A46 Coventry Junctions (Walsgrave)
Scheme Number: TR010066

7.1 Case for the Scheme

APFP Regulation 5(2)(q)

Planning Act 2008

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

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A46 Coventry Junctions (Walsgrave) Development Consent Order 202[x]

CASE FOR THE SCHEME

Regulation Number	Regulation 5(2)(q)
Planning Inspectorate Scheme Reference	TR010066
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1. Introduction

1.1. Purpose of this Document

1.1.1. This Case for the Scheme relates to an application for a Development Consent Order (DCO) to the Secretary of State for Transport (the Secretary of State) via the Planning Inspectorate (the "Inspectorate") by National Highways, (the "Applicant") under section 37 of the Planning Act 2008. If made, the DCO would grant consent for the A46 Coventry Junctions (Walsgrave) Scheme (the "Scheme").

1.1.2. This Case for the Scheme has been prepared in accordance with Regulation 5(2)(q) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 and the Inspectorate's Guidance document: Nationally Significant Infrastructure Projects: Advice on the Preparation and Submission of Application Documents (August 2024, updated October 2024).

1.1.3. This Case for the Scheme aims to provide details of the need and case for the Scheme. It provides key information in support of the Scheme and demonstrates the robustness of the application made, following careful consideration of alternatives. This Case for the Scheme also provides a description of the Scheme and surrounding environment. While the submission of a Case for the Scheme is not a mandatory requirement under the Planning Act 2008, it has been prepared to accompany the application for the DCO to summarise how the Scheme relates to and complies with Government policy and the relevant planning policy context, including national and local planning policy.

1.1.4. It also provides an overview of the traffic assessment and related economic analysis upon which the need and case for the Scheme is based.

1.1.5. Under Section 104(2) of the Planning Act 2008, the Secretary of State must have regard to (among other matters) any *"relevant national policy statement"* when deciding an application for a DCO. The relevant national policy statement (NPS) for the Scheme is the National Networks National Policy Statement (NPS NN), a revised version of which was designated in May 2024. This sets out the need, and Government's policies, for delivering the development of Nationally Significant Infrastructure Projects (NSIPs) on the national road and rail networks in England.

1.1.6. The NPS NN has particular weight in deciding this application for a DCO as, under Section 104(3) of the Planning Act 2008, the Secretary of State is required to decide the application in accordance with the relevant national policy statement, subject to the exceptions set out in section 104(4) to (8). The Scheme's compliance with the NPS NN is assessed in the NPS NN Accordance Tables (**TR010066/APP/7.2**).

1.1.7. This document is therefore intended to supplement the assessment of the Scheme's compliance with the NPS NN and also identify 'any other matters' that are considered 'important and relevant' to the determination of the application in accordance with Section 104(2) of the Planning Act 2008.

1.1.8. This Case for the Scheme will also draw on key assessments and environmental information set out in the Environmental Statement (ES) (**TR010066/APP/6.1**) submitted with the application.

1.2. The Applicant

1.2.1. The Applicant is National Highways Limited (National Highways). National Highways became a Government owned company in April 2015, succeeding to the functions of the Highways Agency and subsequently Highways England. The Applicant is appointed and licensed as the strategic highways company for England by the Secretary of State, on whose behalf it is responsible for planning, designing, building operating and maintaining the Strategic Road Network (SRN).

1.2.2. The SRN is made up of the motorway and trunk road networks, which includes major A roads. The A46 within the Order Limits of the Scheme, forms part of the SRN.

1.2.3. The Applicant seeks to provide a modern and reliable road network with fewer delays. In achieving this, it's aims are for a network that:

- Provides fast and reliable journeys (supporting economic growth).
- Improves safety for all.
- Delivers better environmental outcomes.
- Meets the needs of all users.

1.2.4. Achieving the above aims can also support economic growth through creating jobs, helping businesses, and opening new areas for development. The underlying focus is to deliver long-term benefits for the community and road users and be environmentally sustainable.

1.3. Requirement for a Development Consent Order

1.3.1. The Scheme is an NSIP within sections 14(1)(h) and 22(1)(b) of the Planning Act 2008. Under section 22, an NSIP must fall within one of the three categories specified, which are expressly stated to be alternatives.

1.3.2. The Scheme satisfies section 22(3) in that:

- the highway is wholly in England;

- the Applicant as a strategic highways company will be the highway authority for the highway;
- the area of development at 36.62 hectares (ha) exceeds the 12.5ha threshold as set out in subsection (4); and
- speed limits on the Scheme will be 50mph or greater (as per subsection (4)(b)).

1.3.3. Pursuant to the Planning Act 2008, the Applicant is required to secure a DCO to construct, maintain and operate the Scheme.

1.3.4. An application for a DCO has therefore been submitted to the Planning Inspectorate, who will appoint an Examining Authority or Panel to examine it and make a recommendation to the Secretary of State on whether development consent should be granted. The Secretary of State will make the final decision on whether development consent should be granted.

1.4. Requirement for an Environmental Impact Assessment

1.4.1. The Scheme is an Environmental Impact Assessment (EIA) development, as defined by the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the "EIA Regulations"). The Scheme falls within paragraph 10(f) of Schedule 2 to the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 as the potential for significant environmental effects has been identified, and an ES (**TR010066/APP/6.1**) has been prepared to accompany the DCO application to the Inspectorate.

1.4.2. An Environmental Scoping Report (**TR010066/APP/6.8**) was produced in June 2023 to comply with Section 10 of these Regulations. LA103 (Scoping projects for environmental assessment) of the Design Manual for Roads and Bridges (DMRB), and the Inspectorate's Advice Note Seven (version 7 republished June 2020), for all environmental factors (topics) set out in the Infrastructure Planning (EIA) Regulations 2017. The purpose of the Scoping Report was to establish what the Applicant considers the scope of the EIA to be, and the level of detail required. National Highways notified the Secretary of State within the Environmental Scoping Report that an ES would be submitted with the DCO application for this project in accordance with Regulation 8(1)(b) of the EIA Regulations.

1.4.3. The Environmental Scoping Report (**TR010066/APP/6.8**) was submitted to the relevant consultation bodies by the Inspectorate. A Scoping Opinion was adopted by the Secretary of State on 10 August 2023 (**TR010066/APP/6.9**) which provides the Secretary of State's written opinion as to topics to be assessed in the ES.

1.4.4. An ES (**TR010066/APP/6.1**) has been submitted as part of the DCO application.

The ES meets the requirements of Regulation 14 of the Infrastructure Planning (EIA) Regulations 2017. ES Chapters 5 to 15 (**TR010066/APP/6.1**) provide details of the assessments that have been undertaken for the Scheme, including assessment of the potential impacts of the Scheme, with a description of the likely significant effects on the environment and set out proposals for mitigation to reduce and, if possible, offset likely significant adverse effects. The assessments in the ES (**TR010066/APP/6.1**) have been undertaken in line with the relevant sections of the DMRB. An assessment of alternative options for the Scheme is set out in ES Chapter 3 (Assessment of Alternatives) (**TR010066/APP/6.1**).

1.5. Other consents and licences

1.5.1. The principal consent for the Scheme will be a DCO. The DCO process provides development consent for the works and enables land acquisition and temporary possession of land, along with other consents and powers to be dealt with at the same time.

1.5.2. The DCO application may be required to be supplemented by other consents, licenses, and agreements.

1.5.3. The Consents and Agreements Position Statement (**TR010066/APP/3.3**) sets out the permits, licenses and agreements that are expected to be needed for the Scheme, along with the Applicant's intended strategy for obtaining these.

1.6. Planning policy context

1.6.1. A hierarchy of policy exists in support of a development consent. It is a means through which an application for development consent, designated as a NSIP, within the provisions of NPS can seek approval by the Secretary of State. The documents in this hierarchy can be summarised as follows:

- NPS NN: Section 104 of the Planning Act 2008 states that, where a relevant NPS has been designated, decisions about applications for a DCO must be taken in accordance with it. The revised NPS NN was designated on 24 May 2024. It sets out the Government's vision and policies to deliver road networks that meet the country's long-term needs, support a prosperous and competitive economy and improve the quality of life for all. Further details can also be found in Section 6 of this document and the NPS NN Accordance Tables (**TR010066/APP/7.2**).

- The National Planning Policy Framework (NPPF) ((The Department for Levelling Up, Housing and Communities, December 2023) sets out the Government's planning policy framework for the whole of England, including the Government's expectation for content and quality of planning applications and local plan policy. The overall strategic aims of the NPS NN and NPPF are consistent. The NPPF may be an important

and relevant matter, but does not form the basis for a decision on an NSIP.

- At the local level, every Local Planning Authority (LPA) should have an adopted development plan for the area, which sets out the planning policies and proposals for land use in their area. It is these policies that planning applications for development in the area are determined in accordance with, provided they are not of a scale to qualify as an NSIP. The adopted development plan should align with the NPPF. In addition to the adopted development plan, emerging draft policy may be a material consideration in decision-making. The relevant LPAs for the Scheme are Coventry City Council and Rugby Borough Council, as the Scheme sits across both local authorities. The Scheme is situated within the county boundary of Warwickshire County Council.

- In addition, an LPA may adopt Supplementary Planning Documents (SPDs) which do not form part of the development plan for the area, but which provide additional guidance or detail on policies within the development plan and are a material consideration for an LPA in their decision-making.

1.6.2. In terms of the relationships between documents in the policy hierarchy for the Scheme, the following principles apply:

- A designated NPS provides the principal planning policy to be applied in determining a DCO application. A designated NPS does not form part of the development plan for an area, but has primacy over it, reflecting the national interest.

- Under Section 104 of the Planning Act 2008, the Secretary of State must have regard to any other matters which they think are both important and relevant to their decision, in addition to certain other specified matters.

- The NPPF requires local authorities to take account of the development principles set out in relevant NPSs when preparing their local plans.

- In general terms, there should be no conflict between policies in a designated NPS and the NPPF; however, if this does arise the designated NPS has primacy.

1.6.3. The ‘development plan’ for an area includes documents defined by Section 38 of the Planning and Compulsory Purchase Act 2004, these are development plan documents prepared under the provisions of that Planning and Compulsory Purchase Act 2004 and adopted by the relevant local authority.

1.6.4. SPDs are capable of being important and relevant but are not part of the development plan for an area.

1.6.5. Further details of the relevant policy for this Scheme can also be found in Section 6 of this document.

1.7. Structure of this Document

1.7.1. This Case for the Scheme comprises seven sections as detailed below:

- **Section 1** - sets out the details of the application and Applicant and explains why the Scheme is a NSIP which requires the submission of a DCO application.
- **Section 2** - sets out the need for the Scheme, describes the existing environment and describes the Scheme.
- **Section 3** - describes the Scheme and the surrounding area and sets out how the Scheme has developed over time. It sets out the route options that have been considered and how the preferred route option was selected.
- **Section 4** - summarises the transport case for the Scheme.
- **Section 5** - summarises the economic case for the Scheme and describes its monetised and non-monetised benefits.
- **Section 6** - assesses the Scheme against national, regional and local planning and transport policy, and considers the policy justification for the Scheme.
- **Section 7** – provides a summary, bringing together the case for the Scheme and setting out its overall compliance with the NPS NN, relevant planning policy and other important considerations.

2. The need for the Scheme

2.1. Overview

2.1.1. This Section sets out the Scheme location, existing land use, historic character and aims and objectives of the Scheme, as well as sub-regional economic, development planning and transport context that provides the strategic case for the Scheme.

2.2. Scheme context

2.2.1. The existing A46 Walsgrave Junction is located in the West Midlands, approximately 5km to the east of Coventry city centre. The Scheme involves improvements to the B4082 which runs eastwards from Clifford Bridge Road to the A46 Walsgrave roundabout and the A46 (Coventry Eastern Bypass) which runs north-south to the east of Coventry. Binley Junction, located on the A46, is approximately 1.7km to the south of the existing Walsgrave Junction, and the M6 and M69 junctions are approximately 2.5km to the north of the existing Walsgrave Junction.

2.2.2. The Scheme is situated within the Coventry City Council and Rugby Borough Council administrative areas (see ES Figure 1.1 (Regional Context) (**TR010066/APP/6.2**)). The boundary between these two administrative areas is along the western side of the A46. Rugby Borough Council's administrative areas also forms part of Warwickshire County Council's administrative area, which shares the same border with Coventry City Council.

2.2.3. The location of the A46 Walsgrave Junction is shown in Figure 2-1, which shows the Order Limits of the Scheme.

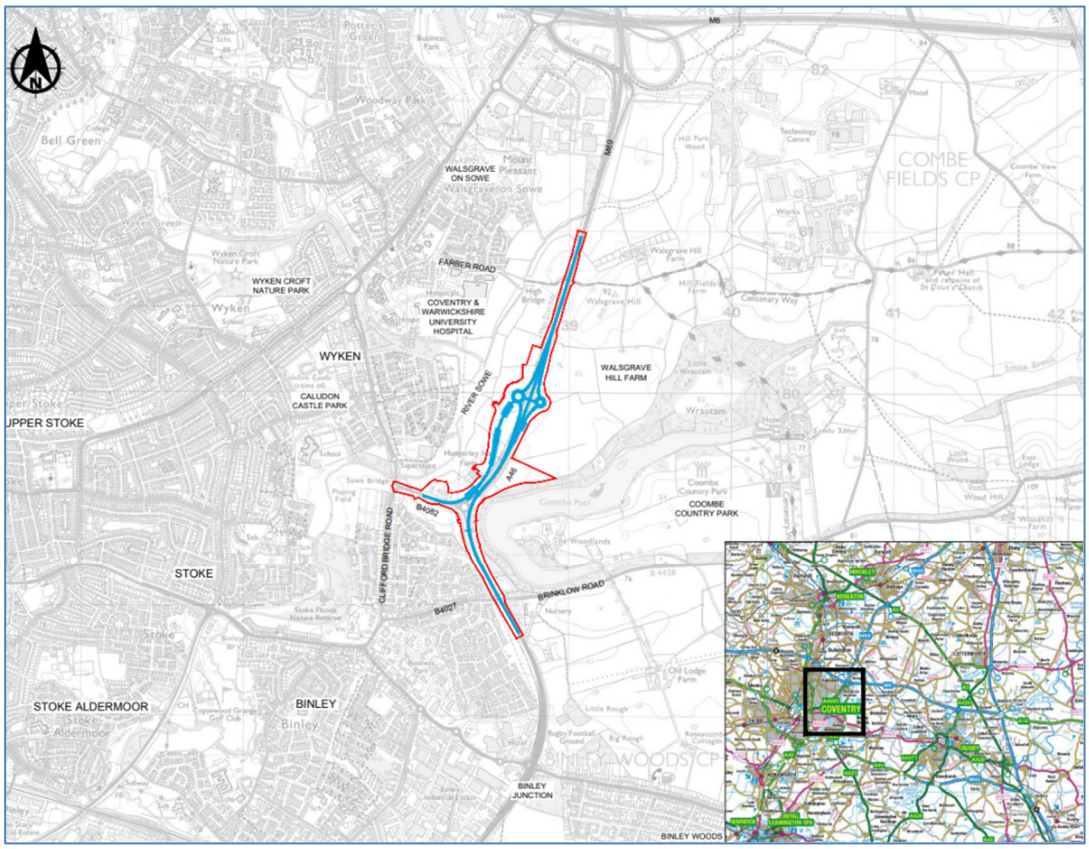

Figure 2-1: Location of the Scheme

2.2.4. To the west of the existing Walsgrave Junction, the area is densely populated with seven schools within 2km of the Junction. University Hospital Coventry is located approximately 1.2km to the north of the existing A46 Walsgrave Junction, which serves as a blue-light (i.e. emergency services) route to the hospital.

2.2.5. To the immediate north-west of Walsgrave Junction and along the western side of the A46 north of the existing junction are areas of agricultural land associated with Hungerley Hall Farm and further north with Walsgrave Hill Farm. To the immediate south-west of Walsgrave Junction and north of Smite Brook, the land is associated with Hungerley Hall Farm.

2.2.6. South of Smite Brook are areas of public open space, beyond which are residential areas. Isolated properties at Coombe Warren are located to the south-east of the Scheme.

2.2.7. A high voltage electricity line runs north-south on the western side of the A46, crossing the B4082 immediately west of Walsgrave Junction.

2.2.8. Immediately adjacent to the east side of Walsgrave Junction is Coombe Abbey Park, part of which includes Coombe Pool Site of Special Scientific Interest (SSSI) and Coombe Abbey Grade II* Park and Garden.

2.2.9. The A46 and the area to the east is designated as within the Green Belt.

2.2.10. To the north-east of the existing junction and northwards along the eastern side of the A46 are areas of agricultural land associated with Walsgrave Hill Farm.

2.2.11. The land required by temporary possession and/or by permanent acquisition for the construction, operation and maintenance of the Scheme is shown on the Land Plans (**TR010066/APP/2.2**).

2.3. Existing A46 Walsgrave Junction

2.3.1. The existing A46 Walsgrave Junction is an at-grade three arm roundabout connecting the A46 mainline to the B4082 local network. The junction has three approach arms, all of which are priority controlled.

2.3.2. The existing A46 is a dual carriageway within the Scheme extents. South of the existing Walsgrave Junction the road is generally elevated, and north of the existing roundabout, it is generally in cutting.

2.3.3. The main carriageway of the A46 at this location is a dual two-lane with 7.3m wide carriageways with 1m wide hard strips, and a central reserve varying from 4.5m minimum wide to 12m maximum wide in sections. The A46 is subject to the national speed limit of 70mph. The B4082 is a 7.3m single carriageway with 1m wide hard strips and is subject to a 60mph national speed limit for single carriageway roads.

2.3.4. The central island of the roundabout has a diameter of approximately 40m, and with the 12.5m wide circulatory carriageway. On all approaches to the roundabout the entry arms flare to provide additional lanes.

2.3.5. The B4082 is a two-lane single carriageway road that provides a link between the A46 and Clifford Bridge Road.

2.3.6. The B4027 Brinklow Road passes under the A46 mainline approximately 600m south of the existing Walsgrave Junction. The road changes to the B4428 when it passes under the A46.

2.3.7. Parking laybys are located on the northbound and southbound carriageways of the A46 mainline between the Walsgrave Junction and the M6/M69 junction. Emergency telephones are located at these laybys. The usage levels of the laybys are currently unknown.

2.3.8. Two gantries are present within the Order Limits. A variable message sign (VMS) gantry is situated approximately 1.2km to the north of the existing Walsgrave Junction. The second VMS gantry is situated approximately 1.5km to the north of the existing junction. Both gantries span over the verge of the northbound carriageway of the A46. There are no gantries located on the southbound carriageway within the Order Limits.

2.3.9. Hungerley Hall Farm accommodation overbridge, located approximately 400m north of the existing Walsgrave Junction, is owned by National Highways with access rights granted to Hungerley Hall Farm. The bridge provides private access between Hungerley Hall Farm to the west of the A46 and the agricultural land to the east of the A46. The bridge is not currently accessible to the public.

2.3.10. The Farber Road overbridge is located approximately 1.6km north of the existing Walsgrave Junction and carries the 156/R75x/1 bridleway over the A46 and provides vehicular access to Walsgrave Hill Farm.

2.3.11. The A46 and B4082 corridor boundaries are heavily vegetated on all approaches to the existing Walsgrave Junction, which quickly give way to farmland and public open space beyond. The exception is the section of road adjacent to Coombe Abbey Park where there is significant tree belt separating the road from Coombe Pool. This whole woodland is subject to a Tree Preservation Order (TPO).

2.3.12. The existing A46 and the B4082 to the Clifford Bridge Road roundabout are currently owned, maintained and operated by the Applicant. The B4082 at Clifford Bridge Road roundabout is currently owned, maintained and operated by Coventry City Council.

2.4. Existing land uses and character

Topography

2.4.1. ES Chapter 2 (The Scheme) (**TR010066/APP/6.1**) sets out the environmental baseline and ES Chapter 7 (Landscape and Visual Effects) (**TR010066/APP/6.1**) provides detail on the topography and landscape of the Scheme and surrounding area.

2.4.2. The topography of the area is generally flat. The roads occupying the Scheme include the A46, the B4082, and two access roads: a farmer's access road in the north of the Order Limits passing over the A46, and an access road off the northern side of the B4082.

2.4.3. Most of the existing area within the Order Limits around the roads is covered by vegetation: mainly grass with hedgerows, trees and bushes are present around the perimeter. At the north of the Order Limits, there are embankment earthworks passing through the site for the farm track and public right of way (PRoW) off Farber Road, that passes over the A46.

2.4.4. Smite Brook is present in the south of the Order Limits, culverted under the A46 and flows from Coombe Pool in the east, to the River Sowe in the west. The River Sowe runs approximately north to south, parallel to the western Order Limits boundary.

2.4.5. North of the existing Walsgrave Junction, the agricultural land predominantly slopes from east to west towards the River Sowe. The A46 mainline is in cut as it leaves Walsgrave junction heading north.

2.4.6. The land immediately south of the B4082 slopes steeply from north to south away from the road to a relatively flat plain.

2.4.7. South of the existing Walsgrave Junction, bunding is present on each side of the A46. On the eastern side, after the bunding, the land falls northeast and on the western side the land falls north-west.

Land use

2.4.8. ES Chapter 2 (The Scheme) (**TR010066/APP/6.1**) sets out the environmental baseline, ES Chapter 7 (Landscape and Visual Effects) (**TR010066/APP/6.1**) provides detail on the landscape, whilst ES Chapter 12 (Population and Human Health) (**TR010066/APP/6.1**) provides information about the land use of the Scheme and surrounding area.

2.4.9. Between Binley and the Walsgrave junctions, land use on the western side of the A46 predominantly comprises residential and retail properties set back from the highway boundary. A narrow band of open space and scrub land separates the A46 from the residential properties. To the east of this section of the A46, the highway is bordered by playing fields used by Broadstreet Rugby Football Club, scrub land, agricultural land and woodland associated with Coombe Abbey Park and Pool. Much of the land to the north of the B4082 and to the west of the A46 forms the Walsgrave Hill Farm housing allocation (referenced as H2:3 in the Coventry Local Plan 2017).

2.4.10. There is a large technology and manufacturing cluster known as Ansty Park approximately 1.5km to the north-east of the Scheme, comprising a Manufacturing Technology Centre and companies such as Rolls Royce, London EV Company and a number of supermarkets and hotels.

2.4.11. Between Walsgrave and the M6/M69 Junction the land-use is predominantly agricultural. There is an agricultural vehicle crossing access approximately 400m north of the existing Walsgrave roundabout (approximately 125m north of Hungerley Hall Farm) also known as Hungerley Hall Farm accommodation overbridge, and another bridleway overbridge (the Walsgrave Hill Farm accommodation overbridge) approximately 1.2km from this agricultural vehicle crossing.

2.4.12. The University Hospital Coventry is located approximately 450m to the west of the A46 near the point where the Walsgrave Farm accommodation overbridge crosses the A46. A large Tesco supermarket is also present north-west of the existing junction accessed via Clifford Bridge Road.

Ecological designations

2.4.13. ES Chapter 2 (The Scheme) (**TR010066/APP/6.1**) and ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**) set out the ecological baseline for the Scheme and surrounding area. A number of statutory designated sites have been identified within the 2km study area of the Scheme's Order Limits, or with a direct hydrological connection. They include:

- two SSSIs;
- two locally designated Local Nature Reserves (LNRs); and
- seven local wildlife sites (LWS).

2.4.14. There are no European protected sites (Special Protection Areas, Special Areas of Conservation (SAC), or Wetlands of International Importance (Ramsar sites)) within 2km of the existing Walsgrave Junction. The nearest European protected site is Ensor's Pool SAC, which is located over 11.5km to the north-west.

2.4.15. There are two SSSIs within 2km of the site. Coombe Pool SSSI located immediately adjacent to the east of the existing Walsgrave Junction, and a narrow section of the SSSI is within the Scheme's Order Limits. The SSSI lies within Coombe Abbey Park and contains a 36ha pool (fed by Smite Brook), reed beds, and woodland. The site is known for its herons (it is the largest heronry in the county with 20 breeding pairs recorded in the past), and wintering waterfowl. The woodland within the SSSI supports a diverse breeding bird community. Herald Way Marsh SSSI, located 1.5km south of the existing Walsgrave Junction, is designated for its assemblage of invertebrates, a number of which are nationally rare. None of this SSSI is within the Scheme's Order Limits.

2.4.16. Two LNRs are present within 2km of the existing Walsgrave Junction. Herald Marsh Way LNR located approximately 1.45km to the south, comprises one of the most important areas for rare invertebrates in the county. The site overlaps with Herald Way Marsh SSSI. Stoke Floods LNR is located approximately 900m south-west of the existing Walsgrave Junction. The Stoke Floods LNR has a large lake, reedbeds and scrub next to the River Sowe. The site supports many wetland plants, including flag and reed canary grass. Bird life is varied from many species of duck, seven species of warbler in the summer and occasional black tern and yellow wagtails. The reserve is one of the most important wetland sites in Coventry.

2.4.17. The Scheme Order Limits include the existing A46 road, with associated road verges, hedgerows, woodland, amenity grassland and arable farmland. One veteran tree record was provided from Warwickshire Biological Records Centre west of the River Sowe. A veteran oak tree has been identified at 15m from the Order Limits to the north of Hungerley Hall Farm. The habitats within the Order Limits have the potential to support a range of species including a number of bat

species, badgers, great crested newts, reptiles, a range of bird species including barn owl, riparian mammals, and aquatic macroinvertebrates.

Historic environment

2.4.18. ES Chapter 2 (The Scheme) (**TR010066/APP/6.1**) and ES Chapter 6 (Cultural Heritage) (**TR010066/APP/6.1**) set out the heritage baseline for the Scheme and surrounding area.

2.4.19. Two Historic Environment Record areas cover the study area: the Coventry Historic Environment Record and the Warwickshire Historic Environment Record. The study area has been defined in accordance with DMRB LA 106 Cultural Heritage (paragraphs 3.5 - 3.7). It is not directly mappable, but those elements that are able to be depicted on a map are shown on ES Figures (**TR010066/APP/6.2**) 6.1 (Designated Heritage Assets), 6.2 (Non-Designated Heritage Assets) and 6.3 (Heritage Events). The study area of the Scheme includes:

- The footprint of the Scheme and areas which may be physically affected.
- The Zone of Visual Influence (ZVI). This draws from the Zone of Theoretical Visibility (ZTV) as a maximum extent and is modified using site observations to account for vegetation or other factors, such as existing buildings or inaccessible locations (for example the roofline of a building may be within the ZTV but is not where a person could be reasonably expected to be standing to experience an effect). The ZVI does not have a mappable output, as it is based partly on professional judgement and will change with season and weather.
- Any heritage assets which may potentially be affected by noise and/or vibration.

2.4.20. A total of 183 heritage known assets have been identified within the study area. These assets are made up of:

- two Scheduled Monuments;
- one grade II* Registered Park and Garden, also designated as a Conservation Area;
- 25 Listed Buildings (two grade I, two grade II*, and 21 grade II);
- 144 non-designated heritage assets, including findspots; and
- 11 newly identified non-designated heritage assets.

2.4.21. There are no Registered Battlefields within the study area.

Landscape character

2.4.22. ES Chapter 7 (Landscape and Visual Effects) (**TR010066/APP/6.1**) provides

detail on the landscape designations and landscape character of the Scheme and surrounding area.

2.4.23. In accordance with DMRB LA 107 a study area for the landscape and visual assessment has been established. The extent of the study area has been selected as being appropriate to ensure that all potentially significant landscape and visual effects are identified. It is considered unlikely that the Scheme would give rise to any significant effects on landscape and visual receptors due to the distance and presence of intervening topography, vegetation and built form, particularly the context of the existing A46 and Walsgrave Junction. Therefore, it was determined that a 1km radius study area was adequate. Neither the ZTV or site visits indicated the presence of primary sensitive receptor(s) within or beyond 1km study area.

2.4.24. There are no national or local landscape designations within the study area.

2.4.25. The Scheme adjoins Coombe Abbey Grade II* Registered Park and Garden and conservation area, located within Coombe Abbey Park. There is a range of listed buildings within the study area, including several within Coombe Abbey Park and three at Hungerley Hall Farm.

2.4.26. The Rugby Green Belt boundary and the Rugby administrative area follow the western highway verge of the A46. Therefore, all of the existing A46 within the Order Limits is in the Green Belt. Most of the Scheme is within the Green Belt, apart from the western dumbbell and the western B4082 slip road.

2.4.27. The Scheme lies between Natural England's National Character Area (NCA) 97: Arden and NCA 96: Dunsmore and Feldon. Arden comprises farmland and former wood-pasture. The landscape of the lower-lying central area has small fragmented semi-natural and ancient woodlands amongst fields bounded by hedgerows featuring mature oaks. Dunsmore and Feldon are predominantly rural, agricultural landscapes, containing small rivers and tributaries. Feldon has a more open character, while Dunsmore is wooded. The area comprises predominantly agricultural land, parkland of Coombe Abbey and dense residential and industrial areas of Binley/ Walsgrave. Prominent elements are the large scale industrial and commercial buildings and the University Hospital Coventry.

2.4.28. Warwickshire County Council has produced a suite of landscape character assessment reports for the whole of Warwickshire: Warwickshire Landscapes Guidelines (November 1993). The eastern part of the study area is located within Rugby Borough Council's jurisdiction and falls within the identified Dunsmore Parklands Landscape Character Type (LCT). This is described by Warwickshire County Council as 'an enclosed, gently rolling estate landscape with a strongly wooded character defined by woodland edges, parkland and belts of trees.'

2.4.29. The character of the Dunsmore Parklands LCT gives a strong sense of scale,

enclosure, and the feeling of a linked landscape; through large woodland blocks, wooded streams, mature hedgerows, and hedgerow trees (predominantly oak). This is emphasised by gently rolling landform and large-scale field pattern, poorly defined in some places, allowing for middle distance views to wooded skylines. The landscape around Coombe Abbey Park fields is open, allowing for wide views northwards, but fragmented by intrusive landscape features like busy roads and industrial built form.

Hydrological and flood risk

2.4.30. ES Chapter 13 (Road Drainage and the Water Environment) (**TR010066/APP/6.1**) sets out the hydrological baseline of the Scheme and surrounding area.

2.4.31. The following water features exist in the 1km study area:

- The Scheme is located within close proximity to two designated main rivers within the study area. There are no main rivers within the Order Limits. The River Sowe is located to the west of the Order Limits, flowing southwards 100m to the west of the Scheme at its closest point within the study area.
- OS mapping shows the Scheme is located in close proximity to multiple ordinary watercourses within the study area, which include field drains and six ordinary watercourses:
    - Smite Brook flows from the north-east joining with Coombe Pool and discharging to the west of Coombe Pool. Coombe Pool then discharges excess flow into Smite Brook to the west of Coombe Pool, 100m south-east of the existing Walsgrave Junction. At this location, Birchley Beck converges with Smite Brook. Smite Brook is then culverted beneath the A46, 50m south of the existing Walsgrave Junction, before flowing westwards beneath the B4082 via a culvert, before its confluence with the River Sowe.
    - Birchley Beck, originates from the south-east outside the study area. Birchley Beck is formed from a number of small watercourses, which confluence within Birchley Wood. Birchley Beck flows west, to the south of Coombe Pool receiving discharges from the lake via sluice gates and spillways. The brook then confluences with an unnamed tributary before its confluence with Smite Brook, to the east of the A46.
    - The unnamed tributary of Birchley Beck originates from the south, outside the study area, flowing north before it is culverted beneath Brinklow Road. After flowing beneath Brinklow Road, it flows north before its confluence with Birchley Beck.
    - An unnamed ordinary watercourse, located within the study area,

approximately 1km north of the existing A46 Walsgrave Junction, flows west beneath the existing A46 via pipework to the River Sowe.

- Approximately 700m north of the existing A46 Walsgrave Junction, an unnamed ordinary watercourse flows in a westerly direction to the River Sowe. This watercourse is contained to the west of the existing A46, where it originates. On the opposite side of the A46 carriageway to this, a watercourse flows in a westerly direction and connects to the existing drainage system, east of the A46.

- Coombe Pool is a reservoir situated approximately 100m east of the existing Walsgrave Junction, within Coombe Abbey Park. Coombe Pool Reservoir is designated as a Site of Special Scientific Interest (SSSI). The reservoir (as part of Coombe Abbey Park) is owned and managed by Coventry City Council in accordance with requirements of the Reservoir Act 1975.

- There are three ponds located within the study area, which are hydraulically connected to watercourses during extreme flood events as they lie within Flood Zones 2 and 3. Two ponds are located in the south-west of the study area, one within and one close to Stoke Floods LNR. The third is located in the north of the study area. In addition to this there are 11 ponds within the study area which are hydraulically disconnected from watercourses and the Scheme.

2.4.32. The Environment Agency's Flood Map for Planning (Environment Agency, 2024a) shows that the majority of the Scheme and study area is located within Flood Zone 1. Land immediately surrounding the River Sowe, Smite Brook, Birchley Beck, and its unnamed tributary primarily lie within Flood Zones 2 and 3

2.4.33. Site specific hydraulic modelling was undertaken to provide a more accurate representation of the baseline fluvial flood risk around the A46 Walsgrave Junction as part of the Flood Risk Assessment (ES Appendix 13.1 (**TR010066/APP/6.3**). The updated baseline model has been reviewed by the Environment Agency. The updated baseline model still shows the A46 to be located within Flood Zone 1.

2.4.34. A Scheme specific hydraulic model has been developed to refine the understanding of the baseline and post development conditions. This demonstrates that the existing highway is not at flood risk during the 1% event. Although there are areas at flood risk adjacent to the Scheme, these are broadly in line with those shown in the Environment Agency's Flood Map for Planning as described above. Further information is provided within the Flood Risk Assessment (FRA) (Appendix 13.1 of the ES (**TR010066/APP/6.3**)).

2.4.35. The Environment Agency's Long Term Flood Risk map (Environment Agency, 2024b) indicates the majority of the Scheme is at very low risk of flooding from pluvial sources (surface water). This indicates the majority of the Scheme has

a chance of flooding of less than 0.1% each year. However, ES Figure 12.3 (Design mitigation and enhancement measures) (**TR010066/APP/6.2**) shows high and medium risks of surface water flooding along the A46, northbound. ES Figure 12.3 (Design mitigation and enhancement measures) (**TR010066/APP/6.2**) also shows medium risks of surface water flooding along the B4082.

Noise

2.4.36. The noise baseline is set out in ES Chapter 11 (Noise and Vibration) (**TR010066/APP/6.1**). The baseline noise environment is dominated by road traffic, with some localised commercial sources. In addition to the A46, there are a number of other potentially significant sources of road traffic noise, including the B4082 and Clifford Bridge Road. A reflective noise barrier, approximately 50m in length, is located alongside the A46 northbound carriageway as it crosses Brinklow Road towards the south of the area. There are also a number of minor roads, in particular around the Star Industrial Park and University Hospital Coventry, which will contribute to ambient noise levels. Other noise sources include noise associated with general urban and rural activities.

2.4.37. There are no Noise Important Areas (NIAs) located within the immediate vicinity of the Scheme. However, there are a number of NIAs located on surrounding roads. These include three NIAs situated on the A4600 Antsy Road (IDs 324, 11796 and 14385), two to the south-west on Brandon Road (ID 330) and Binley Road (ID 11800) and one on the A46 at Binley Junction (ID 14307). All these NIAs, except ID 14307, are the responsibility of Coventry City Council. ID 14307 is the responsibility of National Highways. No Environmental Noise Directive (END) quiet areas or potential END quiet areas have been identified in the study area.

2.4.38. All residential receptors in the study area (maximum distance of approximately 300m from the construction works for noise impacts and up to a maximum distance of approximately 100m from construction works for vibration impacts) are considered to be sensitive to traffic noise levels during the day and night.

2.4.39. A total of 838 existing noise sensitive receptors have been identified within the 300m construction noise study area, not including seven PRoW and amenity areas.

2.4.40. Other noise sensitive receptors within approximately 1km of the existing Walsgrave Junction include the following educational, medical facilities and community facilities, as well as areas of undeveloped semi-natural environment:

- Residential communities to the north, west and south-west of the existing junction
- Schools such as Clifford Bridge Academy and Pearl Hyde Primary

School, and Wyken Community Centre

- University Hospital Coventry (approximately 1km to the north of the existing junction)
- Coombe Pool SSSI, located directly east of the junction. This SSSI is located within Coombe Abbey Grade II* Registered Park and Garden
- Two PRoW: 156/R75x/1 which crosses the A46 to the north of the Scheme; and 104/R31/2 which approximately follows the road layout at the Ansty Interchange
- Grade II listed structures at Hungerley Hall Farm within the Order Limits
- Areas of amenity or Green Infrastructure (as defined on the Coventry Local Plan) including the external grounds of Pearl Hyde Primary School, Clifford Bridge Academy, Broadstreet Rugby Football Club (RFC), along with Spring Estates Allotment, Valencia Road Play Park and Brinklow Road Open Space,

Air quality

2.4.41. The air quality baseline is set out in ES Chapter 5 (Air Quality) (**TR010066/APP/6.1**).

2.4.42. Coventry City Council currently has a citywide Air Quality Management Area (AQMA), declared due to exceedances of the annual mean NO_2 objective, the boundary of which is immediately adjacent to the Scheme Order Limits. As such, a number of road links within the study area are located within the AQMA (construction study area is 200m from the Order Limits).

2.4.43. Rugby Borough Council currently has one AQMA declared, which covers the urban area of Rugby, approximately 8km to the east of the Scheme and outside of the study area.

2.4.44. Receptors sensitive to changes in air quality including residential properties, schools and hospitals are located within the study area.

2.4.45. Within the 200m study area there are a number of residential properties, which include:

- Hungerley Hall Farm
- Properties along Clifford Bridge Road
- Properties along Dorchester Way, Bridport Close, Abbotsbury Close, Fontmell Close, Sturminster Close

- Properties along Gainford Rise, Royston Close, Valencia Road and Florence Road

2.5. Description of the Scheme

2.5.1. The Scheme consists of the following principal elements:

- Realignment of the existing A46 dual carriageway through the existing at grade roundabout (which will be removed), for approximately 880m to improve the road geometry and allow for a 50mph speed limit.
- Earthworks on the eastern side of the A46 mainline to facilitate the realignment through the existing at grade roundabout.
- A new grade separated junction over the A46 mainline, approximately 800m north of the existing Walsgrave junction to connect the B4082 with the A46.
- A new overbridge structure across the existing A46, between the dumbbell roundabouts forming the grade separated junction.
- New merge and diverge slip roads at the grade separated junction for both northbound and southbound movements.
- Realignment of the B4082 to form a single carriageway link road, for approximately 900m, to connect the local road network to the new A46 grade separated junction with a proposed 40mph speed limit.
- Road assets and street furniture such as traffic signs and lines, variable message sign (VMS), street lighting columns, vehicle restraint systems (VRS), fences, noise barriers, retaining walls and kerbs.
- Drainage systems including a dry detention basin and two ponds that will be designed to be permanently wet.
- Proposed new maintenance accesses to the drainage features and VMS.
- Retention of the Hungerley Hall Farm accommodation bridge (the existing bridge that provides farm vehicle access over the A46 mainline).
- Farm access track to the north of Hungerley Hall Farm to provide gated access to the B4082 link road.
- Improvements to facilities for walkers, cyclists and horse-riders (WCH) through provision of a signalised pedestrian crossing on the B4082; and providing enabling works, including the retention of Hungerley Hall Farm accommodation overbridge, for a potential future WCH route to be provided by others.
- Replacement and installation of new highway boundary fencing.
- Replacement vegetation planting to compensate for the vegetation that needs to be removed to facilitate the Scheme.

2.5.2. A full description of the Scheme is provided in ES Chapter 2 (The Scheme) (**TR010066/APP/6.1**).

2.6. Objectives

2.6.1. The main aims of the Scheme are to increase capacity and reduce traffic congestion on the A46 around Coventry. This will directly contribute to the UK, regional and local government's transport and economic growth plans by improving connectivity in Warwickshire.

2.6.2. Scheme objectives have been used to develop the design. The objectives of the Scheme are as follows:

- An SRN that supports and facilitates economic growth, supporting employment and residential development opportunities.
- An SRN that is maintained to safe and serviceable condition.
- Improve the operation and efficiency of the existing transport network, delivering capacity enhancements to the SRN.
- An SRN that minimises its negative impacts on users, local communities and the environment.
- An SRN that balances the need of individuals and businesses that use and rely upon it.
- Reducing/minimising the impact on the wider environment, whilst seeking to bring enhancement.
- Operational maintenance to be considered holistically.

2.6.3. Table 2-1 provides commentary on how the Scheme meets the objectives.

Table 2-1: Consideration of the Scheme against the Scheme Objectives

Topic	Objectives	How the Scheme Meets the Objectives
Growth	An SRN that supports and facilitates economic growth, supporting employment and residential development opportunities	The Scheme will provide additional capacity and improved journey times which may encourage economic growth in the local area as well as across the A46 corridor. This will help contribute to sustainable economic growth by supporting employment and improving access to commercial areas. The A46 corridor also fulfils a key strategic role in linking the advanced manufacturing sector within the Warwickshire sub region, so improvements to the corridor will enhance this. The Scheme will enable future residential development opportunities by providing potential means of access to the A46, such as those to the west of the A46 allocated in the Coventry Local Plan. An example includes Walsgrave Hill Farm Allocation

Topic	Objectives	How the Scheme Meets the Objectives
		(H2:3) which provides a projected 900 homes. The Economic case overview (Section 5) provides more details of the economic benefits of the Scheme.
Safety	An SRN that is maintained to safe and serviceable condition	The Scheme will address operational issues by reducing congestion at the Walsgrave Junction, along the A46 and the B4082. It has been designed and will be built to current standards as set out in the DMRB. There will be an overall reduction in the number of collisions, thus assisting in keeping the SRN in a safe and serviceable condition. The design of the Scheme has incorporated features to enhance safety to users, such as new VRS, warning signage of new layouts and agricultural traffic, new speed limits and appropriate lighting. The Transport Case for the Scheme (Section 4) of this document, and the Transport Assessment (**TR010066/APP/7.3**) provide more detail on the safety benefits – the introduction of the Scheme leads to: • a decrease in overall accidents, although a small shift towards a higher severity is seen. • Improved safety on local roads due to reduced traffic using that part of the network. • Improved safety on the wider SRN when taking account safety as a result of Binley and Walsgrave functioning together; and comparatively in regard to the levels of traffic reassigned to the SRN.
Reduce congestion	Improve the operation and efficiency of the existing transport network, delivering capacity enhancements to the SRN	Many sections of the A46 near Coventry have been upgraded by the Applicant to provide relief from traffic congestion and to improve journey times by increasing the capacity on the A46 between the M6 and the M40. The existing Walsgrave Junction on the A46 still remains a particular pinch point for traffic. The Coventry Junctions Scheme involves the upgrade of two at-grade junctions (Binley and Walsgrave) to provide relief from traffic congestion and to improve journey times by increasing the capacity on the A46 between the M6 and the M40. The Scheme is predicted to reduce traffic flows on many local roads as traffic reroutes onto the A46. The Transport Case for the Scheme (Section 4) of this document and the Transport Assessment (**TR010066/APP/7.3**) provide more detail on traffic movements.
Reduce negative impacts	An SRN that minimises its negative impacts on users, local communities and the environment	The Scheme design has considered local community access to the road network and reduce impacts during construction and operation on users, communities and the environment. These aspects are set out in ES Chapters 5-15 (**TR010066/APP/6.1**) with mitigation for adverse impacts caused by the Scheme embedded into the design.

Topic	Objectives	How the Scheme Meets the Objectives
		An Outline Traffic Management Plan (**TR010066/APP/7.5**), which shows how traffic will be managed to reduce impact on the local communities during construction, and First Iteration Environmental Management Plan (EMP) (**TR010066/APP/6.5**), which shows how the environmental impacts will be managed and mitigated during various activities for the construction and operation of the Scheme, accompany the application.
Customer	An SRN that balances the need of individuals and businesses that use and rely upon it	As detailed above, the Scheme has been designed to consider its users, including both members of the public and businesses. Public transport routes are expected to be more consistent due to reduction of congestion and delays on the A46 and the local road network. Road users are expected to have reduced and consistent journey times including to University Hospital Coventry, which impacts on a small number of users. Local roads generally show a reduction in flows due to increase flows on the A46 with the Scheme. The Scheme will provide a new signalised crossing on the B4082 and will provide passive provision for potential new cycling and walking routes in the future. These aspects are set out in ES Chapter 12 (Population and Human Health) (**TR010066/APP/6.1**). The Scheme will reduce congestion on the A46, this in turn will reduce negative impacts on users, local communities and the environment whilst balancing the need of individuals and businesses that use and rely upon the A46, thus having positive impacts on the economy.
Environment	Reducing/ minimising the impact on the wider environment, whilst seeking to bring enhancement	The Scheme has been designed to reduce negative impacts on the wider environment by providing mitigation to any adverse impacts caused by the Scheme, whilst seeking environmental enhancement and achieving a biodiversity net gain. More details are provided in the ES Chapters 1-15 (**TR010066/APP/6.1**) and the Environmental Masterplan displays the ecological benefits of the Scheme (ES Figure 2.4 (**TR010066/APP/6.2**)).
Maintenance	Operational maintenance to be considered holistically	The Scheme will be kept in a safe and serviceable condition with maintenance having been considered during design development. Detailed arrangements are also incorporated for the long-term management and maintenance of landscape features, as detailed in the First Iteration EMP (**TR010066/APP/6.5**).

2.7. Need for the Scheme

2.7.1. The main Scheme objectives for the A46 Coventry Junctions Upgrade Scheme (Binley and Walsgrave), as set out in RIS2, are to provide relief from traffic

congestion and improve journey times by increasing the capacity of the two remaining at-grade junctions on the A46 between the M6 and the M40, benefitting both the strategic and local traffic needs and supporting future growth forecasts from Coventry City Council.

2.7.2. The A46 corridor forms part of the national SRN connecting the M1, M6 and the M69 with the M5 and provides links to the SRN and the rest of the country. The South Midlands Route Strategy Evidence Report (Highways Agency, 2014) indicated that sections of the A46 to the south and east of Coventry suffer from congestion and poor journey time reliability. These are likely to be exacerbated by future housing growth and economic aspirations. Many communities are located adjacent to the A46, and stakeholders have raised concerns regarding the pedestrian crossing points on and near the A46.

2.7.3. The A46 has historically experienced safety performance issues in comparison to the rest of the SRN. (English A-road dual carriageway figures were obtained from data in the Reported Road Casualties on the Strategic Network, 2017). As part of the A46 Coventry Junctions Scheme improvements at the A45/A46 Tollbar End Junction, to the south of Coventry, to grade separate (i.e. to be on different levels) the A46 (N) to A45 (W) movements were completed in 2017 and work to upgrade the Binley Junction started in March 2020, and was completed in February 2023. Conversion of a section of the M6 between junctions 2 and 4 into a smart motorway was completed in March 2020.

2.7.4. Following the completion of the A46 Binley Junction Improvement Scheme in 2023, the Walsgrave Junction is the only remaining roundabout east of Coventry and north of Tollbar End Junction that is at grade (i.e., is at the same level), and as such is a pinch point for traffic.

2.7.5. The existing network performance issues are further set out in Section 4 of this Case for the Scheme.

2.7.6. As such, the Scheme will address the above identified transport issues by:

- Improving the performance of the A46 around Coventry and addressing the delays and congestion. The Scheme provides the required capacity improvements to allow for the forecasted traffic growth.

- Improving operational issues by reducing congestion at Walsgrave Junction, along the A46 and the B4082. Further details are set out in Section 4 of this Case for the Scheme and the Transport Assessment (**TR010066/APP/7.3**).

2.8. National need for the Scheme

2.8.1. The aims of the Scheme are directly in line with the Government's policies and illustrate the need for the Scheme on a national level. The Government has highlighted the express need for further growth and improvements to the national

networks within the NPS NN. The Road Investment Strategies explore these needs in further detail and support the Scheme as a required improvement to the SRN.

2.8.2. In April 2020, the Department of Transport (DfT) published the Road Investment Strategy 2 (RIS2). RIS2 sets out a long-term strategic vision for network investment for the second road period (RP2) between 2020 and 2025. RIS2 sets out a list of schemes that are to be developed by National Highways in this period.

2.8.3. National Highways, as the strategic highways company and appointed by the Secretary of State must, in exercising its functions and complying with its legal duties and other obligations, act in a manner which it considers best calculated to, among others:

- minimise the environmental impacts of operating, maintaining and improving its network and seek to protect and enhance the quality of the surrounding environment; and
- conform to the principles of sustainable development.

2.8.4. RIS2 (page 91) introduces the schemes in the Midlands committed to in Road Programme 2. RIS2 (page 92) includes the "grade separation of the Binley and Walsgrave roundabouts on the A46 near Coventry". RIS2 sets out a commitment for "*Improving the A46 'Trans-Midlands Trade Corridor' between the M5 and the Humber Ports. Work in RP2 will create a continuous dual carriageway from Lincoln to Warwick, delivering one of Midlands Connect's key priorities.*"

2.8.5. Midlands Connect is a partnership that researches, develops and progresses transport projects which will provide the biggest possible environmental, economic and social benefits for the Midlands and the rest of the UK.

2.8.6. RIS2 is informed by the Route Strategies as a part of a rolling programme that sets out a plan for investment into the SRN. The North and East Midlands Route Strategy gathers wide-ranging evidence on the state of the network within the study area, including potential areas for investment opportunity, which in turn ensures that the development of RIS2 makes the best use of taxpayer's money and that investments have the maximum impact.

2.8.7. National Highways' Strategic Business Plan (2020) responds to the publication of RIS2 with a high-level direction for National Highways. It outlines six key performance indicators (KPIs) and outcome areas to respond to and align with RIS2 priorities.

2.8.8. The Scheme is designed to support the RIS2 framework by meeting these priorities. The Scheme objectives have been aligned to meet National Highways' outcome areas, alongside the RIS2 strategic outcomes, by reducing delays and

congestion on the network and improving the journey time reliability of the A46.

2.8.9. The Scheme is well-placed to make a positive contribution towards a range of relevant strategies and policy, as summarised in Table 2-2.

Table 2-2: Policies and Strategies with which the Scheme aligns

Policy / Strategy	Summary
National Highways Strategic Business Plan 2020 – 2025 (2016)	The Scheme supports National Highways' commitment to meeting RIS2 outcomes.
DfT's Roads Investment Strategy 2: 2020-2025 (RIS2)	The Scheme is aligned with the RIS2 focus of making the SRN efficient and reliable for everyone, with the aim of "*Improving the A46 'Trans-Midlands Trade Corridor' between the M5 and the Humber Ports. Work in RP2 will create a continuous dual carriageway from Lincoln to Warwick, delivering one of Midlands Connect's key priorities.'*
DfT's Transport Investment Strategy (2017)	The Scheme is aligned with the strategy and the aims of investment in transport aligns with the Scheme's Objectives.
HM Treasury National Infrastructure Strategy (2020)	The Scheme is explicitly referenced within the National Infrastructure Strategy as one of the projects where the government is making key transport investments in England.
National Highways Route Strategy – South Midlands (2023)	The Scheme is explicitly referenced as a RIS2 commitment.

2.8.10. Stretching for 155 miles from Gloucestershire to Lincolnshire, the A46 corridor is home to 5.5 million people and 2.9 million jobs, with an economic output of £115 million, 9% of the English economy as evidenced by Midlands Connect, the local Sub-National Transport Body. As evidenced by the Midlands Engine Partnership's Independent Economic Review (2020), the regional economy is dominated by road-reliant industries such as advanced manufacturing, automotive, aerospace, agriculture, distribution and textiles with manufacturing and engineering sectors alone accounting for 16.2% of regional Gross Value Added (GVA). With ports at either end of the corridor and East Midlands Airport (the UK's largest dedicated cargo airport) close by, the A46 is a nationally significant trade and export route. The regional freight sector accounts for export of £43 billion worth of goods to 178 countries (Midlands Connect Strategic Transport Plan, 2022).

2.8.11. A key feature of the A46 is the reliance on journey time reliability and an efficient network. Midlands Connect Strategic Transport Plan (2022) states *"Strategic trade corridors, like the A46, are vital because the Midlands plays a crucial role in the movement of lorries and other commercial traffic. The so called 'Golden Triangle', which straddles the East and West Midlands, sits within 4 hours drive of most of Great Britain. It has great connections via some of the country's main motorways, allowing fast deliveries for most of the UK population."*

2.8.12. Some significant statistics (according to the Midlands Connect Business Corridor Survey in 2016 among 250 businesses) are:

- Half of the industries in the Midlands rely on the SRN for both international and national supply chains and connections to customers – 22% of goods produced in the Corridor are exported and 85% of businesses use the A46 for long-distance journeys.
- An improvement in the A46 Corridor will raise overall business productivity – according to the survey with 65% believing it would allow them to recruit more staff.

2.8.13. Economic growth around Coventry and the Midlands has been driven by strategic initiatives, investments, and a focus on innovation and sustainability. Key sectors include advanced manufacturing, food and agri-tech, med-tech, and life sciences. Ongoing investments in infrastructure and connectivity are expected to further boost the region's economic prospects.

2.8.14. The A46 corridor is expected to see further substantial growth and economic change in the period up to 2041. Midlands Connect, in its' 20-year vision for the A46 corridor, estimates the corridor as a whole is likely to see an additional 600,000 residents, 150,000 jobs, and 250,000 new homes.

2.8.15. The Scheme itself could strengthen a number of sectoral developments across the wider Midlands area on a regional level, as outlined within Table 2-3.

Table 2-3: Sectoral developments within the Midlands area

Development	Impacts
Automotive industry	• Mainly located between Coventry and Birmingham and benefiting from proximity to the A46. • Major industry for regional employment.
Net Zero industry	• Strong public commitment to investing in the Net Zero industries. • The supply chain for the clean energy industry particularly stretches along the A46.
Enterprise Zones Coventry and Warwickshire Enterprise Zone	Coventry and Warwickshire Enterprise Zone: This zone includes several sites such as the Coventry and Warwickshire Gateway, which is strategically located near the A46. It focuses on advanced manufacturing, engineering, and digital sectors, offering businesses benefits like business rate discounts and simplified planning processes. These zones are part of a broader strategy to boost the regional economy by attracting investment, creating jobs, and supporting innovation.

2.8.16. However, despite this there are some challenges. The economic performance and productivity of the Midlands lags behind the rest of England, particularly the South-east. While key regional industries are dependent on the A46, their productivity is weakened by unreliable journey times and major bottlenecks along the A46.

2.9. Local need for the Scheme

2.9.1. Regional and local planning policy recognises the A46 as an important section of SRN. The Scheme is required to provide relief from traffic congestion and improve journey times by increasing the capacity of the remaining at-grade junction on the A46 between the M6 and the M40, benefitting both the strategic and local traffic needs and supporting future growth forecasts from Coventry City Council, Rugby Borough Council and West Midlands Combined Authority.

2.9.2. The West Midlands Combined Authority Plan for Growth (2022) is a strategic initiative aimed at fostering economic resilience and recovery in the region. The Plan for Growth highlights that significant investments in transport aim to better connect people, places, and opportunities. The plan leverages private sector innovation and investment, supported by public initiatives, to create a conducive environment for growth. It aims to make the West Midlands the fastest-growing UK region outside London.

2.9.3. The Rugby Borough Council's growth strategy, known as the Rugby Regeneration Strategy (2022), aims to transform the town centre into a vibrant, resilient community hub. This strategy is designed to harness Rugby's strengths and drive significant, long-term transformation. The Rugby Regeneration Strategy sets out a vision for the future, setting out guiding principles for redevelopment and a number of 'big idea' projects which have a vital role to play in revitalising the town centre, although the A46 is not specifically mentioned In the Regeneration Strategy, sustainable connectivity is a key priority for Rugby, with the objective to deliver a movement network that enables safe, active and sustainable localised journeys, and a step-change in mode of transport from wider communities and visitors accessing the centre.

2.9.4. Coventry's Infrastructure Delivery Plan (IDP) is a key component of Coventry Local Plan (2017). It states that *"Transportation infrastructure is the largest area of infrastructure needed in terms of scale and cost. The transport modelling that has supported the Local Plan has identified a range of schemes that will be essential to the delivery of new homes and jobs across Coventry."* It outlines the necessary infrastructure projects and investments required to support the city's growth and development. The IDP includes the Walsgrave Hill Farm Allocation which includes the development of 900 homes at Walsgrave Hill Farm, with construction starting in 2025 and continuing until 2031. It also includes the A46 Coventry junctions upgrade and states the improvements will enhance connectivity between Coventry and the broader motorway network, supporting economic growth in the region. The IDP states that the new grade separated junction will be created on the A46 near Walsgrave Hill Farm to support new development access. The IDP says that the Scheme (and others) "in particular represent clear commitments to using infrastructure to unlock growth not just for Coventry but jointly with Nuneaton and Bedworth and Rugby Borough Councils respectively." These projects are part of a broader strategy to support

sustainable growth and improve infrastructure in Coventry.

2.9.5. According to Coventry City Council Economic Development Strategy 2022-2027, focuses on improving the economy in Coventry include:

- Post-Pandemic Recovery: Coventry has focused on recovering from the COVID-19 pandemic, with significant support provided to local businesses.
- Innovation and Investment: The city has seen substantial investment in sectors like automotive, particularly electric vehicles, with the UK Battery Industrialisation Centre being a notable achievement.
- Cultural and Tourism Boost: Securing the UK City of Culture 2021 has enhanced Coventry's profile, attracting new investments and boosting the creative and tourism sectors.
- Development Sites: New development sites with excellent connectivity are being delivered, supporting business growth and job creation.
- Green Growth: Emphasis on sustainable development and green technologies is a key part of the city's strategy.

2.9.6. The 2022 Coventry Transport Strategy emphasises the interrelationship between the region's transport objectives and the delivery of wider goals relating to the economy, society and environment. The Warwickshire County Council Local Transport Plan 2023 specifically lists the A46 as a network vital for providing links through the county to international gateways such as ports and airports throughout the UK, it emphasises the importance of the A46 as the Trans-Midlands Trade Corridor.

2.9.7. The Scheme will lead to a decrease in the number of accidents on the local road network, and a reduced number of accidents on the SRN when combined with the Binley Junction Improvement Scheme. The Scheme will also reduce congestion-related delay and improve journey time reliability, making movements at the junction more free-flowing and journey times more predictable.

2.9.8. The Scheme is in general accordance with policies and objectives contained in the development plans of the local authorities in relation to supporting economic development through infrastructure improvement. By increasing road capacity, reducing congestion on the A46 the Scheme will encourage inward investment, support housebuilding and support the economic growth objectives contained in the Rugby Borough Council and Coventry Local Plans which seek to ensure that any new developments are sustainable and integrate with existing networks and provide good connectivity within the development and to the surrounding areas including any existing walking and cycling routes.

2.10. National Highways objectives

2.10.1. The Secretary of State appointed Highways England Company Limited (the Licence holder) (now operating as National Highways) by way of an Order in accordance with Section 1 of the Infrastructure Act 2015.

2.10.2. The Licence under which National Highways operates sets out the Secretary of State's statutory directions and guidance to National Highways. Under the Licence, National Highways is the highway authority, traffic authority and street authority for the SRN. It makes clear, to both National Highways and the wider community of road users and stakeholders, what National Highways is expected to achieve and how they must Under Part 4.2g of The Highways England Licence (Department for Transport, 2015) and in accordance with the Infrastructure Act 2015, the licence holder must *"minimise the environmental impacts of operating, maintaining and improving its network and seek to protect and enhance the quality of the surrounding environment."* The Scheme therefore fulfils the requirements of National Highways as license holder.

2.10.3. More details about the Licence are provided in Section 6 of this document.

3. Scheme development and options considered

3.1. Overview

3.1.1. This section outlines the Scheme evolution, as well as the alternative 'options' which were considered in determining the preferred route. The associated benefits and disbenefits of the various route options are discussed to demonstrate the reasons for the preferred route selection.

3.1.2. A detailed description and analysis of the options is also set out in ES Chapter 3 (Assessment of Alternatives) (**TR010066/APP/6.1**).

3.2. Development history and alternative options

3.2.1. This section outlines the alternative design options that have been considered during the development of the Scheme. All projects undertaken by National Highways go through the following initial project stages:

- Strategy, Shaping and Prioritisation stage: at this stage, initial analysis and appraisal are conducted to assess the viability of transport scheme solutions to the problem, including road network and non-road network solutions
- Options Identification Stage: at this stage, traffic modelling and economic and environmental assessment is undertaken on a number of options
- Option Selection Stage: at this stage, the public are consulted on the recommended options from the options identification stage. Refinements are then made to the option designs, traffic modelling and economic and environmental assessments following feedback from the consultation. At the end of the option selection stage a Preferred Route Announcement (PRA) is made to announce the decision on which option will be progressed
- Preliminary Design Stage: this is the stage that the Scheme is currently in and involves developing a design for the preferred option. An EIA is undertaken upon the Scheme at this stage which is reported in the ES to support the DCO.

Alternative options considered

3.2.2. In July 2014, Highways England published the Route Strategic Options Report – A46 Coventry to M6 J2 Study (Highways England, 2014), which identified four

potential options associated with the Binley and Walsgrave Junctions that could address congestion and poor journey time reliability issues at Binley and Walsgrave Junctions along the A46. These included:

- Option A: Improvements to the Binley Junction by grade separation
- Option B: Improvements to Walsgrave Junction through relocation of the junction and grade separation
- Option C: Improvements to or upgrade of M6 Junction 2 and M6/M69, and consideration of whether the links can be improved, and if there is sufficient capacity to cope with the planned growth
- Option D: Improvements to both Binley and Walsgrave Junctions as stated in Options A and B above

3.2.3. A recommendation was made to take forward Option D and its associated sub-options as the improvement works to the two junctions would facilitate economic growth and alleviate delay and congestion along this section of the A46.

3.2.4. Due to the more urgent need to upgrade Binley Junction, plans to upgrade it were progressed ahead of the proposals to upgrade the Walsgrave junction. The Binley Junction Improvement Scheme was progressed using Highways Act 1980 powers and was open to traffic in 2022.

3.2.5. During the Strategy, Shaping and Prioritisation stage in 2015 the options for grade separation were developed without the benefit of traffic flow data and traffic modelling to inform the proposed layout configurations. At this stage it was proposed to remove the existing Walsgrave roundabout and provide a grade separated junction 1000m north of the existing junction. Under this option the A46 would be realigned through the existing location of the roundabout. There was some flexibility in the location of this junction along the route of the A46. There was also potential for a link into Coventry immediately to the south of the University Hospital Coventry.

3.2.6. During 2015-2016, the Option Identification stage for the Walsgrave and Binley junctions identified three options. For more information, please refer to ES Chapter 3 (Assessment of Alternatives) (**TR010066/APP/6.1**). It was decided that Walsgrave junction would be considered for funding under proposed RIS2 submissions and would be put on hold until local authorities were in the position to unlock the surrounding development land within the project vicinity.

Walsgrave option development

3.2.7. In April 2018, design work for Walsgrave re-commenced and a review of the

work completed as part of the early option assessment was undertaken. To ensure that identification of specific options was not biased by earlier work, or limited to a narrow interpretation of the layout, options were developed within six "design families", as outlined in Table 3-1.

Table 3-1: Descriptions of the six design families considered as part of the assessment of alternatives

Design Family	Description	Degree of Change
1	Do nothing/Do minimum	None
2	Southbound dedicated bypass lane	Minor
3	Signalised junction	Minor to moderate
4	Remodel for left-in and left-out to B4082	Moderate
5	Compact grade separated junction	Substantial
6	Full grade separation	Substantial

3.2.8. Through the option appraisal process, 30 options considered were grouped within the six family groups and assessed on their merits against a range of factors including safety, benefits to traffic, impact on the local network, environmental and geotechnical considerations, economic benefits, cost and effects on stakeholders. Through rationalisation and the Option sifting activities the options were shortlisted down to 10 for further consideration and assessment.

3.2.9. The following options shown in Table 3-2 area from the Staged Overview of Assessment Report (SOAR) (Highways England, 2022). The 10 options were selected for further assessment in the options identification stage.

Table 3-2: Descriptions of the 10 design options

Option	Brief Description
1	One-way traffic system on Clifford Bridge Road (70mph)
2	Dedicated bypass southbound (free-flow link) with fly-over northbound (50mph)
3	Signalised T-junction (50mph)
4	Left-in/Left-out (LILO) connection to B4082 (50mph)
5	Compact Grade-separated junction (fully compact junction) (50mph)
6	Fully Grade-separated junction (70mph)
7	Left-in/Left-out (LILO) connection to B4082 (tight radii) (50mph)
8	Realignment of A46 Mainline with Left-in/Left-out (LILO) connection to B4082 (70mph)
9	Removal of A46 connection to B4082 (50mph
10	Removal of A46 connection to B4082, with realignment of A46 Mainline (70mph)

3.2.10. Following on from the options identification stage, three options were initially taken forward to the options selection stage (Options 6, 7 and 8), with seven

options discounted, please refer to ES Chapter 3 (Assessment of Alternatives) (**TR010066/APP/6.1**) for further details.

3.2.11. Following initial environmental assessment and traffic modelling of the three selected options, a further fourth option, Option 11, was subsequently developed based on previously discounted options re-examined. Further details about Option 11 are provided below.

3.2.12. Refinements to the design, including bringing the alignment closer online to the existing A46 and realigning the connector road away from the River Sowe improved the viability of Option 11. A review was held in September 2021 and the viability confirmed of Option 11.

3.2.13. The four 'do something' options are described further in ES Chapter 3 (Assessment of Alternatives) (**TR010066/APP/6.1**).

3.2.14. At the options selection stage options progressed were considered against the do minimum scenario. The 'do minimum' option is the current baseline (that is, what would happen in future without the Scheme) and includes the completed improvements to Binley Junction. With this option there would be no capacity improvements to Walsgrave Junction and the Applicant would be required to put in place a long-term repair and maintenance strategy to maintain the serviceability of the existing network.

3.2.15. To summarise, at the end of the options appraisal stage, four 'do something', options were progressed to the options selection stage. An Environmental Assessment Report (EAR) (National Highways, 2022) was produced to inform the comparison of environmental effects for the four options and to support the selection of the preferred option. The preferred option was selected after the EAR was completed and was informed by the conclusions of the EAR.

3.2.16. Options 6, 7 and 8 were concluded as non-viable. This was due to their impact on flooding and re-routing traffic, resulting in one remaining viable option (Option 11) being taken forward and presented at non-statutory Consultation between 11 January and the 14 February 2022. A full report on the options considered is included in Appendix D and Appendix E of the A46 Coventry Junctions Upgrade (Walsgrave) Stage Overview Assessment Report (Highways England, 2020). The preferred option was selected after the EAR was completed and was informed by the conclusions of the EAR. Further details are provided in ES Chapter 3 (Assessment of Alternatives) (**TR010066/APP/6.1**).

'Do something' Option 11 – Full grade separated junction

3.2.17. Option 11 was a grade separated junction approximately 800m to the north of the existing roundabout location. The geometry of this option allows a 50mph

speed limit on the mainline dual carriageway. Option 11 is presented in Figure 3-1.

3.2.18. The A46 mainline would be realigned through the existing Walsgrave roundabout for approximately 800m, before tying back into the current alignment at the existing Hungerley Hall Farm accommodation bridge. The mainline then continues on the current alignment for approximately 850m to allow for junction slip road tie ins.

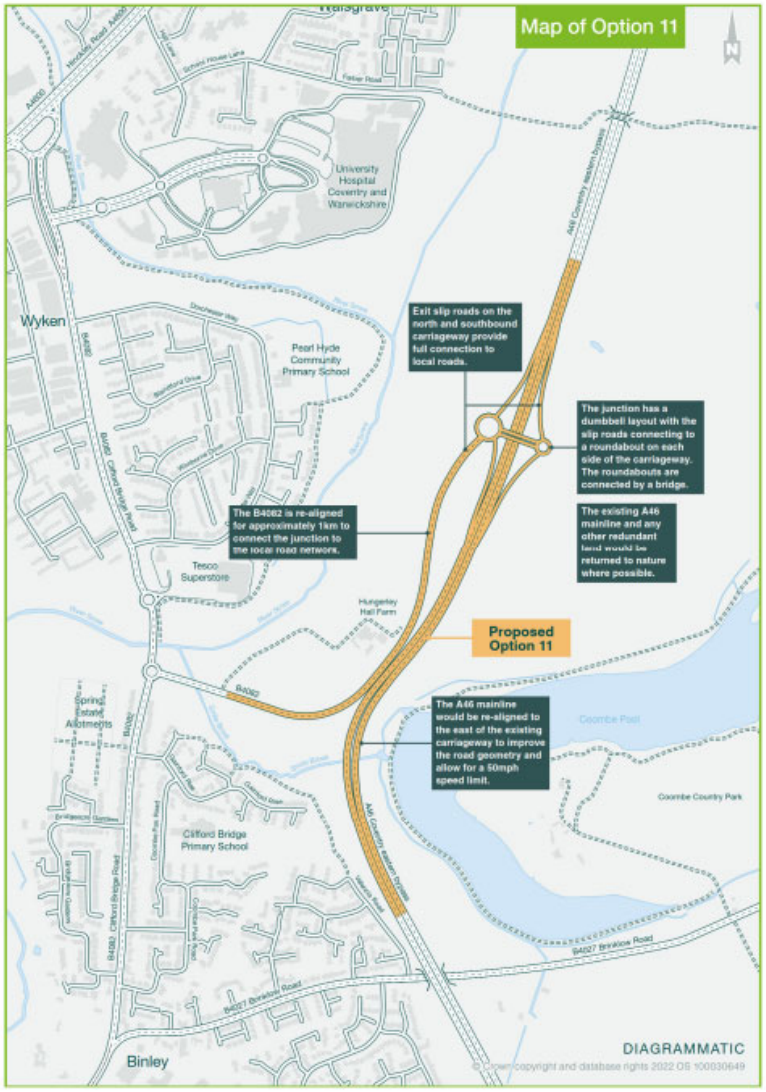

Figure 3-1: Option 11

3.2.19. The full grade separated dumbbell junction would be approximately 800m north of the existing Walsgrave junction roundabout and would consist of north and southbound diverge and merge slip roads connecting to an overbridge with roundabouts to the east and west. The overbridge would be provided across the A46 between the two roundabouts and would carry a two-lane single carriageway. The proposed height above the A46 mainline road level would be

up to approximately 8m. A new B4082 link road, approximately 1km in length, would be provided between the western roundabout of the dumbbell junction and an existing section of the B4082 that leads to the existing roundabout on Clifford Bridge Road. This would be a two-lane single carriageway. The new link road would pass close to the A46 mainline carriageway between the A46 and Hungerley Hall Farm before being aligned further west away from the A46 to connect to the western dumbbell.

3.2.20. The existing sections of the B4082 and A46 roundabout that are no longer required would be grubbed up and landscaped. The existing overpass (farm access) over the A46 close to Hungerley Hall Farm would be demolished, with access re-provided via the B4082 and dumbbell junction overbridge, subject to consultation with the current landowner.

3.2.21. The proposed outline drainage strategy for Option 11 comprised of three attenuation basins to be constructed to attenuate the increase in impermeable area, before discharging to the River Sowe to the west via new outfalls. A new culvert may be required to carry flow under the proposed connector road to maintain an existing drainage ditch.

3.2.22. The Scheme footprint for Option 11 would be 306,752m^2. The permanent land take required for this option outside of the highway boundary would be 94,553m^2. In addition, an allowance has been made for an environmental compensation area to the north of Coombe Pool SSSI of 37,020m^2. The temporary land take required for this option would be 23,678m^2.

3.3. Non-statutory consultation

3.3.1. Consultation is an important part of the options selection process. The Applicant held a non-statutory consultation between 11 January 2022 and the 14 February 2022 as part of the option selection stage for the proposed upgrade to Walsgrave Junction. Consultation was undertaken with applicable statutory stakeholders including Historic England, Natural England, Environment Agency, Coventry City Council, Warwickshire County Council and Rugby Borough Council as well as the public.

3.3.2. All four of the DS options were presented at non-statutory consultation with Option 11 being highlighted as the only viable option. Reasons for the discounting of Options 6, 7 and 8 were presented within the consultation documentation.

3.3.3. Due to COVID-19 restrictions that were in place at the time, this was carried out remotely which included three online public information events. Members of the community could also request a call back from a specialist within the project

team as well as request hard copies of consultation documents to be posted to them free of charge. Detail was shared during the public consultation on the discounted options and why these options were not viable. The purpose of the consultation was to provide the local community and stakeholders with the opportunity to have their say on the proposals and share ideas, concerns, and local knowledge.

3.3.4. The feedback received during the consultation showed support for improvements at A46 Walsgrave Junction and support for Option 11. Option 11 would provide a fully grade separated junction approximately 800m north of the existing A46 Walsgrave Junction. Exit and entry slip roads would be provided on both the north and southbound carriageway allowing full connection to the local road network. 80% of respondents agreed that improvements to the A46 Walsgrave Junction are needed, and 66% supported Option 11.

3.3.5. The Applicant received 121 responses to the consultation. This feedback was important to understand how the local community currently uses the road and what people thought about the proposals for upgrading the A46 Walsgrave Junction. Respondents were asked to share thoughts on the need for improvements at Walsgrave Junction and on Option 11, as presented in the consultation.

3.3.6. A number of comments were raised in response to the consultation. These included comments regarding (but not limited to):

- access to the hospital;
- walking and cycling provision;
- proposed 50mph speed limit; and
- impact on the local road network

3.3.7. When selecting the preferred route several criteria, including the Scheme objectives, safety, benefits, costs, environmental effects, construction and feedback from the public consultation were considered.

3.4. Preferred Route Announcement

3.4.1. Following public consultation in early 2022, Option 11 was chosen as the preferred option which was supported by the consultation responses received. The Public Route Announcement for Option 11 was made in June 2022, and Option 11 was progressed to the preliminary design stage which commenced in February 2023.

3.5. Design development following the Preferred Route Announcement

3.5.1. A number of changes were made to the Scheme design following the Preferred Route Announcement up to the time of the Statutory Consultation in October 2023. These are shown in Table 3-3.

Table 3-3: Changes to the Scheme following statutory consultation

Change to Scheme design	Description
A46 vertical alignment	The proposed vertical alignment of the A46 mainline has been adjusted to reduce the extents of works.
Dumbbell western roundabout	The proposed western dumbbell roundabout was designed to accommodate a potential future link road to access the allocated development land to the west of the Scheme and to the hospital. As stated within Coventry City Council's Local Plan, the delivery of the link road will form part of the adjacent development.
B4082 speed limit	The existing B4082 has a speed limit of 60mph. Through discussions with Coventry City Council, it was agreed to reduce the speed limit of the B4082 to 40mph.
Northern pond maintenance access track	A maintenance access track was provided for the northern attenuation pond via the western dumbbell roundabout.
Lighting	An assessment of the lighting requirement of the Scheme was undertaken. It concluded that the A46 mainline does not require lighting, but lighting would be provided on the junction, on the slip roads, and along the B4082.
WCH provision (across the A46)	Initial consultation with local walking, cycling and horse-riding user groups and Coventry City Council, identified an aspiration for a WCH link across the A46 to Coombe Abbey Park. To facilitate a potential future walking and cycling link, the Scheme provides a widened western verge to the new B4082 which can accommodate a segregated cycleway and footway. The delivery of the segregated cycleway and footway would be by others in conjunction with the adjacent development.
WCH provision (Clifford Bridge Road)	WCH surveys of the local infrastructure identified a notable number of users crossing over the eastern arm of the Clifford Bridge Road roundabout at the uncontrolled crossing. Many of these movements were attributed to unaccompanied minors reflecting pupils making their way to and from school. To address the need for formalising this crossing, the Scheme provides a signalised pedestrian crossing at this location.

3.6. Statutory consultation

3.6.1. Statutory consultation on the preferred route was held between 25 October and

6 December 2023. Full details of this consultation are provided in the Consultation Report and its Annexes (**TR010066/APP/5.1** and **5.2**).

3.6.2. National Highways consulted with the local community in accordance with the Statement of Community Consultation (SoCC), provided in Annex E of the Consultation Report (**TR010066/APP/5.2**), as prescribed by Section 47(7) of the Planning Act 2008.

3.6.3. National Highways invited all consultees, including those identified under Section 42, Section 47 and Section 48 of the Planning Act 2008, to submit feedback within the consultation period noted above.

3.6.4. A total of 229 responses were received during the consultation period.

3.6.5. When asked if they supported or opposed the proposals 46% of the responses agreed that the scheme was needed (Question 1a of the Statutory Consultation Questionnaire), with 51% of respondents agreeing with the proposed route and junction arrangements for the scheme (Question 1e of the Statutory Consultation Questionnaire).

3.6.6. The route was taken forward for further detailed design.

3.7. Design development following the statutory consultation

3.7.1. Design developments have taken place following the statutory consultation (October – December 2023) to produce the design which forms the application for development consent. These design developments have been integrated into the current Scheme presented and therefore the design that has been assessed within the ES (**TR010066/APP/6.2**).

3.7.2. Following consideration of the responses to the statutory consultation, the following changes were made to the Scheme design based on the feedback received:

- A reconfigured access track for access/ egress across the B4082 and Hungerley Hall Farm accommodation bridge.
- Noise mitigation for Coombe Abbey Park.
- A badger crossing to be provided under the B4082 to maintain existing commuting routes.

3.7.3. A full design review also took place resulting in minor amendments to the Scheme design. The following changes shown in Table 3-4 evolved from design development. The Scheme design changes were not deemed as significant,

however some of the changes resulted in small modifications to the Order Limits.

Table 3-4: Changes to the Scheme following further design development

Change to Scheme design	Description
Clifford Bridge Road roundabout additional working area	At the Clifford Bridge Road roundabout, the Order Limits were extended to provide further working space to build the proposed pedestrian crossing as part of the Scheme. This would involve work to install traffic detection loops on the carriageway and extending pedestrian guard rails around the south-east corner of the roundabout.
Additional pedestrian crossing	Proposed signalised pedestrian crossing at Clifford Bridge Road.
Removal of haul road	The haul road using part of the access to Hungerley Hall Farm and around the buildings was removed as the construction methodology was changed with access proposed off the B4082.
Detention basin orientation	The detention basin had a change in orientation due to utility constraints. Due to this, additional land is required.
Landscaping	Additional vegetation planting and landscaping was proposed close to Hungerley Hall Farm near the detention basin and B4082.
Hungerley Hall Farm buildings	The listed farm buildings were included into the Order Limits to allow for monitoring during construction and for any potential mitigation requirements.
Re-aligned access road at Hungerley Hall farm	Following feedback from the landowner the access road at Hungerley Hall farm was realigned to bring it closer to the existing buildings and reduce the distance travelled to/from the accommodation bridge and farmland east of the A46. The revised access road would result in farm vehicles travelling on the new B4082 for approximately 50m to access the accommodation bridge via a staggered junction.
Drainage pond enlarged	The drainage pond between the B4082 and A46 was enlarged to take the drainage from the A46 which resulted in a decrease in the land use north of the junction, and reduced the size of the water quality treatment swale north of the junction.
Drainage ditch	A drainage ditch was developed with landscaping along the B4082 embankment which included an extension to the land at the local watercourse for drainage discharge.
Drainage connection	An additional area was provided for the proposed drainage connection into the local watercourse.

Change to Scheme design	Description
into watercourse	
Fenceline to Coombe Pool	An additional area was required to accommodate works needed to specific trees in relation to the repairs/replacement of the existing boundary fence to Coombe Abbey Park
Badger crossing	A proposed badger crossing under A46 was provided.
Landscaping	East of the A46, the landscaping design was developed and widened slightly.
Drainage pond changes	The maintenance access to the northern drainage pond was removed and there was a change in size, position and use of drainage pond for water quality treatment and size reduction as A46 drainage taken by the pond between the A46 and B408.
Construction space at new Walsgrave Junction	To allow more space for construction activities, a temporary possession area was included to the east of the eastern roundabout as part of the development of the landscaping design.
Introduction of a swale, which is similar in appearance to a ditch but shallower and wider to treat surface water near the proposed new Walsgrave junction roundabouts	At statutory consultation, there were three attenuation ponds to contain surface run off before discharging to the River Sowe. Further design development determined that the ponds could be consolidated into one large pond (south of the proposed new roundabout), thus the pond to the north was not required for attenuation purposes. Water quality assessments determined that the existing drainage network to the north of the Scheme required additional water quality treatment to meet National Highways standards for discharging drainage water. A swale was introduced, instead of the pond, which would allow surface water, off the road, to be treated to improve the quality before entering the local watercourse.
Introduction of a second construction compound (satellite compound)	As set out during statutory consultation and following further development of the construction methodology, a second construction compound area within the Order Limits was proposed. This compound would be used to provide welfare facilities, including a canteen, toilet, and drying room, ensuring workers have necessary amenities during construction. Located on the north-west side of the A46, the compound will cover approximately 110 by 50 meters. Access would be from the A46 northbound carriageway via the existing layby. The compound would operate during normal working hours and during any necessary carriageway closures. Security will be maintained with a 2.1-meter high mesh fence, with potential noise and visual screening, and perimeter lighting for safety. The site would include designated areas for parking, material storage, and areas to lay down and assemble the new bridge.
Fenceline north of new Walsgrave Junction	The Order Limits of the Scheme were reduced to the existing National Highways fence line.

Change to Scheme design	Description
Fenceline environmental mitigation	To allow repairs and replacement of the existing fence to Coombe Abbey Park, access will be needed to the area, with works required to specific trees close to the fence. The area was adjusted to reflect the Coombe Abbey Park Boundary fence.

3.8. Targeted statutory consultation

3.8.1. Following statutory and non-statutory consultation, the Applicant continued engagement with stakeholders to keep them updated about the Scheme and to discuss technical elements of the plans. This took the form of scheduled meetings, conference calls and email correspondence (targeted consultation).

3.8.2. A focused consultation took place between 23 August and 20 September 2024 to consult affected parties of the changes to the Scheme as detailed in Section 3.7 of this document.

3.8.3. In addition, section 42(1)(d) of the Planning Act 2008 Category 1, 2 and 3 consultees were also subject to a statutory consultation between 23 August and 20 September 2024, due to new consultees being identified, changes to the Order Limits and amendments to permanent acquisition and temporary possession of land.

3.8.4. Full details of engagement and consultation are set out in the Consultation Report (**TR010066/APP/5.1**) and Annexes of the Consultation Report (**TR010066/APP/5.2**).

3.8.5. The feedback received from the consultations, together with that from the 2023 engagement, and ongoing engagement has informed the Scheme as presented within the application documents.

3.9. Other design considerations

Walking cycling and horse riding (WCH)

3.9.1. Initial consultation with local WCH user groups and Coventry City Council identified an aspiration for a WCH link across the A46 to Coombe Abbey Park. The Scheme does incorporate enabling works for potential future WCH provision to be provided by others. This includes additional earth works which provides verge widening along the new section of the B4082 link road to accommodate the future provision of a segregated walking and cycling route and a section of

shared use path by others.

3.9.2. The Applicant has also retained the Hungerley Hall Farm accommodation bridge and will continue to maintain the asset. These enabling works have the potential to facilitate a new route from Clifford Bridge Road and the Binley Cycleway (to be delivered by Coventry City Council) to Coombe Abbey Park in the future, at a substantially reduced cost and disruption. Such a route would connect with committed and proposed future active travel schemes within Coventry and Warwickshire local authority areas.

3.9.3. Further details are provided in Section 4.4 of this document and ES Chapter 12 (Population and Human Health) (**TR010066/APP/6.1**).

Hospital link road

3.9.4. During the consultation, a potential hospital link road to University Hospital Coventry (blue light access) was suggested by several consultees, however this is not part of the Scheme.

3.9.5. Coventry City Council are in discussions with a local developer who are progressing plans for a development on the adjacent housing allocation about a hospital link road. This would be delivered by the developer undertaking the residential development within the housing allocation to the west of the Scheme - Coventry Local Plan, 2017 – allocation H2:3 Walsgrave Hill Farm.

3.9.6. Therefore, a potential hospital link road is a separate development to the A46 Coventry Junctions (Walsgrave) Scheme. However, the Scheme has been designed so it does not impede a potential hospital link road if it comes forward in the future:

- For the western dumbbell roundabout, the Applicant has designed the geometry to accommodate a future hospital link road.
- Planting including new woodland is proposed around the western side of the roundabout. For a future link road, a corridor would need to be created. The adjacent development is still not committed and potentially it may not come forward for years. If this area is not planted, there will be a large gap in the visual screening of the new junction, and a break in the woodland planting which would have adverse impacts on wildlife.

Brinklow Road compound (main site compound)

3.9.7. The main construction compound is to the south of the Scheme at Binley Woods on Brinklow Road and has been progressed as a separate planning application under the Town and Country Planning Act 1990.

3.9.8. The main compound is existing and was previously used as the main compound for the Binley Junction Improvement Scheme. It was permitted by planning permission reference: R20/0462, by Rugby Borough Council. The compound had originally had planning permission until 31 December 2026, but the permission was then altered via a non-material amendment application (Rugby Borough Council planning reference: R24/0164) to extend the timescale of the planning permission, so it could be used for the A46 Coventry Junctions (Walsgrave) Scheme. This application was approved on 13 May 2024 by Rugby Borough Council and provides planning permission for the compound until 31 December 2029.

3.9.9. The main construction compound will be used predominantly for office space for workers on the Scheme, carparking for workers and for storage of some materials.

3.9.10. The environmental effects of the main construction compound have been fully assessed for the separate planning application and as part of the EIA for this DCO application, in the ES (**TR010066/APP/6.1**).

Good design

3.9.11. Good design has been considered as part of the Scheme development, which is about the whole process of putting a project together so that it achieves the elements of good design including choice of location, vision, narrative, design principles and consultation programme.

3.9.12. The development and final design of the Scheme has been guided by a diverse range of specialists including, planners, environmental specialists, landscape architects, architects, engineers, but also members of the public and community groups in informing the project vision, narrative, design principles, and project design process to support delivery of the outcomes of the project.

3.9.13. How the design responds to the National Infrastructure Commission design principles for national infrastructure: climate, people, places and value is shown in the Scheme Design Report (**TR010066/APP/7.4**).

3.9.14. The Scheme development is further detailed within ES Chapters 2 (The Scheme) and 3 (Assessment of Alternatives) (**TR010066/APP/6.1**) and the Scheme Design Report (**TR010066/APP/7.4**), including the design's key features presented at consultation and the Scheme which is included within the Application.

4. Transport case for the Scheme

4.1. Overview of transport modelling and appraisal

4.1.1. A Transport Assessment (**TR010066/APP/7.3**) has been undertaken to evaluate the Scheme's impact on the strategic and local highway network with respect to traffic congestion and road safety for motorised transport.

4.1.2. In order to assess the potential benefits of the Scheme, a suite of transport models has been used to forecast the expected travel demand, both with and without the Scheme in place:

- The modelling assessment comprises of a strategic multi-modal model. The model utilised for the assessment of the Scheme is called the Coventry Strategic Model (CoSTM). For the development of a transport model to allow option testing of the A46 Walsgrave Junction, a new 2019 base year transport model was developed from the Midlands Regional Transport Model (MRTM) in 2020. As part of preliminary design, it was agreed to update the model to utilise the underlying demand from the updated Midlands Regional Transport Model 2 (MRTM2) in development of the CoSTM. The CoSTM modelling system comprises 2 components:
    - A highway assignment model – used for estimating travel costs and identifying the routes travellers may choose through the road network using the SATURN software; and
    - A Variable Demand model (VDM) - used for estimating how travellers will respond to changes in their travel costs between highway and public transport using the DIADEM software (and the integrated interface (HEIDI)).
- A local area VISSIM micro-simulation model has been constructed to aid the development of the Scheme design.

4.1.3. Full details are provided within the Transport Assessment (**TR010066/APP/7.3**).

4.2. Baseline data and development of model

4.2.1. This Section provides a summary of the A46 Walsgrave Junction modelling assessment as well as the supporting baseline data collection.

4.2.2. The baseline dataset includes the collection of volumetric traffic count, network and vehicle journey time data sources. This information is used in the model development process to calibrate and validate the baseline model. The fully

calibrated and validated base year model then provides a stable basis to undertake the future year assessment of the Scheme.

Baseline data

4.2.3. Ideally, an updated base model would utilise the most recent available traffic data to establish a model that reflects current conditions. However, due to the impact of COVID-19 travel restrictions and the traffic management in place for the construction of the A46 Binley Junction between 2019 and early 2023, traffic conditions within this time period were not considered likely to reflect normal operating conditions.

4.2.4. Further, a combined economic assessment of both the A46 Binley and Walsgrave junctions against a background of a no A46 Coventry Junction Scheme upgrades is required. As such, a base model was needed that dated prior to the construction of the Binley scheme, and hence use of any surveys post Autumn 2019 would not be appropriate due to the combined impact of COVID-19 travel restrictions and the road works associated with the construction of the Binley Junction upgrade.

4.2.5. Traffic counts obtained from National Highways' TRIS database indicated that the traffic flow pattern on A46 at the Walsgrave Junction remained generally consistent across the three-year period of 2017-2019 (Stage 2 – Option Selection of the Scheme). Therefore, it is considered that all survey data collected for this period was still relevant and suitable for continued use in transport modelling and no new surveys were required.

4.2.6. Baseline data collected included:

- Traffic flows
- National Highways' TRIS data
- Road Network and Traffic Movement Data
- Journey Time Data
- Traffic Signal Data
- Accident data

Modelling

4.2.7. The traffic modelling assessment comprises of a strategic multi-modal model which covers Coventry as well as the wider Warwickshire area. The strategic modelling assessment is used as the basis to derive forecasted traffic impacts of the Scheme's performance across the wider area. The strategic model utilised for the preliminary design work has been developed in line with the DfT's Transport Analysis Guidance (TAG). A local traffic operational (micro-simulation)

model of the Walsgrave Junction has also been developed to assess the Scheme's operational performance in the forecast year scenarios.

4.2.8. The framework of the modelling assessment has been developed to enable the comparative analysis of the operation of the existing A46 Walsgrave Junction layout against the Scheme design. The comparative assessment is used to evaluate the performance of the Scheme against the Scheme objectives. Therefore, the modelling analysis summarised in this section details the Scheme's impacts with respect to congestion relief, journey time savings, reliability improvements and accident reductions.

4.2.9. The modelling assessment comprises of a strategic multi-modal model. The model utilised for the assessment of the Scheme is called the Coventry Strategic Transport Model (CoSTM).

4.2.10. As part of preliminary design, it was agreed to update the model to utilise the underlying demand from the updated Midlands Regional Transport Model 2 (MRTM2) in development of the CoSTM.

4.2.11. The model covers the whole of the UK with the level of detail increasing with proximity to the Scheme. The Area of Detailed Modelling (AoDM) is the area within which significant changes in flow and speed due to the Scheme may be expected to occur. The AoDM has been specified as detailed, simulation, network.

4.2.12. The extent of the traffic model and level of coding detail needs to be such that it allows for the accurate representation of existing and forecast traffic flows. Outside of the AoDM, a Fully Modelled Area (FMA) was identified which extends beyond the AoDM and consists of simulation network coding with somewhat larger zones and slightly less network detail.

4.2.13. Away from the FMA, the coding is further reduced, simplifying the network as less detail is required as this area serves to allow trips to move around/enter the FMA. This external network is represented as "buffer" using a combination of fixed speeds on links and speed flow curves. Zones are larger and only more strategic links are represented with increasing distance from the Scheme.

Base year model

4.2.14. The CoSTM base year has been developed to represent a typical weekday in 2018, utilising the data collected as part of the scheme assessment. The model has a 2018 base year in order to be unaffected by COVID-19 travel restrictions and the construction of the A46 Binley Junction. The base model was developed in accordance with the DfT's TAG Unit M3.1: Highway Assignment Modelling.

4.2.15. The CoSTM modelling system comprises 2 components:

- A highway assignment model – used for estimating travel costs and identifying the routes travellers may choose through the road network using the SATURN software; and
- A Variable Demand model (VDM) - used for estimating how travellers will respond to changes in their travel costs between highway and public transport using the DIADEM software (and the integrated interface (HEIDI)).

4.2.16. The base model represents the three time periods:

- Morning (AM) Peak – 07:00 to 09:00
- Evening (PM) Peak – 16:00 to 18:00
- Daytime (Inter) Peak – 09:00 to 16:00

4.2.17. Based on the calibration and validation assessments, the model was considered to reflect observed traffic flows and travel times across the network to a high level and is suitable for use as a basis for future year forecasting and assessment of the Scheme.

Forecast modelling approach

4.2.18. The forecasting approach involves creating initial reference case travel demand forecasts which reflect changes in car ownership, population, employment and other demographic and economic factors. However, traffic growth resulting from other sources, such as changes in generalised costs due to traffic conditions, are not included in the reference case forecasts. These impacts are evaluated through the VDM.

4.2.19. VDM is applied to derive the demand impacts of both the DM scenario as well as the DS.

4.2.20. The base year and forecast years are listed as follows:

- 2018 Base Year;
- 2023 A46 Binley Opening Year (for use in economic appraisal);
- 2028 A46 Walsgrave Opening Year;
- 2043 Design Year (15 years after opening); and
- 2061 Horizon Year (for use in economic appraisal).

4.2.21. In the future year scenarios, 2028, 2043, and 2061 both a ‘do minimum’ (DM)

(without Scheme) and a 'do something' (DS) (with Scheme) network scenario has been modelled. Hence the comparison of the DM and a DS provides the assessment of the schemes impacts in a given forecast year.

4.2.22. In 2023, in addition to the DM, a do nothing (DN) model, without the Scheme or A46 Binley Junction Improvement Scheme, is also developed. This is for use in testing the impact of the combined junctions noting that no DS scenario is required at 2023 as it is prior to the Scheme opening year.

Traffic growth forecasts

4.2.23. The traffic forecasts are dependent on household and employment growth, which were derived from both local and national growth forecasts. The local growth forecasts consider the local authority growth projections and the national growth forecasts take wider anticipated growth into account.

4.2.24. The local authority forecasts on development growth are derived from the uncertainty log. The uncertainty log details the local authority development schemes in regions which are both nearby and significant to the model. This includes assumptions on local uncertainty, which is dependent on whether developments or other planned transport schemes close to the Scheme area are proposed. In addition to identifying each source of uncertainty in the local area, the uncertainty log lists the following information for each source:

- The core assumptions – describing the assumptions that have been made for the core scenario;
- The likelihood that the scheme or development will go ahead;
- The range of assumptions around each input or parameter and, if possible, information about the distribution.

Core scenario

4.2.25. The core scenario represents the most unbiased and realistic set of assumptions. It is intended to provide a sound basis for decision-making given current evidence. It must be robust and evidence-based taking on board various factors and noting uncertainties affecting travel demand in the future. In accordance with TAG, the uncertainty log includes the management of the uncertainties required for formulating the core scenario.

4.2.26. The categorisation and schedule for the potential developments included in the uncertainty log for the Walsgrave traffic modelling forecasting was agreed from correspondence with Coventry City Council and Warwickshire County Council.

4.2.27. Highway networks have been produced for three forecasting scenarios for each

forecast year (2023, 2028, 2043 and 2061).

4.2.28. The DN Scenario uses the 2018 Base Year network and is updated to include the infrastructure changes from the Uncertainty Log.

4.2.29. The DM Scenario was then updated from the DN to include the A46 Binley Junction Improvement Scheme. This utilised the data file provided with MRTM2 checked against the completed Scheme using as built drawings, Google aerial and street view mapping.

4.2.30. The DS Scenario builds on the DM with the inclusion of the A46 Walsgrave Scheme. Therefore, the only difference between the DN, DM and DS networks are the inclusion of A46 Binley and A46 Walsgrave junction improvement schemes.

Variable Demand Modelling

4.2.31. VDM was undertaken by retaining the VDM set up developed for MRTM2 adjusted for the CoSTM local network/zone structure.

COVID-19

4.2.32. In line with current guidance, global adjustments were made to the post VDM matrices to account for the COVID-19 pandemic. A reduction factor was applied for each car user class.

Sensitivity scenarios

4.2.33. In agreement with National Highways Transport Planning Group, two sensitivity tests were assessed which are the High and Low Economy Common Analytical Scenarios.

Operational modelling

4.2.34. A local area VISSIM[1] micro-simulation model has been constructed to aid the development of the Scheme design. The extents of the road network layout included in the VISSIM model of the Scheme is shown in Figure 4-1. The principal purpose of the micro-simulation model is to undertake a detailed operational assessment of the Scheme designs. This assessment is then used to inform and refine the scheme layout. Micro-simulation models include a representation of the time-continuous movement of individual vehicles travelling across a highway network. This small-scale individual representation of driver behaviour provides a suitable tool to assess the detailed operation of the Scheme

[1] VISSIM is a micro-simulation modelling software developed by the PTV Group, Germany: https://www.ptvgroup.com/en/solutions/products/ptv-vissim/

design.

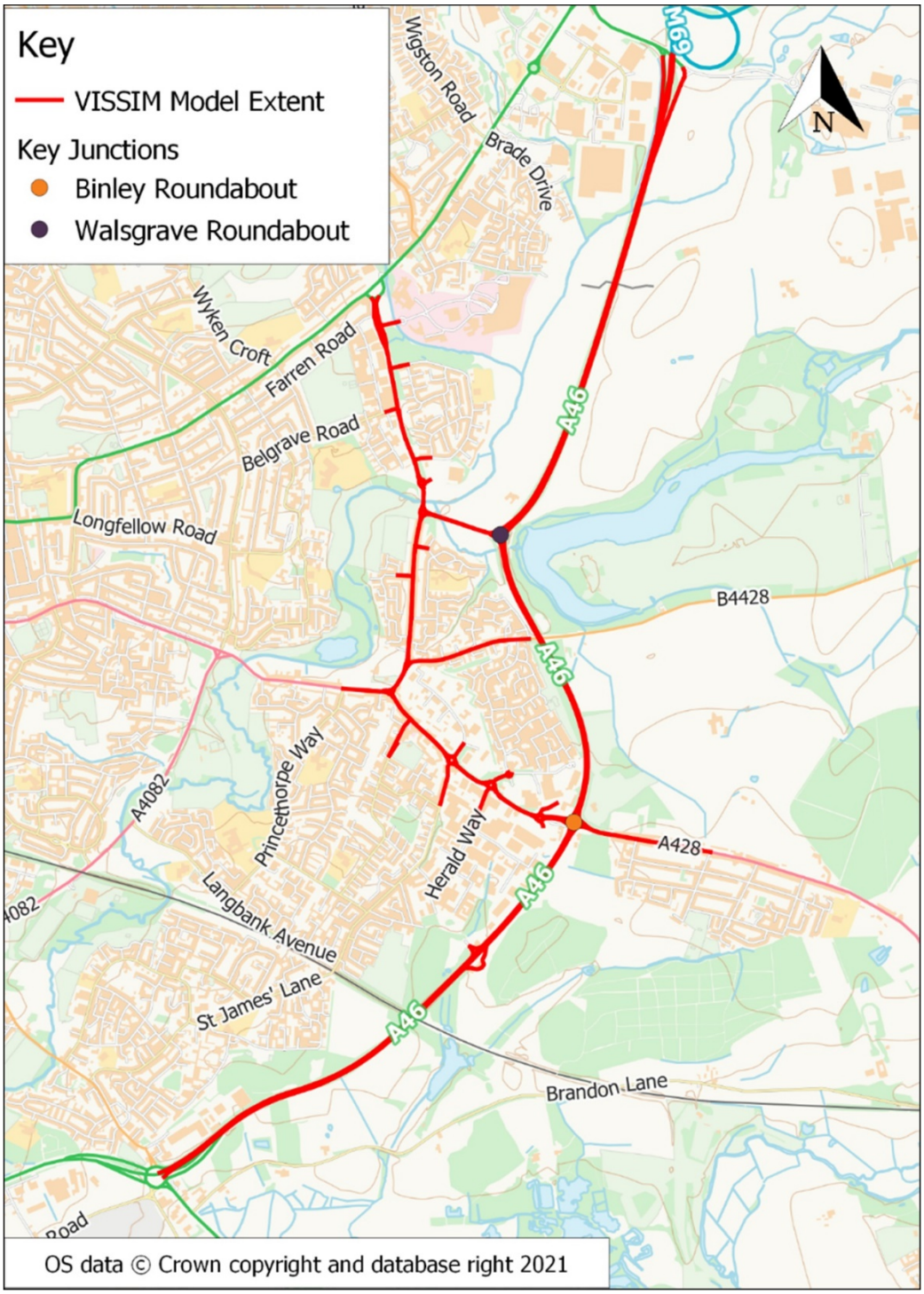

Figure 4-1: A46 Walsgrave VISSIM model extents

4.2.35. The simulation periods for operational modelling look at the time periods with the highest flow levels and are defined as:

- AM model 06:45 – 09:15 (Peak hour 07:45 - 08:45);
- PM model 15:45 – 18:15 (Peak hour 16:45 – 17:45).

4.2.36. The traffic demand used in the VISSIM model has been derived from the wider area CoSTM model.

4.2.37. Modelled networks were developed for the 2028 Opening and 2043 Design years for the DM and DS scenarios.

4.2.38. For the DM model, the network was updated to refine the modelling of the A46 Binley Junction Improvement Scheme based on as built details. Coding was carried out in a consistent manner to the base model where required.

4.2.39. The DS model network was developed from the DM network by inclusion of the scheme details with coding based on the current scheme design and carried out in a consistent manner to the Base and DM models.

4.2.40. Full details of the modelling are provided in Section 3 of the Transport Assessment (**TR010066/APP/7.3**).

4.3. Transport impacts

Current network performance

4.3.1. Base year journey times have been extracted from the strategic model for the A46 in the local area. This indicates that on this section of the A46, peak hour journey times are affected by delay at the junction reducing north-south average speeds to less than 30mph.

4.3.2. The model has been used to assess junction performance and this analysis indicates that the majority of the approaches to the junction currently operate over or approaching capacity.

Future network performance

4.3.3. Overall, there is expected to be an increase in traffic throughout the network across the wider Coventry and Warwickshire area. This is reflected along the A46 approach arms to the Walsgrave Junction in both 2028 and 2043 where DM traffic flows increase compared to the 2018 base model in all three peaks with the highest percentage increase in the Inter Peak. However, the exit arms for the roundabout northbound in the PM, and southbound and westbound in the AM show nearly zero percent or negative growth. This is indicative of the current junction forming a bottle neck restricting traffic from continuing its journey.

4.3.4. With the increase in traffic flows in the DM, each approach to the A46 Walsgrave experiences increased delay and all approaches to the junction exceed capacity in 2028 and 2043 in all three peak periods.

4.3.5. The comparison of the DM and DS scenarios then enables the impacts of the

proposed scheme to be evaluated.

4.3.6. The 2028 and 2043 flows generally showed an increase in traffic flows on the A46 between the DM and the DS, and a reduction in flows on the local roads. The exception was in the Inter Peak time period in 2028 where there were decreases in flow between the DM and DS on the A46 through the local area and on the B4082 in both directions. This appears to be as a direct result of the increased travel distance (and hence time) of the new junction arrangement. Where flows in the scenarios are relatively low, the travel time of using the now longer realigned B4082 is less desirable than other routes over the wider area with more traffic on the A444 north of Stivichall Interchange, the B4082 east of the A444 and Ansty Road. This was not seen in the 2043 Inter Peak scenario which follows the pattern of the AM and PM as flow levels and travel times increase making the new junction alignment more competitive for travel times.

4.3.7. As the introduction of the Scheme introduces a change in the links used to perform required travel movements, it is not always easy to understand the impact of the Scheme by looking at simple difference plots for delay. For example, trips moving from the A46 to the B4082 would use the new junction alignment requiring travel on additional link sections.

4.3.8. As such, analysis of the impact of the Scheme on travel times was carried out based on key movements through and around the Scheme area based on five two-way routes along the A46 and through the local area.

4.3.9. In 2028, when comparing the DS to the DM, further improvements were seen on the A46 in both directions with the exception of the Inter Peak (IP) which stayed relatively stable in line with the flow changes noted previously.

4.3.10. For both the A46 North to Clifford Bridge Road South and A46 South to Clifford Bridge Road North, increases in travel time were seen when conditions were less congested due to the additional travel distance required to complete the movement. However, this additional distance travel time was counteracted when congestion was high, with the new alignment removing the queue on the approach to the A46 Walsgrave Junction from its current alignment.

4.3.11. Away from the A46, the A428 east-west through Binley saw very minor increases in travel time. However, Clifford Bridge Road between Brinklow Road and the Hospital access saw small decreases in travel time. The travel times in 2043 saw a similar pattern to 2028.

4.3.12. When comparing DM to DS in 2028 and 2043 a significant increase in speed is seen on all approaches to A46 Walsgrave Junction in all peak periods indicating a reduction in congestion. This is despite a revised lower speed limit introduced

as part of the Scheme. However, decreases in speed are seen on the A46 links from Walsgrave to Tollbar Island junctions southbound and from Tollbar Island to Binley northbound. This is due to the increased traffic on these links slowing the overall speed. Very little change is seen on Clifford Bridge Road or for most sections of Binley Road although the approaches to the A46 Binley Junction do decrease both eastbound and westbound in some scenarios likely due to rerouting.

Operational modelling

4.3.13. As noted previously, operational modelling is used to understand the fine detail of how a junction works.

4.3.14. Overall network performance statistics give an overview of the impact on all trips within the network and so includes the impact where an improvement for some movements occurs to the detriment of others. These indicated that network wide average delay decreases in 2028 and 2043 for both AM and PM peaks with the introduction of the Scheme.

4.3.15. Latent demand, which constitute trips that are unable to enter the network as there is no space available, was very low with the exception of the 2043 DM and DS PM. It was seen that this latent demand in 2043 DM PM consisted of vehicles trying to access the network from the A46 southbound joining at the northern extents of the network from the direction of M6 J2. This is due to queuing from the southbound approach to A46 Walsgrave extending back past the merge point. This queuing is removed in the DS scenario and hence there is reduced latent demand. However, in the DS scenario, latent demand is instead formed, at a lower level, predominantly on Willenhall Lane. This is due to queuing on Brandon Road and other routes joining the network in this area.

Impact of the Scheme on link flows and delays

4.3.16. In the 2028 DM AM peak there are queues approaching A46 Walsgrave southbound. The southbound queue extends for over half a kilometre back towards to the A46/M69 merge. A similar queue is seen in 2043, but this extends further along the A46.

4.3.17. In the 2028 DM PM peak there is queuing in both directions on the A46 from the A46/M69 merge and from A46 Binley. A similar level of queuing is seen in 2043. However, the southbound queue exceeds the extents of the networks as indicated by the latent demand.

4.3.18. In the DM scenarios except 2043 DM PM, no queuing is seen on the B4082 approaching Walsgrave. It is noted that current observed conditions do show queuing here as illustrated and this is not accurately represented in the base

model. As such, any benefits from the removal of this queue are likely to be under-represented in the DS modelling.

4.3.19. The DS scenarios remove queuing approaching A46 Walsgrave in all cases. Average speeds of throughflow traffic at Walsgrave are around 50mph which indicates travelling at/approaching the speed limit.

4.3.20. Average speeds on the B4082 approaching Clifford Bridge Road are around 30mph, against a 40mph speed limit, showing slower moving traffic. However, queues are not seen to extend to the revised A46 Walsgrave junction in either year or peak.

4.3.21. Additionally, the DS scenarios increase queueing on Brandon Road and Brinklow Road. This is seen on Clifford Bridge Road and Brandon Road approaching Brinklow Road in the 2043 DS AM and PM. This is partly due to increased demand for trips in this area in the DS, leading to increased congestion. However, this is also likely affected more significantly by traffic previously held back at A46 Walsgrave in the DM which can now reach this area in the DS.

4.3.22. Changes in journey time through the network show significant reductions in DS scenarios on routes using the A46 southbound in the AM and northbound in both peak periods compared to the DM scenario. This is due to the removal of queuing for throughflow traffic.

4.3.23. Routes using the realigned B4082 to approach the A46 Walsgrave junction see increased travel times due to the increased travel distance at a slower speed, leading to increased journey times in all scenarios of under a minute. However, it is likely that the journey time routes which utilise the B4082 eastbound approach to A46 Walsgrave are underestimating travel time in the DM given that observed congestion is seen on this approach in reality, but which is not reflected in the model. This is likely due to limitations in the Base modelling from Stage 2.

4.3.24. Routes which use Brandon Road show increased queuing in all DS scenarios. As such increased journey times from DM to DS are seen in all scenarios here. This is likely as traffic is no longer held back at the A46 Walsgrave junction leading to increased demand in this area.

The impact of the Scheme on network resilience

4.3.25. Network resilience is the ability of the road network to be able to deal and recover quickly from events. This is closely linked to reliability. The term reliability refers to variation in journey times that are unable to be predicted (journey time variability, or JTV). Such variation could come from recurring congestion at the same period each day (day-to-day variability, or DTDV) or from non-recurring

events, such as incidents. It excludes predictable variation relating to varying levels of demand by time of day, day of week, and seasonal effects which travellers are assumed to be aware of.

4.3.26. The implementation of the Scheme will generate reliability benefits as road capacity is increased, delays are shortened and overall accidents (and their impacts) are reduced (although a small shift towards a higher severity is seen), all of which contribute to improved reliability. It can then be concluded that the improved reliability of the A46 as a result of the Walsgrave Junction improvements will also lead to increased network resilience.

4.3.27. Journey time reliability analysis has been undertaken to assess the economic impacts of the Scheme. The economic assessment of the Scheme is outlined in Section 5 of this Document. This analysis shows that the Scheme will generate a positive journey time reliability improvement benefit of around £8.35M.

Impact of the Scheme on public transport

4.3.28. There are no proposed alterations to rail public transport services as part of the Scheme, therefore any impacts are judged to be insignificant.

4.3.29. No alterations to bus public transport services are included in the Scheme. It is considered the Scheme's impact on public transport routes are expected to take a more consistent approach due to reduction of congestion and delays on the A46.

4.3.30. It should be noted that changes in public transport benefits have not been included within the economic assessment, as there are no new proposed public transport services as part of the Scheme and therefore any rerouting impacts are judged to be insignificant.

The impact of the Scheme on safety

4.3.31. The Scheme is designed to generate a reduction in accidents by upgrading the A46 Walsgrave Junction. Section 6 of the Transport Assessment (**TR010066/APP/7.3**) provides an assessment of the Scheme's impact on safety. It provides a summary of the existing road safety record on the A46 and a forecast impact of the Scheme on accidents, as well as assessing the impact on the both the SRN and the local road network. It also provides responses to the road safety audit (RSA) undertaken for the Scheme, including the designer's response on behalf of the Applicant, in order to demonstrate the suitability of the Scheme design in safety terms.

4.3.32. The economic appraisal for the Scheme, as summarised in Section 5 of this Document, includes monetised benefits associated with road safety. Reported

Personal Injury Collision (PIC) data was provided for the A46 Trunk Road by National Highways in July 2023 covering the period 2015 to 2022 inclusive. This was filtered to the 3 year, pre COVID-19 pandemic restrictions, time period 2017 to 2019.

4.3.33. For economic appraisal, a 5-year period for observed accidents is recommended and as such, the 2015-2016 data collated as part of the Stage 2 assessment were appended to the data set to avoid periods affected by COVID-19 travel restrictions or the construction of the A46 Binley Improvement Scheme.

4.3.34. The PIC data includes data on road accidents reported to the police where at least one person is injured. Several people can be injured in one accident, resulting in multiple casualties being recorded.

4.3.35. The Stage 1 Road Safety Audit (RSA1) has been undertaken during the preliminary design of the Scheme in line with the National Highways standard, DMRB GG 119 'Road safety audit' revision two. The Applicant has carefully considered the points and recommendations raised in the RSA1.

4.3.36. An assessment has been made of the number of accidents, and their associated costs, using COBA-LT. COBA-LT assesses the safety aspects of road schemes using detailed inputs of either separate road links and road junctions that would be impacted by a Scheme, or combined links and junctions. The assessment is based on a comparison of accidents by severity and associated costs across an identified network, which includes accidents on the SRN and the local road network, in DM and DS forecasts, using details of link and junction characteristics, relevant accident rates and costs and forecast traffic volumes by link and junction.

4.3.37. Combining the results from the full and the SRN assessments therefore indicates a decrease in accidents on the local roads as seen in Table 4-1. Here, a negative number indicates a decrease in accidents with the Scheme.

Table 4-1: Distribution of accident occurrence savings by severity

Area	Fatal	Serious	Slight	Total
SRN	3	11	38	52
Local	-1	-12	-107	-119
Total	2	-1	-69	-67

4.3.38. In summary, the introduction of the Scheme leads to a decrease in overall accidents across the combined SRN and local road network. Although a decrease in the total number of accidents and casualties is seen, the monetary valuation is a disbenefit as more Killed or Seriously Injured (KSI) accidents are

predicted which have a higher cost than slight accidents. In both cases, this is attributable to a shift from accidents on local roads to the SRN as traffic reroutes onto the A46.

4.3.39. However, it should be noted that the combined impact of The A46 Coventry Junctions Scheme (i.e. both Binley and Walsgrave) predicts an overall decrease in both total number of accidents and KSI overall and broken down for either the SRN or local roads, indicating an improvement in safety due to the combined scheme for the wider SRN as well as local roads.

4.3.40. Although the DS and DM Scheme scenarios both generate accident costs in monetary terms, the Scheme results in monetary disbenefits related to road safety of circa -£0.22 million over the 60-year appraisal period related to road safety.

4.3.41. Increases in accident costs are predominantly seen on the A46 and M69 links. This corresponds to the increase in traffic on these links as vehicles reroute to take advantage of the reduced journey time through the A46 Walsgrave Junction. An exception is the southbound approach to the A46 Walsgrave where the removal of the junction and realignment of the carriageway leads to a decrease in predicted accident costs due to the lower speed limit, higher standard and safer road type that will be delivered by the Scheme.

4.3.42. Some reductions in costs are seen in the local area due to less accidents on the local road network, although many links within Coventry are largely unaffected.

4.3.43. When considering the junctions assessed, the removal of the existing A46 Walsgrave roundabout gives a reduction in predicted accidents. The new A46 Walsgrave dumbbell arrangement does not offset this reduction as the flows through the new roundabout junctions are significantly lower and hence do not have an equivalent predicted accident rate. An increase in predicted accidents is seen at the A46 Binley Junction due to the increased traffic wishing to utilise the A46 in this area. As a result of this reallocation of traffic to the A46 (SRN), the Scheme does lead to a reduced number of accidents on the local roads and provides safety benefits to the local road network.

4.3.44. In line with recent National Highways guidance, it is required that the accident analysis is also disaggregated into those that occur on the SRN. This is not additional benefit but sets out the benefits that can be directly attributed to the SRN.

4.3.45. An accident assessment has been carried out using COBA-LT using the same methodology as the full assessment but with any local road links and junctions removed. Combining the results from the full and the SRN assessments

therefore indicates a decrease in accidents on the local roads.

4.3.46. In summary, the introduction of the Scheme leads to a decrease in overall accidents across the combined SRN and local road network. Although a decrease in the total number of accidents and casualties is seen, the monetary valuation is a disbenefit as more KSI accidents are predicted which have a higher cost than slight accidents. In both cases, this is attributable to a shift from accidents on local roads to the SRN as traffic reroutes onto the A46.

4.3.47. The SRN does not function as a number of individual junctions, but instead operates as network; and, therefore, should be assessed beyond the Scheme when examining the impact upon safety. The Applicant has undertaken a combined COBA-LT assessment of the resulting safety impacts from both the Binley and Walsgrave schemes. The combined impact of the A46 Coventry Junctions Scheme (i.e. both Binley and Walsgrave) predicts an overall decrease in both total number of accidents and KSI overall and broken down for either the SRN or local roads, indicating an improvement in safety due to the combined scheme for the wider SRN as well as local roads as shown in Table 4-2 below. A negative number indicates a decrease in the predicted number of accidents.

Table 4-2: Combined A46 Coventry Junctions assessment distribution of accident casualty occurrence savings by severity

Area	KSI	Slight	Total
SRN	-1	-256	-257
Local	-18	-141	-159
Total	-18	-397	-416

Impact of the Scheme during construction

4.3.48. During construction of the Scheme, impacts to the local road network users will be minimised as much as possible. Construction impacts will be mitigated as set out in the Outline Traffic Management Plan (**TR010066/APP/7.5**). A phased approach has been used to minimise disruption to both strategic traffic on the A46 and the local road network. A full Traffic Management Plan will be developed in the detailed design stage of the Scheme in accordance with Requirement 11 of the draft DCO (**TR010066/APP/3.1**).

4.3.49. The Outline Traffic Management Plan consists of seven phases. These are subject to change following the detailed design phase of the Scheme. All existing routes are maintained during the daytime under reduced speed limits while traffic management is in place and supplemented by a limited number of overnight closures for varying sections of the route.

4.3.50. Mitigation measures are to be arranged in consultation with local stakeholders and the local authorities, Coventry City Council. The programme of works will be co-ordinated in a fashion that allows optimum use of full closures in order to minimise the number required and promote operational efficiency. Full closures will be co-ordinated with local highways authorities (such as Warwickshire County Council, Coventry City Council and Rugby Borough Council), and discussed via stakeholder engagement.

4.4. Walking, cycling and horse riding

4.4.1. Minimising the impacts of the Scheme on WCH has been achieved by maintaining connectivity and incorporating new facilities to enhance existing networks. The design of the Scheme has attempted to minimise the impact upon walking, cycling and horse-riding routes within the Order Limits and wider networks.

Baseline conditions

4.4.2. The existing WCH routes and facilities within the study area (within 500m from the Scheme) are summarised in Table 12.8 of ES Chapter 12 (Population and Human Health) (**TR010066/APP/6.1**) and shown in ES Figure 12.2 (Walking, Cycling and Horse-riding (WCH) facilities and survey locations) (**TR010066/APP/6.2**) and in Figure 4-1 overleaf. At present, only bridleway 156/R75x/1 from Farber Road to Walsgrave Hill Farm (via the Farber Road overbridge) provides PRoW facilities within the Order Limits. No works are proposed to this bridge. Operation of the Scheme would not result in any impacts on any existing WCH facilities, and the Scheme would not lead to any changes to the existing local WCH network.

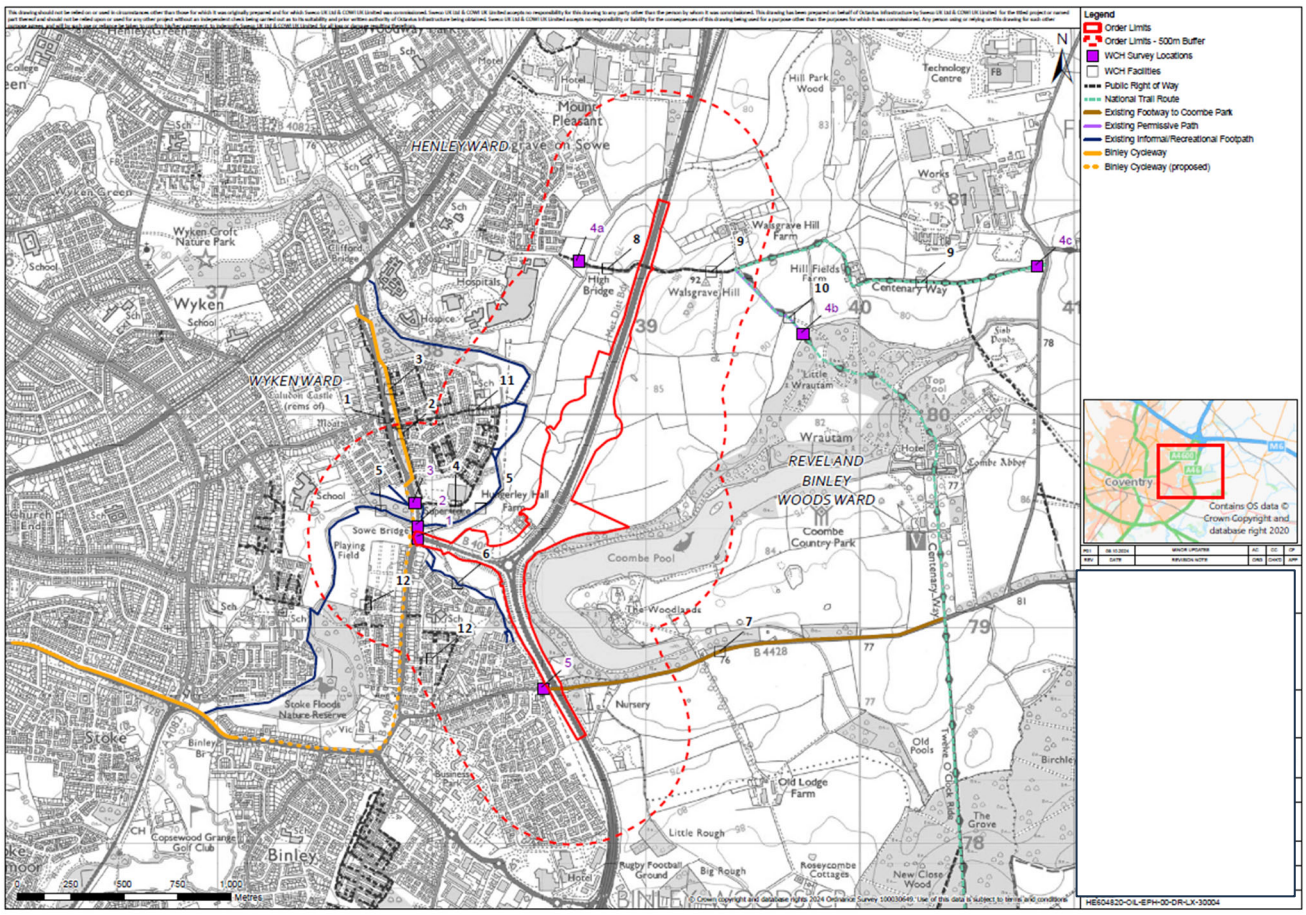

Figure 4-2: Location of PRoW, permissive routes and other facilities

Walking, cycling and horse-riding (WCH) surveys

4.4.3. To provide an indication of the level of usage of WCH facilities in the vicinity of the Scheme, WCH surveys were undertaken at five locations. The surveys were carried out between 07:00 and 19:00 hours for seven consecutive days between Wednesday 14 June and Tuesday 20 June 2023, inclusive, using CCTV video cameras. It should be noted that the survey for site 4 comprised three counts to provide usage information for each leg of the route. In the main, the weather during the surveys was dry.

4.4.4. Site 1: Clifford Bridge Road / B4082 roundabout: The results show that on a weekday an average total of 796 individual movements were recorded at this survey location. The number of recorded movements reduces by more than half to an average of only 363 movements between Saturday and Sunday. Just over a third (302 movements) are attributed to unaccompanied minors on a weekday, reflecting pupils making their way to and from the nearby high school. Also, there is a notable flow of movements across the B4082 link at the uncontrolled pedestrian crossing point.

4.4.5. Site 2: Clifford Bridge Road links to river side path: The results show that on a weekday an average total of 652 individual movements were recorded at this survey location. The number of recorded movements reduces by more than half to an average of only 291 movements between Saturday and Sunday. Just under half (274 movements) are attributed to unaccompanied minors on a weekday, reflecting pupils making their way to and from the nearby high school.

4.4.6. Site 3: Clifford Bridge Road / Tesco roundabout: The results show that on a weekday an average total of 735 individual movements were recorded at this survey location The number of recorded movements reduces by around a half to an average of only 368 movements between Saturday and Sunday. Just under a third (194 movements) are attributed to unaccompanied minors on a weekday, reflecting pupils making their way to and from the nearby high school. The results also suggest that some WCH users are using the informal paths that lead to the river path to avoid having to cross Clifford Bridge Road at the roundabout.

4.4.7. Site 4: PRoW Bridleway and permissive path (Centenary Way) to Coombe Abbey Park: The results show that there is a notable daily flow of pedestrians and cyclists using the bridleway from Farber Road and the permissive path to access Coombe Abbey Park on both a weekday and on a Saturday and Sunday. On a weekday, an average total of 178 individual movements were recorded for the section of the bridleway to the west of the permissive route whereas only 8 movements were recorded for the section of the bridleway to the east. A total of 104 movements were recorded for the permissive route which suggests that a proportion of users only travel as far as the junction with the permissive route before returning in the direction of Farber Road. On a weekend, an average total of movements for the section of bridleway to the west increases to 240 movements whereas only 18 movements were recorded for the section of bridleway to the east. A total of 175 movements were recorded for the permissive route which again suggests that not all users make their way to Coombe Abbey Park. It is worthy of note that around 20 percent of users recorded in the surveys were cyclists and no equestrians were recorded using the bridleway.

4.4.8. Site 5: Brinklow Road / Valencia Road Junction: The results show that on a weekday an average total of 273 individual movements were recorded at this survey location. At the weekend the recorded usage is at a similar level with an average of 269 movements between Saturday and Sunday. The majority of the recorded movements were between Brinklow Road west and Valencia Road for all pedestrian types and there are some movements along Brinklow Road and between Valencia Road and Brinklow Road east. This suggests that there are some walking trips to/from Coombe Abbey Park. In addition,

the majority of cyclists travel along Brinklow Road with minimal movements between Brinklow Road and Valencia Road. These cyclists make use of both the footways and carriageway.

Walking, cycling and horse-riding aspirations

4.4.9. Consultation was undertaken with relevant officers at Coventry City Council and Rugby Borough Council to ensure that local accessibility issues and the impact of the Scheme were clearly understood. Initial consultation with local WCH user groups and Coventry City Council identified an aspiration for a WCH link across the A46 to Coombe Abbey Park. The Applicant has designed the Scheme to incorporate enabling works for potential future WCH provision to be provided by others, more detail is provided in the following section and further details are provided within ES Chapter 12 (Population and Human Health) (**TR010066/APP/6.1**).

Walking, cycling and horse-riding provision within the Scheme

4.4.10. A signalised pedestrian crossing would be provided on the B4082 link road to the immediate east of the Clifford Bridge Road/B4082 roundabout. This would improve the north-south movement of pedestrians along the eastern side of Clifford Bridge Road between Wyken and Binley. This would become a Coventry City Council asset. The crossing also involves installing loops for the functioning of the crossing within the circulatory carriageway of Clifford Bridge Road roundabout. Associated with the crossing, pedestrian guard railing may also be installed around the south-eastern and north-eastern curves of the roundabout. This will assist in connecting the communities of Binley and Wyken and is an improvement over the existing uncontrolled crossing point on the B4082.

4.4.11. The Scheme does not include any further WCH provision enhancements. However, the Scheme does incorporate enabling works for potential future WCH provision to be provided by others. This includes additional earth works which provides verge widening along the new section of the B4082 link road to accommodate the future provision of a segregated walking and cycling route and a section of shared use path by others.

4.4.12. The Applicant has also retained the Hungerley Hall Farm accommodation bridge and will continue to maintain the asset. These enabling works have the potential to facilitate a new route from Clifford Bridge Road and the Binley Cycleway (to be delivered by Coventry City Council) to Coombe Abbey Park in the future, at a substantially reduced cost and disruption. Such a route would connect with committed and proposed future active travel schemes within Coventry and Warwickshire local authority areas.

4.4.13. A WCH assessment was undertaken for the Scheme and the outcome is provided in ES Chapter 12 (Population and Human Health) (**TR010066/APP/6.1**). Details of the design mitigation and enhancement measures are shown on ES Figure 12.3 (Environmental Constraints) (**TR010066/APP/6.2**). It includes the results of usage surveys of walkers and cyclists on a range of local routes. The assessment concludes there is not considered to be any increase in severance as a result of the Scheme, and no likely significant effect upon existing WCH routes.

4.4.14. The Applicant considers that all reasonable opportunities for connecting communities and enabling future active travel provision have been explored, and the objectives of the Scheme have been met.

4.5. Transport assessment summary

4.5.1. The Scheme accords with Transport policy at the national level in that the RIS2 supports the A46 Scheme as a required improvement to the SRN. Further, in accordance with the NPS NN and NPPF it will reduce congestion-related delay, improve journey time reliability, increase the overall capacity of the A46, reduces the number of accidents on the local road network, improves safety on the SRN when assessed in combination with the Binley Junction Improvement Scheme, improves traffic flow, assisting the region's attractiveness for business and helping promote a competitive regional economy.

4.5.2. At a regional and local level, the Scheme will assist in delivering the required and supported key infrastructure which is essential to fluid connectivity and facilitating new housing and business developments and support existing residential and commercial communities in the local area and wider region.

4.5.3. The results of the modelling assessment show the scheme fulfils its objectives by providing capacity, relieving congestion, improving journey times and increasing accessibility for the local communities.

4.5.4. In terms of operational traffic impacts on the highway network, the VISSIM modelling assessment show the Scheme is operating successfully with 2043 forecasted demand. The junction improvements provided by the Scheme generate benefits with respect to congestion relief as well as road safety as it leads to a decrease in overall accidents, although a small shift towards a higher severity is seen.

4.5.5. In summary, it is considered that the Scheme provides the following transport benefits:

- The Scheme provides additional capacity and improved journey times.

- The Scheme improves accessibility for local communities by reducing congestion along the A46 corridor.
- The Scheme improves operational issues by reducing congestion at the Walsgrave Junction, along the A46 and the B4082.
- The Scheme is predicted to reduce traffic flows on many local roads.
- The Scheme improves journey time reliability for the area.
- Public transport routes are expected to be more consistent on the local road network due to reduction of congestion and delays on the A46.

4.5.6. VISSIM modelling shows the A46 Walsgrave junction operating satisfactorily without any significant excess queuing.

4.5.7. Road traffic congestion is significantly reduced by the Scheme, with journey times along the A46 reducing in the 2043 DS scenario to be approximately equivalent to or significantly better than 2018.

5. Economic case overview

5.1. Introduction

5.1.1. This section outlines the economic assessment of the Scheme. It presents the expected monetised benefits and disbenefits, as well as the non-monetised benefits and disbenefits associated with the Scheme and sets out overall value for money. It estimates its economic worth, by comparing the benefits to users against the costs of procurement. It does this by comparing the economic costs and benefits of the Scheme against the equivalent costs and benefits without the Scheme.

5.2. Estimation of Scheme costs

5.2.1. Scheme construction costs have been estimated by the National Highways Commercial Team and were produced on 28 June 2024.

5.2.2. Outturn costs are the expected costs in the actual years of expenditure. Central forecasts of outturn costs for construction, land, preparation and supervision for each actual year of expenditure were produced by the Applicant and were developed from relevant information (including preliminary design and bills of quantities).

5.2.3. The expenditure profiles are based upon cost estimates for each financial year and then inflated to outturn costs using the Applicant's projected construction related inflation. These costs have then been rebased to 2010 calendar year profiles for economic calculations, using the Gross Domestic Product (GDP) deflator series, as published in the latest TAG data book. All the costs are in factor cost unit of account and exclude VAT, both recoverable and non-recoverable. All spend to date (historic cost) has been removed as these costs are considered as sunk costs and not included in the economic appraisal. In line with the Applicant's Economics/Chief Analyst's Division (CAD) guidance, portfolio risk has been excluded in the appraisal process.

5.2.4. The total present value of costs is £56.2 million, discounted to 2010 market prices. This figure is based on construction costs as no operating and maintenance costs were available. These costs are therefore used in the Public Accounts table to represent the Present Value Cost (PVC) of the Scheme.

5.3. Overview of economic assessment and methodology used

5.3.1. The purpose of an economic appraisal is to estimate the benefits of a transport scheme using information on travel demand, traffic flows, journey times and other

data extracted from the traffic model. A Benefit to Cost Ratio (BCR) is calculated from the economic assessment by comparing the Scheme cost to the benefits of the Scheme over the 60-year appraisal period.

5.3.2. Benefits appraised for the A46 Coventry Junctions (Walsgrave) Scheme have been categorised as established monetised impacts, evolving monetised impacts, indicative monetised impacts and non-monetised impacts, as per the DfT's Value for Money Framework.

5.3.3. The main economic assumptions have been based on the latest TAG data book at the time of modelling, issued in November 2023. All economics files have been updated to the November 2023 data book values as they became available.

5.3.4. The benefits of the Scheme have been calculated from a number of sources:

- Transport user benefit appraisal (TUBA) has been used to assess the savings in travel time and vehicle operating costs (VOC) as a result of the Scheme. This uses the latest version of the software (v1.9.17) and economics file v1.9.22 (consistent with the November 2023 TAG data book), at the time of appraisal;
- User delays during construction – impacts on travel time and VOC as a result of scheme construction, calculated using TUBA version 1.9.17 and economics file v1.9.22;
- Safety benefits – accident benefits were calculated using Cost and Benefits to Accidents – Light Touch (COBA-LT) version 2.6 (November 2023), based on a network boundary defined by those links forecast to experience a change of ±10% in Average Annual Daily Traffic (AADT) flows in the scheme scenarios compared to without scheme scenarios assessed to exclude links where model noise affected the percentage change;
- Environmental benefits – a quantitative and monetised assessment of greenhouse gases, air quality and noise as a result of the Scheme, undertaken as part of the environmental assessment;
- Indirect tax revenue – changes in the amount of fuel purchased and the associated impact to revenue from fuel duty as a result of the Scheme were calculated using TUBA version 1.9.17 and economics file v1.9.22;
- Journey time reliability (JTR) benefits – JTR impacts were assessed in line with the guidance in TAG Unit A1.3 Section 6.3, using TUBA version 1.9.17 and economics file v1.9.22 (November 2023);

- Wider economic impacts (WEIs) – WEIs were assessed in line with the guidance in TAG Unit A2.1 – Wider Economic Impact Appraisal (May 2018). The WEIs identified are categorised into two levels:
    - Level 2 WEIs based on connectivity improvements only, without explicit land use change, including: static agglomeration, more people working and increased output in imperfectly competitive markets
    - Level 3 WEIs involving explicit land use change and / or additional economic modelling, including: dynamic agglomeration, move to more productive jobs and dependent development; (however only Level 2 WEIs were assessed), and

- Social and distributional benefits – social and distributional benefits were assessed in line with the guidance in TAG Units A4.1 Social Impact Appraisal (May 2020) and A4.2 Distributional Impacts Appraisal (May 2020) using values from TAG data book November 2023.

5.3.5. The Economic Appraisal has been carried out using standard procedures and economic parameters as defined by TAG Unit A.1 Cost Benefit Analysis; with efforts made to quantify and monetise costs and other impacts where appropriate. The economic appraisal is supplemented with sensitivity tests.

5.4. Monetised benefits

5.4.1. The Scheme will increase capacity, relieve congestion and improve journey times along this section of the A46. These improvements will reduce lost productive time and subsequently increase business user and transport service provider benefits. There will also be associated changes in VOC, such as fuel, vehicle maintenance and mileage related depreciation.

5.4.2. Monetised benefits have been estimated over a 60-year appraisal period, standard for a transport scheme as per TAG Unit A1.1 “Cost-Benefit Analysis”. All values have been converted to the TAG standard of 2010 costs and values, and discounted to 2010, to allow a direct conversion between effects occurring in different years.

5.4.3. The Scheme monetised benefits are a combination of different elements which are dependent on network capacity, average speeds, number of trips, cost of travel, tax, etc. Monetised benefits are split into those that supply an initial assessment and a second set used to form the adjusted assessment. The total monetised benefits include the following items assessed as part of the appraisal:

Initial benefits:

- Travel time, which is assessed within TUBA;
- VOC, assessed within TUBA;
- Accident benefits, assessed within COBA-LT;
- Indirect tax revenues, assessed within TUBA;
- Construction user delays, assessed within SATURN and TUBA; and
- Environmental impacts, assessed in accordance with TAG Unit A3.

Adjusted monetised benefits:

- Journey time reliability assessed separately using TUBA; and
- The WEIs of output change in imperfectly competitive markets and labour supply.

5.4.4. Combining the results from the above assessments provide the Present Value Benefit (PVB) of the Scheme.

5.5. Appraisal summary

5.5.1. Combining the monetised benefits (PVB) and costs (PVC) provide the appraisal of the Scheme. In line with TAG Unit A1.1. Economic assessment results are presented in the form of Transport Economic Efficiency (TEE) (Table 5-1), Public Accounts (PA) (Table 5-2) and Analysis of Monetised Costs and Benefits (AMCB) (Table 5-3).

5.5.2. The TEE table brings together the benefits to transport users and providers derived from the TUBA runs, the construction delay appraisal, and the cost to business of any developer contributions. The TEE table is a key component in the reporting of the economic assessment impacts. Table 5-1 presents the TEE table for the core scenario. Values are presented in £000's in line with NH guidance.

Table 5-1: TEE Table – Core Scenario, £000

Item	Monetary value (£000)
Consumer – Commuting User benefits	**All modes**
Travel time	£23,228
VOC	-£2,653
During construction	-£1,284
Net consumer – commuting benefits	**£19,291**
Consumer – Other user benefits	**All modes**
Travel time	£30,127
VOC	-£4,470
During construction	-£1,914
Net consumer – commuting benefits	**£23,743**
Business Impacts	**All modes**
Travel time	£71,866
VOC	-£3,324
During construction	-£3,083
Subtotal	**£65,459**
Private sector provider impacts	£0
Subtotal	**£65,459**
Other business impacts	£0
Developer contributions	£0
Net business impact	**£65,459**
Present Value of Transport Economic Efficiency Benefits (TEE)	**£108,493**

(All values are presented in 2010 market prices and discounted to 2010 values)

5.6. Public accounts

5.6.1. The Public Accounts (PA) Table brings together the costs of the Scheme and the revenue and tax changes which would result. The revenue and tax changes which follow from changes in traffic routes and speeds are derived from the TUBA output, while the capital and operating costs, less any offsetting developer contributions, are as described. Table 5-2 presents the PA table for the core scenario. Values are presented in £000's.

Table 5-2: PA Table – Core Scenario Costs £000

Item	Monetary value (£000)
Local Government Funding	**All modes**
Revenue	£0
Operating costs	£0
Investment costs	£0
Developer contributions	£0
Grant/subsidy payments	£0
Net impact	**£0**
Central government funding: Transport	**All modes**
Revenue	£0
Operating costs	£0
Investment costs	£56,213
Developer contributions	£0
Grant/subsidy payments	£0
Net impact	**£56,213**
Central government funding: Non-Transport	
Indirect Tax Revenues	-£1,936
Totals	
Broad Transport Budget	**£56,213**
Wider public finances	**-£1,936**

(All values are presented in 2010 market prices and discounted to 2010 values)

5.7. Analysis of monetised costs and benefits

5.7.1. The AMCB Table (Table 5-3) brings together quantified scheme costs and benefits to help determine the economic worth of the Scheme. This table is based on those elements of the economic appraisal which are considered to produce robust monetised estimates of the impacts. The table also shows the adjusted BCR, which is obtained by the inclusion of other benefits whose estimation is considered to be less robust (JTR and WEIs). The table presents

the AMCB table for the core scenario. Values are presented in £000's.

Table 5-3: AMCB Table – Core Scenario, £000

Item	Monetary value (£000)
Noise	£860
Air Quality	-£681
GHGs**	-£27,951
Accident Savings	-£222
Economic Efficiency: Consumer users (Commuting)	£19,291
Economic Efficiency: Consumer users (Other)	£23,743
Economic Efficiency: Business Users and Providers	£65,459
Wider Public Finances	£1,936
Level 1 Present Value Benefit (PVB)	**£82,436**
Broad Transport Budget Present Value Cost (PVC)	**£56,213**
Level 1 Net Present Value (NPV)	**£26,223**
Level 1 Benefit to Cost Ratio (BCR)	**1.47**
Reliability Benefits	£8,346
Wider Economic Benefits (Labour Supply) *	£2,142
Wider Economic Benefits (Imperfect Markets)	£7,182
Level 2 PVB	**£17,670**
Adjusted PVB (Level 1 + Level 2)	**£100,106**
PVC	**£56,213**
Adjusted NPV (Level 1 + Level 2)	**£43,892**
Adjusted BCR (Level 1 + Level 2)	**1.78**

(* Stage 2 assessment values which have not been updated as part of Stage 3).

(All values are presented in 2010 market prices and discounted to 2010 values except **greenhouse gases (GHGs) which are factor prices).

5.7.2. When considering the Level 1[2] benefits, the A46 Coventry Junctions (Walsgrave) Scheme generates a PVB of £82.4 million and a PVC of £56 million. This results in an initial BCR of 1.47 which suggests that for each pound

[2] TAG Unit A2.1 (May 2018) sets out approaches for estimating six WEIs that can be considered to be supplementary to the welfare economic benefits captured through the conventional appraisal described in the previous sections (termed Level 1 appraisal). These WEIs occur as individuals and businesses change their behaviour in response to the transport change.

of Broad Transport Budget expenditure, £1.47 of benefit to public value is expected to be generated.

5.7.3. In line with TAG guidance, WEIs and journey time reliability (JTR) are not part of the Level 1 BCR and therefore these are considered in the Level 2 benefits and the corresponding adjusted BCR. The Scheme generates an adjusted PVB of £100.11 million and an adjusted BCR of 1.78 when the Level 2 benefits are included.

5.8. Non-monetised impacts

Social impacts summary

5.8.1. The Social Impacts of the Scheme cover the human experience of the transport system and its impact on social factors that are not considered as part of economic or environmental impacts. They have been assessed either quantitatively or qualitatively in accordance with TAG unit A4.1 – Social Impact Appraisal (May 2020) and include the following:

- accidents - new transport schemes may result in an increase or decrease in the risk of individuals being killed or injured in an accident, for both users and non-users of transport. The Scheme is anticipated to alter the volume of traffic on the A46 and surrounding SRN and hence the number and type of accidents
- physical activity - transport provision can affect levels of physical activity. The British Medical Association notes that there is a relationship between transport, the environment and health
- security - transport interventions can impact upon the personal security of transport users or other people. The principal security impacts on road users relate to situations where they are required to leave their vehicle or where they are forced to stop or travel at low speeds
- severance - community severance is defined as the separation of residents from facilities and services they use within their community caused by substantial changes in transport infrastructure or by changes in traffic flows
- journey quality - a measure of the real and perceived physical and social environment experience while travelling. A poor journey quality may dissuade users from using particular modes of transport. Interventions that improve journey quality may lead to a choice of an alternative mode
- option and non-use values are assessed when a scheme includes measures that will substantially change the availability of transport services

within the study area

- accessibility reflects the range of opportunities and choices people have in connecting with jobs, services and family and friends. The level of access will depend on where people choose to live, where services are located and the availability of 'home delivery' of goods or services

- personal affordability – the monetary costs of travel can be a major barrier to mobility for certain groups of people, with particularly acute effects on their ability to access key destinations.

5.8.2. Table 5-4 provides a concise summary of the findings and results of the Social Impacts Appraisal undertaken for each indicator.

Table 5-4: Social Impacts Summary

Indicator	Assessment	Conclusion
Accidents	-£0.222M in disbenefits are generated from increased accident costs.	Slight Adverse
Physical Activity	The Scheme is not expected to significantly alter active mode provision since it is a highway scheme. However, the provision of a pedestrian crossing at the B4082's junction with Clifford Bridge Road is likely to encourage more walkers.	Slight Benefit
Security	Visibility and informal surveillance are expected to improve with the Scheme.	Slight Benefit
Severance	The Scheme is predicted to reduce traffic flows on many local roads which reduces severance.	Slight Benefit
Journey Quality	There are slight benefits to travellers' frustration due to reduced journey times for throughflow traffic on the A46 as well as benefits to fear of potential accidents since drivers will no longer all be stopping at the junction's roundabout.	Slight Benefit
Option and Non-Use Values	Public transport routes are expected to take a more consistent approach due to reduction of congestion and delays on the A46.	Slight Benefit
Accessibility	Road users are expected to have reduced and consistent journey times including to University Hospital Coventry, which impacts on a small number of users.	Neutral
Personal Affordability	VOC disbenefits are seen across all sectors, increasing costs to private transport users.	Moderate adverse

Distributional impacts summary

5.8.3. The Distributional Impacts of the Scheme consider how the impacts of a Scheme vary across different social groups and have been assessed, in accordance with TAG unit A4.2 Distributional Impact Appraisal (May 2020), either quantitatively or qualitatively, for the following user benefits:

- noise and air quality – noise and air quality impacts are likely to occur where a Scheme results in changes to traffic flows or speeds or where the physical gap between people and traffic is altered. The Scheme includes changes to the network road alignment, traffic flows and speeds

- accidents - any change to the road network can affect the number of accidents that occur. Groups that are particularly vulnerable to increases in risk of accidents include children, the elderly, young males and motorcyclists. There is also a strong link between deprivation and road accidents

- security – there are potential impacts (in personal security terms) from making changes to the transport system and these can raise specific concerns for women, young people, older people, people with disabilities and black and minority ethnic communities

- severance – consideration is given to how groups such as children, people without access to a car, older people, people with disabilities and parents with pushchairs are impacted by severance. These groups often experience longer journey times or are often required to use pedestrian routes that are inappropriate and difficult to use

- accessibility - public transport accessibility for different groups to access employment, services and social networks. The Scheme itself is not expected to have any significant impacts on public transport accessibility so this was scoped out of the assessment

- personal affordability - changes in transport costs could have disproportionate impacts on vulnerable groups due to their reliance on available, accessible and affordable transport options.

5.5.1. Table 5-5 provides a concise summary of the findings and results of the Distributional Impacts Appraisal undertaken for each indicator.

Table 5-5: Distributional Impacts Appraisal Summary

Indicator	Assessment	Conclusion
User Benefits	The Scheme generates user benefits which are experienced across all user groups. These are seen to impact the most on the more deprived sectors in the study.	Benefit with severity varying by income quintile
Noise	Noise levels are seen to reduce as a whole which benefits all incomes, with a large benefit in one of the less deprived quintiles, in the short-term assessment. Children are expected to benefit due to reduced noise levels near primary schools.	Slight Benefit with some income quintiles having larger benefits
Air Quality	The Scheme is expected to bring benefit to the medium deprived areas due to decreases in NO_2 concentrations, due to diversion of traffic away from the local roads as a result of the Scheme. However, the least deprived areas are expected to see increase in NO_2 concentrations as a result of increased usage of the SRN.	Variable between income quintiles
Accidents	The Scheme is expected to have a slight reduction in the number of total casualties. A by link analysis has shown that there is no significant change to the number of casualties by vulnerable group. Pedestrians and young male drivers have some noticeable increase to their number of casualties.	Neutral
Security	All vulnerable groups assessed saw a slight increase to their personal security. As the Scheme is not anticipated to impact on public transport there are only limited improvements. These include greater visibility and informal surveillance.	Slight Benefit
Severance	Severance is seen to improve across the local area, due to a reduction of traffic in the local area. This particularly benefits children, including their access to schools.	Slight Benefit
Affordability	VOC are expected to increase as a result of increased speeds on the A46 with the implementation of the Scheme. This can have a large impact on personal affordability. All user groups received a disbenefit for VOC, which is seen to significantly impact the most deprived sectors and moderately affect the least deprived sectors.	Disbenefit with severity varying by income quintile

Environmental Impacts

5.8.4. The economic appraisal has sought to assess the full range of economic, environmental, social benefits and impacts resulting from the Scheme, in line with TAG. Costs and benefits have been quantified, or 'monetised' as part of a cost benefit analysis, wherever possible.

5.8.5. For environmental benefits – a quantitative and monetised assessment of greenhouse gases (GHGs), air quality and noise as a result of the Scheme has been undertaken as part of the environmental assessment. A monetised assessment of the noise, air quality and GHG impacts are included in Table 5-3.

5.8.6. Non-monetised benefits for noise and air quality are included in the Table 5-6, which shows the environmental qualitative impacts of the Scheme.

Table 5-6: A46 Coventry Junctions (Walsgrave) Qualitative Environmental Impact

Impacts	Summary of key impacts	Qualitative Assessment
Landscape	This assessment has been prepared using desk-top study, site visits and detailed ES chapter – ES Chapter 7 (Landscape and Visual Effects) (**TR010066/APP/6.1**) and Environmental Masterplan (ES Figure 2.4) (**TR010066/APP/6.2**). The Scheme aligns with the existing landscape pattern, integrating effectively with the scale, landform, and terrain of the area. Although the introduction of new roadway alignment and infrastructure will alter certain local features, these changes have been designed to fit smoothly within the existing landscape character, preserving its visual unity and quality. The impact on the landscape's tranquillity is minimal and the cultural landscape impact is neutral, with the project complementing the existing landscape and including measures to preserve the character and integrity of the Green Belt, particularly around woodland areas and Coombe Abbey Park. While the removal of individual trees, woodland blocks and hedgerows will affect the local landscape, mitigation proposals of the Scheme, including replanting and habitat restoration, restoring the local landscape character.	Neutral
Townscape	The Scheme is not expected to create any significant impacts on townscape and has been scoped out of the assessment	N/A
Historic Environment	The Scheme will have a slight adverse effect on the historic environment. This derives mainly from adverse physical and setting effects on a related group of grade II listed buildings (Hungerley Hall Farm). The known and potential archaeological resource is very limited, as demonstrated by archaeological evaluation. Other potential adverse impacts are limited to: Negligible effects on the settings of designated and non-designated historic landscapes, very low potential for disturbance of unknown archaeological remains of up to low.	Slight Adverse
Biodiversity	While there will be impacts on ecological features from the construction and operation of the Scheme, embedded and essential mitigation would avoid, reduce and compensate for these impacts in accordance with the mitigation hierarchy except for noise impacts to the SSSI during construction. At present mitigation has not been identified and incorporated into the Scheme for this impact and there	Moderately Adverse

Impacts	Summary of key impacts	Qualitative Assessment
	is currently a temporary significant effect on parts of the SSSI during construction as a result.	
Water Environment	Potentially adverse long-term effects on the water environment (including groundwater bodies and surface water bodies and their indirect receptors, flood risk and Water Framework Directive waterbodies) will be mitigated by the scheme design, selection of construction methods and by best practice construction measures. No significant effects on surface water quality, resulting from pollution in routine road runoff or from accidental spillages discharging via outfalls, have been identified. There would be insignificant effects on flood risk resulting from an increase in road runoff rates due to attenuation included within the drainage design. There will be no significant effects on fluvial flood risk.	Insignificance/ low significance (on balance)

5.8.7. Other quantitative benefits of the Scheme are discussed in the ES Chapters 5-15 (**TR010066/APP/6.1**) and include benefits such as environmental enhancement and achieving a biodiversity net gain. The Environmental Masterplan displays the ecological benefits of the Scheme (ES Figure 2.4 (**TR010066/APP/6.2**)).

5.9. A46 Coventry Junctions – Binley and Walsgrave combined economic benefits

5.9.1. As noted previously, an additional test has been undertaken to assess the combined impact of the A46 Binley and Walsgrave schemes based on the Core scenario.

5.9.2. To provide this comparison, model forecasts use the earlier A46 Binley opening year of 2023 giving a 60-year assessment period 2023-2082 (inclusive). The number of modelled years is increased from 3 to 4 as 2028, 2043 and 2061 are still used as well as the new 2023 forecasts.

5.9.3. The appraisal uses the DN which excludes both the A46 Binley and A46 Walsgrave Junction Improvement Schemes as the reference scenario for all forecast years.

5.9.4. For 2023, this is assessed against the DM which includes the A46 Binley Junction Improvement Scheme but without the proposed A46 Walsgrave Scheme as the latter scheme is not completed by this date.

5.9.5. Post 2023, the DS, which includes both the A46 Binley and Walsgrave Schemes, is used for 2028, 2043 and 2061.

5.9.6. The following elements are included in the appraisal (Table 5-5). The results of the economic appraisal for the combined A46 Coventry Junctions scheme are set out in the Appraisal Summary Tables in Table 5-7 to Table 5-10.

Table 5-7: Combined A46 Coventry Junctions Appraisal Approach

Element	Appraisal Approach
Level 1 Benefits	
Travel time	Updated
Vehicle operating costs	Updated
Construction delays	Combined values from A46 Binley Stage 4 and A46 Walsgrave Stage 3
Accidents	Updated
Indirect tax revenues	Updated
Noise	Combined values from A46 Binley Stage 4 and A46 Walsgrave Stage 3
Air quality	Combined values from A46 Binley Stage 4 and A46 Walsgrave Stage 3
GHGs	Updated
Investment costs	Combined values from A46 Binley Stage 4 and A46 Walsgrave Stage 3
Level 2 Benefits	
Journey time reliability	Updated
Wider economic impacts (labour supply)	Combined values from A46 Binley Stage 4 and A46 Walsgrave Stage 3
Wider economic impacts (imperfect markets)	Updated

Table 5-8: A46 Coventry Junctions Transport Economic Efficiency, £000

Item	Monetary Value
Consumer – Commuting User benefits	**All modes**
Travel time	£40,040
VOC	-£3,877
During construction*	-£2,448
Net consumer – commuting benefits	**£33,715**
Consumer – Other user benefits	**All modes**
Travel time	£52,965
VOC	-£7,643
During construction	-£3,513
Net consumer – commuting benefits	**£41,809**
Business Impacts	**All modes**
Travel time	£122,506
VOC	-£2,573
During construction	-£6,886
Subtotal	**£113,047**
Private sector provider impacts	£0
Subtotal	**£113,047**
Other business impacts	£0
Developer contributions	£0
Net business impact	**£113,047**
Present Value of Transport Economic Efficiency Benefits (TEE)	**£188,571**

(*Note: Construction costs for A46 Binley was not available by user so all costs have been applied to Consumer).
(All values are presented in 2010 market prices and discounted to 2010 values).

Table 5-9: A46 Coventry Junctions Public Accounts, £000

Item	Monetary value
Local Government Funding	**All modes**
Revenue	£0
Operating costs	£0
Investment costs	£0
Developer contributions	£0
Grant/subsidy payments	£0
Net impact	**£0**
Central government funding: Transport	**All modes**
Revenue	£0
Operating costs	£0
Investment costs	£106,729
Developer contributions	£0
Grant/subsidy payments	£0
Net impact	**£106,729**
Central government funding: Non-Transport	
Indirect Tax Revenues	-£4,304
Totals	
Broad Transport Budget	**£106,729**
Wider public finances	**-£4,304**

(All values are presented in 2010 market prices and discounted to 2010 values)

Table 5-10: A46 Coventry Junctions Analysis of Monetised Costs and Benefits, £000

Item	Monetary value
Noise	£874
Air Quality	-£10,915
Greenhouse Gases**	-£18,518
Accident Savings	£7,387
Economic Efficiency: Consumer users (Commuting)	£33,715
Economic Efficiency: Consumer users (Other)	£41,809
Economic Efficiency: Business Users and Providers	£113,047
Wider Public Finances	£4,304
Level 1 PVB	**£171,703**
Broad Transport Budget PVC	**£106,729**
Level 1 NPV	**£64,974**
Level 1 Benefit to Cost Ratio (BCR)	**1.61**
Reliability Benefits	£24,439
Wider Economic Benefits (Labour Supply) *	£4,838
Wider Economic Benefits (Imperfect Markets)	£12,809
Level 2 PVB	**£42,086**
Adjusted PVB (Level 1 + Level 2)	**£213,790**
PVC	**£106,729**
Adjusted NPV (Level 1 + Level 2)	**£107,061**
Adjusted BCR (Level 1 + Level 2)	**2.00**

(All values are presented in 2010 market prices and discounted to 2010 values except **GHG in factor prices)
(*Note: Labour Supply uses Stage 2 results for A46+ Walsgrave)

5.9.1. As can be seen from the above table, when considering the Level 1 benefits, the combined A46 Coventry Junctions scheme generates a PVB of £172 million and a PVC of £107 million. This results in an initial BCR of 1.61 which suggests that for each pound of Broad Transport Budget expenditure, £1.61 of benefit to public value is expected to be generated.

5.9.2. In line with TAG guidance, WEIs and JTR are not part of the Level 1 BCR and

therefore these are considered in the Level 2 benefits and the corresponding adjusted BCR. As can be seen, the scheme generates a PVB of £214 million and an adjusted BCR of 2.00 when the Level 2 benefits are included.

5.10. Economic assessment summary

5.10.1. The economic appraisal has sought to assess the full range of economic, environmental, social benefits and impacts resulting from the Scheme, in line with TAG. Costs and benefits have been quantified, or 'monetised' as part of a cost benefit analysis, wherever possible.

5.10.2. The Scheme demonstrates a significant number of benefits, building upon previous improvements to the A46 Binley Junction and contributing to wider economic benefits along the wider A46 corridor, particular economic efficiency for business users and providers (monetary value of £65 million) and reliability benefits of (monetary value of £8 million).

5.10.3. In line with TAG, WEIs and JTR are not part of the Level 1 BCR and therefore these are considered in the Level 2 benefits and the corresponding adjusted BCR. The Scheme generates an adjusted PVB of £100.11 million and an adjusted BCR of 1.78 when the Level 2 benefits are included.

5.10.4. The table below presents a summary of the initial BCR and adjusted BCR for the Scheme for the core scenario.

Table 5-11: Headline Benefits Summary – Core Scenario, £M

Scheme	Initial PVB	PVC	Initial BCR	Adjusted PVB	Adjusted BCR
A46 Walsgrave Junction	£82.44	£56.21	1.47	£100.11	1.78

(All values are presented in 2010 market prices and discounted to 2010 values)

5.10.5. The Scheme design has been identified as the best option to meet the defined need and Scheme objectives. It will decrease the number of accidents on the local road network, improve safety on the SRN in combination with the Binley Junction Improvement Scheme, improve resilience and journey time reliability and is consistent with national and local planning objectives for transport, economy and the environment.

5.10.6. Through the increased capacity and improved journey time reliability, the Scheme will also assist in making the region more attractive for businesses and will provide the required infrastructure for future development including housing and employment.

5.10.7. The A46 corridor provides opportunities for economic growth and improved accessibility within Coventry and Warwickshire enabling the potential unlocking of sites for residential development, such as the allocated land to the west of the

A46 and improving access to existing commercial areas.

5.10.8. Some other Scheme benefits include:

- The Scheme is not expected to significantly alter active mode provision since it is a highway Scheme. However, the provision of a pedestrian crossing at the B4082's junction with Clifford Bridge Road is likely to encourage more walkers.
- Visibility and informal surveillance are expected to improve with the Scheme.
- The Scheme is predicted to reduce traffic flows on many local roads which reduces severance.
- Improved journey quality due to reduced journey times for throughflow traffic on the A46 as well as benefits to fear of potential accidents since drivers will no longer all be stopping at the junction's roundabout.
- Public transport routes are expected to take a more consistent approach due to reduction of congestion and delays on the A46.
- Road users are expected to have reduced and consistent journey times including to University Hospital Coventry, which impacts a small number of users.

6. Conformity with planning policy and transport plans

6.1. Overview

6.1.1. This section provides an appraisal of the Scheme's conformity with the relevant national policies that will guide the decision processes and outlines how the Applicant is assessing the Scheme against key policies, local and national.

6.1.2. Local Plans and other national policy documents, such as the NPPF (2023), can be a relevant consideration when making decisions on DCO applications. Section 104(2) of the Planning Act 2008 states that the relevant Secretary of State must have regard to the relevant NPS, any local impact reports produced by host authorities, prescribed matters, and any other matters that they consider are both important and relevant to the decision.

6.2. Policy context

6.2.1. Various national-level documents offer relevant information, as well as fundamental consideration with which the Scheme has been assessed against. The national-level documents considered to be relevant to the Scheme include:

- National Networks National Policy Statement (May 2024)
- National Planning Policy Framework (December 2023)
- Road Investment Strategy 2 2020 – 2025 (March 2020)
- National Infrastructure Delivery Plan 2016 – 2021 (March 2016)
- The Strategic Road Network and the Delivery of Sustainable Development (DfT Circular 01/2022)
- Highways England (now National Highways) Delivery Plan and Strategic Business Plans

6.2.2. In 2019 the Government outlined its commitment to reach net zero emissions by 2050. Various national-level documents offer relevant information surrounding this target, including specific documents surrounding transport. The national-level documents considered to be relevant to the Scheme include:

- Net Zero Strategy: Build Back Greener (April 2022)
- Carbon Reduction Policy (February 2023)

- Decarbonising Transport: A Better, Greener Britain (January 2023)
- DfT Outcome Delivery Plan: 2021 to 2022 (July 2021)

6.2.3. This section then sets out an appraisal of the Scheme against planning policy summarised by key topic.

6.3. National policy and plans

National Networks National Policy Statement (May 2024)

6.3.1. As the Scheme meets the criteria for a NSIP, and will be subject to the DCO process, the application will be judged primarily against the relevant NPS according to the decision-making framework set out in the Planning Act 2008.

6.3.2. NPSs (National Policy Statements) are produced by the Government. As explained on the Inspectorate's National Infrastructure Planning website, *"they give reasons for the policy set out in the statement and must include an explanation of how the policy takes account of Government policy relating to the mitigation of, and adaptation to, climate change. They comprise the government's objectives for the development of nationally significant infrastructure in a particular sector and state."*

6.3.3. NPSs also include any other policies or circumstances that ministers consider should be taken into account in decisions on infrastructure development.

6.3.4. There are 12 designated NPSs setting out Government policy on distinct types of national infrastructure development. NPSs are produced by the relevant government body and provide policy on specific aspects of national infrastructure clarifying how it:

- contributes to sustainable development;
- takes account of the mitigation of, and adaptation to, climate change;
- demonstrates that objectives have been integrated with other government policies;
- details how actual and projected capacity and demand have been taken into account;
- considers relevant issues in relation to safety or technology; and
- looks at circumstances where it would be particularly important to address the adverse impacts of development.

6.3.5. In May 2024, the Government designated the revised version of the NPS NN. The NPS NN (2024) is the primary national policy document that guides decision making on this application covering both the road and rail network.

6.3.6. The NPS NN 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,"* as well as providing "*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 Secretary of State."* NPS NN sits alongside RIS1 and RIS2.

6.3.7. The intent of the NPS NN is to remain consistent with the NPPF throughout. Nevertheless, whereas the NPPF makes clear it is not intended to contain specific policies for NSIPs, the NPS NN *"will assume that function and provide transport policy which will guide individual development brought under it."*

6.3.8. The NPS NN is not scheme specific. As well as setting out the need for development of the national networks, and the Government's policies to deliver development of NSIPs on the national road and rail networks in England, it also provides planning guidance for promoters of NSIPs on the national road and rail networks, and the basis for the examination by the Examining Authority and decisions by the Secretary of State. Paragraph 1.3 of the NPS NN states: *"The Secretary of State will use this NPS as the primary basis for making decisions on development consent applications for NSIPs on the national road and rail networks in England."* Paragraph 1.4 states: *"Under Section 104 of the Planning Act the Secretary of State must decide an application or a relevant NSIP in accordance with this NPS unless he/she is satisfied that to do so would:*

- *lead to the UK being in breach of its international obligations*
- *be unlawful*
- *lead to the Secretary of State being in breach of any duty imposed by or under*
- *any legislation*
- *result in adverse impacts of the development outweighing its benefits*
- *be contrary to legislation about how the decisions are to be taken."*

6.3.9. This section provides an appraisal of the Scheme's strategic alignment and conformity with the relevant national planning policies within the NPS NN. The appraisal within this section focuses on the key policy matters relevant to the

Scheme and purposefully does not seek to set out how the Scheme performs against all policies within the NPS NN. A detailed appraisal of how the Scheme at this stage conforms with all policies within the NPS NN is contained within the NPS NN Accordance Tables (**TR010066/APP/7.2**).

Principle of development

6.3.10. NPS NN paragraph 2.1 states: *"National networks provide critical long-distance links between places, offering fast and reliable journey times and in doing so enable connectivity between people and communities, which in turn supports and stimulates economic growth."*

6.3.11. Paragraph 2.1 of the NPS NN confirms that the improved connectivity can increase the economic density of an area, leading to increased productivity. Roads are a critical part of the national transport framework in facilitating connectivity (paragraph 2.5). The strategic and long-distance nature of the SRN provides long distance traffic with a safe and efficient route, freeing up local roads for genuinely local journeys and active travel, and keeping traffic away from principal centres of population (paragraph 2.8).

6.3.12. Paragraphs 3.1 to 3.23 set out the challenges that national networks face and the need to develop infrastructure in order to respond to those challenges. Paragraph 3.2. the NPS NN confirms: *"Population growth and economic growth are the most critical influences on travel demand."* "*Without investment and infrastructure interventions, increasing demand will lead to decreasing network performance for users, for example, poorer journey time reliability, which comes with economic and social costs."* The Government has therefore concluded that at a strategic level there is a compelling need for development of all national road networks (paragraph 3.22). The same paragraph confirms that 'The Examining Authority and the Secretary of State should therefore start their assessment of applications for infrastructure covered by this NPS on that basis'. Transport infrastructure is described as 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 (paragraph 3.8). The SRN facilitates economic development (paragraph 3.22).

6.3.13. The Scheme comprises an essential part of a wider package of proposals for the A46 corridor to transform connectivity to and from the Midlands, as described in the Roads Investment Strategy, the Transport Investment Strategy, the National Infrastructure Delivery Plan, and the Highways England Delivery Plan 2020 - 2025. The Scheme therefore helps to address the compelling and strategic need for development, identified in the NPS NN.

6.3.14. The Scheme directly addresses the Government's wider strategic policy

objectives, whilst specifically addressing the identified congestion problems along the A46 caused by new developments and increased traffic, older road layouts and standards, accident rates and associated delays and limited opportunities for overtaking. A description of these issues and the need for the Scheme is provided in ES Chapter 2 (The Scheme) (**TR010066/APP/6.1**) and in Section 2 of this Document. The Scheme fulfils this long-established need, and delivers benefits in terms of resolving local transport, economic, environmental and heritage concerns and the Government' s recognised national commitment to improving the SRN

6.3.15. The Government's policy of improving the existing national road network is set out in paragraph 3.46 of the NPS NN as including but not limited to:

- new and improved junctions and slip roads
- improvements to trunk roads, in particular, dualling of single carriageway strategic trunk roads and additional lanes on existing dual carriageway
- measures to enhance capacity of the motorway network.

6.3.16. The NPS NN sets out that, subject to the detailed policies and protections contained in the NPS and the legal constraints set out in the Planning Act 2008, there is a 'presumption in favour' of granting development consent for national network NSIPs that fall within the need for infrastructure established in the NPS NN (paragraph 4.1).

6.3.17. The NPS NN requires Schemes to consider the balance of potential benefits and adverse impacts (paragraph 1.4).

6.3.18. Benefits to be considered include the facilitation of economic development, job creation, housing and environmental improvement, and any longer-term or wider benefits. Assessment of adverse impacts should include longer-term and cumulative adverse impacts, as well as planned mitigation of these impacts.

6.3.19. It also requires environmental, safety, economic and social impacts to be considered at a national, regional and local level. The information provided should be proportionate to the development and underpin the business case (paragraph 4.7). In this regard, the Scheme has been subject to a Transport Assessment (**TR010066/APP/7.3**), Economic Assessment (summary included in Section 5 of this document), and the ES (**TR010066/APP/6.1**).

Options appraisal

6.3.20. Paragraph 4.21 of the NPS NN states that all projects should be subject to an options appraisal. The options appraisal should consider viable modal

alternatives and may also consider other options.

6.3.21. The Scheme has been subject to a rigorous options appraisal process. A summary of the considered options and the appraisal process has been provided in Section 2 of this document, with further detail in the Scheme Design Report (**TR010066/APP/7.4**) and ES Chapter 3 (Assessment of Alternatives (**TR010066/APP/6.1**).

Sustainable development

6.3.22. Both the NPS NN and NPPF seek to encourage development proposals to achieve a high level of sustainable development.

6.3.23. NPPF paragraph 8 states that achieving sustainable development means that the planning system has three overarching objectives – an economic objective, a social objective and an environmental objective.

6.3.24. It states that these objectives are interdependent and need to be pursued in mutually supportive ways.

6.3.25. Paragraph 5.202 of the NPS NN recognises that the impacts from transport infrastructure schemes can be economic, social and environmental, and that consideration and mitigation of these impacts is important in achieving sustainable development.

6.3.26. The Scheme would fulfil the economic objective of sustainable development during the operational phase by increasing capacity and reducing congestion on the SRN. This would facilitate growth of a number of economic sectors, such as food and logistics, which are reliant on journey time reliability and network efficiency and dominate the regional economy. This would allow these industries to consolidate and build their businesses. The Scheme would also help to unlock employment growth within the Coventry area and along the A46 corridor by facilitating the delivery of regional and local business developments. The Scheme would fulfil the social objective of sustainable development by supporting strong, vibrant and healthy communities.

6.3.27. The Scheme would improve strategic and local connectivity in Coventry and the wider area incorporates enabling works for potential future WCH provision to be provided by others, as outlined in ES Chapter 12 (Population and Human Health) (**TR010066/APP/6.1**)

6.3.28. The Scheme would fulfil the environmental objective of sustainable development by seeking to avoid or mitigate environmental effects. Measures incorporated to mitigate effects are extensive and are outlined in the ES (**TR010066/APP/6.1**). The Scheme would also achieve a net gain in biodiversity as set out in ES

Appendix 8.1 (Biodiversity Net Gain Baseline Report) (**TR010066/APP/6.3**) and ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**). Post-construction Biodiversity Net Gain (BNG) calculations based on the Environmental Masterplan (ES Figure 2.4 (**TR010066/APP/6.3**)) DCO submission have identified a +11.87% and +15.38% net gain for area-based and linear hedgerow habitats respectively.

6.3.29. The Environmental Masterplan, Figure 2.4 of the ES Figures (**TR010066/APP/6.2**) has sought to create a range of habitats similar to those already present on site and affected by the Scheme. However, this would include habitats of higher biodiversity where possible.

6.3.30. Policy and guidance recognise that not all impacts are able to be resolved in large scale Schemes and any residual impacts are weighed against the longer term and wider benefits of the Scheme in environmental, safety, social and economic terms. Specifically, paragraph 2.16 of the NPS NN states *"Applicants should look for opportunities to design infrastructure with a holistic approach to avoiding, or, where adverse impacts are unavoidable, mitigating and as a last resort compensating impacts on the natural, historic or built environment, on landscapes and on people by using nature-based solutions."* Therefore, it is acknowledged that some adverse impacts may be unavoidable. However, enhancements have also been made in the Scheme where possible, this includes Biodiversity Net Gain, landscaping enhancements and seeking to provide future opportunities for development of WCH routes.

6.3.31. The Applicant therefore considers that the Scheme meets the requirements of the economic, social and environmental objectives of sustainable development as set out in the NPS NN.

Overall environmental impact

6.3.32. Section 5 of the NPS NN gives guidance for decision making relating to impacts on the environment, habitat, landscape, accessibility and existing infrastructure. In relation to environmental impacts, the guidance is clear that development consent should not be granted for schemes which will have a detrimental impact on irreplaceable habitats, including ancient woodland and veteran trees unless *"there are wholly exceptional reasons (for example, where the public benefit would clearly outweigh the loss or deterioration of habitat) and a suitable compensation strategy exists."* (paragraph 5.63).

6.3.33. The assessment of effects and associated mitigation on environment, habitat, landscape, accessibility and existing infrastructure is provided in the ES (**TR010066/APP/6.1**). Further information on how the Scheme meets environmental policy objectives is provided in summary below for the various topics assessed for the Scheme. Further information is also set out in the ES

Chapters 5-15 (**TR010066/APP/6.1**) and the NPS NN Accordance Tables (**TR010066/APP/7.2**).

Air quality

6.3.34. ES Chapter 5 (Air Quality) (**TR010066/APP/6.1**) presents information enable the identification and assessment of likely significant effects on air quality.

6.3.35. The NPS NN recognises that *"…increases in emissions of pollutants during the construction or operation phases of projects on the national networks can result in the worsening of local air quality (though they can also have beneficial effects on air quality, for example through reduced congestion). Increased emissions can contribute to adverse impacts on human health, on protected species and habitats."* (paragraph 5.7).

6.3.36. *"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,"* (paragraph 5.12).

6.3.37. Paragraph 5.13 states "*The environmental statement for a proposed project should describe*:

- *The existing air quality emissions and concentrations.*
- *Air quality forecast at the time of the Scheme opening, assuming the Scheme is not built and then taking into account the impact of the Scheme.*
- *Detail any significant air quality effects, their mitigation and any residual effects distinguishing between the operational and construction stages and including the impacts of road traffic generated by the project.*
- *Predicted emissions and concentration changes after mitigation.*
- *Potential impacts on nearby habitats.*
- *Proximity and nature of nearby receptors (including those more sensitive to poor air quality)."*

6.3.38. Paragraph 5.14 states: *"In addition, applicants should consider The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 by*

following available Defra guidance, including interim guidance."

6.3.39. *"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 approach but may include more detailed modelling to demonstrate local impacts. If an applicant believes they have robust additional supporting evidence, such as updated vehicle fleet data, that has not been incorporated into the Emissions Factor Toolkit and is likely to change the projected emissions, to the extent they could affect the conclusions of the assessment, they should include this in the representations to the Examining Authority along with the source of evidence."* (paragraph 5.15).

6.3.40. *"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."* (paragraph 5.17).

6.3.41. NPS NN paragraph 5.18 states: *"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."*

6.3.42. "*With respect to The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023, the applicant should take all reasonable steps to reduce the emissions of PM2.5, and its precursor pollutants in the construction and operational stages of the development by following available Defra guidance."* (paragraph 5.20).

6.3.43. NPS NN provides advice for decision makers (paragraph 5.24):

"The Secretary of State should 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 meeting environmental assessment requirements and/or where they lead to a deterioration in air quality in a zone/agglomeration."

6.3.44. Further advice for decision makers in also provided (paragraph 5.25):

"The Secretary of State should refuse consent where, after taking into account mitigation, the air quality impact of the scheme will:

- *Result in a zone/agglomeration which is currently reported as being compliant with the Air Quality Standards Regulations*

becoming non-compliant.

- *Affect the ability of a non-compliant area to achieve compliance within the most recent timescales reported to the examining authority at the time of the examination."*

6.3.45. The assessment in ES Chapter 5 (Air Quality) (**TR010066/APP/6.1**) has reviewed existing and future baseline air quality within the defined study area and has considered air quality impacts associated with both the construction and operation phases of the Scheme. Where appropriate, mitigation is detailed, and the residual effects stated. The assessment has addressed impacts at local sensitive receptors (including nearby habitats), within the context of relevant air quality objectives and limit values. (Please see ES Chapter 5 sections 5.8, 5.9 and 5.10).

6.3.46. During construction, as construction activities are programmed to last less than two years, it is unlikely there will be a significant effect on air quality from construction traffic emissions, and the Scheme's construction will not affect the UK's ability to comply with the Air Quality Standards Regulations 2010.

6.3.47. With the application of best practice construction mitigation measures, as defined in the Scheme's First Iteration EMP (**TR010066/APP/6.5**), there will be no likely significant air quality effect on local air quality associated with construction dust.

6.3.48. The operation of the Scheme will have no significant air quality effect. This is based on the following:

- The human health results analysis has demonstrated that there are no modelled exceedances of the annual mean NO_2 and PM_{10} air quality objectives with the Scheme in operation.
- Based on consultation with the competent biodiversity expert for the Scheme, the results analysis relating to ecological receptors has demonstrated that:

6.3.49. The Scheme causes improved air quality (decrease in annual mean NO_2 concentrations) at Clifford Bridge Road, due to an expected reduction in vehicle flows resulting from the operation of the Scheme, as detailed in ES Chapter 5 (Air Quality) (**TR010066/APP/6.1**). The majority of receptors within the Coventry AQMA experience either a 'small' improvement in concentrations or an imperceptible change in concentrations.

6.3.50. There are modelled exceedances of the relevant annual mean nitrogen oxides (NO_x) and ammonia (NH_3) critical levels in both the Do-Minimum (DM) and PM_{10} (particulate) air quality objectives with the Scheme in operation.

6.3.51. Based on consultation with the competent biodiversity expert for the Scheme, the results analysis relating to ecological receptors has demonstrated that:

- There are modelled exceedances of the relevant annual mean NO_x and NH_3 critical levels in both the (DM) and Do-Something (DS) 2028 scenarios, with some transect receptors experiencing an impact above 1% of the critical level. These occur within 40m of the nearest carriageway. No new exceedances of the relevant critical levels are introduced by the Scheme.

- Similarly, nitrogen deposition rates are assessed to exceed the lower critical load at each designated site in both the DM and DS 2028 scenarios, owing to an existing high background deposition rate. No new exceedances of the relevant lower critical loads are introduced by the Scheme.

- The Scheme is predicted to have beneficial and adverse impacts on nitrogen deposition above 1% of the significance screening criterion.

- However, the transect receptors exceeding the criterion are generally not within the designated feature, with these locations being primarily roadside where sensitive species are not present. Given this, in combination with the high baseline levels for NH_3 concentrations and nitrogen deposition rates, the impacts attributed to the Scheme are marginal.

6.3.52. Within the further discussion, (ES Appendix 8.15 (Assessment of Air Quality Impacts on Ecological Features) (**TR010066/APP/6.3**)), the competent biodiversity expert concludes that there are no likely significant air quality effects on ecological features.

Historic environment

6.3.53. ES Chapter 6 (Cultural Heritage) (**TR010066/APP/6.1**) enables the identification and assessment of likely significant effects on cultural heritage.

6.3.54. Paragraph 5.210 of the NPS NN states: "*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.*"

6.3.55. All heritage assets relevant to the Scheme have been identified from utilisation of documentary sources, a site walkover survey and archaeological field survey. The determination of asset significance is central to understanding to what degree the historic assets would be affected by the changes arising from the Scheme. ES Appendix 6.1 (Cultural Heritage Information) (**TR010066/APP/6.3**) goes into detail about the heritage assets affected and has determined their value through a series of processes including the extent to which setting contributes to the assets in question.

6.3.56. Paragraph 5.213 of the NPS NN states: *"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 "* and paragraph 5.214 states: *"The Secretary of State may add requirements to the Development Consent Order to ensure that this is undertaken in a timely manner in accordance with a written scheme of investigation that meets the requirements of this section, and has been agreed in writing with the relevant Local Authority, Historic England or Marine Management Organisation."*

6.3.57. The potential significant heritage impacts have been assessed in ES Chapter 6 (Cultural Heritage) and in ES Appendix 6.1 (Cultural Heritage Information) (**TR010066/APP/6.3**).

6.3.58. The construction of the Scheme would physically affect the curtilage listed yard wall associated with the grade II Listed Buildings of Hungerley Hall Farmhouse. The proposed B4082 link road and associated landscaping would involve the demolition of the yard wall. Loss of the wall would mean that this dimension of understanding would be greatly lessened, but still possible through reference to mapping and by inference from the layout of the other buildings.

6.3.59. In order to mitigate the impact during construction on the grade II listed yard wall at Hungerley Hall Farmhouse, a Level 3 Historic Building Recording (HBR) will be carried out. This will form a written, photographic and drawn record of the wall prior to construction. The details of this will be laid out in the outline heritage mitigation strategy as part of the EMP. Requirement 10 of the draft DCO (**TR010066/APP/3.1**) states no construction activity is to commence in the area of the listed Hungerley Hall Farm wall until for that part of the authorised development a written scheme for historic building recording, reflecting the mitigation measures included in the Register of Environmental Actions and Commitments (REAC) (contained within Appendix A of the First Iteration EMP

(**TR010066/APP/6.5**)), has been submitted to and approved in writing by the Secretary of State following consultation with the relevant planning authority. The written scheme of investigation would stipulate the accession of the Scheme reports to the public domain as well as the archiving arrangements.

6.3.60. The NPS NN, paragraph 5.215 states *"Where there is a high probability that a development site may include as yet undiscovered heritage assets with archaeological interest, the Secretary of State should consider requirements to ensure that appropriate procedures are in place for the identification and treatment of such assets discovered during construction."* The Scheme area has a very low archaeological potential. Protocols for the discovery of unexpected archaeological remains have been included in the First Iteration EMP (**TR010066/APP/6.5**). Any potential effects on further unexpected archaeological remains will be mitigated through the Unexpected Archaeological Finds Protocol First Iteration EMP (**TR010066/APP/6.5**) (Appendix B.6).

6.3.61. During the operation of the Scheme, the significant residual effects are determined by comparing the value/sensitivity of the heritage asset affected against the magnitude of impact of the Scheme, including any embedded or committed mitigation, using the matrix approach set out in DMRB LA 104.

6.3.62. There are no significant adverse effects caused to cultural heritage assets during the operation of the Scheme. Potential adverse impacts to the heritage value of cultural heritage assets during the operational phase would be due to changes in their setting as a result of alterations to lighting, noise, vibration, air quality or ecological conditions. There are two (not significant), slight adverse effects:

- An effect as a result of a physical impact was identified at the listed Hungerley Hall Farm. A programme of Historic Building Recording is proposed to mitigate this effect.

- An effect as a result of changes to setting was identified at the listed Hungerley Hall Farm. Landscape planting is proposed to soften this impact.

6.3.63. The operation of the proposed B4082 link road would add to the urbanising effect of the existing A46 within part of the degraded rural setting east of the grade II listed farm complex of Hungerley Hall Farm through increases to traffic noise and new or increased sources of artificial light. The magnitude of this permanent impact is considered to be minor adverse on these high value assets.

6.3.64. The Scheme has the potential to affect the setting of the grade II* Registered Park and Garden of Coombe Abbey (NHLE1000408). The increase in lighting, notable on the roundabouts, would impact the setting of the park and garden. An increase in light would be visible from the footpath on the northern side of the lake as well

as from inside the park to a very small degree. This increase in light would only be visible at night or in winter, mostly as points of light rather than an illuminated area and would affect the experience of the surrounding landscape as rural. This would not significantly alter the contribution that setting makes to the heritage value of the Park, as it does not interact with the key elements/views and all other elements/views remain accessible and legible. The thinning out of trees would slightly increase the permeability of the boundary woodland in this location, as described previously. This may result in greater penetration of lights from carriageway lighting and vehicle lights into the woodland, particularly in winter. The proposed carriageway would also be closer, resulting in marginally more vehicle noise in this part of the Park during operation. This change would be limited to a small area of the Park, and would not influence any key aspects of the setting. The magnitude of this permanent impact is considered to be negligible adverse on this high value asset.

Landscape and visual impact

6.3.65. ES Chapter 7 (Landscape and Visual Effects) (**TR010066/APP/6.1**) presents the information to enable the identification and assessment of likely significant effects on landscape character and visual receptors.

6.3.66. NPS NN paragraph 5.161 states*: "[...] 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. [...]."*

6.3.67. The Landscape and Visual Impact Assessment (LVIA) considers likely significant landscape and visual effects within Section 7.11 of ES Chapter 7 (Landscape and Visual Effects) (**TR010066/APP/6.1**).

6.3.68. Coventry City Council have no published landscape character assessments relating to the study area.

6.3.69. ES Chapter 7 (Landscape and Visual Effects) (**TR010066/APP/6.1**) was produced in accordance with Warwickshire County Council and Rugby Borough Council: Landscape Assessment of the Borough of Rugby Sensitivity and Condition Study (Warwickshire County Council and Rugby Borough Council, 2006. The aim of the study was to examine the landscape around Rugby in terms of sensitivity, and condition undertaking a broad-based landscape character assessment of Rugby.

6.3.70. Following a site visit and a review of published landscape character information,

both national and local, it has been determined that the study area consists of four distinctive local landscape character areas. For the purposes of this assessment these four areas have been defined as Project Landscape Character Areas (PLCA) (paragraphs 7.8.6 to 7.8.16 of ES Chapter 7 (Landscape and Visual Effects) (**TR010066/APP/6.1**)).

6.3.71. NPS NN paragraph 5.162 states: "*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 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. […].*"

6.3.72. Section 7.11 of ES Chapter 7 (Landscape and Visual Effects) (**TR010066/APP/6.1**) considers likely significant visual effects during both construction and operation, as required in DMRB LA 107.

6.3.73. The assessment of landscape and visual effects includes consideration of both day and night-time conditions. However, as agreed in the Scoping Opinion (**TR010066/APP/6.9**) given the urban-edge location of the Scheme; the limited number of sensitive visual receptor locations with open views and the presence of existing night-time traffic movements on the existing A46, significant visual change is unlikely to occur due to night-time visibility and a night-time site visit and viewpoint assessment is not considered necessary as part of the LVIA for this Scheme. Therefore, the assessment of night-time viewpoints has been scoped out of further assessment (ID 3.3.2 in Appendix 4.1 (Scoping Opinion Response) (**TR010066/APP/6.3**)).

6.3.74. Effects relating to noise are included within ES Chapter 11 (Noise and Vibration) (**TR010066/APP/6.1**). Effects relating to nature conservation are included within ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**). Effects on human health is included within ES Chapter 12 (Population and Human Health) (**TR010066/APP/6.1**)

6.3.75. NPS NN paragraph 5.164 describes: *"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 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."* Whilst paragraph 5.165 states: *"Projects need to be designed carefully, taking account of the potential*

impact on the landscape. […]", and *"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 bridges), 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*." (Paragraph 5.166).

6.3.76. Mitigation is described in Section 7.10 of ES Chapter 7 (Landscape and Visual Effects) (**TR010066/APP/6.1**) and included in the First Iteration EMP (**TR010066/APP/6.5**). To avoid, reduce or remediate (offset) potential effects on the landscape, embedded mitigation measures and essential mitigation measures for this aspect have been developed as presented within Section 7.10 of ES Chapter 7 (Landscape and Visual Effects) (**TR010066/APP/6.1**). These are shown on ES Figure 2.4 Environmental Masterplan (**TR010066/APP/6.2**).

6.3.77. Related design considerations are also presented in ES Chapter 2 (The Scheme) (**TR010066/APP/6.1**) and the Scheme Design Report (**TR010066/APP/7.4**).

6.3.78. Paragraph 5.168 states: *"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."*

6.3.79. An Outline Landscape and Ecological Management Plan (OLEMP) is included in the First Iteration EMP (**TR010066/APP/6.5**). The OLEMP has been prepared to help ensure the protection and management of landscape and ecological features, such as vegetation and habitats, during construction of the Scheme and the successful establishment of landscape and ecological mitigation including planting and seeding associated with the Scheme. The OLEMP would be updated to a Landscape and Ecological Management Plan (LEMP) by the Principal Contractor and included within the Second Iteration EMP, as appropriate and necessary, prior to commencement of works in accordance with Requirement 4 of the draft DCO (**TR010066/APP/3.1**).

6.3.80. Paragraph 5.169 describes: *"Landscape effects of the project depend on the existing character of the local landscape, its capacity to accommodate change and nature of the effect likely to occur. All of these factors need to be considered in judging the impact of a project on landscape. Projects need to have regard to siting, orientation, height operational and other relevant constraints. The aim should be to avoid or minimise harm to the landscape, where adverse impacts are unavoidable providing reasonable mitigation and opportunities for*

enhancement where possible and appropriate."

6.3.81. The Environmental Masterplan (ES Figure 2.4 (**TR010066/APP/6.2**)) has been designed with due regard to the siting, orientation, height, operational and other constraints.

6.3.82. Paragraph 5.181 states: "*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." And "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 land use in Green Belts." (Paragraph 5.188).* Part of the Scheme and wider study area within Rugby Borough Council is located within the Green Belt as shown on ES Figure 7.1 Landscape Policy Context (**TR010066/APP/6.2**). ES Chapter 7 (Landscape and Visual Effects) (**TR010066/APP/6.1**) includes consideration of effects on visual amenity and openness within the Green Belt both for the immediate effect at Year 1 and Year 15, allowing for planting to mature. Further details on the Scheme's impact on the Green Belt are provided later in this section.

6.3.83. Paragraph 5.195 states: *"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 avoid and mitigate for any direct and indirect effects […]. 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. Opportunities for tree planting and woodland creation should be maximised."*

6.3.84. Embedded mitigation and essential mitigation measures in relation to trees and woodland have been developed as presented within Section 7.10 of ES Chapter 7 (Landscape and Visual Effects) (**TR010066/APP/6.1**) and are shown on ES Figure 2.4 (Environmental Masterplan) (**TR010066/APP/6.2**). Further details of impacts on trees and woodlands are presented in the ES Appendix 7.4 (Arboricultural Impact Assessment) (**TR010066/APP/6.3**).

6.3.85. The majority of the Scheme and its immediate setting is located within Protected Landscape Character Area 1 (PLCA) and, as such, would be affected to the greatest degree, resulting in large adverse (significant) effects on landscape character during construction. Construction stage effects of the Scheme primarily result from the removal of existing vegetation, earthworks, and the introduction of

new features into the landscape, most notably the new grade separated junction and overbridge. As well as effects on landscape character due to the temporary presence of construction activities.

6.3.86. Aside from the existing A46, this is a relatively calm landscape, and the presence of construction activities and introduction of noticeably incongruous features (new grade separated junction and overbridge) into the landscape would adversely affect the peri-urban character of PLCA 1.

6.3.87. A detailed assessment of construction stage effects on representative viewpoints is set out in Appendix 7.3 (Representative Viewpoints) (**TR010066/APP/6.3**). The most significant construction phase visual effects on representative viewpoints would be associated with locations in closest proximity to the Scheme and construction works, particularly residential receptors and users of local footpaths. Large adverse (significant) visual effects would occur at representative viewpoints 1 and 13 and Moderate adverse (significant) visual effects at representative viewpoints 2, 6 and 7.

6.3.88. Significant adverse effects would be experienced by residents in close proximity to the Scheme living along Farber Road, Barrow Close, Dorchester Way (southern end) and at Hungerley Hall Farm refer to Appendix 7.3 (Representative Viewpoints), (**TR010066/APP/6.3**) representative viewpoints 1, 6, and 13 and Figures 7.4.1, 7.4.6 and 7.4.13). This would be due to the loss of screening vegetation, opening up of short to medium range views of construction activities and the installation of the retaining walls, new graded separated junction, over bridge and associated embankments.

6.3.89. Significant adverse effects would be experienced by users of PRoW in close proximity to the Scheme in particular users of the PRoW no. R75X at Walsgrave Hill (Figure 7.4.1 Viewpoint 1, and Figure 7.4.2 Viewpoint 2 (**TR010066/APP/6.1**). This would be due to the proximity to the A46, clear views of the Scheme, as such the proximity of construction activity along the road corridor.

6.3.90. Local footpaths associated with Sowe Valley and Dorchester Way (Refer to representative viewpoints 4, 6 and 7, Appendix 7.3 (Representative Viewpoints), (**TR010066/APP/6.3**) and Figures 7.4.4, 7.4.6 or 7.4.7) dependent on aspect, location, and proximity, in relation to the Scheme would experience adverse effects of varying degrees from Slight adverse (not significant) to Moderate adverse (significant).

6.3.91. Effects on landscape character in Year 1 of operation of the Scheme and its immediate setting (PLCA 1), would be affected to the greatest degree and this would be Moderate adverse (significant). This is largely due to the clearance of hedgerows, trees, and woodland belt cover and in addition to the presence of new

earthworks and related infrastructure. Associated with the grade separated junction and overbridge, B4082 link road and retaining walls near Hungerley Hall Farm. Prior to the establishment of mitigation planting, these changes and key feature loss would be most evident at Year 1, altering the constitution of the landscape character.

6.3.92. A detailed assessment of operational stage effects on representative viewpoints is set out in Appendix 7.3 (Representative Viewpoints) (**TR010066/APP/6.3**).

6.3.93. Due to proximity to the Scheme, representative viewpoints 1 and 13, during Year 1 of operation would be affected to the greatest degree and would be large adverse (significant). Proposed mitigation planting along the A46 verges, lost during construction would not have matured. As such, new traffic movements would be visible where sections of woodland planting, hedgerows and isolated trees had not yet matured. Despite improvements in the view compared to the baseline, embankments, and highway infrastructure elements (lighting, gantries, or signage) associated with the grade separated junction and B4082 extension would be prominent man-made features within the view.

6.3.94. Representative viewpoint 13 (Hungerley Hall Farm) at year 15 of operation the Scheme would experience a Minor adverse magnitude of change and a Moderate adverse (significant) visual effect. After 15 years mitigation planting would be maturing and achieving a level of screening. Reinstated woodland belts along the embankments would substantially screen the B4082 link road and A46 traffic movements at the location of the former Walsgrave roundabout. However, residual filtered visibility associated highway infrastructure elements (lighting, gantries, or signage) will still be possible due to their height. At this stage there would be some degree of seasonal variation between winter and summer views. In winter there would be a greater likelihood of visibility of elements of the Scheme through gaps within the continuity of the woodland belt. Glimpses of large or high-sided vehicle movements may persist during winter months whilst being fully screened in summer.

6.3.95. At year 1 of operation, significant adverse effects (large adverse) would be experienced most by residents in close proximity to the Scheme living along Farber Road, Barrow Close, and at Hungerley Hall Farm (representative viewpoints 1 and 13). Mitigation planting would not have matured up the grade separated junction embankments or along the realigned A46 verges. As such new traffic movements and highway infrastructure elements (lighting, gantries, or signage) would be prominent man-made features within the view, where mitigation planting had not yet matured.

6.3.96. Effects would have reduced for all residential receptors by Year 15 to Slight beneficial (not significant) except for residents at Hungerley Hall Farm. At

Hungerley Hall Farm, after 15 years new planting would be maturing and achieving a level of screening. However, residual filtered visibility of large or high-sided vehicles and associated highway infrastructure elements (lighting, gantries, or signage) will still be possible due to their height. In addition to some degree of seasonal variation between winter and summer views at this stage, resulting in a Moderate adverse significance of visual effect.

6.3.97. Significant adverse effects would be experienced by users of PRoW in close proximity to the Scheme in particular users of the PRoW no. R75X at Walsgrave Hill, as demonstrated by representative viewpoint 1 (large adverse). This would be due to the proximity of the PRoW to the A46 and clear views of the Scheme as the mitigation planting along the grade separated junction and overbridge would not have matured. The Scheme would be a noticeable man-made feature within the distant view. This level of effect reduces in year 15 to Slight beneficial as mitigation planting in relation to the grade separated junction would screen the associated roundabouts and traffic movements; with residual filtered visibility associated with highway infrastructure in this direction.

6.3.98. Overall, by year 15 of the Scheme operation, vegetation would have matured so that the Scheme is screened from the surrounding landscape and effects would not be significant, and there would be a minor beneficial impact. This includes minor beneficial impacts on the landscape character area PLCA 1 - Walsgrave Hill and Valley including Hungerley Hall Farm, and on recreational users of public path to Coombe Abbey Country Park/ PRoW R75x and residential receptors at Farber Road/ Barrow Close, Walsgrave

Biodiversity

6.3.99. ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**) presents the information to enable the identification and assessment of likely significant effects on biodiversity.

6.3.100. Paragraph 4.23 of the NPS NN states: *"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 provide net gains for biodiversity, applicants should also identify and deliver appropriate opportunities for nature recovery and wider environmental enhancements".*

6.3.101. Paragraph 4.24 states: "*Applicants are encouraged to use the latest version of biodiversity metric (as advised by Defra) to calculate their biodiversity baseline and inform their biodiversity net gain outcomes and should present this data as part of their application."* The latest version of Defra's Statutory Biodiversity

Metric has been used to inform the assessment within ES Appendix 8.1 (Biodiversity Net Gain Report) (**TR010066/APP/6.3**).

6.3.102. Paragraph 4.25 states: *"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 reference point for those delivery biodiversity net gain off-site) and other relevant national and local plans and strategies, such as green infrastructure strategies, used to inform biodiversity net gain delivery."* The current BNG calculations show that the Scheme can achieve the Applicant's targeted BNG within the Order Limits. ES Appendix 8.1 (Biodiversity Net Gain Report) (**TR010066/APP/6.3**) details the BNG assessment undertaken for the Scheme. At the time of writing the ES the Local Nature Recovery Strategies for Warwickshire and the West Midlands have not been published.

6.3.103. NPS NN paragraph 4.16 states: *"The Environment Act 2021 contains provisions for a mandatory biodiversity net gain statement for NSIPs. A government Biodiversity Net Gain Statement will set out the concept and policy requirements for biodiversity net gain for Nationally Significant Infrastructure Projects (NSIPs). When these provisions are commenced, the Secretary of State will need to be satisfied that the biodiversity net gain objective in any relevant Biodiversity Net Gain Statement has been met."*

6.3.104. As a NSIP submitting a DCO application in late 2024 the Scheme is not subject to mandatory BNG under the Environment Act 2021. ES Appendix 8.1 (Biodiversity Net Gain Report) (**TR010066/APP/6.3**) details the BNG assessment undertaken for the Scheme with targets set by the Applicant. Scheme mitigation has been designed in accordance with the mitigation hierarchy. Section 8.10 of ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**) details mitigation for ecological features.

6.3.105. Paragraph 5.44 states: *"Government policy and priorities for the natural environment are set out in the government's Environmental Improvement Plan, which is the first regular revision of the 25 Year Environment Plan, as required by the Environment Act 2021. The Act introduced the requirement for government to set legally binding long-term environmental targets, and introduced an enhanced biodiversity duty for public authorities, biodiversity net gain and local nature recovery strategies. Local nature recovery strategies will drive the creation of a Nature Recovery Network and will help to deliver the government's Environmental Improvement Plan, to expand, improve and connect wildlife-rich*

places." As stated above, ES Appendix 8.1 (Biodiversity Net Gain Report) (**TR010066/APP/6.3**) details the BNG assessment undertaken for the Scheme.

6.3.106. Paragraph 5.47 states: *"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."* Mitigation for ecological features, including avoidance and enhancement measures, are detailed within section 8.10 of ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**).

6.3.107. Paragraph 5.48 states: *"To avoid direct and indirect harm or disturbance in line with the mitigation hierarchy the applicant should demonstrate:*

- *developments are designed to avoid the risk of harm, for example by minimising the footprint of the development and/or retaining 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 and habitats follow 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 breeding season for wild birds and lifecycles for migratory fish."*

6.3.108. The assessment in ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**) includes a review of the existing biodiversity baseline conditions (section 8.8) which has defined the constraints of the Scheme design. The assessment also includes the potential impacts of the Scheme (section 8.9) and the identification of proportionate mitigation (section 8.10) to mitigate against any likely significant adverse effects on ecological features resulting from the Scheme.

6.3.109. The Environmental Masterplan (Figure 2.4 (**TR010066/APP/6.2**)) has been developed with ecologists to connect new habitat creation with existing habitats, such a Coombe Pool SSSI. Fragmentation has been identified for the construction and operation phases and reported in section 8.9 (Potential impacts) of ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**). Mitigation for fragmentation has been identified in section 8.10 (Design, mitigation and

enhancement measures) which includes the provision of a badger crossing. Habitat connectivity along the Scheme will be achieved through the creation of native hedgerows and tree lines along the verges created as a vegetative screen and to maintain the local landscape character of the area.

6.3.110. The Order Limits have been kept to a minimum by requiring only land that is necessary for delivering the Scheme elements and to provide safe working areas. Temporary land has been kept to a minimum by using the existing Brinklow Road compound, and only providing a smaller satellite compound within the Order Limits. Furthermore, separate haul roads are not proposed with the contractor using the permanent corridors for works access. Refer to ES Figure 2.5 (Temporary Works) (**TR010066/APP/6.2**).

6.3.111. Paragraph 5.49 states: *"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 the proposed development, including identifying where and how these will be secured in the long term."*

6.3.112. Mitigation for the Scheme is in accordance with the mitigation hierarchy and is detailed within section 8.10 of ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**). Mitigation is also included in the REAC in Appendix A of the First Iteration EMP (**TR010066/APP/6.5**). The First Iteration EMP will be developed into the Second Iteration EMP for implementation during construction and is secured by Requirement 4 of the draft DCO (**TR010066/APP/3.1**). Mitigation includes best practice to reduce noise and vibration effects on protected species and habitats.

6.3.113. Paragraph 5.50 states: "*If avoidance or bespoke mitigation measures are insufficient or not possible, as a last resort, appropriate compensation measures should be sought and implemented."* As stated above, mitigation for the Scheme is in accordance with the mitigation hierarchy and is detailed within section 8.10 of ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**). Compensation measures are not anticipated for the Scheme.

6.3.114. Paragraph 5.51 states: *"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 due regard to any relevant local nature recovery strategies and species conservation strategies. Opportunities will be taken to enhance, expand or connect 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 and improving habitat connectivity is important for climate resilience and the biodiversity of ecological networks."*

6.3.115. The Environmental Masterplan (Figure 2.4 (**TR010066/APP/6.2**)) has been developed to connect new habitat creation with existing habitats. Mitigation for the Scheme is in accordance with the mitigation hierarchy and is detailed within section 8.10 of ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**), which also details habitat creation and enhancement measures, including the provision of a badger crossing under the B4082. Further information about habitat creation is provided ES Chapter 7 (Landscape and Visual Effects) (**TR010066/APP/6.1**)).

6.3.116. The Scheme design seeks to maximise biodiversity delivery. The Environmental Masterplan (ES Figure 2.4 (**TR010066/APP/6.2**) has been designed to be appropriate to those habitats lost whilst also providing more ecologically valuable habitat in some cases (for example in place of cereal crops) and will be composed primarily of native species and species recognised of being of higher benefit to pollinators and birds with regards to food sources.

6.3.117. Habitat creation will take place along the verges of the Scheme and would include species-rich grassland, woodland, scrub, native hedgerows with trees, wet grassland and tree planting. An area within the Order Limits to the north-east of the existing junction will be used for mitigation woodland planting to mitigate for loss of woodland due to the Scheme.

6.3.118. ES Appendix 8.1 (Biodiversity Net Gain Report) (**TR010066/APP/6.3**) details the BNG assessment undertaken for the Scheme. Effects from climate change are discussed in paragraph 8.8.119 of ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**).

6.3.119. Paragraph 5.52 states: *"Wider ecosystem services and benefits of natural capital should also be considered when designing enhancement measures in order to maximise multi-functional 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."*

6.3.120. Paragraph 5.53 states: "*The Secretary of State should consider the ten goals of the government's Environmental Improvement Plan, the United Nations Environmental Programme Convention on Biological Diversity of 1992 and any relevant measures and targets, such as the Environment Act 2021 targets. In doing so, the Secretary of State should also take account of the context of the challenge of climate change: failure to address this challenge will result in significant adverse impacts to biodiversity. The benefits of nationally significant low carbon transport infrastructure development may include benefits for biodiversity and geological conservation interests and these benefits may outweigh harm to these interests. However, the mitigation hierarchy will still need*

to be applied."

6.3.121. Mitigation for the Scheme is in accordance with the mitigation hierarchy and is detailed within section 8.10 of ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**), which also details enhancement measures. Multi-functional measures include the provision of permanently wet drainage ponds which could create more diverse habitats than the existing arable land within the Hungerley Hall Farm Ecosite, as discussed in section 8.10 of ES Chapter 8. The habitat creation would include SuDS, woodland, marsh and wet grassland, species-rich grassland, amenity grass, shrubs, ground cover and scrub in addition to planting of 612 individual trees.

6.3.122. Paragraph 5.54 states: "*The Secretary of State should consider what appropriate requirements should be attached to any consent and/or in any planning obligations entered into, to ensure that any necessary mitigation and compensatory measures are secured, delivered, managed and if necessary enforced, and that biodiversity improvements are registered in accordance with biodiversity net gain requirements."* ES Appendix 8.13 and 8.14 detail a Draft Badger Mitigation Licence and Natural England Letter of No Impediment respectively (**TR010066/APP/6.3**). ES Appendix 8.1 (Biodiversity Net Gain Report) (**TR010066/APP/6.3**) details the BNG assessment undertaken for the Scheme. The Scheme provides a Biodiversity Net Gain and these documents detail how this is achieved.

6.3.123. Paragraph 5.55 states: *"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 [within the NPS NN]). 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."* Mitigation required for ecological features is detailed within section 8.10 of ES Chapter and is in accordance with the mitigation hierarchy (CIEEM, 2022). Section 8.13 of ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**) details residual effects. Compensation measures are not anticipated for the Scheme. The Scheme is anticipated to result in a residual significant effect following mitigation upon Coombe Pool SSSI during construction, due to construction noise impacts as detailed within ES Appendix 8.16 (Assessment of Noise Impacts on Ecological Features) (**TR010066/APP/6.3**).

6.3.124. Paragraph 5.56 states: *"In taking decisions, the Secretary of State should ensure that appropriate weight is attached to: designated sites of international, national,*

and local importance; irreplaceable habitats; protected species and habitats; other species of principal importance for the conservation of biodiversity; biodiversity and geological interests within the wider environment and to areas prioritised for nature's recovery in the relevant local nature recovery strategies." ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**) fully assesses the impacts of the Scheme upon designated sites of international, national and local important, irreplaceable habitats, protected species and habitats and other species and habitats of principal importance for the conservation of biodiversity. As discussed, at the time of writing the ES, the Local Nature Recovery Strategies for Warwickshire and the West Midlands have not been published.

6.3.125. Paragraph 5.57: "*The Secretary of State will need to take account of the advice provided to the applicant by Natural England and/or the Marine Management Organisation and/or the Environment Agency, as regards any necessary mitigation measures and whether these organisations have granted or refused, or intend to grant or refuse, any relevant licences or permit, including protected species mitigation licences. In advance of the formal submission, applicants are encouraged to use Natural England's Letter of No Impediment Approach and engage with Natural England [GOV.UK, 2024]."* Details of consultation with Natural England and Environment Agency are provided in section 8.4 of ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**). ES Appendix 8.13 and 8.14 detail a Draft Badger Mitigation Licence and Natural England Letter of No Impediment respectively (**TR010066/APP/6.3**).

6.3.126. Paragraph 5.58 states: *"The most important sites for biodiversity in the UK are afforded special protection by the Habitats Regulations. These sites are designated as Special Areas of Conservation and Special Protection Areas and are collectively known as habitat sites. The following should be given the same protection as sites legally protected by the Habitats Regulations: potential Special Protection Areas and possible Special Areas of Conservation, listed or proposed Wetlands of International Importance (Ramsar sites), and sites identified, or required, as compensatory measures for adverse effects on habitat sites."* ES Appendix 8.12 (Habitats Regulations Assessment Screening Report) (**TR010066/APP/6.3**) details a Habitats Regulations screening assessment undertaken for the Scheme.

6.3.127. Paragraph 5.59 states: *"The Habitats Regulations set out a specific process (see paragraphs 4.14 to 4.18) to assess the likely implications for these sites from a proposed plan or project. To maintain the overall cohesion of the National Site Network, such plans or projects may only proceed if the assessment concludes they will not adversely affect the integrity of the site or, in the case of a negative assessment, if there are no alternative solutions, and they must*

proceed for imperative reasons of overriding public interest with the necessary compensatory measures secured." ES Appendix 8.12 (Habitats Regulations Assessment Screening Report) (**TR010066/APP/6.3**) details a Habitats Regulations screening assessment undertaken for the Scheme.

6.3.128. Paragraphs 5.60 states: "*Many Sites of Special Scientific Interest are also designated as habitats sites and are protected accordingly. Those that are not, or those features of Sites of Special Scientific Interest not covered by an international designation, are given a high degree of protection by the Wildlife and Countryside Act 1981. Most of the land that has been declared by Natural England as National Nature Reserves is also notified as Sites of Special Scientific Interest."* ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**) fully assesses impacts of the Scheme upon SSSIs.

6.3.129. Paragraph 5.61 states *"Where a proposed development on land within or outside of a Site of Special Scientific Interest is likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) development consent should not normally be consented. An exception should only be made where the benefits of the development 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."* Section 8.11 of ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**) details the assessment of Scheme impacts on ecological features. The Scheme is anticipated to result in a residual significant effect following mitigation upon Coombe Pool SSSI during construction, due to construction noise impacts as detailed within ES Appendix 8.16 (Assessment of Noise Impacts on Ecological Features) (**TR010066/APP/6.3**). No residual significant effects are anticipated during operation.

6.3.130. Paragraph 5.62 states: *"Ancient woodland and ancient and veteran trees are irreplaceable habitats. England's ancient woodlands and ancient and veteran trees support high levels of biodiversity. They are home to a quarter of England's priority species for conservation and once lost they cannot be recreated. They also deliver many ecosystem services including clean water and healthy soils, carbon storage, support for people's wellbeing and their long-standing cultural values. The Keepers of Time published in 2022 updates the government's policy to recognise the value of England's ancient and native woodlands and ancient and veteran trees. It restates the government's commitment to evaluate the threats facing these habitats and sets out updated principles and objectives to protect and improve these habitats for future generations."*

6.3.131. Paragraph 5.63 states: "*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 ancient and veteran trees unless there are wholly exceptional reasons (for example, where the public benefit would clearly outweigh the loss or deterioration of habitat) and a suitable compensation strategy exists."

6.3.132. ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**) fully assesses impacts of the Scheme upon irreplaceable habitats including ancient woodland and veteran trees. Table 8-21 details significant residual effects, which shows no likely significant effects on ancient woodland and veteran trees.

6.3.133. NPS NN paragraph 5.64 states: "*Marine Conservation Zones, introduced under the Marine and Coastal Access Act 2009, have been designated for the purpose of conserving marine flora or fauna, marine habitats or types of marine habitat or features of geological or geomorphological interest. Marine Conservation Zones form part of the Marine Protected Areas network together with Special Areas of Conservation and Special Protection Areas. The protected feature or features and the conservation objective for the Marine Conservation Zones are stated in the designation order for the Marine Conservation Zones, which provides statutory protection for these areas. Measures to restrict damaging activities are being implemented by the Marine Management Organisation and other relevant organisations. As a public authority, the Secretary of State is bound by the duties in relation to Marine Conservation Zones imposed by sections 125 and 126 of the Marine and Coastal Access Act 2009."* Section 8.8 of ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**) details the ecological baseline for the Scheme. The Scheme will not affect any Marine Conservation Zones.

6.3.134. Paragraph 5.65 states: "*Sites of regional and local biodiversity and geographical interest, which includes Local Geological Sites, Local Nature Reserves and Local Wildlife Sites and Nature Improvement Areas, are areas of substantive nature conservation value and make an important contribution to ecological networks and nature's recovery. They can also provide wider benefits including contributing to the quality of life and well-being of the community, and in supporting research and education. The Secretary of State should give due consideration to any such harm to the detriment of biodiversity and geological features of regional or local importance which s/he considers may result from a proposed development. However, given the need for new infrastructure, these designations should not be used in themselves to refuse development consent, nevertheless the mitigation hierarchy applies to these sites."* ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**) fully assesses impacts of the Scheme upon regional and local designated sites. Section 8.8 of ES Chapter 8 details the ecological baseline for the Scheme. Table 8-21 details significant residual effects, which shows no likely significant effects regional and local designated sites.

6.3.135. Paragraph 5.66 states: *"Development proposals provide many opportunities for incorporating beneficial biodiversity or geological features as part of good design. Nature contributes to the quality of a place, to people's quality of life, the attractiveness of active travel routes and movements, and it is a critical component of well-designed development. Road and rail projects can also play a part in meeting government tree planting and nature recovery targets through partnership working with adjoining landowners, delivering biodiversity, carbon offsetting and social benefits."*ES Figure 2.4 Environmental Masterplan (**TR010066/APP/6.2**) details habitat creation as part of the Scheme, and further detail is provided in ES Chapter 7 (Landscape and Visual Effects) (**TR010066/APP/6.3**). Ecological enhancements are included in section 8.10 of ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**).

6.3.136. NPS NN paragraph 5.67 states: "*Consideration should be given to the impacts on, and improvements to, habitats and species in, around and beyond developments, for wider ecosystem services and natural capital benefits, relevant to the local area and communities. The value of linear infrastructure and its footprint in supporting biodiversity and connecting habitats ecosystems should also be taken into account. Local nature recovery strategies will identify opportunities to create or enhance habitat likely to have greatest benefit to biodiversity and wider environmental improvement. Consideration should also be given to national priorities and targets, such as reduced flood risk, improved air or water quality, and increased access to natural greenspace, or tree planting, woodland creation and protecting long established woodlands."* ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**) fully assesses the impacts of the Scheme on ecological features. Potential impacts prior to mitigation are detailed in section 8.9.

6.3.137. Paragraph 5.68 states: *"When considering proposals, the Secretary of State should consider whether the applicant has maximised such opportunities and enhancement of wider biodiversity, in and around developments. The Secretary of State may use requirements or planning obligations where appropriate in order to ensure that such beneficial features are delivered, and ongoing management and maintenance secured."* Mitigation for the Scheme is in accordance with the mitigation hierarchy and is detailed within section 8.10 of ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**), which also details enhancement measures.

6.3.138. Paragraph 5.69 states: *"Many individual wildlife species receive statutory protection under a range of legislative provisions. Some 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. As a public authority, the Secretary of State is bound by the duty in section 40 of*

the Natural Environment and Rural Communities Act 2006 (as amended by section 102 of the Environment Act 2021) to periodically consider what action an authority can take, consistent with the exercise of its functions, to further the conservation and enhancement of biodiversity. In doing so, the Secretary of State may consider the impact on species and habitats listed under Section 41 of the Act. The Secretary of State should ensure that applicants have taken measures to ensure these species and habitats are protected from the adverse effects of the development by using requirements, planning obligations, or licence conditions. The Secretary of State should refuse consent where harm to habitats or species and their habitats would result, unless the benefits of the development (including need) clearly outweigh that harm." ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**) fully assesses impacts of the Scheme upon habitats and species of principal importance. The ecological baseline for the Scheme is presented in section 8.8 of ES Chapter 8 (Biodiversity). Table 8-21 details significant residual effects, which shows no likely significant effects regional and local designated sites. The Scheme is anticipated to result in a residual significant effect following mitigation upon Coombe Pool SSSI during construction, due to construction noise impacts as detailed within ES Appendix 8.16 (Assessment of Noise Impacts on Ecological Features) (**TR010066/APP/6.3**). No residual significant effects are anticipated during operation.

6.3.139. ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**) describes that the Scheme is anticipated to result in a residual significant effect upon Coombe Pool SSSI during construction, which includes a moderate adverse effect on breeding waterbirds, including grey heron, and a large adverse effect on wintering waterbirds including shoveler. This is due to construction noise impacts detailed within ES Appendix 8.16 (Assessment of Noise Impacts on Ecological Features) (**TR010066/APP/6.3**)

6.3.140. This assessment does not consider any mitigation and thus presents the worst-case in the event that mitigation is not practicable. To reduce noise levels, it is proposed that one option is to install a 2m high noise barrier along the boundary of the SSSI (at the bottom of the embankment) for the duration of construction works that lead to significant noise effects. The two panels are displayed within ES Figure 8.3 (Proposed Construction Mitigation Noise Barrier – December 2026) (**TR010066/APP/6.2**). Daytime show graphically the difference in absolute noise levels between existing conditions and the day with the highest noise levels within that month. The top panel of ES Figure 8.3 shows the noise change without additional mitigation and the bottom panel indicates the likely reduction in noise levels from the proposed 2m noise barrier, which is aligned along the existing post and rail fence line on the SSSI boundary. As shown on the Figure, the noise

barrier proposed would reduce the area of the SSSI and specifically the pool which would experience changes in noise >5.0dB. However, much of the pool would still experience noticeable noise change >3dB. Therefore, further mitigation measures, which may include programming of works to avoid sensitive periods and/or use of quieter machinery, would be developed at detailed design where practicable to further reduce the noise levels impacting the SSSI during construction. These mitigation measures will be detailed in the Second Iteration EMP, discussed with Natural England and secured in the DCO. For the purposes of this assessment the worst case has been presented.

6.3.141. No residual significant effects are anticipated during operation. Monitoring during both construction and operation will aim to record changes in the ecological baseline, determine whether the mitigation/compensation measures are successful, and inform whether remedial actions are required. The Scheme monitoring requirements are detailed within the First Iteration EMP (**TR010066/APP/6.5**). In accordance with Requirement 4 of the draft DCO (**TR010066/APP/3.1**) a Second Iteration EMP will secure the monitoring requirements and procedures, to reduce or eliminate impacts on the environment prior to construction commencing.

6.3.142. An Ecological Clerk of Works would be employed during the construction phase where relevant to monitor implementation and effectiveness of mitigation measures during construction detailed within the First Iteration EMP (**TR010066/APP/6.5**).

6.3.143. Overall, as the adverse effects on the SSSI are only during the construction phase and mitigation and management will be put in place to reduce or eliminate impacts. The benefits of the Scheme as outlined in this Case for the Scheme and summarised in Section 6.6, are seen by the Applicant to outweigh harm caused by the Scheme on the SSSI. The 'critical need' to improve the SRN to deliver a national network that meets the country's long-term needs and supports a prosperous and competitive economy, reduced congestion and improvements to Journey time reliability, and benefits to businesses during the operational phase bring substantial weight in favour of the DCO being made.

Land use, including agricultural land

6.3.144. ES Chapter 9 (Geology and Soils) (**TR010066/APP/6.1**) presents the information to enable the identification and assessment of likely significant effects on geology and soils.

6.3.145. NPS NN paragraph 5.46 states: *"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."

6.3.146. Paragraph 5.47 states: *"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…"* There are no geological conservation sites within the geology and soils study area for the Scheme. Internationally, nationally and locally designated sites dependent on soils for their ecological designations have been scoped out of the assessment in ES Chapter 9 (Geology and Soils) (**TR010066/APP/6.1**), as none have been identified within the geology and soils study area. Ecological conservation sites are discussed in ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**).

6.3.147. Paragraph 5.154 states: *"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."*

6.3.148. Paragraph 5.156 states: *"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 neighbouring land or property. This could be in the form of a land stability or slope stability risk assessment report.*"

6.3.149. ES Chapter 9 (Geology and Soils) (**TR010066/APP/6.1**) uses Environment Agency (2023) Land Contamination Risk Management (LCRM) guidance to assess risks posed to human health and the environment.

6.3.150. Paragraph 5.189 states: "*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."

6.3.151. The effects of the Scheme on agricultural land and best and most versatile land (BMV) are reported in ES Chapter 9 (Geology and Soils) (**TR010066/APP/6.1**) and are informed by ES Appendix 9.2 (Soil Resource Plan and Agricultural Land Classification) (**TR010066/APP/6.3**).

6.3.152. Residual effects once mitigation measures are taken into consideration in ES Chapter 9 (Geology and Soils) (**TR010066/APP/6.1**), which have been identified based on ground investigation data and the preceding sections are identified, with the following being significant:

Agricultural soils

Grade 1

Stripping of soil across the scheme footprint required for the permanent works (road, structures, drainage network, environmental bunds etc). Permanent land take of between 1 - 20ha. With a large adverse effect.

Grade 3a

Stripping of soil across the Scheme footprint required for the permanent works (road, structures, drainage network, environmental bunds etc). Permanent land take of over 1 - 20 ha. With a moderate adverse effect.

Grade 3b

Stripping of soil across the scheme footprint required for the permanent works (road, structures, drainage network, environmental bunds etc).

6.3.153. Permanent land take of between 1 – 20 ha, with a moderate adverse effect. The temporary land take areas would be restored to agriculture following the completion of the construction phase. The temporary loss of agricultural land during the construction phase is considered to be of moderate magnitude and large adverse significance for Grade 1 agricultural land and slight adverse significance for Grade 3b agricultural land.

6.3.154. Provided that the mitigation measures are effective, and areas of temporary land take are restored back to their former condition, the long-term residual effects on agricultural soils would be limited to the permanent loss of agricultural land:

- The permanent loss of 3.7 hectares of Grade 1 agricultural land is considered to be of moderate magnitude and large adverse significance.
- The permanent loss of 3.2 hectares of Subgrade 3a agricultural land is considered to be of moderate magnitude and moderate adverse significance.
- The permanent loss of 4.9 hectares of Subgrade 3b agricultural land is considered to be of moderate magnitude and moderate adverse significance.

6.3.155. It is predicted that the Scheme is unlikely to give rise to any significant effects upon geology or soils during the operational phase.

Material assets and waste

6.3.156. ES Chapter 10 (Material Assets and Waste) (**TR010066/APP/6.1**) presents the information to enable the identification and assessment of likely significant effects on materials assets and waste.

6.3.157. NPS NN paragraph 5.71 states: "*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 re-use 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 England and Department for Food and Rural Affairs (DEFRA) Construction Code of Practice for the Sustainable Use of Soils on Construction Sites, which provides practical guidance on how to improve appropriate soil re-use on construction sites and reducing the volume that is sent to landfill.*"

6.3.158. Paragraph 5.74 states *"Large infrastructure projects may generate hazardous and non-hazardous waste during construction and operation. Projects need to comply with the relevant waste regimes. 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 how waste regulations apply to their development, including the Environmental Permitting requirements."

6.3.159. Paragraph 5.75 states: *"Infrastructure projects should look to use Modern Methods of Construction, such as legal and sustainable timber and low carbon concrete and other sustainable design practices, where possible."*

6.3.160. Paragraph 5.76 states: *"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*:

- *'adequate steps have been taken to minimise the volume of waste arising and maximise opportunities for re-use and recycling*
- *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."*

6.3.161. Paragraph 5.77 states: "*Where the project will be subject to the Environmental Permitting regime, waste management arrangements during operations will be covered by the permit and the considerations set out in paragraphs 4.44 to 4.51 will apply."*

6.3.162. NPS NN paragraph 5.78 states*: "Where possible, projects should include the re-use of materials and use of sustainable materials and recycled materials."*

6.3.163. The requirements within paragraphs 5.71 to 5.78 of the NPS NN have been taken into account in ES Chapter 10 (Material Assets and Waste) (**TR010066/APP/6.1**) within the following mitigation measures. These mitigation measures are detailed in full within section 10.10 of ES Chapter 10 and are secured in the First Iteration EMP (**TR010066/APP/6.5**):

- MA1: waste hierarchy implementation
  - The Scheme aims to prioritise waste prevention, followed by preparing for re-use, recycling and recovery and lastly disposal to landfill.
- MA2: designing out waste
  - Designing out waste is one of the key tenets of a circular economy.

The Principal Contractor will implement the principles of designing out waste to reduce it and reduce the total material assets demand of the detailed design.

- MA3: use of secondary or recycled materials
    - The Principal Contractor will prioritise the use of secondary or recycled materials in accordance with the relevant legislation, standards and specification for these works with an aim to reduce the requirement to import materials for construction and reduce the need to remove surplus materials from site.
- MA4: local and responsible sourcing of material assets
    - The principles of local and responsible sourcing of key material assets will be adopted by the Principal Contractor in accordance with their policies on sustainable procurement.
- MA5: soil handling management plan
    - A Soil Handline Management Plan (SHMP) will be developed and form part of the Second Iteration EMP. In addition to ensuring soil sustainability during construction, it will detail how all construction phase material assets be managed and identify opportunities to substitute recycled or secondary materials and products for those using primary materials.
    - The Scheme is known to intersect areas of historical landfill operations. If historical wastes associated with the landfills are encountered during construction, they cannot be retained. They must be removed from the Scheme in a manner that will not cause a detrimental impact to the surrounding environment.
    - Excavation arisings should be managed in accordance with Construction Industry Research and Information Association (CIRIA) publication C809: Sustainable Management of Surplus Soil and Aggregates from Construction (2023) and DEFRAs Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (September 2009) provides practical guidance on how to improve appropriate soil re-use on construction sites and reducing the volume of soils that are sent to landfill.
- MA6: site waste management plan
    - An Outline Site Waste Management Plan (SWMP) has been

produced for the Scheme which forms part of the First Iteration EMP. This will be developed and the SWMP will form part of the Second Iteration EMP. It will identify the types and likely quantities of wastes that may be generated, and set out, in an auditable manner, how waste will be reduced, re-used, managed and disposed in accordance with the waste hierarchy and other legislative requirements.

- MA7: materials management plan
    - A Materials Management Plan (MMP) would be prepared where applicable to provide lines of evidence covering the use of clean site won materials within the Scheme. If required, the MMP would be developed and form part of the Second Iteration EMP, as secured in Schedule 2 of the draft DCO (**TR010066/APP/3.1**).

6.3.164. Significant environmental effects from the use of construction material assets and generation of waste during the opening year are not predicted due to limited material use and waste generation from infrequent maintenance activities.

6.3.165. The potential impacts of the Scheme from the use of material resources were assessed against the baseline information on construction material assets generated by the relevant authorities, based on predicted regional demand projections.

6.3.166. Design, mitigation and enhancement measures will be implemented during construction and controlled through the Second Iteration EMP in accordance with the requirements in the First Iteration EMP (**TR010066/APP/6.5**).

6.3.167. Overall, the recycled content of the materials used are predicted to be in excess of the regional target of 28%. If 'good practice' is achieved during construction, it is anticipated that an overall recycled content of 53% can be reached.

6.3.168. In addition, it has been estimated that the Scheme has the potential to incorporate a recovery rate of 95% for construction demolition waste, which exceeds the Government's recovery target of 70% (DMRB target of 90%).

6.3.169. Operation of the Scheme in its first year (or for a considerably longer period) is not anticipated to result in significant environmental effects due to limited materials use and waste generation from infrequent operation and maintenance activities that might be required on a newly constructed asset. Therefore, the use of material assets and generation of waste during operation is not included in the assessment in the ES Chapter 10 (Material Assets and Waste) (**TR010066/APP/6.1**).

Noise and vibration

6.3.170. ES Chapter 11 (Noise and Vibration) (**TR010066/APP/6.1**) presents the information required to enable the identification and assessment of likely significant effects on noise and vibration.

6.3.171. Paragraph 5.230 of the NPS NN states: "*Where noise impacts are likely to arise from the proposed development, the applicant should include the following in its noise assessment:*

- *a description of the noise sources including the 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*
- *identification of noise sensitive premises and noise sensitive areas that may be affected*
- *the characteristics of the existing noise environment*
- *a prediction on how the noise environment will change with the proposed development*
- *in the shorter term such as during the construction period*
- *in the longer term during the operating life of the infrastructure*
- *at particular times of the day, evening and night (including weekends) as appropriate*
- *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*
- *measures to be employed in mitigating the effects of noise applicants should consider using the best available techniques to reduce noise impacts."*

6.3.172. ES Chapter 11 (Noise and Vibration) (**TR010066/APP/6.1**) presents the noise assessment and is also supported by ES Appendices 11.1 – 11.5 (**TR010066/APP/6.3**):

6.3.173. Paragraph 5.231 states: *"The nature and extent of the noise assessment should be proportionate to the likely noise impact."* The operational assessment

methodology undertaken is described in section 11.5 of ES Chapter 11 (Noise and Vibration) (**TR010066/APP/6.1**) and is considered to be proportionate to the potential impacts of the Scheme.

6.3.174. Paragraph 5.232 states: *"The potential noise impact elsewhere that is directly associated with the development, such as changes in road and rail traffic movements elsewhere on national networks, should be considered as appropriate.*" The potential noise impact assessment has been presented in section 11.9 and 11.11 of ES Chapter 11 (Noise and Vibration) (**TR010066/APP/6.1**).

6.3.175. The NPS NN states in paragraph 5.233: *"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 Calculation of Road Traffic Noise [CRTN]." and "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".* This requirement is addressed in Section 11.5 (Assessment methodology) of ES Chapter 11 (Noise and Vibration) (**TR010066/APP/6.1**) where the assessment methodologies are described.

6.3.176. Paragraph 5.234 states: *"The applicant should consult Natural England with regard to the 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 Applicant has consulted with Natural England during the development of the Scheme as detailed in the Consultation Report (**TR010066/APP/5.1**) and as detailed in ES Chapter 8 (Biodiversity). Noise modelling has informed the ecological assessment. Ecological noise sensitive receptors and an assessment of the impacts is presented in summary in ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**) and in detail in ES Appendix 8.16 (Noise Impacts Upon Ecological Receptors) (**TR010066/APP/6.3**).

6.3.177. Paragraph 5.235 states: *"The Examining Authority and the Secretary of State should consider whether mitigation measures are needed for both operational and construction noise over and above any which may form part of the project application. The Secretary of State may wish to impose requirements to ensure delivery and future maintenance of all mitigation measures."*

6.3.178. Paragraph 5.236 states: *"Mitigation measures for the projects 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 appropriate noise criteria or times of use (for example, in the case of railway station public address systems).”*

6.3.179. Paragraph 5.237 states: *“For most national network projects, the relevant Noise Insulation Regulations will apply. These place a duty on, and provide powers to, the relevant authority to offer noise mitigation through improved sound insulation to dwellings, with associated ventilation to deal with construction and operational noise. An indication of the likely eligibility for such compensation should be included in the assessment. In extreme cases, the applicant may consider it appropriate to provide noise mitigation, through compulsory acquisition of affected properties in order to gain consent for what might otherwise be an unacceptable development. Where mitigation is proposed to be dealt with through compulsory acquisition, such properties would have to be included within the Development Consent Order land in relation to which compulsory acquisition powers are being sought.”*

6.3.180. The First Iteration EMP (**TR010066/APP/6.5**) and Section 11.11 of ES Chapter 11 (Noise and Vibration) (**TR010066/APP/6.1**) details the design of mitigation proposed in relation to the Scheme. The First Iteration EMP (**TR010066/APP/6.5**) will be developed into a Second Iteration EMP for each part for implementation during construction and is secured through Requirement 4 of the draft DCO (**TR010066/APP/3.1**).

6.3.181. Paragraph 5.238 states: “*Applicants should consider opportunities to address the noise issues associated with the Important Areas as identified through the noise action planning process”.* Noise Important Areas (NIA) within the study area have been identified in section 11.9 of ES Chapter 11 (Noise and Vibration) (**TR010066/APP/6.1**) and have been considered in the assessments presented herein.

6.3.182. Paragraph 5.239 states: *“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”.* Consideration has been given to National policy in Section 11.5 (Assessment

methodology), Section 11.9 (Potential impacts), Section 11.10 (Design, mitigation and enhancement measures) and Section 11.11 (Assessment of likely significant effects) of ES Chapter 11 (Noise and Vibration) (**TR010066/APP/6.1**).

6.3.183. Paragraph 5.240 states: *"The project should demonstrate good design through optimisation of scheme layout to minimise noise emissions and, where practicable and sustainable, 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."* The First Iteration EMP (**TR010066/APP/6.5**) and Section 11.9 of ES Chapter 11 (Noise and Vibration) (**TR010066/APP/6.1**) details the design of mitigation proposed in relation to the Scheme.

6.3.184. NPS NN paragraph 5.241 states: *"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 the effective management and control of noise, where possible."*

6.3.185. The assessment reports the significance of effects in section 11.11 of ES Chapter 11 (Noise and Vibration) (**TR010066/APP/6.1**). Mitigation is presented in section 11.10.

6.3.186. Paragraph 5.242 states: "*In determining an application, the Secretary of State 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."* The First Iteration EMP (**TR010066/APP/6.5**) details the noise mitigation proposed in relation to the Scheme. Even with the provision of temporary noise barriers, implementation of best practicable means, construction noise monitoring where required, and the mitigation measures described within section 11.9 of ES Chapter 11 (Noise and Vibration) (**TR010066/APP/6.1**) construction noise may result in significant adverse residual effects at limited locations.

6.3.187. As the diversion routes will be in place during night-time hours and will utilise local roads, the magnitude of impact due to noise from diversion routes is predicted to

be moderate to major according to the DMRB LA111 and the high-level assessments undertaken. The change in road traffic noise during temporary traffic diversions may therefore be expected to constitute a significant effect, albeit a temporary one.

6.3.188. A construction noise assessment has been undertaken, identifying that adverse impacts that are likely to constitute significant effects would occur without mitigation at some of the receptors closest to construction works. Suitable means of minimising the potential for significant adverse have been presented including the provision of temporary acoustic barriers. It is also necessary for the Principal Contractor to carry out further detailed construction noise assessments for overnight or weekend works where these could affect sensitive receptors for 10 or more days or nights in any 15 consecutive days or nights. Where all mitigation is implemented effectively, significant residual construction noise effects will be reduced but may still occur. Furthermore, there are receptors that could experience significant effects due to noise from night-time or weekend works and this will also need further consideration once further detail regarding the scope and duration of these works has been defined.

6.3.189. Based on the assessments detailed in ES Chapter 11 (Noise and Vibration) (**TR010066/APP/6.1**) and where mitigation is implemented in line within section 11.10 of ES Chapter 11 and the First Iteration EMP (**TR010066/APP/6.4**), vibration due to construction activity is not expected to constitute a significant effect at any vibration-sensitive receptor.

6.3.190. ES Chapter 11 (Noise and Vibration) (**TR010066/APP/6.1**) demonstrates that, for a vast majority of noise sensitive receptors within the operational study area, the effects associated with the short-term change in road traffic noise due to the Scheme are not significant.

6.3.191. Noise levels are seen to reduce as a whole which benefits all incomes, with a large benefit in one of the less deprived quintiles, in the short-term assessment. Children are expected to benefit due to reduced noise levels near primary schools.

6.3.192. For receptors located within buildings, all minor adverse and beneficial impacts in the short-term are predicted to have absolute noise levels below the Significant Observable Effect Level (SOAEL) and the long-term impact is predicted to be minor or negligible. As such, short-term minor impacts are not predicted to have significant noise effects.

6.3.193. There are thirteen individual residential receptors where the effects associated with the change in road traffic noise due to the Scheme are initially significant during daytime and/or night-time periods. These are all located off Valencia Road, south of the primary works areas and are indicated to have a moderate beneficial

impact in the short-term.

6.3.194. For receptors at which the effects are initially deemed significant, DMRB LA 111 requires the final operational significance to be determined using the justifications in DMRB LA 111 Table 3.60 (reproduced in ES Appendix 11.2 (Legislation and Policy Framework) (**TR010066/APP/6.3**)). The final operational noise significance at the thirteen identified residential receptors has been determined as not significant. Therefore, in accordance with DMRB LA 111, no significant residual traffic noise effects, adverse or beneficial, are predicted due to the operation of the Scheme.

6.3.195. Vibration due to operational activity is not expected to constitute a significant effect at any vibration-sensitive receptor.

6.3.196. With regards to noise impacts on ecology, ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**) fully assesses impacts of the Scheme upon SSSI in accordance with the Wildlife and Countryside Act 1981. This Chapter describes that the Scheme is anticipated to result in a residual significant adverse effect following mitigation upon Coombe Pool SSSI during construction, which includes a moderate adverse effect on breeding waterbirds, including grey heron, and a large adverse effect on wintering waterbirds including shoveler. This is due to construction noise impacts detailed within ES Appendix 8.16 (Assessment of Noise Impacts on Ecological Features) (**TR010066/APP/6.3**). Natural England have been consulted on these matters.

6.3.197. This assessment does not consider any mitigation and thus presents the worst-case in the event that mitigation is not practicable. To reduce noise levels, it is proposed that one option is to install a 2m high noise barrier along the boundary of the SSSI (at the bottom of the embankment) for the duration of construction works that lead to significant noise effects. The two panels are displayed within ES Figure 8.3 (Proposed Construction Mitigation Noise Barrier – December 2026) (**TR010066/APP/6.2**). Daytime show graphically the difference in absolute noise levels between existing conditions and the day with the highest noise levels within that month. The top panel of ES Figure 8.3 shows the noise change without additional mitigation and the bottom panel indicates the likely reduction in noise levels from the proposed 2m noise barrier, which is aligned along the existing post and rail fence line on the SSSI boundary. As shown on the Figure, the noise barrier proposed would reduce the area of the SSSI and specifically the pool which would experience changes in noise >5.0dB. However, much of the pool would still experience noticeable noise change >3dB. Therefore, further mitigation measures, which may include programming of works to avoid sensitive periods and/or use of quieter machinery, would be developed at detailed design where practicable to further reduce the noise levels impacting the SSSI during construction. These mitigation measures will be detailed in the Second Iteration

EMP, discussed with Natural England and secured in the DCO. For the purposes of this assessment the worst case has been presented.

6.3.198. No residual significant noise and vibration effects are anticipated during operation on ecological receptors.

Population and human health

6.3.199. ES Chapter 12 (Population and Human Heath) (**TR010066/APP/6.1**) presents the information to enable the identification and assessment of likely significant effects on population and human health.

6.3.200. Paragraph 4.57 of the NPS NN states that applicants are expected to: *"give consideration to 'expanding active travel, and creating safe and pleasant walking, wheeling and cycling environments' through the design of the Scheme."*

6.3.201. Paragraph 4.59 further states that: *"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… contributing to improvements in road safety for pedestrians and cyclists".*

6.3.202. Paragraph 4.72 states: *"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".*

6.3.203. The description of the design of the Scheme is presented in ES Chapter 2 (The Scheme) (**TR010066/APP/6.1**). The assessment in ES Chapter 12 (Population and Human Heath) (**TR010066/APP/6.1**) considers the impacts of the Scheme on non-motorised users as presented in section 12.11.

6.3.204. ES Chapter 12 (Population and Human Heath) (**TR010066/APP/6.1**) also reports on how the Scheme would improve an existing pedestrian crossing facility thereby contributing to an improvement in road safety facilitating north to south movement across the B4082.

6.3.205. Paragraph 4.78 states: *"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".* ES Chapter 3 (Assessment of Alternatives) (**TR010066/APP/6.1**) presents the consideration of options that have been considered.

6.3.206. ES Chapter 12 (Population and Human Heath) (**TR010066/APP/6.1**) reports on how the Scheme provides enabling works to facilitate a potential expansion of existing walking and cycling networks to improve connectivity across the A46 by

others in line with the future development of the Walsgrave Hill Farm Housing Allocation H2:3 to the west.

6.3.207. ES Chapter 12 (Population and Human Heath) (**TR010066/APP/6.1**) also reports on how the Scheme would improve an existing pedestrian crossing facility thereby contributing to an improvement in road safety.

6.3.208. Paragraph 5.185 states: *"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, quality and functionality in a suitable and accessible location. Applicants considering proposals which would involve developing such land should have regards to any local authority's assessment of need for such types of land and buildings".*

6.3.209. Paragraph 5.193 states *"….Applicants should endeavour to improve networks green infrastructure and other areas of open space, including appropriate access to new coastal access routes, National Trails and other public rights of way".*

6.3.210. ES Chapter 12 (Population and Human Heath) (**TR010066/APP/6.1**) assesses the impacts on nearby open land (Coombe Abbey Park) as part of the WCH and health assessment as presented in section 12.11.

6.3.211. During construction the Scheme would require the temporary closure of the existing uncontrolled pedestrian crossing facility on the B4082 eastern arm of the Clifford Bridge Road roundabout. During the closure, pedestrians wishing to travel north to south (and vice versa) along the footway on the eastern frontage of Clifford Bridge Road would be required to cross to the footway on the western frontage to complete their journeys. The Scheme would have a negligible impact on users as the diversion route would be approximately 20m longer. However, taking account of the reduced amenity of requiring users following the diversion route to cross Clifford Bridge Road twice and applying professional judgement, the magnitude of the impact has been increased to minor. Effects are therefore assessed as moderate adverse during the temporary construction period.

6.3.212. During operation there is anticipated to be Moderate effects on Hungerley Hall Farm in relation to farming activities, access and infrastructure and permanent land take. There are anticipated to be Slight Moderate effects on Walsgrave Hill Farm Partnership during operation in relation to farming activities, Moderate effects to access and infrastructure and Slight effects on permanent land take. Some Slight beneficial effects at Hungerley Hall Farm and Walsgrave Hill Farm Partnership in relation to environmental considerations at the farms, such as potential for agri-environmental schemes and increased habitat areas supporting beneficial insects for pollination and pest control. For WCH users, there would be

beneficial impacts during operation. The new signalised pedestrian crossing facility on the eastern arm of the Clifford Bridge Round roundabout would provide safety benefits facilitating north to south movement across the B4082, resulting in a beneficial effect.

6.3.213. Incorporating mitigation outlined in ES Chapter 5 (Air Quality), ES Chapter 7 (Landscape and Visual Effects), ES Chapter 9 (Geology and Soils), ES Chapter 11 (Noise and Vibration) (**TR010066/APP/6.1**), the majority of health outcomes are deemed to be Neutral or Positive during construction and operation. The exception is effects due to construction noise and construction traffic which may result in a significant effect and therefore a Negative health outcome.

6.3.214. Overall, the Scheme aims to provide improvements to WCH facilities through safer, enhanced routes as described above. The Applicant considers the proposals represent proportionate measures to mitigate impacts on accessibility as far as is reasonably possible, as required by NPS NN paragraphs 4.57 - 5.193.

Road drainage and the water environment

6.3.215. ES Chapter 13 (Road Drainage and the Water Environment) (**TR010066/APP/6.1**) presents the information to enable the identification and assessment of likely significant effects on road drainage and the water environment.

6.3.216. Paragraph 5.131 of the NPS NN states: *"Applications for projects in the following 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 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 the future; or land that may be subject to other sources of where its development would introduce a more vulnerable use."*

6.3.217. Paragraph 5.132 states: "*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."*

6.3.218. A Flood Risk Assessment (ES Appendix 13.1 (**TR010066/APP/6.3**)) has been produced, this considers all forms of flooding and demonstrates how these will be managed taking into account climate change.

6.3.219. Paragraph 5.133 states: *"In preparing a Flood Risk Assessment (FRA) the applicant should:*

- *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, demonstrate how these risks will be managed and where relevant mitigation will be implemented 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 considered 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 Secretary of State to apply the Sequential Test and Exception Test as appropriate"*

6.3.220. ES Appendix 13.1 (Flood Risk Assessment) (**TR010066/APP/6.3**) addresses the risk of all forms of flooding taking the impacts of climate change into account. The ES Appendix 13.1 (Flood Risk Assessment) (**TR010066/APP/6.3**) provides the application of Sequential and Exception Tests.

6.3.221. Paragraph 5.134 states: *"Applicants for projects which may be affected by, or may add to, flood risk should seek sufficiently early pre-application discussions, before the official pre-application 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 local highway 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."

6.3.222. Details of pre-application discussions with the Environment Agency and the Lead Local Flood Authorities (LLFA) are set out in Section 5 of the Flood Risk Assessment (ES Appendix 13.1 (**TR010066/APP/6.3**)).

6.3.223. Paragraph 5.135 states: *"For local flood risk (surface water, groundwater and ordinary watercourse flooding), local flood risk management strategies and surface water management plans provide useful sources of information for consideration in Flood Risk Assessments. Surface water flood issues need to be understood and then account of these issues can be taken, for example, flow routes should be clearly identified and managed."* As discussed, ES Appendix 13.1 (Flood Risk Assessment) (**TR010066/APP/6.3**) addresses the risk of all forms of flooding taking the impacts of climate change into account.

6.3.224. Paragraph 5.136 states: *"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."*

6.3.225. NPS NN paragraph 5.137: "*The term Sustainable Drainage Systems is taken to cover the whole range of sustainable approaches to surface water drainage management including:*

- *source control measures including rainwater recycling and drainage*
- *use of Sustainable Drainage Systems Management Trains to improve water quality*
- *infiltration devices to allow water to soak into the ground, that can include individual soakaways and communal facilities*
- *filter strips and swales, which are vegetated features that hold and drain water downhill mimicking natural drainage patterns*
- *filter drains and porous pavements to allow rainwater and run-off to infiltrate into permeable material below ground and provide storage if needed*
- *basins and ponds to hold excess water after rain and controlled discharge that avoids flooding*
- *flood routes to carry and direct excess water through developments to*

minimise the impact of severe rainfall flooding."

6.3.226. A drainage strategy has been developed for the Scheme (ES Appendix 13.6 (Drainage Strategy Report)) (**TR010066/APP/6.3**) that aims to reduce the impact of pluvial flood risk through the use of sustainable drainage systems (SuDS).

6.3.227. Paragraph 5.138 states: *"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 slow runoff, hold back peak flows and make landscapes more able to absorb the impact of severe weather events."*

6.3.228. Paragraph 5.139 states: *"Site layout and surface water drainage systems should cope with events the exceed the design capacity of the system, so that excess water can be safely stored on or conveyed from the site without adverse impacts."*

6.3.229. Paragraph 5.140 states: *"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."*

6.3.230. Paragraph 5.141 states: "*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 of the project site, if necessary, through the use of a planning obligation."*

6.3.231. The Drainage Strategy Report (ES Appendix 13.6) (**TR010066/APP/6.3**) details the measures proposed to store and convey water from the site and summarises the volumes and flow rates for the Scheme.

6.3.232. Paragraph 5.142 states: *"The sequential approach should be applied to the layout and design of the project. Vulnerable uses should be located in parts of the site with 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 forward to lower flood risk by improving flow routes, flood storage capacity and using Sustainable Drainage Systems."*

6.3.233. Paragraph 5.143 states *"Where flood risk is a factor in determining an application for development consent, the Secretary of State should be satisfied that, where relevant:*

- *the application is supported by an appropriate Flood Risk Assessment*
- *the Sequential Test has been satisfactorily applied as part of the site selection and, if required, the Exception Test."*

6.3.234. Paragraph 5.144 states: *"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 that both the Sequential and Exception Test requirements have been met."*

6.3.235. Paragraph 5.145 states: *"When determining an application, the Secretary of State 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 Test and, if required, the Exception Test), it can be demonstrated that:*

- *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*
- *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."*

6.3.236. Paragraph 5.146 states: *"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."*

6.3.237. The ES Appendix 13.1 (Flood Risk Assessment) (**TR010066/APP/6.3**) provides the application of Sequential and Exception Tests and provides a description of the flood risk and measures to be taken. Climate change is taken into account.

6.3.238. Paragraph 5.147 states: *"If the Environment Agency continues to have concerns and objects to the grant of development consent on the grounds of flood risk, the Secretary of State can grant consent, but would need to be satisfied before deciding whether or not do so that all reasonable steps have been taken by the applicant and the Environment Agency to try and resolve the concerns."*

6.3.239. The ES Appendix 13.1 (Flood Risk Assessment) (**TR010066/APP/6.3**) details the consultation undertaken with the Environment Agency.

6.3.240. Paragraph 5.148 states: "*The Secretary of State 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:*

- *upgrades are made to existing infrastructure in an area at risk of flooding*
- *infrastructure in a flood risk area 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."*

6.3.241. Paragraph 5.149 states: "*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 benefit to placing linear infrastructure in a flood-risk area.*

6.3.242. Paragraph 5.150 states: *"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."*

6.3.243. *Paragraph 5.151 states: "For construction works that have 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, any Development Consent Order, or associated planning obligations, will need to make provision for the adoption and maintenance of any Sustainable Drainage Systems, including 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 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, pre-applications with the Environment Agency are recommended to ensure they do not cause pollution to surface and groundwater quality and applicants should consider the role of Sustainable Drainage Systems management trains to control and treat run-off."

6.3.244. A Flood Risk Assessment (ES Appendix 13.1 (**TR010066/APP/6.3**)) provides a description of the flood risk and measures to be taken and has been prepared to assess the flood risk arising from the Scheme. The Drainage Strategy (ES Appendix 13.6 (Drainage Strategy Report) (**TR010066/APP/6.3**)) details the measures proposed to store and convey water from the site.

6.3.245. The incorporation of a pond for water quality mitigation will provide benefits as this will treat a proportion of the existing road drainage and thus provides an improvement upon the existing situation.

6.3.246. Paragraph 5.159 states: *"Applicants have a range of options available to mitigate and minimise risks of*

- *land and groundwater contamination:*
- *these options should include sustainable remediation, sustainable remediation*
- *can provide the opportunity to manage unacceptable risks to human health and*
- *the environment, it can help to ensure that the benefit of doing the remediation*
- *is greater than its impact*
- *in accordance with the Environmental Improvement Plan, disposal of soils to landfill should be minimised."*

6.3.247. A Groundwater Assessment (ES Appendix 13.4 (**TR010066/APP/6.3**)) has been prepared to assess the impacts to groundwater quality arising from the Scheme.

6.3.248. Paragraph 5.252 states: *"Infrastructure development can have adverse effects on the water environment, including groundwater, inland surface water, transitional waters and coastal waters. During the construction and operation, it can lead to increased demand for water, involve discharges to water and cause adverse ecological effects resulting from physical modifications to the water environment. There may also be an increased risk of spills and leaks of pollutants to the water environment. These effects could lead to adverse impacts on health or on species and habitats, and could, in particular, result in surface waters, groundwaters or protected areas failing to meet environmental objectives*

established under the Water Framework Directive Regulations."

6.3.249. Paragraph 5.253 states: "*The planning system should contribute to and enhance the natural and local environment by, amongst other things, preventing both new and existing development from contributing to, or being put at unacceptable risk from, or being adversely affected by, water pollution. The government has issued guidance on water supply, wastewater and water quality considerations in the planning system. Where applicable, an application for a Development Consent Order has have regard to the water body objectives of the River Basin Management Plan where the project is located and avoid or mitigate deterioration of water bodies in the area."*

6.3.250. Paragraph 5.254 states: *"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 patterns and consequently water availability across the water environment."*

6.3.251. Paragraph 5.258 states: *"Any assessment for both the construction and operational phases of the*

- *development should describe:*
- *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 Directive Regulations and source protection zones around potable groundwater abstractions; and how climate change will impact on this*
- *any cumulative effects"*

6.3.252. Paragraph 5.259 states: *"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, such as those included in the relevant local nature recovery strategy or catchment plan to improve water quality, for example, through nature-based approaches or solutions."*

6.3.253. Paragraph 5.263 states: *"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 Environment Improvement Plan objectives and potentially provide greater capacity to support infrastructure needs."*

6.3.254. A Water Quality Assessment (ES Appendix 13.3 (**TR010066/APP/6.3**)) and Groundwater Assessment (ES Appendix 13.4 (**TR010066/APP/6.3**)) have been prepared to assess the impacts to surface water and groundwater quality arising from the Scheme.

6.3.255. Paragraph 5.267 states: *"The Secretary of State should be satisfied that the proposal considers the River Basin Management Plans (Environment Agency, 2022a) and the requirements of the WFD (WFD) (including Article 4.7) and its daughter directives. This includes requirements on priority substances and groundwater."* Paragraph 5.267 of the NPS NN has been considered for water quality within the ES Appendix 13.2 (Water Framework Directive Compliance Assessment) (**TR010066/APP/6.3**) and Section 13.8 of ES Chapter 13 (Road Drainage and the Water Environment) (**TR010066/APP/6.1**).

6.3.256. The Scheme is not expected to give rise to significant residual effects in relation to road drainage and the water environment during the construction phase with the adoption of mitigation measures described in ES Chapter 13 (Road Drainage and the Water Environment) (**TR010066/APP/6.1**), which shall be secured through the implementation of the EMP (**TR01066/APP/6.5**).

Climate

6.3.257. ES Chapter 14 (Climate) (**TR010066/APP/6.1**) presents the information required to enable the identification and assessment of likely significant effects on climate.

6.3.258. Paragraph 4.35 of the NPS NN states: *"Article 7 of the Paris Agreement establishes a global goal on adaption – of enhancing adaptive capacity, strengthening resilience, and reducing vulnerability to climate change in the context of temperature goal of the Agreement. It aims to significantly strengthen national adaption efforts, including through support and international*

cooperation."

6.3.259. Paragraph 4.36 states*: "To support planning decisions, the government produces a set of UK Climate Projections and has developed a National Adaption Programme. In addition, the government's Adaption Reporting Power invites authorities (a defined list of public bodies and statutory undertakers, including National Highways, Network Rail and the Office for Rail and Road) to assess the risks presented by a changing climate, include policies and actions to address climate risk and set out progress made."*

6.3.260. Paragraph 4.38 states: *"In preparing the measures to support climate change adaption applicants should consider whether nature-based solutions could provide a basis for such adaption. In addition to avoid further carbon emissions when compared with some more traditional adaption approaches, nature-based solutions can also result in biodiversity benefits as well as increasing absorption of carbon dioxide from the atmosphere (see also paragraphs 5.190 to 5.203) on the role of green infrastructure)."*

6.3.261. The Scheme has been designed with respect to commitments set out in the Paris Agreement (2015). ES Chapter 14 (Climate) (**TR010066/APP/6.1**) considers the Scheme's effect on climate (i.e. increases in carbon emissions) as well as the potential vulnerability of the Scheme to climate change (i.e. the resilience of Scheme assets to projected changes in climate). The risks posed by climate change have been reported within the Climate Change Resilience Assessment section of this Chapter.

6.3.262. An Outline Carbon Management Plan, Appendix B.8 of the First Iteration EMP (**TR010066/APP/6.5**) has been produced for the Scheme which outlines different mitigation measures to minimise the carbon emissions from construction. This says priority should be given to low-carbon solutions that promote network and system decarbonisation as far as possible (including nature-based solutions). A Carbon Management Report will be prepared at the end of each work stage and follow National Highways guidance. This will include opportunities to include the embedment of nature-based solutions and technological solutions to mitigate, capture or offset the emissions of construction.

6.3.263. Paragraph 5.34 of the NPS NN states: *"As referenced in the Transport Analysis Guidance, the guiding principles of managing whole life carbon are established in PAS 2080: Carbon Management in Buildings and Infrastructure (2023). This demonstrates how the whole value chain can support infrastructure decarbonisation."*

6.3.264. Paragraph 5.35 states: *"Having regard to current knowledge, a carbon management plan should be produced as part of the Development Consent*

Order submission and include:

- *a Whole Life Carbon Assessment for the project*
- *an explanation of the steps that have been taken to drive down the carbon impacts of the project*
- *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 PAS 2080) (recognising that the case of road projects while the developer can estimate the likely emissions from road traffic, it is not solely responsible for controlling them).*
- *whether and how any residual emissions will be (voluntarily) offset or removed using a recognised framework (any offsetting of emissions should not be used in the Whole Life Carbon Assessment headline figures)*
- *where there are residual emissions, the level of emissions and the impact of those on relevant statutory carbon budgets."*

6.3.265. Paragraph 5.36 states: *"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."*

6.3.266. Paragraph 5.37 states: *"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 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 application."*

6.3.267. As stated above, an Outline Carbon Management Plan, Appendix B.8 of the First Iteration EMP (**TR010066/APP/6.5**), has been produced for the Scheme, and Section 14.10 of ES Chapter 14 (Climate) (**TR010066/APP/6.1**) outlines different mitigation measures to minimise the carbon emissions from construction and operation. All steps to reduce the carbon emissions from the scheme have been outlined in the Design, mitigation and enhancement measures section of this Chapter.

6.3.268. Paragraph 5.38 states*: "The Secretary of State must be satisfied that the applicant has as far as possible assessed carbon emissions at all stages of the development. The Secretary of State for Energy and Net Zero regularly assesses*

whether the UK has sufficient policies and proposals overall to meet the UK carbon budgets, with a view to meeting the net zero target, in line with the duties under Section 13 of the Climate Change Act 2008. It would not be feasible or sensible for such an assessment to be done at the time of taking individual development decisions, and there is no legal requirement to do so."

6.3.269. Paragraph 5.39 S.1(1) of the Climate Change Act 2008 reflects and puts into effect the net zero target set in light of the temperature goal of the Paris Agreement. The target was increased from 80% emission reductions by 2050 to 100% emission reductions by 2050 in June 2019. Carbon budgets 1 to 5 were set to meet the 80% emission reduction target, but carbon budget 6 (2033-2037) has been set to meet the 2050 net zero target, so it is more stretching. The UK's current Nationally Determined Contribution (set in line with Article 4 of the Paris Agreement) commits to reducing economy-wide GHG emissions by at least 68% by 2030, compared to 1990 levels, so it is more stretching than carbon budget 5. The UK's Nationally Determined Contribution is on the pathway to the 2050 net zero target. Where it provides useful context, applicants may wish to compare their scheme emissions against carbon budgets, Net Zero and the Nationally Determined Contribution. Where an applicant assesses the carbon impacts of its scheme against carbon budget 6, and later carbon budgets, it is to be taken also to have assessed the scheme against the net zero target in the Climate Change Act 2008, as they are line with this target.

6.3.270. ES Chapter 14 (Climate) (**TR010066/APP/6.1**) illustrates the increase in carbon emissions resulting from the Scheme represents up to approximately 0.003% of relevant carbon budgets over their respective periods.

6.3.271. Comparison between the increase in the Scheme emissions and published carbon budgets, following DMRB LA 114 guidance on determining significance, can only be undertaken for approximately 19% of the emissions increase. The remaining 81% of the increase in carbon emissions will occur after 2038 (the end of the last currently published UK carbon budget) however, there is the commitment to meet the Climate Change Act (2050 Target amendment) target of net zero emissions by 2050. It is expected that the remaining 81% of the increase in carbon emissions will be reduced due to the uptake of electric vehicles, with a further opportunity of increased use and improved public transport in the area. However, there is currently too much uncertainty to model these opportunities. For both construction and operational effects on climate, it is unlikely that the Scheme will result in GHG emissions that would be defined as significant considering the GHG emissions from the Scheme are unlikely to have a material impact on the Government achieving its carbon targets.

6.3.272. Paragraph 5.40 states: *"The Secretary of State should be content that the applicant has taken all reasonable steps to reduce carbon emissions at all*

stages of the development. 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."

6.3.273. The Scheme includes nature-based solutions, and these are presented on the Environmental Masterplan (ES Figure 2.4) (**TR010066/APP/6.2**). The Environmental Masterplan has been developed with ecologists to increase biodiversity, including the provision of sustainable drainage systems and woodland creation. Refer to ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**).

6.3.274. A Carbon Management Report will be prepared at the end of each work stage and follow National Highways guidance. This will include opportunities to include the embedment of any further nature-based solutions and technological solutions to mitigate, capture or offset the emissions of construction.

6.3.275. Paragraph 5.41 states: *"Operational carbon emissions from some types of national network infrastructure cannot be totally avoided. Given the range of non-planning policies aimed at decarbonising the transport system, government has determined that net increase in operational carbon emissions is not, in itself, reasons to prohibit the consenting of national network projects or to impose more restrictions on them in the planning policy framework."*

6.3.276. Paragraph 5.42 states: *"Any carbon assessment will include an assessment of operational greenhouse gas emissions, but the policies set out in Chapter 2 of the NPS, apply to these emissions. Operational emissions will be addressed in a managed, economy wide manner, to ensure consistency with carbon budgets, net zero and our international climate commitments. Therefore, approval of schemes with residual carbon emissions is allowable and can be consistent with meeting net zero. However, where the increase in carbon emissions resulting from the proposed scheme are so significant that it would have a material impact on the ability of government to achieve its statutory carbon budgets, the Secretary of State should refuse consent."*

6.3.277. A Whole Life Carbon Assessment has been undertaken which reports the total estimated GHG emissions arising from the Scheme for the construction, operation and overall total for the whole lifecycle. The Whole Life Carbon Assessment has been conducted according to PAS 2080:2023 and DMRB LA 114 as outlined in the methodology and the results of the assessment have been reported in ES Chapter 14 (Climate) (**TR010066/APP/6.1**). This includes the use of WebTAG and the TAG database.

6.3.278. All steps to reduce the carbon emissions from the scheme have been outlined in the design, mitigation and enhancement measures section of ES Chapter 14 (Climate) (**TR010066/APP/6.1**).

6.3.279. ES Chapter 14 (Climate) (**TR010066/APP/6.1**) demonstrates the construction, operation and use of the Scheme is predicted to increase carbon emissions by approximately 377,791 tCO2e over the appraisal period of 60 years (up to 2087). However, the contributions of the Scheme to the UK's carbon budget for the relevant carbon budget periods are not significant, less than 0.003%, and therefore it can be concluded that the GHG emissions impact of the Scheme would not have any material impact on the UK Government meeting its legally binding carbon reduction targets.

6.3.280. For construction and operational effects on climate, it is unlikely that the Scheme will result in GHG emissions that would be defined as significant considering the GHG emissions from the Scheme are unlikely to have a material impact on the Government achieving its carbon targets. That said, in line with the UK Government's Carbon Reduction Plan, the Scheme has sought to reduce GHG emissions as far as practicable to contribute to the UK's net reduction in GHG emissions and maximise the potential for reducing GHG emissions. Assessing the level of GHG emissions associated with the Scheme has been key in assisting and focusing the reduction effort.

6.3.281. In the context of the vulnerability of the Scheme to climate change, projected climate change is not anticipated to have a significant effect.

Combined and cumulative effects

6.3.282. ES Chapter 15 (Combined and Cumulative Effects) (**TR010066/APP/6.1**). presents the information required by the Infrastructure Planning (EIA) Regulations 2017 (as amended) to be provided in the ES to enable the identification and assessment of likely significant combined and cumulative environmental effects.

6.3.283. NPS NN paragraph 4.12 states: *"A key part of environmental assessment is the consideration of cumulative effects' which should '…consider the impact of other existing and committed developments within an appropriate geographical area and assess the additional impact of their own development."* The methodology for this cumulative assessment involves the identification of incremental changes likely to be caused by reasonably foreseeable existing and / or approved developments, hereafter referred to as 'other developments'; considered together with the Scheme, which is detailed in section 15.5 of ES Chapter 15 (Combined and Cumulative Effects) (**TR010066/APP/6.1**). The cumulative assessment is detailed in section 15.8.

6.3.284. Paragraph 4.12 goes on to note that while there is no mandated approach, the assessment of combined and cumulative effects must take account of how proposals *"…might affect the environment, economy or community as a whole…' through '…the accumulation of, and interrelationship between, effects identified in the environmental assessment…".* The predicted environmental effects for both construction and operational phases of the Scheme are taken into consideration with the inclusion of any proposed mitigation from the chapters of the ES.

6.3.285. A summary of the reported construction effects is described in Table 15-2 and a summary of the reported operation effects are described in Table 15-3 of ES Chapter 15 (Combined and Cumulative Effects) (**TR010066/APP/6.1**).

6.3.286. Paragraph 4.51 states: *"The Secretary of State should be satisfied that development consent can be granted taking full account of environmental impacts. This will require close cooperation with the Environment Agency and/or the pollution control authority, and other relevant bodies, such as the Marine Management Organisation, the Statutory Nature Conservation Bodies, Drainage Boards, and water and sewerage undertakers, before consenting any potentially polluting developments, to ensure that:"*

"…The cumulative effects of pollution when the proposed development is added would make that development unacceptable …' The consultation undertaken is detailed within section 15.4 of this Chapter and this chapter reflects the study areas and assessment approach agreed with the consultees"

6.3.287. Paragraph 5.245 states: *"Short term negative effects in relation to socio-economics where '…if development consent were to be granted to for (sic) a number of projects within a region and these were developed in a similar timeframe…"* The predicted environmental effects for both construction and operational phases of the Scheme are taken into consideration with the inclusion of any proposed mitigation from the chapters of the ES. A summary of the reported construction effects is described in Table 15-2 and a summary of the reported operation effects are described in Table 15-3 of ES Chapter 15 (Combined and Cumulative Effects) (**TR010066/APP/6.1**).

6.3.288. Paragraph 5.33 states: *"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".* A Whole Life Carbon Assessment has been undertaken which reports the total estimated GHG emissions arising from the Scheme for the construction, operation and overall total for the whole lifecycle. The Whole Life Carbon Assessment has been conducted according to PAS 2080:2023 and

DMRB LA 114 as outlined in the methodology and the results of the assessment have been reported in the ES Chapter 14 Climate (**TR010066/APP/6.1**).

6.3.289. The assessment concludes that as a result of the residual effects of the Scheme, as a single project it is anticipated that there may be two significant cumulative effects during construction, in relation to Hungerley Hall Farm and Coombe Pool SSSI. Combined effects on Coombe Pool SSSI are also discussed in ES Chapter 8 Biodiversity.

6.3.290. During operation, as a single project is anticipated that there may be significant cumulative effects on Hungerley Hall Farm, due to visual effects in Year 1 and 15 of operation and impacts on farming, in relation to permanent land take, access and infrastructure disruption and farming activities.

6.3.291. Two developments met the criteria for inclusion in the short list of developments in ES Appendix 15.1 (Cumulative Effects Long and Short List) (**TR010066/APP/6.3**). It is not anticipated that the Scheme would result in any significant cumulative effects with these schemes. Whilst there are mutual receptors identified for Landscape and Visual and Biodiversity, it is not anticipated that these would give rise to a significant cumulative effect.

NPS NN Green Belt

6.3.292. The Green Belt boundary follows the western highway verge of the A46. Therefore, all of the existing A46 is in the Green Belt. Most of the proposed Scheme is in the Green Belt, except for the western dumbbell and the western B4082 slip road. The only significant development outside the existing footprint of the A46 is the small eastern dumbbell roundabout.

6.3.293. Paragraph 5.181 of the NPS NN states that "*Green Belts, defined in a development plan, are situated around certain cities and large built-up areas. 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."* This reflects the NPPF five purposes of the Green Belt, and this is discussed further in the next section.

6.3.294. Paragraph 5.187 of the NPS NN states: *"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."

6.3.295. The NPS NN acknowledges that 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."* (Paragraph 5.188).

6.3.296. The NPS NN echoes the NPPF, stating that inappropriate development is, by definition, harmful to the Green Belt and should not be approved except in very special circumstances. NPS NN paragraph 5.203 states "*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 may 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."* Again, this is discussed further in the next section regarding the NPPF, although the Applicant considers that the Scheme is not inappropriate development in the Green Belt, very special circumstances can also be demonstrated.

6.3.297. Addressing the planning balance, the 'critical need' to improve the SRN to deliver a national network that meets the country's long-term needs and supports a prosperous and competitive economy, reduced congestion and improvements to journey time reliability, and benefits to businesses during the operational phase provide substantial weight in favour of the DCO being made. The Scheme therefore is in accordance with paragraphs 5.187, 5.188 and 5.203 of the NPS NN.

6.3.298. The Applicant has considered reasonable alternatives and undertaken an options appraisal in line with NPS NN paras 4.20, 4.21 and 4.22, the EIA Regulations and other legal requirements. In particular:

- where applicable, the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 require projects with significant environmental effects to include a description 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

- there may also be other specific legal requirements for the consideration of alternatives, for example, under the Habitats Regulations and Water Environment (Water Framework Directive) (England and Wales) Regulations 2017.

- there may also be policy requirements in this NPS NN, for example the flood risk sequential test and the assessment of alternatives for developments in National Parks, the Broads and Areas of Outstanding Natural Beauty (now known as National Landscapes) - where there is a policy or legal requirement to consider alternatives, the applicant should describe the alternatives considered in compliance with these requirements and in a proportionate manner

6.3.299. Paragraph 4.27 of the NPS NN provides that "*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.*"

6.3.300. With regards to an appraisal of alternative schemes, Section 3 of this document demonstrates that this has been undertaken and is sufficient to meet the requirements of the NPS NN. The Scheme was subject to an iterative design process and responded to consultative feedback from the public and other consultees. Reasons for rejecting alternatives are clearly set out in Section 3, ES Chapter 3 (Assessment of Alternatives) (**TR010066/APP/6.1**), and the Scheme Design Report (**TR010066/APP/7.4**), which fully demonstrate why the preferred option was chosen, taking into account environmental effects.

6.3.301. Although not part of the options considered described in Section 2, an option entirely to the west of the existing A46 mainline out of the Green Belt would involve realigning this whole section of the A46, and would therefore not be feasible, as this would cause adverse impacts to the environment that are much greater than any caused by the Scheme.

6.3.302. It is not a requirement of Green Belt policy to show that there is no alternative to development in the Green Belt. The lack of alternatives in a non-Green Belt location may support a case for very special circumstances in favour of the

Scheme in the Green Belt location – however the absence of alternatives is not to be relied upon to justify the Scheme. Alternative proposals may be relevant for consideration, but it is not considered sufficient to elevate alternatives into the category of mandatory material considerations. If it was, then alternatives would be relevant in every Green Belt case where there was inappropriate development and there is no such policy requirement in the NPS NN. There is no general principle of law that in any case where a scheme would cause adverse effects, but these are held to be outweighed by its beneficial effects, the existence of alternative sites inevitably becomes a mandatory material consideration.

NPS NN summary

6.3.303. No matters either individually or cumulatively lead to a different conclusion in terms of the overall balance of benefits and adverse impacts.

6.3.304. Overall, after taking considerations in relation to the matters set out in the NPS NN and realised matters in favour of the DCO are seen to outweigh the matters against the DCO being made.

National Planning Policy Framework (NPPF) (December 2023)

6.3.305. The NPPF sets out the government's national planning policies for England and how these should be applied strategically in the development plan system and in the management of development.

6.3.306. While the overall strategic aims of the NPPF and the NPS are consistent, the NPPF is an important and relevant consideration in decisions on nationally significant infrastructure projects, but only to the extent relevant to that project. The NPS NN provides transport policy which will guide individual development brought under it. It also provides guidance on good scheme design, as well as the treatment of environmental impacts. Both documents seek to achieve sustainable development and recognise that different approaches and measures will be necessary to achieve this.

6.3.307. The NPPF states that NPS's are the primary decision-making document for NSIP under the Planning Act 2008. 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 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)."*

6.3.308. The NPS NN states that the overall strategic aims of the NPS NN and NPPF are consistent and the NPPF will be an important and relevant consideration 'but

only to the extent relevant to [the] project'.

6.3.309. The NPPF states that the purpose of the planning system is to contribute to the achievement of sustainable development. In this regard there are three interdependent overarching objectives; economic, social and environmental which need to be pursued in mutually supportive ways with the aim of securing net gains across each. Accordingly, the NPPF states a *"presumption in favour of sustainable development"* (NPPF paragraph 10).

6.3.310. With regard to sustainable transport, Chapter 9 states that in plan making and development proposals, opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, should be considered and the environmental impacts of traffic and transport infrastructure identified, assessed and taken into account. This should include appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains (paragraph 108).

6.3.311. Further, planning policies should: *"Be prepared with the active involvement of local highways authorities, other transport infrastructure providers and operators and neighbouring councils, so that strategies and investments for supporting sustainable transport and development patterns are aligned;"* and *"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;"* they should also "*provide for any large scale transport facilities that need to be located in the area, and the infrastructure and wider development required to support their operation, expansion and contribution to the wider economy. In doing so they should take into account whether such development is likely to be a nationally significant infrastructure project and any relevant national policy statements* (Paragraph 110).

NPPF Green Belt

6.3.312. Section 13 of the NPPF describes the Green Belt and how it should be protected. The NPPF states there are 5 purposes of the Green Belt (para 142):

"(a) to check the unrestricted sprawl of large built-up areas;

(b) to prevent neighbouring towns merging into one another;

(c) to assist in safeguarding the countryside from encroachment;

(d) to preserve the setting and special character of historic towns; and

(e) to assist in urban regeneration, by encouraging the recycling of derelict and other urban land."

6.3.313. It is considered that the Scheme does not conflict with the five purposes of the Green Belt:

"(a) to check the unrestricted sprawl of large built-up areas;

- the Scheme does not lead to sprawl of a large built-up area, the A46 effectively follows the Green Belt boundary, and therefore acts as a barrier to further development.

(b) to prevent neighbouring towns merging into one another;

- the Scheme does not lead to neighbouring towns merging.

(c) to assist in safeguarding the countryside from encroachment;

- the A46 is already within the Green Belt, therefore the Scheme does not encroach into the countryside in a significant way, over and above the existing A46.

(d) to preserve the setting and special character of historic towns; and

– the Scheme does not impact the special character of historic towns.

(e) to assist in urban regeneration, by encouraging the recycling of derelict and other urban land.

– the Scheme is an alteration of the existing A46, it utilises existing A46 land as much as possible."

6.3.314. NPPF paragraph 152 states *"Inappropriate development is, by definition, harmful to the Green Belt and should not be approved except in very special circumstances".*

6.3.315. Paragraph 155 states that "*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."* The list of these developments include: *"(c) local transport infrastructure which can demonstrate a requirement for Green Belt location".*

6.3.316. The location of the Scheme is unavoidable due to the need to mitigate severe congestion on the existing route within the Green Belt. It is considered that the Scheme is not inappropriate development within the Green Belt, as, due to the existing Green Belt location of the A46:

- the Scheme preserves openness: openness is not reduced by the Scheme as is demonstrated in the following paragraphs: 6.3.320 –

6.3.324. Due to the presence of the existing junction and the scale, form, and the extent of the proposed junction, the spatial and visual effects would preserve the openness of the Green Belt;

- the Scheme and does not conflict with the purposes of the Green Belt as demonstrated in paragraph 6.3.315 of this Section above;
- the Scheme provides local (and national) transport infrastructure, particularly the local access from the eastern dumbbell roundabout, which requires a Green Belt location due to the existing Green Belt location of the A46 Walgrave Junction. The Scheme provides local transport infrastructure in the form of a new Walsgrave Junction, that benefits the local area by reducing congestion and reducing accidents on the local network.

6.3.317. Due to the presence of the existing junction and the scale, form, and extent of the proposed junction, the spatial and visual effects would preserve the openness of the Green Belt. The Scheme therefore falls under the exceptions within Paragraph 155 of the NPPF and therefore does not constitute inappropriate development in the Green Belt. This aligns with the decision on the A38 Derby Junctions Scheme, where the Secretary of State agreed with the Examining Authority that the proposed development would fall within the exception set out in paragraph 150 of the NPPF 2021 (now paragraph 155 of the NPPF 2023) and would not be considered as inappropriate development in the Green Belt.

6.3.318. ES Chapter 7 (Landscape and Visual Effects) (**TR010066/APP/6.1**) includes consideration of effects on visual amenity and openness within the Green Belt. With regards to the Scheme's impact on openness, it is considered that openness would be preserved, as the Scheme has been carefully designed and includes extensive mitigation to minimise visual impact on surrounding receptors – including landscaping around the new dumbbell roundabouts and landscaping along the B4082 slip road. Openness is not limited to a narrow volumetric approach and visual impacts may be relevant to openness as a matter of planning judgment. Although there will be change in the form of landscape caused by the Scheme, the rural landscape will remain open and would not be built up with urban development that would form urban sprawl. In addition, the development does not introduce uncharacteristic elements into the Green Belt, as A46 is already located within the Green Belt.

6.3.319. There are a number of footpaths set within open agricultural land; offering long distance views with limited woodland cover except for Coombe Abbey Park and the woodland belt along the edge of A46. Despite potential long-distance views from the wider landscape (Green Belt) localised topography limits the overall

openness of the Green Belt. Green belt sensitivity is medium as there is limited or no direct visibility or interaction with the A46.

6.3.320. ES Chapter 7 (Landscape and Visual Effects) (**TR010066/APP/6.1**) describes that construction effects upon the Green Belt within the study area are not considered likely to be significant due to their temporary nature and the footprint of the Scheme being located along the edge and the existing influence exerted upon its setting by the A46 highway corridor.

6.3.321. During the operation of the Scheme, changes to the perceived visual and land use openness of the Green Belt would be most evident at Year 1 prior to the establishment of mitigation planting. As such, there would be a minor adverse magnitude of landscape character change and a slight adverse significance of effect on the openness of the Green Belt, however, in terms of openness, changes within the Green Belt would be limited due to the localised nature of the Scheme. By Year 15, effects on the openness of the Green Belt would have reduced to baseline condition as the mitigation planting would replicate the current tree and woodland characteristics of the area. As such, at Year 15 there would be a negligible magnitude of change and a slight adverse significance of effect as a result of the Scheme on the openness of the Green Belt which would continue to be perceived as being broadly rural and open consistent with the existing baseline.

6.3.322. Overall, considering the Scheme's spatial and visual effects it would preserve the openness of the Green Belt.

6.3.323. Para 153 of the NPPF states: "*When considering any planning application, 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."*

6.3.324. It is considered that even if the project was considered to be inappropriate development in the Green Belt by the Secretary of State, which is not the Applicant's case, any actual or perceived harm to the openness of the Green Belt is clearly outweighed by other material considerations, which justify the application of 'very special circumstances' in support of the Scheme. These very special circumstances include the benefits of the Scheme:

- Reduced congestion - The Scheme will improve the operation and efficiency of the existing transport network associated with Walsgrave Junction to increase capacity.

- Safety and maintenance – The Scheme will enable the A46 to be maintained

to a safe and serviceable condition, with maintenance being considered during design. The introduction of the Scheme leads to a decrease in overall accidents (although a small shift towards a higher severity is seen).

- Growth – The Scheme will support and facilitate economic growth, generating employment and residential development opportunities.
- Environment – The Scheme will reduce negative impacts on the wider environment whilst seeking environmental enhancement and providing biodiversity net gain.
- Customer – The Scheme will reduce negative impacts on users, local communities and the environment whilst balancing the needs of individuals and businesses that use and rely upon the A46.

6.3.325. In addition, it is considered that NPPF paragraph 155 makes clear that engineering operations, such as those temporary works that would be required to construct the Scheme, are not inappropriate development in the Green Belt considering they preserve its openness and do not conflict with the purposes of including land within it. The NPPF does not define in any more detail what engineering operations or transport infrastructure entail. It is therefore considered that the proposed development would fall within the provision of the NPPF paragraph 155, and that the proposed location in the Green Belt is unavoidable. The main area of temporary works is the satellite compound to the west of the Scheme, and this is not within the Green Belt.

Other relevant NPPF policies

6.3.326. Paragraph 157 states that the 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 GHG 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.

6.3.327. Paragraph 159 states that new development should be planned for in ways that:

a) *“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; and*

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."

6.3.328. With regard to the need to adapt to climate change, the environmental effects of the Scheme have been carefully assessed. One of its objectives is to, where possible, improve the environmental effects of transport on those living along the route of or in the vicinity of the Scheme. This will be achieved through design, reducing any impacts on the natural and built environment.

6.3.329. The increase in carbon emissions resulting from the Scheme represents up to approximately 0.0003% of relevant carbon budgets over their respective periods.

6.3.330. Comparison between the increase in the Scheme emissions and published carbon budgets, following DMRB LA 114 guidance on determining significance, can only be undertaken for approximately 19% of the emissions increase. The remaining 81% of the increase in carbon emissions will occur after 2038 (the end of the last currently published UK carbon budget). DMRB LA 114 Note 1 and 2 of section 3.19 state that *"[…] it is very unlikely that the impact of a road project will, in isolation, affect the ability of Government to meet its carbon reduction plan targets. […] it is considered unlikely that projects will in isolation conclude significant effects on climate*". For both construction and operational effects on climate, it is unlikely that the Scheme will result in GHG emissions that would be defined as significant considering the GHG emissions from the Scheme are unlikely to have a material impact on the Government achieving its carbon targets.

NPPF summary

6.3.331. The Scheme would improve the quality of the SRN in the Midlands by improving connectivity, reliability, resilience and reduces the number of overall accidents on the SRN and local road network which accords with the social objectives of the NPPF (although a small shift towards a higher severity is seen).

6.3.332. Although the Scheme is within the Green Belt, it is considered that it is not inappropriate development and falls under exception (c) of NPPF paragraph 155. The existing A46 and Walsgrave Junction infrastructure is already located within the Green Belt, the Scheme preserves the openness of the Green Belt, it does not conflict with the purposes of the Green Belt, and it provides local transport infrastructure. In addition, it also provides very special circumstances as there is critical need for the Scheme.

6.3.333. The Scheme supports the NPPF economic objectives and strategic policy in making adequate provision for transport infrastructure and supporting future

economic growth.

6.3.334. The Scheme therefore accords with the key aims of the NPPF by providing improved infrastructure to support economic growth.

Sustainable development

6.3.335. Both the NPS NN and NPPF seek to encourage development proposals to achieve a high level of sustainable development.

6.3.336. NPPF paragraph 8 states that achieving sustainable development means that the planning system has three overarching objectives – an economic objective, a social objective and an environmental objective.

6.3.337. It states that these objectives are interdependent and need to be pursued in mutually supportive ways.

6.3.338. Paragraph 5.202 of the NPS NN recognises that the impacts from transport infrastructure schemes can be economic, social and environmental, and that consideration and mitigation of these impacts is important in achieving sustainable development.

6.3.339. The Scheme would fulfil the economic objective of sustainable development during the operational phase by increasing capacity and reducing congestion on the SRN. This would facilitate growth of a number of economic sectors, such as food and logistics, which are reliant on journey time reliability and network efficiency and dominate the regional economy. This would allow these industries to consolidate and build their businesses. The Scheme would also help to unlock employment growth within the Coventry area and along the A46 corridor by facilitating the delivery of regional and local business developments. The Scheme would fulfil the social objective of sustainable development by supporting strong, vibrant and healthy communities.

6.3.340. The Scheme would improve strategic and local connectivity in Coventry and the wider area incorporate enabling works for future WCH provision to be provided by others as outlined in ES Chapter 12 (Population and Human Health) (**TR010066/APP/6.1**)

6.3.341. The Scheme would fulfil the environmental objective of sustainable development by seeking to avoid or mitigate environmental effects. Measures incorporated to mitigate effects are extensive and are outlined in the ES (**TR010066/APP/6.1**). The Scheme would also achieve a net gain in biodiversity as set out in ES Appendix 8.1 (Biodiversity Net Gain Baseline Report) (**TR010066/APP/6.3**) which sets the results of the UKHab survey. The area-based habitat baseline has been calculated as 130.77 units, and the linear-foliage baseline as 28.62

units, in accordance with the Statutory Biodiversity Metric. The results of the river condition assessment (RCA) survey have identified 0.71 linear watercourse units within the baseline from culverts and 'other rivers and streams'

6.3.342. The Environmental Masterplan, Figure 2.4 of the ES Figures (**TR010066/APP/6.2**) has sought to create a range of habitats similar to those already present on site and affected by the Scheme. However, this would include habitats of higher biodiversity where possible,

6.3.343. The Applicant therefore considers that the Scheme meets the requirements of the economic, social and environmental objectives of sustainable development as set out in the NPS NN.

Road Investment Strategy (RIS2) (2020)

6.3.344. RIS2 defines a national programme of improvements to the SRN and sets a long-term strategic vision for the network to 2050 and the steps that will help National Highways achieve it. Within this context it specifies the performance standards Highways England (now National Highways) must meet; lists planned enhancement schemes expected to be built; and states the funding that will made available during the RP2, covering the financial years 2020/21 to 2024/25.

6.3.345. The RIS2 also sets out a list of schemes to be developed by National Highways over the period covered by the RIS and a number of specific locations for improvements to the SRN. The A46 Coventry Junctions, including both the Walgrave and Binley schemes is committed for RP2.

6.3.346. National Highways, as the strategic highways company appointed by the Secretary of State, must in exercising its functions and complying with its legal duties and other obligations act in a manner which it considers best calculated to, among others:

- minimise the environmental impacts of operating, maintaining and improving its network and seek to protect and enhance the quality of the surrounding environment
- conform to the principles of sustainable development.

6.3.347. RIS2 (page 91) introduces the schemes in the Midlands committed to in Road Programme 2. The RIS2 (page 92) includes the *"grade separation of the Binley and Walsgrave roundabouts on the A46 near Coventry".* The Scheme therefore adheres to RIS2 by bringing a committed project forward.

National Infrastructure Delivery Plan, 2016 - 2021 (2016)

6.3.348. The National Infrastructure Delivery Plan (NIDP) 2016-2021 (produced by the Infrastructure and Projects Authority) outlines details of £483 billion of investment in over 600 infrastructure projects and programmes across the UK to 2020-21 and beyond.

6.3.349. The NIDP focused specifically on nearly £300 billion of infrastructure that will be delivered over the next 5 years to 2020-2021.

6.3.350. Chapter 3 of the NIDP sets out how the Government is investing over £15 billion to support the transformation of the SRN, with over 100 major schemes completed or in construction by the end of 2020-21. Ministers have established a clear regulatory framework, setting up investment periods with legally guaranteed funding levels. The first of these, RP1, ran from 2015 to 2020. The goals and objectives of RP1 are detailed within RIS1.

6.3.351. The NIDP 2016–2021 also established a series of objectives for National Highways to follow. With relevance to the Scheme, these included but were not limited to:

- Making the network safer: with a target of 40% reduction in the number of people killed or seriously injured on the SRN against the 2005-09 period by the end of 2020.
- Improving user satisfaction: by 31 March 2017, 90% of people responding to the National Road Users' Satisfaction Survey need to be either fairly or very satisfied
- Supporting the smooth flow of traffic: minimise delay and inconvenience to road users and ensuring at least 97% of the SRN is available to road users and ensuring at least 85% of incidents are cleared within 1 hour.
- Encouraging economic growth by working to minimise delay on the SRN. Achieving real efficiency: delivering total capital savings of at least £1.2 billion by the end of the Road Period 1.
- Keeping the SRN in good condition; including an ambitious resurfacing programme.

6.3.352. In February 2023 the Government produced the National Infrastructure and Construction Procurement Pipeline 2023 which is a forward-looking pipeline of planned procurements and provides a clear and robust assessment of infrastructure investment over the next decade. It includes an analysis of proposed investment by sector - energy and transport represent the largest sectors in the 10-year pipeline (41% and 30% respectively). Transport shows a strong profile in the next two years (£19 billion a year to 2024/25).

The Strategic Road Network and the Delivery of Sustainable Development (DfT Circular 02/2013)

6.3.353. This Circular explains how the Highways Agency (now National Highways) will engage with the planning system, communities and the development industry to deliver sustainable development and, thus, economic growth, whilst safeguarding the primary function and purpose of the SRN.

6.3.354. The document states that Highways England (now National Highways) will work with local authorities to influence Local Plan decisions that may affect the SRN.

The Highways England Delivery Plan (2020) and Strategic Business Plan 2020-2025 (2020)

6.3.355. The Applicant is responsible for planning the long-term future and development of the SRN including its maintenance, operation and improvement. Published in March 2020, the Delivery Plan responds to and aligns with the government's RIS2. It provides high-level outcomes the Applicant will work to deliver and the strategic priorities for the business and sets out the plans for the modernisation and renewal of the road network over the five-year period from 2020 to 2025.

6.3.356. The A46 Coventry Junctions Scheme (including Binley and Walsgrave) is listed within the Regional Investment Programme which is used to deliver enhancement schemes. The various schemes along the A46 are focused on tackling regional problems around safety, congestion and capacity.

6.3.357. The Delivery Plan states *"In the first road period in the midlands, we opened 13 schemes and started work on nine additional schemes. Over the second road period, we will start construction on a further eight schemes. We will open 14 of these schemes before the end of the second road period, with the remainder opening in future road periods."*

6.3.358. Annex B of the Plan sets out the six key performance outcomes agreed with the DfT for this second road period including:

- improving safety for all
- providing fast and reliable journeys
- a well-maintained and resilient network
- delivering better environmental outcomes
- meeting the needs of all users
- achieving efficient delivery.

6.3.359. These outcomes respond to and align with government's priorities, as set out in RIS2: a network that supports the economy; a greener network; a safer and more reliable network; a more integrated network; and a smarter network. The objectives of the Scheme align with the performance outcomes.

6.3.360. The Scheme is included in the National Highways Strategic Business Plan. Specifically, the plan includes improvements to the A46 as part of the Government's RIS2 for 2020-202512.

6.3.361. The Funding Statement (**TR010066/APP/4.2**) presents details of the designated funds for delivery of the Scheme under this Plan.

The Net Zero Highways (2021)

6.3.362. The Net Zero Highways initiative by National Highways aims to make road travel in the UK carbon-neutral by 2050. Targets of this initiative include:

6.3.363. Corporate Emissions: Achieve net zero for their own operations by 2030. This includes reducing emissions from network lighting, roadside equipment, travel, and offices.

6.3.364. Maintenance and Construction Emissions: Reach net zero for maintenance and construction activities by 2040. This involves decarbonising the production and use of materials like asphalt, cement, and steel.

6.3.365. Road User Emissions: Ensure net zero carbon travel on roads by 2050. This includes supporting the transition to electric vehicles and other low-emission technologies.

6.3.366. The plan is aligned with the UK's broader climate goals and involves significant investment in sustainable infrastructure and technologies.

Net Zero Strategy: Build Back Greener (2022)

6.3.367. The Government Net Zero Strategy: Build Back Greener (GNZS) published in October 2021 and updated in April 2022 details the Government measures to reach carbon net zero by 2050. Within the GNZS, the Government outlines four core foundations to enable the transition to carbon net zero. The Government will:

- Work with the grain of consumer choice: no one will be required to rip out their existing boiler or scrap their current car.
- Ensure the biggest polluters pay the most for the transition through fair carbon pricing.
- Ensure that the most vulnerable are protected through Government support in the form of energy bill discounts, energy efficiency upgrades, and more.

- Work with businesses to continue delivering deep cost reductions in low carbon tech through support for the latest state of the art kit to bring down costs for consumers and deliver benefits for businesses

6.3.368. Whilst transition to carbon net zero will extend across several decades, the GNZS identified several policies, as well as schemes to monitor the transition to carbon net zero.

6.3.369. In accordance with the DMRB LA 114 Climate guidance document, the Applicant has sought to reduce carbon emissions as far as possible in order to contribute to the UK's net reduction in carbon emissions.

6.3.370. A hierarchical approach to carbon management has been applied, which applies the principles of build nothing, build less, build clever, build efficiently (as described in PAS 2080: Carbon Management in Infrastructure). Using the hierarchy and data driven decision making it has been possible to drive carbon reduction through the design. Key carbon reductions identified are detailed in ES Chapter 14 (Climate) (**TR010066/APP/6.1**) including:

- Reduction in earthwork balancing driving considerable reductions in excavation, import of fill, deposition and compaction.
- Reduction of emissions through optimisation of the pavement design and proposal for efficient construction techniques to improve longevity of the design and reduce maintenance.
- Specification of low carbon materials where applicable.

6.3.371. ES Chapter 14 (Climate) (**TR010066/APP/6.1**) concludes that the construction and operation of the Scheme will result in an increase in GHG emissions, however, the contributions of the Scheme to the UK's carbon budget for the relevant carbon budget periods are less than 0.003%, and the assessment concludes no significant effect and that the GHG emissions impact of the Scheme would not have a material impact on the UK government meeting its legally binding carbon reduction targets.

6.3.372. The Scheme has been designed to ensure the lifetime operation is as efficient as possible ensuring a whole-life low carbon scheme supporting the Applicant's ambitions.

Carbon Reduction Policy (2023)

6.3.373. The Crown Commercial Service (CCS), the biggest public procurement organisation in the UK, remains committed to the achievement of net zero emissions by 2050, which would in turn represent a substantial benefit to the CCS,

as well as their consumers, suppliers, and the wider communities.

6.3.374. The CCS's Carbon Reduction Plan (CRP) focuses on the processes that the CCS will follow to oversee its commitment to net zero emissions, as well as reduce its business-related carbon emissions. The CRP utilises the CCS's baseline information to establish a clear target for their GHG emission reduction across the planned timeframe. The CRP specifies the CCS's planned schemes to reach carbon net zero by 2050.

6.3.375. From 2019 to 2035, the CCS intends to reduce its GHG emissions from 829.791 tonnes to around 180 tonnes, which would mean a reduction of 78%. The CSS has identified several means to reach this, as well as the carbon net zero aim to 2050.

6.3.376. In accordance with the DMRB LA 114 Climate guidance document, the Applicant has sought to minimise carbon emissions in order to contribute to the UK's net reduction in carbon emissions. A baseline assessment using the National Highways Carbon Forecasting Tool (v2.5.1) has been carried out as part of the development of the Scheme. This has allowed for the consideration of carbon throughout the design process, resulting in the development of a carbon baseline from which further reductions may be made as part of the detailed design stage and through opportunities during the construction phase.

DfT Decarbonising transport: a better, greener Britain, Transport Decarbonisation Plan (2021)

6.3.377. The Transport Decarbonisation Plan (TDP) outlines the course which the DfT surmise will secure carbon net zero within travel across the UK, as well as the various benefits associated with carbon net zero travel. The DfT's TDP summarises its commitment to decarbonise transport.

6.3.378. The TDP includes a commitment to invest £15 million in 2021/22 to help address the backlog in traffic signal maintenance to improve traffic flow and reduce emissions. It also includes a commitment to review the NPS NN.

6.3.379. In accordance with the DMRB LA 114 Climate guidance document, the Applicant has sought to minimise carbon emissions in order to contribute to the UK's net reduction in carbon emissions. Through the Scheme design significant efforts to reduce emissions have occurred.

DfT Outcome Delivery Plan: 2021 to 2022 (2021)

6.3.380. The DfT remains committed to the delivery of its outcomes, which the DfT

confirmed within its Outcome Delivery Plan: 2021 to 2022 (ODP) published in July 2021. The ODP identifies several outcomes:

- Improving connectivity across the UK and growing the economy by enhancing the transport network, on time and on budget.
- Building confidence in the transport network as the country recovers from COVID-19 and improving transport users' experience, ensuring that the network is safe, reliable, and inclusive.
- Tackling climate change and improving air quality by decarbonising transport.

6.3.381. The ODP clarifies how the DfT will achieve the various outcomes, as well as how the resources will be allocated to reach each outcome.

6.3.382. Although the ODP recognises the importance of decarbonisation, as well as clear air, it also outlines the need to enhance infrastructure. The ODP will function in tandem with the DfT's Decarbonising Transport: A Better, Greener Britain to ensure the DfT's schemes will be sustainable, and that infrastructure will be resilient to climate change.

6.3.383. The Transport Assessment (**TR010066/APP/7.3**) demonstrates the Scheme is expected to increase capacity and reduce congestion on the SRN.

6.3.384. ES Chapter 14 (Climate) (**TR010066/APP/6.1**) concludes the construction, operation and use of the Scheme is predicted to increase carbon emissions by approximately 377,791 tCO_2e over the appraisal period of 60 years (up to 2087). However, the contributions of the Scheme to the UK's carbon budget for the relevant carbon budget periods are not significant, less than 0.003% (including embedded mitigation within current design), and therefore it can be concluded that the GHG emissions impact of the Scheme would not have any material impact on the UK Government meeting its legally binding carbon reduction targets.

6.3.385. ES Chapter 2 (The Scheme) (**TR010066/APP/6.1**) outlines embedded mitigation measures incorporated into the Scheme design, including using low carbon concrete kerbs, drainage outfalls and drainage chambers to help reduce carbon.

National Infrastructure Strategy Plan (2020)

6.3.386. HM Treasury, advised by the National Infrastructure Commission, presented the National Infrastructure Strategy Plan to Parliament in November 2020. It sets out the government's plans to deliver a radical improvement to the UK's infrastructure system delivering projects better, greener and faster, underpinned by high levels of government investment. It aims to:

- boost growth and productivity across the whole of the UK, levelling up and strengthening the Union
- put the UK on the path to meeting its net zero emissions target by 2050
- support private investment
- accelerate and improve delivery.

6.3.387. The foundational role of high-quality infrastructure in relation to economic growth is emphasised, particularly in current times in the UK's recovery from the COVID-19 pandemic. The 2020 Spending Review pledges £27 billion in 2021 to develop the economic infrastructure sectors, including transport. Further, it states that *"continuing to progress the UK's ambitious infrastructure plans in all parts of the country is vital to the recovery of the construction sector, and the economy as a whole".*

6.3.388. The Scheme is explicitly referenced within the National Infrastructure Strategy as one of the projects where the government is making key transport investments in England.

The Highways England License Document (2015)

6.3.389. The Highways England Licence (2015) sets out key requirements which must be complied with by the Licence holder as well as statutory guidance. In exercising its functions and complying with its legal duties and obligations, the Licence holder must act in such a manner which it considers best calculated to:

- ensure the effective operation of the network
- ensure the maintenance, resilience, renewal, and replacement of the network
- ensure the improvement, enhancement and long-term development of the network
- ensure efficiency and value for money
- protect and improve the safety of the network
- co-operate with other persons or organisations for the purposes of coordinating day-to-day operations and long-term planning
- minimise the environmental impacts of operating, maintaining and improving its network and seek to protect and enhance the quality of the surrounding environment
- conform to the principles of sustainable development
- in complying with section 4.2(g) and its general duty under section 5(2) of

the Infrastructure Act 2015 the Licence holder must have regard for the environment

- ensure that protecting and enhancing the environment is embedded into its business decision-making processes and is considered at all levels of operations
- ensure the best practicable environmental outcomes across its activities, while working in the context of sustainable development and delivering value for money
- consider the cumulative environmental impact of its activities across its network and identify holistic approaches to mitigate such impacts and improve environmental performance
- where appropriate, work with others to develop solutions that can provide increased environmental benefits over those that the Licence holder can achieve alone, where this delivers value for money
- calculate and consider the carbon impact of road projects and factor carbon into design decisions and seek to minimise carbon emissions and other GHG from its operations
- adapt its network to operate in a changing climate, including assessing, managing and mitigating the potential risks posed by climate change to the operation, maintenance and improvement of the network
- develop approaches to the construction, maintenance and operation of the Licence holder's network that are consistent with the government's plans for a low carbon future
- take opportunities to influence road users to reduce the GHG emissions from their journey choices.

Summary

6.3.390. The Scheme complies with national planning policy in that the Government has highlighted the express need for further growth and improvements to the national networks within the NPS NN and the recently published National Infrastructure Strategy Plan.

6.3.391. The criteria in Section 5 of NPS NN relating to impacts on the environment, habitat, landscape, accessibility and existing infrastructure can in most circumstances be met, with mitigation measures incorporated into the Scheme to reduce unavoidable impacts on the surrounding environment. Any residual 'significant' impacts are not without sufficient justification. Notwithstanding, the Applicant is of the opinion that the national need for and benefits of the Scheme, in that location, set out in the NPS NN clearly outweigh any loss.

6.3.392. The DfT's RIS2 lists the *A46 Coventry Junctions* as a 'committed Scheme' in the current roads period. The Highways England Delivery Plan also lists the A46 Coventry junctions within the Regional Investment Programme which is used to

deliver enhancement schemes aimed at tackling regional problems around safety, congestion and capacity.

6.3.393. The Scheme meets the environmental and sustainable objectives of the NPPF, providing mitigation where unavoidable impacts occur. The Scheme, as submitted, will lead to a decrease in overall accidents on the SRN and local road network (although a small shift towards a higher severity is seen), improve journey times and contribute to network resilience.

6.3.394. National Highways has engaged with the planning system, communities and the development industry to ensure the delivery of sustainable development and, thus, economic growth, whilst safeguarding the primary function and purpose of the SRN in line with the requirements of Circular 2/2013 The Strategic Road Network and The Delivery of Sustainable Development[3].

6.4. Sub-regional policy

Warwickshire Council Plan 2022 – 2027 (2022)

6.4.1. Warwickshire Council Plan was adopted in April 2022 and sets out the strategic priorities and areas of focus over the years between 2022 and 2027. A key consideration of the plan includes delivery of major infrastructure and improved transport The three strategic priorities include:

- For Warwickshire to have a thriving economy and places that have the right jobs, skills, education and infrastructure.
- To be a County where all people can live their best lives; where communities and individuals are supported to live safely, healthily, happily and independently.
- For the County to have a sustainable future, adapting to and mitigating climate change and meeting net zero commitments.

6.4.2. One of the seven areas of focus includes delivery of major infrastructure, digital connectivity and improved transport options. It is noted that Warwickshire boasts excellent transport links and is the hub of the motorway network, however this presents its own climate challenges. Warwickshire had the third highest CO_2 emissions per capita of all English county local authorities in 2019.

6.4.3. It is affirmed that long-term infrastructure plans will enable Warwickshire to make

[3] Circular 2/2013 The Strategic Road Network and The Delivery of Sustainable Development https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/237412/dft-circular-strategic-road.pdf

the greatest positive difference to levelling up communities. The plans will be integrated with those long-term transitions such as achieving net zero. Warwickshire has ambitions for a transport network that is be fit for purpose, well-connected, in a good condition, utilises green technology and is safe for users. The Scheme adheres to and is an enabler of these objectives.

6.4.4. The Scheme adheres to the Plan, providing a road that is fit for purpose, whilst minimising the effects on the environment.

Warwickshire Strategic Economic Plan 2024 – 2034 (2024)

6.4.5. Warwickshire Strategic Economic Plan 2024-2034 was approved on 11 April 2024. This plan seeks to create a future of inclusive and sustainable growth across the County, one where all residents can benefit, and the environment is protected. One of the priorities of this Plan is to ensure infrastructure and connectivity enables growth.

6.4.6. The Scheme will reduce congestion on the A46 this in turn will reduce negative impacts on users, local communities and the environment whilst balancing the need of individuals and businesses that use and rely upon the A46, thus having positive impacts on the economy.

Warwickshire Minerals Local Plan 2018 to 2032 (2022)

6.4.7. The Plan serves to assist in making decisions on mineral planning applications for mineral extraction, processing and restoration and is intended to be a resource that provides assistance to Boroughs and Districts to ensure minerals resources and infrastructure are not sterilised by non-mineral development. Objectives of the adopted Plan include:

- securing a steady and adequate supply of aggregates and other minerals required to support sustainable economic growth at the national, sub-regional and local level
- help deliver sustainable mineral development by promoting the prudent use and safeguarding of Warwickshire's mineral resources and help prevent sterilisation of land from non-mineral development
- encourage the use of recycled and/or secondary materials and promote waste minimisation to reduce the overall demand for primary mineral extraction for construction aggregates, by supporting proposals for the production of materials where they are consistent with the policies of the adopted Waste Local Plan.

6.4.8. The Minerals Planning Authority (MPA) have focussed on the national planning policy requirement to maintain a 10-year landbank of permitted reserves.

6.4.9. This Plan and Policies therewithin have been used to inform the baseline in section 10.8 of ES Chapter 10 (Material Assets and Waste) (**TR010066/APP/6.1**).

6.4.10. Mitigation measures in line with these policies have been included in section 10.10 of ES Chapter 10 (Material Assets and Waste) (**TR010066/APP/6.1**) that promotes the use of recycled and secondary materials to help reduce both the extraction of primary materials and generation of waste.

6.4.11. Sterilisation of mineral sites has been scoped out of further assessment in agreement with the Planning Inspectorate's Scoping Opinion (**TR010066/APP/6.8**).

Warwickshire Waste Core Strategy Adopted Local Plan 2013 to 2028 (2013)

6.4.12. The Plan sets out the Spatial Strategy, Vision, Objectives and Policies for managing waste for a 15-year period up to 2028. It provides the framework for waste development management including implementation and monitoring.

6.4.13. The Plan has eight objectives (Section 6.2, page 45), of which the following are considered applicable to ES Chapter 10 (Material Assets and Waste) (**TR010066/APP/6.1**):

- Objective 1: deliver sustainable waste management development by managing waste as a resource and by moving it up the waste hierarchy.
- Objective 2: enable the provision of waste management infrastructure to meet an identified need and ensure that the county has equivalent self-sufficiency in waste management, recognising that specialisation and economies of scale within the waste management industry will require cross boundary movements of waste.
- Objective 4: engage and empower communities in the waste planning process, ensuring that people recognise the contribution that the waste management industry makes to creating sustainable communities through waste reduction, re-use and recovering value from waste, whilst also contributing to the local economy.

6.4.14. This Plan and Policies therewithin have been used to inform the baseline in section 10.8 of ES Chapter 10 (Material Assets and Waste) (**TR010066/APP/6.1**).

6.4.15. Mitigation measures in line with these policies have been included in section 10.10 of ES Chapter 10 (Material Assets and Waste) (**TR010066/APP/6.1**) to promote the management of waste as a resource and reduce the amount of waste going to landfill.

Leicestershire County Council Minerals and Waste Local Plan (2022)

6.4.16. The Plan sets out the spatial vision and strategic objectives relating to the allocation and extraction of mineral resources within Leicestershire.

6.4.17. The source of materials that may be required by the Scheme locally is considered applicable to ES Chapter 10 (Material Assets and Waste) (**TR010066/APP/6.1**)

6.4.18. Consideration has been given to the proximity of the Leicestershire border (East Midlands region) when determining the likely amount and source of materials that may be required by the Scheme locally.

6.4.19. This Plan and Policies have been used to inform the baseline in section 10.8 of ES Chapter 10 (Material Assets and Waste) (**TR010066/APP/6.1**).

6.4.20. Mitigation measures in line with these policies have been included in section 10.10 of ES Chapter 10 (Material Assets and Waste) (**TR010066/APP/6.1**) that promotes the use of recycled and secondary materials to help reduce both the extraction of primary materials and generation of waste.

Regional environmental strategies

The Warwickshire, Coventry and Solihull Local Biodiversity Action Plan 2017 – 2022 (2018)

6.4.21. The Local Biodiversity Action Plan outlines the approach to biodiversity in these locations and sets the habitats and species of conservation concern. There are 52 action plans in total including 27 for species and 25 for habitats.

6.4.22. ES Chapter 8 (Biodiversity) **TR010066/APP/6.1**) fully assesses the impacts of the Scheme on designated sites, ancient woodland and protected and notable species and habitats. Section 8.8 of ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**) details the biodiversity baseline.

Warwickshire, Coventry and Solihull Sub-regional Green Infrastructure Strategy (2013)

6.4.23. The strategy provides evidence for the preparation of plans, policies and strategies relating to Green Infrastructure (GI) at a sub-regional level. For biodiversity the strategy identifies sub-regional GI Biodiversity Assets and identifies Strategic Areas for delivering the Biodiversity Strategy's aim to reconnect habitats throughout the sub-region. It makes the recommendation consistent with national policies and strategies to safeguard, enhance and create GI Biodiversity Assets to connect individual sub-regional GI Biodiversity assets together to form core areas creating large functional clusters of woodland, wetland and grassland habitats.

6.4.24. ES Figure 2.4, Environmental Masterplan (**TR010066/APP/6.2**) details the habitat creation for the Scheme. ES Appendix 8.1 (Biodiversity Net Gain Report) details habitat creation and its strategic significance.

Regional transport and economic strategies

Warwickshire Local Transport Plan (LTP4) (2023)

6.4.25. Warwickshire's Local Transport Plan (LTP4) was adopted by Warwickshire County Council in July 2023.

6.4.26. Active travel is high on the agenda and Warwickshire Local Transport Plan includes an Active Travel Strategy, where they encourage moving away from car dependency, which will also ease congestion on the road network.

6.4.27. Warwickshire has a relatively high level of vehicles registered per head of population. This steady and sustained increase in the number of vehicles places heavy pressure on road space. Traffic congestion increases travel time and reduces the appeal of buses as a convenient alternative to car use.

6.4.28. Warwickshire Local Transport Plan includes a Motor Vehicle Strategy. This emphasises that Warwickshire lies at the heart of England and that its central location and closeness to large manufacturing centres have given it a strategic importance in the country's transport network. It mentions that the county is crisscrossed by a SRN of motorways and trunk roads, managed by the Applicant. This includes important interchanges with the M69/A5 and the M40/A46, with some routes recognised for their wider importance, such as the A46 Trans-Midlands Trade Corridor and the A5 Midlands Logistics Corridor. The road network in Warwickshire is vital for the economy but also is vital to the environment and shapes the places people live and work. Journey times are mentioned to be a key driver of choice for some routes.

6.4.29. The Transport Plan mentions that *"Prior to the impact of the Covid pandemic, vehicle usage in Warwickshire had risen by approximately 40% compared to 1993 levels."* One of the priorities of the plan is to reduce the need to travel by car and to prioritise alternative forms of transport.

6.4.30. Warwickshire County Council says it will maintain an effective network of routes throughout the county, which will include options for travel by road, rail, air and waterway, and by all types of users. Where these are not directly controlled by Warwickshire County Council, they will use their *"influence to bring about the changes which work for Warwickshire." Their aim will be to "reduce congestion on our road network, removing barriers to productivity, supporting jobs and improving health and wellbeing by promoting safe active travel choices."*

6.4.31. Transport remains at the heart of a functioning economy and Warwickshire County Council want to continue to support Warwickshire's economy by improving accessibility to jobs, allowing the movement of freight, supporting the delivery of new infrastructure and services, and by making the County an outstanding location for business.

6.4.32. The Safer Travel Strategy seeks to ensure that everyone should be presented with travel choices which allow them to reach their destinations free from harm. As a highway authority, Warwickshire County Council's main area of responsibility focuses on road safety. Warwickshire has a Road Safety Partnership – which includes the police, other emergency services, local communities, schools and external road safety groups. This partnership method allows them to deliver a road safety strategy in an effective and joined-up.

6.4.33. The A46 is also recognised as important route for freight: *"Motorways such as the M40 and M6, along with the A46 Trans-Midlands Trade Corridor, are vital for providing links through the county to international gateways such as ports and airports throughout the UK."* The A5 and M6 corridors have many large distribution parks located near them, taking advantage of good access to the Strategic and Major Road Networks. The Transport Plan States that Warwickshire is located within the logistics 'Golden Triangle', from which 90% of the UK population can be reached within four hours' drive.

6.4.34. One of the key themes of the Local Transport Plan is improving carbon reductions from transport and the move towards Net Zero. The Plan states "*To meet the target of carbon Net Zero by 2050, car usage will need to decrease and we will have to provide alternatives to the way we travel."* Although environment is high on the agenda, the Plan seeks to ensure transport is easily accessible.

6.4.35. Traffic congestion increases travel time and reduces the appeal of buses as a convenient alternative to car use. Journey times are also mentioned to be a key driver of choice for some routes. The Scheme will reduce congestion on the A46 thus reducing journey times and therefore could encourage the appeal of public transport. Reduced congestion also supports the economy by improving accessibility to jobs, allowing the movement of freight, supporting the delivery of new infrastructure and services.

6.4.36. The overall aim of the Scheme is to alleviate strategic traffic problems and congestion, and associated safety issues, at the existing Walsgrave Junction of the A46 Coventry Eastern bypass and the B4082, east of Walsgrave.

6.4.37. The assessment in ES Chapter 12 (Population and Human Health) (**TR010066/APP/6.1**) has taken these considerations into account including the identification, assessment and evaluation of existing land uses, the movement of WCH, and the outcomes of related assessments (Section 12.11).

6.4.38. Under the long-term theme 10: Improved environment and reduced carbon through new technologies, Policy GT9 looks to "minimise noise nuisance from the transport network". The LTPs commitment to reducing ambient noise from transport network is addressed within ES Chapter 12 (Population and Human Health) (**TR010066/APP/6.1**) by adopting the use of low-noise road surfacing on the A46, as discussed in section 11.10 of ES Chapter 11 (Noise and Vibration) (**TR010066/APP/6.1**).

Midlands Connect Full Strategy (Midlands Connect Partnership) (2017)

6.4.39. The Midlands Connect Partnership spans local authorities, Local Enterprise Partnerships, business groups, the region's two main airports, National Highways, Network Rail and the Department for Transport. It also included HS2 Ltd. It sets out a transport strategy that is focused on economic outputs, setting out transformational rail, road and digital infrastructure that will power the Midlands Engine for Growth. The Strategy includes a range of proposals that would benefit the Coventry area.

6.4.40. The "Midlands Connect" initiative identified six "intensive growth corridors" and four major hubs of economic activity across the wider Midlands. Evidence from "Midlands Connect" shows that improved highway reliability and regular average speeds, and higher line speeds on inter-regional rail and highway links across the Midlands provide an economic benefit to the wider Midlands of up to £800m per annum by 2036 with 143,000 additional jobs when a ten per cent reduction in general travel costs are achieved. The schemes and measures arising from Midlands Connect technical evidence being produced for eight workstreams in 2016 will form the basis of development of this national/regional tier of the West Midlands Metropolitan Area's transport system.

6.4.41. This will be important to realise improvements between the East and West Midlands in corridors such as the A46/M69 Corridor and the A5 Corridor.

6.4.42. Midlands Connect highlights the importance of freight movements serving the West Midlands and crossing central England. It will also be invaluable in helping identify schemes to assist freight movements and to assist advanced manufacturing and other growth sectors of the West Midlands economy.

6.4.43. The Midlands Connect Corridor Study (A46 Corridor Study Phase 2 -Task 1 Final Report (November 2020)) focuses on improving the A46 corridor. The study states that the corridor supports 5.5 million people and 2.9 million jobs, contributing significantly to the English economy. The study aims to boost the economy by £7.1 billion over 60 years through targeted investments at congestion hotspots, and outlines a sequenced investment approach, including the construction of the A46 Newark Bypass and improvements to the A46 Coventry Junctions. By 2041, the corridor is expected to accommodate 600,000

new residents, 150,000 new jobs, and 250,000 new homes. Midlands Connect is also focused on decarbonising the corridor and contributing to the 'Net Zero' carbon target by 2050. This comprehensive approach aims to enhance connectivity, support economic growth, and address environmental challenges.

Movement for Growth: 2026 Delivery Plan for Transport (Transport for West Midlands) (2016)

6.4.44. The Movement for Growth strategic transport plan articulates the vision outlined in the Strategic Economic Plan and provides a high-level policy framework and overall long-term approach for improving the transport system serving the West Midlands. The plan (currently) contains details of nearly 200 schemes and initiatives representing some £8bn worth of infrastructure and technology investment in the transport system. The plan outlines various strategic transport initiatives and infrastructure improvements, including those related to the A46 corridor.

6.4.45. The A46 is highlighted as a crucial corridor for regional connectivity, linking various economic hubs and facilitating the movement of goods and people. The plan outlines proposals for upgrading the A46 to improve traffic flow and reduce congestion. This includes junction improvements and potential road widening projects. Enhancements to the A46 are seen as vital for supporting economic growth in the Midlands, particularly by improving access to Enterprise Zones and other key development sites. There is an emphasis on integrating sustainable transport options along the A46 corridor, such as improved public transport services and cycling infrastructure.

Transport for West Midlands Local Transport Plan (LTP) (2023)

6.4.46. Transport for West Midlands (TfWM) is part of the West Midlands Combined Authority (WMCA).

6.4.47. The Transport for West Midlands Local Transport Plan (LTP) (Reimagining transport in the West Midlands, Local Transport Plan Core Strategy) sets out policies to promote safe, integrated, efficient and economic transport to, from and within the area as well as plans to implement those policies. It proposes a new vision for travel in the West Midlands where people can thrive without having to drive or own a car. To get there the Core Strategy sets out the need for actions to help improve accessibility, reduce traffic, and electrify transport. This document is the Core Strategy for the fifth Local LTP for the West Midlands. It sets out the overall aims, vision and approach to guide the development and delivery of transport policies until the end of 2041.

6.4.48. The plan highlights the A46 as a key strategic corridor for the region. It includes proposals for various improvements to enhance connectivity and support economic growth including improvements at key junctions along the A46, such as the Binley and Walsgrave roundabouts, to reduce congestion and improve traffic flow.

6.4.49. The assessment in ES Chapter 12 (Population and Human Health) (**TR010066/APP/6.1**) considers the effects of the Scheme on land use, accessibility, development land and businesses (Section 12.11).

6.4.50. Under the long-term theme 10: *Improved environment and reduced carbon through new technologies,* Policy GT9 looks to "minimise noise nuisance from the transport network". The LTPs commitment to reducing ambient noise from transport network is addressed within the ES assessment by adopting the use of low-noise road surfacing on the A46, as discussed in section 11.10 of ES Chapter 11 (Noise and Vibration) (**TR010066/APP/6.1**).

6.4.51. The overall aim of the Scheme is to alleviate strategic traffic problems and congestion, and associated safety issues, at the existing Walsgrave Junction of the A46 Coventry Eastern bypass and the B4082, east of Walsgrave.

West Midlands Combined Authority Plan for Growth (2022)

6.4.52. The West Midlands Combined Authority Plan for Growth (2022) is a strategic initiative aimed at fostering economic resilience and recovery in the region. The Plan for Growth highlights that significant investments in transport aim to better connect people, places, and opportunities. The plan leverages private sector innovation and investment, supported by public initiatives, to create a conducive environment for growth. It aims to make the West Midlands the fastest-growing UK region outside London.

West Midlands Combined Authority: Five Year Plan (2021 – 2026) (2022)

6.4.53. The West Midlands Combined Authority (WMCA) Five Year Plan (2021-2026) outlines the region's strategy to achieve net zero carbon emissions by 2041, aligning with the Paris Agreement goals. Here are the key points:

- Net Zero Target: The plan sets a clear path to reach net zero by 2041, focusing on reducing carbon emissions across all sectors.
- Investment: Achieving the "Accelerated" scenario requires a gross investment of £4.3 billion by 2026, with net investment being lower due to operational savings.
- Job Creation: The plan aims to create 21,000 jobs by 2026 and 72,000 by 2041 through green initiatives.

- Sectoral Focus: It includes detailed sectoral analysis and carbon modelling to guide actions and investments1.

- Collaboration: Success depends on collaboration between regional stakeholders, devolution of powers, and additional government investment1.

6.4.54. The plan emphasises the importance of immediate and sustained action to ensure the region meets its ambitious climate goals.

6.4.55. ES Chapter 14 (Climate) (**TR010066/APP/6.1**), Section 14.5, illustrates how the Scheme would support this goal of net zero by 2041 by assessing its GHG emissions in the Scheme's opening year of 2028 and design year of 2043 to recommend mitigation measures to limit / further reduce GHG emissions as part of National Highways' policy to achieve net zero, as outlined below this table in Section 14.3.6 – 14.3.8.

6.4.56. An Outline Carbon Management Plan, Appendix B.8 of the First Iteration EMP (**TR010066/APP/6.5**), outlines the framework for managing and reducing the GHG emissions the Scheme. This document outlines the project-specific context as well as the carbon quantification methodology, carbon target review and the development of carbon mitigation strategies, of which all are required to be implemented from the outset of project development/initiation.

Summary

6.4.57. There is a strong drive in the Coventry and Warwickshire areas for sustained economic growth over the coming years to capitalise on population growth in the area, build upon the region's strong innovation and business base, deliver homes and jobs. The A46 Walsgrave Junction improvements and relief of the impacts of congestion on productivity, as part of a package of infrastructure measures, is critical to this delivery.

6.4.58. The Local Transport Plan also emphasises the interrelationship between the region's transport objectives and the delivery of wider goals relating to the economy and the environment. The Scheme is therefore an essential and integral part of the Region's drive for economic success articulated in the objectives of the various sub-regional policy documents.

6.5. Local policy

Coventry Local Plan 2011-2031 (2017)

6.5.1. The Coventry Local Plan, adopted on December 6, 2017, serves as a statutory document guiding the city council's decisions on planning applications. It encompasses the council's strategies and policies, including those related to

transport, ensuring development aligns with the city's vision and regulatory requirements. SPDs support the Local Plan, detailing specific policies and guidelines.

6.5.2. The Local Plan embraces this growth and identifies land for new homes, new jobs and ne retail and community uses. It also plans proactively for the removal of land from the city's Green Belt in the first time in 50 years, to help facilitate growth and development as well as creating high quality urban and natural environments for those wishing to live and work in Coventry. This includes two significant urban extensions to the north and west of the city.

6.5.3. The Local Plan states that this growth will also be supported by new, high-quality infrastructure to combat congestion and transport issues.

6.5.4. Coventry is well connected to the national road network having good access to the A46/M40, M69, M6, M45/M1 and M42. The Local plan states that "*Highways England* (National Highways) *manage the strategic road network which surrounds Coventry and is crucial to its national connectivity needs. This includes the A46 corridor which has been designated as an Expressway in the Highways England Road Investment Strategy".* The Local Plan comments on the A46 new junction, and states that *"The road network will continue to cater for the largest proportion of strategic freight, business and leisure trips including the M6, A45/M1 and A46/M40."* It says: *"Further improvements are planned at Brandon Road and Walsgrave near the B4082 to introduce grade separation to improve traffic flow" and "Future capacity enhancements on the strategic highway network which support Coventry's economic growth proposals will be supported."*

6.5.5. The Local Plan notes that the Office for National Statistics recognises Coventry as the fastest growing city outside of Greater London, with job creation continuing to grow and the city's two universities thriving. This Plan embraces this growth and identifies land for new homes, new jobs and new retail and community uses. For the first time in over 50 years the Council is planning proactively for the removal of land from the city's Green Belt to help facilitate growth and development as well as creating high quality urban and natural environments for those wishing to live and work in Coventry. This includes two significant urban extensions to the north and west of the city.

6.5.6. The Local Plan states that Coventry's population is projected to grow by in excess of 89,000 people between 2011 and 2031, with growth in the working age population of approximately 48,000 people.

6.5.7. To facilitate this growth, the Local Plan recognises that new, high-quality infrastructure is required to combat congestion and transport issues.

6.5.8. The overarching vision of this Local Plan reflects the Council's wider corporate plan (The Council Plan). "*COVENTRY – A top ten City that is globally connected and locally committed*." The A46 Scheme will assist in improving the connectivity of Coventry.

6.5.9. One of the Local Plan objectives is maintaining and enhancing an accessible transport network, supported by a series of sub-objectives, as follows:

- *Providing a transport network that enhances the city's accessibility, efficiency, safety and sustainability;*
- *Continuing to improve links with the city centre and to provide better connection to green spaces within Coventry; and*
- *Increasing the range of opportunities for people to access arts and culture, sports and leisure, music and events and other activities. The Local Plan recognises that the local transport system will play a critically important role in supporting major housing and jobs growth in Coventry and the Council's ambition to become a 'top ten city'. The Plan therefore advocates more detailed and descriptive guidance to govern planning decisions and agreements."*

6.5.10. Coventry Local Plan Policies of relevance are shown in Table 6-1.

Table 6-1: Coventry City Council Local Plan (2017) Policies

Policy	Policy Summary	How the Scheme adheres to policy
Policy DS1 Overall Development Needs	This policy sets out the levels of required development in housing, housing, employment and retail development, which will be planned for, and the supporting infrastructure and environmental enhancements.	Although not specifically listed in DS1, the Scheme provides infrastructure required to enable other development in the Coventry area.
Policy DS3 Sustainable	This states that when considering development proposals, the Council	Overall, the benefits of the Scheme are considered by the Applicant to

Policy	Policy Summary	How the Scheme adheres to policy
Development Policy	will take a positive approach that reflects the presumption in favour of sustainable development contained in the NPPF. It will work proactively with applicants to find solutions to enable proposals to be approved wherever possible, and to secure development that improves the economic, social and environmental conditions in the area including sustainable waste management.	outweigh any unavoidable adverse effects as shown in Section 6.3 of this Case for the Scheme. An Outline Carbon Management Plan, Appendix B.8 of the First Iteration EMP (**TR010066/APP/6.5**), outlines the methodology to identify opportunities to reduce carbon emissions that would also offer opportunities for economic, social and environmental improvements, such as creating wetland habitats, promoting low carbon material use and investing in carbon innovations.
Policy DS4 (Part A) General masterplan principles	General principles to be adhered to when master planning any major development proposal incorporate innovative and creative approaches waste management solutions to make new developments more sustainable and resistant to the impacts of climate change. The General Principles include: *vi. Identify appropriate highway infrastructure along with sustainable transport corridors that include the provision for integrated public transport, cycling and walking which provides excellent connectivity and linkages to within the site itself, the city centre and with the surrounding area and existing networks;…..* *xii. Provide fully integrated, accessible and connected multi-functional green and blue infrastructure which forms strategically important links to the surrounding area to provide routes for people and wildlife and open spaces for sports, recreation and play;….* Where appropriate incorporate innovative and creative approaches to energy generation, the provision of utilities and information technology, mitigation of pollutants, management of surface water and	With regards to the waste aspects of this policy, this Plan and Policies therewithin have been used to inform the baseline in section 10.8 of ES Chapter 10 (Material Assets and Waste) (**TR010066/APP/6.1**). Mitigation measures in line with these policies have been included in section 10.10 to promote the management of waste as a resource and reduce the amount of waste going to landfill. With regards to WCH requirement, the provision of highway infrastructure including space for a potential future provision of a walking and cycling route is detailed in ES Chapter 2 (The Scheme) (**TR010066/APP/6.1**). The Scheme also includes a signalised pedestrian crossing of the B4082 at the Clifford Bridge Road roundabout to facilitate north-south movements to the eastern side of the roundabout for pedestrians. The retention of Hungerley Hall Farm accommodation bridge will also allow enabling infrastructure for a future connection into the Coombe Abbey Park if this is progressed by others. This assessment evaluates the impact of the Scheme on walking and cycling routes which is presented in section 12.11 of ES Chapter 12 (Population and Human Health)

Policy	Policy Summary	How the Scheme adheres to policy
	flood risk and waste management solutions.	(**TR010066/APP/6.1**). Water quality and flood risk have been considered within ES Chapter 13 (Road Drainage and the Water Environment) (**TR010066/APP/6.1**), ES Appendix 13.1 (Flood Risk Assessment) (**TR010066/APP/6.3**) and ES Appendix 13.3 (Water Quality Assessment) (**TR010066/APP/6.3**).
Policy HW1 Health Impact Assessments (HIA)	This states that all major development proposals will be required to demonstrate that they would have an acceptable impact on health and wellbeing. This should be demonstrated through a HIA Screening Report which demonstrates that the proposed development would not overall give rise to negative impacts in respect of health and wellbeing.	These issues are addressed in ES Chapter 12 (Population and Human Health) (**TR010066/APP/6.1**). See response to Policy DS 4. A health assessment has been undertaken as part of this EIA. This assessment evaluates the impact of the Scheme on the health of the local population which is presented in section 12.11 of ES Chapter 12 (Population and Human Health) (**TR010066/APP/6.1**).
Policy GB1 Green Belt and Local Green Space	The policy identifies that the city's most up-to-date Green Belt and Local Green Space boundaries are shown on the Policies Map. 2A: Inappropriate development will not be permitted in the Coventry Green Belt unless very special circumstances exist.	The justification of the development of the Scheme in the Green Belt is detailed in Section 6.3 of this document.
Policy GE1 Green Infrastructure	This states new development proposals should make provision for green infrastructure to ensure that such development is integrated into the landscape and contributes to improvements in connectivity and public access, biodiversity, landscape conservation, design, archaeology and recreation. Coventry's existing and planned network of green infrastructure should be used as a way of adapting to climate change through the management and enhancement of existing habitats. New development will be expected to maintain the quantity, quality and functionality of	ES Chapters 8 (Biodiversity) and 7 (Landscape and Visual Effects) (**TR010066/APP/6.1**) demonstrate how the Scheme protects and enhances habitats and landscapes and green infrastructure its vicinity. ES Figure 2.4, Environmental Masterplan (**TR010066/APP/6.3**) details habitat creation as part of the Scheme. Table 8-17 of ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**) details the change in habitat areas a result of the Scheme The provision of highway infrastructure including space for potential future provision of a

Policy	Policy Summary	How the Scheme adheres to policy
	existing green infrastructure. Policy GE1 Green Infrastructure states *"2. New development proposals should make provision for green infrastructure to ensure that such development is integrated into the landscape and contributes to improvements in connectivity and public access, biodiversity, landscape conservation, design, archaeology and recreation."* GE1 also asks developers to consider flood risk management and improving surface water quality.	walking and cycling route is detailed in ES Chapter 2 (The Scheme) (**TR010066/APP/6.1**). The Scheme also includes a signalised pedestrian crossing of the B4082 at the Clifford Bridge Road roundabout to facilitate north-south movements to the eastern side of the roundabout for pedestrians. The retention of Hungerley Hall Farm accommodation bridge will also allow a potential future connection into the Coombe Abbey Park if this is progressed by others. This assessment evaluates the impact of the Scheme on walking and cycling routes which is presented in section 12.11 of ES Chapter 12 (Population and Hunam Health) (**TR010066/APP/6.1**). Water quality and flood risk are considered within ES Chapter 13 (Road Drainage and the Water Environment) (**TR010066/APP/6.1**), ES Appendix 13.1 (Flood Risk Assessment) (**TR010066/APP/6.3**) and ES Appendix 13.3 (Water Quality Assessment) (**TR010066/APP/6.3**).
Policy GE2 Green Space	*GE2: Green Space states:* *"1. Development involving the loss of green space that is of value for amenity, recreational, outdoor sports and/or community use will not be permitted unless specifically identified as part of a strategic land use allocation, or it can be demonstrated that:* *a. An assessment showing there is no longer a demand, or prospect of demand, for the recreational use of the site or any other green space use; or* *b. A deficiency would not be created through its loss, measured against the most up-to-date Coventry Green Space standards; or* *c. The loss resulting from any proposed development would be replaced by equivalent or better*	A description of the green spaces is presented in section 12.8 of ES Chapter 12 (Population and Hunam Health) (**TR010066/APP/6.1**) and the assessment of the impact of the Scheme on green spaces is presented in section 12.11.

Policy	Policy Summary	How the Scheme adheres to policy
	provision in terms of quantity and quality in a suitable location of the city. *2. To support the proposed allocations at H2:19 and JE2:4 the following sites are allocated for the provision of new replacement sports pitches: a. Land at Charter Avenue (former Alderman Harris School site). B. Land east of Coundon Wedge Road."*	
Policy GE3 Biodiversity, Geological, Landscape and Archaeological Conservation	States that designated sites, including Sites of Special Scientific Interest (SSSIs) will be protected and enhanced. This concerns land to the east of the Scheme. Proposals for development on other sites, having biodiversity or geological conservation value, will be permitted provided that they protect, enhance and/or restore habitat biodiversity. Development proposals will be expected to ensure that they: lead to a net gain of biodiversity, where appropriate.	These issues are addressed in ES Chapter 8 (Biodiversity), and ES Chapter 7 (Landscape and Visual Effects) (**TR010066/APP/6.1**). ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**) fully assesses the impacts of the Scheme on designated sites, ancient woodland and protected species. Section 8.10 of this ES Chapter details Scheme mitigation for ecological features. Section 8.13 details residual effects. ES Appendix 8.1 (Biodiversity Net Gain Report) (**TR010066/APP/6.3**) details the BNG assessment undertaken for the Scheme. To avoid, reduce or remediate (offset) potential effects on the landscape and ecological receptors, embedded mitigation measures and essential mitigation measures for this aspect have been developed as presented within Section 7.10 of ES Chapter 7 (Landscape and Visual Effects) (**TR010066/APP/6.1**). These are shown on ES Figure 2.4 Environmental Masterplan (**TR010066/APP/6.2**). Mitigation measures of relevance are included within the First Iteration EMP (**TR010066/APP/6.5**) which is secured through the draft DCO (**TR010066/APP/3.1**).
Policy GE4 Tree Protection –	1. Development proposals will be	Details of the Scheme's impact on trees and hedgerows is presented in

Policy	Policy Summary	How the Scheme adheres to policy
Part 1 and 2	positively considered provided: a. there is no unacceptable loss of, or damage to, existing trees or woodlands during or as result of development, any loss should be supported by a tree survey b. trees not to be retained as a result of the development are replaced with new trees as part of a well-designed landscape scheme; and c. existing trees worthy of retention are sympathetically incorporated into the overall design of the scheme including all necessary measures taken to ensure their continued protection and survival during construction. 2. Development proposals that seek to remove trees that are subject to 'Protection', without justification, will not be permitted.	ES Appendix 7.4 (Arboricultural Impact Assessment) (**TR010066/APP/6.3**). ES Appendix 7.4 also includes the works and protection afforded to a veteran tree, and a TPO at Coombe Abbey Park. To avoid, reduce or remediate (offset) potential effects on the landscape, embedded mitigation measures and essential mitigation measures for this aspect have been developed as presented within Section 7.10 of ES Chapter 7 (Landscape and Visual Effects) (**TR010066/APP/6.1**). These are shown on ES Figure 2.4 Environmental Masterplan (**TR010066/APP/6.2**). Mitigation measures of relevance are included within the First Iteration EMP (**TR010066/APP/6.5**) which is secured through the draft DCO (**TR010066/APP/3.1**).
Policy DE1 Ensuring High Quality Design	This policy seeks that all development proposals must respect and enhance their surroundings and positively contribute towards the local identity and character of an area. All development will be expected to meet several key principles including being proactive in responding to climate change and adopt sustainable and low carbon construction principles and minimise adverse impact on important natural resources.	The Scheme Design Report (**TR010066/APP/7.4**) fully demonstrates why the preferred option was chosen, taking into account environmental effects. With regards to landscape and visual effects, embedded mitigation measures and essential mitigation measures for this aspect have been developed as presented within Section 7.10 of ES Chapter 7 (Landscape and Visual Effects) (**TR010066/APP/76.1**). These are shown on ES Figure 2.4 Environmental Masterplan (**TR010066/APP/6.2**). The environmental design has been developed to integrate the Scheme into the existing landscape setting with the use of hedgerows, woodland (roadside belts), individual trees and grassland areas. Mitigation measures of relevance are included within the First Iteration EMP

Policy	Policy Summary	How the Scheme adheres to policy
		(**TR010066/APP/6.5**) which is secured through the draft DCO (**TR010066/APP/3.1**). This Plan and Policies therewithin have been used to inform the baseline in section 10.8 of ES Chapter 10 (Material Assets and Waste) (**TR010066/APP/6.1**). Mitigation measures in line with these policies have been included in section 10.10 of ES Chapter 10 to promote the management of waste as a resource and reduce the amount of waste going to landfill. With regards to climate, the Scheme has been designed to prevent consequential impacts from adaptation measures. The adaptation measures have been discussed within the Design, mitigation and enhancement measures section in ES Chapter 14 (Climate) (**TR010066/APP/6.1**). An Outline Carbon Management Plan, Appendix B.8 of the First Iteration EMP (**TR010066/APP/6.5**) has also been submitted as part of the Application, it outlines the framework for managing and reducing the GHG emissions of the Scheme. This document outlines the project-specific context as well as the carbon quantification methodology, carbon target review and the development of carbon mitigation strategies, of which all are required to be implemented from the outset of project development/initiation.
Policy HE2 Conservation and Heritage Assets	This details that in order to help sustain the historic character, sense of place, environmental quality and local distinctiveness of Coventry, development proposals will be supported where they conserve and, where appropriate, enhance those aspects of the historic environment which are recognised as being of special historic, archaeological, architectural, artistic, landscape or townscape	This policy relates to the land and heritage assets to the west of the scheme. ES Chapter 6 (Cultural Heritage) (**TR010066/APP/6.1**) demonstrates the impacts of the Scheme on the heritage environment. This ES Chapter fully assesses the impacts of the Scheme on the cultural heritage features. The cultural heritage features

Policy	Policy Summary	How the Scheme adheres to policy
	significance.	assessed within ES Chapter 6 (Cultural Heritage) are detailed within the baseline conditions in section 6.8. Further detail is provided in Appendix 6.1 (Cultural Heritage Information) (**TR010066/APP/6.3**). Mitigation measures are detailed in section 6.10 of ES Chapter 6and the assessment of likely significant effects is detailed in section 6.11. Mitigation is also included in the REAC contained within the First Iteration EMP (**TR010066/APP/6.5**). The First Iteration EMP will be developed into the Second Iteration EMP for implementation during construction and is secured by Requirement 4 of the draft DCO (**TR010066/APP/3.1**).
Policies AC1, AC2 and AC3 concern the transport network in Coventry	Policy AC1: Accessible Transport Network sets out requirements development proposals which are expected to generate additional trips on the transport network. These are expected to integrate with existing transport networks including roads, public transport and walking and cycling routes to promote access by a choice of transport modes. They must consider the transport and accessibility needs of everyone living, working or visiting the city and support the delivery of new and improved high quality local transport networks which are closely integrated into the built form. Policy AC2: Road Network provides requirements for new development proposals which are predicted to have a negative impact on the capacity and/or safety of the highway network. The Coventry Local Plan highlights the council's partnership with the Low Emissions Towns and Cities programme (LETCP) and sets out their aims with regards to air quality.	The Scheme will provide improvements to the road network and have wider community benefits. The introduction of the Scheme leads to a decrease in overall accidents (although a small shift towards a higher severity is seen). Section 4 of this report provides further details with regards to the Transport benefits of the Scheme and a full Transport Assessment (**TR010066/APP/7.3**) has been undertaken which includes further details that relate to these policies. With regards to Policy AC2, the assessment in ES Chapter 5 (Air Quality) (**TR010066/APP/6.1**) has been completed with reference to DMRB LA105. By association, it aligns with these policies by assessing the potential for significant effects on air quality (i.e. potential for decline in air quality) during both the construction and operation phases. Where appropriate, mitigation measures are detailed. (These are presented in sections 5.5, 5.9 and 5.10 of ES Chapter 5). Non-road mobile machinery (NRMM) emission

Policy	Policy Summary	How the Scheme adheres to policy
	Policies relevant to air quality within the Local Plan include Policy AC2, which states that development proposals which are likely to impact the capacity of a road network should mitigate traffic growth to ensure the development does not cause an unacceptable decline in air quality. Policy AC2 also states that mitigation measures should firstly promote sustainable modes of transport and secondly deliver highway capacity interventions. Policy AC3: Demand Management states Transport Assessments will be required for developments which generate significant additional trips on the transport network. Travel Plans will be required for new developments which generate significant additional traffic movements. New development proposals which require changes to the highway network will be required to integrate with any existing UTMC and ITS infrastructure and strategy and development of the Key Route Network.	standard controls have been included within the EMP for the construction phase.
Policy AC4 Walking and Cycling	Development proposals should incorporate appropriate safe and convenient access to walking and cycling routes. Where these links do not exist, new and upgraded routes will be required and these must appropriately link into established networks to ensure that routes are continuous. The expected type of provision will depend on the scale, use and location of the site. This policy states: *"1. Development proposals should incorporate appropriate safe and convenient access to walking and cycling routes. Where these links do not exist, new and upgraded routes will be required and these must appropriately link into established networks to ensure that routes are continuous. The expected type of*	The Scheme provides enabling works (i.e. verge widening) to accommodate a potential new walking and cycling route to come forward in the future. More details are provided in ES Chapter 12 (Population and Human Heath) (**TR010066/APP/6.1**). The provision of highway infrastructure including space for future provision of a walking and cycling route is detailed in ES Chapter 2 (The Scheme) (**TR010066/APP/6.1**). The Scheme also includes a signalised pedestrian crossing of the B4082 at the Clifford Bridge Road roundabout to facilitate north-south movements to the eastern side of the roundabout for pedestrians. The retention of Hungerley Hall

Policy	Policy Summary	How the Scheme adheres to policy
	provision will depend on the scale, use and location of the site. For larger developments, financial contributions may be required to support improved pedestrian and /or cycling routes on the wider network. Further details will be set out in the Coventry Connected SPD."	Farm accommodation bridge will also allow a potential future connection into the Coombe Abbey Park if this is progressed by others. This assessment evaluates the impact of the Scheme on walking and cycling routes which is presented in section 12.11 of in ES Chapter 12 (Population and Human Heath) (**TR010066/APP/6.1**).
Policy EM1 Planning for Climate Change Adaptation	New development design in relation to climate change - all development is required to be designed to be resilient to, and adapt to the future impacts of, climate change. Optimising the use of multi-functional green infrastructure, including tree planting for urban cooling, local flood risk management and shading is encouraged, as well as incorporating water efficiency measures, and minimising vulnerability to flood risk and incorporating sustainable drainage. Similarly, Policy EM4 Flood Risk Management states that all major developments must be assessed in respect of the level of flood risk from all sources. All opportunities to reduce flood risk in the surrounding area must be taken, including creating additional flood storage. A Flood Risk Assessment is required, appropriate to the scale and nature of the development proposed. Policy EM5 Sustainable Drainage Systems (SuDS) requires all development to apply SuDS ensure that surface water runoff is managed as close to its source as possible.	These issues are addressed in ES Chapter 13 (Road Drainage and the Water Environment) (**TR010066/APP/6.1**) and ES Appendix 13.1 (Flood Risk Assessment) (**TR010066/APP/6.3**). ES Chapter 14 (Climate) (**TR010066/APP/6.1**) Section 14.10 outlines the climate resilience assessment. The Outline Carbon Management Plan, Appendix B.8 of the First Iteration EMP (**TR010066/APP/6.5**), states the reporting requirements throughout project lifecycle.
Policy EM2 Building Standards	This policy requires proposed developments to acknowledge the need for conserving water and minimising flood risk including flood resilient construction.	This has been considered for flood risk within ES Chapter 13 (Road Drainage and the Water Environment) (**TR010066/APP/6.1**) and ES Appendix 13.1 (Flood Risk Assessment) (**TR010066/APP/6.3**).

Policy	Policy Summary	How the Scheme adheres to policy
Policy EM4 Flood Risk Management	All major developments must be assessed in respect of the level of flood risk from all sources. Opportunities to reduce flood risk in the surrounding area must be taken, including creating additional flood storage. For sites in Flood Zone 3a, development should not impede flow routes, reduce floodplain storage, or consume flood storage in a 'flood cell' within a defended area without appropriate compensatory floodplain storage elsewhere. Development should ensure that it would not prevent the water bodies' ability to reach good status and should support, where feasible, improving the status class.	This has been considered for flood risk within ES Chapter 13 (Road Drainage and the Water Environment) (**TR010066/APP/6.1**) and ES Appendix 13.1 (Flood Risk Assessment) (**TR010066/APP/6.3**).
Policy EM5 Sustainable Drainage Systems (SuDS)	All development must apply SuDS and should ensure that surface water runoff is managed as close to its source as possible. All development should carry out infiltration tests and a ground water risk assessment, including seasonal groundwater monitoring, to demonstrate whether infiltration is possible, and that ground water would not be polluted to Environment Agency and LLFA requirements.	This has been considered for water quality within ES Chapter 13 (Road Drainage and the Water Environment) (**TR010066/APP/6.1**) and ES Appendix 13.4 (Groundwater Assessment) (**TR010066/APP/6.3**). Climate change has been considered in the drainage design in accordance with DMRB and current government guidance. The details are in the Flood Risk Assessment (ES Appendix 13.1 (**TR010066/APP/6.3**) of ES Chapter 13 (Road Drainage and the Water Environment) (**TR010066/APP/6.1**).
Policy EM6 Redevelopment of Previously Developed Land.	Development will be permitted where proposals do not have a negative impact on water quality, either directly through pollution of surface or ground water or indirectly through the treatment of wastewater by whatever means. Developers and operators must provide adequate information when submitting their proposals so that the potential impact on groundwater resources and quality can be adequately assessed. Development will not be permitted within a groundwater Source Protection Zone 1 which would physically	This has been considered for water quality within ES Chapter 13 (Road Drainage and the Water Environment) (**TR010066/APP/6.1**), ES Appendix 13.3 (Water Quality Assessment) (**TR010066/APP/6.3**) and ES Appendix 13.4 (Groundwater Assessment) (**TR010066/APP/6.3**). A controlled waters risk assessment has been undertaken and is presented in ES Appendix 9.3 (Ground Investigation Report) (**TR010066/APP/6.3**).

Policy	Policy Summary	How the Scheme adheres to policy
	disturb an aquifer.	A Water Frameworks Directive (WFD) assessment has been undertaken and is presented in ES Appendix 13.2 (Water Framework Directive Compliance Assessment) (**TR010066/APP/6**.3). This assessment has been undertaken in accordance with the requirements of Environment Agency, Land Contamination Risk Management.
Policy EM7 Air Quality	This policy requires that all major development proposals should be suitably planned to design out any adverse impact on air quality and be in accordance with the West Midlands Transport Emissions Framework and associated policies and require the submission of an air quality assessment. Policy EM7 includes information relating to air quality impacts from major developments and includes a that 'a supplementary planning document will be developed to support this Policy' in the form of the Coventry City Council Air Quality Supplementary Planning Document, 2019. This supplementary guidance provides information on mitigation measures include which are relevant to non-road mobile machinery (NRMM) to meet minimum emission standards in Table 6. These are the same as the standards presented in the Rugby Borough Council Air Quality Supplementary Planning Document, 2021.	An air quality assessment has been undertaken for the Scheme (ES Appendices 5.1 - 5.3 (**TR010066/APP/6.3**) and further details are provided in ES Chapter 5 (Air Quality) (**TR010066/APP/6.1**). See response to EM1 above.
Policy EM8 Waste Management	This provides details required by The Council's Waste Management Strategy when building new development. Consumption of raw materials through the reduction and re-use of waste products is encouraged. The Council supports the recycling proposals for aggregate materials. Development proposals should demonstrate	These issues are addressed respectively in ES Chapter 10 (Materials, Assets and Waste) (**TR010066/APP/6.1**). This Plan and Policies therewithin have been used to inform the baseline in section 10.8 of ES Chapter 10. Mitigation measures in line with these policies have been

Policy	Policy Summary	How the Scheme adheres to policy
	measures to minimise the generation of waste in construction and promote more sustainable approaches to waste management, including the reuse and recycling of construction waste. Policy EM8 states that 'Development proposals should demonstrate measures to minimise the generation of waste in the construction, use and life of buildings and promote more sustainable approaches to waste management, including the reuse and recycling of construction waste and the promotion of layouts and designs that provide adequate space to facilitate waste storage, reuse, recycling and composting.'	included in section 10.10 of ES Chapter 10 to promote the management of waste as a resource and reduce the amount of waste going to landfill. The Outline Carbon Management Plan, Appendix B.8 of the First Iteration EMP (**TR010066/APP/6.5**), details the carbon management hierarchy which will be applied. Within this is 'Improve' which considers circular economy principles. The Carbon Management Plan also highlights that the questions related to re-use and waste minimisation will be raised in the carbon reduction workshops. Waste carbon emissions will be reported at agreed intervals throughout the project.
Policy EM9 Safeguarding mineral resources	Policy EM9: Safeguarding mineral resources states: *"The Council's Mineral Safeguarding Areas are defined for mineral reserves that are considered to be of current or future economic importance. Where developments are proposed in these areas, the application needs to acknowledge the presence of these mineral reserves."*	Mineral Safeguarding Areas have been scoped out of further assessment in agreement with the Planning Inspectorate's Scoping Opinion (**TR010066/APP/6.8**).
Policy EM10: Non mineral development in mineral safeguarded areas	Policy EM10: Non mineral development in mineral safeguarded areas states: *"All non-mineral development proposals in the designated Mineral Safeguarding Areas should assess and evaluate the legacy of past mining heritage'. 'It should also ensure that development does not entirely sterilise any potential future mineral extraction should this become viable and desirable. This should be considered in partnership with the Coal Authority."*	See response to EM9 above.

6.4.1. The Walsgrave Hill Farm Housing Allocation H2:3 is to the west of the A46 and the north of the B4082 this includes the retention listed buildings at Hungerley

Hall Farm. The Local Plan states that the site will also incorporate blue light access linking the A46 to the University Hospital Coventry and facilitate and work with National Highways on highways proposals linked to a new grade separated junction at Clifford Bridge. There will be provision of essential drainage and flood risk infrastructure.

6.4.2. The Local Plan states that a comprehensive and independently developed strategic transport model has been carried out by WSP Planning Consultants to assess the impact of planned development proposals on the highway network over the plan period. The model assessed the impact of the expected additional trip generation from planned residential and commercial development on the local highway network. The model was used to firstly assess the proposed growth on a 2013 road network plus 'committed' schemes. The schemes of greatest significance included: Walsgrave: Proposed inclusion of a new blue light access linking the A46 to the University Hospital Coventry as part of a new grade separated junction to replace the existing Clifford Bridge Road roundabout. The results showed that although total vehicle kilometres increase, the overall uplift in journey making is indicative of the improved connectivity across Coventry which will support increased economic growth and activity. The most affected routes and junctions are primarily focused in the north-west of the city close to the periphery of the city centre, and to a lesser extent on major strategic corridors in the south and east of the city including the A45 and A46 corridors. This correlates with the anticipated increase in trips associated with the sites in the west and northwest of the city at Eastern Green and Keresley and with planned employment growth in the south and east of the city including the University of Warwick, Whitley and Ansty Park.

6.4.3. The Coventry City Local Plan is currently under review to ensure that the plan remains up-to-date and aligns with national policies and local priorities. The review process is ongoing, and the updated plan was expected to be released in 2024.

6.4.4. In addition, the Council have developed the One Coventry Plan, which is a strategic framework to guide the city's development and improvement from 2022 to 20301. The plan focuses on three main delivery priorities:

- Improving outcomes and tackling inequalities within communities.
- Enhancing the economic prosperity of the city and surrounding regions.
- Addressing the causes and consequences of climate change.

6.4.5. Additionally, the plan emphasises two enabling priorities:

- Ensuring the financial sustainability of the Council.

- Strengthening the Council's role as a partner, enabler, and leader.

6.4.6. The One Coventry Plan aims to create a collaborative approach, working with residents, businesses, and other stakeholders to make Coventry a better place to live, work, and study.

6.4.7. The Scheme also supports Coventry City Council's Safer Travel Strategy as it will improve reduce the number of accidents on the SRN and local road network (although a small shift towards a higher severity is seen) and operational issues by upgrading the Walsgrave Junction and providing safer access onto the A46 from new slip roads and will be built to modern standards as set out in the DMRB. The Transport Case for the Scheme (Section 4) of this document and the Transport Assessment (**TR010066/APP/7.3**) provide more detail on the safety benefits.

Coventry Infrastructure Delivery Plan (2017)

6.4.8. The Coventry Infrastructure Delivery Plan (IDP) is a key component of the city's Local Plan, which outlines development goals up to 2031. The IDP details the necessary infrastructure to support this growth, including:

- Housing and Jobs: Identifying where new homes and employment opportunities will be created.
- Services and Facilities: Ensuring the provision of essential services like healthcare, education, and community facilities.
- Transport: Improving transport networks to facilitate better movement of people and goods.
- Environmental Sustainability: Incorporating green spaces and sustainable practices to enhance the living environment1.

6.4.9. The plan also specifies the timing, costs, and funding sources for these infrastructure projects. The IDP specifically mentions the significant A46 upgrades to the A46 corridor, particularly focusing on improving junctions at Binley and Walsgrave.

Coventry Connected Supplementary Planning Document (SPD) (2018)

6.4.10. The Coventry Connected SPD provides further guidance to support Policies LPAC1 – LPAC4 of the Coventry Local Plan (2017) and sets out Coventry's long term spatial vision for how the city will grow, develop and change and how this vision will be delivered through a strategy for promoting, distributing and delivering sustainable development in relation to accessibility. Overall, the objective of this

SPD is to ensure that forecasted growth in Coventry can be achieved through a series of developments that support and enhance the city's transport network.

6.4.11. Its content has been taken into account in the Scheme design, as detailed in the Scheme Design Report (**TR010066/APP/7.4**), the preparation of the Transport Assessment (**TR010066/APP/7.3**) and ES Chapter 12 (Population and Human Health) (**TR010066/APP/6.1**). In addition, in line with this SPD, an Outline Traffic Management Plan (**TR010066/APP/7.5**) is submitted with the application for this Scheme.

6.4.12. The Council's Local Plan is supported by a number of other SPDs in addition to this Coventry Connected document. The Health Impact Assessment (HIA) SPD is of particular importance to this SPD and the Scheme, health impacts of the Scheme are considered in ES Chapter 12 (Population and Human Health) (**TR010066/APP/6.1**).

6.4.13. The overall aim of the Scheme is to alleviate strategic traffic problems and congestion, and associated safety issues, at the existing Walsgrave Junction of the A46 Coventry Eastern bypass and the B4082, east of Walsgrave.

6.4.1. This assessment in ES Chapter 12 (Population and Human Health) (**TR010066/APP/6.1**) considers the effects of the Scheme on land use, accessibility, development land and businesses (Section 12.11).

Trees & Development Guidelines for Coventry Supplementary Planning Document (SPD) (2020)

6.4.2. This SPD builds upon Coventry Local Plan (2011-2031) polices in relation to trees within Coventry and their preservation and protection in relation to developments. Details of the Scheme's impact on trees and hedgerows is presented in ES Appendix 7.4 (Arboricultural Impact Assessment) (**TR010066/APP/6.3**). ES Appendix 7.4 also includes the works and protection afforded to a veteran tree, and a TPO at Coombe Abbey Park.

Coventry City Biodiversity Net Gain Supplementary Planning Document (SPD) (2022)

6.4.3. This SPD Provides more detailed guidance regarding Local Plan Policy GE3 and its four main aims. It also details how development can avoid loss of biodiversity and thereafter offset loss.

6.4.4. ES Appendix 8.1 (Biodiversity Net Gain Report) (**TR010066/APP/6.3**) details the BNG assessment undertaken for the Scheme.

Air Quality Supplementary Planning Document (SPD) (2019)

6.4.5. Coventry Local Plan Policy EM7 includes information relating to air quality impacts from major developments and includes a that 'a supplementary planning document will be developed to support this Policy' in the form of the Coventry City Council Air Quality Supplementary Planning Document, 2019. This supplementary guidance provides information on mitigation measures include which are relevant to non-road mobile machinery (NRMM) to meet minimum emission standards in Table 6. These are the same as the standards presented in the Rugby Borough Council Air Quality Supplementary Planning Document, 2021.

6.4.6. This assessment in ES Chapter 5 (Air Quality) (**TR010066/APP/6.1**) has been completed with reference to DMRB LA105. By association, it aligns with these policies by assessing the potential for significant effects on air quality (i.e. potential for decline in air quality) during both the construction and operation phases. Where appropriate, mitigation measures are

Rugby Borough Council Local Plan 2011-2031 (2019)

6.4.7. Rugby Borough Council Local Plan, adopted in June 2019 sets out the Council's policies and proposals to support the development of the Borough through to 2031. The Local Plan was informed by a detailed understanding of Rugby Borough, including the makeup of its population, the local environment and economy. The Local Plan states that between 2001- 2011 the borough's population increased significantly by 14.8% to around 100,496.). The rise in population was largely due to people migrating into the area and more single parent families, but also as a result of increased birth rate and people living longer. The projected population increase between 2011 and 2031 is expected to be 15.5%, which would bring the population to around 115,236.

6.4.8. The Local Plan states that the growth that Rugby Borough needs to accommodate over the period of the Local Plan needs to be delivered in a sustainable way.

6.4.9. The strategy promotes modal shift towards public transport and low and zero emission vehicles. The Local Plan recognises that improved transport infrastructure is required to support growth to 2031.

6.4.10. The policies of the Local Plan that are relevant to the Scheme are shown in Table 6-2.

Table 6-2: Rugby Borough Council Local Plan (2019) Policies

Policy	Policy Summary	How the Scheme adheres to policy
Policy GP1 Securing Sustainable Development	This states that when considering development proposals, the Council will take a positive approach that reflects the presumption in favour of sustainable development contained in the NPPF.	Section 6.3 of this document outlines why the Scheme is sustainable, and more details are provided in the ES (**TR010066/APP/6.1**)
Policy HS1 Healthy, safe and inclusive communities	HS1: Healthy, safe and inclusive communities The potential for creating healthy, safe and inclusive communities will be taken into account when considering all development proposals. Support will be given to proposals which:… • Contribute to the development of a high quality, safe and convenient walking and cycling network;….. Improve the quality and quantity of green infrastructure networks and protect and enhance physical access, including public rights of way to open space;	ES Chapter 12 (Population and Human Health) (**TR010066/APP/6.1**) reports, in Section 12.11 how the delivery of an improved pedestrian crossing facility as part of the Scheme would align with and compliment new facilities to be delivered by the City Council as part of the new cycleway. The Chapter also reports, in Section 12.11 how the Scheme provides enabling works to facilitate a potential new connection to the cycleway by others in line with the future development of the housing allocation.
Policy HS2 Health Impact Assessments Development	This sets out that non-residential developments where the area of development exceeds 1ha need to demonstrate that they would not generate adverse impacts on health and wellbeing. An assessment of potential impacts on health and wellbeing should be demonstrated through a Health Impact Assessment screening report; and a full Health Impact Assessment where the screening report identifies that significant impacts on health and wellbeing would arise from the development.	ES Chapter 12 (Population and Human Health) (**TR010066/APP/6.1**) details how impacts on health and wellbeing have been considered as part of the Scheme. An Equality Impact Assessment (**TR010066/APP7.6**) has been undertaken and provides an analysis of the proposals for the Scheme. The assessment particularly focuses on protected characteristic groups and concludes that the Scheme would have no significant impact on people within protected characteristic groups. A health assessment has been undertaken as part of this EIA. This assessment evaluates the impact of the Scheme on the health of the local population which is presented in section 12.11 of ES Chapter 12 (Population and Human Health) (**TR010066/APP/6.1**).

Policy	Policy Summary	How the Scheme adheres to policy
Policy HS5 Traffic Generation and Air Quality, Noise and Vibration Development	Traffic Generation and Air Quality, Noise and Vibration Development suggests that proposals should promote a shift to the use of sustainable transport modes and low emission vehicles (including electric/hybrid cars) to minimise the impact on air quality, noise and vibration caused by traffic generation. Proposals should take full account of the cumulative impact of all developments including that proposed in this Local Plan on traffic generation, air quality, noise and vibration. Whilst Policy HS5 is not directly relevant to the Scheme, the Policy is supported by Rugby Council's Air Quality SPD, which includes mitigation methods for developments that have the potential to impact air quality. Of relevance to the Scheme and specifically the construction phase, the SPD states that NRMM should meet minimum emissions standards. Table 4 of the SPD states: *"NRMM of net power between 37kW and 560kW will be required to meet the standards based upon the engine emissions standards in EU Directive 97/68/EC and its subsequent amendments…"*	The Scheme proposal is a new junction arrangement to reduce congestion on the local and SRNs. The issues have been dealt with respectively in the following ES chapters (**TR010066/APP/6.1**): Chapter 5 (Air Quality), Chapter 11 (Noise and Vibration), Chapter 12 (Population and Human Health), and also the Transport Assessment (**TR010066/APP/7.3**). This assessment in ES Chapter 5 (Air Quality) (**TR010066/APP/7.3**) has been completed with reference to DMRB LA105. By association, it aligns with these policies by assessing the potential for significant effects on air quality (i.e. potential for decline in air quality) during both the construction and operation phases. Where appropriate, mitigation measures are detailed. (These are presented in sections 5.5, 5.9 and 5.10 of ES Chapter 5). NRMM emission standard controls have been included within the EMP for the construction phase. ES Chapter 5 (Air Quality) (**TR010066/APP/6.1**) the assessment of impacts upon air quality in relation to human beings is presented in section 5.11. The assessment of impacts relation to noise and vibration upon human beings is presented in section 11.11 of ES Chapter 11 (Noise and Vibration) (**TR010066/APP/6.1**).
Policy NE1 Protecting Designated Biodiversity and Geodiversity Assets	Protecting Designated Biodiversity and Geodiversity Assets seeks to protect designated areas and species of international, national and local importance for biodiversity and geodiversity, including Ancient Woodland. Development is expected to deliver a net gain in biodiversity and be in accordance with the mitigation hierarchy below.	How the Scheme adheres to the objectives of this policy is detailed in ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**). This ES Chapter fully assesses the impacts of the Scheme on designated sites, ancient woodland and protected species. Section 8.10 of ES Chapter 8 details Scheme mitigation for ecological features. ES Appendix 8.1 (Biodiversity Net Gain Report) details a BNG assessment for the

Policy	Policy Summary	How the Scheme adheres to policy
		Scheme (**TR010066/APP/6.3**).
Policy NE2 Strategic Green and Blue Infrastructure	Policy NE2: Strategic Green and Blue Infrastructure, discusses how new developments 'must provide suitable Green and Blue Infrastructure corridors throughout the development and link into adjacent strategic and local Green and Blue Infrastructure networks or assets where present .' Green and Blue Infrastructure refer to a strategic network of green and blue spaces, such as woodlands, parks, amenity landscaping, ponds, canals and rivers, and the links between them.	The landscape design has been developed to integrate the Scheme into the existing landscape setting including the use of hedgerows, woodland (roadside belts), individual trees and grassland areas (see ES Chapter 7 (Landscape and Visual Effects) (**TR010066/APP/6.1**) and the Environmental Masterplan (ES Figure 2.4) (**TR010066/APP/6.2**)). It also links in with existing landscape assets such as Coombe Abbey Park. The creation of drainage features that are permanently wet, would be planted with native aquatic vegetation would provide additional habitat for common amphibians, aquatic invertebrates and fish.
Policy NE3 Landscape Protection and Enhancement	Landscape Protection and Enhancement requires new development to positively contribute to landscape character and consider the local distinctiveness of the different natural and historic landscapes and character, including tranquillity and relate well to local topography and built form and enhance key landscape features, ensuring their long-term management and maintenance.	Visual impacts on the local landscape and townscape and its immediate setting should be considered and landscaping undertaken to reduce impacts. Impacts on the landscape have been considered during the Scheme design, which is described in the Scheme design Report (**TR010066/APP/7.4**). The impacts on the landscape have been assessed in the ES Chapter 7 (Landscape and Visual Effects) (**TR010066/APP/6.1**). The landscape design has been developed with the engineering and ecology design teams from the outset, to ensure its integration into the overall design. The landscape design has been developed to integrate the Scheme into the existing landscape setting and minimise visual intrusion. The environmental mitigation strategy also reinstates landscape features lost due to the Scheme such as replanting of hedgerows within the Scheme, new plantation woodland, as well as general enhancement of the landscape context wherever possible. It also links in with existing landscape and heritage assets, for example by providing isolated trees

Policy	Policy Summary	How the Scheme adheres to policy
		or small groups, along the road verge to tie into the wider former parkland estate character near to Coombe Abbey Park. The Scheme planting design uses native planting species which are potentially suited to our changing climate (wetter winters and dry summers) i.e. more wet and dry tolerant species for long term climate change resistance. The Environmental Masterplan (ES Figure 2.4 (**TR010066/APP/6.2**)) has been in conjunction with ecologists to enhance and improve local habitats. Refer to ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**) for further details of habitat improvements. Mitigation measures of relevance are included within the First Iteration EMP (**TR010066/APP/6.5**) which is secured through the draft DCO (**TR010066/APP/3.1**). It has been determined that the study area consists of four distinct local landscape character areas. For the purposes of this assessment these areas are defined as Project Landscape Character Areas (paragraphs 7.8.6 to 7.8.16 of ES Chapter 7 (Landscape and Visual Effects) (**TR010066/APP/6.1**)). The LVIA considers likely significant landscape and visual effects within Section 7.11 of ES Chapter 7 (Landscape and Visual Effects) (**TR010066/APP/6.1**). Viewpoints have been agreed in discussion with Coventry City Council and Rugby Borough Council. Related design considerations are also presented in ES Chapter 2 (The Scheme) (**TR010066/APP/6.1**) and the Scheme Design Report (**TR010066/APP/7.4**).
Policy SDC1 Sustainable Design	Sustainable Design ensures that all development should demonstrate high quality, inclusive and sustainable design and new development will only be supported where the proposals are of a scale, density and design that responds to the character of the areas in which they are	See response to SDC1 above. How the scheme design has been developed is detailed in the Scheme Design Report (**TR010066/APP/7.4**), and landscaping impact is considered in ES Chapter ES Chapter 7 (Landscape and Visual Effects) (**TR010066/APP/6.1**). The local geology and contaminated land

Policy	Policy Summary	How the Scheme adheres to policy
	situated.	have been considered in ES Chapter 9 (Geology and Soils) (**TR010066/APP/6.1**). The baseline is described in Section 9.8 of ES Chapter 9 and Section 9.10 of ES Chapter 9 describes embedded and essential mitigation measures.
Policy SDC2 Landscaping	Policy SDC2: Landscaping states that the landscape aspects of a development proposal will be required to form an integral part of the overall design and a high standard of appropriate hard and soft landscaping will be required.	An Arboricultural survey has been undertaken and the retention of veteran and TPO trees within the Scheme is reported in ES Appendix 7.4 (Arboricultural Impact Assessment) (**TR010066/APP/6.3**). Sustainable drainage features are created within the Scheme and allow the provision of wetland planting to create new habitats in the area. The Scheme planting design uses native planting species which are potentially suited to our changing climate (wetter winters and dry summers) i.e. more wet and dry tolerant species for long term climate change resistance. Visual barriers will be provided to minimise the visual impact on the surrounding area through woodland planting, individual/ groups of scattered trees or hedgerows, whilst enhancing the visual appeal and blend of the Scheme into the existing environment. An OLEMP is included in the First Iteration EMP (**TR010066/APP/6.5**). The OLEMP has been prepared to help ensure the protection and management of landscape and ecological features, such as vegetation and habitats, during construction of the Scheme and the successful establishment of landscape and ecological mitigation including planting and seeding associated with the Scheme. The OLEMP would be updated to a LEMP and included within the Second Iteration EMP prior to commencement of works in accordance with Requirement 4 of the draft DCO (**TR010066/APP/3.1**)
Policy SDC3	This policy requires	The Scheme's impact on the historic environment is described in ES Chapter 6

Policy	Policy Summary	How the Scheme adheres to policy
Protecting and Enhancing the Historic Environment	development to sustain and enhance the significance of the Borough's heritage assets.	(Cultural Heritage) (**TR010066/APP/6.1**). This ES Chapter fully assesses the impacts of the Scheme on the cultural heritage features. The cultural heritage features assessed within ES Chapter 6 are detailed within the baseline conditions in section 6.8. Further detail is provided in Appendix 6.1 Cultural Heritage Information (**TR010066/APP/6.3**). Mitigation measures are detailed in section 6.10 of ES Chapter 6 and the assessment of likely significant effects is detailed in section 6.11. Mitigation is also included in the REAC contained within the First Iteration EMP (**TR010066/APP/6.5**). The First Iteration EMP will be developed into the Second Iteration EMP for implementation during construction and is secured by Requirement 4 of the draft DCO (**TR010066/APP/3.1**).
Policy SDC5 Flood Risk Management	This requires new developments to be located in areas with the lowest probability of flooding, in order to minimise the flood risk to people and property and manage any residual risk. Policy SDC6: Sustainable Drainage states Sustainable Drainage Systems (SuDS) are required in all major developments and all development in flood zones 2 and 3.	How flood risk management has been incorporated into the Scheme design is detailed in the Scheme Design Report (**TR010066/APP/7.4**), ES Chapter 13 (Road Drainage and the Water Environment) (**TR010066/APP/6.1**) and ES Appendix 13.1 (Flood Risk Assessment) (**TR010066/APP/6.3**).
Policy SDC6 Sustainable Drainage	This encourages the use of sustainable drainage techniques to reduce the potential impact of flood risk and improve water quality. The developer will carry out infiltration tests where practicable and a groundwater risk assessment to ensure that groundwater will not be polluted.	This has been considered for water quality and flood risk within ES Chapter 13 (Road Drainage and the Water Environment) (**TR010066/APP/6.1**), ES Appendix 13.1 (Flood Risk Assessment) (**TR010066/APP/6.3**), ES Appendix 13.3 (Water Quality Assessment) (**TR010066/APP/6.3**) and ES Appendix 13.4 (Groundwater Assessment (**TR010066/APP/6.3**).
Policy SDC7 Protection of the Water Environment	This policy seeks to protect water quality from negative impacts caused by development. It ensures the proposed	How the Scheme protect water quality is described in the ES Chapter 13 (Road Drainage and the Water Environment) (**TR010066/APP/6.1**), ES Appendix 13.2

Policy	Policy Summary	How the Scheme adheres to policy
and Water Supply	development is in accordance with the WFD Objectives and does not adversely affect the water bodies. Development will not be carried out where the sensitivity of the groundwater environment, or the risk posed by the type of development, is deemed to pose an unacceptable risk of pollution of the underlying aquifer.	(Water Framework Directive Compliance Assessment) (**TR010066/APP/6.3**) and ES Appendix 13.4 (Groundwater Assessment) (**TR010066/APP/6.3**).
Policy D1 Transport Development	This policy states transport development will be permitted where sustainable modes of transport are prioritised, and measures designed to mitigate transport impacts arising from either individual development proposals or cumulative impacts caused by a number of proposals are provided. Proposals should have regard to the Sustainable Transport Strategy. All large-scale developments which result in the generation of significant traffic movements, should be supported by a Transport Assessment and where necessary a Travel Plan, to demonstrate practical and effective measures to be taken to mitigate the adverse impacts of traffic.	A Transport Assessment (**TR010066/APP/7.3**) accompanies the application and sets out the transport impacts of the Scheme.
Policy D3 Infrastructure and Implementation	This policy states that the delivery of new development will be dependent on sufficient capacity being available in existing infrastructure and/or measures being proposed to mitigate its impact.	The Scheme is a requirement of RIS2 and will provide additional capacity in the SRN.

6.4.1. Rugby Borough Council Local Plan is currently being updated. The review process began in December 2022, and the Council has identified a need to update the plan due to changes in national policy, local priorities, and the declaration of a climate emergency. A Public Consultation: An Issues and Options consultation ran from 30 October 2023 to 2 February 2024. The Plan was

expected to be updated in June 2024; however, this is still under review. The current Local Plan, adopted in June 2019, remains in effect until the updated plan is finalised.

Infrastructure Delivery Plan – Appendix 3 of the Rugby Borough Council Local Plan (2016)

6.4.2. The Infrastructure Delivery Plan seeks to establish what additional infrastructure and service needs are required to support and accommodate the level of development and growth proposed in the Local Plan. Improvements to the A46 are not specifically mentioned within the Infrastructure Delivery Plan. However, the Infrastructure Delivery Plan mentions Highways England (now National Highways) is responsible for operating, maintaining and improving the SRN in England on behalf of the Secretary of State for Transport and "*The council needs to demonstrate that the proposals in the Local Plan will not have a significant impact on the strategic road network."*

Rugby Borough Council Climate Change and Sustainable Design and Construction Supplementary Planning Document (SPD) (2023)

6.4.3. The SPD provides supplementary advice the Local Plan on policies on climate and flood Risk.

6.4.4. For Policy SDC5: Flood Risk and Resilience Measures, a sequential approach to flood risk is followed to ensure that development is located in the areas of lowest flood risk. This means favouring applications in Flood Zones 1 (low probability of flooding), rather than in Flood Zones 2 and 3 (medium and high probabilities of flooding respectively). On a larger scale, natural flood measures could be utilised to reduce flood risk. This can include restoration of floodplains - which can slow water flow and provide attenuation and catchment woodland – to hold some rainwater and allow evaporation, as well as soil infiltration. This has been considered for flood risk within ES Chapter 13 (Road Drainage and the Water Environment) (**TR010066/APP/6.1**), and ES Appendix 13.1 (Flood Risk Assessment) (**TR010066/APP/6.3**).

6.4.5. Policy SDC6 Sustainable drainage states the use of SuDS can be used to manage surface water runoff on-site and also alleviate flood pressure elsewhere. Policy SDC6 of the local plan sets out the requirements for providing SuDS as part of developments. This has been considered for flood risk within ES Chapter 13 (Road Drainage and the Water Environment) (**TR010066/APP/6.1**), and ES Appendix 13.1 (Flood Risk Assessment) (**TR010066/APP/6.3**).

The Rugby Borough Council Air Quality Supplementary Planning Document (SPD) (2021)

6.4.6. The SPD seeks to improve the consideration of air quality impacts in line with the planning process, NPPF, PPG and Rugby local plan.

6.4.7. The Air Quality SPD includes mitigation methods for developments that have the potential to impact air quality. Of relevance to the Scheme and specifically the construction phase, the SPD states that NRMM should meet minimum emissions standards. Table 4 of the SPD states:

"NRMM of net power between 37kW and 560kW will be required to meet the standards based upon the engine emissions standards in EU Directive 97/68/EC and its subsequent amendments…"

6.4.8. The Scheme proposal is a new junction arrangement to reduce congestion on the local and SRNs.

6.4.9. The issues have been dealt with respectively in the following ES chapters (**TR010066/APP/6.1**): Chapter 5 (Air Quality), Chapter 11 (Noise and Vibration), Chapter 12 (Population and Human Health), and also the Transport Assessment (**TR010066/APP/7.3**).

6.4.10. The assessment in ES Chapter 5 (Air Quality) (**TR010066/APP/6.1**) has been completed with reference to DMRB LA105. By association, it aligns with these policies by assessing the potential for significant effects on air quality (i.e. potential for decline in air quality) during both the construction and operation phases. Where appropriate, mitigation measures are detailed. (These are presented in sections 5.5, 5.9 and 5.10 of ES Chapter 5). NRMM emission standard controls have been included within the EMP for the construction phase.

6.4.11. ES Chapter 5 (Air Quality) (**TR010066/APP/6.1**) the assessment of impacts upon air quality in relation to human beings is presented in section 5.11. The assessment of impacts relation to noise and vibration upon human beings is presented in section 11.11 of ES Chapter 11 (Noise and Vibration) (**TR010066/APP/6.1**).

Local transport policy

Coventry Transport Strategy (2023)

6.4.12. The Strategy sets out the Council's plans to deliver a transport system that meets the need of the city's population, businesses and wider community, providing access to community facilities and supporting a thriving economy and a healthy population.

6.4.13. The strategy recognises the need to reduce inequalities in access to economic, educational and cultural opportunities and in public health, and to improve the quality of life for local people.

6.4.14. It sets out plans to bring about a fundamental change to the way that people and goods travel to, from and around the city in the future, and identifies how the Council will work with various partners to achieve this. It includes:

6.4.15. The case for change: A summary of how the transport system is working currently and why it needs to change a long-term vision, including a set of objectives which the Council aim to meet over the next 15 years.

6.4.16. A broad description of what the Council will do over the lifetime of the strategy (2022/23 – 2036/37) to achieve these objectives. Further detail is set out in an accompanying Implementation Plan.

6.4.17. A summary of how the Council will measure progress, through annual reporting.

6.4.18. The Strategy is fully integrated with the West Midlands Combined Authority's (WMCA) Local Transport Plan (LTP), and the two documents together provide the transport policy framework for Coventry.

6.4.19. The Strategy is subject to regular review, to allow for response to changes in national or regional policies, the emergence of new technology such as autonomous vehicles, or to respond to changes in travel behaviour, such as those brought about during the COVID-19 pandemic.

6.4.20. An Annual Progress Report will also be prepared to outline progress in implementing the strategy, and to report any changes to the Implementation Plan.

6.4.21. Specific road improvements to be delivered over the lifetime of the Transport Strategy include various improvements to the A46 including the Walsgrave Junction improvements by National Highways.

6.4.22. The Implementation Plan accompanies the Council's Transport Strategy. This document provides further detail about the plans and sets out details of the specific improvements that the Council will make to the city's transport network and the expected timescales and approximate costs associated with these. This lists the Applicant as the lead organisation delivering the Scheme, with an estimated cost of £50-100 million. It forecasts the development of the Scheme in 2022/2023 (years 1-2) and the construction/scheme delivery in 2024/2025 (years 3-4).

6.4.23. Specific road improvements to be delivered over the lifetime of the Transport Strategy include various improvements to the A46 including the Walsgrave Junction improvements by National Highways. The Scheme fulfils the improvements required to the A46 and will assist in delivery of wider goals relating to the economy, society and environment.

6.4.24. The assessment in ES Chapter 12 (Population and Human Health) (**TR010066/APP/6.1**) has taken these considerations into account in including the identification, assessment and evaluation of existing land uses, the movement of walkers, cyclists and horse riders, and the outcomes of related assessments. The Chapter reports, in Section 12.11 how the delivery of an improved pedestrian crossing facility as part of the Scheme would align with and compliment new facilities to be delivered by the City Council as part of the new cycleway. The Chapter also reports, in Section 12.11 how the Scheme is provides enabling infrastructure for a connection to the cycleway by others in line with the future development of the housing allocation.

Other local authority documents of relevance

Coventry City Council Economic Development Strategy 2022-2027 (2022)

6.4.11. Coventry City Council Economic Development Strategy was published in August 2022. In the 10 years after the 2008/09 recession, Coventry & Warwickshire was the fastest-growing local economy in England, with economic output (measured in real GVA) growing by 33.4% between 2008/09 and 2016/17. This was driven significantly by major investments in Research & Development and production in the automotive sector and its supply chain, as well as continued expansion of the professional services sector and creative economy. Coventry had the fastest growing population of UK cities from 2009-2019 and its economic progress was exemplified by the award of UK City of Culture for 2021, being a host venue for the 2022 Commonwealth Games, and being part of the West Midlands 5G Test Bed – the first in the UK.

6.4.12. However, the local economy has encountered significant challenges in recent years. After growth of the Coventry & Warwickshire economy slowed to 1.24% growth (the lowest of all local economies) in 2018/19, the COVID-19 Pandemic had a severe impact on the economy, with the UK economy contracting by 9.9% in 2020 and the West Midlands estimated to have experienced the greatest contraction of all regions. This had a major impact on the local labour force, with the claimant count rising from 7,525 (3.0%) recorded in January 2020 to 16,490 (6.6%) in December 2020 (the peak during the pandemic). Longstanding inequalities across Coventry were exacerbated, with 14.4% of neighbourhoods ranked in the most deprived 10% in England and life expectancy varying by 10.7 years for men and 8.3 years for women between the city's most affluent and most deprived neighbourhoods. The Council played an important role in helping to protect businesses and jobs, awarding over £80m in Government COVID-19 grants to over 4,500 Coventry businesses either mandated to close or adversely affected by public health restrictions, and ensuring that over 7,300 local businesses accessed over £300m in Government loans.

6.4.13. Further challenges emerged in 2021 and 2022, with inflation, labour shortages, and new regulations and document requirements for UK-EU trade post-Brexit all of which have slowed economic recovery, and the Bank of England's forecast of August 2022 projecting a recession for the UK during Q4 2022 and throughout 2023.

6.4.14. It is therefore crucial that Coventry is able to deliver a strong and sustainable economic recovery from this challenging economic climate, and that foundations are put in place for longer-term economic prosperity This includes building on the unique opportunities presented by the opening and roll-out of the £136m UK Battery Industrialisation Centre, maintaining Coventry's track record of leading edge innovation, the potential to secure a Gigafactory at Coventry Airport and subsequent investment in the electric vehicle and battery technology supply chains. The Economic Development Strategy mentions that there are opportunities presented by the city's outstanding digital and transport connectivity. The council aspire for Coventry in five years' time to be a:

- Green City, both through industrial innovation and sustainable transport
- Leading edge city in Advanced Manufacturing & Engineering industries
- Cultural City, particularly through expanded creative and tourism sectors
- City providing high employment levels and good quality jobs
- City providing opportunities for all through strong universities, and education & skills ecosystems
- City with reduced health, economic and social inequalities.

6.4.15. The Scheme will provide a more connected Coventry, which will increase accessibility for higher employment levels and economic growth.

Summary

6.5.11. The Coventry and Rugby Local Plans recognise the economic and population growth in the area and need to proactively plan for this, recognising the need for improved infrastructure and transport network. The Council's Local Plan lists the Scheme specifically as an upcoming network improvement and stresses the importance of the A46 corridor and SRN surrounding Coventry as crucial due to its national connectivity.

6.5.12. The Scheme accords with the development control policies of the Council and Rugby Borough Council's Local Plans and related SPDs by demonstrating through the chapters of the ES (**TR010066/APP/6.1**) that any impacts on the

natural and built environment can be mitigated against where necessary and, where possible, enhancements can be made. Where any outstanding impacts may remain, national and regional policy support states that the Scheme is essential in the public benefit. The ES chapters (**TR010066/APP/6.1**) address the environmental issues in full.

6.6. Planning balance

6.6.1. Section 104(7) of the Planning Act 2008 (as amended) requires that applications should be determined in accordance with the relevant National Policy Statement unless the adverse impact of the Scheme would outweigh its benefits. This Case for the Scheme provides an overview of the economic, social and environmental benefits of the Scheme. The potential impacts of the Scheme have also been comprehensively considered and addressed through the management and mitigation measures described in the ES (**TR010066/APP/6.1**). The balance of benefits and adverse impacts is also considered through the Applicant's response to the balancing exercises for relevant topic areas set out in the NPS NN Accordance Tables (**TR010066/APP/7.2**).

6.5.1. The ES (**TR010066/APP/6.1**) has considered each impact assessment topic according to whether there are likely to be significant residual environmental effects following mitigation, in line with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended). The conclusions from the ES have been reviewed in order to consider the conformity of the Scheme with the NPS NN, the NPPF, the relevant development plans, plus other infrastructure and transport plans and strategies. Any unavoidable adverse environmental effects which may remain following mitigation are outweighed by the public benefit that will accrue as a result of the Scheme and the Government's commitment to upgrading the SRN.

6.5.2. In terms of adherence to national policy requirements, the Scheme demonstrates compliance with the Government's strategic vision for the development of the national road network. The need for the Scheme is demonstrated by its inclusion within the RIS and within national, regional and local transport and planning policy. Section 3(6) of the Infrastructure Act 2015 places a duty on the Secretary of State to comply with the provisions of the RIS.

6.5.3. The Scheme complies with national planning policy within the NPS NN and NPPF. It will reduce congestion-related delay, improve journey time reliability, increase the overall capacity of the A46 and improve traffic flow, whilst reducing the number of accidents on the SRN and local road network (although a small shift towards a higher severity is seen). These improvements mean that the Scheme will contribute towards making the eastern region more attractive for business and will help in promoting a competitive regional economy.

6.5.4. The design of the Scheme will not only increase road capacity and deliver reduced congestion and improve journey times, but it will also provide the environment enhancements to the land adjoining Coombe Pool SSSI; and enable transport infrastructure to enable the delivery of Walsgrave Hill Housing Allocation (H2:3) of up to 900 homes. The Scheme will encourage inward investment, support housebuilding and support the economic growth and in the Coventry and Warwickshire area.

6.5.5. The 2022 Coventry Transport Strategy emphasises the interrelationship between the region's transport objectives and the delivery of wider goals relating to the economy, society and environment. The Warwickshire County Council Local Transport Plan 2023 specifically lists the A46 as a network vital for providing links through the county to international gateways such as ports and airports throughout the UK.

6.5.6. The Scheme supports the economic growth objectives of the various sub-regional policy documents and Coventry City Council and Rugby Borough Council Local Plans. It will assist in delivering the required and supported improvements to the A46 which are key to safe, fluid connectivity and facilitating new housing and business developments.

6.5.7. The Scheme accords with the development control policies of the Council and Rugby Borough Council's Local Plans and related SPDs by demonstrating through the chapters of the ES (**TR010066/APP/6.1**) that any impacts on the natural and built environment can be managed and mitigated against where necessary and, where possible, enhancements can be made. Policy at all levels is supportive of the Scheme and overall, its public benefits outweigh any unavoidable adverse environmental effects which may remain. The ES (**TR010066/APP/6.1**) considers these issues in full.

6.5.8. The Scheme also accords with the policies of Coventry Local Plan and the Rugby Borough Council Local Plan in enabling transport infrastructure for future strategic patterns of development growth identified within current and future local plans for Coventry, Rugby and Warwickshire.

6.5.9. Following the detailed consideration of options, the Scheme is considered by the Applicant to be the best available new junction operation for the A46 at Walsgrave. It is fully funded as illustrated in the Funding Statement (**TR010066/APP/4.2**) and if granted, the DCO will include the compulsory acquisition powers required to deliver the Scheme.

6.5.10. The Scheme therefore comprises an opportunity to secure a deliverable and fully funded A46 Coventry Junctions (Walsgrave) with the RIS, and current and emerging planning and transport policies.

7. Conclusions

7.1. Overview

7.1.1. This Case for the Scheme sets out the policy context against which the Scheme should be assessed. It demonstrates a clear justification for the Scheme grounded in national, regional and local planning and transport policy.

7.1.2. The NPS NN, NIDP and RIS2 set out a strong base for delivery of national networks that meet the country's long-term network needs, while supporting a prosperous and competitive economy and improving the quality of life for all.

7.2. Need for the Scheme and objectives

7.2.1. The Scheme is part of the Applicant's commitment to improve the A46 'Trans-Midlands Trade Corridor' between the M5 and the Humber Ports. The A46 has historically experienced safety issues.

7.2.2. Walsgrave Junction is the last remaining roundabout east of Coventry and north of Tollbar End Junction that is at-grade, and as such it is a pinch point for traffic.

7.2.3. Population growth in Coventry is high and a significant programme of housebuilding is planned. This is boosting economic development in the area where growth is currently outstripping the UK average.

7.2.4. The combined Coventry Junctions Scheme involves the upgrade of two at-grade junctions (Binley and Walsgrave) to provide relief from traffic congestion and to improve journey times by increasing the capacity on the A46 between the M6 and the M40. This will benefit both the strategic and local traffic needs and support future growth forecasts from Coventry City Council.

7.2.5. The Binley roundabout is approximately 1.7km to the south of the Walsgrave Junction. The A46 Binley Junction Improvement Scheme was opened to traffic in November 2022, converting the junction from an at-grade signalised roundabout to a grade separated junction.

7.2.6. The committed solution to the congestion and safety issues, defined in the RIS2 is "*A46 Coventry Junctions – grade separation of the Binley and Walsgrave roundabouts on the A46 near Coventry."* This solution will also unlock economic growth and development in the area.

7.2.7. The DfT's RIS2 sets out a commitment for *"Improving the A46 'Trans-Midlands Trade Corridor' between the M5 and the Humber Ports. Work in RP2 will create a continuous dual carriageway from Lincoln to Warwick, delivering one of*

Midlands Connect's key priorities." As well as a commitment for: *"A46 Coventry Junctions – grade separation of the Binley and Walsgrave roundabouts on the A46 near Coventry, upgrading the trunk sections of the A45/A46 between the M6 and M40 to a consistent standard."*

7.3. Alternatives, the Scheme and its benefits

7.3.1. A wide ranging and detailed optioneering process, involving extensive study and consultation, has considered reasonable alternatives for the Scheme, ultimately resulting in the announcement of the preferred route in June 2022: Option 11 - *"a grade separated junction approximately 800m to the north of the existing roundabout location. The geometry of this option allows a 50mph speed limit on the mainline dual carriageway."*

7.3.2. The Scheme has been further developed since the preferred route announcement. Taking on board feedback received from ongoing stakeholder engagement, the design of the Scheme has been developed to that now set out within the DCO application. It is considered to be the best option to meet the defined need and objectives, including the delivery of a comprehensive set of benefits as detailed in this document and summarised below:

Transport benefits

7.3.3. The Scheme is supported by a comprehensive Transport Assessment (**TR010066/APP/7.3**) that demonstrates:

- The Scheme provides additional capacity and improved journey times.
- The Scheme improves accessibility for local communities by reducing congestion along the A46 corridor.
- The Scheme improves operational issues by reducing congestion at the Walsgrave Junction, along the A46 and the B4082.
- The Scheme is predicted to reduce traffic flows on many local roads.
- The Scheme improves journey time reliability for the area.
- Public transport routes are expected to be more consistent on the local road network due to reduction of congestion and delays on the A46.

Social benefits

- The Scheme provides additional capacity and improved journey times, which may encourage housing and economic growth in the local area, as

well as across the A46 corridor.

- The Scheme provides a pedestrian crossing at the B4082's junction with Clifford Bridge Road which would provide safety benefits facilitating north to south movement across the B4082.
- The Scheme reduces severance between the Wyken and Binley communities through the installation of a controlled pedestrian crossing of the B4082 and allowing safer pedestrian movements. Many of these movements were attributed to unaccompanied minors reflecting pupils making their way to and from school.
- The installation of the pedestrian crossing may also encourage greater physical activity by providing enhanced WCH provision.
- Public transport routes reliability is expected to improve due to a reduction of traffic on local roads.
- Safety will be improved on local roads due to reduced traffic using that part of the network.
- Safety will be improved on the wider SRN when taking account safety as a result of Binley and Walsgrave functioning together; and comparatively in regard to the levels of traffic reassigned to the SRN.

Economic benefits

7.3.4. When considering the Level 1 benefits, the A46 Coventry Junctions (Walsgrave) Scheme generates an initial PVB of £82.4 million and an initial PVC of £56 million. This results in an initial BCR of 1.47 which suggests that for each pound of Broad Transport Budget expenditure, £1.47 of benefit to public value is expected to be generated.

7.3.5. In line with TAG guidance, wider WEIs and JTR are not part of the Level 1 BCR and therefore these are considered in the Level 2 benefits and the corresponding adjusted BCR. The Scheme generates an adjusted PVB of £100.11 million and an adjusted BCR of 1.78 when the Level 2 benefits are included. *(Note - the values are in 2010 values and prices (i.e. not current prices))*

7.3.6. Through the increased capacity and improved journey time reliability, the Scheme will also assist in making the region more attractive for businesses and will provide the required infrastructure for future development, including housing and employment.

7.3.7. The A46 corridor provides opportunities for economic growth and improved

accessibility within Coventry and Warwickshire, enabling the unlocking of sites for residential development, such as the adjoining allocated housing land to the west of the A46 and improving access to existing commercial areas.

7.3.8. With regards to other economic benefits, the Scheme will increase capacity, relieve congestion and improve journey times along this section of the A46. These improvements will reduce lost productive time and subsequently increase business user and transport service provider benefits. There will also be associated changes in vehicle operating costs, such as fuel, vehicle maintenance and mileage related depreciation. Further details can be found in Section 4 and 5 of this Document and the Transport Assessment (**TR010066/APP/7.3**).

7.3.9. Wider economic and transport benefits of the Scheme are also recognised in the Coventry City Council Local Plan. The Coventry City Council Local Plan 2011-2031 and Rugby Borough Council Local Plan 2011-2031. The Local Plans recognise the economic and population growth and need to proactively plan for this and improve transport infrastructure. Rugby Borough Council Local Plan specifically mentions the improvements planned at Walsgrave near the B4082 to introduce grade separation to improve traffic flow. The West Midlands Strategic Transport Plan also identities that the A46 improvements are required to meet regional growth aspirations and economic objectives.

Environmental benefits

7.3.10. The Scheme is supported by an Environmental Impact Assessment to establish the impacts and mitigation measures needed to meet the Scheme objective of avoiding unacceptable impacts on the surrounding natural and historic environment and landscape and optimise opportunities for enhancement. The assessment of the Scheme's effects on the environment is set out in the Environmental Statement (**TR010066/APP/6.1**). A summary of the benefits includes:

Air Quality

7.3.11. The Scheme results in improved air quality (decrease in annual mean NO_2 concentrations) at Clifford Bridge Road, due to an expected reduction in vehicle flows resulting from the operation of the Scheme, as detailed in ES Chapter 5 (Air Quality) (**TR010066/APP/6.1**). The majority of receptors within the Coventry AQMA experience either a 'small' improvement in concentrations or an imperceptible change in concentrations.

Biodiversity

7.3.12. The Scheme design seeks to maximise biodiversity delivery. The Environmental

Masterplan (ES Figure 2.4 (**TR010066/APP/6.2**) has been designed to be appropriate to those habitats lost whilst also providing more ecologically valuable habitat in some cases (for example in place of cereal crops) and will be composed primarily of native species and species recognised of being of higher benefit to pollinators and birds with regards to food sources.

7.3.13. Habitat creation will take place along the verges of the Scheme and would include species-rich grassland, woodland, scrub, native hedgerows with trees, wet grassland and tree planting. An area within the Order Limits to the north-east of the existing junction will be used for mitigation woodland planting to mitigate for loss of woodland due to the Scheme.

7.3.14. ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**) describes where enhancements to biodiversity interests are made as part of the Scheme. This includes habitat creation within Hungerley Hall Farm Ecosite (a nature conservation area, as defined by Warwickshire Biological Records Centre). The habitat creation would include sustainable drainage systems (SuDS), woodland, marsh and wet grassland, species-rich grassland, amenity grass, shrubs, ground cover and scrub in addition to planting of 612 individual trees.

7.3.15. Habitat connectivity along the Scheme will be achieved through the creation of native hedgerows and tree lines along the verges created as a vegetative screen and to maintain the local landscape character of the area.

7.3.16. The Scheme provides a Biodiversity Net Gain. ES Chapter 8 (Biodiversity) (**TR010066/APP/6.1**) and ES Appendix 8.1 (Biodiversity Net Gain Report) (**TR010066/APP/6.3**) detail how this is achieved.

Noise

7.3.17. Noise levels are seen to reduce as a whole which benefits all incomes (see Section 5 Economic case overview), with a large benefit in one of the less deprived quintiles, in the short-term assessment. Children are expected to benefit due to reduced noise levels near primary schools.

Landscape and visual

7.3.18. By year 15 of the Scheme operation, vegetation would have matured so that the Scheme is screened from the surrounding landscape and effects would not be significant, and there would be a minor beneficial impact. This includes minor beneficial impacts on the landscape character area PLCA 1 - Walsgrave Hill and Valley including Hungerley Hall Farm, and on recreational users of public path to Coombe Abbey Park/ PRoW R75x and residential receptors at Farber Road/ Barrow Close, Walsgrave

Water Quality

7.3.19. The incorporation of a pond for water quality mitigation will provide benefits as this will treat a proportion of the existing road drainage and thus provides an improvement upon the existing situation.

7.4. Compatibility with NPS NN and other policy

7.4.1. This Case for the Scheme has considered the compliance of the Scheme with relevant planning policy. There is significant policy support for the Scheme in the NPS NN, which forms the primary basis against which the Scheme must be assessed. The NPS NN places a strong emphasis on the need to improve and integrate the strategic highway network and the Scheme would deliver against this national objective.

7.4.2. The NPS NN Accordance Tables (**TR010066/APP/7.2**) demonstrate the Scheme's conformity with the NPS NN. The Scheme demonstrates compliance with the NPS NN, including the Government's strategic vision for the development of the national road network, wider policies for economic performance, environment, safety, technology, sustainable transport and accessibility, as well as journey reliability and the experience of road users. Where impacts are generated by the construction or operation of the Scheme, it has been demonstrated through careful and comprehensive assessment that the substantial and long-lasting benefits, such as the extensive transportation, economic and community benefits, will outweigh the limited residual impacts identified.

7.4.3. The Applicant has taken great care to develop the design of the Scheme to avoid sensitive areas and limit adverse impacts where possible. Extensive embedded mitigation and essential mitigation has also been set out in the ES and its relevant topic chapters (**TR010066/APP/6.1**).

7.4.4. Overall, it is considered by the Applicant that the public benefits provided by the Scheme are clear and outweigh any unavoidable impacts. This document has shown that, where the NPS NN requires a balanced judgement between harm and benefits, the evidence demonstrates that the Scheme complies with the NPS NN and, its benefits outweigh impacts.

7.5. Delivery of Government policy and programmes

7.5.1. The Scheme forms part of the Government's vision and strategic objectives for improving the UK's transport infrastructure as set out in detail in Section 4 of this document. The Scheme would meet the identified need to provide safe,

expeditious and resilient networks that better support social and economic activity; and to provide a transport network that can stimulate and support economic growth as set out in the NPS NN.

7.5.2. The A46 Coventry Junctions (Walsgrave) is a Committed Scheme in the RIS. The Scheme also fulfils the aims of the NIDP and the National Highways Delivery Plan.

7.6. Delivery of local planning and transport policy

7.6.1. The Scheme has also had regard to all other important and relevant policy which needs to be taken into consideration, including the relevant adopted local development plans. This is further summarised in Section 6 of this Case for the Scheme. Policy at all levels supports the Scheme's development.

7.6.2. The Scheme delivers the aims of the Coventry City Council and Rugby Borough Council Local Plans, and the Warwickshire Transport Strategy 2020, which supports the improvements to the A46. The Scheme complies with the development control policies of the Local Plans in addressing its potential impacts on the natural and built environment, mitigating and enhancing where possible. It is demonstrated that the public benefits of the Scheme outweigh any unavoidable residual impacts.

7.7. The Planning Act, 2008

7.7.1. The Planning Act 2008 requires that, in determining DCO applications, the Secretary of State must have regard to the relevant NPS, the Local Impact Report, any prescribed matters and any other matters the Secretary of State thinks are important and relevant. Paragraph 4.2 of the NPS NN confirms that there is a presumption in favour of granting development consent for national networks.

7.7.2. The Planning Act 2008 also states that DCO applications should be determined in accordance with the relevant NPS except in certain circumstances including where adverse impacts would outweigh benefits, or where to do so would be unlawful, in breach of duty or condition, or in breach of international obligations.

7.7.3. The Scheme complies with the NPS NN and accords with all other relevant and important matters which need to be taken into consideration, including the adopted development plans for the local area and the NPPF.

Glossary of Terms

Term	Acronym	Meaning
Affected Road Network	ARN	Parts of the road network which are identified as likely to be affected by changes in air quality as a result of a project. These comprise all roads that trigger the traffic screening criteria and adjoining roads within 200m.
Agricultural Land Classification	ALC	The system devised and introduced by the Ministry of Agriculture, Fisheries and Food to classify agricultural land according to the extent to which its physical or chemical characteristics impose long-term limitations on agricultural use. Land is graded between 1 (excellent quality) to 5 (very poor quality), with grade 3 subdivided into agricultural subgrades 3a and 3b.
Air quality objective		Objectives are policy targets generally expressed as a maximum ambient pollutant concentration to be achieved. The objectives are set out in the UK Government's Air Quality Strategy for the key air pollutants.
Air Quality Monitoring Area	AQMA	Defined geographical areas where air pollution levels are, or likely to, exceed national air quality objectives.
Ancient woodland		Any area that has been continually wooded since at least 1600 AD and has developed irreplaceable, complex ecosystems.
Annual Average Daily Flows	AADF	The average over a full year of the number of vehicles passing a point in the road network each day.
Annual Average Daily Traffic	AADT	The total volume of vehicle traffic of a motorway or road for a year divided by 365 days.
Ante Meridiem	AM	Before midday
The Applicant		National Highways
Area of Detailed Modelling	AoDM	The area within which significant changes in flow and speed due to the Scheme may be expected to occur. The AoDM has been specified as detailed, simulation, network.
Arboricultural Impact Assessment	AIA	A document submitted as part of the application for development consent that details existing tree constraints and trees/areas of arboricultural significance using available tree survey data with the information used to help minimise and/or avoid impacts on trees.
At-grade		On the same level. For example, when a road is on the current ground level.
Base year		The outputs of the traffic model coinciding with the year the traffic data was collected.
Benefit to Cost Ratio	BCR	The benefit cost ratio is a presentation of the amount of benefit being bought for every £1 of cost to the public purse – the higher the BCR the greater the benefit for every £1 spent.
Best and most versatile land	BMV	Land defined as grades 1, 2 and 3a of the Agricultural Land Classification. This land is considered the most flexible, productive and efficient and is most capable of delivering crops for food and non-food uses.
Biodiversity		The variability among living organisms from all sources, including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part of. This includes diversity within species, between species and of ecosystems.
Biodiversity Net Gain	BNG	An approach that aims to leave biodiversity within the natural environment in a measurably better state than its condition prior to implementation of a project.
Borrow pit		An excavated area where material has been dug for use as fill at another location.
Bund		An embankment that acts as a visual or noise screen or acts as a barrier to control the spillage of fluids.

Term	Acronym	Meaning
Bypass		The diversion of a major road to carry traffic around a built-up area, constructed to improve the journey of through traffic and/or improve the environmental conditions along the original route.
Carbon Reduction Plan	CRP	A plan that outlines the strategies for the Crown Commercial Service's ongoing commitment to the management and reduction of our business-related carbon emissions.
Case for the Scheme	Case for the Scheme	This document.
Climate		Long-term weather conditions prevailing over a region.
Climate change		This refers to a change in the state of the climate, which can be identified by changes in average climate characteristics which persist for an extended period, typically decades or longer.
Closed-circuit Television	CCTV	A type of video surveillance.
Congestion		A situation where the volume of traffic is too great for the road, causing vehicles to slow down or stop, often caused by bottlenecks, traffic incidents and junction design.
Conservation area		An area designated under section 69 of the Planning (Listed Buildings and Conservation Areas) Act 1990 as being of special architectural or historic interest and with a character or appearance that is desirable to preserve or enhance.
Consultation Report		The Report which sets out how the Applicant has complied with the consultation requirements of the Planning Act 2008 and how the Applicant has had regard to the responses received.
Cost and Benefit to Accidents – Light Touch	COBA-LT	COBALT software undertakes the analysis of the impact on accidents as part of the economic appraisal for a road scheme, in accordance with the Department for Transport's Transport Analysis Guidance.
Coventry Strategic Transport Model	CoSTM	The Coventry Strategic Transport Model is a comprehensive tool used by Coventry City Council to plan and manage the city's transport system. It helps in understanding current travel patterns, forecasting future travel demand, and evaluating the impact of various transport policies and infrastructure projects.
Crown Commercial Service	CCS	The biggest public procurement organisation in the UK.
Cultural heritage		Historic monuments, historic groups of buildings and/or historic sites.
Culvert		A tunnel (pipe or box shaped) that carries a stream or open drain under a road or railway.
Cutting		A cutting is where the land has been excavated to allow the road to pass at a lower level than the original ground level.
Day-to-day variability	DTDV	Day-to-day variability refers to the fluctuations or changes that occur from one day to the next
Department for Transport	DfT	The national Government body responsible for transport in Britain, and therefore in overall control of the road network. It is responsible for policy decisions, and its responsibilities are carried out by a range of agencies and local authorities.
Department for Transport's Transport Analysis Framework	TAG	A framework for options appraisal used by National Highways.
Development Consent Order	DCO	The consent for a Nationally Significant Infrastructure Project required under the Planning Act 2008.
Design Manual for Roads and	DMRB	The Design Manual for Roads and Bridges contains information about current standards relating to the design, assessment and operation of

Term	Acronym	Meaning
Bridges		motorway and all-purpose trunk roads in England.
Desk-Based Assessment	DBA	A document prepared to provide a detailed assessment of the cultural heritage resource and sensitivities within the Order Limits of the Scheme and explores the potential effects the Scheme may have upon this resource.
Development plan		Documentation which that seeks to guide development and planning in a local authority area for a set period.
Do Minimum	DM	The conditions that would persist in the absence of the implementation of a construction or improvement project but on the basis that maintenance on the road network is ongoing.
Do Something	DS	The conditions that would occur as a consequence the implementation of a construction or improvement project.
Dust		All airborne particulate matter.
Earthworks		The removal or placement of soils and rocks such as in cuttings, embankments and environmental mitigation, including the in-situ improvement of soils/rocks to achieve the desired properties.
Embedded mitigation		Design measures that are integrated into the Scheme for the purpose of minimising environmental effects.
Enterprise Zone	EZ	Designated areas across England that provide tax breaks and Government support.
Environment Agency	EA	Government agency established to protect and improve the environment and contribute to sustainable development in England. Responsibilities include: water quality and resources, flooding and coastal risk management and contaminated land.
Environmental Management Plan	EMP	A site-specific plan developed to ensure that a project is implemented in an environmentally sustainable manner where all contractors and subcontractors, including consultants, understand the environmental constraints within the site.
Environmental Assessment Report	EAR	A process by which information about environmental effects is collected, assessed, and used to inform decision-making.
Environmental Impact Assessment	EIA	The statutory process through which the likely significant effects of a development project on the environment are identified and assessed.
Environmental Noise Directive	END	The Environmental Noise Directive, formally known as Directive 2002/49/EC, is a key piece of European Union legislation aimed at assessing and managing environmental noise. The directive does not set specific noise limits but provides a framework for countries to develop their own measures to address noise pollution.
Environmental Statement	ES	A statutory document which reports the EIA process, produced in accordance with the EIA Directive as transposed into UK law by the EIA Regulations.
Essential Mitigation		Mitigation required to offset the impacts as a result of construction and operation of the Scheme, which is secured through a Development Consent Order.
First Iteration Environmental Management Plan		The First Iteration of the Environmental Management Plan produced to set out mitigation measures and other commitments. This document **(TR010066/APP/6.5)** is submitted with the Development Consent application.
Flood Risk		A combination of the probability (likelihood or chance) of a flood event happening, and the consequences (impact) if it occurred.
Flood Risk Assessment	FRA	The process of assessing potential flood risk to a site and identifying whether there are any flooding or surface water management issues that may warrant further consideration or may affect the feasibility of the Scheme.
Flood Zone 1		Land outside the floodplain where there is little or no risk of flooding.
Flood Zone 2		The area of the floodplain where there is a low to medium flood risk.
Flood Zone 3		The area of the floodplain where there is a high risk of flooding.

Term	Acronym	Meaning
Floodplain		Land adjacent to a watercourse over which water flows or would flow in times of flood, but for defenses in place.
Fluvial		A term that relates to rivers and streams and the processes that occur within them.
Fully Modelled Area	FMA	Outside of the AoDM, the Fully Modelled Area extends beyond the AoDM and consists of simulation network coding with somewhat larger zones and slightly less network detail.
Geology		The physical structure, substance and history of the earth (rocks and minerals).
Government Net Zero Strategy	GNZS	A strategy that sets out policies and proposals for decarbonising all sectors of the UK economy to meet the government's net zero target by 2050.
Grade separated		A type of junction where the major route (or routes) through the junction do not stop and do not cross any other road on the level. Movements to other roads are made using slip roads and bridges.
Great Crested Newt	GCN	A newt in the family Salamandridae, found across Europe and parts of Asia, which are protected under the Conservation of Habitats and Species Regulations 2017.
Green Belt		A designation for land around certain cities and large built-up areas, which aims to keep this land permanently open or largely undeveloped.
Greenhouse gases	GHG	Atmospheric gases that absorb and emit infrared radiation emitted by the Earth's surface, the atmosphere and clouds.
Green infrastructure		Green infrastructure is a network of multi-functional green and blue features and other natural features, urban and rural, which are capable of delivering a wide range of environmental, economic, health and wellbeing benefits for nature, climate, local and wider communities and prosperity. Green Infrastructure can include nature-based solutions to prevent or reduce environmental impacts. Green infrastructure can also enable developments to provide positive environmental, social and economic benefits. The Green Infrastructure Framework – Principles and Standards for England can be used to consider green infrastructure in development and plan for good quality and targeted creation or improvement.
Ground investigation	GI	An intrusive investigation undertaken to collect information relating to the ground conditions, normally for geotechnical or land contamination purposes.
Gross Value Added	GVA	A measure of the total value of goods and services produced in an economy.
Groundwater		Water found underground in porous geological strata and soils.
ha	Hectares	Measurement of area of land parcel. 10,000 square metres.
Habitat		The place or type of site where an organism or population naturally occurs. Often used in the wider sense referring to major assemblages of plants and animals found together.
Habitats Regulations Assessment	HRA	An assessment of *'projects'* (or plans) potentially affecting European Sites in the UK, required under the Habitats Directive and Regulations. Also known as an assessment of implications on European Sites.
Heritage Asset		A building, monument, site, place, area or landscape of historic value.
Historic England		Executive non-departmental public body created under section 32 of the National Heritage Act 1983 to: a. secure the preservation of ancient monuments and historic buildings situated in England; b. promote the preservation and enhancement of the character and appearance of conservation areas situated in England; and promote the public's enjoyment of, and advance their knowledge of, ancient monuments and historic buildings situated in England

Term	Acronym	Meaning
		and their preservation.
Historic Environment Record	HER	A record of all known archaeological finds and features and historic buildings and historic/landscape features, relating to all periods from the earliest human activity to the present day; maintained by each County and Unitary Authority in the United Kingdom.
Identification	ID	Process or action of identifying someone or something.
Inter Peak	IP	Between two or more peaks.
Junction		A place where two roads meet, regardless of design or layout.
Journey Time Reliability	JTR	Journey Time Reliability refers to the consistency and predictability of travel times on a given route. It measures how much travel times vary from day to day or at different times of the day. High journey time reliability means that travel times are consistent and predictable, while low reliability indicates frequent and significant variations in travel times.
Journey Time Variability	JTV	Journey Time Variability refers to the fluctuations in travel times experienced on a particular route over different days or times. It measures how much travel times can vary due to various factors, such as traffic congestion, weather conditions, roadworks, accidents, and other disruptions.
Kilometres	KM	A metric unit length equal to 1,000 metres.
Key Performance Indicator	KPI	Critical quantifiable indicators of progress towards a result.
Land Use		What land is used for, based on broad categories of functional land cover, such as urban and industrial use and the different types of agriculture and forestry.
Landscape		An area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.
Landscape and Ecology Management Plan	LEMP	Is a site-specific document, which details immediate and long-term commitments to manage the planting, protection and enhancement of biodiversity in and around a new development site.
Landscape Character Area	LCA	Areas of landscape that have a broadly consistent pattern of topography, land use and vegetation cover.
Landscape and Visual Impact Assessment	LVIA	A tool used to identify and assess the significance of and the effects of change resulting from a development on both the landscape as a resource and on people's views and visual amenity.
Limits of Deviation	LoD	The maximum lateral and vertical extents within which the Scheme can be built. These are defined in the Development Consent Order.
Listed building		A building of special architectural or historic interest. Listed buildings are graded I, II* or II, with Grade I being as the highest. Listing includes the interior, as well as the exterior, of the building.
Local Nature Reserve	LNR	A statutory designation for certain nature reserves in Great Britain. It is a protected area designated by local authorities due to its special natural interest, educational value, or community importance.
Local Development Framework	LDF	Documentation which that seeks to guide development and planning in a local authority area for a set period.
Local Enterprise Partnership	LEP	Partnerships between local authorities and businesses. They decide what the priorities should be for investment in roads, buildings and facilities in the area
Local Planning Authority	LPA	The body empowered by law to exercise planning functions.
Local Wildlife Site	LWS	Non-statutory sites of nature conservation value that have been designated 'locally'. These sites are referred to differently between counties with common terms including site of importance for nature conservation, county wildlife site, site of biological importance, site of local importance and sites of metropolitan importance.
Metres	m	A metre is the base unit of length in the International System of Units

Term	Acronym	Meaning
		(SI). First introduced as a unit of length in the metric system (equivalent to approximately 39.37 inches).
Miles per hour	Mph	Imperial system unit of speed expressive the number of miles travelled in one hour.
Members of Parliament	MPs	A Member of Parliament is an individual elected to represent the people of a specific electoral district in a country's parliament.
Midlands Regional Transport Model	MRTM	The modelling for the Scheme is based on this model. MRTM2 is one of five Regional Transport Models used to assess programme level strategies across regions and provide a starting point for the development of detailed proposed scheme specific models, where networks, volumetric counts and availability of travel demand data can reduce the trafficking modelling programme
Mineral safeguarding area	MSA	Areas defined by mineral planning authorities with known mineral resources that are of identified economic or conservation value.
Mitigation		Measures intended to avoid, reduce and, where possible, remedy significant adverse environmental effects as the result of the Scheme.
Monitoring		An assessment of the performance of the Scheme, including mitigation measures. This determines if effects occur as predicted or if operations remain within acceptable limits, and if mitigation measures are as effective as predicted.
Motorway		A special type of road reserved for motorised traffic only, the numbers of which are prefixed with the letter 'M'.
National Character Area	NCA	A natural subdivision of England based on a combination of landscape, biodiversity, geodiversity and economic activity. The 159 NCAs in the UK follow natural, rather than administrative boundaries.
National Heritage List for England	NHLE	A database of designated heritage assets.
National Nature Reserve	NNR	National Nature Reserve is statutory designation, it is a protected area designated for its significant natural features, including habitats, species, and geological formations.
Nationally Significant Infrastructure Project	NSIP	Nationally Significant Infrastructure Project, further defined within Section 1 of this Case for the Scheme.
National Infrastructure Delivery Plan	NIDP	A plan that sets out how the government will support the delivery of infrastructure projects and programmes.
National Planning Policy Framework	NPPF	A planning framework which sets out the Government's planning policies for England and how these are expected to be applied.
National Policy Statements	NPS	Statements prepared and designated by the Secretary of State under the Planning Act 2008, which establish national policy for Nationally Significant Infrastructure Projects, including energy, transport and water, waste water and waste and against which applications for Development Consent Orders are assessed.
National Policy Statement for National Networks	NPS NN	A statement setting out the need for, and the Government's policies to deliver, the development of Nationally Significant Infrastructure Projects on the national road and rail networks in England.
Natural England	NE	Executive non-departmental public body constituted under the Natural Environment and Rural Communities Act 2006 (section 2(1)) to ensure that the natural environment is conserved, enhanced and managed for the benefit of present and future generations, thereby contributing to sustainable development.
Net Present Value	NPV	Net Present Value is a financial metric used to evaluate the profitability of an investment or project by calculating the difference between the present value of cash inflows and the present value of cash outflows over a period of time.

Term	Acronym	Meaning
Nitrogen Dioxide	NO_2	Nitrogen Dioxide is a reddish-brown gas that is highly reactive and toxic. Nitrogen dioxide is a chemical compound with the formula NO_2. Nitrogen Dioxide is primarily known as an air pollutant rather than a GHG. However, it plays a significant role in atmospheric chemistry, contributing to the formation of ground-level ozone and particulate matter, both of which are harmful pollutant.
Noise		Unwanted sound.
Noise barrier		Fence placed between a road and a noise sensitive receptor to reduce noise levels. Includes all elements of the fence (posts and fixings, as well as panels).
Noise Important Area	NIA	Areas identified with respect to noise from major roads and from roads within agglomerations where 'the 1% of the population that are affected by the highest noise levels from major roads' are located according to the results of the strategic noise mapping.
Non-road mobile machinery	NNMM	NRMM covers a very wide variety of machinery typically used off the road in many ways. It comprises, for example small gardening and handheld equipment (lawn mowers, chainsaws, etc.), construction machinery (excavators, loaders, dozers, etc.), agricultural & farming machinery (harvesters, cultivators, etc.), even railcars, locomotives and inland waterway vessels.
Operational		The functioning of the Scheme on completion of construction.
Order Limits		The extent of the area within which the Scheme may be carried out.
Origin-Destination	OD	Origin-Destination data represents the movement of people or goods from a starting point (origin) to an endpoint (destination). This data is crucial in transportation planning and traffic management.
Outline Site Waste Management Plan	OSWMP	Identifies the strategic approach for the management of waste generated during the construction phase of the Scheme.
Post Meridiem	PM	After midday/
Preferred Option		The chosen design option that most successfully achieves the Scheme objectives and becomes subject to further design and assessment
Preferred Route Announcement	PRA	An announcement made by National Highways following the selection of a preferred option or solution for a road scheme.
Present Value	PV	Present Value is a financial concept that represents the current value of a future sum of money or stream of cash flows, discounted at a specific rate of return.
Present Value Benefit	PVB	Present Value Benefit refers to the current worth of future benefits, discounted at a specific rate to account for the time value of money. This concept is often used in cost-benefit analysis to evaluate the economic feasibility of projects or investments.
Principal Contractor		A person or organisation responsible for the overall management of a construction project, particularly when there is more than one contractor involved in a project.
Protected Species		Species of wild plants, birds and animals that are afforded protection through legislative provisions.
Public right of way	PRoW	A highway where the public has the right to pass. It can be a footpath (used for walking), a bridleway (used for walking, riding a horse and cycling), or a byway that is open to all traffic (including motor vehicles).
Register of Environmental Actions and Commitments	REAC	The Register of Environmental Actions and Commitments (REAC) is contained in Appendix A of the First Iteration Environmental Management Plan (EMP) (**TR010066/APP/6.5**) and identifies the environmental commitments included within the ES (**TR010066/APP/6.1**) to address the potential environmental effects of the Scheme. As part of this, specific actions and control measures which individual ES Chapters relied upon as part of their assessments have been defined and presented in the REAC. These

Term	Acronym	Meaning
		measures must be implemented and complied with in full.
Road Investment Strategy	RIS	A document which sets a long-term strategic vision for the network. With that vision in mind, it then: specifies the performance standards Highways England (National Highways) must meet; lists planned enhancement schemes National Highways expect to be built; and states the funding that they will make available during the first Road Period (RP), covering the financial years 2015/16 to 2019/20.
Road Investment Strategy 2	RIS2	A document which sets a long-term strategic vision for the network. With that vision in mind, it then: specifies the performance standards Highways England must meet; lists planned enhancement schemes National Highways expect to be built; and states the funding that they will make available during the second Road Period (RP2), covering the financial years 2020/21 to 2024/25.
Roads Period 1	RP1	Roads Period 1 (RP1) refers to the first phase of the UK government's Road Investment Strategy (RIS), which covered the period from April 2015 to March 2020.
Road Period 2	RP2	Roads Period 2, also known as the Road Investment Strategy 2 (RIS2), covers the period from April 2020 to March 2025.
Road Safety Audit 1	RSA1	There are four stages of a Road Safety Audit (RSA). Stage 1 RSAs are undertaken at the completion of preliminary design and normally before planning consent is granted.
Roundabout		A circular, one-way junction at which other roads meet and terminate.
Runoff		The flow of water over the ground surface.
Scoping		The process of identifying the issues to be addressed by the Environmental Impact Assessment process. It is a method of ensuring that an assessment focuses on the important issues and avoids those that are considered insignificant.
Scoping Opinion		The written opinion of the relevant authority, following a request from the Applicant, as to the information to be provided in an ES. Document (**TR010066/APP/6.8**).
Scoping Report		A report that records the outcomes of the scoping process and is typically submitted as part of a formal request for a Scoping Opinion (**TR010066/APP/6.9**).
Screening		The formal process undertaken to determine whether it is necessary to carry out a statutory Environmental Impact Assessment and publish an ES in accordance with the EIA Regulations.
Second Iteration Environmental Management Plan		The second iteration of the Environmental Management Plan, which is refined for the construction stage of the consented project and prepared in advance of construction.
Severance (walkers, cyclists and horse riders)		The extent to which members of communities are able (or not able) to move around their community and access services/facilities.
Significance (of effect)		A measure of the importance or gravity of the environmental effect, defined by generic significance criteria or criteria specific to an environmental topic.
Simulation and Assignment of Traffic to Urban Road Networks	SATURN	SATURN is a powerful and flexible highway assignment software package.
The Scheme		The A46 Coventry Junctions (Walsgrave) Scheme for which development consent is being sought.
Significant Observed Adverse Effect Level	SOAEL	The level above which significant adverse effects on health and quality of life occur.

Term	Acronym	Meaning
Site of Special Scientific Interest	SSSI	Area of land notified by Natural England under section 28 of the Wildlife and Countryside Act 1981 as being of special interest due to its flora, fauna or geological or physiological features.
Site Waste Management Plan	SWMP	A plan that is used to outline how a construction project would avoid, minimise or mitigate effects on waste production and handling on the environment and surrounding area.
Soil		An assemblage of mineral particles and/or organic matter, which includes variable amounts of water and air (and sometimes other gases).
Soils Management Plan	SMP	A document that provides a framework that can be used by contractors to manage and monitor the soils disturbed during the construction phase of the Scheme.
Supplementary Planning Document	SPD	Supplementary Planning Documents are additional guidance on some of the policies of the Local Plan. They provide detailed guidance on how planning policy will be implemented. SPDs do not have the same status as the policies in the Local Plan but have been subject to public consultation and are taken into account as material considerations in dealing with planning applications
Special Area of Conservation	SAC	Sites designated under EU legislation for the protection of habitats and species considered to be of European interest.
Stakeholder		An organisation or individual with a particular interest in the Scheme.
Strategic Road Network	SRN	The network of motorways and trunk roads in England.
Supplementary Planning Document	SPD	Documents not part of a development plan for a particular authority area that provide additional guidance or detail on policies within the development plan and are a material consideration for an LPA in their decision-making.
Sustainable Drainage System	SuDS	Techniques for managing water runoff to reduce the quantity, and increase the quality, of surface water that drains from a development.
Targeted consultation		Following the statutory consultation, the Applicant undertook targeted non-statutory consultation as a result of updates to the proposal in six areas of the Scheme. This targeted non-statutory consultation was held to seek views and allow an opportunity for prescribed consultees, persons with land interests and community stakeholders, who the Applicant considered would be impacted by, and interested in, the Scheme, to comment on the updates.
Tonnes of carbon dioxide equivalent	tCO_2e	A measure that allows the different GHGs to be compared on a like-for-like basis relative to one unit of CO2.
Transport Analysis Guidance	TAG	Guidance produced by the Department for Transport for undertaking transportation studies, appraisals and modelling. Also referred to as WebTAG.
Transport Decarbonisation Plan	TDP	A plan that sets out the government's commitments and the actions needed to decarbonise the entire transport system in the UK.
Transport User Benefit Appraisal	TUBA	A type of software that undertakes the economic appraisal of transport schemes in accordance with DfT's TAG.
Traffic Management Plan	TMP	A document that sets out how construction traffic including site personnel movements will be controlled to ensure the safe and efficient delivery of the Scheme.
Variable Demand Model	VDM	Used to predict the future levels of demand for private vehicle travel, taking into account trip generation, distribution and mode split.
Variable Message Sign	VMS	An electronic traffic sign often used on roadways to give travelers information about special event.
Variable Restraint System	VRS	A Variable Restraint System (VRS), often referred to as a Vehicle Restraint System, is designed to enhance road safety by controlling and mitigating the impact of vehicles that leave the roadway.
Value for Money	VfM	An assessment that takes into consideration both the monetised and unmonetised benefits and costs of the Scheme.

Term	Acronym	Meaning
Vehicle Operating Cost	VOC	The expenses associated with owning, operating and maintaining a vehicle.
Veteran Tree		Trees that have features of ancientness but at a younger age. These features include missing branches, hollow trunks and habitat features more commonly associated with ancient trees.
Visual Receptor		Individuals and/or defined groups of people who potentially could be affected by the Scheme.
VISSIM		VISSIM is a micro-simulation modelling software developed by the PTV Group, Germany: https://www.ptvgroup.com/en/solutions/products/ptv-vissim/
Walkers, cyclists and horse-riders	WCH	A collective term used to describe pedestrians, cyclists and equestrians.
Water Framework Directive	WFD	A European Union Directive which commits member states to achieve good status of all waterbodies (both surface and groundwater), and also requires that no such waterbodies experience deterioration in status. Good status is a function of good ecological and good chemical status, defined by a number of elements.
Wider Economic Impacts	WEIs	Wider Economic Impacts
Wider Impacts in Transport Appraisal	WITA	A type of software that captures the welfare impacts of employment, investment and productivity effects that are not already included in the conventional user benefit calculations for transport schemes.

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