision making. The Secretary of State needs to be satisfied that national networks infrastructure projects are sustainable, having regard to appropriate industry good design guidance, and the applicant has considered, as far as possible, both functionality (including fitness for purpose and sustainability) and aesthetics (including the scheme's contribution to the quality of the area in which it would be located).</u></p>	
4.30	<p><u>Applicants should have regard to appropriate guidance and plans such as: local nature recovery strategies, Local Air Quality Action Plans, the Green Infrastructure Design Guide, the purposes and Management Plans of National Parks, National Landscapes, the Broads and any local design codes. For road schemes, the Design Manual for Roads and Bridges contains design standards for motorway and all-purpose trunk road projects.</u></p>	<p><u>All relevant Environmental chapters and reports detail the policy they adhere to with the most up-to-date policy being followed.</u></p>

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4.31	<p><u>In their application, applicants should be able to demonstrate how the design process was conducted, effective engagement with communities and stakeholders and how the proposed design evolved to maximise design outcomes. Where a number of different designs were considered, applicants should set out the reasons why the favoured choice has been selected with a clear articulation of its benefits. The Examining Authority and Secretary of State should consider the ultimate purpose of the infrastructure and the operational, safety and security requirements which the design must satisfy.</u></p>	<p><u>A detailed description of the development and analysis of the alternative options considered for the Scheme can be found in Chapter 3 of the ES (APP-062). The Consultation Report (APP-038) sets out how the Scheme has evolved in response to comments received during the consultation periods.</u></p>
4.38	<p><u>In preparing measures to support climate change, adaptation applicants should consider whether nature-based solutions could provide a basis for such adaptation. In addition to avoiding further greenhouse gas emissions when compared with some more traditional adaptation approaches, nature-based solutions can also result in biodiversity benefits as well as increasing absorption of carbon dioxide from the atmosphere (see also paragraphs 5.170 to 5.194 on the role of green infrastructure).</u></p>	<p><u>The Scheme includes a significant level of Green Infrastructure which is both embedded mitigation for the impacts of the Scheme and aims to provide biodiversity enhancements.</u></p> <p><u>Chapter 14 Climate of the ES (APP-062) states that the construction and operation of the Scheme have the potential to create and enhance carbon stocks in vegetation and soils, encouraging increased removals of greenhouse gases from the atmosphere.</u></p>
4.39 – 4.40	<p><u>New national networks infrastructure will typically be a long-term investment and will need to remain operational over many decades, in the face of a changing climate. Consequently, applicants must consider the direct (e.g. flooding of road or rail infrastructure) and indirect (e.g. flooding of other parts of the road or rail network) impacts of climate change when planning the location, design, build, operation and maintenance. The Secretary of State will need information on how the proposal will take account of</u></p>	<p><u>Chapter 14 Climate of the ES (AS-020) takes account of the predicted impacts of the Scheme on climate change, and the vulnerability of the Scheme to the impacts of climate change. It proposes mitigation measures for climate-related impacts. The Chapter concludes that the Scheme will improve transport resilience by replacing old degrading assets that were designed with less resilience to climate change than the assets that will replace them.</u></p>

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	<p><u>the projected impacts of climate change and remain resilient.</u></p> <p><u>The Secretary of State should be satisfied that applications for new national networks infrastructure have taken into account the potential direct and indirect impacts of climate change. This should include using the latest UK Climate Projections and associated research and expert guidance (such as the Environment Agency's Climate Change Allowances for Flood Risk Assessments) applicable at the time the environmental assessment was prepared as part of their Development Consent Order application, to ensure they have identified mitigation or adaptation measures. This should cover the estimated lifetime of the new infrastructure, with a high level of climate resilience built-in from the outset. The applicant should also be able to demonstrate how proposals can be adapted over their predicted lifetimes to remain resilient to a credible maximum climate change scenario. Should a revised set of UK Climate Projections or associated research be applicable after the preparation of the environmental assessment, the Examining Authority should consider whether they need to request further information from the applicant.</u></p>	<p><u>The Flood Risk Assessment (APP-070) also takes into account the impacts of climate change and resilience over the lifetime of the development. The Scheme will not be at significant risk of flooding, and the Scheme should not result in a material increase in flood risk to third parties.</u></p>
<p><u>4.41</u></p>	<p><u>The Secretary of State should be satisfied that there are no features of the design of new national networks infrastructure critical to its safety or operation which may be seriously affected by more radical changes to the climate. Beyond that projected in the latest set of UK climate projections and taking account of the latest credible scientific evidence on, for example, sea level rise. The Secretary of State should also be satisfied that necessary action can be taken to ensure the</u></p>	<p><u>DMRB LA 114 states that climate assessments should use the H++ climate scenarios to test the sensitivity of vulnerable safety-critical features, to ensure that such features would not be affected by more radical changes to the climate beyond that projected in the latest set of UK Climate Projections. Within Chapter 14 Climate of the ES (AS-020), the UKCP09 H++ scenarios are considered a credible maximum climate change scenario and they are used to assess the</u></p>

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	<u>operation of the infrastructure over its estimated lifetime.</u>	<p><u>impacts of low probability, high impact climate events including heat waves, drought, extreme winds, sea level rise and storm surge.</u></p> <p><u>The chapter presents measures to mitigate the effects of changes to climate which either avoid these impacts, minimise them or reduce their consequences to acceptable levels. None of the potential climate vulnerability impacts are found to be significantly adverse, so the Scheme is compliant in this regard.</u></p>
4.42	<p><u>Any adaptation measures should be based on the latest set of UK Climate Projections, the government's latest UK Climate Change Risk Assessment, when available⁹³ and in consultation with the Environment Agency's Climate Change Allowances for Flood Risk Assessments. Any adaptation measures must themselves also be assessed as part of any environmental assessment, which should set out how and where such measures are proposed to be secured.</u></p>	<p><u>Chapter 14: Climate (APP-073) presents the likely effects of the Scheme on climate as well as the vulnerability of the Scheme to climate change. The assessment is based on an assessment of climate projections from United Kingdom Climate Projections 2018 (UKCP1834).</u></p>
4.43	<p><u>Adaptation measures should be required to be implemented at the time of construction where necessary and appropriate to do so. However, where they are necessary to deal with the impact of climate change, and that measure would have an adverse effect on other aspects of the project and/or surrounding environment (for example coastal processes), the Secretary of State may consider requiring the applicant to ensure that the adaptation measure could be implemented should the need arise, rather than at the outset of the development (for example reserving land for future extension or increasing height of existing, or requiring new, sea walls). In these circumstances, the applicant should</u></p>	<p><u>The Scheme as a whole is forward looking a designed to unlock future economic growth in the Scheme area. The Scheme also aims to ensure that this growth will have a nil detriment to the SRN as well as be adaptable to future needs and resilient to Climate Change.</u></p> <p><u>As recommended in paragraph 4.43, the Scheme provides justification and the mechanism to implement adaptation measures later through the use of the Development Consent Order. Schedule 2, Part 1 paragraph 4 stipulates that;</u></p>

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	<p><u>make a case to justify implementing adaptation measures later, set out clearly how the design could be adapted and have mechanisms in place (such as Development Consent Order requirements) for monitoring and implementation of these future adaptation measures.</u></p>	<p><u>(4) Upon completion of construction of the authorised development the EMP (2nd iteration) must be converted into the EMP (3rd iteration). The EMP (3rd iteration) must be submitted to the county planning authority for approval within 28 days of the opening of the authorised development for public use.</u></p> <p><u>The EMP (3rd iteration) is a mechanism that will ensure the future adaptations needed as well as any adaptations that are required in light of the construction phase are applicable. This mechanism allows for changes that come to light due to changes in climate or any other external change of circumstances during the construction can be effectively handled and dealt with.</u></p> <p><u>Schedule 2, Part 1, Interpretation paragraph 1 states that the EMP (3rd iteration) is to be developed at the end of the construction phase and specifically stipulates in paragraphs 1(a), 1(b) and 1(c) that the following must be contained within the EMP (3rd iteration);</u></p> <p><u>(a) the environmental information needed for the future maintenance and operation of the authorised development;</u></p> <p><u>(b) the long-term commitments to aftercare, monitoring and maintenance activities relating to the environmental features and mitigation measures that will be required to ensure the continued long-term effectiveness of the environmental mitigation measures and the prevention of unexpected environmental</u></p>

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		<p><i>impacts during the operation of the authorised development; and</i></p> <p><i>(c) a record of the consents, commitments and permissions resulting from liaison with statutory bodies;</i></p>
4.48	<p>Applicants are encouraged to begin pre-application discussions with relevant regulators, such as the Environment Agency and the Marine Management Organisation, as early as possible. This is especially the case where applicants wish to parallel track Development Consent Order and Environmental Permit applications. This will help ensure that applications take account of all relevant environmental considerations and that the relevant regulators are able to provide timely advice and assurance to the Examining Authority.</p>	<p>Where feasible and expedient for the project, GCC has sought the agreement of relevant consenting bodies to be able to include other consenting requirements within the scope of the DCO.</p> <p>For other consents that may need to be obtained separately from the DCO, GCC is either seeking to obtain these in parallel with the DCO process or has sought assurances from the relevant consenting bodies that such consents will not be unreasonably withheld later.</p>
4.57	<p>Highways developments provide an opportunity to make significant safety improvements and significant incident reduction benefits when they are well designed. Some developments may have safety as a key objective, but even where safety is not the main aim of a development, the opportunity should be taken to improve safety, including introducing the most modern and effective safety measures where proportionate. Consideration should also be given to wider transport objectives, including expanding active travel, and creating safe and pleasant walking, wheeling and cycling environments. In developing roads schemes the applicant should have due regard to the needs of drivers and riders and the imperative to ensure road user safety. Schemes should be developed with a mindset that accounts for the need for motorists to rest, particularly Heavy Goods Vehicle drivers who need safe and secure roadside facilities</p>	<p>Safety is a key objective of the Scheme, in terms of providing safe access to services for the local community. The process for monitoring and evaluating safety has been commenced with a Stage 1 Road Safety Audit.</p> <p>Measures to minimise the risk of death and injury arising from the construction of the Scheme are specified within the Environmental Management Plan (AS-025).</p>

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	<p><u>that also cater for their welfare needs including the appropriate provision of high-quality washrooms, a catering offer and access to alternative fuel and digital infrastructure.</u></p>	
<p><u>4.58</u></p>	<p><u>The applicant should undertake an objective assessment of the impact of the proposed development on safety including the impact of any mitigation measures. This should use the methodology outlined in the guidance from Department for Transport’s Transport Appraisal Guidance and from National Highways. They should also put in place arrangements for undertaking the road safety audit process and ensuring their implementation. Road safety audits are a mandatory requirement for highway improvement schemes in the UK (including motorways). Road safety audits are intended to ensure that operational road safety experience is applied during the design and construction process so that the number and severity of collisions is as low as is reasonably practicable.</u></p>	<p><u>A Stage 1 Road Safety Audit has commenced for the Scheme. This is the first stage in an ongoing audit to be progressed at a later stage of design, as per DfT and NH guidance.</u></p>
<p><u>4.59 – 4.61</u></p>	<p><u>The applicant should be able to demonstrate that their scheme is consistent with government Road Safety policy and with the National Highways Safety Framework for the Strategic Road Network. Applicants must show that they have taken all steps that are reasonably required to minimise the risk of death and injury arising from their development, including:</u></p> <ul style="list-style-type: none"> <u>• contributing to an overall reduction in road casualties contribute to an overall reduction in road casualties</u> <u>• contribute to an overall reduction in the number of unplanned incidents</u> 	<p><u>Measures to minimise the risk of death and injury arising from the construction of the Scheme are specified within the Environmental Management Plan (AS-025). Risk of injury and death is also a key factor in Chapter 13 Population and Human Health of the ES (AS-018).</u></p> <p><u>The Scheme’s contribution to reducing road casualties and improving safety for walkers and cyclists during its operation is addressed through the provision of dedicated NMU facilities (footways, crossings, Public Rights of Way) and upgraded signalling and crossing points.</u></p>

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	<ul style="list-style-type: none"> • <u>contributing to improvements in road safety for pedestrians and cyclists. The applicant must also demonstrate that:</u> • <u>they have considered the safety implications of their project from the outset</u> • <u>they are putting in place rigorous processes for monitoring and evaluating safety</u> <p><u>The Secretary of State should not grant development consent unless satisfied that all reasonable steps have been taken and will be taken to:</u></p> <ul style="list-style-type: none"> • <u>minimise the risk of road casualties arising from the scheme</u> • <u>contribute to improvements in the safety of the SRN.</u> 	
4.72	<p><u>As described in the relevant sections of this NPS, where the proposed project has an effect on human beings, the applicant should assess these effects, identifying any potential adverse health impacts, and identify measures to avoid, reduce or compensate for adverse health impacts as appropriate. Enhancement opportunities should be identified by promoting local improvements for active travel and horse riders driven by the principles of good design to create safe and attractive routes to encourage health and wellbeing; this includes potential impacts on vulnerable groups within society, i.e. those groups within society which may be differentially impacted by a development compared to wider society as a whole.</u></p>	<p><u>ES Chapter 13 Population and Human Health (APP-AS-014) considers the Scheme’s impact on the population and the health of the communities within the Scheme boundary and beyond.</u></p> <p><u>The chapter also provides details of the replacement and enhanced PRow included in the Scheme, which will improve connectivity and amenities for walkers, cyclists and equestrians. The chapter also includes consideration of vulnerable groups including those with disabilities, and covers accessibility in varying forms including physical accessibility, access to local amenities, and access to information.</u></p>

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4.74 – 4.75	<p><u>The government’s strategy for achieving equal access for disabled people is set out in the Inclusive Transport Strategy. The government expects applicants to improve access, wherever possible, on and around the national networks by designing and delivering schemes that take account of the accessibility requirements of all those who use, or are affected by, national networks infrastructure, including disabled users.</u></p> <p><u>Applicants must comply with any obligations under the Equality Act 2010. Public authority applicants are reminded of their duty to promote equality and to consider the needs of disabled people as part of their normal practice. The Public Sector Equality Duty requires that public authorities have due regard to the need to:</u></p> <ul style="list-style-type: none"> <u>• eliminate discrimination, harassment, victimisation and any other conduct prohibited by the Equality Act.</u> <u>• Advance equality of opportunity between people who share a protected characteristic and people who do not share it.</u> <u>• Foster good relations between people who share a protected characteristic and people who do not share it.</u> 	<p><u>The Equality Impact Assessment report (APP-144) assesses the Scheme’s impact on equality of opportunity and concludes that there will be a neutral impact on the gender, sexual orientation, gender reassignment and marriage/civil partnership equality groups.</u></p> <p><u>Negative impacts have been identified in relation to religion, age, disability, ethnicity and pregnancy/maternity. However, it has been detailed within the assessment that there is some assumed mitigation through the development of an inclusive consultation and communication strategy. Furthermore, other potential impacts identified will need to be monitored going forward in the Scheme development.</u></p>
4.78	<p><u>Applicants should demonstrate the following where relevant:</u></p> <p><u>All reasonable opportunities to deliver improvements in accessibility on and to the existing national road</u></p>	<p><u>Chapter 13 Population and Human Health of the ES AS-014) assesses the impacts of the Scheme on community severance and accessibility. The Scheme is anticipated to maintain the connectivity offered by</u></p>

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	<p><u>network should be taken, including improvements for non-motorised users</u></p> <p><u>Severance can be a problem in some locations; where appropriate, applicants should seek to deliver improvements that reduce community severance and improve accessibility</u></p> <p><u>National Network infrastructure should incorporate good design, as expanded on in paragraphs 4.24 to 4.29, which includes delivering accessible infrastructure for users.</u></p>	<p><u>recreational routes for NMUs and will include new, altered and improved PRoW which will improve conditions and accessibility for NMUs.</u></p> <p><u>The Scheme objectives set out in this Planning Statement include providing safe access to services for the local community and for users of sustainable transport modes. This includes providing convenient, accessible and attractive routes for pedestrians, cyclists and equestrians and improving crossing facilities, as well as the provision of a bus lane on the A4019 eastbound carriageway.</u></p>
<u>Chapter 5: Generic impacts</u>		
<u>5.3</u>	<p><u>Applicants should engage with relevant and statutory bodies regarding their proposal at the pre-application stage.</u></p>	<p><u>The Applicant undertook formal, statutory consultation with the local authorities, landowners and persons with an interest in land. Each consultee received a consultation pack which included information explaining the Scheme and a feedback survey.</u></p> <p><u>The project team have engaged with the three host authorities (GCC, TBC and CBC) throughout the progression of the Scheme through a series of planning liaison meetings, where representatives from each local authority were invited to comment on various elements of the design of the Scheme and to help develop the Statement of Common Ground (SoCG) with the host authorities.</u></p> <p><u>The project team have included NH in consultation discussions throughout the development of the Scheme. NH, as a statutory consultee, responded to the non-statutory consultation, the statutory consultation and the first round of targeted consultation. NH have also been subject to continued</u></p>

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		<p><u>consultation through the development of the SoCG with key stakeholders.</u></p> <p><u>The full list of stakeholders who have been consulted in order to develop SOCGs are:</u></p> <ul style="list-style-type: none"> • <u>The Joint Councils</u> • <u>Natural England.</u> • <u>Environment Agency.</u> • <u>Historic England.</u> • <u>National Highways</u> • <u>Elms Park Developers (Bloor Homes and Persimmon Homes).</u> • <u>Golden Valley Developers (Midland Land Portfolio).</u> • <u>Developers of Safeguarded Land at North West Cheltenham.</u> <p><u>The Applicant has also liaised with statutory bodies such as the Environment Agency and the Lead Local Flood Authority throughout the design development of the Scheme.</u></p> <p><u>The Consultation Report – Main Report (APP-038) explains the consultation undertaken and how it has influenced the Scheme prior to submission.</u></p>
5.6	<p><u>Applicants should look for opportunities to design infrastructure with a holistic approach to avoiding, or where adverse impacts are unavoidable, mitigating</u></p>	<p><u>A holistic approach to the design of the scheme was taken with a number of nature-based solutions being implemented.</u></p>

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	<p><u>and, as a last resort, compensating for impacts on the natural, historic or built environment, on landscapes and on people by using nature-based solutions. Nature-based solutions can deliver multiple benefits for climate, biodiversity, and people, and can therefore play a critical role in tackling these interrelated impacts in an integrated way. For example, trees planted to sequester carbon could offer benefits for flood management, soil health and stability, biodiversity and recreation. The relevant local nature recovery strategy will be a useful source of information for nature-based solutions, including green infrastructure (see also paragraphs 5.179 to 5.203 on the role of green infrastructure).</u></p>	
<p><u>5.12 – 5.15</u></p>	<p><u>The applicant should undertake an assessment as part of their Development Consent Order application where the impacts of the project (both on and off scheme) are likely to have significant air quality effects in relation to meeting environmental assessment requirements or affect the UK’s ability to comply with the Air Quality Standards Regulations 2010, or impact the relevant local authority’s ability to comply with The Air Quality (England) Regulations 2000. Applicants should also refer to the Environmental Assessment section in chapter 4 and paragraph 5.4. The assessment should describe:</u></p>	<p><u>The ES Chapter 13 Air Quality (AS-012) assesses the Scheme’s compliance with Air Quality Regulations (The Air Quality Standards Regulations 2010 (SI 2010/1001) for EU limit values and the Air Quality (England) Regulations (SI 2000/928) as amended (2002/3043) for national objectives). The assessment includes:</u></p> <ul style="list-style-type: none"> <u>• Analysis of existing air quality levels (‘baseline conditions’).</u> <u>• Assessment of air quality for the following scenarios: base year (2019), opening year (2027) and future year (2042).</u> <u>• Identification of significant air quality effects, mitigation and residual effects arising from</u>

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	<ul style="list-style-type: none"> • <u>existing air quality emissions and concentrations</u> • <u>forecasts of emissions and concentrations at the time of opening, assuming that the scheme is not built (the future baseline) and taking account of the impact of the scheme</u> • <u>any significant air quality effects, their mitigation and any residual effects, distinguishing between the construction and operation stages and taking account of the impact of any road traffic generated by the project</u> • <u>the predicted emissions, concentration change and absolute concentrations of the proposed project after mitigation methods have been applied</u> • <u>any potential impacts on nearby designated habitats from air pollutants</u> • <u>the proximity and nature of nearby receptors which could be impacted, including those more sensitive to poor air quality</u> <p><u>In addition, applicants should consider The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 by following available Defra guidance, including interim guidance.</u></p> <p><u>Defra publishes future projections of UK air pollutant emissions based on evidence of future emissions, traffic and vehicle fleet. Projections are updated as the evidence base changes. The applicant's assessment should be consistent with this but may include more detailed modelling to demonstrate local impacts.</u></p>	<p><u>construction traffic and activities and operational road traffic of the Scheme.</u></p> <p><u>The assessment concludes that any air quality effects due to construction would be temporary and could be suitably minimised by the application of standard and appropriate mitigation measures. During operation, air quality modelling has indicated that the Scheme is unlikely to have any overall significant adverse effects on human health or on designated habitats.</u></p> <p><u>There are no estimated exceedances of the annual mean NO2 air quality limit value in the Defra Pollution Climate Mapping (PCM) model links within the affected road network in 2019.</u></p>

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5.17- 5.18	<p><u>Mitigation measures may affect the project design, layout, construction, operation and/or may consist of measures to improve air quality beyond the immediate locality of the scheme. Measures could include, but are not limited to, changes to the route or design of the new scheme, changes to the proximity of vehicles to local receptors in the existing route, physical means including barriers to better disperse emissions, and/or speed control.</u></p> <p><u>Where a project is likely to lead to a breach of any relevant statutory air quality limits, objectives or targets, the applicant should work with the relevant authorities to secure appropriate mitigation measures. Where a project is located within, or in close proximity to, an Air Quality Management Area or Clean Air Zone, applicants should engage with the relevant local authority to ensure the project is compatible with the Local Air Quality Action Plan.</u></p>	<p><u>It is not anticipated that there would be any significant adverse effects on air quality during the Scheme's construction or operation, provided standard construction best practice is adhered to, as detailed in Chapter 5 Air Quality of the ES (AS-012). As such no specific mitigation measures for air quality are proposed.</u></p>
5.31 – 5.33	<p><u>Emissions occur across the lifecycle of a project, and assessing the Whole Life Carbon emissions throughout a project will identify areas for efficiency and potential carbon reductions. All proposals for national network infrastructure projects should include a Whole Life Carbon Assessment at critical stages in the project lifecycle, for example the submission of a major business case. Undertaking a Whole Life Carbon Assessment involves calculating the emissions from 'cradle to grave' of a project. This builds a comprehensive understanding of the emissions generated when building, operating, using, maintaining and discontinuing the infrastructure.</u></p>	<p><u>Chapter 14 Climate of the ES (AS-020) provides an assessment of the likely carbon emissions against the UK Carbon Budgets across the Scheme's entire life cycle. This runs from the construction phase and then provides cumulative figures until 2087.</u></p> <p><u>The magnitude of emissions from the Scheme will not materially impact the Government's ability to meet the budget, and therefore will not have a significant effect on climate.</u></p> <p><u>This information can be found in Section 14.10 of the Climate chapter of the ES.</u></p>

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	<p><u>A Whole Life Carbon Assessment should be conducted according to the guidance, standards and methodologies set out in Transport Analysis Guidance Unit A3. Also refer to the Environmental Assessment at paragraph 4.12 of this NPS document for more information about cumulative assessment.</u></p>	
<p><u>5.35</u></p>	<p><u>Having regard to current knowledge, a carbon management plan should be produced as part of the Development Consent Order submission and include:</u></p>	<p><u>Chapter 14 Climate of the ES (AS-020) states that a comprehensive carbon management plan is being developed for the Scheme, which would be implemented from the Detailed Design stage and through construction. This would follow a data collection and analysis methodology which adheres to the requirements of the PAS 2080 – Carbon Management in Infrastructure verification technical standard.</u></p> <p><u>GCC seeks to secure this by way of Requirement 3 (Schedule 2, Part 1 paragraph 3 of the draft DCO (APP-034) requiring that tThe Principal Contractor will produce a Carbon Management Plan (CMP)-as part of their contract. The CMP will set out how GHG emissions will be managed and reduced over the lifetime of the scheme. The Principal Contractor will also set targets for GHG emissions reductions for each stage of the scheme which will be included within the CMP.</u></p>

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	<ul style="list-style-type: none"> • <u>a Whole Life Carbon assessment for the project</u> • <u>an explanation of the steps that have been taken to drive down the carbon impacts of the project</u> • <u>how construction and operational emissions and, where applicable, emissions from maintenance activities, have been reduced as much as possible using the carbon reduction hierarchy (e.g., as set out in PAS2080) (recognising that in the case of road projects while the developer can estimate the likely emissions from road traffic, it is not solely responsible for controlling them)</u> • <u>whether and how any residual carbon emissions will be (voluntarily) offset or removed using a recognised framework (any offsetting of emissions should not be included in the Whole Life Carbon Assessment headline figures)</u> • <u>where there are residual emissions, the level of emissions and the impact of those on any relevant statutory carbon budgets</u> 	
5.32 – 5.33	<p><u>Applicants should look for opportunities within the design of the proposed development to embed nature-based or technological solutions to mitigate, capture or offset the emissions of construction.</u></p> <p><u>Steps taken to minimise, capture and offset emissions in design and construction, should be set out in the carbon management plan, secured under the Development Consent Order. This could include, for example, mitigation through woodland creation on or</u></p>	<p><u>Mitigation measures are set out in sections 14.9 and 14.22 of Chapter 14 Climate of the ES (AS-020). These are applied through the carbon reduction hierarchy set out in DMRB LA114: Avoid / Prevent, Reduce, Remediate.</u></p> <p><u>A Greenhouse Gas Reduction Strategy has not been produced, as there is no requirement to produce such a document under the current version of NNNPS.</u></p>

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	<p><u>adjacent to the site, contributing to offsetting residual emissions. Applicants may wish to refer to the Institute of Environmental Management and Assessment Greenhouse Gas Management Hierarchy guidance when drafting their application¹⁰⁰.</u></p>	
<p><u>5.40</u></p>	<p><u>The Secretary of State should be content that the applicant has taken all reasonable steps to reduce the total greenhouse gas emissions from a whole life carbon perspective. The Secretary of State should also give positive weight to projects that embed nature-based or technological processes to mitigate or offset the emissions of construction and within the proposed development. However, given the important role national network infrastructure plays in supporting the process of economy wide decarbonisation, the Secretary of State accepts that there are likely to be some residual emissions from construction of national network infrastructure.</u></p>	<p><u>Regarding greenhouse gas emissions, Chapter 14 Climate of the ES APP-073) concludes that emissions arising from the construction phase and opening year of the Scheme together contribute 0.005% to the fourth carbon budget, which would not have a significant effect on climate.</u></p> <p><u>In terms of within the proposed development, the assessment also notes that transport was the largest emitting section of UK GHG emissions in 2020, contributing 24% of emissions. However, operational impacts associated with emissions are likely to be offset by the predicted future fleet wide shift toward electric and hybrid vehicles.</u></p> <p><u>Chapter 14 Climate of the ES APP-073) also covers operational emissions impacts cumulatively over the period 2027-2087.</u></p>
<p><u>5.46 – 5.47</u></p>	<p><u>The applicant should consider the potential direct and indirect impacts on ecosystems including the impacts on habitats and protected species and the interactions between these, and provide environmental information proportionate to the likely impacts of the infrastructure on biodiversity and nature. The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests as well as consider how their proposal will deliver Biodiversity net- gain in line with the requirements in a Biodiversity Gain Statement.</u></p>	<p><u>The ES Chapter 7 Biodiversity APP-066) considers the effects on biodiversity in detail.</u></p> <p><u>19.20 ha of species rich road verge will be created within the Order Limits, which will more than compensate for the loss of approximately 0.1 ha of lowland meadow priority habitat along the A4019. Furthermore, taking into account the embedded and essential mitigation measures proposed, significant residual effects in relation to biodiversity resources are not anticipated as a result of the Scheme.</u></p>

<u>NNNPS Paragraph No.</u>	<u>Relevant requirement of the National Networks NPS</u>	<u>Scheme compliance with the National Networks NPS</u>
		<p><u>In terms of reconnecting habitats and ecosystems, as part of the Biodiversity Net Gain initiative the Scheme will provide new planting which will strengthen the linear vegetation features within the Scheme and improve connectivity to the wider landscape. Wildlife crossing points will also be provided which will ensure continued habitat connectivity for badgers and prevent badger access to the carriageway. Ecologically sensitive design of structures such as culverts will also be incorporated into the Scheme, to maintain connectivity, continuity of flow, and natural substrate establishment.</u></p> <p><u>As part of the Scheme's objectives, the Scheme is targeting a net gain in biodiversity.</u></p> <p><u>An agreement on a package of measures to minimise, mitigate and compensate for the Scheme's biodiversity impacts wherever possible has also taken place following consultation with Natural England.</u></p>
5.48 – 5.5	<p><u>To avoid harm or disturbance in line with the mitigation hierarchy the applicant should demonstrate that:</u></p>	<p><u>The ES Chapter 7 Biodiversity (APP-066) considers all ecological features; identifies those that are of principal importance and assesses the residual effects appropriately. Alongside the identified embedded and enhanced mitigation measures, the chapter states that the Scheme includes habitat enhancement and new hedgerow planting. The Scheme will also provide bird nesting boxes on mature trees.</u></p> <p><u>The Scheme design has sought to minimise risks and impacts as far as is possible given the constraints of the Scheme. Where impacts could not be avoided appropriate mitigation measures have been proposed in line with the mitigation hierarchy. This is seen through some mitigation, compensation and enhancement measures being embedded at the design</u></p>

- developments are designed to avoid the risk of harm and to minimise the footprint of the development and/or to retain the site's important habitat features
- developments are designed and landscaped to provide green corridors and minimise habitat fragmentation (for example using underpasses or green bridges to link habitats)
- during construction, they will seek to ensure that activities will be confined to the minimum areas required for the works
- during construction and operation, best practice will be followed to ensure that risk of disturbance or damage to species or habitats follows the mitigation hierarchy (including as a consequence of transport access arrangements). For example, plan for construction work to be carried out at specific times to avoid sensitive times and location, such as the breeding season for wild birds and lifecycles of migratory fish.

If avoidance or reduction of harm is not possible, applicants should include appropriate mitigation measures, in line with the mitigation hierarchy, as an integral part of their proposed development, including identifying where and how these will be secured in the long term.

If avoidance or bespoke mitigation measures are insufficient or not possible, as a last resort, appropriate compensation measures should be sought and implemented. For example, moving protected species out of the development site and where practicable, restore habitats after construction works have finished.

stage to minimise or compensate for impacts on biodiversity, or to provide enhancements, as secured in the EMP (AS-025).

The REAC (AS-027) details the environmental mitigation measures that would be implemented both during construction and operation, why they are required, who is responsible for delivering them and detailing any ongoing maintenance arrangements.

<u>NNNPS Paragraph No.</u>	<u>Relevant requirement of the National Networks NPS</u>	<u>Scheme compliance with the National Networks NPS</u>
<u>5.51-5.52</u>	<p>The applicant should not just look to mitigate direct harms but should show how the project has taken advantage of opportunities to conserve and enhance biodiversity, having regard to any relevant Local Nature Recovery Strategy. Opportunities will be taken to enhance or expand existing habitats and create new habitats in accordance with biodiversity net gain requirements. Habitat creation, enhancement and management proposals should include measures for climate resilience, including appropriate species selection. Maintaining habitat connectivity is important for climate resilience and the biodiversity of ecological networks.</p> <p>Wider ecosystem services and benefits of natural capital should also be considered when designing enhancement measures in order to maximise multifunctional benefits whilst minimising land take. For example, this can be achieved through integration of biodiversity features within a sustainable drainage system; the use of green roofs and walls to harvest rainwater and ameliorate urban heating; or the restoration of rivers to reduce flood risk and provide attractive amenity areas.</p>	<p>The ES Chapter 7 Biodiversity APP-066) states that the Scheme will result in the creation of replacement habitat, which includes a net increase in broadleaved woodland, hedgerow planting and the creation of species-rich grasslands, shrubs and scrub. These new habitats are likely to support an abundance of invertebrate prey providing a foraging habitat for bats.</p> <p>These new replacement habitats contribute towards the overall Scheme BNG, as set out in the BNG assessment, which is included as an appendix to Chapter 7 Biodiversity of the ES (APP-066APP-066).</p>
<u>5.55</u>	<p>As a general principle, and subject to the specific policies below, development should, at first avoid significant harm to biodiversity and geological conservation interests, including through consideration of reasonable alternatives. If avoidance is not possible, mitigation needs to be considered (as set out in paragraphs 5.48 to 5.52 above). Where significant harm cannot be avoided or mitigated it should be compensated for as a last resort, with on-site mitigation being considered prior to off-site. The</p>	<p>The ES Chapter 7 Biodiversity (APP-066) outlines the effects on sites, habitats and species.</p> <p>The chapter states that mitigation, compensation and enhancement measures have been embedded at the design stage to minimise or compensate for impacts on biodiversity, or to provide enhancements. Existing vegetation has been retained as far as possible. Embankments have also been designed to retain habitats as far as possible. Full details of avoidance</p>

<u>NNNPS Paragraph No.</u>	<u>Relevant requirement of the National Networks NPS</u>	<u>Scheme compliance with the National Networks NPS</u>
	<u>Secretary of State will give significant weight to any residual harm.</u>	<u>measures within the Scheme design are set out in ES Chapter 7 Biodiversity (APP-066).</u> <u>This demonstrates that with the avoidance, mitigation and compensation measures in place, no long-term residual impacts of significance are predicted for any notable species. Significant residual effects in relation to biodiversity resources are not anticipated as a result of the Scheme.</u>
5.7	<u>The applicant should demonstrate that they will adhere to the waste hierarchy, preventing and reducing waste produced in the first place and maximising preparation for reuse and recycling for waste that cannot be prevented. Where possible, applicants are encouraged to use existing materials first, then low carbon materials, sustainable sources, and local suppliers. Consideration should be given to circular economy principles wherever practicable, for example by using longer lasting materials efficiently, optimising the use of secondary materials and how the development will be maintained and decommissioned. Applicants should consider and take into account emerging government policy, including Maximising Resources, Minimising Waste, constituting the new Waste Prevention Programme for England¹⁰⁴ and Defra’s Construction Code of Practice for the Sustainable Use of Soils on Construction Sites, which provides practical guidance on how to improve appropriate soil reuse on construction sites and reducing the volume that is sent to landfill.</u>	<u>Chapter 12 Materials and Waste of the ES (APP-071) states that during construction, the effect of material asset use and waste generation is estimated to be slight adverse. During operation there will be negligible material asset use or waste generation.</u> <u>Mitigation that follows the waste hierarchy is expected to be applied during detailed design and construction which will lead to material asset use and waste generation prevention, reduction, reuse, recycling, and recovery. In particular during construction this includes reuse of waste, use of aggregates with minimum 22% recycled content and recovery of 95% of wastes that are managed offsite.</u> <u>Regarding soils, surplus soils from the footprint of the Scheme are expected to be sustainably re-used, which should add benefits with regards to materials and waste for the Scheme.</u>
5.74	<u>Large infrastructure projects may generate hazardous and non-hazardous waste during construction and operation. The Environmental Permitting regime, regulated by the Environment Agency in England,</u>	<u>Any necessary waste management permits will be obtained as set out in the Environmental Management</u>

<u>NNNPS Paragraph No.</u>	<u>Relevant requirement of the National Networks NPS</u>	<u>Scheme compliance with the National Networks NPS</u>
	<p><u>incorporates operational waste management requirements for certain activities. Applicants should therefore give consideration to the Environmental Permitting regime and whether this applies to their development, including the Environmental Permitting requirements.</u></p>	<p><u>Plan (AS-025) and the Consents and Agreements Position Statement (APP-033).</u></p>
<p><u>5.71</u></p>	<p><u>The Secretary of State should consider the extent to which the applicant has proposed an effective process that will be followed to ensure safe and effective management of waste arising from the construction and operation of the proposed development. It is advised that this is detailed in the dedicated plans summarising the sustainable use of resources and waste for both construction and operation as part of the application documentation. The Secretary of State should be satisfied that the process sets out:</u></p> <ul style="list-style-type: none"> <u>• adequate steps have been taken to minimise the volume of waste arising and maximise opportunities for reuse and recycling</u> <u>• how waste will be managed, both on-site and off-site</u> <u>• that consideration has been given to available waste management infrastructure capacity to manage wastes arising from the development.</u> 	<p><u>Measures for managing waste and materials are proposed, alongside details of their implementation, measuring and monitoring, within Chapter 12 Materials and Waste of the ES (APP-071).</u></p> <p><u>The REAC (AS-027) contains the waste mitigation measures that would be implemented, why they are required, who is responsible for delivering them, and any ongoing maintenance arrangements.</u></p>
<p><u>5.120 – 5.122</u></p>	<p><u>The applicant should assess the potential for emissions of odour, dust, steam, smoke and artificial light to have a detrimental impact on amenity.</u></p>	<p><u>The Statement of Statutory Nuisances (application document TR010063-(APP-134-6-16) considers nuisance caused by dust, odour, artificial light, smoke and steam. The ES Chapter 5 Air Quality (AS-012) considers effects relating to air quality.</u></p>

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	<p><u>In particular, the assessment provided by the applicant should describe:</u></p> <ul style="list-style-type: none"> • <u>the type and quantity of emissions</u> • <u>aspects of the development which may give rise to emissions during construction, operation and decommissioning</u> • <u>premises, locations or species that may be affected by the emission</u> • <u>effects of the emission on identified premises or locations</u> • <u>measures to be employed in preventing or mitigating the emissions</u> <p><u>The applicant is advised to consult the relevant local environmental health team and, where appropriate, the Environment Agency about the scope and methodology of the assessment.</u></p>	<p><u>The construction activities that have the potential to create a nuisance will be controlled through strict compliance with the implementation of the environmental measures identified in the Environmental Management Plan (APP-136AS-025).</u></p>
5.123	<p><u>The Secretary of State should ensure the applicant has provided sufficient information to show that any necessary mitigation will be put into place. In particular, the Secretary of State should consider whether to require the applicant to abide by a scheme of management and mitigation concerning emissions of odour, dust, steam, smoke, artificial light from the development to reduce any loss to amenity which might arise during the construction and operation of the development. This should be detailed within a Statement Relating to Statutory Nuisance.</u></p>	<p><u>The Statement of Statutory Nuisances (APP-134) considers nuisance caused by dust, odour, artificial light, smoke and steam. The document sets out measures for:</u></p> <ul style="list-style-type: none"> • <u>Mitigating the generation of dust on construction sites</u> • <u>Measures to control dust during construction</u> • <u>Lighting arrangements for night-time working to mitigate the effects of lighting</u> • <u>Measures to reduce noise effects during construction</u>

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		<u>These measures are also outlined within the REAC (AS-027).</u>
<u>5.126-5.128</u>	<p><u>The National Planning Policy Framework is clear that inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk (whether existing or future). Where development is necessary, it should be made safe without increasing flood risk elsewhere</u></p> <p><u>The Sequential Test ensures that a sequential, risk-based approach is followed to steer new development to areas with the lowest risk of flooding from any source¹¹². All projects should apply the sequential approach to locating development within the site.</u></p> <p><u>The Exception test provides a method of allowing necessary development to go ahead in situations where suitable sites at lower risk of flooding are not available. It assesses the safety of a site, including whether the proposed development will be safe from flooding for its lifetime. The Exception Test should only be applied if, once the Sequential Test has been satisfactorily applied, it has not proved possible for the development to be located in areas with a lower risk of flooding. For the Exception Test to be passed:</u></p> <p><u>it must be demonstrated that the project provides wider sustainability benefits to the community that outweigh flood risk. A</u></p> <p><u>a Flood Risk Assessment must demonstrate that the project will be safe for its lifetime, without increasing</u></p>	<p><u>The Flood Risk Assessment (APP-070) describes how the Scheme is considered to be essential infrastructure. The FRA demonstrates that the Exception Test has been passed, making clear that although there will be a minor increase in flood levels and the probability and duration of flooding in very small areas of the Scheme, the impacts are acceptable and there will be no material change in flood risk. Even though some of the impacts are significant in EIA terms, due to the application of DMRB methodology, there is no material increase in flood risk and therefore the Scheme passes the Exception Test.</u></p>

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	<u>flood risk elsewhere and, where possible, will reduce flood risk overall.</u>	
5.131	<p><u>Applications for projects in the following flood zone locations should be accompanied by a Flood Risk Assessment:</u></p> <ul style="list-style-type: none"> • <u>Applications in flood Zones 2 and 3, which represent a medium and high probability of river and sea flooding</u> • <u>Applications in flood Zone 1 (a low probability of river and sea flooding) involving sites of 1 hectare or more; land which has been identified by the Environment Agency as having critical drainage problems; land identified in a strategic flood risk assessment as being at increased flood risk in future; or land that may be subject to other sources of flooding, where its development would introduce a more vulnerable use</u> • <u>Applications where there is less than 1 ha in flood zone 1, including a change of use in development type to a more vulnerable class (for example from commercial to residential), where they could be affected by sources of flooding other than rivers and the sea (for example surface water drains, reservoirs)</u> 	<p><u>The Scheme crosses the floodplains of the River Chelt and Leigh Brook. The FRA (APP-070) reports that the Scheme will not affect floodplain storage.</u></p> <p><u>The Flood Risk Assessment (APP-070) presents a final detailed assessment of flood risk to the Scheme.</u></p>
5.132 – 5.133	<u>The Flood Risk Assessment should identify and assess the risks of all forms of flooding and coastal erosion to and from the project and demonstrate how these flood risks will be managed, taking climate change into account.</u>	<u>The Flood Risk Assessment (APP-070) presents a final detailed assessment of flood risk to the Scheme. The fluvial assessment demonstrates that the Scheme is appropriate in terms of flood risk, having passed Part B of the Exception Test, by demonstrating that flood risk</u>

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	<p><u>In preparing a Flood Risk Assessment the applicant should:</u></p> <ul style="list-style-type: none"> • <u>consider the risk of all forms of flooding arising from the project (including in adjacent parts of the United Kingdom), in addition to the risk of flooding to the project, and demonstrate how these risks will be managed and, where relevant, mitigated, so that the development remains safe throughout its lifetime</u> • <u>take the impacts of climate change into account, clearly stating the development lifetime over which the assessment has been made</u> • <u>demonstrate how residual risks to and from reservoirs will be safely managed and/ or mitigated</u> • <u>consider the vulnerability of those using the infrastructure including arrangements for safe access and escape</u> • <u>include the assessment of the remaining (known as ‘residual’) risk after risk reduction measures have been taken into account and demonstrate that this is acceptable for the particular project</u> • <u>consider if there is a need to remain operational during a worst-case flood event over the development’s lifetime provide the rationale for the Secretary of State on the application of the Sequential Test and Exception Test, as appropriate</u> 	<p><u>is not increased elsewhere as a result of those measures.</u></p> <p><u>The Scheme’s embedded mitigation (including compensatory floodplain and storage areas) ensures that any fluvial flood effects are acceptable in the context of receptor vulnerability and sensitivity.</u></p> <p><u>The assessment of surface water flood risk has shown that the Scheme is not at significant risk from this source of flooding. While there are parts that intersect areas at pluvial flood risk any flood risks associated with this can readily be mitigated through incorporating appropriate landform and drainage measures.</u></p> <p><u>The assessment also takes into account the impacts on climate change and resilience over the lifetime of the development. The Scheme will not be at significant risk of flooding, and the Scheme should not result in a material increase in flood risk to third parties.</u></p>
<p><u>5.134</u></p>	<p><u>Applicants for projects which may be affected by, or may add to, flood risk should seek sufficiently early</u></p>	<p><u>Discussions with stakeholders, including the Environment Agency, has taken place regarding the</u></p>

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	<p><u>pre-application discussions, before the official preapplication stage of the NSIP process with the Environment Agency, and, where relevant, other flood risk management bodies such as lead local flood authorities, Internal Drainage Boards, sewerage undertakers, and highways authorities. Such discussions can be used to identify the likelihood and possible extent and nature of the flood risk, to help scope the Flood Risk Assessment, and identify the information that will be required by the Secretary of State to reach a decision on the application once it has been submitted and examined. If the Environment Agency has concerns about the proposal on flood risk grounds, the applicant should discuss these concerns with the Environment Agency and look to agree ways in which the proposal might be amended, or additional information provided, which would satisfy the Environment Agency's concerns, before the application for development consent is submitted.</u></p>	<p><u>FRA from the start of the project. This continues to take place through the development of the SoCGs. Consultation was undertaken with Gloucestershire County Council as the Lead Local Flood Authority (LLFA), specifically for the flood risk elements relating to the Leigh Brook (an Ordinary Watercourse) and the minor watercourses at the B4634. For matters relating to the River Chelt and Leigh Brook, the LLFA referred to the Environment Agency. For the minor watercourses, at the B4634, the LLFA challenged the findings and further modelling was undertaken. The resulting technical note and findings were subsequently accepted by the LLFA with no objections. The Baseline and Scheme models and their accompanying reports were also reviewed by external consultants on behalf of the EA. The EA deemed both models appropriate, such that the results from the models can be used to support the FRA and the ES.</u></p>
<p><u>5.136</u></p>	<p><u>Proposals should prioritise the use of sustainable drainage systems unless there is clear evidence that this would be inappropriate. A drainage strategy should also be produced and submitted as part of the Flood Risk Assessment.</u></p>	<p><u>The proposed junction upgrades for the Scheme present an increase in the impermeable footprint of the existing highway, which will generate greater amounts of surface water runoff compared to the current situation. The proposed highway drainage strategy (ES Appendix 2.1 and 2.2 (APP-079) outlines the applicant's proposed approach to drainage which will replicate the site's existing hydrology through SuDS principles.</u></p>
<p><u>5.139-5.142</u></p>	<p><u>Site layout and surface water drainage systems should cope with events that exceed the design capacity of the system, so that excess water can be safely stored on or conveyed from the site without adverse impacts.</u></p>	<p><u>The proposed highway drainage strategy (ES Appendix 2.1 and 2.2 (APP-079) outlines the applicant's proposed approach to drainage which will replicate the site's existing hydrology through SuDS principles.</u></p>

<u>NNNPS Paragraph No.</u>	<u>Relevant requirement of the National Networks NPS</u>	<u>Scheme compliance with the National Networks NPS</u>
	<p><u>The surface water drainage arrangements for any project should be such that the volumes and peak flow rates of surface water leaving the site are no greater than the rates prior to the proposed project unless specific off-site arrangements are made and result in the same net effect.</u></p> <p><u>If there are no viable Sustainable Drainage Systems options available, it may be necessary to provide surface water storage and infiltration to limit and reduce both the peak rate of discharge from the site and the total volume discharged from the site. There may be circumstances where it is appropriate for infiltration attenuation storage to be provided outside the project site, if necessary, through the use of a planning obligation.</u></p> <p><u>The sequential approach should be applied to the layout and design of the project. Vulnerable uses should be located on parts of the site at lower probability and residual risk of flooding. Applicants should seek opportunities to use open space for multiple purposes such as amenity, wildlife habitat and flood storage uses. Opportunities can be taken to lower flood risk by improving flow routes, flood storage capacity and using Sustainable Drainage Systems.</u></p>	
5.144	<p><u>The Secretary of State should not consent development in flood risk areas (including flood zones 2 and 3 and locations at risk of flooding from local watercourses, surface water, groundwater or reservoirs) accounting for the predicted impacts of climate change unless they are satisfied that the sequential test requirements have been met. In addition, the Secretary of State should not consent development in Flood Zone 3 unless they are satisfied</u></p>	<p><u>The Flood Risk Assessment (APP-070) demonstrates that the Scheme is appropriate in terms of flood risk, having passed Part B of the Exception Test, by demonstrating that although there will be a minor increase in flood levels and the probability and duration of flooding in very small areas of the Scheme, that the impacts are acceptable and there will be no material change in flood risk. Even though some of the impacts are significant in EIA terms, due to the application of</u></p>

<u>NNNPS Paragraph No.</u>	<u>Relevant requirement of the National Networks NPS</u>	<u>Scheme compliance with the National Networks NPS</u>
	<u>that both the Sequential and Exception Test requirements have been met.</u>	<u>DMRB methodology, there is no material increase in flood risk and therefore the Scheme passes the Exception Test.</u>
<u>5.129 – 5.131</u>	<p><u>If, following application of the Sequential Test, it is not possible, consistent with wider sustainability objectives, for the project to be located in zones of lower probability of flooding than Flood Zone 3a, the Exception Test can be applied. Flood Zone 3a applies when land has a 1 in 100 or greater annual probability of river flooding. The Exception Test provides a method of managing flood risk while still allowing necessary development to occur.</u></p> <p><u>The Exception Test should only be applied once the Sequential Test has been satisfactorily applied.</u></p> <p><u>Both elements of the test will have to be passed for development to be consented. For the Exception Test to be passed:</u></p> <ul style="list-style-type: none"> <u>• it must be demonstrated that the project provides wider sustainability benefits to the community that outweigh flood risk.</u> <u>• a Flood Risk Assessment must demonstrate that the project will be safe for its lifetime, without increasing flood risk elsewhere and, where possible, will reduce flood risk overall.</u> 	<p><u>The Scheme's adherence to the requirements of the Exception Test is detailed in the FRA (APP-070). The FRA concludes that although there will be a minor increase in flood levels and the probability and duration of flooding in very small areas of the Scheme, the impacts are acceptable and there will be no material change in flood risk. Even though some of the impacts are significant in EIA terms, due to the application of DMRB methodology, there is no material increase in flood risk and therefore the Scheme passes the Exception Test.</u></p>
<u>5.138 – 5.1422</u>	<p><u>To satisfactorily manage flood risk and the impact of the natural water cycle on people, property and ecosystems, good design and infrastructure may need to be secured using requirements or planning obligations. This may include the use of Sustainable Drainage Systems but could also include vegetation to help to slow runoff, hold back peak flows and make</u></p>	<p><u>The proposed highway drainage strategy (ES Appendix 2.1 and 2.2 (TR010063-APP-6.15APP-079)) outlines the applicant's proposed approach to drainage which will replicate the site's existing hydrology through SuDS principles.</u></p> <p><u>The surface water drainage strategy will replicate the existing hydrology within the land occupied by the</u></p>

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	<p><u>landscapes more able to absorb the impact of severe weather events.</u></p> <p><u>Site layout and surface water drainage systems should cope with events that exceed the design capacity of the system, so that excess water can be safely stored on or conveyed from the site without adverse impacts.</u></p> <p><u>The surface water drainage arrangements for any project should be such that the volumes and peak flow rates of surface water leaving the site are no greater than the rates prior to the proposed project unless specific off-site arrangements are made and result in the same net effect.</u></p> <p><u>If there are no viable Sustainable Drainage Systems options available, it may be necessary to provide surface water storage and infiltration to limit and reduce both the peak rate of discharge from the site and the total volume discharged from the site. There may be circumstances where it is appropriate for infiltration attenuation storage to be provided outside the project site, if necessary, through the use of a planning obligation.</u></p> <p><u>The sequential approach should be applied to the layout and design of the project. Vulnerable uses should be located on parts of the site at lower probability and residual risk of flooding. Applicants should seek opportunities to use open space for multiple purposes such as amenity, wildlife habitat and flood storage uses. Opportunities can be taken to lower flood risk by improving flow routes, flood storage capacity and using Sustainable Drainage Systems.</u></p>	<p><u>Scheme through SuDS principles. Offset gullies are proposed for the collection of rainwater runoff from the M5 mainline, which connects to carrier drains. For the Link Road, swales and filter drains serve as the collection systems. Attenuation basins are also provided.</u></p> <p><u>The FRA (APP-070) reports that the drainage system will be designed in line with current NH Standards (DMRB) to ensure that runoff from the new impermeable area does not exceed the greenfield rate up to the 1 in 100 (1%) annual probability event, taking into account climate change. The Scheme design has incorporated a drainage strategy that centres on the application of SuDS, appropriate to local conditions, to manage surface water runoff.</u></p>

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5.146	<p><u>In addition, any project that is classified as ‘essential infrastructure’ and proposed to be located in Flood Zone 3a or b should be designed and constructed to remain operational and safe for users in times of flood; and any project in Flood Zone 3b should result in no net loss of floodplain storage and not impede water flows.</u></p>	<p><u>Details regarding the Scheme remaining operational at times of floods are available in Chapter 8: Road Drainage and the Water Environment (application document TR010063/APP/6.6) in sections 8.7.60 to 8.7.67.</u></p> <p><u>Details around flood plain storage are available in Appendix 8.1 Flood Risk Assessment Part 1 of 2 (application documents TR010063/APP/6.15AS-023). It is not anticipated that there will be any flood plain loss as the Scheme includes compensatory floodplain and flood storage.</u></p>
5.149 – 5.150	<p><u>The design of linear infrastructure and the use of embankments in particular, may mean that linear infrastructure can reduce the risk of flooding for the surrounding area while also offering opportunities to enhance biodiversity. It should be demonstrated that there is no increase in flood risk elsewhere. In such cases the Secretary of State should take account of any positive benefits to placing linear infrastructure in a flood risk area.</u></p> <p><u>Where linear infrastructure has been proposed in a flood risk area, the Secretary of State should expect reasonable mitigation measures to have been made, to ensure that infrastructure remains functional in the event of predicted flooding.</u></p>	<p><u>The FRA (APP-070) sets out the Scheme’s adherence to the requirements of the Exception Test as although there will be a minor increase in flood levels and the probability and duration of flooding in very small areas of the Scheme, the impacts are acceptable and there will be no material change in flood risk. Even though some of the impacts are significant in EIA terms, due to the application of DMRB methodology, there is no material increase in flood risk and therefore the Scheme passes the Exception Test.</u></p> <p><u>Embedded mitigation measures include the development of a flood management plan and a construction drainage strategy to address the temporary management of surface waters to ensure flood risk to the surrounding area is not increased.</u></p> <p><u>Consultation with affected landowners is being undertaken to ensure that they are fully aware of the small increases in peak flood levels and find them acceptable.</u></p>

<u>NNNPS Paragraph No.</u>	<u>Relevant requirement of the National Networks NPS</u>	<u>Scheme compliance with the National Networks NPS</u>
		<p>A right is also being sought through the DCO process to permit some increased depth of flood on farmland both upstream and downstream of the Link Road on farmland between the B4634 and Withybridge Lane.</p>
5.151	<p>For construction work which has drainage implications, approval for the project's drainage system will form part of any development consent issued by the Secretary of State. The Secretary of State will therefore need to be satisfied that the proposed drainage system complies with Technical Standards published by Ministers. In addition, the Development Consent Order, or any associated planning obligations, will need to make provision for the adoption and maintenance of any Sustainable Drainage Systems, including any necessary access rights to property. Sustainable Drainage Systems should deliver multifunctional benefits and help to achieve biodiversity net gain. The Secretary of State should be satisfied that the most appropriate body is being given the responsibility for maintaining any Sustainable Drainage Systems, taking into account the nature and security of the infrastructure on the proposed site. The responsible body could include, for example, the applicant, the landowner, the relevant local authority and the relevant Sustainable Drainage Systems Approval Body or another body such as the Internal Drainage Board. Where infiltration type Sustainable Drainage Systems are proposed, preapplications with the Environment Agency are recommended to ensure they do not cause pollution to surface and groundwater quality and applicants should</p>	<p>The drainage strategy is available within Drainage Strategy Report (APP-079). The report details access measures required such as the use of a maintenance access corridor of 8m being provided around the pond perimeter for attenuation basin design. Additionally, arrangements for maintenance are set out in section 3.9. The Scheme will be managed by GCC who are is also the Applicant.</p> <p>Furthermore, The Scheme is not anticipated to have any drainage implications during construction as concluded in section 8.9 of Road Drainage and the Water Environment (APP-049). Any implications are likely to be temporary in nature and will be mitigated through good engineering practise.</p>

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	<p><u>consider the role of Sustainable Drainage Systems management trains to control and treat run-off.</u></p>	
<p><u>5.154 – 5.156</u></p>	<p><u>Where necessary, land contamination and instability should be considered in respect of new development. Specifically, proposals should be appropriate for the location, including preventing unacceptable risks from land contamination or instability. If land instability and/or land contamination may be an issue, applicants should seek appropriate technical and environmental expert advice from a competent person to prepare and carry out the appropriate assessments. Applicants should consult with the Coal Authority, Environment Agency and Local Authority if necessary.</u></p> <p><u>For developments on previously developed land, applicants should ensure and demonstrate that they have considered the risks posed by land contamination in accordance with the Land Contamination Risk Management guidance¹¹⁵. A preliminary assessment of land contamination and/or ground instability should be carried out at the earliest possible stage before a detailed application for development consent is prepared.</u></p> <p><u>Applicants should ensure that any necessary investigations are undertaken, in accordance with Land Contamination Risk Management guidance, to ascertain the risk from contamination and identify sensitive receptors and that their sites are, and will, remain stable or can be made so as part of the development. The site needs to be assessed in the context of surrounding areas where subsidence, landslides and land compression could threaten the development during its anticipated life or damage</u></p>	<p><u>The Ground Investigation Report (APP-124 sets out the land instability assessment associated with the Scheme. The report includes a technical framework for identifying and remediating contamination through the application of a risk management process. The report states that the overall contamination risk associated with the site is considered to be low for human health receptors.</u></p> <p><u>ES Chapter 10 Geology and Soils (APP-069) sets out the baseline in terms of the ground conditions, soil and geology characteristics for the Scheme. The baseline conditions section states that it is unlikely that there is an unacceptable risk to human health from soils across the M5, A4019 and Link Road areas. No visual indicators of contamination were recorded in any of the locations progressed during the investigation.</u></p>

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	<u>neighbouring land or property. This could be in the form of a land stability or slope stability risk assessment report.</u>	
<u>5.157</u>	<p><u>Applicants have a range of mechanisms available to mitigate and minimise risks of land instability. These include:</u></p> <ul style="list-style-type: none"> • <u>Establishing the principle and layout of new development, for example avoiding mine entries and other hazards</u> • <u>Ensuring proper design of structures to cope with any movement expected, and other hazards such as mine and/or ground gases</u> • <u>Requiring ground improvement techniques, usually involving the removal of poor material and its replacement with suitable inert and stable material. For development on land previously affected by mining activity, this may mean prior extraction of any remaining mineral resource</u> 	<u>Section 8 of the Ground Investigation Report (APP-124) sets out the Geotechnical Risk Register which includes various mitigation measures relating to land instability.</u>
<u>5.158</u>	<u>Applicants should submit a coal mining risk assessment as part of their application in specific Development High Risk areas.</u>	<u>Section 2.5 of Ground Investigation Report (APP-124) identifies that the Scheme area is not within a coal mining reporting area, with no coal mining related hazards mapped within 18 km.</u>
<u>5.161 – 5.162</u>	<u>The applicant should carry out a landscape and visual impact assessment. A number of guides have been produced to assist in addressing landscape issues, for example, the third edition of Guidelines for Landscape and Visual Impact Assessment (GLVIA3) published by the Landscape Institute 116. The landscape and visual assessment for the proposed project should include</u>	<u>Chapter 9 Landscape and Visual of the ES (APP-068) sets out the potential landscape and visual impacts associated with the construction and operation of the Scheme. The proposed landscape mitigation measures seek to ensure an attractive visual appearance of the Scheme. The chapter also states that although significant adverse effects may be experienced during</u>

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	<p><u>the impacts during construction and operation, and reference to any landscape character assessments. The applicant's assessment should also take account of any relevant policies based on these assessments in local development documents in England. For seascapes, applicants should consult the Seascape Character Assessment and the Marine Plan Seascape Character Assessments, and any successors to them.</u></p> <p><u>The assessment should include the visibility and conspicuousness of the project during construction and of the presence and operation of the project, potential impacts on views (including protected views) and visual amenity. This should include any noise and/or light pollution effects, including on local amenity, dark skies, tranquillity, and nature conservation. The assessment should also demonstrate how noise and/or light pollution from construction and operational activities on residential amenity, sensitive locations, and other receptors will be minimised. The assessment should also consider identified special qualities for National Parks, the Broads and Areas of Outstanding Natural Beauty (now known as National Landscapes) (as set out in the management plans for these designations).</u></p>	<p><u>construction and initially upon completion, once the designed-in mitigation has been established and matured, the Scheme would not have any long-term significant adverse effects on landscape character or visual amenity, and in some cases may provide beneficial effects.</u></p>
<p><u>5.164 – 5.166</u></p>	<p><u>The project should be designed, and the scale minimised, to avoid or where unavoidable, mitigate the visual and landscape effects, during construction and operation, so far as is possible while maintaining the operational requirements 86 of the scheme. In exceptional circumstances a reduction in operational requirements might be warranted, and the Secretary of State may decide that the benefits to reduce the landscape effects outweigh the marginal loss of scale</u></p>	<p><u>The Scheme design and landscaping proposals will conserve and enhance the environment through embedded mitigation measures. ES Chapter 7 Biodiversity (APP-066) and Chapter 9 Landscape and Visual (APP-068) outline the specific mitigation measures and landscape design features which ensure the conservation and enhancement of the environment with reference to areas of landscape and biodiversity importance.</u></p>

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	<u>or function. Projects function. Projects need to be designed carefully, taking account of the potential impact on the landscape. standards.</u>	<u>Replanting to roadsides and other embedded mitigation measures will ensure the Scheme will sit comfortably within the landscape in the long term, and would potentially provide an enhancement of the environment to improve the experience for residents, pedestrians, cyclists, and vehicle users.</u>
5.168	<u>Applicants should consider how landscapes can be enhanced using landscape management plans, as this will help to enhance environmental assets where they contribute to landscape and townscape quality, and can reinforce or enhance landscape features and character.</u>	<u>Chapter 9 Landscape and Visual of the ES (APP-068) describes the landscape mitigation and enhancement measures for the Scheme. Full details of mitigation measures can be found in the Environmental Master Plan Part 1 and Part 2 (APP-027 and APP-028 respectively) which includes details on screening and planting.</u>
5.184	<u>The applicant should identify existing and proposed proposed land uses near the project, any effects of replacing an existing development or use of the site with the proposed project, or preventing a development or use on a neighbouring site from continuing. Applicants should also assess any effects of precluding a new development or use proposed in the development plan. The assessment should be proportionate.</u>	<u>ES Chapter 13 Population and Human Health (AS-014) considers the existing and proposed land uses within the Scheme study area and assesses the effect of the Scheme on the identified receptors.</u>
5.186	<u>The applicant should engage in pre-application discussions with the local planning authority and other regulatory bodies at the earliest opportunity. It is essential that engagement is meaningful and supported where necessary by Statements of Common Ground. Discussions will cover a range of potential local impacts and issues, and the local planning authority should identify any concerns it has about the impacts of the application on land-use, having regard to the development plan and relevant</u>	<u>The project team have liaised with the three host authorities and other regulatory bodies from the earliest available opportunity. This has resulted in the development of the Statements of Common Ground (SoCG) with key stakeholders.</u> <u>It should also be noted that, separate to NH's role as a statutory consultee, NH also acted as a project technical reviewer, providing review comments on the suite of technical deliverables which form the DCO application.</u>

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	<p><u>applications. This includes, where relevant, whether it agrees with any independent assessment that the land is surplus to requirements. These are also matters that local authorities may wish to include in their Local Impact Report which is submitted during examination and after an application for development consent has been accepted.</u></p>	
<p><u>5.187</u></p>	<p><u>The general policies controlling development in the countryside apply with equal force in Green Belts but there is, in addition, a general presumption against inappropriate development within them. Such development should not be approved except in very special circumstances. Applicants should therefore determine whether their proposal, or any part of it, is within an established Green Belt and, if so, whether their proposal may be considered inappropriate development within the meaning of Green Belt policy. Metropolitan Open Land, and land designated as Local Green Space in a local or neighbourhood plan, are subject to the same policies of protection as Green Belt, and inappropriate development should not be approved except in very special circumstances</u></p>	<p><u>The Scheme is located partially within the Gloucester and Cheltenham Green Belt. The Scheme is located partially within the Gloucester and Cheltenham Green Belt.</u></p> <p><u>As outlined in paragraphs 7.6.8 to 7.6.27 of this Statement, the Scheme is not considered to be inappropriate development in policy definition terms, in the Green Belt. The Scheme preserves the Green Belt's openness and does not conflict with the purposes of the Green Belt.</u></p> <p><u>With the benefits considered cumulatively, the Scheme would therefore amount to 'very special circumstances' within the Green Belt, which would allow for development in the event that the Scheme is considered 'inappropriate development' within the Green Belt.</u></p> <p><u>The Scheme can be described as an engineering operation and the alteration of existing local transport infrastructure which can demonstrate a requirement for a Green Belt location, as set out in Paragraph 150 of the NPPF. As this infrastructure exists, it demonstrates a requirement for its location within the Green Belt. Therefore, the Scheme is considered to not be inappropriate in the Green Belt, providing the Scheme</u></p>

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		<p><u>preserves the Green Belt's openness and does not conflict with the purposes of the Green Belt, as set out in Paragraph 138 of the NPPF.</u></p> <p><u>Full details on the Green Belt assessment for the Scheme is found in Section 7.65 of this document.</u></p>
<p><u>5.189 – 5.190</u></p>	<p><u>Applicants should take into account the economic and other benefits of the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification). Where significant development of agricultural land is demonstrated to be necessary, applicants should seek to use areas of poorer quality land in preference to that of a higher quality. Applicants should also identify any effects, and seek to minimise impacts, on soil health and protect and improve soils, taking into account any mitigation measures proposed. Soil is an important natural capital resource, providing many essential services such as storing carbon (also known as a carbon sink), reducing the risk of flooding, providing wildlife habitats and delivering global food supplies. Guidance on sustainable soil management can be found in Defra's Construction Code of Practice for the Sustainable Use of Soils on Construction Sites. As a first principle, developments should be on previously developed (brownfield) sites provided that it is not of high environmental value (see paragraphs 5.152 to 5.159)..</u></p> <p><u>The Agricultural Land Classification¹²¹ is the only approved system for grading agricultural quality in England and Wales. If necessary, field surveys should be used to establish the Agricultural Land Classification grades in accordance with the current grading criteria, or any successor to it and identify the</u></p>	<p><u>Chapter 10 Geology and Soils of the ES (APP-069) assesses the impact of the Scheme on agricultural land, including the impact on farms and land-based enterprises with particular emphasis on agricultural quality of soils and the best and most versatile (BMV) land.</u></p> <p><u>The Scheme has been designed so as to minimise the permanent loss of BMV. Impacts on BMV agricultural land have been assessed and mitigation measures have been identified to minimise impacts on soil quality.</u></p> <p><u>The chapter states that although agricultural land is anticipated to have permanent restrictions due to being located within a flood storage area, the land will be returned to its original use upon operation of the Scheme.</u></p> <p><u>Chapter 13 Population and Human Health of the ES (AS-014) includes an assessment on agricultural land holdings. This includes the grading of agricultural quality as part of the baseline conditions.</u></p>

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	<p><u>soil types to inform soil management at the construction, operation and decommissioning phases in line with the Defra Construction Code122. Applicants are encouraged to develop and implement a Soil Resources and Management Plan which could help to use and manage soils sustainably and minimise adverse impacts on soil health and potential land contamination. This is to be in line with the ambition set out in the Environmental Improvement Plan for sustainable management of agricultural soils.</u></p>	
<p><u>5.191</u></p>	<p><u>Applicants should safeguard any mineral resources on the proposed site as far as possible. Taking into account the policies of the Minerals Planning Authority, applicants should consider whether prior extraction of the minerals would be appropriate.</u></p>	<p><u>The Applicant has implemented the waste hierarchy to prevent, reduce, reuse, recycle and recover materials in the construction and operation of the Scheme. ES Chapter 12 – Materials and Waste (APP-071) outlines details of how suitable design and embedded mitigation measures have been incorporated with the Scheme.</u></p>
<p><u>5.192</u></p>	<p><u>Applicants can avoid, or minimise, the direct effects of a project on the existing use of the proposed site or proposed uses near the site, by the application of good design principles, including the layout of the project and the protection of soils during construction.</u></p>	<p><u>The full set of mitigation measures are set out within the Environmental Management Plan (EMP) (AS-025) which supports this DCO application and reflects the mitigation measures set out in the REAC (AS-027). These mitigation measures significantly reduce the adverse impacts of the Scheme and have been developed utilising best practice measures, liaison with relevant LPA representatives and engagement with affected landowners.</u></p>
<p><u>5.193</u></p>	<p><u>Where green infrastructure is affected, applicants should aim to ensure the functionality and connectivity of the green infrastructure network is maintained and any necessary works are undertaken, where possible, to mitigate any adverse impact. Applicants should endeavour to improve networks and other areas of</u></p>	<p><u>Chapter 13 Population and Human Health of the ES (AS-014) provides details of the replacement and enhanced PRoW included in the Scheme, which will improve connectivity and amenities for walkers, cyclists and equestrians.</u></p>

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	<u>open space, including appropriate access to new coastal access routes, National Trails and other public rights of way.</u>	<u>This PRoW network will be preserved and enhanced in order to retain access to green space and the green infrastructure network which is largely located outside of the study area.</u>
5.195	<u>Existing trees and woodlands should be retained where possible. The applicant should assess the impacts on, and loss of, all trees and woodlands within the project boundary and develop mitigation measures to minimise adverse impacts and any risk of net deforestation as a result of the scheme. Mitigation may include the use of buffers to enhance resilience, improvements to connectivity, and improved woodland management. Where woodland loss is unavoidable, compensation schemes will be required, and the long-term management and maintenance of newly planted trees should be secured.</u>	<u>Chapter 9 Landscape and Visual (APP-068) details how the selection and refinement of the preferred Scheme option has reduced potential impacts on the loss of trees, hedgerows and woodland.</u> <u>The Scheme will provide the replacement of woodland and scrub along the M5 and around the new junction to reinstate the screening effect and integrate back into the landscape. Individual trees to central reserves and verges to integrate the realigned A4019 route will also be provided. Hedgerow will also be provided along the Link Road with supplementary blocks of wood and individual trees to reflect the local character of road infrastructure and provide some screening for visual receptors.</u>
5.198 – 5.199	<u>Public rights of way, National Trails, and other rights of access to land (for example, open access land) are important recreational facilities for pedestrians, wheelers, cyclists and equestrians. Applicants are expected to take appropriate mitigation measures to address adverse effects on coastal access, National Trails, public rights of way and open access land, and to consider what opportunities there may be to improve access and connectivity. In considering revisions to an existing right of way, consideration needs to be given to the use, character, attractiveness and convenience of the right of way. The Secretary of State should consider whether the mitigation</u>	<u>Chapter 13 Population and Human Health of the ES (AS-014) provides details of the replacement and enhanced PRoW included in the Scheme, which will improve connectivity and amenities for walkers, cyclists and equestrians.</u> <u>The Human Health element of the assessment allows for consideration of effects on the amenity of users of WCH, which includes the character and attractiveness of the asset.</u>

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	<p><u>measures put forward by an applicant are acceptable and whether requirements in respect of these measures might be attached to any grant of development consent.</u></p> <p><u>Public rights of way can be extinguished under section 136 of the Planning Act if the Secretary of State is satisfied that an alternative has been or will be provided or is not required.</u></p>	
5.203	<p><u>Inappropriate development is, by definition, harmful to the Green Belt and should not be approved except in very special circumstances. When considering any Development Consent Order, the Examining Authority and Secretary of State should ensure that substantial weight is given to any harm to the Green Belt. 'Very special circumstances' will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm resulting from the proposal, is clearly outweighed by other considerations. When located in the Green Belt, elements of many national networks infrastructure projects will comprise inappropriate development. In such cases, scheme promoters will need to demonstrate very special circumstances if projects are to proceed. Such very special circumstances may include the safety benefits associated with improvements to the relevant section of the national network.</u></p>	<p><u>The Scheme is located partially within the Gloucester and Cheltenham Green Belt.</u></p> <p><u>As outlined in paragraphs 7.6.8 to 7.6.27 of this Statement, the Scheme is not considered to be inappropriate development in policy definition terms, in the Green Belt. The Scheme preserves the Green Belt's openness and does not conflict with the purposes of the Green Belt.</u></p> <p><u>The Scheme can be described as an engineering operation and the alteration of existing local transport infrastructure which can demonstrate a requirement for a Green Belt location, as set out in Paragraph 150 of the NPPF. As this infrastructure exists, it demonstrates a requirement for its location within the Green Belt. Therefore, the Scheme is considered to not be inappropriate in the Green Belt, providing the Scheme preserves the Green Belt's openness and does not conflict with the purposes of the Green Belt, as set out in Paragraph 138 of the NPPF.</u></p> <p><u>Section 7.6 of this document also provides an alternative case for very special circumstances, in the event that the SoS disagrees that the Scheme</u></p>

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		<u>amounts to appropriate development within the Green Belt. These include the economic benefits of the Scheme, the provision of infrastructure and the bringing forward of key housing and employment sites.</u>
<u>5.210</u>	<u>The applicant should undertake an assessment of any significant heritage impacts of the proposed project and should describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the asset's importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum, the relevant Historic Environment Record should have been consulted and the heritage assets assessed using appropriate expertise. Where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, the applicant should include an appropriate desk-based assessment and, where necessary, a field evaluation.</u>	<u>Chapter 11 Cultural Heritage of the ES (APP-070) describes the heritage impacts through an assessment of effects and with information on topographical, geological and archaeological conditions. Consultation with the Gloucestershire County archaeological advisor has been ongoing, including the review of design options, written schemes of investigation and the results of geophysical survey and trial trenching. Consultation is also underway with Historic England regarding the potential impacts on designated heritage assets, with particular emphasis on the contributions of setting to the significance of the Scheduled Monuments and Listed Buildings within the study area.</u>
<u>5.211</u>	<u>The discovery of heritage assets has potential to have a significant delay on scheme development, and applicants should ensure that protection of the historic environment is considered early in the development process.</u>	<u>Chapter 11 Cultural Heritage of the ES (APP-070) sets out all known cultural heritage assets which have been considered as per DMRB guidance. The assessment of the historic environment for the Scheme has been informed by desk-based research as well as non-intrusive geophysical survey and intrusive archaeological evaluation trenching. A geophysical survey of the land proposed for the link road was also conducted.</u>
<u>5.216</u>	<u>In determining applications, the Secretary of State should seek to identify and assess the particular significance of any heritage asset that may be affected</u>	<u>Chapter 11 Cultural Heritage of the ES (APP-070) sets out the potential significant effects of the Scheme in relation to Cultural Heritage. The conclusion states that</u>

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	<p><u>by the proposed development (including by development affecting the setting of a heritage asset). The Secretary of State should take account of the available evidence and any necessary expertise from:</u></p> <ul style="list-style-type: none"> • <u>relevant information provided with the application and, where applicable, relevant information submitted during examination of the application</u> • <u>any designation records</u> • <u>the relevant Historic Environment Record(s), and similar sources of information</u> • <u>representations made by interested parties during the examination</u> • <u>expert advice, where appropriate, and when the need to understand the significance of the heritage asset demands it</u> 	<p><u>although significant adverse effects are anticipated due to impacts to known and as-yet-unknown archaeological remains, a robust programme of archaeological investigation and recording following an Archaeological Management Plan (AMP) prepared in consultation with the local planning authority's archaeological advisor would mitigate these impacts to a slight adverse effect, which is not significant. The Scheme is therefore compliant in this regard.</u></p>
<p><u>5.217</u></p>	<p><u>In considering the impact of a proposed development on any heritage assets, the Secretary of State should take into account the particular nature of the significance of the heritage asset, and the value that they hold for this and future generations. This understanding should be used to avoid or minimise conflict between their conservation and any aspect of the proposal.</u></p>	<p><u>Chapter 11 Cultural Heritage of the ES (APP-070) sets out the potential significant effects of the Scheme in relation to Cultural Heritage.</u></p>
<p><u>5.218</u></p>	<p><u>The Secretary of State should take into account the desirability of sustaining and, where appropriate, enhancing the significance of heritage assets, the contribution of their settings and the positive contribution that their conservation can make to sustainable communities – including their economic vitality. The Secretary of State should also take into</u></p>	<p><u>Chapter 11 Cultural Heritage of the ES (APP-070) sets out where there are opportunities to enhance the historic environment through the application of National Highways' Designated Funds to help protect the settings of designated heritage assets within the study area.</u></p>

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	<p><u>account the desirability of new development making a positive contribution to the character and local distinctiveness of the historic environment. The consideration of design should include scale, height, massing, alignment, materials, use and landscaping (for example, screen planting).</u></p>	
<p><u>5.219</u></p>	<p><u>When considering the impact of a proposed development on the significance of a designated heritage asset, the Secretary of State should give great weight to the asset's conservation. The more important the asset, the greater the weight should be. Once lost, heritage assets cannot be replaced, and their loss has a cultural, environmental, economic and social impact. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. Given that heritage assets are irreplaceable, harm or loss affecting any designated heritage asset should require clear and convincing justification. Substantial harm to or loss of a grade II Listed Building, or a grade II Registered Park or Garden should be exceptional. Substantial harm to, or loss of, designated assets of the highest significance, including World Heritage Sites, Scheduled Monuments, grade I and II* Listed Buildings, Registered Battlefields, and grade I and II* Registered Parks and Gardens should be wholly exceptional.</u></p>	<p><u>Chapter 11 Cultural Heritage of the ES (APP-070) states that consideration of the level of harm to a heritage asset as a result of the Scheme is a primary concern for the decision-taker with regard to planning consent.</u></p> <p><u>As no significant effects are expected once all embedded and additional mitigation measures are in place, the Scheme is considered to have less than substantial harm to the historic environment.</u></p>
<p><u>5.220</u></p>	<p><u>Any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of development, recognising that the greater the harm to the significance of the heritage asset, the greater the justification that will be needed for any loss.</u></p>	<p><u>Chapter 11 Cultural Heritage of the ES (APP-070) sets out the assessment of designated heritage assets. The chapter states that consideration of the level of harm to a heritage asset as a result of the Scheme is a primary concern for the decision-taker with regard to planning consent. The determination of what constitutes</u></p>

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		<u>substantial harm is not straightforward, and no specific test exists for it. In terms of EIA regulations, it is presumed that only significant effects would rise to the level of substantial harm. As no significant effects are expected once all embedded and additional mitigation measures are in place, the Scheme is considered to have less than substantial harm on the historic environment.</u>
<u>5.22 – 5.222</u>	<p><u>Where the proposed development will lead to substantial harm to, or total loss of, significance of a designated heritage asset, the Secretary of State should refuse consent unless it can be demonstrated that it is necessary to deliver substantial public benefits that outweigh that loss or harm. Alternatively, that all of the following apply:</u></p> <ul style="list-style-type: none"> <u>• the nature of the heritage asset prevents all reasonable uses of the site</u> <u>• no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation</u> <u>• conservation by grant-funding or some form of charitable or public ownership is demonstrably not possible</u> <u>• the harm or loss is outweighed by the benefit of bringing the site back into use</u> <p><u>Where the proposed development will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal, including securing its optimum viable use.</u></p>	<u>Chapter 11 Cultural Heritage of the ES (APP-070) concludes that the Scheme is considered to have less than substantial harm to the historic environment.</u>

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5.230	<p><u>Where noise impacts are likely to arise from the proposed development, the applicant should include the following in its noise assessment:</u></p> <ul style="list-style-type: none"> • <u>a description of the noise sources including likely usage in terms of number of movements, fleet mix and diurnal pattern. For any associated fixed structures, such as ventilation fans for tunnels, information about the noise sources including the identification of any distinctive tonal, impulsive or low frequency characteristics of the noise</u> • <u>identification of noise sensitive premises and noise sensitive areas that may be affected</u> • <u>the characteristics of the existing noise environment</u> • <u>a prediction on how the noise environment will change with the proposed development:</u> <ul style="list-style-type: none"> • <u>in the shorter term such as during the construction period</u> • <u>in the longer term during the operating life of the infrastructure</u> • <u>at particular times of the day, evening and night (and weekends) as appropriate</u> • <u>an assessment of the effect of predicted changes in the noise environment on any</u> 	<p><u>Chapter 6 Noise and Vibration of the ES (AS-014) provides an assessment of noise impacts during the construction and operation of the Scheme.</u></p> <p><u>The chapter sets out the noise sources within the noise survey. The noise-sensitive premises, noise-sensitive areas and the characteristics of the existing noise environment are set out in the baseline conditions.</u></p> <p><u>The prediction of how the noise environment would change and the assessment of effects of this change is provided in the assessment of the effects of the Scheme.</u></p> <p><u>Mitigation measures are described in Section 6.8 of the ES chapter.</u></p>

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	<p><u>noise sensitive premises and noise sensitive areas, including identifying whether any particular groups are more likely to be affected</u></p> <ul style="list-style-type: none"> <u>measures to be employed in mitigating the effects of noise applicants should consider using best available techniques to reduce noise impacts</u> 	
5.232	<p><u>The potential noise impact elsewhere that is directly associated with the development, such as changes in road and rail traffic movements elsewhere on the national networks, should be considered as appropriate.</u></p>	<p><u>Chapter 6 Noise and Vibration of the ES AS-014) includes an assessment of road traffic noise as a result of the Scheme. This has been predicted using the traffic data provided as part of the assessment.</u></p>
5.233	<p><u>Operational noise, with respect to human receptors, should be assessed using the principles of the relevant British Standards and other guidance. The prediction of road traffic noise should be based on the method described in the Calculation of Road Traffic Noise and Common Noise Assessment Methods (CNOSSOS). The prediction of noise from new railways should be based on the method described in Calculation of Railway Noise and Common Noise Assessment Methods (CNOSSOS). For the prediction, assessment and management of construction noise, reference should be made to any relevant British Standards and other guidance which also give examples of mitigation strategies.</u></p>	<p><u>Chapter 6 Noise and Vibration of the ES AS-014) states that the Calculation of Road Traffic Noise, 1988 (CRTN) is used to predict the noise from existing and potential future roads. CRTN is also the preferred noise calculation method</u></p> <p><u>The calculation of construction noise levels follows the methodology in BS 5228 Part 1. The predicted noise levels from construction noise sources have been compared against the assessment criteria shown in the DMRB LA 111.</u></p>
5.234	<p><u>The applicant should consult Natural England with regard to assessment of noise on designated nature conservation sites, protected landscapes, protected species or other wildlife. The results of any noise surveys and predictions may inform the ecological</u></p>	<p><u>The project team have consulted Natural England as detailed in ES Chapter 7 Biodiversity (APP-066). The assessment includes consideration of disturbance to</u></p>

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	<u>assessment. The seasonality of potentially affected species in nearby sites may also need to be taken into account.</u>	<u>protected species as a result of changes in noise levels.</u> <u>Full details of the consultation undertaken for the noise assessment are provided in the Consultation Report (AS-008).</u>
<u>5.236</u>	<u>Mitigation measures for the project should be proportionate and reasonable and may include one or more of the following:</u> <ul style="list-style-type: none"> • <u>engineering: containment of noise generated</u> • <u>materials: use of materials that reduce noise, (for example, low noise road surfacing)</u> • <u>lay-out: adequate distance between source and noise-sensitive receptors</u> • <u>incorporating good design: to minimise noise transmission through landscaping and screening by natural or purpose-built barriers including topographical changes</u> • <u>administration: specifying acceptable noise limits or times of use (for example, in the case of railway station public address systems)</u> 	<u>Chapter 6 Noise and Vibration of the ES (AS-014) sets out the approach to mitigation relating to noise and vibration. The approach aligns with the aims of the Noise Policy Statement for England (NPSE).</u> <u>Key measures include the use of a low noise construction plant undertaking one high noise-generating activity during construction and the use of permanent noise barriers during operation. Full details of mitigation measures can be found in this chapter of the ES.</u> <u>With regards to administration, there are no noise limits set by National Highways for the operation of the Scheme.</u>
<u>5.238</u>	<u>Applicants should consider opportunities to address the noise issues associated with the Important Areas as identified through the noise action planning process.</u>	<u>The operational assessment In ES Chapter 6: Noise and Vibration (AS-014) considered the changes in noise due to traffic and Scheme layout, in both the short term and long term. Mitigation measures were included in the assessment where possible, to reduce noise levels in the noise important area as well as the informal Travellers Site.</u>
<u>5.239</u>	<u>Developments must be undertaken in accordance with statutory requirements for noise. Due regard must have been given to the relevant sections of the Noise</u>	<u>Chapter 6 Noise and Vibration of the ES (AS-014) has been undertaken in accordance with the assessment criteria shown in the DMRB LA 111. By assessing</u>

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	<p><u>Policy Statement for England, National Planning Policy Framework and the government’s associated planning guidance on noise.</u></p>	<p><u>against the criteria in DMRB LA 111, the Scheme can be measured against the policy requirements of the NPSE and the NPPF.</u></p>
<p><u>5.240</u></p>	<p><u>The project should demonstrate good design through optimisation of scheme layout to minimise noise emissions and, where possible, the use of landscaping, bunds or noise barriers to reduce noise transmission. The project should also consider the need for the mitigation of impacts elsewhere on the road and rail networks that have been identified as arising from the development, according to government policy.</u></p>	<p><u>Chapter 6 Noise and Vibration of the ES (AS-014) states that the design of the M5 Junction 10 itself provides an embedded mitigation measure for operational road traffic noise. The slip roads on either side of the M5 maximise screening of noise from the road, such as for Sheldon Cottages.</u></p> <p><u>The alignment of the A4019 to the east of the M5 Junction 10 repositions the road further away from noise-sensitive receptors located within three Noise Important Areas, which reduces road traffic noise contributions from this road within the Noise Important Area</u></p> <p><u>The Scheme includes low-noise road surfacing on all of the new and altered sections of the M5, which reduces noise generated from the interaction between the tyres of moving vehicles and the road.</u></p> <p><u>Permanent environmental noise barriers were included in the Scheme’s design to reduce road traffic noise levels.</u></p>
<p><u>5.244 – 5.245</u></p>	<p><u>Where the project is likely to have socio-economic impacts at local or regional levels, the applicant should undertake and include in their application an assessment of these impacts.</u></p> <p><u>This assessment should consider all relevant socio-economic impacts, which may include:</u></p>	<p><u>The ES has reported relevant socio-economic impacts in relation to wider determinants of human health in ES Chapter 13 Population and Human Health (AS-018).</u></p> <p><u>One of the five Scheme objectives is to “support economic growth and facilitate growth in jobs and housing by providing improved transport network connections in west and north-west Cheltenham.”</u></p> <p><u>Upgrading M5 Junction 10 to an all-movements junction has been identified as a key infrastructure requirement to enable the housing and economic</u></p>

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	<ul style="list-style-type: none"> • <u>the creation of jobs and training opportunities. Applicants may wish to provide information on the sustainability of the jobs created, including where they will help to develop the skills needed for the UK's transition to net zero</u> • <u>the value of increased connectivity on productivity and access to jobs, services and housing</u> • <u>the provision of additional local services and improvements to local infrastructure, including the provision of educational and visitor facilities. Applicants should engage with local businesses and the local community at the pre-construction phase to understand opportunities for businesses and the community throughout construction, such as employment or educational programmes</u> • <u>any indirect beneficial impacts for the region hosting the infrastructure, particularly in relation to use of local support services and supply chains</u> • <u>effects on tourism</u> • <u>cumulative effects - if development consent were to be granted to for a number of projects within a region and these were developed in a similar timeframe, there could be some short-term negative effects, for example a potential shortage of construction workers to meet the needs of other industries and major projects within the region</u> 	<p><u>development proposed by the JCS and supported in the Gloucestershire Local Enterprise Partnership's (GFirst LEP) Strategic Economic Plan and the transport network sought by GCC in the adopted Gloucestershire Local Transport Plan. Improvements to M5 Junction 10 are critical to maintaining the safe and efficient operation of the junction; and enabling the planned development and economic growth.</u></p> <p><u>Section 3 of this Statement outlines the overall need for the Scheme and outlines the wider beneficial effects of the Scheme for the local community and wider economy.</u></p>
5.246	Applicants should describe the existing socio-economic conditions in the areas surrounding the	ES Chapter 13 Population and Human Health (AS-018) sets out the baseline conditions in proximity to the

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	<p><u>proposed development and should also refer to how the development's socio-economic impacts correlate with local planning policies.</u></p>	<p><u>Scheme. This includes some information relating to the socio-economic conditions in the areas surrounding the Scheme and the health profile of the locations in proximity to the Scheme.</u></p> <p><u>Appendix A of this Statement provides the range of local planning policies and sets out how the Scheme accords with these local planning policies.</u></p>
<p><u>5.248 – 5.249</u></p>	<p><u>The Secretary of State should consider whether mitigation measures are necessary to mitigate any adverse socio-economic impacts of the development. For example, high quality design can improve the visual and environmental experience for visitors and the local community alike.</u></p> <p><u>This could include the potential for jobs to be created in the area as a result of a major scheme, the impact on local businesses and the supply chain, and potentially require the provision of additional local services. This is more relevant to Strategic Rail Freight Interchanges than road or rail schemes.</u></p>	<p><u>ES Chapter 13 Population and Human Health (AS-018) provides mitigation measures which cover the socio-economic impacts of the development, including impacts on local businesses particularly during the construction phase.</u></p>
<p><u>5.254</u></p>	<p><u>Applicants should make early contact with the relevant regulators, including the Environment Agency, for abstraction licensing or water quality activity or groundwater activity permits, and with relevant water undertakers. Where development is likely to have adverse effects on the water environment, the applicant should undertake an assessment of the existing status and impacts of the proposed project on water quality, water resources and physical characteristics of the water environment as part of the Environmental Statement or equivalent. The assessment should also include how this might change due to the impact of climate change on rainfall</u></p>	<p><u>Discussions have taken place during the development of the ES relating to licences and permits required for the construction and operation of the Scheme. The full list can be found in the Consents and Agreements Position Statement (APP-033).</u></p> <p><u>Effects of the Scheme relating to the water environment can be found in ES Chapter 8 Road Drainage and the Water Environment of the ES (AS-016). The chapter concluded that there are potential significant adverse effects localised to the River Chelt floodplain on the existing farmland however, these effects will cause no increase in flood risk.</u></p>

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	<u>patterns and consequently water availability across the water environment.</u>	<u>Furthermore, as required, the assessment also factored in the impacts of climate change with the inclusion the magnitude and impact for each receptor group being based on the modelled 1% AEP event (1 in 100-year return period) with climate change (+53% increase in flow applied).</u>
5.255	<u>For those projects that are improving the existing infrastructure, such as road widening, opportunities should be taken, where feasible, to improve the quality of existing discharges where these are identified and shown to contribute towards water body quality failures under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (“Water Framework Directive Regulations”) commitments. A permit under the Environmental Permitting Regulations may also be required where improvements are being made to existing infrastructure, for example, the discharge of contaminated water from roads.</u>	<u>ES Appendix 8.3 Surface Water Quality Assessment (APP-111) sets out the assessments used to determine the likely operational significant effects of the Scheme on surface water quality.</u> <u>The surface water quality assessment has been undertaken in accordance with the DRMB LA 113 and LA 104 (Environmental assessment and monitoring).</u> <u>The assessment is against the Highways England Water Risk Assessment Tool (HEWRAT).</u> <u>The ES Appendix 8.2 WFD Compliance Assessment (APP-108) assesses the potential impacts against the Scheme design including embedded mitigation to determine if the Scheme is compliant with WFD objectives.</u>
5.256	<u>Under the Environmental Permitting Regulations, applicants are required to manage surface water during construction by treating surface water runoff from exposed topsoil prior to discharging and to limit the discharge of suspended solids. For example, from car parks or other areas of hard standing, during operation. Consent may be required for working near to a river from the Environment Agency and a pollution incident response plan is recommended. .</u>	<u>The Ground Investigation Report (APP-124) sets out the land instability assessment associated with the Scheme. The report includes a technical framework for identifying and remediating contamination through the application of a risk management process. The report states that the overall contamination risk associated with the site is considered to be low for human health receptors.</u> <u>ES Chapter 8 Road Drainage and the Water Environment (AS-016) states that subject to the implementation of all mitigation measures, the overall effect on surface water during construction has been</u>

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		assessed as Neutral which is not considered significant.
5.257	<u>Applicants should consider protective measures to control the risk of pollution to groundwater beyond those outlined in Environmental Management Plans - this could include, for example, the use of protective barriers.</u>	<p><u>Chapter 8 Road Drainage and the Water Environment of the ES (AS-016) includes details of mitigation measures for any potential adverse effects on the water environment, including those relating to pollution to groundwater.</u></p> <p><u>The REAC (AS-027) also sets out mitigation measures to negate adverse effects on groundwater quality and contamination. Mitigations that are embedded into the design of the Scheme rather than the use of compensatory EMPs are WE3, WE4, WE5, WE6, WE7 and WE8.</u></p> <p><u>Such mitigation measures include providing bunded areas where contaminated water may be generated, such as oil storage areas.</u></p>
5.258 – 5.259	<u>Any assessment for both the construction and operational phases of the development should describe:</u>	<u>Chapter 8 Road Drainage and the Water Environment of the ES (AS-014) sets out:</u>

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	<ul style="list-style-type: none"> • <u>the existing quality of waters affected by the proposed project, and how climate change will impact on this</u> • <u>existing water resources affected by the proposed project, the impacts of the proposed project on water resources, and how climate change will impact on this</u> • <u>existing physical characteristics of the water environment (including quantity and dynamics of flow) affected by the proposed project, and any impact of physical modifications to these characteristics</u> • <u>any impacts of the proposed project on water bodies or protected areas under the Water Framework Regulations and source protection zones around potable groundwater abstractions; and how climate change will impact on this</u> • <u>any cumulative effects</u> <p><u>The assessment should also identify protected areas and other water usages within the vicinity of any discharge, such as bathing waters, abstractions and fisheries at risk from proposed works and the permits/consents required. It should also identify opportunities to improve water quality, for example, through nature-based approaches or solutions, and as part of environmental and biodiversity net gain.</u></p>	<ul style="list-style-type: none"> • <u>the baseline conditions of the water environment, including a desk-based assessment and primary information collected during 2019 and 2022 site visits</u> • <u>the receptors that are potentially affected and their importance</u> • <u>the potential impacts from the Scheme to surface water quality, hydromorphology, flood risk and groundwater</u> • <u>the cumulative effects of the Scheme and the Scheme interacting with other RFFPs</u> <p><u>The chapter also identifies potential improvements to water receptors, including at Leigh Brook as a result of cumulative impacts of the North West Cheltenham Development Area and safeguarded land to the north-west of Cheltenham developments, in combination with the Scheme.</u></p> <p><u>Vegetation management will also take place, which will result in BNG condition class improvements.</u></p>
5.260	<p><u>The impact on local water resources can be minimised through planning and design for the efficient use of water, including water recycling. If an applicant needs new water infrastructure, significant supplies or impacts other water supplies, the applicant should</u></p>	<p><u>The Drainage Strategy Report (APP-079) details the drainage design for the Scheme. Key to the design of the drainage strategy was the need to address that the proposed junction upgrades would have resulted in an increase in the impermeable footprint of the existing</u></p>

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	<p><u>consult with the local water company and the Environment Agency.</u></p>	<p><u>highway, which would have created greater amounts of surface water runoff compared to the current situation. The design includes attenuation basins.</u></p> <p><u>The Environment Agency and LLFA have been consulted on issues including climate change adaptation, fluvial flood risk, ecological protection/enhancement and ground conditions.</u></p> <p><u>Full details of the consultation can be found in the Consultation Report (APP-038) and Chapter 8 Road Drainage and the Water Environment of the ES (AS-016).</u></p>
<p><u>5.261 – 5.262</u></p>	<p><u>The Secretary of State should consider whether the mitigation measures put forward by the applicant which are needed for operation and construction (and which are over and above any which may form part of the project application) are acceptable. A construction management plan may help codify mitigation.</u></p> <p><u>The project should adhere to any National Standards for Sustainable Drainage Systems. The Sustainable Drainage Systems Technical Standards introduced a hierarchical approach to drainage design that promotes the most sustainable approach but recognises feasibility and use of conventional drainage systems as part of a sustainable solution for any given site given its constraints.</u></p>	<p><u>The full set of mitigation measures are set out within the EMP (AS-025). These also reflect the mitigation measures set out in the REAC (AS-027).</u></p> <p><u>The EMP contains an appropriate level of detail for this preliminary design stage and has been prepared in accordance with the National Highways Design Manual for Roads and Bridges (DMRB) LA 120 Environmental management plans. In accordance with LA 104 Environmental Assessment and Monitoring, the results of monitoring will be used to update the EMP during the construction and handover stages.</u></p> <p><u>As requested through consultation with the LLFA, the design of the Scheme drainage systems is in accordance with the CIRIA SuDS Manual C753.</u></p>
<p><u>5.263</u></p>	<p><u>The project should identify opportunities and secure measures to protect and improve water quality and resources through green and blue infrastructure and sustainable drainage. This will help to achieve Environmental Improvement Plan objectives and</u></p>	<p><u>Chapter 8 Road Drainage and the Water Environment of the ES (AS-016) includes consideration of water quality (both surface water and groundwater), the Water Framework Directive (WFD) and flood risk.</u></p>

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	<p><u>potentially provide greater capacity to support infrastructure needs.</u></p>	<p><u>ES Appendix 8.3 Surface Water Quality Assessment (APP-111) sets out the Scheme mitigation which will contribute towards protecting and improving water quality. These include the attenuation basins, swales and vegetated ditches. Within section 7, specifically paragraph 7.1.3, the assessment concludes that two drainage catchments result in minor beneficial impacts to the water quality of the Leigh Brook as a result of mitigation that the Scheme is applying to the drainage catchments. These impacts are of slight beneficial significance. The remaining drainage catchments result in a negligible impact on the water quality of the Leigh Brook and River Chelt. As the Leigh Brook and the River Chelt are of high importance, even though the magnitude of impact is negligible it is of slight adverse significance.</u></p>
<p><u>5.271 – 5.274</u></p>	<p><u>Applicants should consult the relevant highway authority, local planning authority, and Network Rail, as appropriate, on the assessment of transport impacts. This should include agreement on alignment to policies outlined in existing or emerging local plans and Local Transport Plans.</u></p> <p><u>Different transport networks may need to share space within an area, even whilst serving different travel needs. For example, bus lanes, shared cycle lanes, green lanes, or bus and rail routes on the same corridor.</u></p> <p><u>Applicants should seek to offer an integrated transport outcome, significantly considering opportunities to support other sustainable transport modes, as well as improving local connectivity and accessibility in developing infrastructure. The needs of pedestrian and other vulnerable road users should be considered.</u></p>	<p><u>The three host authorities have been regularly consulted throughout the progression of the Scheme. This includes GCC as the local highway authority.</u></p> <p><u>In regards to the specific point made that consultation with the relevant highway authority 'should include agreement on alignment to policies outlined in existing or emerging local plans and Local Transport Plans'.</u> This point was brought to the attention of the Applicant through the consultation carried out to adhere to s42 of the 2008 Planning Act. GCC pointed to this section of the NN PS as shown in row 148 of Table 8.10 of the <u>Consultation Report.</u></p> <p><u>The Scheme conformity to relevant local planning policy has been set out in Appendix A of this Statement. There is support for the scheme within policy. Within the JCS paragraph 4.1.12 of states that 'there is agreement across relevant partners that the</u></p>

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	<p><u>where appropriate, in line with the principles of the road user hierarchy.</u></p> <p><u>The applicant should provide evidence that as part of the project they have addressed any new or existing severance issues and/or safety concerns that act as a barrier to non-motorised users, unless it is unsafe or unviable to do so.</u></p>	<p><u>upgrading of Junction 10 to an all movements junction will support the economy of the JCS area and that of wider Gloucestershire'. However, at the time of writing the JCS, it states that as there 'is no certainty that this funding will be released and it is not therefore possible to anticipate any delivery within the JCS plan period; should funding become available, then the JCS authorities would consider a Strategic Allocation through a JCS Review'. The need for improvement also featured within the evidence base of the JCS.</u></p> <p><u>The evidence base shows five iterations of transport impacts, mitigation and analysis up to October 2016. In response to Inspector's Interim Report on re-Submission Joint Core Strategy (July 2016) Highways Modelling [Autumn 2016], the fifth iteration (DS5) outlined details of the revised mitigation package that represented a departure from DS3a and focuses on road building (including major link roads) and the upgrade of high frequency public transport bus corridors. It also includes a number of schemes which are not JCS dependant, but due to changes in scheme status they have been included as it is assumed that the impact of the schemes will be significant on the transport network (JCS Transport Evidence Base – May 2017). They include:</u></p> <ul style="list-style-type: none"> <u>• M5 J10 – Full Movements (including upgrading of existing slips and junction on the A4019 corridor to Coombe Hill)</u> <u>• A417 Missing Link</u>

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		<p><u>The DS6 scenario tested the revised land use scenario in line with the proposals included in the JCS Proposed Main Modifications document (February 2017). Critical to the scenario were the access arrangements into the West Cheltenham Strategic Site. Within this scenario these are provided via Junction 10 of the M5 and a new distributor road linking into the site from the motorway. The motorway junction improvement comprised a minimum upgrade to allow full movements, with additional capacity provided on the slip roads. The infrastructure included in this scenario did not mitigate the impacts of the scale of development.</u></p> <p><u>DS7 includes an 'All Movements' junction improvements including complementary measures to M5 mainline. This includes a high capacity upgrade of M5 J10 junction including three lane motorway off slips and a three circulatory lane grade separated roundabout with A4019, and a new signal controlled junction immediately west of the M5 to accommodate the associated West of Cheltenham development access road. There would also be new signals on the A4019 westbound entry to the new grade separated motorway junction.</u></p> <p><u>DS7 concluded that the J10 scheme is required to unlock all of the strategic allocations within the JCS. Note this does not include unlocking of the safeguarded land as this safeguarded land was not tested as part of the transport evidence base. Only the actual Strategic allocations were included in the JCS transport modelling.</u></p>

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		<p><u>Transport impacts, including on local roads, have been assessed in the TA (AS-029).</u></p> <p><u>The Scheme provides integrated public transport infrastructure including bus stop, bus lane and bus gates within the Order Limits.</u></p> <p><u>The Scheme considers the needs of NMU throughout the design. This is evidenced through the provision of replacement and enhanced PRoW included in the Scheme, which will improve connectivity and amenity for walkers, cyclists and equestrians.</u></p> <p><u>Chapter 13 Population and Human Health of the ES (AS-018) sets out the baseline and provides an assessment of severance to a number of receptor categories, including on the PRoW network.</u></p>
5.275	<p><u>For road and rail developments, the applicant's assessment should include an assessment of the transport impacts on other networks as part of the application, based on discussions with the Local Highway Authority/Local Planning Authority.</u></p>	<p><u>The TA (AS-029) states that the impacts of the Scheme have been assessed using the Gloucestershire Countywide Traffic Model (GCTM) The GCTM is a SATURN strategic model which has been used to test the impact of the Scheme on the wider road network. This recognises that the Scheme has the potential to affect wider strategic movements on the highway network.</u></p>
5.277-5.278	<p><u>If a project is likely to have significant transport impacts it should include a Transport Assessment, using the Transport Analysis Guidance methodology stipulated in Department for Transport guidance, or any successor to such methodology.</u></p> <p><u>The applicant should also prepare a travel plan outlining management measures to mitigate transport impacts. A successful travel plan and mitigation strategy will understand the needs of people walking.</u></p>	<p><u>A part of the application, Transport Assessment (TA) (AS-029) has been prepared. The TA has utilised the Gloucestershire Countywide Traffic Model (GCTM) Version 2.3 to assess transport impacts which is a SATURN strategic model.</u></p> <p><u>Additionally, a Traffic Management Plan, (AS-041) as well as Public Rights of Way Management Plan in line with paragraph 5.277.</u></p>

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	<p><u>wheeling or cycling. Audits should be undertaken to understand their movements and establish any barriers and opportunities to improve this environment. This includes detailing the accessibility of the development by active travel modes, such as the provision of safe and secure cycle parking and associated facilities, creating high quality pedestrian environments including through public realm improvements, enhancing modal interchanges to create an integrated transport system and access via public transport such as bus stops within close proximity of the development. Mitigating measures should also look to reduce the need for any parking associated with the proposal, ensure the infrastructure needed to support the transition to alternative fuels including electric vehicles are in place during construction and ahead of operation, and to mitigate transport impacts.</u></p>	<p><u>Documents TR010063/APP/9.13 ensures that the Scheme adheres the commitments set out within the Register of Environmental Actions and Commitments (REAC) (Application document TR010063/APP/7.4AS-027). Of relevance to accessibility is commitment PHH5- Maintaining WCH access, connections to and availability of public transport during construction to avoid severance and loss of access to key services and facilities, in the interests of human health.</u></p> <p><u>Audit information is available within Road Safety Audit Report (application document TR010063/APP/9.15).</u></p>
<p><u>5.282 – 5.283</u></p>	<p><u>Mitigation measures for schemes should be proportionate and reasonable, focussed on facilitating journeys by active travel, public transport, and cleaner fuels.</u></p> <p><u>Where development would worsen accessibility, there is a strong expectation that such impacts should be mitigated. Where impacts cannot be mitigated, the applicant is required to provide reasoning as to why impacts cannot be mitigated.</u></p> <p><u>The applicant should provide evidence that the development improves the operation of the network and assists with capacity issues.</u></p>	<p><u>The Register of Environmental Actions and Commitments (AS-027) details the mitigation measures that have been committed to within the ES to manage the effects of the construction and operation of the Scheme to the environment, and how those mitigation commitments will be implemented through the construction of the Scheme and into its operation. It covers key mitigations relating to a range of environmental topics, these are:</u></p> <ul style="list-style-type: none"> <u>• General Mitigations</u> <u>• Air Quality Mitigations</u> <u>• Noise and Vibration Mitigations</u> <u>• Biodiversity Mitigations</u>

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		<ul style="list-style-type: none"> • <u>Road Drainage and the Water Environment Mitigations</u> • <u>Landscape Mitigations</u> • <u>Cultural Heritage Mitigations</u> • <u>Geology and Soils Mitigations</u> • <u>Materials and Waste Mitigations</u> • <u>Population and Human Health Mitigations</u> • <u>Climate Mitigations</u> • <u>Cumulative Effects Assessment Mitigations</u> <p><u>General Mitigation, G10 EffectiveEffective traffic management, also secures a mechanism to ensure the maintenance of traffic flows during construction.</u></p> <p><u>Chapter 13 Population and Human Health of the ES (application-AS-018) provides details of the impact of the Scheme on WCH - including changes to severance, accessibility, journey amenity and length. It sets out, where necessary, specific mitigation measures to address significant adverse effects on routes and access during the construction and operation of the Scheme. The Scheme also contains in-built enhancements for connectivity and amenity for users of PRow.</u></p> <p><u>The Scheme will enable public transport use by providing public transport infrastructure including bus stops, bus lanes and bus gates.</u></p> <p><u>The TA (AS-029) provides evidence that the Scheme will create networks with the capacity and connectivity</u></p>

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		<p><u>to support national and local economic activity and facilitate growth.</u></p> <p><u>The TA focuses on the Scheme in relation to the existing highway network and sustainable transport provision within the vicinity of the Scheme. It was prepared prepared in accordance with 'Travel Plans, Transport Assessments and Statements' guidance from the Ministry of Housing, Communities & Local Government'.</u></p> <p><u>Further detail regarding the modelling is described in section 5.2 Assessment Methodology. The Gloucestershire Countywide Traffic Model (GCTM) Version 2.3 has been used to identify the transportation impacts of the proposed development. The GCTM is a SATURN strategic model which has been used to test the impact of the M5 J10 Scheme on the wider road network. 5.2.2. The resultant trip matrices from the GCTM were then used in the Paramics model to understand the impact of the Scheme in more detail at the junctions on the local highway network.</u></p> <p><u>The GCTM 2015 base year model, which was updated in June 2019, has been developed in accordance with DfT guidelines and advice set out in the Design Manual for Roads and Bridges (DMRB) and Transport Assessment Guidance (TAG) acceptability criteria, and has achieved relevant validation standards.</u></p>

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		<p><u>The model consider three scenarios in which to measure impacts against. These were</u></p> <p><u>Scenario P which consisted of the future year scenario without the Scheme, and without the dependent development. Local improvements included in Scenario P are the Coombe Hill improvement Scheme and upgrading Arle Court Roundabout. It represents a scenario without any improvement along the Scheme extent</u></p> <p><u>Scenario S consisted of the future year scenario with the Scheme. The network is based on the Scheme, with all other elements identical to the Scenario P network. This scenario does not include the traffic associated with dependent developments. As such, it captures the impact of the Scheme in isolation.</u></p> <p><u>Scenario R consisted of the future year scenario with the Scheme and dependent development. This scenario includes the traffic associated with Scheme dependent developments. It represents a cumulative scenario.</u></p> <p><u>The GCTM predicts much larger increases in flows in the Scheme area between Scenario R and Scenario P). This results from the trips generated by the dependent development rather than Scheme itself.</u></p> <p><u>The full outcome which demonstrates the positive impact of the Scheme is detailed in section 12 of the report. The ultimate conclusion is that the report demonstrates that the Scheme creates networks with</u></p>

<u>NNPS Paragraph No.</u>	<u>Relevant requirement of the National Networks NPS</u>	<u>Scheme compliance with the National Networks NPS</u>
		<u>the capacity and connectivity to support national and local economic activity and facilitate growth. The modelling demonstrates that the Scheme creates networks which improve journey quality, reliability, and safety.</u>

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