LOCAL IMPACT REPORT

A46 Newark Bypass Scheme

Nottinghamshire County Council

October 2024

Nottinghamshire County Council

Contents

1. Introduction

Overview

1.1 National Highways (NH) (the 'Applicant') is planning to upgrade the A46 Newark Bypass, which is classified as a 'Nationally Significant Infrastructure Project' (NSIP). NH intend to obtain the necessary highway orders and compulsory purchase orders using a Development Consent Order (DCO) statutory instrument (under the Planning Act 2008). Part of the 2008 Act process invites relevant local authorities to submit a Local Impact Report (LIR), which considers the impact of the proposed scheme from the local authorities' perspective.

1.2 This LIR has been prepared by Nottinghamshire County Council, the Local Highway Authority, to evaluate the local impacts of the A46 Newark Bypass DCO for the construction, operation and maintenance of a bypass connecting Farndon roundabout and the Winthorpe roundabout. It is understood that Newark & Sherwood District Council (NSDC), the Local Planning Authority, are intending to submit a separate LIR. However. the District Council has provided advice to the County Council on built cultural heritage (Chapter 8).

1.3 The report has been prepared in accordance with the Planning Inspectorate Advice Note on Local Impact Reports (2012) and the published guidance of the Planning Officers Society.

Site Description and Surroundings

1.4 The scheme is located within the district of Newark & Sherwood in the County of Nottinghamshire.

1.5 The route runs to the west of Newark, approximately 1km from the town centre, and to the east of the village of Kelham (approximately 2km distant). The southern extent of the scheme is located close to Farndon, whilst the northern extent of the scheme is located close to Winthorpe.

1.6 The existing A46 route traverses through farmland for the majority of the scheme extent, and passes over the River Trent as well as both the East Coast Mainline and Nottingham to Lincoln (Castle) rail line.

1.7 Newark is a historic market town, home of Newark Castle (famous for being the location where King John died), the National Civil War Museum and Newark Air Museum. The scheme extent also passes several large employment sites, including British Sugar (accessed via the A46 / Great North Road junction), Northern Road Industrial Estate (accessed via the A46 / Lincoln Road junction), and Newlink Business Park. The route also passes Newark Showground, which is a large venue hosting a variety of events throughout the year. As such, the wider Newark area attracts a large number of local, regional and national trips that are important for the local economy.

1.8 Figure 1.1 summarises the scheme location.

Figure 1.1: Scheme Location

Source: OpenStreetMap

Details of the Scheme

1.9 The A46 forms part of the strategic Trans-Midlands Trade Corridor, connecting the M5 to the Humber Ports, with the section between Farndon roundabout, to the southwest of Newark, and the A1 to the east of Newark being the last remaining stretch of single carriageway between the M1 and A1.

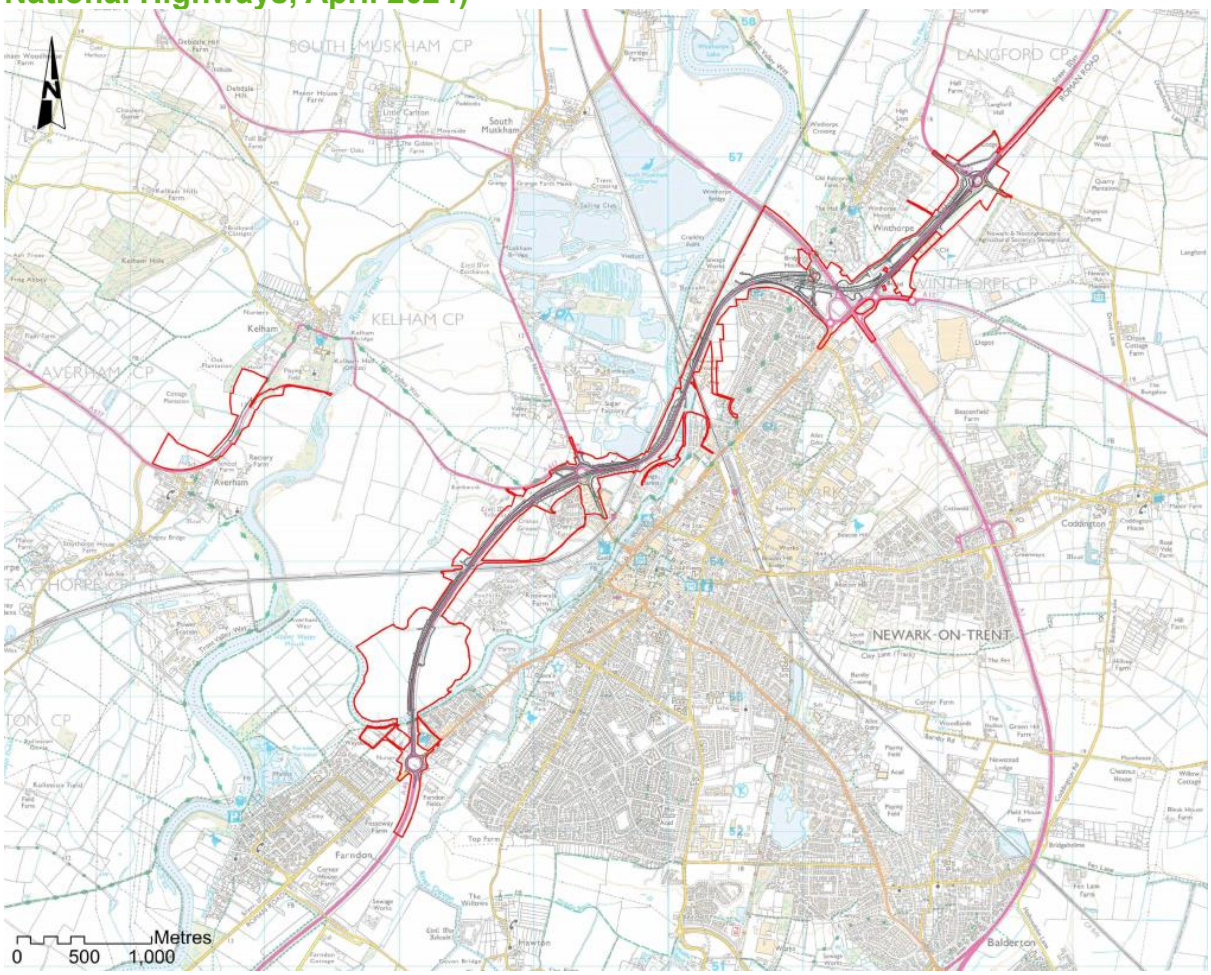
1.10 The A46 Newark Bypass scheme comprises on-line widening, on the north of side of the existing route, for most of its length between Farndon roundabout – at its western extent – and the A1 followed [to the east of the A1] by a new section of offline dual carriageway proposed between the A1 and Winthorpe roundabout, where the new dual carriageway ties into the existing A46 to the west of Winthorpe roundabout. The improvements will also result in amendments to the provision for Non Motorised Users (NMUs). These NMU amendments may impact on pedestrians and cyclists in the immediate vicinity of the scheme, as well as wider public rights of way that may impact on equestrians.

1.11 The widening works require extensive earthworks along the existing embankments, and new structures where the route crosses the Nottingham to Lincoln and East Coast main railway lines, River Trent and the A1. The roundabouts at Farndon and Winthorpe will be enlarged and partially signalised, while the 'Cattle Market' roundabout will be grade separated by elevating the A46. Access to the A1 to / from A46 will also be improved by upgrading the 'Brownhill' and 'Friendly Farmer' roundabouts.

1.12 The DCO Scheme's Location Plan is shown in the DCO document 2.1 [**APP-004**].

1.13 Figure 1.2 shows an extract of the Scheme Location Plan.

Figure 1.2: Scheme Location Plan (Source: App-004 Scheme Location Plan, National Highways, April 2024)



2. Transport Planning

Relevant Local Transport-Related Policy Context

Nottinghamshire Plan

2.1 The Nottinghamshire Plan[1] covers the period between 2021 to 2031 and sets out the 10-year vision for Nottinghamshire, considering the evolving ambitions for the County following the Covid-19 pandemic.

2.2 The Nottinghamshire Plan sets out the following ambitions which are relevant to the A46 scheme:

A. Ambition 6: Making Nottinghamshire somewhere people love to live, work and visit.
   i. Ensure that developments across Nottinghamshire are attractive, sustainable and well planned.

B. Ambition 7: Attracting investment in infrastructure, the economy and green growth

[1] Available from: https://plan.nottinghamshire.gov.uk/

i. Promote and drive the East Midlands Development Corporation, HS2, the Toton Campus and other major infrastructure projects.
ii. Protect our natural environment when new infrastructure is developed.

C. Ambition 8: Improving transport and digital connections
i. Improve local and regional transport connections to make journeys easier.
ii. Keep our highways safe and reduce congestion.

D. Ambition 9: Protecting the environment and reducing our carbon footprint
i. Promote greener travel

2.3 The aims of the A46 Scheme are well aligned with the Nottinghamshire Plan.

Nottinghamshire Local Transport Plan

2.4 The Third Local Transport Plan (LTP3) sets out Nottinghamshire's transport strategy between 2011 and 2026 and outlines a programme of measures to be delivered over the short, medium and long term. The document is comprised of the Local Transport Plan Strategy and the Implementation Plan.

2.5 The LTP3 transport goals are to:

- provide a reliable, resilient transport system which supports a thriving economy and growth whilst encouraging sustainable and healthy travel
- improve access to key services, particularly enabling employment and training opportunities, and
- minimise the impacts of transport on people's lives, maximise opportunities to improve the environment and help tackle carbon emissions.

2.6 The following are the local transport objectives from the LTP3:

- Objectives related to **supporting economic growth**

  1. Tackle congestion and make journey times more reliable
  2. Improve connectivity to inter-urban, regional and international networks, primarily by public transport
  3. Address the transport impacts of planned housing and employment growth
  4. Encourage people to walk, cycle and use public transport through promotion and provision of facilities
  5. Support regeneration

- Objectives related to **helping protect the environment**

  6. Reduce transport's impact on the environment (air quality, buildings, landscape, noise etc.)
  7. Adapt to climate change and the development of a low-carbon transport system

- Objectives related to **improving health and safety**

  8. Improve levels of health and activity by encouraging active travel (walking or cycling) instead of short car journeys
  9. Address and improve personal safety (and the perceptions of safety) when walking, cycling or using public transport

- Objectives related to **improving accessibility**

  10. Improve access to employment and other key services particularly from rural areas

11. Provision of an affordable, reliable, and convenient public transport network

- Objectives related to **maintaining and improving existing infrastructure**

12. Maintain the existing transport infrastructure (roads, footways, public transport services etc

2.7 The Implementation Plan details the transport improvements that will help to address the Local Plan objectives. The following specific reference to the given in relation to the A46 scheme: "*The County Council will continue (in collaboration with partners) to press for the A46 Newark improvements to be included and delivered during the second RIS period.*"

2.8 The objectives of the A46 Scheme are well aligned with the Nottinghamshire LTP.

East Midlands Combined County Authority Local Transport Plan

2.9 It is understood that the East Midlands Combined County Authority (EMCCA) is producing a new Local Transport Plan (LTP) to replace the existing LTPs of Derby, Derbyshire, Nottingham and Nottinghamshire. No conflict is anticipated with major infrastructure schemes, such as that proposed with the A46.

Bus Service Improvement Plan (BSIP)

2.10 The Nottinghamshire BSIP sets out the collaborative strategy between NCC and bus operators to improve bus services within the region. The NCC BSIP comprises of the following objectives:

- Comprehensive and simple network
- Reliable network
- Affordable services
- Integrated services
- Attractive, comfortable, safe and accessible services
- Coordinated transport
- Services that contribute to decarbonisation

2.11 The following strategies within the BSIP are applicable to the A46 scheme and wider Newark area:

a) Launch new bus services (including a new bus service from Newark Northgate Station to Fernwood and Grantham, new evening Demand Responsive Transport in Newark and more buses per hour between Newark and Nottingham).
b) Ensure bus services and associated infrastructure is provided as a priority for new developments.
c) Bus stop infrastructure upgrades (including raised boarding kerbs and new / upgraded bus shelters).

2.12 It is understood that a key aim of the A46 Scheme is to improve journey time reliability along the corridor, with junction upgrades also relieving congestion. This aim aligns well with the BSIP objective to create a more reliable network; however, increased traffic flows on routes leading to / from the A46 corridor may impact the reliability of bus services within Newark and therefore undermine wider BSIP aspirations. This is considered further in the report, in the Section *Impacts on Public Transport*.

Local Cycling and Walking Infrastructure Plan (LCWIP)

2.13 The D2N2 (Derby City, Derbyshire, Nottingham City and Nottingham) LCWIP sets out the strategic approach for developing comprehensive local cycling and walking

networks within the region. The plan identifies a prioritised list of walking and cycling infrastructure improvements for future delivery in the short, medium and long term.

2.14 The following LCWIP Objectives are relevant to the A46 scheme:

a) Objective 3 – Constrain Traffic Congestion
b) Objective 4 – Address Climate Change and Improve Air Quality

2.15 Figure 2.1 shows the LCWIP network within proximity of the A46 Scheme, including the aspiration to create a continuous route via Fosse Road / Farndon Road and through the town centre (via Mill Gate, Bar Gate, North Gate and Lincoln Road) before joining the A46 at the Brownhills roundabout and Friendly Farmer roundabout.

2.16 Other routes crossing the A46 Scheme extent include the route following the A617, which crosses over the Cattle Market junction (utilising existing cycle infrastructure) before continuing along the B6326 Great North Road towards Newark town centre.

2.17 The existing National Cycle Network (NCN) Route 64 is also shown in Figure 2.1, which currently crosses under the A46 to the west of the Brownhills roundabout.

2.18 Table 2.1 summarises LCWIP routes (within proximity of the A46 scheme) included within NCCs 15-year delivery programme. Any routes not included within Table 2.1 are corridors prioritised for consideration beyond 2036/37, this includes the A46 Newark to Lincolnshire route.

Figure 2.1: LCWIP Routes

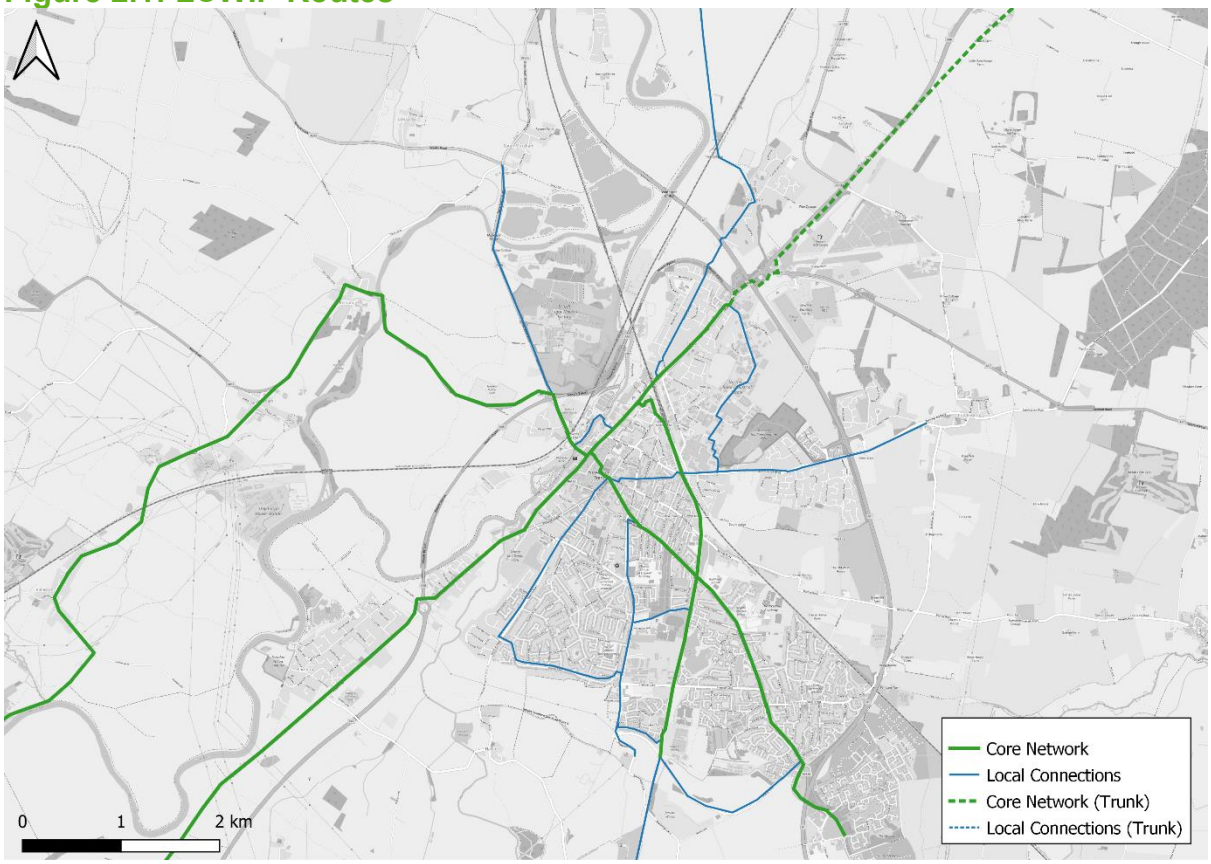


Table 2.1: Proposed LCWIP 15-year infrastructure programme (2022/23 to 2036/37) (NCC, 2022) - Newark

Route Corridor	Type of Network	Funding Secured for delivery in 2022/23 – 23/24?	Proposed delivery priority – Short Term	Proposed delivery priority – Medium Term	Proposed delivery priority – Long Term
Beacon Hill Road to town centre, Newark	Local		✓		
Newark Bridleway 5/Cow Lane, Newark	Local			✓	
Newark to Coddington	Local			✓	
Winthorpe to Farndon via Newark town centre	Core			✓	
A616 (Newark to South Muskham)	Local				✓

2.19 Active Travel England, a major funding body for pedestrian and cycling improvements, now considers the potential for LCWIP schemes to be provided to LTN1/20 standards. The A46 Scheme provides the opportunity to ensure that future NCC LCWIP proposals that interface with the A46 corridor can be provided to these LTN1/20 standards.

Rights of Way Management Plan (2018 – 2026)

2.20 The Rights of Way Management Plan for Nottinghamshire, published in late 2018 in accordance with the Countryside and Rights of Way (CRoW) Act 2000, assesses Nottinghamshire's current path network and its ability to cope with future needs. It sets out a series of actions designed to improve the path network for residents and visitors.

2.21 The plan was developed through research and refined through public consultation on a draft plan during spring 2018.

2.22 The plan notes the importance of the Rights of Way Network for a wide range of uses, including access to services, facilities and employment as well as providing a network of paths for pedestrians, cyclists and equestrians for leisure purposes. In addition, the plan shows how the Rights of Way network contributes to other policy objectives such as low carbon travel and the improvement of public health.

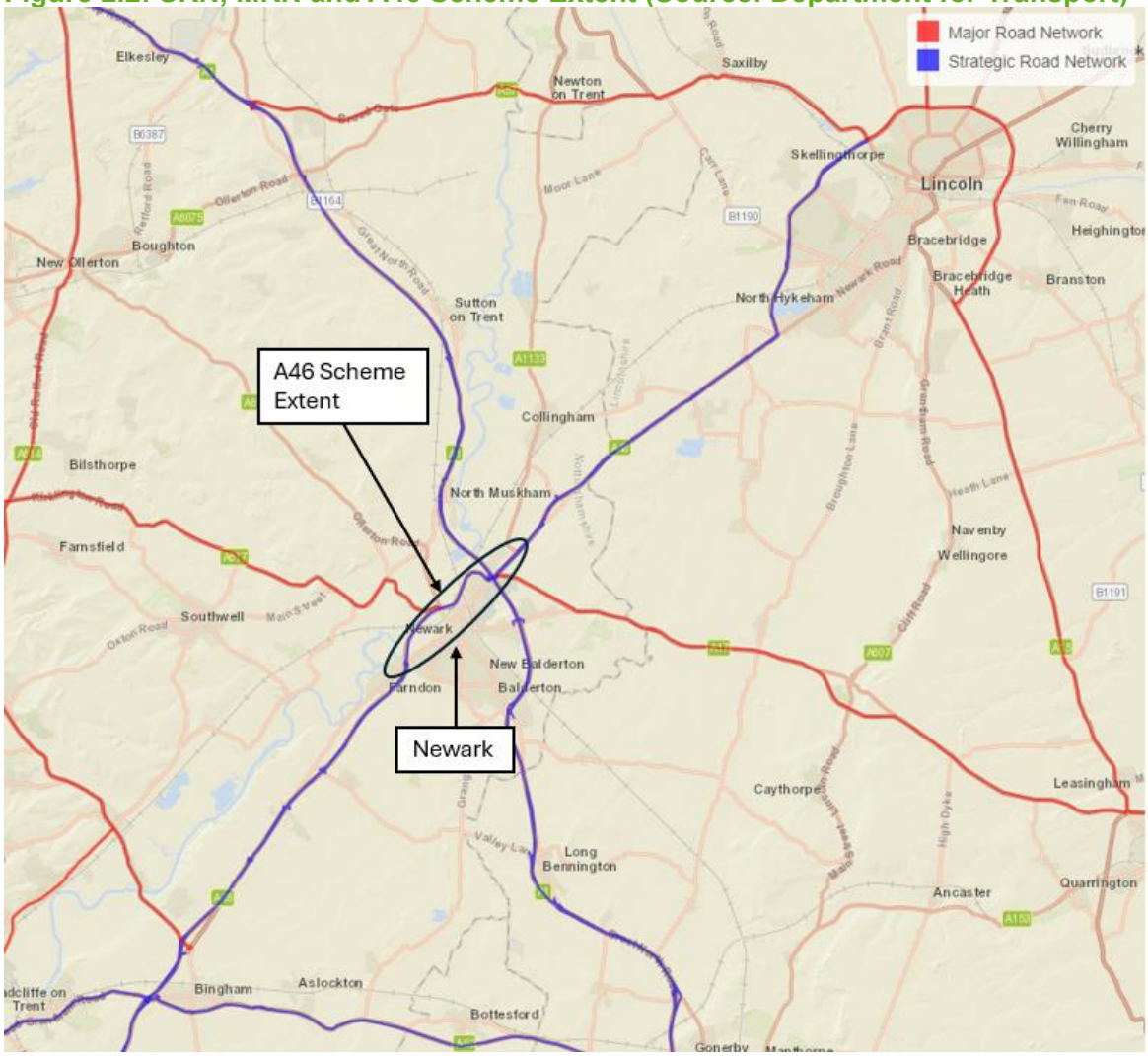
Local Transport Context

Existing Road network

Network description

2.23 Figure 2.2 shows the relationship between the Strategic Road Network (SRN, managed and maintained by National Highways) and the Major Road Network and Local Road Network (both managed by Nottinghamshire County Council).

Figure 2.2: SRN, MRN and A46 Scheme Extent (Source: Department for Transport)



2.24 The A46 is a designated SRN until its junction with the A15 in Lincoln. Locally to the scheme, the SRN also covers the A1 and A52.

2.25 The Major Road Network (MRN) incorporates the more major local authority-controlled A roads. The A617 and A17 are designated MRN routes, and both meet the A46 within the scheme extent. Within the wider region, the A57 (connecting the A1 at Markham Moor to Lincoln), A15 (connecting Sleaford to Lincoln) and A614/A6097 corridor (connecting the A46 at Bingham to the A1 at Upper Morton) are also part of the MRN network.

2.26 Fosse Road, A616 (Ollerton Road), B6326, Lincoln Road and the A1133 also join the A46 within the scheme extent, but are not designated SRN or MRN routes. All routes join the A46 via roundabout junctions.

Congestion Mapping

2.27 Congestion mapping (Figure 2.3 and Figure 2.4) produced by NCC shows the routes within proximity of the A46 scheme extent currently experiencing delay. Figure 2.3 shows delay per mile for the AM peak period (0800 – 0900hrs), whilst Figure 2.4 shows the delay in the PM peak (1700 – 1800hrs). Delay data for the congestion mapping has been taken from the TrafficMaster GPS data (2019) and mapped onto the 2018 Integrated Transport Network (ITN) layer.

Table 2.2: Routes Experiencing Current Delays

Degree of Delay	AM Peak Hour	PM Peak Hour
75 to 150 seconds	• A46 Newark Bypass (between A46 / A616 / A617 junction) • A46 approaching A46 / Newark Services / A17 junction) • Routes within Newark Town Centre (incl. Beastmarket Hill, Lombard Street, Portland Street, Kirk Gate, King's Road and Sherwood Avenue.)	• A46 (between A46 / Farndon Road junction and A46 / A617 / A616 junction) • Lincoln Road (south of the A46 / Lincoln Road / A1 off/on-slip junction) • Routes within Newark Town Centre (incl. Carter Gate, London Road, Sherwood Avenue, Lover's Lane, Warburton Street and Lime Grove)
150 seconds or more	• A46 / A617 / A616 junction approach (most arms) • A46 / A1 off/on-slip / Lincoln Road / A17 junction • A17 approach to A46 / A1 off/on-slip / Lincoln Road / A17 junction • Routes within Newark Town Centre (incl. The Wharf, Boar Lane, Middle Gate, Stodman Street, Carter Gate, Barnby Gate and Boundary Road).	• A46 (on the approach to the A46 / Fosse Road / Farndon Road) • B6326 (Great North Road) on the approach to the A46 / A617 / Great North Road junction) • A1 off-slip (approaching the Lincoln Road / A46 / A1 off / on-slip junction). • Lincoln Road (approaching the Lincoln Road / A46 / A1 off / on-slip junction) • A17 (approaching the A17 / A46 / A1 off/on-slip) • Northern Road Industrial Estate • Routes within Newark Town Centre (incl. North Gate, Queens Road, Castle Gate, Sleaford Road, Beastmarket Hill, Stodman Street, Lombard Street, Friary Road and Beacon Hill Road)

2.28 The analysis shows that local routes are experiencing delays and could therefore be sensitive to potential re-assignment affects resulting from the implementation of the A46 scheme. This will be examined in more detail later in this LIR.

Figure 2.3: Delay per Mile (AM Peak – 0800 to 0900hrs)

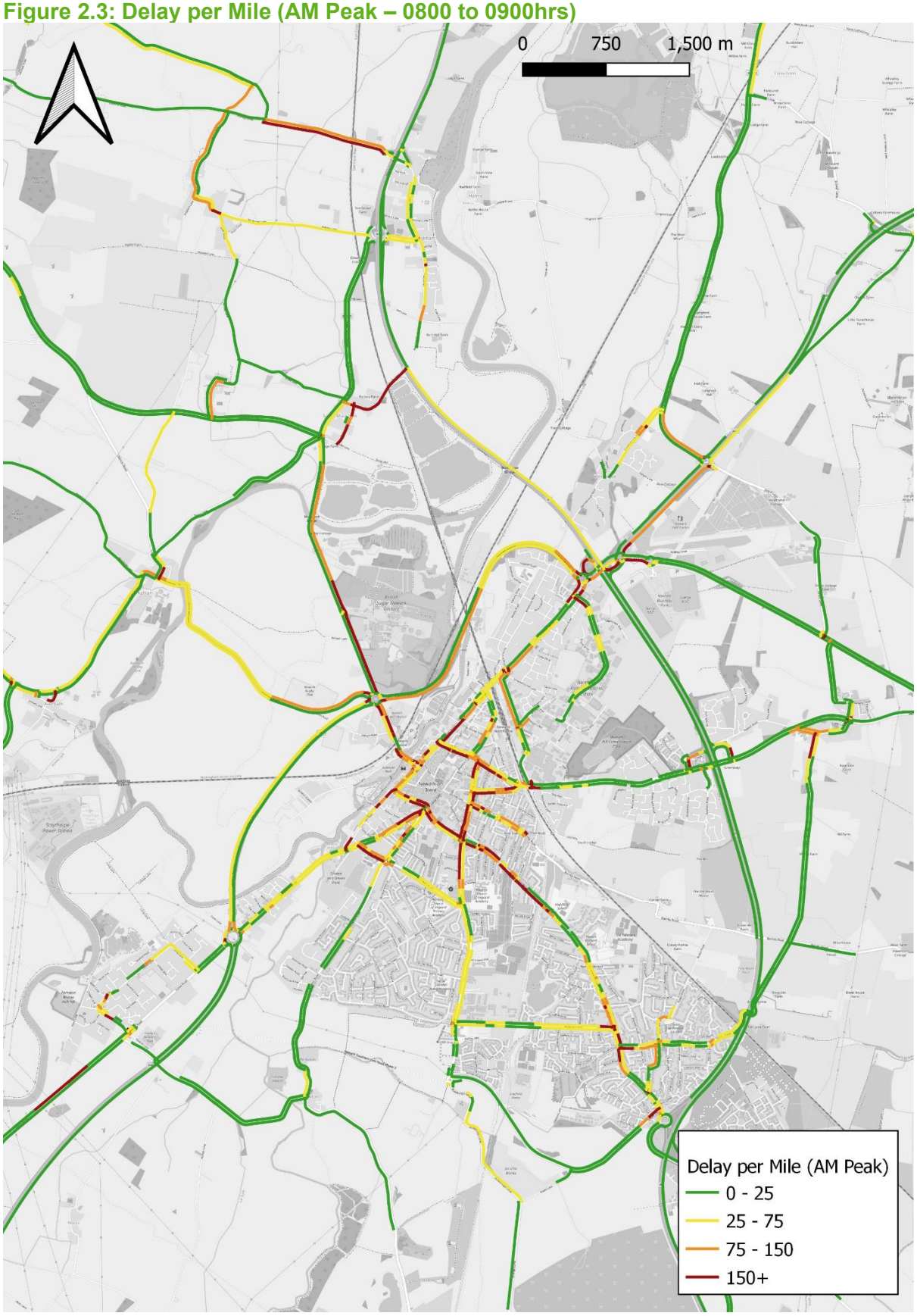
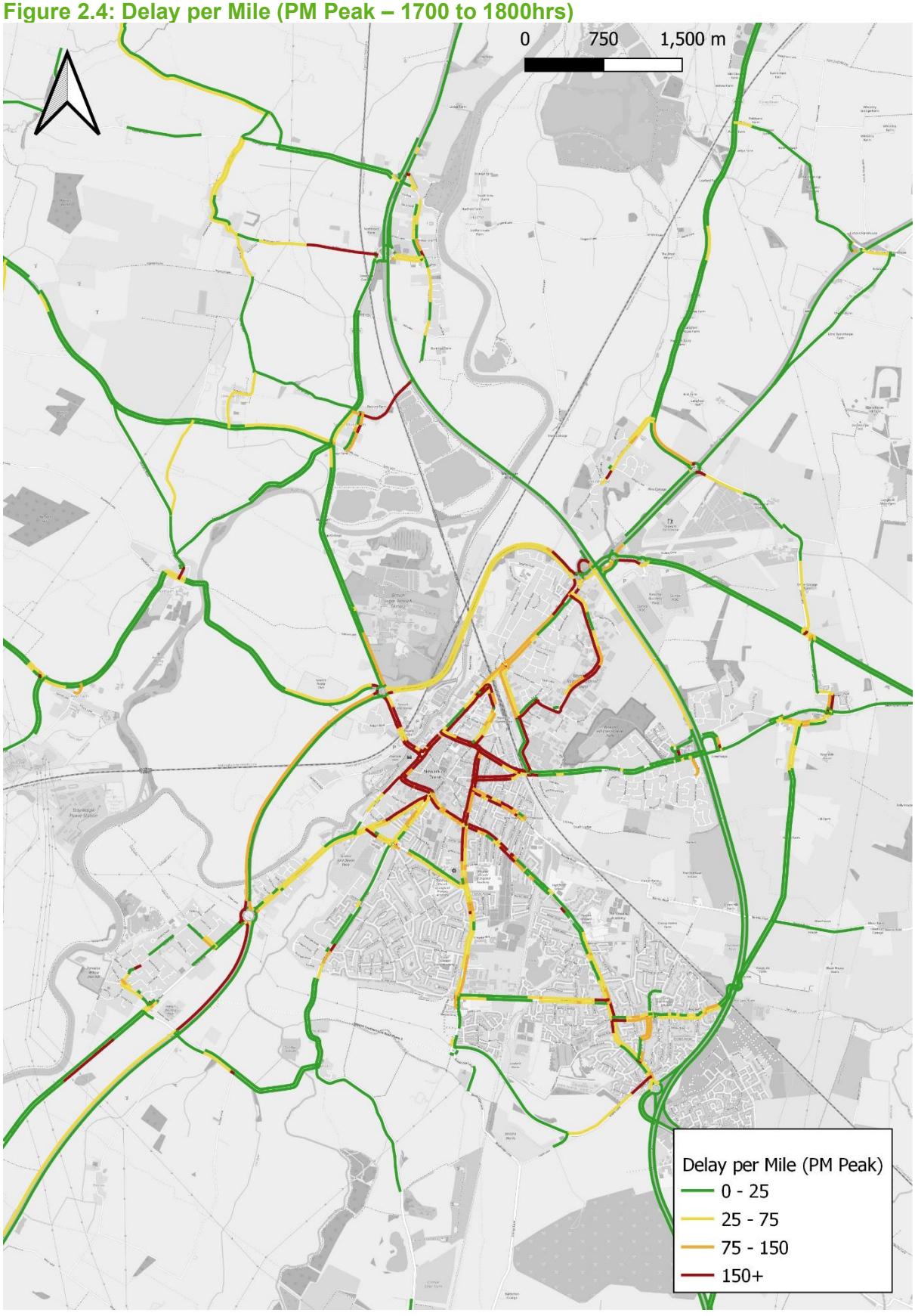


Figure 2.4: Delay per Mile (PM Peak – 1700 to 1800hrs)



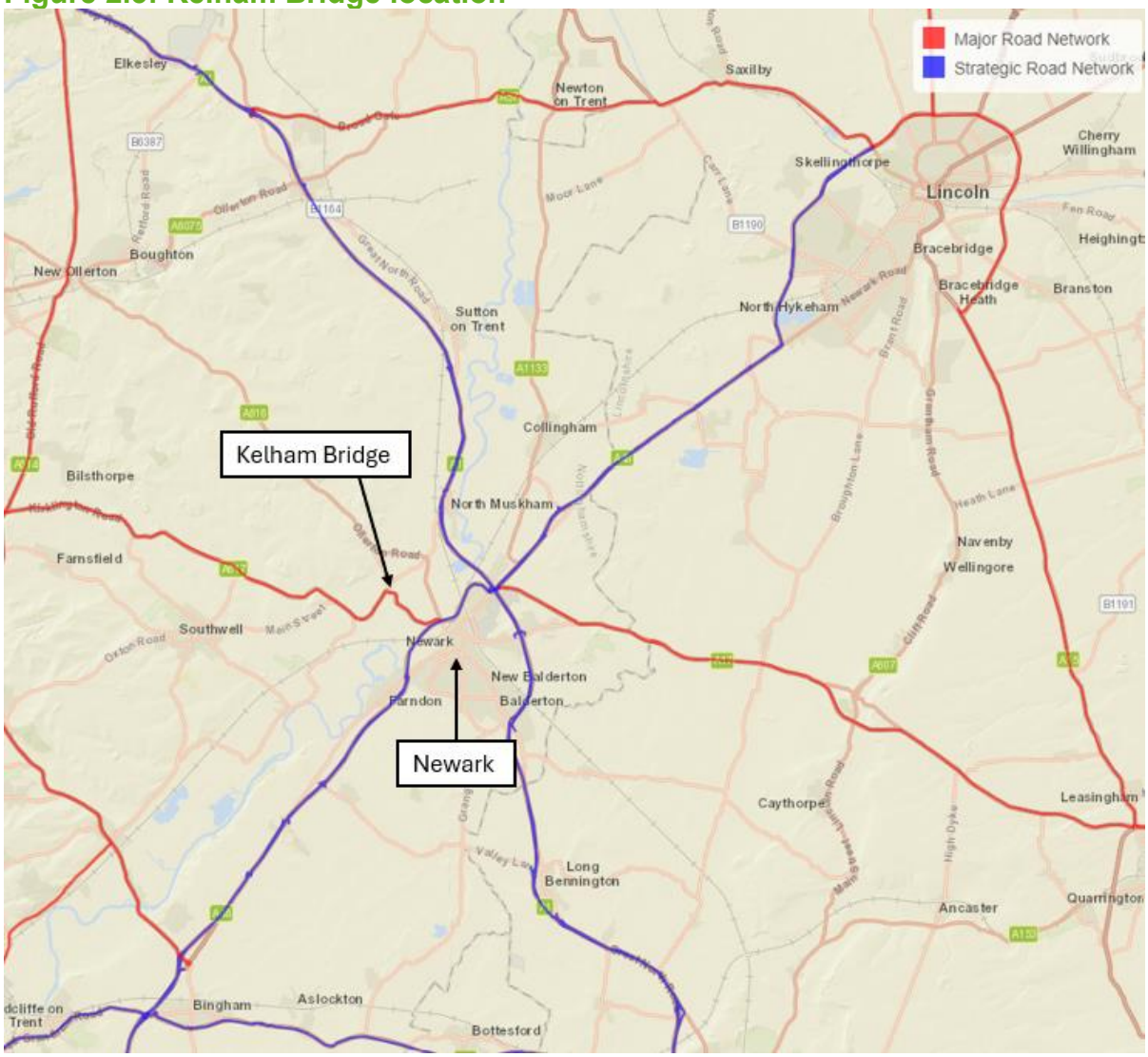
Locations of Concern

2.29 Existing locations of particular concern to NCC are as follows:

Kelham Bridge

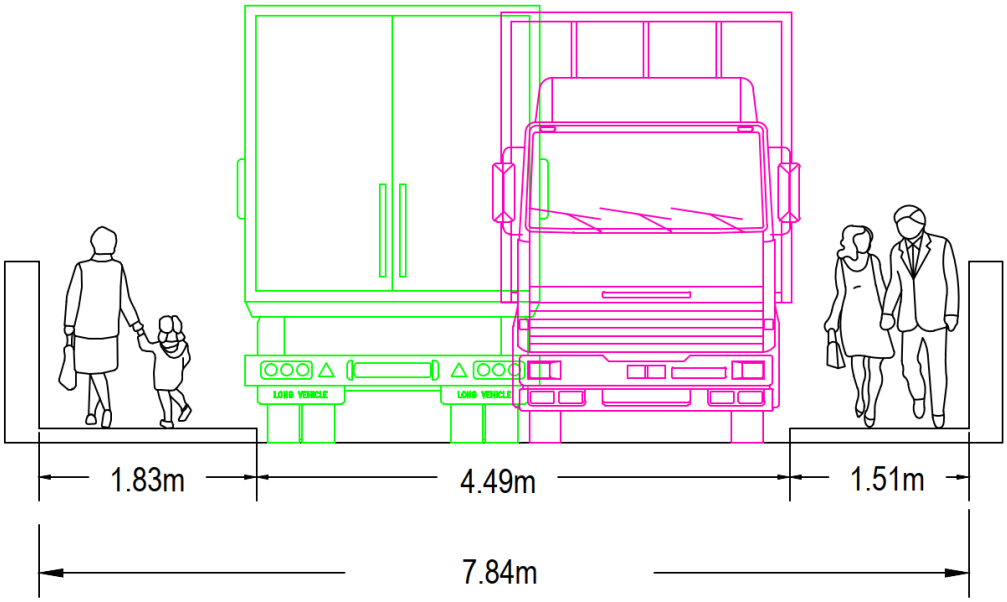
2.30 The A617 crosses the River Trent at Kelham Bridge, which is one of only ten road crossing points over the River Trent within Nottinghamshire. The location of Kelham Bridge vis-à-vis Newark is shown in Figure 2.5.

Figure 2.5: Kelham Bridge location



2.31 The bridge is a grade II listed structure and is too narrow to accommodate two large HGVs passing with a carriageway width of approximately 4.6m. This is illustrated in Figure 2.6, which also shows the bridge has two substandard footways and no cycle facilities (with more details in the later section).

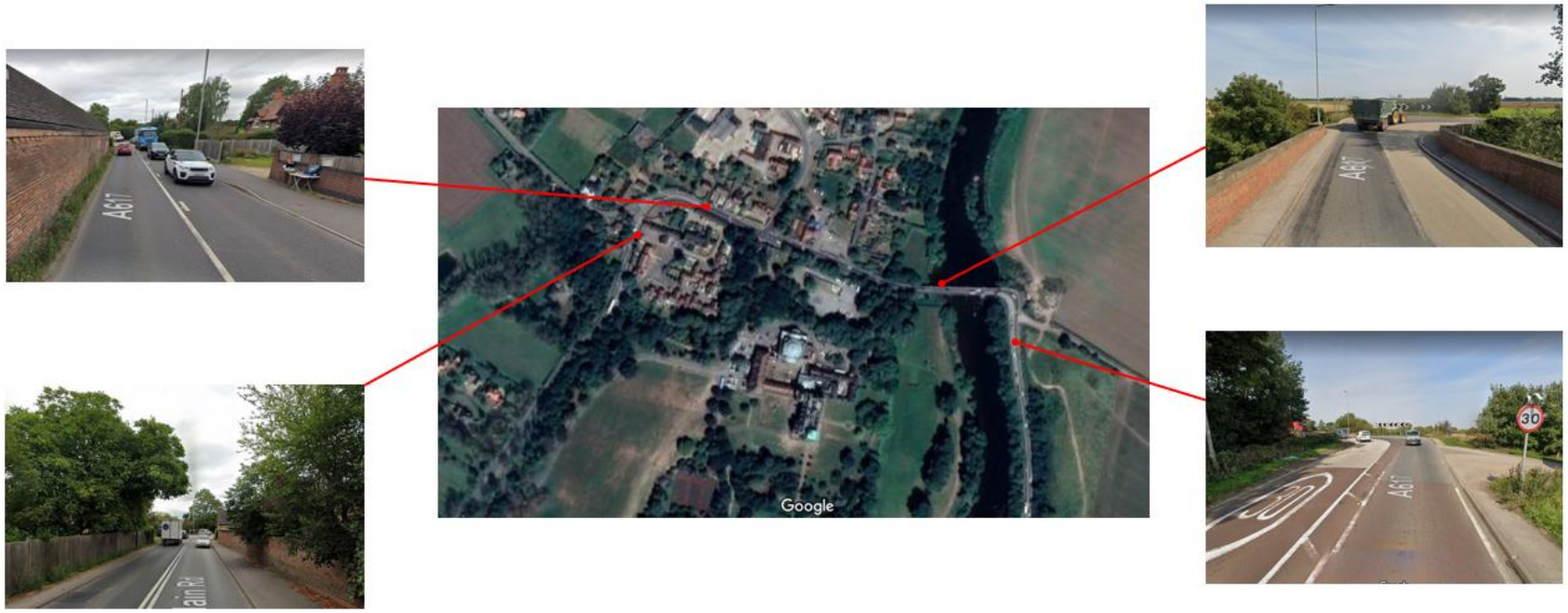
Figure 2.6: Kelham Bridge Cross Section



2.32 In addition, the alignment of the A617 to the east of Kelham Bridge is via a 90-degree bend, resulting in poor visibility which exacerbates the above problems. The alignment regularly results in larger HGVs swinging out into the eastbound carriageway to access the bridge. To the west of Kelham, the A617 also has a 90-degree sharp bend resulting in poor forward visibility. This bend and poor visibility are key contributing factors for multiple collisions in this location, and the alignment impacts journey times due to vehicles having to slow to take the bend. HGVs regularly cross lanes to traverse the bend.

2.33 This is illustrated in Figure 2.7.

Figure 2.7: Kelham A617 Trent River Crossing

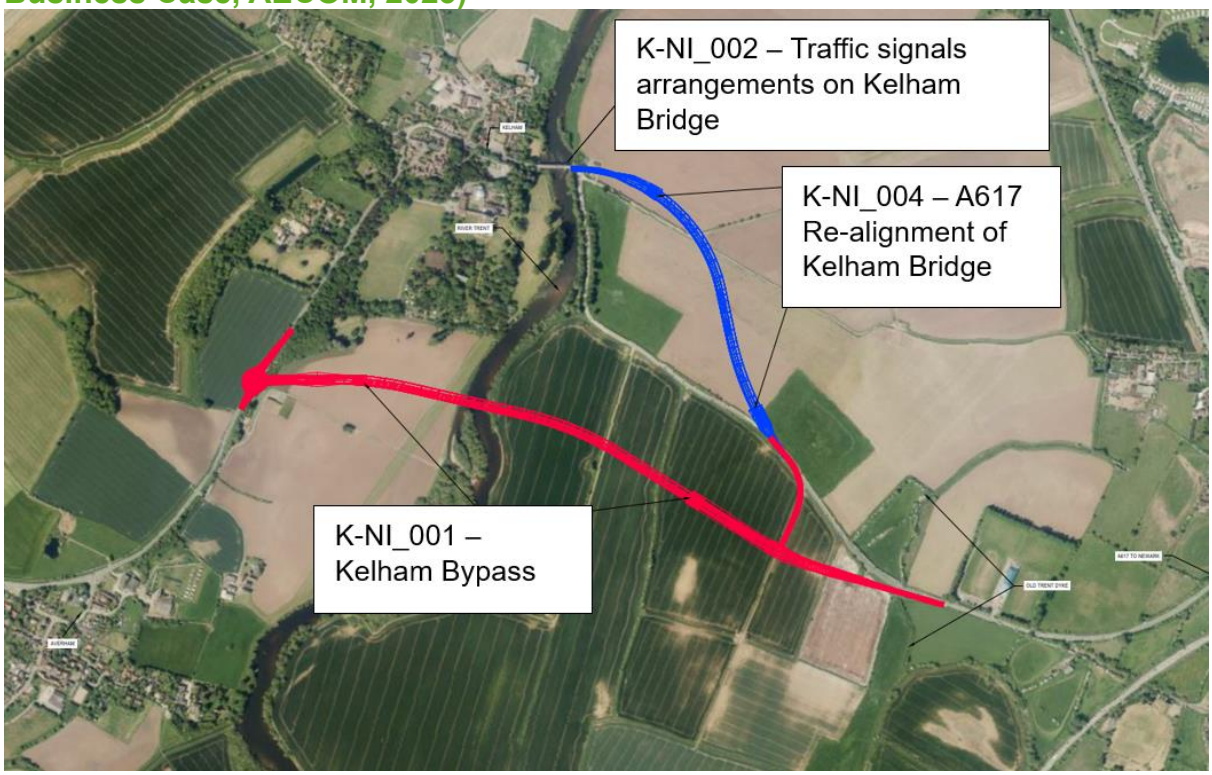


2.34 NCC is considering options to identify a preferred improvement scheme that will alleviate the issues at Kelham Bridge, which will assist with securing funding.

2.35 Three options (summarised in Figure 2.8) have been identified:

a. Kelham Bypass. Designed to eliminate the requirement to pass over Kelham bridge and removes traffic from Kelham village, alongside improved NMU facilities.
b. A617 Re-alignment of the Approach to Kelham Bridge. Mitigates the alignment issues at Kelham Bridge but does not fully remove the issues of HGVs passing and poor NMU facilities, does not remove the risk of bridge strikes, and retains high traffic flows through Kelham village.
c. Traffic signals arrangements on Kelham Bridge. Seeks to mitigate issues of HGVs passing through shuttle working to actively manage the flows of traffic over the bridge and therefore reducing the current conflict (but does not resolve poor NMU facilities and retains high traffic flows through Kelham village).

Figure 2.8: Kelham Shortlisted Schemes (Source: Kelham Strategic Outline Business Case, AECOM, 2023)



2.36 NCC would like to understand the potential impact or implications of the proposed Scheme on the operation of Kelham Bridge and how the Scheme may affect the assessment of the options and the deliverability of an improvement at the bridge. This will be discussed in more detail within Section *Forecast Changes in Traffic Flow*.

Great North Road

2.37 This route into Newark from the north-west of the town is capacity constrained by two main features: the river crossing (which limits access routes to the west of the town) and an at-grade level crossing (over the Lincoln to Nottingham railway line) located on Great North Road between the Great North Road / Manners Road and Great North Road / Ossington Way junction.

2.38 Frequent level crossing closures leads to queues backing up at the Great North Road / Bar Gate junction as well as onto the Cattle Market roundabout junction on occasion.

2.39 Great North Road is also an important route on the strategic cycle network. The narrow carriageway and high vehicle flows make it a very poor and difficult experience for cyclists.

The frequent level crossing closures also adversely affect cycling and walking journey times and the impact of waiting in a queue of idling vehicles is also a concern to NCCA.

2.40 Further into Newark town centre, queuing traffic is also common at the B6166/Lombard Street and Bar gate / North Gate junctions.

Collision Data

2.41 There are several existing collision clusters within proximity of the A46 scheme, and NCC anticipate that increased traffic flow on routes to / from the A46 will likely exacerbate the road safety issues. This is discussed further within the Section *Impacts on road safety.*

Public Transport Network

Bus Network

2.42 Figure 2.9[2] summarises the bus services operating in the Newark area.

2.43 In addition to those shown in Figure 2.9, there is also a demand responsive service (Nottsbus On Demand) covering the south Newark area which launched in Spring 2024 and covers communities including Car Colston, Screveton, Flintham, Syerston, Elston, Thorpe, Hawton, Cotham, Kilvington, Alverton and Thoroton. Passengers can request the service between 09:30am – 2:30pm Monday to Saturday. An additional on demand evening service has recently been introduced (July 2024) covering Newark town centre, Coddington, Balderton , Hawtonville and Winthorpe between 7.30pm until midnight Monday to Saturday.

2.44 There are currently no bus services operating along the A46 for the majority of the scheme extent. The 67, 22B and 46 operate at the northern extent of the scheme (between the A17 / A46 'Friendly Farmer junction and A46 / A1133 'Winthorpe' junction) as highlighted in Figure 2.9. These services also route through the A46 / Lincoln Road 'Brownhills' junction).

2.45 The services operating on routes surrounding the A46 are shown below. High frequency services (more than 1 per hour during the day) are highlighted in **bold underlined**.

A1133 (Passing through the A1133 / A46 'Winthorpe' junction)

- **367**
- 22B
- 609B

A616 - Great North Road (passing through the A46 / A617 / A616 / Great North Road 'Cattle Market' junction)

- 22
- **37**
- 39
- 39B
- X22

A617 (passing through the A46 / A617 / A616 / Great North Road 'Cattle Market' junction)

- **28 / 29**
- 227
- 300
- 330

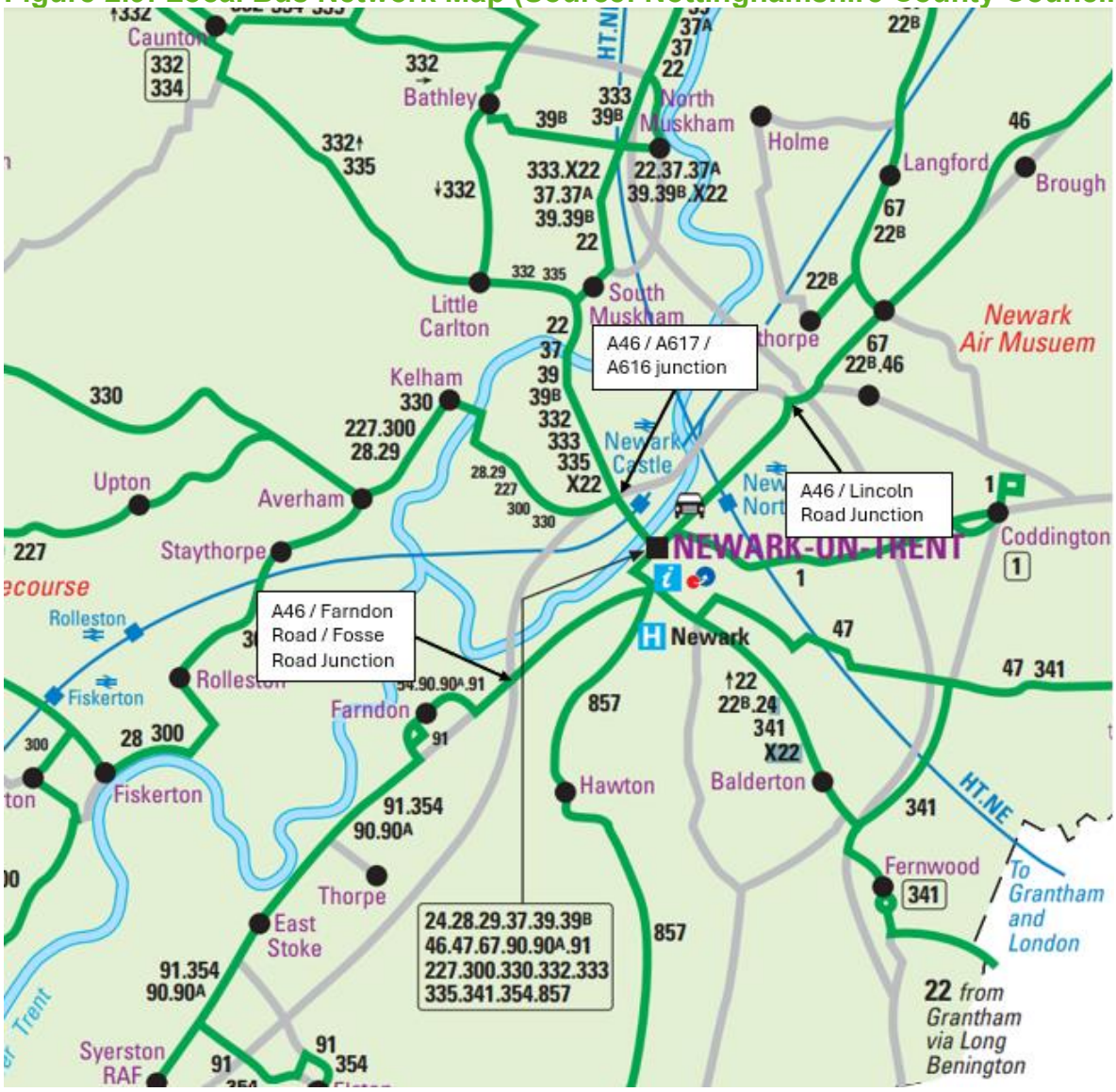
Fosse Road / Farndon Road (passing through the A46 / Farndon Road / Fosse Road 'Farndon' junction)

- 54

[2] Note: Some minor changes to bus services (including service numbers etc.) have changed since this map was produced.

- **90**
- 90A

Figure 2.9: Local Bus Network Map (Source: Nottinghamshire County Council)



2.46 Local bus services will experience delays on the network as per the congestion mapping shown in the preceding section of this report.

Bus Network Improvements

2.47 The Nottinghamshire BSIP proposes to create a new service from Newark Northgate Station to Fernwood and Grantham, as well as to provide more buses per hour between Newark and Nottingham. The aspiration to create a new demand responsive evening service within Newark has already been delivered (July 2024).

2.48 It is not anticipated that any of the proposed bus service improvements will route along the A46 scheme extent, and therefore it is not anticipated that the A46 scheme will have a detrimental impact upon proposed bus network improvements.

2.49 Notwithstanding, NCC are keen to understand the likely impact of the scheme upon the existing level of service, and this is discussed in greater detail within Section *Impacts on Public Transport*.

Rail Network

2.50 Two rail stations are located within Newark: Newark Northgate and Newark Castle.

2.51 Newark Northgate serves the East Coast Main Line, providing connection to London and the North-east of England and Scotland.

2.52 Newark Castle is located on the Nottingham to Lincoln line and serves local destinations.

2.53 Neither station is located on (or in close proximity to) the A46 scheme, and therefore it is not anticipated that the scheme will lead to a notable impact upon rail users or access to the station. It is assumed that the Applicant has liaised with Network Rail to ensure the A46 scheme is futureproof against any planned improvements to the rail network.

Active Travel Network

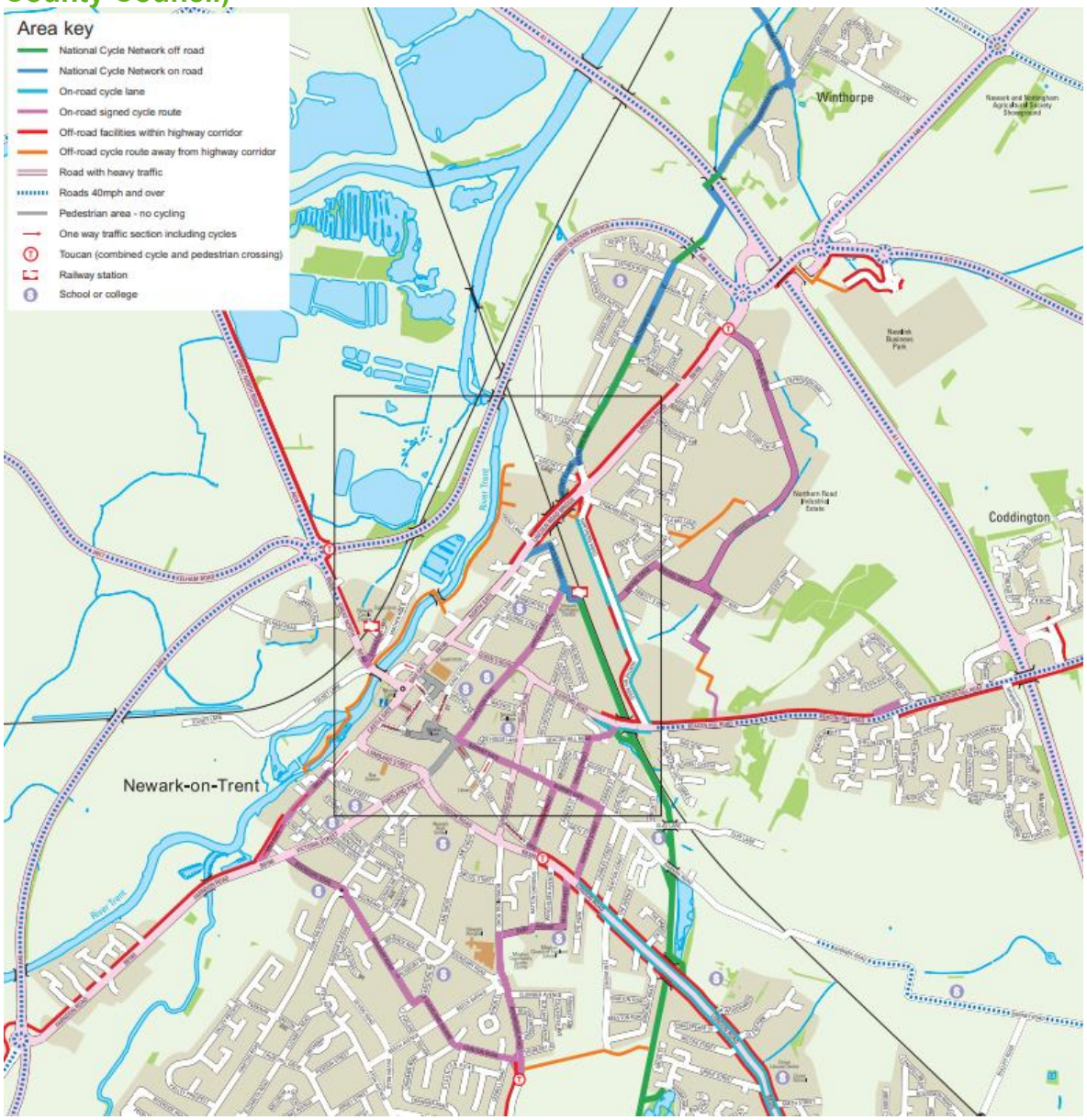
Cycling

2.54 Figure 2.10 summarises the cycle infrastructure currently in place within Newark. The following infrastructure is relevant to the A46 scheme:

- Great North Road shared footway / cycleway – supported by a Toucan crossing point across the A46 (east) arm at the A46 / A617 / A616 / Great North Road roundabout
- Fosse Road / Farndon Road shared footway / cycleway – the route diverts from Fosse Road via Crees Lane (prior to the A46 / Fosse Road / Farndon Road junction). A dropped kerb crossing point (with traffic island) is available across Farndon Road (approximately 40m east of the A46 / Fosse Road / Farndon Road junction) providing connection into International Logistics Centre. The shared footway / cycleway continues along Farndon Road towards Newark town centre.
- The National Cycle Network connects Newark to Winthorpe via an off-road link routing underneath the A46. This route has now been extended to Girton, and work is currently being undertaken on extending the route further to meet the Fledborough to Lincoln multi-user route.
- Newlink Business Park – a shared footway / cycleway connects the A46 to the Newlink Business Park.

2.55 None of the above infrastructure meets the current design standards (i.e. LTN1/20).

Figure 2.10: Newark Cycling Infrastructure (Newark Cycle Map, Nottinghamshire County Council)



Walking & Wheeling

2.56 The Public Rights of Way (PRoW) network is shown in Figure 2.11. The figure shows that there is a PRoW (Trent Valley Way) crossing beneath the A46 to the north of Farndon roundabout and again mid-way between the Cattle Market junction and Brownhills roundabout, a footpath crossing the A46 to the west of the Cattle Market Junction and lastly a footpath crossing the A46 between the Friendly Farmer and Winthorpe roundabout.

2.57 The following walking and cycling infrastructure issues are relevant to the A46 scheme:

- Kelham to Newark footpath – routing across the A617 and A46. Uncontrolled crossing point across both the A617 and A46.
- Trent Valley Way – off-road footway following the River Trent. The route passes beneath the A46 to the north of the A46 / Fosse Road / Farndon Road junction and again halfway between the A46 / A616 / A617 junction and the A46 / Lincoln Road / A1 off/on-slip junction.

- Winthorpe to Newlink Business park – this route crosses the A46 to the east of Newark Services. The barriered nature of the A46 in this location creates a severance issue for those using this footpath and there is currently no accessible crossing point available.

Figure 2.11: Public Right of Way (PRoW) Map - Newark

Active Travel Network Improvements

2.58 As noted previously, NCC have an aspiration to create an integrated cycle network via the creation / maintenance of the following LCWIP routes relevant to the A46 scheme:

- A617 connecting Newark to Fiskerton (crossing the A46 at the Cattle Market Junction).
- Great North Road connecting South Muskham to Newark on Trent (crossing the A46 at the Cattle Market Junction).
- Continuous route connecting Flintham to Lincolnshire via Newark Town centre (crossing the A46 at the Farndon roundabout, before re-joining the A46 at the Brownhills roundabout and traversing along the A46 to Potter Hill).
- Winthorpe Road connecting Newark to Lincolnshire via Winthorpe (passing under the A46 northwest of Brownhills roundabout)

2.59 NCC are keen to understand how the A46 scheme will impact existing cycle routes within its proximity, as well as whether the proposals safeguard the aspirations contained within the LCWIP. This is explored in greater detail within Section *Impacts on active Travel*.

Future Developments

2.60 Figure 2.12 (taken from Newark & Sherwood District Council's Local Development Framework Allocations & Development Management Development Plan Document) summarises Local Plan site allocations identified within proximity of the A46 Scheme. Site allocations located close to the A46 corridor are summarised below:

- NUA/MU/1 – Land north of the A17 (Mixed use development comprising a hotel/conference facility, restaurant facilities to support the wider showground site, and employment uses).
- NUA/MU/2 – Land at the current Brownhills Motor Homes Site (Mixed use development comprising employment (B1/B2/B8) development, roadside services including a hotel and continued use of the site for the sale of Motor Homes).
- NUA/E/2 – Land west of the A1 on Stephenson Way (12.24-hectare employment site)
- NUA/E/3 – Land off Telford Drive (1.54-hectare employment site)
- NUA/Ho/3 – Land on Lincoln Road (approx. 24 dwellings)
- NUA/Ho/4 – Yorke Drive Estate and Lincoln Road Playing Fields (approx. 230 net increase in dwellings)
- NUA/Ho/2 – Land South of Quibells Lane (approx. 86 dwellings)
- NUA/E/4 – Land at the former Nottinghamshire County Council Highways Deport on Great North Road (2.07 employment site (B1/B2/B8 uses)).
- NAP 2A - Land South of Newark (approx. 2,600 dwellings and 4,000 employees). The site runs adjacent to the A46 and is connected via the Newark Southern Link Road (partially constructed) which will, once complete, connect the A1 to the A46.
- NAP 2C - Land around Fernwood (approx. 3,000 dwellings and 1,100 employees). The site is located to the east of the A1 at the south of Newark. It will be connected to the A46 via the Newark Southern Relief Road (see above).
- NAP 2B - Land east of Newark (approx. 1,000 dwellings and 100 employees). It's expected that some development trips to / from the site will route via the A46.

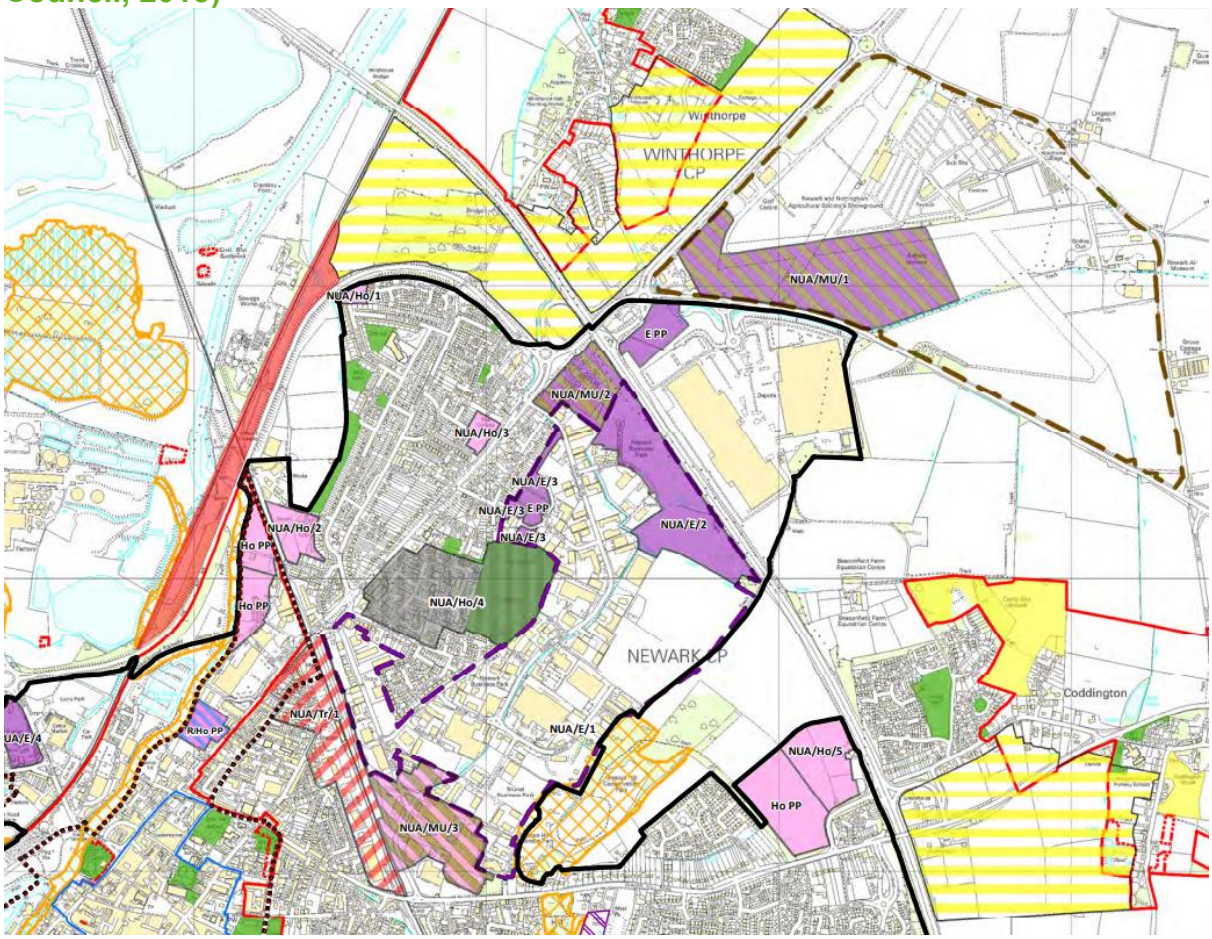
2.61 Site allocations are a matter for NSDC; however, NCC would like to understand whether the A46 scheme will impact the delivery of strategic sites, particularly in terms of:

- any increase in traffic flow routing along key links and whether this may lead to congestion issues in future and / or undermine the ability to deliver key sites in future;
- accessibility by public transport;
- accessibility by active modes.

2.62 This is explored in greater detail within the following sections of this report:

- Design Impacts on the Local Road Network (Operational)
- Forecast Changes in Traffic Flow (Operational
- Impacts on Junction Capacity

Figure 2.12: Local Plan site allocations (Source: Newark & Sherwood District Council, 2013)



Scheme Design Principles

2.63 A **Scheme Design Report (APP-194)** has been prepared which contains a full detailed breakdown of the design of the Scheme but also contains the design principles with which the Scheme will be committed.

Table 2.3: NCC Comment on Scheme Design Report APP-194

Document	NCC Comment
Scheme Design Report APP-194	**NCC recommend that the design principles should sit as a separate document that is secured within the DCO (as per recent National Highways schemes, such as the A66).**

Design Impacts on the Local Road Network (Operational)

General Arrangement Drawings

2.64 A review has been undertaken of the **General Arrangement drawings (AS-007)**. Further comments on these drawings are also provided under Section *Construction Traffic Management* for matters relating to construction activities.

Table 2.4: NCC Comment on General Arrangement Drawings AS-007

Sheet	NCC Comment
1	The linework style for Flood Compensation Area extents and existing footway / cycleway could be mistaken.
2	Whilst not an NCC area of the network, NCC note that the Applicant is proposing a direct access for maintenance off the Dual Carriageway in vicinity to the Farndon East Borrow Pits area. NCC query if this has this been assessed from a road safety perspective due to being on the inside of horizontal curvature which may give rise to the risk of a shunt style collision. Furthermore, NCC would like clarification if full visibility, in accordance with the DMRB CD 123, been considered in this region to ensure that any existing vegetation to be removed has been correctly captured into the BNG assessment. Maintenance tracks running along the A46 do not include any passing place provision; NCC would recommend passing places are provided so as to minimise any interaction with wider land access for agricultural vehicles.
3	NCC are concerned that the location of a maintenance access track off the A617 could give rise to a risk of side swipe or shunt style collisions for vehicles accessing or egressing. NCC request confirmation that this junction been afforded the appropriate visibility splays in accordance with CD123. For the transition point for the footway / cycleway to footway on the A617, further information is requested to show how cycle users travelling westbound would safely access the carriageway. NCC are concerned that this strategy needs to be reviewed in accordance with LTN1/20 guidance to ensure that cyclists can navigate the A617 and Cattle Market Roundabout safely. NCC request confirmation as to whether the crossings on the eastern slip roads of cattle market are controlled or uncontrolled crossings. The maintenance access track off A616 Great North Road should be designed to ensure that appropriate visibility for any pedestrian and cyclist interaction is considered. There is considerable diversion distance of Newark FP14; NCC seek clarification as to whether an underpass structure was considered in order to maintain connectivity (mindful of the location and risk of flooding), and whether the extents of the stopping up logical. Notwithstanding this, both the LAF and NCC have

	'agreed' to the stopping. As per the SoCG, the proposal to divert any public use onto the roadside footway of the A617 to the Cattle Market Junction is acceptable provided the footway is widened to provide safe shared use. The proposed route for non-motorised users over the Cattle Market Roundabout should be segregated as far as possible from the carriageway and made safe, with user friendly, clearly signed, light controlled and marked out junctions (as do all junctions). NCC's view is that there needs to be some mitigation and opportunity to improve the links from east to west for NMUs. In particular, connecting to Newark Rugby Club. NCC notes that a private access track is to be provided to the south of cattle market junction to access the proposed attenuation ponds. NCC note that no turning head facility has been provided and would recommend that this should be provided in order to minimise the chance of maintenance vehicles reversing onto the local road network in the vicinity of the Newark Cricket Ground. NCC would like to see further detail on the two-to-one merge on Great North Road heading south into Newark away from the Cattle Market roundabout, and how this design works in respect of side road access points.
3	The site to the south of Cattle Market Junction (to the west of Great North Road) has been identified as a potential compound area (including flood relief culvert). This site has also been identified within the Newark & Sherwood Local Plan Site Allocation document as a strategic employment site (NUA/E/4 (comprising 2.07 hectares of B1/B2/B8 land)). NCC seek to understand how the site will be managed (including timescales) so as to align with NCC / NSDC's development aspirations.
4	FP48-1 is impacted by the extension of the sewage treatment underpass. NCC seek clarification as to whether the impacts of this have been considered and if a temporary diversion has been factored into the assessment. NCC would want to understand the total diversion distance and time to determine if the diversion is appropriate for the types of users who will be utilising this route. For example, someone wishing to continue on a north / south movement would have to divert to get underneath the A46 and rail line. However, there is not a continuity in designated rights of way. NCC therefore need confirmation of what the signed route would be and confirmation it is appropriate, and support NH in providing a suitable network for NMUs impacted by the scheme.
5	A maintenance access track is to be provided on the on-slip to the A46 westbound in the vicinity of the Winthorpe Road Subway. This may give rise to side swipe or shunt style collisions. NCC seek clarification as to whether an alternative access off Brownhills Junction Link Road was considered. NCC wish to understand any temporary diversions or closures that would be required for the route off Winthorpe Road under the A46. NCC query whether the Applicant has sufficient powers to construct the footway cycleway in the land which connects to the eastbound carriageway of the A46 as it passes through the land understood to be owned by Newark Showground. NCC note than existing footpath FP3 shows a section running through the land not included in the order limits which will not be stopped up. Even though there isn't a continuous definitive line across the A46 (previously severed by the construction of the road), there is access across the adopted public carriageway to link the two paths together, therefore there needs to be a suitable link between the two parts of FP3. **NCC notes that a proposed footway / cycleway will be installed under the proposed A46 / A1 structure. NCC notes that this is bringing active travel users in close proximity to high speed traffic which would make this route**

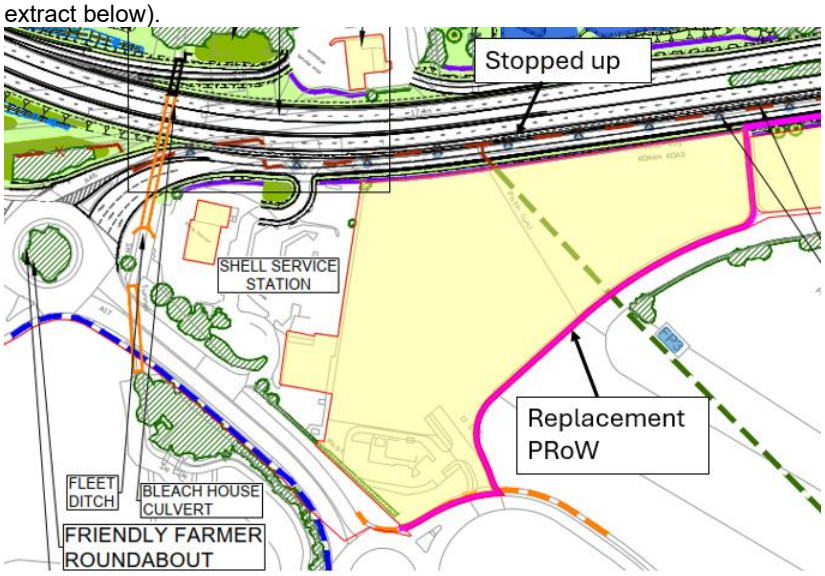
	less desirable and also increase the risk of trespass on the strategic road network. NCC seek clarification as to whether there will be a fence of acoustic barrier. NCC query what other alternatives were explored by the Applicant such as a separate underpass to the east of the proposed overbridge.
5	A site located to the east of the Friendly Farmer roundabout (located to the south of the A46) has been identified within Newark & Sherwood Local Plan Site Allocation document as a strategic mixed-use development site (NUA/MU/1 (hotel/conference facility, restaurant facility to support the wider showground uses, and employment uses)). The existing PRoW running adjacent to the A46 connecting to the Friendly Farmer roundabout is proposed to be stopped up, being replaced with a new footway / cycleway passing to the southeast of the Shell service station (see extract below).  This new route would pass through the site allocation NUA/MU/1. NCC seek clarification that the proposed route would not compromise the ability of NCC / NSDC to deliver the development aspiration at this site.
6	For the proposed deceleration lane off the A46 diverge slip road, NCC seek clarification as to whether this has this been designed in accordance with National Highways DMRB guidance to ensure that there is not a risk of shunt style collisions. NCC seek clarification as to whether this access would be gated given it is a private access into the Newark Showground. For cyclists travelling southbound on Drove Lane, using the proposed footway / cycleway, NCC seek clarification as to how cyclists will merge safely onto the road at the proposed termination point. Is there any desire line for why this route has been extended so far south off the roundabout? NCC seek clarification as to whether the cyclists crossing facilities at Winthorpe Roundabout would be signal controlled. Road Markings for eastbound traffic in the right hand lane and the chevron markings on the circulatory appear to conflict and push road users to exit in Lane 2.

Table 2.5: NCC Comment on Location Plan APP-004

Document	NCC Comment
APP-004 (Location Plan	Red line boundaries for the A46 scheme are shown to the south of Kelham village, some distance from the scheme. NCC require confirmation that this work (flood compensation area and temporary works compound) does not preclude delivery of the Kelham Bypass.

Speed Limit Plans

2.65 A review has been undertaken of the Permanent Speed Order Limit Plans (AS-014).

Table 2.6: NCC Comment on Permanent Speed Order Limit Plans AS-014

Sheet	NCC Comment
General	Interconnectivity of speed limits on A46 between Sheets 1 and Sheets 3 are not included into the DCO schedules.
3	No designation is provided in Schedules for the application of 30mph speed limit on the circulatory of Cattle Market Junction. Currently national speed limit heading south on B6326, so powers would need to be specified for this speed limit change.
5	Can the Applicant please confirm whether it is correct that between points 43 and 44, national speed limit will be in effect? This will primarily form a Private Means of Access for Bridge house Farm and will at its terminus have a pedestrian crossing, should this speed limit not be more proportional for its end use?
6	No coding provided on the Speed Limits Plans for full extents of Drove Lane and A1133 and cross referenced into the schedules.

Clearways and Prohibitions

2.66 A review has been undertaken of the **Traffic Regulation Measures (AS-013)**.

Table 2.7: NCC Comment on Traffic Regulation Measures AS-013

Sheet	NCC Comment
1	*Existing A46 (northbound) carriageway from point 1/2 to point 1/9, a distance of 105 metres.* - Applicant to confirm referencing as this does not seem to align with the plan. Is this referring to the inset and why is the distances different from the row below? Existing A46 (southbound) carriageway from point 1/10 to point 1/4, a total distance of 98 metres. - Missing inset reference in the wording. Existing A46 (northbound) carriageway from point 1/9 to point 1/3, a distance of 45 metres. - Applicant to confirm references as these reference points do not seem to align to anything on the plans. Existing A46 (southbound) carriageway from point 1/3 to point 1/10, a total distance of 45 metres. - Applicant to confirm references as these reference points do not seem to align to anything on the plans.
3	For points 3-C and 3-D there should be an existing speed limit order to be varied or revoked as this will change from national speed limit to 30mph under the Scheme. Existing A46 (southbound) carriageway from point 3/4 to point 3/3, a distance of 65 metres – error in the drafting in the draft development consent order with the wording applied as a fraction.
5	In the relevant Schedule of the draft Development Consent Order, there is duplication for Reference 5-A, the schedule of the draft Development Consent Order should be updated.
6	Friendly Farmer multileader to be frozen off the Inset A.

Streets, Rights of Way and Access Plans

2.67 A review has been undertaken of the Streets, Rights of Way and Access Plans (AS-006).

Table 2.8: NCC Comment on Streets, Rights of Way and Access Plans AS-006

Sheet	NCC Comment
1	NCC would query why the Private Means of Access off Fosse Road is being stopped up and proposed in the same section. NCC query whether this should simply be limited to where there is a physical change in alignment rather than over the full extents.
3	Reference 3C – the description in section 4 should remove the words "inset" after H-3K.

Drainage Engineering Plans

2.68 A review has been undertaken of the **Drainage Engineering Plans (AS-012)**.

Table 2.9: NCC Comment on Drainage Engineering Plans AS-012

Sheet	NCC Comment
General	**No catchment areas are shown for any modified highways which will not form part of the trunk road and will need to be maintained by NCC in future. NCC would request to see how the proposed scheme would alter any existing drainage assets which would be operated by NCC and whether they have taken on board best practice and the requirements of the DMRB.**

Forecast Changes in Traffic Flow (Operational)

2.69 A review has been undertaken to examine the impact of the Scheme upon changing traffic flow levels and the anticipated impact upon the local road network. Key areas of concern from NCC's perspective are summarised in the table below.

Table 2.10: NCC Comment on Forecast Change in Traffic Flow (Operational)

Reference	Wording / Content	NCC Comment
APP-193_Transport Assessment. Figure 6-2	Forecast AADT 2043	A large increase in AADT is forecast at the following locations. NCC seek clarification that additional assessment will be conducted in these locations: • A617 (Hockerton to Averham) (+19% AADT) – NCC are concerned that this route already experiences capacity issues owing to a pinch point at Kelham Bridge. Any increase in traffic flow will likely worsen journey times as well as collision rates (an existing collision cluster is noted in this location) and existing environmental impacts. • A616 (A46 to South Muskham) (+20% AADT) • A17 (Coddington to A46) (+118% AADT) – NCC are concerned about the increase in AADT flow and seeks clarification on why flows have increased so substantially (from 7,900 to 17,200 in 2043?). Where has traffic reassigned from? • A17 (Beckingham to Coddington) (+20% AADT) • Great North Road (South of Cattle Market roundabout) (+43% AADT) - NCC are concerned that this route already experiences capacity issues owing to a level crossing as well as traffic to / from Newark town centre (see earlier on Pinch Points).

APP-193_Transport Assessment. Tables 6-5 & 6-6	Table 6-5: Comparison of two-way AADT total vehicle forecasts on local roads in 2028 with and without the Scheme Table 6-6: Comparison of two-way AADT total vehicle forecasts on local roads in 2043 with and without the Scheme	NCC congestion mapping shows that delays are experienced on several routes through the town centre in both the AM and PM peaks. There is also a known 'pinch point' on Great North Road at the level crossing. NCC would like to fully understand forecast traffic flow changes on key town centre routes, in particular: • Queen's Road / Sleaford Road • B6166 Castle Gate / Lombard Street • Brunel Drive • Bar Gate / North Gate
APP-193_Transport Assessment: Appendix A (ComMA Report). Para 5.3.7	*"The MRTM2 matrices are suitable to be used for the PCF Stage 3 model because they represent recent demand patterns (2019). It is noted that they represent pre COVID-19 travel patterns. However, at present there are concerns that travel behaviour and patterns have not stabilised since COVID-19 and there are no plans to collect new demand data until conditions stabilise. There are no plans to collect further demand data."*	NCC are concerned that the 2019 pre-covid traffic patterns do not fully represent post-covid travel patterns. As per the traffic count data (6.7.1 of the ComMA), the Applicant could undertake a sensitivity test to show the travel patterns using the 2019 demand data are realistic in a post covid environment.
APP-193_Transport Assessment: Appendix A (ComMA Report). Figure 9-1	A46 zone plan – Newark area	The A46 Newark Bypass Model utilises a large model zone representing north-east Newark. NCC are concerned that the loading point of this zone may not represent the correct loading point for the large number of HGV movements from the Curry's national distribution centre on the A17 / A46.
APP-193_Transport Assessment: Appendix A (ComMA Report). Figure 12-7	Do-Minimum Schemes	The following schemes are included within the Do Minimum scenario. Where appropriate, NCC have added detail regarding the status of each scheme (which impacts the development uncertainty log). • A52 (Gamston, Stragglethorpe, Bingham Road, Silverdale) – NCC wish to note that works at Gamston, Stragglethorpe, Bingham Road and Silverdale are now complete. Junction upgrades are also occurring at Nottingham Knight and Wheatcroft; however, it does not appear that these have been included within the Do Minimum modelling. • A614 (Lowdham, Mickledale, Warren Hill, Ollerton, White Post) – NCC note that the junction upgrade at Mickledale is no longer going included in the MRN scheme, but are likely to be progressed by NCC separately. Junction upgrades are instead occurring at Kirk Hill, with these works not included within the Do Minimum modelling.

APP-193_Transport Assessment: Appendix A (ComMA Report). Para 13.4.2	*"The following trends in flow difference can be observed when comparing the Do-Something and Do-Minimum scenarios…. There is long distance route reassignment of north-south traffic from the M1 onto the A46/A1, and from the A607 onto the A46/A17"*	NCC are concerned with the increase in traffic along Great North Road accessing the A1 at North Muskham. NCC are also concerned with the increase in traffic along the A17. See elsewhere in this LIR for further information on these potential local impacts.
APP-193_Transport Assessment: Appendix A (ComMA Report). Para 13.4.2	*"The future year forecasts have been developed for a 'Core Scenario' which is based on the Core Scenario traffic growth from the DfT's National Transport Model. Sensitivity tests have been carried out for the High Economy and Low Economy scenarios from the DfT's Common Analytical Scenarios (CAS)."*	NCC are seeking clarification that all CAS scenarios were tested, and the highest and lowest growth scenarios taken forward for further analysis (often other scenarios e.g. Technology Scenario present the highest sensitivity test).
TR-00022 Transport Forecasting Package. Figure 21.	Forecast AADT Difference 2043 (Local)	NCC are particularly concerned about the increase in traffic flow at the following locations (some of which have already been highlighted above): • A617 – through the Kelham Bridge pinch point • Great North Road (between the A616 junction and North Muskham). • A17 including access to Currys National Distribution Centre. • Pelham Street / Clinton Street • Albert Street • Boundary Road • Brunel Drive NCC are keen to understand the expected change in traffic flow along these routes, as well as the assessed impact. NCC are particularly concerned about the increase in traffic flow forecast along Brunel Drive given that the Northern Road Industrial Estate is the location of a number of strategic site allocations within NSDC's Local Plan (NUA/MU/2 (mixed use development site comprising employment and road side services including hotel)), NUA/E/2 (12.24 hectare employment site), NUA/E/3 (1.54 hectare employment site), NUA/MU/3 (mixed use development comprising at least 150 dwellings, employment provision and comparison retail provision of around 4,000 square metres).
TR-00022 Transport Forecasting Package	N/A	Flow difference plots are only available for AADT values. NCC require flow difference plots for the AM and PM peak hours. It would be beneficial if, in addition to the overview plots, more zoomed in plots are provided showing the Newark town centre area (in particular Pelham

		Street, Lombard Street and Boundary Road areas).
TR-00026 Operational Forecasting Report. Section 1.2.3	*"The ATC data was used to calibrate speed distributions for the VISSIM model. Although there were ten ATCs within the network, only three were used as not all the ATCs reflected free-flowing traffic"*	It is understood that the ATC data was used to update the desired speed distribution for the traffic model. This has been based upon only three available count sites, with only one on the scheme extent. NCC are seeking clarification that this is sufficient to validate the model sufficiently.
Missing Information	N/A	**NCC are concerned that no consideration for event days at Newark Showground has occurred**. Event days attract a large number of people, with the Nottinghamshire County Show attracting 15,000 people in 2023 for example. NCC require additional sensitivity testing, particularly around the northern extent of the scheme, to ascertain whether the scheme design can accommodate the additional demand. NCC require assurance that the Applicant has future proofed access arrangements to Newark Showground.

Impacts on Junction Capacity (Operational)

2.70 NCC have reviewed the information relating to the scheme's anticipated impact upon junction capacity, with key issues identified below.

Table 2.11: NCC Comment on Junction Capacity (Operational)

Reference	Wording / Content	NCC Comment
APP-193_Transport Assessment. Table 6-15/16	Summary of Level of Service in operational assessments	**NCC note that Tables 6-15/16 show the overall (junction) LOS. NCC consider that the tables should also show the LOS of the worst performing arm as well, to show where capacity issues remain (for example at Brownhills - whilst the overall junction performs at a LOS of C in the PM Peak (2043), the A46 link arm performs at a LOS of F (with a queue of 450m)).**
APP-193_Transport Assessment.	N/A	NCC are very concerned that junction capacity assessments have only been conducted at junctions along the scheme extent. Little consideration has been given to junctions within the wider area, despite seeing large increases in AADT. The following junctions are likely to be impacted by the scheme: *Great North Road Junctions Impacted*: Increase in AADT: +6,300 • Great North Road/Kelham Road • Great North Road/Ossington Way/Tolney Lane • Great North Road/Bar Gate *North Gate/Lincoln Bridge Road Junctions Impacted:* Increase in AADT: +2,700 • Bar Gate/Kirk Gate • Bar Gate/Slaughterhouse Lane • Bar Gate/Handley Court • North Gate Gate/Queens Road

		• North Gate /Cow Lane • North Gate /Maltings Retail Park • North Gate /Meyrick Road • North Gate /Currie Road • North Gate /Northgate Retail Park • North Gate /Summers Road • North Gate /Lincoln Bridge Road • North Gate /Trent Lane • Northern Road /Lincoln Bridge Road/Winthorpe Lane/Lincoln Road • Lincoln Road/Emmendingen Avenue • Lincoln Road/Middleton Road • Lincoln Road/Gainsborough Drive • Lincoln Road/Stanhope Avenue • Lincoln Road/Harvest Drive/Brunel Drive *A617 – Kelham Road Junctions Impacted:* Increase in AADT: +1,600 • Kelham Road/Kelham Lane • Kelham Bridge/Kelham Village – NCC are concerned that there is a known issue at this location, particularly concerning the narrow bridge, which sees a large number of bridge strikes. NCC are concerned that the increase in AADT will lead to further issues at this location. • Kelham Road/Blacksmith Lane • Kelham Road/Ollerton Road • Kelham Road/Broadgate Lane • Kelham Road/Staythrope Road *A616 – Great North Road Junctions Impacted:* Increase in AADT: +4,100 • Great North Road/British Sugar access • Great North Road/Kelham Lane/Ollerton Road/Main Street *A616 Ollerton Road Junctions Impacted:* Increase in AADT: +1,300 • Ollerton Road/Bathley Lane • Ollerton Road/ Ollerton Road • Ollerton Road/Canton Road/Newark Road • Back Lane/A6075/Ollerton Road • Ollerton roundabout A616/A614 *Great North Road Junctions Impacted:* Increase in AADT: +1,400 • Great North Road/Crow Lane/Church Street • Great North Road/A1 North Muskham Junction *A1133 Junctions Impacted:* Increase in AADT: +800 • A1133/Gainsborough Road • A1133/Whitemoor Lane *A17 Junctions Impacted:* Increase in AADT: +4,100 • A17/Godfrey Drive/Long Hallow Way • A17/Drove Lane • A17/Beckingham Road/Stapleford Lane • A17 Holdingham Roundabout *Brunel Drive Junctions Impacted -* *Increase in AADT: +500* • Brunel Drive/Stephson Way

		• Brunel Drive/Telford Drive **It is not expected that junction capacity testing to be conducted at all junctions listed above, but to identify junctions for analysis, NCC require AM and PM flow difference plots, to understand if there are any flow differences greater than +30 two-way in peak hours (as per Guidance on Transport Assessment, DfT, 2007).** In the absence of this information, **NCC are particularly concerned about the following junctions:** • **Great North Road / Bar Gate** • **Great North Road / Ossington Way (Waitrose)** • **A17 / Stapleton Lane / Beckingham Road** • **A17 / Long Holloway Road / Godfrey Drive – this is the proposed site access into strategic site NUA/MU/1 within NSDC's Local Plan (proposed mixed use development comprising a hotel / conference facility, restaurant facilities to support the wider showground uses, and employment uses.)**
APP-193_Transport Assessment: Appendix A (ComMA Report). Para 3.3.7 – 3.3.8	*"The lack of a grade separated junction at Cattle Market Junction is being compounded by queuing on the B6326 because of frequent railway level crossing downtimes"*	NCC are concerned that, whilst the issue has been identified within the ComMA, no mitigation measures are proposed to futureproof against potential capacity issues associated with queuing back due to level crossing downtime, particularly due to the increase volume of trips using the route as a result of the scheme.
A46 Cattle Market / Kelham Road Microsim Modelling report	In response to a comment contained within the Newark & Sherwood District Council's Statement of Common Ground[3], the Applicant conducted further Microsimulation modelling at the Great North Road / Former Cattle Market / Lorry Park Site.	The microsimulation modelling analysis has been reviewed by NSDC's consultant, with the following comments made: 1. The technical note only appears to provide information for the 2028 scheme opening year. Please could this be expanded to also include summary tables for the 2043 scheme design year (i.e. 15 years post opening). 2. Is the data presented in Table 1 & 2 for the 2028 scheme opening year (it's not clear from the table titles)? 3. Are the average and maximum queue lengths in Tables 1 & 2 the averages and maximums observed for the whole of the AM and PM peak hours? 4. Please could we have an explanation why the vehicle flows on Great North Road change with the 'New Do-Something' scenario? The changes are small but there is no mention of why flows have changed in the technical note. 5. Please could we have confirmation of the start and end points for the measurement of the journey times on Great North Road. 6. We assume that the main reason for the increased journey times on Great North Road is due to the inclusion of the relocated Lorry Park access junction in the model. Is that correct?

[3] "*The proposed carriageway layout on Great North Road southeast of the A46 Cattle Market junction depicts a Ghost-Island right turn into the former cattle market / lorry park site but no Ghost-Island right turn into the former Council Depot site on the opposite side of Great North Road. Vehicles turning right into the former Council Depot site would therefore impede the free flow of southbound through-traffic in the offside lane and may raise safety concerns. An understanding of this position is required in order for the District Council (and County Council as landowner of the former Council Depot site) to assess the likely impacts on the existing accesses to both sites and on any aspirations to redevelop the existing Newark lorry park.*"

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7. Do the provided VISSIM videos show the 2028 scheme opening year performance (there is no labelling to confirm the years)?
8. The VISSIM videos show the first three minutes for each of the AM and PM peaks. Would it be possible to see similar 3-minute videos at 30-minute intervals throughout both peak hours for the 2028 opening year and 2043 design years (as shown by the crosses in the table below)?
<table>
<tr><td rowspan="2">Time</td><td colspan="2">Year</td></tr>
<tr><td>2028 Opening Year</td><td>2043 Design Year</td></tr>
<tr><td>08:00 – 08:03</td><td>Provided</td><td>X</td></tr>
<tr><td>08:30 – 08:33</td><td>X</td><td>X</td></tr>
<tr><td>08:57 – 09:00</td><td>X</td><td>X</td></tr>
<tr><td>17:00 – 17:03</td><td>Provided</td><td>X</td></tr>
<tr><td>17:30 – 17:33</td><td>X</td><td>X</td></tr>
<tr><td>17:57 – 18:00</td><td>X</td><td>X</td></tr>
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Impacts on Journey Times (Operational)

2.71 A review has been undertaken on the analysis conducted to examine the impact of the scheme upon journey times. The review is summarised in the table below.

Table 2.12: NCC Comment on Journey Times (Operational)

Reference	Wording / Content	NCC Comment
APP-193_Transport Assessment: Appendix A (ComMA Report). Figure 7-3 APP-193_Transport Assessment. Figure 6-3	Figures showing the journey time routes assessed during the scheme appraisal.	**NCC would like to see further journey time routes for both the DM and DS along the A15, representing trips to and from Grantham/Sleaford and Grimsby, as well as the A614 between Nottingham and Grimsby**.
APP-193_Transport Assessment: Appendix A (ComMA Report). Figure 6-4	Journey time survey routes	**There are no journey time routes located within Newark-on-Trent. NCC would like to understand the impact upon journey times within the town centre and arterial routes such as the B6166, B6326 and Lincoln Road, Fosse Road.**
APP-193_Transport Assessment. Para 6.4.13	*"By 2043 there is forecast to be a more marked change in journey times in the PM peak, with journey times increasing by around 14% in the eastbound direction but reducing by around 16% in the westbound direction. This increase in journey times is likely to be as a result of queuing back from Brownhills junctions, however it is worth noting that this increase equates to less than an extra 1 minute 30 seconds on each journey."*	NCC are concerned about the additional 1.5-minute delay caused by the scheme (in the DS) on the A617 EB in the PM peak (2043). Paragraph 6.4.13 states that the delay is likely a result of queuing back from the Brownhills junction; however, we note that traffic flow is forecast to reduce at this junction (Table 6-8 shows a -18% reduction in traffic flow in the AM peak and -15% in the PM by 2043) so we would like clarification as to why journey times would worsen at this location.

Impacts on Road Safety (Operational)

2.72 A review of information relating to the scheme impact upon road safety has been conducted, with the table below summarising the key areas of concern for NCC.

Table 2.13: NCC Comment on Road Safety (Operational)

Reference	Wording / Content	NCC Comment
APP-193_Transport Assessment. Figure 4-2	*Summary of accident benefits by section.*	Figure 4-2 summarises the routes considered as part of the COBALT assessment, and NCC are satisfied that these coincide with the routes that are forecast to see a change in AADT. **However, NCC are concerned that some routes (such as the A17, A617, A612 (Lowdham Junction), A616 and B1202) are expected to see an increase in collisions as a result of the A46 Scheme**. **NCC require additional information about the routes expected to see a worsening in collision rates (including extents, types of collisions etc.) so that we are able to identify whether mitigation would be required.**
APP-193_Transport Assessment. Para 4.4.8	*"Network benefits arise from the upgrade of the single carriageway sections of the widened A46 to dual carriageway, and from some traffic reassigning onto the widened A46 from comparatively less safe local roads. Increases in traffic on some roads adjacent to the scheme, such as the A17, are forecast to lead to some localised increases in accidents, although these are not of sufficient magnitude to outweigh benefits elsewhere."*	NCC require further consideration of the impacts of and the mitigation measures in these locations.
Missing Information	*N/A*	It is noted that Winthorpe roundabout has been designed as a 'through-about' layout. NCC would like to understand how this has been considered within accident analysis (i.e. does COBALT account for this type of layout, is there evidence to suggest this layout is safer or sees more or less collisions?)

Impacts on Public Transport (Operational)

2.73 This section summarises concerns, from NCCs perspective, relating to public transport. As noted within the Section *Local Transport Context,* it is not expected that there will be any direct impact upon rail users or access to the railway stations once the scheme is operational, and therefore this Section only captures concerns relating to the bus network. Notwithstanding, there are general concerns about the increase in traffic flow through the town centre which may impact rail users accessing the station and worsening severance issues for those accessing the station by foot / bicycle.

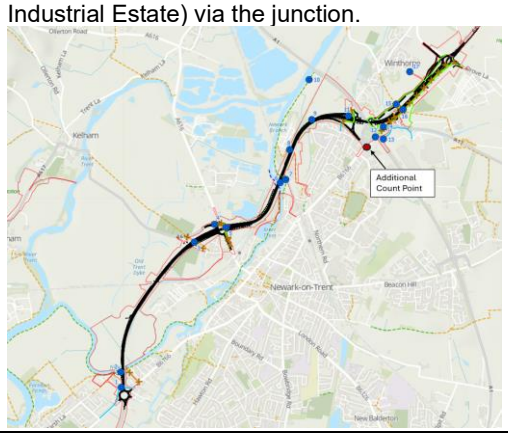
Table 2.14: NCC Comment on Public Transport (Operational)

Reference	Wording / Content	NCC Comment
TR-00022 Transport Forecasting Package. Figure 21. APP-193_Transport Assessment. Figure 6-5 & 6-7	Forecast AADT Difference 2043. 2043 DS link delays (AM peak & PM peak)	Figure 21 shows an increase in traffic flow (>500 AADT) along the A1133 with a corresponding increase to delay (shown in Figures 6-5 & 6-7). NCC are concerned that the A1133 is a bus route (with service 367 considered a high frequency route). NCC would request traffic flow plots for the AM and PM peaks to better understand the volume of additional traffic along this route.
TR-00022 Transport Forecasting Package. Figure 21. APP-193_Transport Assessment. Figure 6-5 & 6-7	Forecast AADT Difference 2043. 2043 DS link delays (AM peak) & PM peak	Similar to this, increased flow and delay is noted along the A617 (particularly in the AM peak). Again, this is a bus route and we are concerned that an increase in traffic flow here may undermine the bus network reliability. NCC would request traffic flow plots for the AM and PM peaks to better understand the volume of additional traffic along this route, as well as additional junction capacity testing as per Section 0.
TR-00022 Transport Forecasting Package. Figure 21. APP-193_Transport Assessment. Figure 6-5 & 6-7	Forecast AADT Difference 2043. 2043 DS link delays (AM peak) & PM peak	NCC are concerned that an increase in traffic flow along the A46 (to the south of Farndon roundabout between Bingham and Newark) may comprise reliability of the proposed Newark to Nottingham services (proposed within the BSIP). NCC request journey time analysis of this route.
APP-193_Transport Assessment. Tables 6-5 & 6-6	Table 6-5: Comparison of two-way AADT total vehicle forecasts on local roads in 2028 with and without the Scheme Table 6-5: Comparison of two-way AADT total vehicle forecasts on local roads in 2043 with and without the Scheme	Key bus routes within the town centre include Castle Gate / Bar Gate / Northgate, Queens Road / Sleaford Road, Lombard Street / London Road, Albert Street and Boundary Road. **a) There is no traffic flow or delay information on some of these bus routes, and NCC request additional data, in particular:** - **Queens Road / Sleaford Road** - **Lombard Street** - **Albert Street** - **Boundary Road** - **Castle Gate / Bar Gate / Northgate** **b) Of the information available, only AADT data is available. NCC would require information regarding the change in traffic flow along town centre links in the AM and PM peak period to determine whether town centre bus routes will likely be impacted.** c) **The increase in traffic flow along Albert Street and Boundary Road and at the bus station on Lombard Street may have a detrimental impact upon the reliability of bus services.**
Other		NCC would like confirmation as to whether the railway lines would be closed during construction.

Impacts on Active Travel (Operational)

2.74 NCC have conducted a review of the impacts of the scheme upon active travel users (including walkers, cyclists and horse-riders, as well as mobility users). The key areas of concern are highlighted in the table below.

Table 2.15: NCC Comment on Active Travel (Operational)

Reference	Wording / Content	NCC Comment
APP-174_Walker, Cyclist and Horse-rider (WCH) Survey Results. Para 1.1.1	*"Walker, cyclists, and horse-rider (WCH) counts were undertaken at 17 locations within the vicinity of the proposed A46 Newark Bypass (the Scheme); see Appendix A (Walking, Cycling and Horse-riding Survey Locations) of this Report for locations."*	In general, NCC are happy with the count locations – although an additional count point on the footway connecting the A46 / Lincoln Road junction and Lincoln Road would have been beneficial to capture those routing to / from Lincoln Road (incl. Northern Road Industrial Estate) via the junction. 
APP-174_Walker, Cyclist and Horse-rider (WCH) Survey Results. Para 1.1.2	*"Each site was surveyed from 6am to 10pm on both a weekday and a weekend in early spring 2023 (between March and April)."*	NCC are concerned that WCH surveys were conducted between March and April, which lies outside of typical peak active travel periods (usually the summer period). Baseline active travel levels may therefore be underestimated.
APP-056_ES Chapter 12 (Population and Human Health). Table 12-11	*Land take effects during construction*	Whilst not strictly related to active travel users, NCC are concerned about the restoration work planned for land parcels temporarily requisitioned as part of construction works. For example, land owned by Briggs Metals (to be used as a satellite construction compound) is currently used for animal grazing. NCC are seeking confirmation that land requisitioned will be returned on a like-for-like basis (i.e. in this example, can be used for livestock grazing).
General Arrangement Drawings (AS-007)	Sheet 3	NCC believe there is an opportunity to create a shared footway / cycleway along the A617 between Newark Rugby Club and the Cattle Market junction (to connect with existing cycle infrastructure at the Cattle Market junction). Ideally this route would be extended along the A617 to link with long term LCWIP aspirations. The above is mitigation for the extinguishment of Newark FP14 and is mitigation for the 'removal' of this path and should include a signalised crossing of the A616.
General Arrangement Drawings (AS-007)	Sheet 3	LTN1/20 makes clear that shared footways are "a last resort". Shared use paths are technically acceptable provided the pedestrian footfall is low (as per LTN1/20) but NCC require NH to demonstrate that full LTN1/20 standards cannot be achieved. Where the path passes under the A46 the tight turns present potential conflict points, visibility

		and stopping sight distance should be checked here for cyclists as per LTN1/20 guidance. The visibility from the A46 roundabout to the crossing on the eastern slip roads may also be reduced due to the position of the crossing point increasing the likelihood of personal injuries. Relocating the crossing closer to the roundabout exit/top of the slip road should be considered.
General Arrangement Drawings (AS-007)	Sheet 5	The footway to be replaced with a footway / cycle way again is technically compliant with LTN 1/20 if footfall is suitably low (no more than 300 per hour). However, as already noted, shared use should be seen as a “last resort” and NH should demonstrate that full LTN1/20 compliance cannot be achieved. Controlled crossings should be provided on the link between the Friendly Farmer and A17 / Long Hollow Way / Godfrey Drive roundabouts adjacent to the Shell Service Station.
General Arrangement Drawings (AS-007)	Sheet 6	Shared use paths are acceptable provided the pedestrian footfall is low but, as already noted, should be seen as ‘a last resort’ and NH should demonstrate that full LTN1/20 compliance cannot be achieved.
General Arrangement Drawings	N/A	A key design principle listed on page 21 of Gear Change is that “cyclists must be separated from pedestrians”. LTN 1/20 builds on this and states that “in general, shared use facilities in streets with high pedestrian or cyclist flows should not be used and in urban areas the conversion of a footway to shared use should be regarded as a last resort”. Whilst the proposed shared use areas are technically Active Travel England (ATE) and LTN 1/20 compliant (subject to pedestrian traffic volume being under 300 per hour / geometry) due to the paths not being in a busy urban setting, NCC would like confirmation as to why a segregated facility has not been pursued, i.e. can you prove footfall is less than 300 per hour or is a segregated facility not feasible due to space constraints. NH should clarify whether the proposals have been reviewed and approved by Active Travel England. From a review of the GA drawings, it would appear there is available space to have a suitable bi-directional cycleway and a footpath in most areas and this should be provided where it can be accommodated. **NCC’s concern is that it will be left with substandard facilities on county highway that will fall to us to upgrade as and when opportunities arise to extend the cycling**

		network. Therefore, NCC would like to see evidence of ATE involvement and, more specifically, their comments regarding the proposals. NCC need surety that ATE is happy with the Applicants Scheme. Signal junctions throughout the extents could be installed as parallel crossings to improve the control of pedestrians and cyclists across the carriageways in numerous locations.
Transport Assessment, Appendix C (WCHAR), APP-193	Figure 12	Figure 12 details the existing Non Motorised User (NMU) routes at Farndon Roundabout; however, the Applicant's submissions do not reflect the works in 2023 that the Applicant completed on Farndon Road, with the existing footway on the westbound carriageway on approach to Farndon Roundabout having been upgraded to a shared footway / cycleway and extending along Farndon Road towards Newark town centre.
Transport Assessment, Appendix C (WCHAR), APP-193	Figure 13	Linking to other comments raised where the Applicant is proposing to install a footway / cycleway on the A617, how cyclists continue westbound towards Kelham and how they safely merge onto the carriageway should be considered.
Transport Assessment, Appendix C (WCHAR), APP-193	N/A	The WCHAR document refers to opportunity FP11 – Hatchet Lane to BW6 – River Trent path. However, the Streets, Rights of Way and Access Plans and General Arrangement Plans do not denote a FP11.

Construction Traffic Management

2.75 A review has been conducted of the **Outline Traffic Management Plan [APP-196]**, and is summarised in the table below.

Table 2.16: NCC Comment on Outline Traffic Management Plan APP-196

Reference	Wording / Content	NCC Comments
Section 1.1.3	*1.1.3 A Traffic Management Plan (TMP) will be produced in consultation with the Local Highway Authorities (LHA), Nottinghamshire County Council and Lincolnshire County Council (in relation to diversion routes). and stakeholders such as the emergency services. Under requirement 11 of the draft DCO (TR010065/APP/3.1) the TMP that will be produced must be substantially in accordance with the OTMP and will be submitted to and approved in writing by the Secretary of State following consultation with the local highway authorities. The TMP will build on and comply with the commitments made in this OTMP.*	**This section of the outline traffic management plan should be amended in order to provide NCC with an approval right over this document, not simply a consultation right.** **As drafted this wording is vague and simply only requires the Applicant to issue the final traffic management plan to NCC.** **Section 1.1.3 should therefore be amended to ensure that the Traffic Management will be produced in consultation with the Local Highway Authority and, prior to any construction works commencing this traffic management plan would need to be approved by the Local Highway Authority.**

		This change would also need to be reflected in Requirement 11 of the draft Development Consent Order. **These changes will ensure that NCC has the relevant authority to challenge and ensure that the Traffic Management Plan does not result in a direct or indirect impact which could adversely impact the NCC local highway network.**
Section 1.1.6	*1.1.6 The TMP will be developed to ensure that the following key objectives are considered and addressed:* *• Safety of the travelling public, walkers, cyclists and horse riders (WCH) and roadworkers to ensure that no person is injured either working within or travelling through the site on the SRN.* *• Clarity of TTM to ensure that the TMP is built around the customers and stakeholders.* *• Minimising delays to road users on both trunk and local roads.* *• To minimise the health and safety risks to the local community resulting from construction operations.* *• Minimise disruption to road users, local businesses and communities.* *• Meeting the needs of the relevant local highway authorities.* *• Addressing the needs of local stakeholders.* *• Maintaining adequate access for the emergency services and affected properties during the construction works.*	The outline traffic management plan is very light on detail in relation to how public rights of way and other non-motorised users will be managed during the construction of the works. e.g. recent NSIP Solar Park Applications have produced an outline public right of way management plan. NCC requests that a similar document is prepared by the Applicant to fully assess and outline the management measures that will be put in place to mitigate ethe impacts of rights of way users and secure this as part of the Development Consent Order.
Section 2.2.2	*TTM will be designed in accordance with Part 1 of Chapter 8 of the Traffic Signs Manual allowing working room to construct as well as the minimum safety zones.*	NCC recommends that this is changed to just Chapter 8 to ensure National Highways considers all parts of this guidance.
Table 2-2 Construction Programme		**NCC notes that the Applicant is considering a range of advance and pre-commencement works. As these works would need to be completed prior to the powers of the DCO being granted, NCC would require separate approvals to be sought to undertake any works that fall within NCC's planning authority jurisdiction**. **NCC note that the level of detail provided is high level and does not allow NCC to ascertain the scale and impact of the Scheme. NCC request that the Applicant complete a pre-commencement plan (in a similar manner that the Applicant conducted on the A428 Black Cat Scheme) in order to provide NCC with a level of detail which is**

		secured as part of the Development Consent Order.
Section 2.3.2	*Traffic management measures are detailed in the subsections below. The Applicant will be responsible for detailing each traffic management measure in full as the detailed design is progressed. The updated detail would be developed in consultation with the LHA and stakeholders and reflected in the TMP that will be produced and approved by the Secretary of State in accordance with Requirement 11 of the draft DCO (TR010065/APP/3.1) prior to construction commencing.*	**As raised in its response to Section 1.1.3, NCC would require an approval right for any traffic management measures which would have a direct or indirect impact on the NCC's network**.
Section 2.3.4	*TTM in this stage would be limited to lane closures on the local road network to facilitate utility diversion works and asset surveys. Applications for temporary traffic management on the local road network during the advanced works phase will be made through the LHA.*	Liking to the above comment on Table 2-2, NCC requests that any pre-commencement plan considers a full indicative programme of when any advanced or pre-commencement works are required in order to ensure that any advanced works are programmed to minimise disruption on the Local Road Network. Any works prior to the Development Consent Order being granted would need to go through a separate planning approval process which would require approval by NCC.
Section 2.3.6	*A series of partial lane closures and temporary signals will be required along Kelham Road and the Great North Road for the utility diversions and construction of a works access and egress into the Scheme office site at the old Nottinghamshire County Council highway depot.*	NCC note that the Applicant refers to partial lane closures and temporary signals on the Great North Road to facilitate access to the Scheme Office Site. These works will be in close proximity to Cattle Market Roundabout and the level crossing adjacent to Newark Castle Station. NCC requests that VISSIM modelling of these traffic management proposals are presented by the Applicant for NCC to understand whether there will be any adverse impacts to the safe operation of the Local Highway Network.
Section 2.3.17	*The Cattle Market roundabout is a strategic junction for the town of Newark and the surrounding villages, with an interface with the Newark lorry park and British Sugar. Traffic is already impacted at this junction with the operation of the level crossing on the Great North Road.*	NCC would like to see the construction VISSIM modelling (video outputs) for the construction phases at this area of the network to understand any adverse impacts on the performance of the local road network. In terms of outputs, the applicant has provided max and average queue length data. NCC would like to see video outputs. The Transport Assessment indicates that there is an impact in performance at this junction with construction traffic added (see below for more on this).
Section 2.5.4	*Narrow running lanes and running of the hard strip will be required for the temporary traffic management along the A46. It is*	NCC requests clarity from the Applicant as to the locations where road users would require running within the hardstrip. This poses a

	anticipated that a 50mph temporary maximum speed limit will be implemented.	hazard to road users in areas where surface water gullies act as the surface water collection system. Current drafting suggests it is the A46 only; however, the A57 will require TM being put in place which may generate the same risk, albeit likely being able to be mitigated by a temporary reduction in speed limit.
Section 2.9.2	*A traffic management forum will be formed prior to the start of construction with relevant members of the LHA, emergency services and representatives from adjacent schemes. The traffic management forums will include discussions on the identification and management of the interface between local and regional schemes.*	NCC request that this is introduced into the Draft Development Consent Order as a requirement. All traffic management works will need to be agreed with NCC where any proposed works could have a direct or indirect impact on NCC's network.
Section 2.12.2	*An incident management plan will be developed by the Applicant, local highways authorities and emergency services.*	**NCC requests that the incident management plan is both consulted and approved by the Local Highway Authority to ensure that any impacts or responsibilities on the Local Highways Authority are understood**.
Section 2.17.6	*The Applicant will produce a Construction Communications Plan to detail how the Applicant will communicate with the stakeholders and members of the public on the construction of the Scheme, including the impacts of the TTM. The Construction Communications Plan will be provided as part of the Second Iteration Environmental Management Plan. Adherence with the Second Iteration Environmental Management Plan is secured by Requirement 3 in Schedule 2 of the draft Development Consent Order (TR010065/APP/3.1)*	NCC requests that the Applicant produces an outline communications plan and introduces this into the Development Consent Order in order to provide a full account of how construction will be communicated to affected stakeholders.
Section 2.18.3	*During the Scheme delivery, the current network occupancy procedures will be followed for accessing the network. Road space bookings will be issued each week, in line with National Highways' booking requirements.*	NCC and the Applicant will need to establish a clear communications procedure for any road space booking procedures to ensure that any works on the strategic and local highway network do not give risk to unnecessary disruption to road users.
Section 2.18.6	*In order for the Scheme to positively contribute to the accuracy of information relating to traffic management, the following steps will be taken: • Ensuring that planned start times are met, and that any deviation from the planned start time is reported to the appropriate Network Control Centre (NCC) within National Highways so that they can ensure management of the overall network is maintained. • If there is a delay for any reason, reporting this to the NCC as early as possible, and not later than the planned start time*	An alternative acronym should be used to avoid confusion with Nottinghamshire County Council (NCC) used elsewhere in the application.

Section 2.20.1	*The Applicant will have continued liaison and communications with the LHA.*	NCC requests details on how this liaison will be structured and its frequency. This should be captured as part of the outline communications plan which have been highlighted in NCC's above comments.
Section 2.22.1	*The Applicant will ensure that abnormal load assessments will be undertaken for the structures to be constructed at the Cattle Market and Brownihills (sic) junctions*.	NCC requests details of the type of abnormal loads required to facilitate construction and whether any of these will be required on the Local Road Network. If abnormal loads vehicles are required these will need to be approved by NCC.
A.1 Proposed diversion routes		Diversion signage should take accordance of any local route access to avoid disruption to local commuter traffic and any unnecessary diversion of local traffic.
A.1.4 A1 between North Muskham and Brownhills and Friendly Farmer roundabouts.		**NCC has concerns relating to the diversion route identified in A.1.4. The diversion of A46 traffic via the A57 and B1164 will introduce a large increase in road users having to utilise Dunham Toll Bridge. NCC note that, without careful planning, this could result in significant disruption to local and strategic road users.**
A.1.7 Drove Lane		NCC notes that the Applicant has identified Drove Lane for a diversion route during construction works. Drove Lane is subject to a 7.5t weight restriction and therefore appropriate TTRO suspension would be required, with TTM to be implemented in order to ensure that strategic road traffic can utilise this diversion route safely.
Appendix A.2		NCC requests the Applicant to provide indicative programme estimates for the various phases depicted in Appendix A.2 A number of these construction phases will be complex in nature and are likely to result in disruption to local and strategic road users. NCC wish to understand the estimated duration for each phase in order to understand which construction phase needs to be considered in further detail.
Figure A-10		NCC notes that Phase 3 looks to be the most disruptive construction phase at Cattle Market Roundabout. NCC would like to see construction traffic modelling for this phase in order to understand the traffic impacts on the local road network. Furthermore, NCC would like to understand how access / egress into the central construction phase area is to be provided.

		NCC is also interested in understanding how existing active travel provisions and connectivity would be maintained during the traffic management works. The junction currently operates as a non-signalised roundabout with controlled pedestrian crossings; is it proposed that the temporary layouts would be fully signal controlled?
Other Points		
NCC notes that the Applicant's submission documents currently do not contain reference to an outline travel plan or the commitment to produce a travel plan for construction staff. NCC request that the Applicant prepare this information in line with other submissions prepared by National highways, e.g. the A428 Black Catto Caxton Gibbet Improvement Scheme. (See below for more on this from the Transport Assessment)		
The A46 is a designated high load and heavy load route and therefore any proposed diversions must ensure that any diverted traffic considers the suitability of that route for high and heavy load vehicles. Where diversion routes are not capable of accommodating high or heavy load vehicles, National Highways must put in place a communications strategy.		
NCC are concerned that construction works at the Friendly Farmer / Brownhills area may lead to a diversion of traffic via Beckingham Road / Beacon Hill Road through Coddington Village, leading to adverse impacts for local residents. NCC seek clarification whether this has been reviewed, assessed and mitigated where appropriate by the Applicant.		

Construction (General)

2.76 A review of Chapter 8 of the **Transport Assessment (APP-193)** has also been conducted in addition to the above.

Table 2.17: NCC Comment on Transport Assessment (APP-193), Construction Chapter

Reference	NCC Comment
Transport Assessment Chapter 8	The Transport Assessment includes outputs from VISSIM modelling of the construction stage. We note that this modelling has been done on the basis of impacts in the AM peak hour only, as it is suggested that staff will not travel in the PM peak hour. Notwithstanding this, Para 8.3.16 of the TA states that "*Construction Worker Travel and Accommodation Plan (CWTAP) would also be developed by the Principal Contractor as the Scheme progresses through the detailed design phase. The CWTAP would be produced as part of the second iteration of the Environmental Management Plan (TR010065/APP/6.5).*" NCC would re-iterate that a Travel Plan is required now to align with the modelling assumptions for construction traffic. NCC also requests a PM peak analysis to be conducted, given that the assumption has been to divide HGV trips by 11 hours and therefore indicates HGV traffic in the PM peak hour. Furthermore, additional justification is needed for excluding 50% of staff trips (para 8.4.8 of the TA) from the modelling which seems to artificially reduce the potential impact of the construction stage.

2.77 A review of the **General Arrangement Plans (AS-007)** has been conducted with respect to construction proposals:

Table 2.18: NCC Comments on General Arrangement Plans AS-007 (Construction)

Sheet	NCC Comment
1	NCC query the practicalities of using A46 Farndon Roundabout circulatory as a compound location. Whilst not an NCC area, NCC are responsible for a number of roads connecting into this roundabout and construction movements into and out of this roundabout could give rise to an increase in collisions.

	Newark Bridleway No.2 is to be temporarily diverted during construction. NCC request details on the temporary bridleway diversion in order to ensure that it is safe and practicable for all users. Especially in light of the area also being used as a temporary works area. NCC are concerned that the existing footpath / trail Newark FP3 leading from Fosse Road to Newark Bridleway No.2 is narrow and maintaining this existing footpath during the temporary works looks to not be possible from a safety perspective. NCC seek clarification as to whether this track is being considered in order to ensure it is capable of taking the proposed construction vehicles.
3	NCC request clarity of how access is to be provided to the land to the west of the Smeaton Arches for the proposed temporary works area which would not result in disturbance to traffic on the A616 Great North Road or give rise to a risk of shunt style collisions.
4	Significant compound areas are proposed off Quibbells Lane. NCC seek clarification regarding the number of construction vehicles that will be utilising this route (which is through a local residential area) and whether the noise and air quality impacts have been considered. For access to the land where a temporary bridge for construction traffic will be installed, NCC seek clarification as to the proposed maintenance access route for operation and whether the Applicant has the necessary rights to use the permanent access route within the proposed order limits. NCC seek clarification as to how construction traffic and commercial traffic have been considered during the operation of the compound off Trent Lane and Quibbells Lane. NCC seek clarification as to how the Bridleway BW6 will be maintained safely for equestrian users with the introduction of construction vehicles associated with the temporary works area for the Nether Lock Rail Bridge works.

Review of Works Plans [AS-005]

2.78 A review has been undertaken of the **Works Plans (AS-005)**.

Table 2.19: NCC Comments on Works Plans AS-005 (Construction)

Work Number	NCC Comment
3	NCC would query with the Applicant whether the proposed diversion suitable for Work No.3 is suitable. As it does not afford equestrian users with an appropriate diversion to continue south on Newark Bridleway 2, this would leave equestrian users stranded unless they are continuing west into Farndon. If proposing to use the Farndon Underpass to maintain connectivity, NCC seeks clarification as to whether this complies with the minimum height for ridden or led horses in accordance with CD143.
6	NCC seek clarification of the practicalities of constructing work number 6 with the limits of deviation provided.
10	NCC request clarity from the Applicant that sufficient works limits have been provided associated with Work No.10 which looks to only show half the existing access width as being permissible to use.
12C	Work No.12C not listed on sheet 1 yet referred to in the draft Development Consent Order Schedule 1.
23	NCC seek clarification as to whether the proposed culvert looks to tie into the existing watercourse at an angle, and if this work also requires any localised realignment of the watercourse and if this work is considered as its own listed work?

47	NCC asks for confirmation that limits of deviation offered by respective highway works number 45 offers sufficient limits of deviation to construct temporary access into this land.
55	Limits of deviation provided for Work No.55 conflicts with the general arrangement plans which shows elements of this parcel of land for vegetation to be retained.
58	Can the Applicant confirm whether the merge visibility has been applied in accordance with DMRB CD122 Section 3.23 to 3.25 in order to ensure that the full width extension of the network Nottingham to Lincoln Railway Line East Crossing has been considered within the works plans.
74	The limits of deviation extend into vegetation to be retained, has this been factored into any BNG calculations for potential loss or, if in error, please amend the limits of deviation accordingly.
75	NCC seek clarification as to whether the merge visibility has been applied in accordance with DMRB CD122 Section 3.23 to 3.25 for the merge onto the A46.
85	NCC seek clarification as to whether the temporary works areas extends into the verge of the A1; can the Applicant confirm if this is an error in drafting?
96	NCC seek clarification as to whether the watercourse profile and section needs realigning to suit the culvert extension?
104	Does the works also include the removal of the existing gantry or is this to be retained?
106	Obscured under label for Friendly Farmer Link Road
107	NCC seek clarification as to how this attenuation pond will be accessed for maintenance and any emergency spillage issues arising.
124	NCC seek clarification as to the types of road closures to facilitate the construction of the proposed culvert.
128	NCC seek clarification as to whether the temporary works area offer the space for material storage and welfare units considering it will act as an access route.
Other	NCC seek clarification as to what work number the diversion of slough dyke fall under.

Utilities Work Plans (AS-016)

2.79 A review has been undertaken of the **Utilities Work Plans (AS-016)**.

Table 2.20: NCC Comments on Utilities Work Plans AS-016 (Construction)

Sheet	NCC Comment
General	NCC seek clarification as to whether the proposed limits of deviation for the proposed utility diversion considers both the permanent and any temporary diversions that may be necessary to facilitate the works.
General	NCC seek clarification as to whether the Utility limits of deviation consider any site compounds or laydown areas that the Statutory Undertakers may require or are they proposed to utilise designated temporary works areas defined in the works plans?
4	NCC seek clarification as to whether the Proposed Diversion U16 co-ordinate with the proposed attenuation pond from a long-section perspective.

Misc Construction Issues

Table 2.21: NCC Comments on Works Plans AS-005 (Construction)

Document	*Topic*	NCC Comment
APP-056_ES Chapter 12 (Population and Human Health). Table 12-12	*Access effects during construction*	Clarification is sought as to which diversionary option has been selected. The Transport Assessment (Table 7-1) states that two options are considered, whilst the ES Chapter 12 (Table 12-12) mentions only one diversionary

		route (adding +700m). Irrespective, NCC are concerned that the selected diversionary route is not suitable for cyclists / equestrians given that it routes through an existing footway (either FW2 or FW3 depending upon which option is selected). NCC would like to view the proposed diversion route, including information about the suitability for cyclists / equestrians and mobility users.
APP-056_ES Chapter 12 (Population and Human Health). Table 12-12	*"Whilst this crossing is currently officially temporarily closed due to safety hazards associated with crossing the A46, construction of the Scheme will result in the official permanent closure of FP14."*	NCC are concerned about the closure of FP14. Whilst the route is noted to be temporarily closed, there is clearly still demand for this route (15 users), and NCC note that this route is the only off-road route between Kelham and Newark town centre as well as connecting the Cricket Ground with the Rugby Ground. NCC would like to understand whether alternative (safe) options are available for these users (e.g. via the A617). In principle, NCC are satisfied with the proposed stopping up but there needs to be suitable provision for NMUs from Kelham Road to the A616 and A617.
APP-056_ES Chapter 12 (Population and Human Health). Table 12-12	*Construction of the Crankley Point Sewage Treatment Works underpass extension and the earthworks operations associated with the embankment widening will result in the temporary closure and diversion of Newark FP48#1 for a period of 24 months.*	NCC are concerned about the 2km diversion of FP48-1, particularly considering that the route sees approx. 50 users over the 2-day surveyed period (likely more during the summer months). NCC would like to see the proposed diversion route, and an assessment of whether any alternative diversion routes are available.
APP-056_ES Chapter 12 (Population and Human Health). Table 12-12	*"Construction of the Brownhills junction will lead to temporary changes in access to National Cycle Network 64 and the Trent Valley Way along Winthorpe Road. Access will be maintained throughout the construction phase, with diversions phased over 24-months."*	NCC would like to see the diversionary routes noted in Table 12-12 for this route, given that it is a key active traveller route (421 over the 7-day survey period).
Transport Assessment, Appendix C (WCHAR), APP-193	N/A	Linking to other comments, the proposed diversion route would terminate in a dead end for equestrian users but also require pedestrians or cyclists to rejoin BW2 via FP3

		which will be used as an access during construction. NCC seek clarification as to how construction traffic and non-motorised users will be safely segregated whilst this diversion route is in effect.

3. Water

Baseline information

3.1 The Applicant has undertaken an assessment of the likely significant effects of road drainage and water environment as part of the Environmental Statement (ES), which has been reviewed by Nottinghamshire County Council (NCC).

3.2 Chapter 13: Road Drainage and Water Environment is supported by the following documents which have also been reviewed:

- Figure 13.1 Surface Water Constraints;
- Figure 13.2 River Waterbody Catchments;
- Figure 13.3 Flooding Constraints;
- Figure 13.4 Groundwater Constraints;
- Appendix 13.1 Water Framework Directive Compliance Assessment;
- Appendix 13.2 Flood Risk Assessment;
- Appendix 13.3 HEWRAT Assessment;
- Appendix 13.4 Drainage Strategy Report; and
- Appendix 13.5 Surface Water Quality Monitoring.

3.3 The review of baseline information included watercourses, waterbodies, water quality monitoring, surface water environmental permits or discharge consents, flood risk areas, groundwater levels, groundwater abstraction, groundwater consented discharges, aquifer designations and vulnerability, Water Framework Directive (WFD) groundwater status, and designated sites within the study area. This information is considered relevant to the assessment to provide baseline conditions of the water environment within or in the vicinity of the Scheme.

3.4 The study area used for sensitive surface water receptors, drainage systems, fluvial flood risk, groundwater receptors and designated sites is 1 km from the Order Limits. The study area is considered suitable as pollutants are expected to disperse and to have been diluted beyond a 1 km radius.

3.5 Risk assessment of the likely significant effects of the construction and operation stage has been conducted in accordance with the Design Manual for Roads and Bridges (DMRB) LA 113 – Road drainage and the water environment. In section 13.5 of Chapter 13: Road Drainage and Water Environment, a framework has been provided for assessing and managing effects associated with the water environment. Environmental Assessment and Monitoring guidance (DMRB LA 104) has been used to assess the significance of the effect on the receptor value and the magnitude of the impact. As part of the assessment, a worst-case scenario approach has been adopted in order to adequately account for all potential impacts. The assessment is considered appropriate.

3.6 Chapter 13: Road Drainage and Water Environment concluded that there are no likely significant construction or operational adverse effects. The assessment is considered to meet the policy requirements set out in the relevant national and local planning policy documents.

Water Framework Directive Compliance Assessment

3.7 The Water Framework Directive (WFD) compliance assessment included as Appendix 13.1 considers the compliance of the Scheme with the relevant WFD objectives for the designated ground and surface waterbodies that may be affected. The assessment determines if the Scheme may cause deterioration or prevent the improvement of the overall status (or potential for heavily modified and artificial waterbodies) of these waterbodies. The report is in accordance with the Planning Inspectorate guidance, the Environment Agency's WFD guidance and position paper. The Environment Agency's WFD guidance and position paper was produced by the Planning Inspectorate in Advice note 18, and the requirements of DMRB LA 113 – Road drainage and the water environment section 3.50 to 3.572. The level of assessment, methodology and desk-based research to provide a WFD baseline is adequate for the current stage of the application.

Flood Risk Assessment

3.8 Given that the Scheme is partly located within Flood Zone 3 and is over 1 hectare in size, a Flood Risk Assessment (FRA) has been undertaken and included as Appendix 13.2. The assessment provides the flood risk impact of the Scheme during the construction and operation phase. In order to inform the flood mitigation measures required, which would include the compensation of floodplains, hydraulic modelling has been conducted as part of the FRA.

3.9 The Sequential Test is applied as part of site selection and Exception Test has also been applied as part of the FRA. The Scheme seeks to improve an existing highway route that passes through Flood Zone 3. Therefore, it is not viable to relocate the works to a zone with a lower probability of flooding or to avoid crossing the A1, the River Trent and other watercourses. The Scheme alignment was developed following a comprehensive assessment of different alignment options which considered all environmental impacts (inclusive of flood risk).

3.10 The FRA states that other options performed better with regard to flood risk but performed less well with regard to other potential impacts. Taking into account wider sustainability objectives, no reasonably available alternatives to locate the Scheme in areas of lower flood risk were identified. This review couldn't confirm that the potential impacts on other areas mean the alternative options are not "reasonably available" but it is assumed this will have been tested through the DCO process.

3.11 According to the FRA the Scheme is classified as Essential Transport Infrastructure, considering it forms part of the strategic road network and the need for the upgrade is set out in the Case for the Scheme. A part of the Scheme passes through Flood Zone 3b. This may be acceptable for Essential Transport Infrastructure subject to the application of the Exception Test.

3.12 The FRA was supported by hydraulic modelling to assess flood risk to and from the Scheme where it passes through Flood Zone 3. Changes in flood depth as a result of the combined permanent and temporary works elements have been compared to baseline depths. The inclusion of the Scheme with temporary works provided a conservative assessment of the flood risk impact of the temporary works. The FRA reports some increases in flooding resulting from the Scheme, both during construction and operation however the results are stated to demonstrate there is no significant impact on flooding based on the DMRB significance criteria and available information on affected receptors. According to the FRA, since the Scheme is a Nationally Significant Infrastructure Project (NSIP), the Exception Test was satisfied in terms of the benefits to the community and safety and flood mitigation measures have been

incorporated into the design. The new road would be at a low risk of flooding and would also be safe for the lifetime of the development without increasing flood risk to receptors elsewhere.

3.13 The flood risk impacts to the Scheme have been comprehensively assessed and the structure and content of the FRA are in accordance with the National Policy Statement for National Networks (NPSNN) Sections 4 and 5, and National Planning Policy Framework (NPPF).

HEWRAT Assessment

3.14 To understand the pollution of routine runoff that is expected to be discharged into the receiving watercourses and ensure that drainage design (and appropriate mitigation) is compliant with the Environmental Quality Standards (EQS), a Highways England Water Risk Assessment Tool (HEWRAT) assessment and the application of the Metal Bioavailability Assessment Tool (M-BAT) has been completed, included as Appendix 13.3. Overall, a proportional rating is given to the severity and risk of the sources with respect to the impacts and the risk.

Drainage Strategy Report

3.15 A report on the road drainage strategy and preliminary design has been prepared to outline the existing drainage regime, provide a summary of the drainage philosophy agreed upon with stakeholders, and present the proposed drainage design that will be developed during the detailed design process. The initial design of the proposed drainage regime has been reasonably placed where suitable taking into account the risk of pollution and flooding extent based on the HEWRAT and FRA.

Surface Water Quality Monitoring

3.16 Surface water quality monitoring was undertaken in January, April, and July 2023 to establish the baseline surface water quality within and in the vicinity of the Scheme during winter high flow and spring/summer lower flow conditions. The monitoring report is provided as Appendix 13.5 of the ES. The applicant states that surface water monitoring and groundwater monitoring would be undertaken during construction to ensure there is no deterioration in water quality as a result of the Scheme. Further monitoring will be undertaken as stated and is proposed to be undertaken quarterly. A reasonable level of assessment has been undertaken by the Applicant and the report is in accordance with the following legislation:

- The Environment Act 2021;
- Flood and Water Management Act 2010;
- Environmental Permitting (England and Wales) Regulations 2016 (as amended);
- Nitrate Pollution Prevention Regulations 2015;
- Water Act 2014;
- The Water Resources Act 1991 (Amendment) (England and Wales); and
- Environmental Damage (Prevention and Remediation) Regulations 2009.

National and Local Policy

Relevant National Policy

3.17 Chapter 13: Road Drainage and Water Environment assessed impacts according to the National Policy Statement for National Networks (NPSNN) and National Planning Policy Framework (NPPF) that was in effect at the time of writing, and was published for consultation in March 2023. Chapter 13: Road Drainage and Water Environment has been reviewed in accordance with the latest NPSNN published in March 2024.

3.18 The submission documents include the document 'National Policy Statement for National Networks Accordance Tables', outlining how the Scheme complies with each section of the NPSNN relevant to Chapter 13: Road Drainage and Water Environment.

3.19 When determining an application for development consent in relation to flood risk, the policies relating to climate change adaption in paragraphs 4.36 to 4.47 of the NPSNN should be taken into account. Paragraph 5.91 refers to advice in the NPPF (paragraphs 165 to 175) regarding directing development away from areas at the highest risk of flooding but where development is necessary, advising that it should be made safe without increasing flood risk elsewhere.

3.20 Advice on assessments is given to applicants in paragraphs 5.92 - 5.97 of the NPSNN which advises schemes located in Flood Zones 2 and 3 (medium and high probability of river and sea flooding), within Flood Zone 1 (low probability of river and sea flooding), or schemes of 1 hectare or greater or subject to other sources of flooding or critical drainage problems be accompanied by a FRA. This should identify and assess the risks of all forms of flooding to and from the Scheme and demonstrate how these flood risks will be managed, taking climate change into account. Applicants for schemes which may be affected by, or may add to, flood risk are advised to seek sufficiently early pre-application discussions with the Environment Agency and, where relevant, other flood risk management bodies such as lead local flood authorities, Internal Drainage Boards (IDB), and reservoir owners and operators.

3.21 The flood risks during construction and operation are outlined in the ES and further assessed in FRA (Appendix 13.2), as described previously. The site-specific FRA also takes into account the impacts of climate change listed above. The FRA concluded a low risk of flooding from all sources both to the Scheme and as a result of the Scheme. This considered the proposed mitigation which includes floodplain storage compensation areas and implementation of the proposed drainage strategy (Appendix 13.4 Drainage Strategy Report). The Scheme has followed the NPSNN in undertaking a site-specific FRA and included appropriate drainage mitigation.

Relevant Local Policy

The Nottinghamshire Plan 2021-31

3.22 Reducing impact on the environment is one of the focuses of the Nottinghamshire 10-year vision. Nottinghamshire County Council, alongside their partners, will protect the communities most at risk of flooding through designing new development with flood protection as part of Ambition 3 over the next four years. Ambition 9 includes carrying out more Natural Flood Management schemes across the county, supporting watercourse owners with their responsibilities and working with their partners to reduce the risk of flooding to homes and businesses.

3.23 Chapter 13: Road Drainage and Water Environment and the accompanying technical appendices have assessed the importance of protecting and enhancing the environment and protecting the communities from flooding within the local area and nearby communities.

Corporate Environmental Policy

3.24 Nottinghamshire County Council also set out an Environmental policy and plan to enhance Nottinghamshire's natural habitats and landscapes, while reducing the council's impact on the environment. Nottinghamshire County Council will ensure that environmental consideration in its policies, plans, procurement and use of financial resources is embedded. They will also ensure that they are compliant with the environmental legislation to deliver their commitment to protecting and enhancing the natural and built environment.

3.25 Chapter 13: Road Drainage and Water Environment has considered the importance of protecting and enhancing the environment within the Scheme extent.

Newark & Sherwood Local Development Framework Core Strategy & Allocations (Amended Core Strategy)

3.26 **Core Policy 9** (Sustainable Design) states that new development proposals should demonstrate sustainable design that proactively manages surface water including, where feasible, the use of Sustainable Drainage Systems to protect and enhance the natural environment. Core Policy 9 states that the district council will prepare a Supplementary Planning Document (SPD) setting out guidance to developers on the sustainable design of development. This has not yet been published.

3.27 Core Policy 9 (Sustainable Design) also states that in areas at risk of flooding, and to direct development away from areas at highest risk, national planning policy requires a sequential approach to flood risk. A Strategic Flood Risk Assessment (SFRA) has been produced to inform decisions over site allocations in the determination of planning applications. The SFRA was reviewed and updated in 2016 to provide the necessary evidence base to inform 'Plan Review'. The District Council will expect developers, as part of proposals, to take the study into account.

3.28 The Newark and Sherwood District SFRA entirely covers the Scheme area and looks at flooding from a variety of different sources. The Level 2 SFRA identifies the Scheme as being partially within the functional floodplain (Flood Zone 3b).

3.29 With regards to meeting the requirement for Core Policy 9, the mitigation measures from the potential surface water impact during construction and operation of the newly proposed SuDS are not specifically defined within Chapter 13: Road Drainage and the Water Environment but a preliminary drainage design has been set out in the Drainage Strategy Report (Appendix 13.4).

3.30 **Core Policy 10** (Climate Change) states the District Council is committed to tackling climate change's causes and impacts and delivering a reduction in the District's carbon footprint. Developments should take into account potential adverse environmental impacts that during construction and operation should be mitigated to minimise the impacts of climate change. New development proposals should be steered away from those areas at the highest risk of flooding, by applying the sequential approach to its location. Where appropriate the Authority will seek to secure strategic flood mitigation measures as part of the new development. Following the Sequential Test, the Exception Test should be applied in line with national guidance.

3.31 New development must also ensure that surface water runoff is positively managed through the design and layout of the development to make sure that there are no unacceptable impacts in runoff into surrounding areas or the existing drainage regime.

3.32 The appropriate climate change uplifts have been considered for the FRA and flood mitigation measures have been examined during the construction and operational phase. As part of the policy requirements, a Sequential Test as well as an Exception Test were completed. Nature based solutions (NbS) and Sustainable Drainage Systems (SuDS) were the primary principles implemented in draining, treating and attenuating the extended catchment of the Scheme. Above-ground SuDS have been integrated with environmental and landscaping features to produce additional benefits where practical. A blue-green corridor has been utilised to tie attenuation features and landscaping into a holistic design.

Conflicts

3.33 In summary, subject to the development being carried out as proposed within the DCO application documents and further details being agreed as part of the subsequent DCO requirement, Nottinghamshire County Council is of the view that the impacts of this proposal would be neutral.

4. Minerals and Waste

4.1 This Section presents a review of the documents submitted in support of the Scheme, including Chapter 10: Material Assets and Waste, of the ES, in context with both the local and national minerals and waste legislation and policy.

Baseline

Waste

4.2 There is one permitted/authorised landfill site which lies immediately adjacent to the boundary of the Scheme. British Sugar Plc operates an active landfill site at the Newark Sugar Factory. The existing A46 road is partially located on the southeastern edge of this landfill site. Within 500 metres of the Order Limits, British Sugar Plc has one closed site (British Sugar Borrow Pits), which lies approximately 300 metres from the Scheme. A historic landfill is also present at Muskham Road, approximately 210 metres from the Scheme.

Minerals

4.3 The majority of the Scheme falls within a Minerals Safeguarding Area (MSA) for sand and gravel.

4.4 It is considered that minerals and waste facilities have been identified adequately within the Environmental Statement and the supporting DCO documentation.

Summary of Legislative and Policy Framework Review

4.5 When determining a DCO application, regard should be given to the relevant National Policy Statements (NPS), as well as national and local planning policy.

Local Policy

4.6 With regard to the local policy context, the relevant development plan documents in this case comprise the following:

- Nottinghamshire and Nottingham Local Aggregates Assessment (2022);
- Nottinghamshire Minerals Local Plan (2021); and
- Nottinghamshire and Nottingham County Council Waste Core Strategy (2013).

Nottinghamshire and Nottingham Local Aggregates Assessment (2022)

4.7 The Nottinghamshire and Nottingham Local Aggregates Assessment (LAA) was adopted in December 2023 and covers both Nottinghamshire County Council (NCC) and Nottingham City Council. It is a requirement of the National Planning Policy Framework (NPPF) for all Mineral Planning Authorities (MPAs) to produce a yearly LAA assessing the demand and supply for aggregates within their jurisdiction over the past 10 years. The 2023 assessment was the most recent available at the time of this application's submission and provides details of sales of aggregates within Nottinghamshire County and Nottingham City in 2022 and provides historic data from 2013 to 2022. Chapter 10: Material Assets and Waste refers to the 2022 version of this report and uses data from this earlier report in the baseline of the assessment. **Nottinghamshire County Council recommend that Table 10-6: Aggregates sales and reserves for Nottinghamshire and Nottingham is updated in respect of the most recent 2023 version of this report. Where appropriate, the assessment should also be updated following this change in baseline conditions**.

Nottinghamshire Minerals Local Plan (2021)

4.8 The Nottinghamshire Minerals Local Plan (NMLP) was adopted by NCC in March 2021 and replaces the previous plan adopted in 2005. The plan covers the period up to 2036 and sets out NCC's approach towards future mineral extraction in Nottinghamshire. It states that the purpose of the plan is to balance *"the economic benefits and need for minerals, against the environmental disruption and harm that mineral extraction can cause"*.

4.9 The following policies are considered of relevance:

- Policy SP1: Minerals Provision;
- Policy SP7: Minerals Safeguarding, Consultation Areas and Associated Minerals Infrastructure;
- Policy DM13: Incidental Mineral Extraction;
- Policy DM15: Borrow Pits;
- Policy MP1: Aggregate Provision;
- Policy MP2: Sand and Gravel Provision;
- Policy MP3: Sherwood Sandstone Provision;
- Policy MP4: Crushed Rock (limestone) Provision; and
- Policy MP5: Secondary and Recycled Aggregates.

4.10 Policy SP1 (Minerals Provision) emphasises the importance of identifying land suitable for mineral extraction to maintain an adequate supply of minerals in the county, and ensuring that the best use is made of the County's finite minerals resources. It further states that "*proposals for mineral development must demonstrate that they have prioritised the avoidance of adverse social, economic and environmental impacts of the proposed development.*"

4.11 Policy SP7 (Minerals Safeguarding, Consultation Areas and Associated Minerals Infrastructure) sets out the need for both Minerals Safeguarding Areas (MSAs), areas of mineral resources which are worthy of safeguarding, and Minerals Consultation Areas (MCAs), areas within Nottinghamshire where the District and Borough authorities are required to consult the Mineral Planning Authority (MPA) over non-minerals development.

4.12 Policy SP7 states that:

"*Non-minerals development within minerals safeguarding areas will have to demonstrate that mineral resources will not be needlessly sterilised as a result of the development and that the development would not pose a serious hindrance to future extraction in the vicinity.*

Where this cannot be demonstrated, and where there is a clear and demonstrable need for the non-minerals development, prior extraction will be sought where practicable."

4.13 Paragraph 3.84 recognises that not all non-mineral development proposals within or close to a MSA/MCA represent a risk to future minerals extraction, with the main risks coming from proposals to extend built-up areas and new development in the open countryside.

4.14 DM13 (Incidental Mineral Extraction) states that "*planning applications for the extraction of minerals as a necessary element of other development proposals on the same site will be supported where it can be demonstrated that the scale and duration of the mineral extraction does not result in adverse environmental impacts and that it brings environmental and other benefits to the development it is incidental to.*" The Applicant has produced an Outline Materials Management Plan (OMMP) (Appendix A, First Iteration Environmental Management Plan (EMP)) to identify ways in which site won materials can be reused during construction, though does acknowledge that the Scheme will result in waste from site won materials which are of poor quality or which otherwise cannot be reused onsite.

4.15 DM15 (Borrow Pits) states that borrow pits will be supported where they are adjacent to or close to the project/s they are intended to serve, are time-limited to the life of the project and material is to be used only for the specified project, can be worked and reclaimed without any unacceptable environmental impacts. The Applicant identifies that borrow pits within the order limit will be used to reduce the requirement for off-site materials and will be backfilled with other site-won material. The use of borrow pits is commonplace on road schemes.

4.16 Policies MP1-MP4 relate to the requirement to ensure the adequate supply of aggregates and minerals, in particular MP2 (Sand and Gravel Provision). MP5 (Secondary and Recycled Aggregates) states that "*development proposals which will increase the supply of secondary and/or recycled aggregates will be supported where it can be demonstrated that there are no significant environmental, transport or other unacceptable impacts.*"

Nottinghamshire and Nottingham County Council Waste Core Strategy (2013)

4.17 NCC and Nottingham City Council jointly prepared a Waste Core Strategy which was adopted in December 2013. It covers the period up to 2031. It partly replaces the saved policies in the existing Waste Local Plan, adopted in January 2002. The policies of the Core Strategy and the saved policies in the Waste Local Plan will remain in force until the new Waste Local Plan is adopted by both councils. The following policies are considered to be of relevance to the Scheme:

- Policy WCS2: Waste Awareness, Prevention and Reuse;
- Policy WCS3: Future Waste Management Provision;
- Policy WCS5: Disposal Sites for Hazardous, Non-Hazardous and Inert Waste;
- Policy WCS8: Extensions to Existing Waste Management Facilities; and
- Policy WCS10: Safeguarding Waste Management Sites.

4.18 Policy WCS2 states that all new development should be designed, constructed and implemented to minimise the creation of waste, maximise the use of recycled materials and assist in the collection, separation, sorting, recycling and recovery of waste arising from the development.

4.19 Policy WCS10 states that the following sites will be safeguarded for waste management facilities: a) Existing authorised waste management facilities including potential extensions and sites which have a valid planning permission that has not yet been implemented; or b) Sites allocated in the Site Allocations Document. Safeguarding will only apply to the above-identified sites and any land immediately adjacent to the site where a need to safeguard has been clearly demonstrated.

Emerging Local Policy

4.20 Nottinghamshire CC and Nottingham City Council submitted the Nottinghamshire and Nottingham Waste Local Plan to the Secretary of State on 5th March 2024.

4.21 The relevant policies are:

4.22 **SP1 Waste prevention and reuse** – All new development should be designed, constructed, and operated to minimise the creation of waste, maximise the use of recycled materials, and assist with the collection, separation, sorting, recycling and recovery of waste arising from the development during its use.

4.23 **SP2 Future Waste Management Provision** – The policy aims to provide sufficient waste management capacity to meet identified needs and will support proposals for waste management facilities which help to move waste management up the waste hierarchy.

4.24 **SP4 Residual Waste Management** – Proposals for the recovery of inert waste to land will be permitted where it can be demonstrated that: This will provide a significant benefit or

improvement which cannot practicably or reasonably be met in any other way. The waste cannot practicably and reasonably be reused, recycled or processed in any other way. The use of inert waste material replaces the need for non-waste materials. The development involves the minimum quantity of waste necessary to achieve the desired benefit or improvement. It will not prejudice the restoration of permitted mineral workings and landfill sites.

4.25 **SP8 Safeguarding Waste Management Sites** – The policy will seek to avoid the loss of existing permitted waste management facilities, having regard to the long-term need for the facility and the wider benefits of any development proposal.

4.26 It is not the intention of Policy SP8 to unreasonably restrict non-waste development and, in most cases, by taking a more flexible approach it may be possible to accommodate non-waste development by making changes to the proposed layout of any housing or mixed-use scheme. Mitigation therefore could include using parking or landscape areas to provide a buffer zone from any existing or potential waste facility. The suitable mitigations will depend on the non-waste development proposed as well as the type of waste facility and the nature of its operations.

National Policy

4.27 With regard to the national policy context, the following documents are of material consideration to the Scheme:

- National Networks National Planning Policy Statement (2014);
- National Networks National Planning Policy Statement (2024); and
- National Planning Policy for Waste (2014).

National Networks National Planning Policy Statement (2024)

4.28 Since the submission of the application by the Applicant, a subsequent NPSNN was produced in May 2024. There are no substantive differences between the two with regard to minerals and waste.

Minerals

National Networks National Planning Policy Statement (2014)

4.29 There are 12 designated National Policy Statements (NPS) that set out government policy on different types of national infrastructure development, including energy, transport, water, wastewater, and waste. The National Policy Statement for National Networks (NPSNN) was first published in December 2014 by the Department for Transport.

4.30 In relation to safeguarding mineral resources, paragraph 5.169 of the NPSNN states:

"Applicants should safeguard any mineral resources on the proposed site as far as possible."

4.31 Paragraph 5.182 goes on to state:

"Where a proposed development has an impact on a Mineral Safeguarding Area (MSA), the Secretary of State should ensure that the applicant has put forward appropriate mitigation measures to safeguard mineral resources."

4.32 The Scheme would result in the sterilisation of some sand and gravel resources designated under the MSA. The Applicant considers that the Scheme would not represent a risk to the MSA, as the Scheme consists of widening and improvement of existing sections of the A46 around Newark (i.e., not a new development) and is not located in overly open countryside. The Scheme would therefore appear to be in line with the criteria laid out within Paragraph 3.84 of the Nottinghamshire Minerals Local Plan (2021).

4.33 There are no existing mineral extraction sites located in close proximity to the Scheme boundary, and given that much of the works are in relatively close proximity to residential areas, it is considered unlikely that the Scheme would result in the infringement of future potential mineral extraction sites.

4.34 Whilst prior extraction of the sand and gravel should be considered and is always preferred, it is acknowledged that this may be impractical given the relatively small areas of land take which are spread across the Scheme and their irregular shape which would hinder effective extraction. The benefit of prior extraction of the mineral would also have to be balanced against the likely impact it would have on the programme for the Scheme (i.e., a not inconsiderable delay) and the adverse environmental effects associated with mineral extraction.

4.35 However, whilst Nottinghamshire County Council are generally content with the information provided throughout the application documents in relation to the impact of the Scheme on minerals, the Applicant has not produced a standalone Mineral Safeguarding Assessment for the Scheme. This would need to demonstrate that, on balance, mineral sterilisation is acceptable due to a clear and demonstrable need for the Scheme and that prior extraction would not be practicable. It would also need to demonstrate that the Scheme would not infringe on the ability of the County to maintain an adequate supply of mineral. **As it stands, Nottinghamshire County Council does not consider this to have been sufficiently demonstrated**.

Waste

National Networks National Planning Policy Statement (2014)

4.36 In relation to Waste, the NPSNN states in paragraph 5.40 that sustainable waste management is implemented through the 'waste hierarchy', including prevention; preparing for reuse; recycling; other recovery, including energy recovery; and disposal.

4.37 Paragraph 5.41 goes on to state that *"Large infrastructure projects may generate hazardous and non-hazardous waste during the construction and operation…"*.

4.38 In relation to an applicant's assessment, the NPSNN states in paragraph 5.42 *"The applicant should set out the arrangements that are proposed for managing any waste produced. The arrangements described should include information on the proposed waste recovery and disposal system for all waste generated by the development. The applicant should seek to minimise the volume of waste produced and the volume of waste sent for disposal unless it can be demonstrated that the alternative is the best overall environmental outcome"*.

National Planning Policy for Waste (2014)

4.39 The National Planning Policy for Waste (NPPW) was published in October 2014.

4.40 Under the heading 'Determining planning applications', paragraph 8 states that when determining planning applications for non-waste development, local planning authorities should ensure that:

- *"the likely impact of proposed, non-waste related development on existing waste management facilities, and on sites and areas allocated for waste management, is acceptable and does not prejudice the implementation of the waste hierarchy and/or the efficient operation of such facilities;*

- *new, non-waste development makes sufficient provision for waste management and promotes good design to secure the integration of waste management facilities with the rest of the development and, in less developed areas, with the local landscape. This includes providing adequate storage facilities at residential premises, for example by ensuring that there is sufficient and discrete provision for bins, to facilitate a high quality, comprehensive and frequent household collection service; and*

- *the handling of waste arising from the construction and operation of development maximises reuse/recovery opportunities, and minimises off-site disposal."*

4.41 The supporting text in the draft Nottinghamshire and Nottingham Waste Plan helps identify potential conflicts with safeguarded waste facilities. Non-waste development can be sensitive to the operations of waste facilities if they are within close proximity to each other. However, permitted and existing waste facilities should not have unreasonable restrictions placed upon them because of a new development being permitted after they have been established. As per NPPF, it is for the applicant of the new development as the 'agent of change' to demonstrate that their Proposed Development will not affect the operations of waste facilities and provide suitable mitigation to address any identified significant adverse impacts which the Proposed Development may have on the existing waste operation. District and Borough Councils within Nottinghamshire are encouraged to consult and collaborate with NCC on applications that are near existing or permitted waste management facilities.

4.42 Where proposed non-waste development would have an unacceptable impact on a waste management facility, such as the loss of waste management capacity, prejudice of site operation or restrict future development, then permission should not be granted unless there are wider social and/or economic benefits that outweigh the need and retention of the waste facility. Applicants will also need to demonstrate that either there is suitable and equivalent capacity provided elsewhere, prior to the non-waste development beginning, or demonstrate the waste facilities capacity is no longer required.

Potential Conflicts

4.43 Whilst Nottingham County Council are generally content with the information provided throughout the application documents in relation to the impact of the Scheme on minerals, the Applicant has not produced a standalone Mineral Safeguarding Assessment for the Scheme to draw this information together in one document. **A standalone Mineral Safeguarding Assessment should be produced** and would need to demonstrate that, on balance, mineral sterilisation is acceptable due to a clear and demonstrable need for the Scheme and that prior extraction would not be practicable. It would also need to demonstrate that the Scheme would not infringe on the ability of the County to maintain an adequate supply of minerals.

4.44 In addition, Nottinghamshire County Council recommend that Table 10-6: Aggregates sales and reserves for Nottinghamshire and Nottingham in Chapter 10: Material Assets and Waste is updated in respect of the Nottinghamshire and Nottingham Local Aggregates Assessment December 2023. Where appropriate, the assessment should also be updated following this change in baseline conditions.

5. Biodiversity

Baseline conditions

5.1 The existing ecological features identified during the desk study, consultations and field surveys are summarised with full details including survey methods and field survey results being provided in appendices (with the Badger, Otter and Barn Owl appendices being confidential). The age and validity of environmental surveys should be considered in accordance with guidance on the Lifespan of Ecological Reports and Surveys from the Chartered Institute of Ecology and Environmental Management (CIEEM) and, where appropriate, surveys repeated prior to construction.

Habitats

5.2 Broad habitat types are described but without an indication of the area for each habitat type nor the percentage of the baseline study area taken up by a given habitat. **Providing the area of habitat types, including the percentage areas of the different habitat types would assist in understanding their extent and proportion within the Scheme area**.

5.3 Apart from air quality, off-site impacts and in-combination effects have not been fully addressed, in some cases not all. The Scheme will be a significant feature in the landscape impacting ecological features such as habitat connectivity.

Protected species

5.4 The accounts for protected species are presented in alphabetical order. It would be useful to have indicated this at the outset of the section, as listing according to the taxonomic order is commonly used. White-clawed Crayfish, Hedgehog and Brown Hare were scoped out of the assessment in the case of the former because it is not known from the study area and because of the widespread distribution of the plague carrying Signal Crayfish.

5.5 The account of the breeding birds is not very specific as to whether the species found were breeding or just present, with the former being expressed in different degrees of certainty (Sections 8.8.50 to 8.8.59). **Nottinghamshire County Council request that further detail is provided, outlining whether breeding birds were identified as breeding or present to understand the potential impact on breeding birds.**

5.6 No accounts were presented in Chapter 8: Biodiversity for any native plant species of note, e.g. higher plants or mosses and liverworts. **Nottinghamshire County Council request confirmation as to whether any native plant species of note were observed during ecological surveys**.

5.7 Off-site impacts and in-combination effects are not fully addressed. Including reference to relevant chapters (for example Chapter 15: Combined and Cumulative Effects, Section 15.3.13) where biodiversity has been scoped out of the combined assessment would improve the ease of readability and strength of Chapter 8: Biodiversity.

Invasive non-native species

5.8 Table 1 provides a summary of invasive non-native species that were shown to be found within the study area. However, there is no clear account of how invasive non-native plant and animal species were surveyed. Nottinghamshire County Council request that further clarification is provided in this regard.

Table 1: Summary of invasive non-native species found in the study area

Species	Distribution	Implication for biodiversity resources of the Scheme	Scheduled in legislation ("must not cause to spread into wild")
Flora			
Indian Balsam (also known as Himalayan Balsam)	Associated with the riparian habitat of the River Trent	No risk of species being spread	Yes
Orange Balsam	Old Trent Dyke	Can be dominant	
Least Duckweed	Old Trent Dyke	Can be dominant	
Fauna			
American Mink	Associated with the riparian habitat of the River Trent	Direct impact (not indirect as indicated) on Water Vole (and other small mammals)	
Signal Crayfish	Main channel of the River Trent	No risk of species being spread	Yes
Chinese Mitten Crab	Main channel of the River Trent	No risk of species being spread	Yes
Northern River (or Florida) Crangonyctid	In two ponds	No risk of species being spread	
Bloody-red Mysid	Main channel of the River Trent	No risk of species being spread	
Demon Shrimp	Main channel of the River Trent	No risk of species being spread	
Asian Clam	Main channel of the River Trent	No risk of species being spread	Yes
Zebra Mussel	Main channel of the River Trent	No risk of species being spread	Yes
Seven other species	Main channel of the River Trent	No risk of species being spread	Depends on which species

5.9 Table 1 also indicates those species which are scheduled in legislation (Wildlife and Countryside Act 1981 (as amended) and the Invasive Alien Species (Enforcement and Permitting Order 2019) which prohibits the spread of these species into the wild as well as other restrictions. Although these plants and animals may be outside the Order Limits, **the Invasive Non-Native Species (INNS) Management Plan and Biosecurity Risk Assessment, as committed to in the First Iteration Environmental Management Plan (FIEMP), should include provision for measures to not only ensure that the construction of the Scheme does not cause any of these species to be spread but that these and other invasive non-native species are not spread into the Scheme**, e.g., on excavators caked in soil from a previous site contaminated with Japanese Knotweed.

Wider Chapter Review

Consultation

5.10 A programme of consultation has been ongoing since March 2022. It is noted that Natural England (4 May 2023) confirmed that they were content with the survey methods not being used in isolation. Additionally, the Environment Agency's comment on the need to ensure no detrimental impact on the River Trent and hence the Humber Special Area of Conservation was taken into consideration (see below sections on Sites designated for their biodiversity value and Habitat Regulations Assessment).

5.11 There is no reference to a draft Statement of Common Ground with any of the key stakeholders. It is assumed these will be produced during the Examination period.

Assessment methods and study areas

5.12 A full description of the assessment methods used is provided demonstrating that these are comprehensive, conforming to the most up to date guidance. A thorough account is provided of the study areas.

5.13 There are a number of occasions when surveys could not be undertaken for various reasons or parts of areas planned to be surveyed were inaccessible. **A table summarising these deviations from the planned programme would be valuable, identifying when a follow-up survey was undertaken to demonstrate that coverage of the study areas was complete**. **This would assist Nottinghamshire County Council in discharging its responsibilities with respect to protected species**.

Mitigation

5.14 The mitigation hierarchy, as dealt with in the DMRB, includes avoidance as part of the Design stage. However, evidence of avoidance is noticeable in its absence in Chapter 8: Biodiversity. This is particularly important given the loss of habitat (including Priority Habitats) to the Scheme. In order to comply with planning policy, such evidence is needed to demonstrate that avoidance was given due consideration and where successes were achieved.

5.15 Mitigation and compensation have been carefully considered and are dealt with in detail. Table 8-9 in Chapter 8: Biodiversity provides a valuable summary although **it is not clear what is meant by "Not applicable" for some of the operational impacts**, e.g. invertebrates, reptiles and Water Vole. Whilst the impact may be neutral, it is only applicable as a result of barriers being successfully implemented. **Nottinghamshire County Council request further clarification on this**.

Design, mitigation, compensation and enhancement measures

5.16 Summary tables would provide a valuable focus on mitigation and compensation measures including actions needed and where detail was yet to be provided, e.g. the number, location and design of fish escape passages to be finalised with the Environment Agency.

Summary of Legislative and Policy Framework Review

Legislation

Animal Welfare Act 2006

5.17 The legislation listed and described in Chapter 8: Biodiversity is generally adequate, however, an additional and relevant piece of national legislation to include within the "National legislation" section of Chapter 8: Biodiversity is the Animal Welfare Act 2006 which protects vertebrate animals from harm. **The provisions of this Act should be taken into account**

within the assessment by ensuring the welfare of any mammals potentially affected by the Scheme are considered, for example Fox, Hedgehog and Badger falling into excavations and being unable to get out or, in the case of excavations with accumulated water, drowning. Avoidance mitigation measures should be included within the Second Iteration EMP.

National Planning Policy

National Policy Statement for National Network (2024)

5.18 Chapter 8: Biodiversity includes a comprehensive review of the legislation and policies pertinent to the Scheme.

5.19 The National Policy Statement for National Network (NPSNN) (2024) states at paragraphs 5.46 and 5.47 that applicants should consider the direct and indirect impacts on habitats and protected species, showing how a scheme has taken advantage of opportunities to conserve and enhance biodiversity, including scheme specific mitigation. The NPSNN states a scheme should identify where and how mitigation measures will be secured in the long term. A First Iteration Environmental Management Plan (EMP) has been produced detailing construction mitigation measures. Chapter 8: Biodiversity states the First Iteration EMP will be developed into a Second Iteration EMP for the construction of the Scheme. As part of the Second Iteration EMP, a Landscape and Ecology Management Plan (LEMP), Invasive Non-Native Species Management Plan and Biodiversity Net Gain Management Plan will be produced. The outlined plans are considered applicable and proportionate to the Scheme.

5.20 At paragraph 5.47, the NPSNN recommends applicants look for opportunities "*to enhance, expand or connect existing habitats and create new habitats in accordance with biodiversity net gain requirements*". Appendix 8.14: Biodiversity Net Gain (BNG) Technical report assessed the following predicted percentage change:

- 4.99% net gain in habitat units;
- 8.17% net gain in hedgerow units; and
- 36.93% net gain in river units.

5.21 The NPSNN, at paragraph 5.50, requires compensation measures if avoidance or bespoke mitigation measures are insufficient or not possible. The Scheme involves the loss of lowland meadow beyond what is acceptable under Biodiversity Metric 4.1 because it is a habitat of very high distinctiveness. A bespoke compensation agreement with Natural England is required. Following the completion of a bespoke compensation agreement, the Scheme's mitigation would be in accordance with the NPSNN.

5.22 No concerns have been identified in relation to the requirements of the NPSNN and the provided assessment set out within Chapter 8: Biodiversity and its associated appendices.

Local Planning Policy

Nottinghamshire and Nottingham Local Nature Recovery Strategy (LNRS)

5.23 The 'Local Policy' section of Chapter 8: Biodiversity whilst acknowledging the "Nottingham County Council Green Estates Development Strategy and Plan 2013-2023", does not refer to the Nottinghamshire and Nottingham Local Nature Recovery Strategy (LNRS) as established by the Environment Act 2021 to:

- help reverse the ongoing decline of nature in England by establishing priorities for nature recovery and identify locations to create or improve habitat most likely to provide the greatest benefit for nature and the wider environment, and in doing so contribute to the national Nature Recovery Network;
- inform the delivery of mandatory Biodiversity Net Gain (BNG) and help to guide local planning policy for nature recovery; inform the delivery of mandatory Biodiversity Net Gain

(BNG) and guide public and private investment, including through the new Environmental Land Schemes (ELMS) and woodland planting funding; and
- help to guide local planning policy for nature recovery.

5.24 A draft strategy is due to be ready for public engagement in spring 2025 with the final strategy being published later in 2025. **Provision should be made within the ES to ensure that the Scheme is integrated as far as is reasonable within the Nottinghamshire and Nottingham LNRS**.

Other local planning policy

5.25 Newark and Sherwood District Council produced a Green Infrastructure Strategy 2010, responding to the need to plan for predicted growth, enhance quality of life and ensure environmental sustainability in the District for generations to come.

5.26 Newark and Sherwood District Council also produced an Amended Core Strategy/Development Plan in 2019, including a section on biodiversity and green infrastructure.

Conflicts

5.27 In summary, whilst the majority of the survey and assessment is considered to be proportionate and adequately derived, some matters require further clarification:

- The provisions of the Animal Welfare Act 2006 should be taken into account within the assessment by ensuring the welfare of any animals potentially affected by the Scheme are considered.
- Provision should be made within the ES to ensure that the Scheme is integrated as far as is reasonable within the Nottinghamshire and Nottingham LNRS.
- A summary should be provided, detailing deviations from the planned survey programme and identifying when follow-up surveys were undertaken.
- The area and percentage area of habitat types should be provided to enable an understanding of their extent and proportion within the Scheme area.
- It is recommended that it is differentiated whether identified breeding birds were breeding or only present.
- Clarification should be provided on how non-native plant and animal species were surveyed, as no clear account of this could be found.
- The INNS Management Plan and Biosecurity Risk Assessment should include measures to ensure construction vehicles do not spread non-native species within the Scheme footprint.
- Clarification should be provided on what “Not Applicable” means for some operational impacts as set out in Table 8-9, of Chapter 8: Biodiversity.

Biodiversity Net Gain

5.28 It is noted that Natural England’s Biodiversity Metric 3.1 was used to calculate net gains for the Scheme. Biodiversity Metric 4.0 was published on 19 April 2023 whereas Appendix 8.14 was published and submitted to the Planning Inspectorate on the 26 April 2024. Whilst Nottinghamshire County Council accepts Natural England’s advice on the use of older metrics (i.e., users of previous versions of the Biodiversity Metric should continue to use that metric (unless requested to do otherwise by their client or consenting body) for the duration of the project it is being used for), just over one year had passed between the publishing of Biodiversity Metric 4.0 and the submission of the DCO application. Nottinghamshire County

Council is of the opinion that there was available time to update the calculations using a more recent version of the Biodiversity Metric (specifically 4.0), to provide Biodiversity Net Gain calculations that are more in-line with the most recent methodologies. Nottinghamshire County Council accepts that updating to the Statutory Biodiversity Metric, published 29 November 2023, could have required more effort, potentially including additional survey work, which could have unnecessarily delayed the applications submission. **Can the Applicant provide justification for retaining the use of Metric 3.1, given the time that has elapsed between publication of Metric 4.0 and Appendix 8.14**.

5.29 Appendix 8.14 states that compensatory measures are proposed off-site at Doddington Hall. These proposals and information provided to demonstrate that the proposed habitat is a Plantation Woodland and that it is feasible to transition this to Lowland Mixed Deciduous Woodland appear to be appropriate. Off-site compensation is subject to legal agreement with the relevant landowner, and the created habitat must be maintained for 30 years. .

6. Arboriculture

Baseline

6.1 The Applicant describes the arboricultural baseline conditions in Section 2 of Appendix 7.4 Arboricultural Impact Assessment (AIA) (Ref: TR010065/APP/6.3). The information presented in the AIA regarding baseline tree survey and desk study data has been derived from site walkovers in 2021 and 2023, a desk study of publicly available information and information held by Newark and Sherwood District Council (NSDC), National Highways and The Department for Environment, Food and Rural Affairs (Defra).

Introduction, methodology and limitations

6.2 The AIA assessment has been undertaken in general accordance with British Standard (BS) 5837:2012 'Trees In Relation to Design, Demolition And Construction – Recommendations'. The baseline tree survey includes a reasonable level of detail on individual trees, groups, woodlands and hedgerows.

6.3 Section 1.3.3 and 1.3.9 to 1.3.10 of the AIA states that trees were plotted indicatively due to a lack of topographical information at the time of the survey and that accuracy is not guaranteed to less than 5m accuracy. It is also noted that tree positions were later checked against topographical information to confirm that no significant accuracy issue was identified. It is not clear if this means that trees have been plotted to topographical positions, and if only some trees, it is not clear which trees have been plotted to topographical positions. This is critical for some aspects of the AIA where sub 5m accuracy could make a significant difference to the level of impact on given trees e.g., veteran trees such as T038, T136 and T139.

6.4 Section 2.2 of the AIA notes that the site contains multiple trees subject to Tree Preservation Order and/or trees located within Conservation Areas both of which provide statutory protection. It also includes a section on ancient woodland in Section 2.3. The AIA does not mention other relevant tree related statutory and non-statutory designations such as: the Forestry Act (1967) which requires a felling licence to fell more than $5m^3$ of timber (subject to relevant exceptions, including full planning consent);; or the Hedgerow Regulations (1997) which controls the removal of certain hedgerows (however this is mentioned in Chapter 8: Biodiversity of the Environmental Statement (ES)).

6.5 Priority habitats/habitats of principal importance are mentioned in Section 2.5 of the AIA with reference to Defra's MAGIC map. These include Deciduous Woodland and Wood Pasture and Parkland. The AIA states that these habitats should be retained and preserved where possible in accordance with the NPSNN (2014) and the NPPF. The AIA does not consider the level of impact to these features although they are impacted (e.g., W133 or G114 which are recorded

as Lowland Mixed Deciduous Woodland, and T655 which appears to be located within an area of Wood Pasture and Parkland).

6.6 Where Wood Pasture is ancient (present since 1600) it would be considered a form of ancient woodland and would therefore be an irreplaceable habitat, potentially requiring a minimum buffer zone of 15m from its recorded boundary. To determine the status of Wood Pasture reference to historic mapping and other sources would be required. Natural England are currently updating the Ancient Woodland Inventory, including the identification of Ancient Wood Pasture; this is being rolled out across the UK (data currently unavailable for Nottinghamshire).

6.7 Traditional Orchards (Priority Habitat Inventory) are present within or immediately adjacent to the study area (such as in areas shown on sheet two and sheet 15 of the Tree Constraints Plan) but are not mentioned in the AIA report.

6.8 Section 1.3.4 of the AIA refers to Standing Advice from Natural England and the Forestry Commission (2022) but does not include the requirement that the buffer zone for an ancient or veteran tree should be an uncapped radius equivalent to 15 x stem diameter or canopy spread +5m, whichever is greater.

6.9 There is a presumption in the AIA report (such as in section 1.3.14) that the RPA is the limit of constraints associated with trees but this should also refer to the spread of the canopy (which can sometimes extend beyond the RPA).

Summary of existing trees and related policy

6.10 Section 2 includes a very brief review of national policy such as NPPF (last accessed 2023) and NPSNN (2014) (last accessed 2023). There is no mention of local planning policy which could be relevant.

6.11 Section 2.4 relates to ancient, veteran and notable trees and confirms the Woodland Trusts Ancient Tree Inventory (ATF) has been consulted. The report states that eight veteran trees have been identified and refers to the very broad Ancient Tree Forum guidance on recognising ancient and veteran trees (this states that '*a veteran tree can be any age but is a tree which shows ancient characteristics'*). T136 (ash) is classed as veteran but with 1300mm stem diameter it meets the girth criteria for ancient status for the species as per guidance from the Ancient Tree Forum (this is a point of accuracy only, as veteran and ancient trees are of equal status in planning terms).

6.12 The AIA report does not reference any definitions for veteran trees included within planning policy. The NPPF (2023) defines a veteran tree as a tree which, because of its '*age, size and condition, is of exceptional biodiversity, cultural or heritage value'*. The 2014 NPSNN does not include a definition but the 2024 NPSNN includes a definition which states *'a tree which, may not be very old, but they have significant decay features, such as branch death and hollowing'*. Both the ATF definition (referred to by the applicant) and the 2024 NPSNN definition highlight that a veteran tree is not necessarily of a particular age.

6.13 The Tree Survey Schedule (included as Appendix C and D) contains multiple trees with recorded veteran or ancient characteristics but have not been identified as such. This raises concerns about whether the assessment has consistently and reliably taken such features into account. Whilst there is some subjectivity in relation to the classification of ancient or veteran trees (and the larger, older and the greater volume and range of habitat features provided, the more likely a tree is to be veteran) the following example tree features (not exhaustive) are at least mature for the species and have recorded veteran characteristics (such as extensive decay) and are presented in Table 1, below:

Table 22: Outline summary of trees with recorded veteran or ancient features

Potential Veteran Features **(Bold =** The greatest veteran features **Red** = To be removed for the Scheme **Red and underlined** = The greatest veteran features and to be removed by the Scheme)	T040, T086, **T134,** T137, T159, T160, T161, **T189,** G238, **T251,** T416, T417, T418, T476, T480, T483, T604, **T614, T625,** T636, T637, T692, **T754, T761** (ancient girth as per draft guidance from ATF), **T768,** T769, T816, T817, T818, T819, T826 (ash 810mm stem diameter, unlikely semi mature as listed), **T832, T839, T852** (ancient girth as per draft guidance from ATF), T853. T854, **T865,** G981, G983 and W1026.

Risks to Trees

6.14 Section 3.1.2 should refer to excavation and/or trenches as either could result in root severance (not just trenches).

6.15 Section 3.1.3 should refer to damage to tree stems and crowns (not just stems).

6.16 Section 3.2.2 refers to a commitment (secured by the First Iteration Environmental Management Plan (FIEMP) [TR010065/APP/6.5]) that the RPA of retained trees should remain undisturbed.

6.17 Section 3.2.2 states that the RPA of a tree should be circular or where appropriate as a square of equivalent area – this should state 'polygon' rather than square as it may not be uniform or square in shape.

Impact Assessment

Arboricultural Impact Assessment

6.18 The AIA focuses on impacts to veteran trees and impacts to trees from floodplain compensation areas.

6.19 Table 4.2 'Actions for the Scheme' does include a column to identify whether impacted trees are subject to a TPO or Conservation Area but the total number of protected tree features impacted is not stated.

6.20 There is no assessment reviewing the impact to trees subject to non-statutory designations (e.g., how many trees removed are part of Priority Habitat Inventory Deciduous Woodland or Wood pasture & Parkland). A Developmental Consent Order (DCO) typically includes a schedule of TPOs or other protected tree features to record any impacts such as removal or pruning (as per government guidance[4]). It is noted that the draft DCO includes a schedule of trees subject to tree preservation orders (Schedule 8). The AIA should consider whether trees to be removed are all within the Order Limits or whether any are off site (i.e., where tree stems are located beyond the Order Limits but their roots or canopy is located within the Order Limits) and whether the draft DCO includes sufficient powers in relation to them.

6.21 Tree loss is very extensive, however, there is no real consideration of tree loss beyond that which is immediately required due to a conflict with the development. For example, additional trees may require removal or management due to a loss of companion shelter/exposure or because they are unsuitably close to new features. On this basis, the AIA may undercount tree loss for the Scheme.

[4] Planning Act 2008: Content of a Development Consent Order required for Nationally Significant Infrastructure Projects - GOV.UK (www.gov.uk)

6.22 There is no reference to any compensation for tree removals e.g. via new planting or where and how this would be delivered in the AIA. However, tree and hedgerow planting is shown on ES Figure 2.3: Environmental Masterplans ([TR010065/APP/6.2]).

Impacts to Veteran Trees:

6.23 The wider submission should include justification for the Scheme layout especially in relation to veteran trees and why alternative design to avoid or reduce impacts are not feasible.

6.24 There is a level of uncertainty as to whether all likely Veteran trees have been correctly recorded as such (see Table 1 above).

6.25 Some of the impacts to the veteran trees (with incursion ranging from circa 10-20% of the RPA) show extensive earthworks and new drainage (e.g., T139 has a cumulative impact of circa 20% of its total RPA) and this is highly likely to change soil and moisture conditions in the trees rootzone. It is difficult to envisage that this would not have a detrimental impact on the health of the tree or its associated biodiversity value (including mycorrhiza within the RPA which may be essential to the health of the tree). In relation to the NPPF (2023) and the draft NPSNN (2024) (noted that these are not the primary policy tests in this instance) it would be required to demonstrate wholly exceptional circumstances and compensation measures in relation to unavoidable detrimental impacts to irreplaceable habitat features.

6.26 The report indicates that supervision and temporary or permanent ground protection will help to ensure the trees are protected. BS5837 indicates that specialist construction (e.g. permanent ground protection/hard surfacing) would not generally be appropriate for veteran trees in section 7.4. It recommends that no construction, including new hard surfacing, occurs within the RPA of a veteran tree. In relation to excavation works for the drainage pipe, the AIA states that this work would be in accordance with BS5837 section 7.2. This should also refer to BS5837 section 7.7. This covers the careful excavation of shallow service runs that can be flexibly installed working around significant tree roots. It may not be feasible to apply this approach for drainage pipes which typically have strict cross fall requirements and are of large diameter (so allow less flexibility).

6.27 The AIA does not include any consideration of the potential impact of nitrogen deposition (especially on the veteran trees). It does not account for dust which is likely to be associated with construction works including the use of a haul road within the RPA of T139, or mitigation measures that could be used to control dust pollution (e.g., the use of screens or other measures set out in the FIEMP [TR010065/APP/6.5]).

6.28 Where an unavoidable incursion within an RPA takes place (e.g., for a new structure, but this could also equally apply to other infrastructure where functional RPA would be lost or detrimentally impacted, such as hard surfacing or drainage) BS5837 section 5.3 indicates that the lost area of RPA should be compensated for elsewhere, contiguous with its RPA and the project arboriculturist should propose a series of mitigation measures to improve the soil environment used by the tree for growth.

6.29 This has not been demonstrated, especially for the three impacted veteran trees (T038, T136 and T139).

6.30 T139 (veteran) is proposed to be pruned to 4.5m above ground level to provide a vertical clearance. It is assumed that this is to provide a clearance for construction traffic. As the existing ground level will likely be raised (for the haul road and temporary/permanent ground protection) it should be reviewed whether this clearance will be sufficient for construction traffic (typical highways clearances are >5.2m). Additional pruning could have a greater impact on the health and condition of the tree.

Outline Arboricultural Method Statement (OAMS):

6.31 The OAMS includes general information on tree protection measures such as barriers and ground protection which generally accord with BS5837.

6.32 Section 5.1.4 refers to the construction of a *pipeline* which is likely an error, the Applicant should confirm if this is the case.

6.33 Section 5.4. 'Supervision and Inspection' limits inspection and supervision to works near six arboricultural features only. Typically an arboriculturist (or equivalent) should be engaged to confirm the position of tree protection measures from the outset for all trees and to oversee the amendment of any protection measures as well as any sensitive works within the RPA of retained trees. Failure to correctly install or maintain protection measures is a key reason for tree damage on development sites and robust control measures are required to ensure approved protection measures are implemented and maintained.

6.34 Section 5.4.1 partly addresses uncertainty in relation to the removal of part of a tree group or woodland however this is not reflected in the extent of removals shown on the tree protection plan which indicates a fairly optimistic interpretation of tree loss (e.g., with tree retention shown up to the foot of earthworks in some cases). The AIA should be transparent that the final extent of tree removals cannot be fully determined at this stage and would need to be determined following setting out and post-initial site clearance works.

6.35 Section 5.5.2 states that careful excavation within the RPA of veteran trees is limited to a depth of 600mm, whilst this aligns with the BS5837 guidance on the typical depth of most tree roots, it is widely accepted that tree roots can develop to greater depths (e.g. Crow, P. 2005 – The Influence of Soils and Species on Tree Root Depth). There are understandable constraints in relation to the feasibility of deeper excavation (e.g. requirement to shore up excavation for safe working) however a 1m depth is considered more reasonable, especially given the irreplaceable value of the trees.

6.36 Whilst there does appear to be a commitment to delivering a detailed Arboricultural Method Statement in the FIEMP [TR010065/APP/6.5], there does not appear to be a commitment to provide an updated Tree Protection Plan post-consent, should there be changes to the design, the likely level of tree removals or the baseline environment.

Appendix C and D: Tree Survey Schedules

6.37 Use of estimated remaining contribution is inconsistent with the BS5837 Table 1: cascade chart, where a category B tree should have at least 20 years remaining future contribution, however, trees are recorded as such with 10+ years (e.g., T366).

6.38 Use of life stage is inconsistent with crack willow (T368) listed as *mature* with a stem diameter of 450mm and yet T365 is classed as *early mature* but has a stem diameter of 810mm.

6.39 T482 *black poplar* – It should be confirmed whether this tree is a hybrid black poplar (*Populus x canadensis*) or a native black poplar (*Populus nigra subsp betulifolia*) which is nationally rare.

6.40 No botanical/scientific names are included in the schedule but this is referred to in the key on page57 of the AIA.

Tree Constraints Plan (TCP)

6.41 The sheet orientation of the drawings is not consistent, for example sheets 5 and 9 are portrait, not landscape.

Tree Protection Plan (TPP)

6.42 The sheet orientation of the drawings is not consistent, for example sheet 9 is portrait and not landscape.

6.43 T136 (veteran), T139 (veteran) (see Figure 1 below), T144, T214, T217, G131, G129a and G223 (as examples – there may be other instances): The tree protection measures conflict

with the footprint of the proposed earthworks indicating that the tree protection measures are not viable. Earthworks often require a) working space beyond their footprint, b) a 'toe' where excavation is necessary and c) potentially temporary works to address/amend ground levels beyond the footprint of embankment. It is not clear that the assessment has taken this into account and is it therefore questionable if the AIA/TPP is a realistic interpretation of the likely impact of the Scheme.

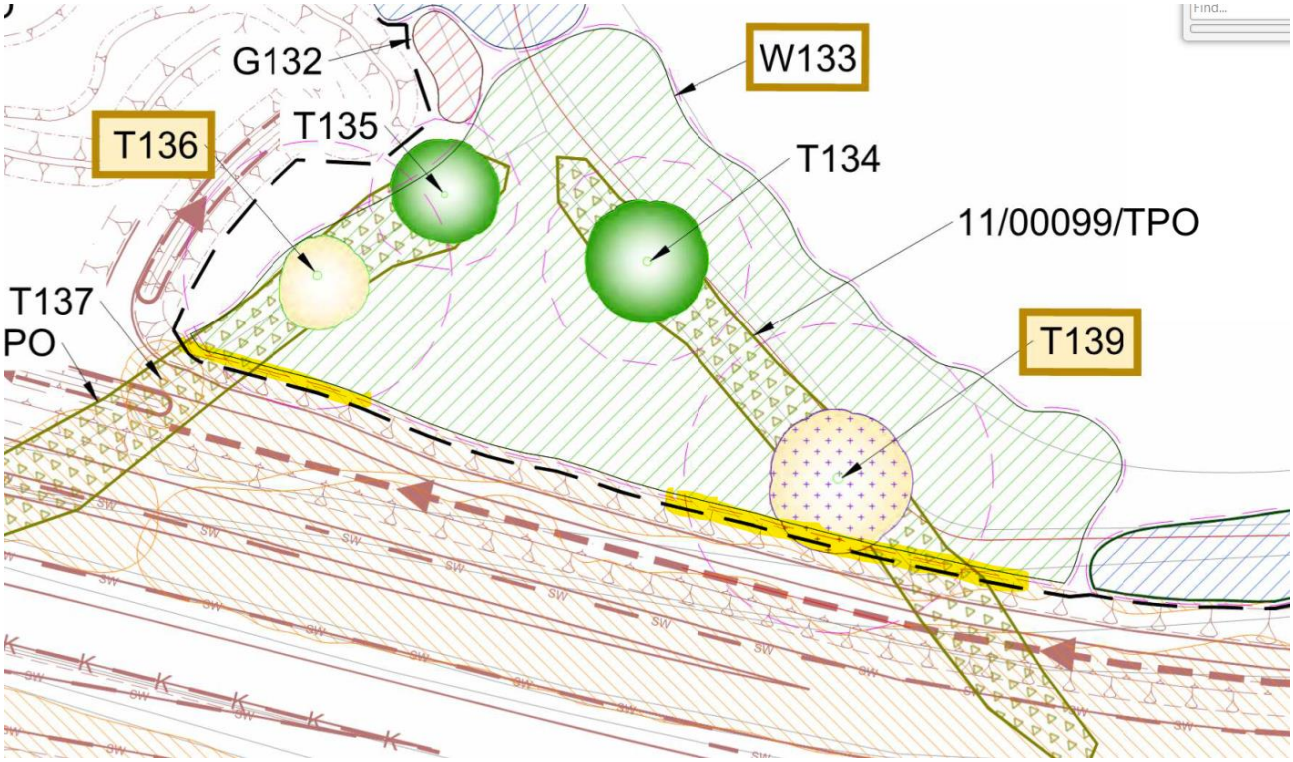


Figure 13 Example of fence positions which do not appear to be viable (in yellow)

6.44 It is not clear why G112, T113, part of G114, G115 and G117 are shown to be removed (see sheet 10) they appear to be set well back from construction works.

6.45 The design justification should be reviewed in relation to T038 (a veteran tree) as there is substantial incursion into the trees RPA. For example, could the access route to the north and west be adjusted and the drainage connection be shortened to provide a greater clearance of the tree. The design justification should be reviewed in relation to T136 and T139 (both veteran trees) as there is substantial incursion into the RPA of these trees. Could the earthworks be reduced, in particular using steeper slopes or retaining features.

Wider ES Review

6.46 The wider ES has not been reviewed in relation to Arboriculture.

Summary of Legislative and Policy Framework Review

National Policy

6.47 The National Policy Statement for National Networks (NPSNN) sets out the policy which the Scheme should comply with and forms the basis for informing the judgement on the impacts of the Scheme. The ES and AIA is based on the 2014 version which was current at the time of the assessment and the draft revision was published in March 2023. A revised version of the NPS was issued in May 2024.

6.48 Table 2 below outlines the requirements of the NPSNN (version 2014) for arboriculture and following the review of the DCO application (AIA report and plans), whether the requirement is adequately met.

Table 2: Compliance with NPSNN

Paragraph of NPSNN	Requirement of the NPSNN	Does the AIA comply with the requirement
5.3.2	*Ancient woodland is a valuable biodiversity resource both for its diversity of species and for its longevity as woodland. Once lost it cannot be recreated. The Secretary of State should not grant development consent for any development that would result in the loss or deterioration of irreplaceable habitats including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the national need for and benefits of the development, in that location, clearly outweigh the loss. Aged or veteran trees found outside ancient woodland are also particularly valuable for biodiversity and their loss should be avoided.* *Where such trees would be affected by development proposals, the applicant should set out proposals for their conservation or, where their loss is unavoidable, the reasons for this.*	The NPSNN does not include extensive requirements in relation to trees and is focused on irreplaceable habitats. There is no ancient woodland identified via desk study or ecology site visits and therefore none is considered to be at risk of loss or deterioration (although the status of wood pasture should be confirmed as if ancient wood pasture, this is a form of ancient woodland and T655 which is to be removed, is located within this habitat feature). The NPSNN is clear that consent should be refused (unless the benefits outweigh the loss) for development that results in the loss of irreplaceable habitats (including veteran trees) although it then makes a distinction for the loss of (not detrimental impact to) trees outside ancient woodlands. Therefore the key issues are likely to be whether a) all veteran or ancient trees have been adequately identified/classified by the tree survey (which is questionable, see Table 1 above) and b) whether any veteran or ancient trees are to be subject to loss or deterioration. With extensive RPA incursions of up to 20% for recorded veteran trees there is not sufficient consideration or justification in the AIA to demonstrate that this would not result in deterioration. Where trees which may be veteran but have not been classified as such (e.g. T189) are to be removed, if they are found to be veteran this would equate to the loss of irreplaceable habitat. The loss of the irreplaceable habitat must be balanced against the need for the Scheme. On this basis, Nottinghamshire County Council believes that the AIA does not robustly meet the requirements of the NPSNN.
5.3.5	*Other species and habitats have been identified as being of principal importance for the conservation of biodiversity in England and Wales and therefore requiring conservation action. The Secretary of State should ensure that applicants have taken measures to ensure these species and habitats are protected from the adverse effects of development. Where appropriate, requirements or planning obligations may be used in order to deliver this protection. The Secretary of State should refuse consent where harm to the habitats or species and their habitats would result,*	Deciduous Woodland is to be removed to facilitate the Scheme. Trees likely to be within wood pasture are also to be removed. The development is unlikely to be able to avoid the loss of such features and therefore, the need for the Scheme must be balanced against this loss.

Paragraph of NPSNN	Requirement of the NPSNN	Does the AIA comply with the requirement
	unless the benefits of the development (including need) clearly outweigh that harm.	

6.49 Overall, the requirements of the NPSNN (version 2014) for arboriculture are not demonstrably met in the AIA, further information to satisfy some requirements or parts of some requirements may be contained within other submission documents within the ES, however these have not been reviewed as part of the review for arboriculture.

6.50 In May 2024, the NPSNN was updated and includes additional or revised requirements for arboriculture as described in Table 3.

Table 3: Compliance with NP SNN (May 2024)

Paragraph of NPSNN	Requirement of the NPSNN	Does the AIA comply with the requirement
5.63	*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.* Ancient Woodland is defined as: *An area of woodland that has been continuously wooded since at least 1600 AD. It includes Ancient Semi Natural Woodlands (ASNW), Plantations on Ancient Woodland Sites (PAWS), Ancient Wood Pasture and* *Parkland (AWPP) and Infilled Ancient Wood Pasture and Parkland (IAWPP). All ancient trees are veteran trees, but not all veteran trees are ancient.* Ancient trees are defined as: *A tree which, can be of a great age relative to others of the same species, be large, depending on species, site and management history, have significant decay features such as hollowing and a crown structure typical of old age and have evidence of past use and management (such as pollarding).* Veteran trees are defined as: *A tree which, may not be very old, but they have significant decay features, such as branch death and hollowing.*	The AIA identifies that three veteran trees will be impacted, it is not clear or robustly justified that these impacts will not result in deterioration. There are multiple additional trees which are not considered by the AIA to qualify as veteran but which could be considered to be veteran given their maturity and the presence or potential presence of extensive decayed or dead wood habitat (as stated in the Tree Survey Schedule). The May 2024 NPSNN includes a specific definition of veteran trees which focuses on the presence of significant decay features. The AIA considers trees as veterans where they are not old enough to be ancient but have features consistent with those of ancient trees. At least one potential veteran tree is to be removed. Therefore the AIA may not comply with the requirement to avoid the loss or deterioration of veteran trees. The loss of the irreplaceable habitat which must be balanced against the need for the Scheme, with wholly exceptional reasons being demonstrated.
5.68	*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*	The AIA does not set out a consideration of design alternatives or to justify why the proposed layout (and associated impacts) are the most optimal. The AIA does not include substantive information on any enhancement or compensatory measures such as new planting.

Paragraph of NPSNN	Requirement of the NPSNN	Does the AIA comply with the requirement
	management and maintenance secured.	
5.69	*The Secretary of State should ensure that applicants have taken measures to ensure…(Habitats and Species of Principal Importance)…. are protected from the adverse effects of development by using requirements, planning obligations, or licence conditions. The Secretary of State should refuse consent where harm to the habitats or species and their habitats would result, unless the benefits of the development (including need) clearly outweigh that harm.*	Lowland Deciduous Woodland and Wood Pasture & Parkland are Habitats of Principal Importance and are to be removed or partly removed for the Scheme (and in arboricultural terms this equates to harm). Therefore, the AIA does not meet this requirement unless the benefits of the Scheme clearly outweigh the harm. .
5.195	*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 and any risk of net deforestation as a result of the scheme (Irreplaceable Habitats require separate consideration 5.57-5.58*). 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.*	The AIA records extensive loss of trees and woodlands as a result of the Scheme. It does not include any consideration of avoidance or mitigation for any direct or indirect effects and any risk of net deforestation as a result of the Scheme. Buffers in the form of RPAs are applied however in places these conflict with the layout of the Scheme or sit on its immediate edge raising questions in relation to working space. There are no substantive measures in the AIA in relation to improved connectivity or woodland management. No compensation is proposed within the AIA.

*** This is** believed **to be an error in the NPSNN and** that **it should refer to the reader to paragraphs 5.62 and 5.63.**

6.51 Overall, the requirements of the NPSNN (version 2024) for arboriculture are not demonstrably met in the AIA documents, further information to satisfy some requirements or parts of some requirements may be contained within other submission documents within the ES, however these have not been reviewed as part of the review for arboriculture.

Local Policy

6.52 The AIA report does not consider local planning policy.

6.53 Newark and Sherwood Amended Core Strategy Development Plan sets out policy up until 2023 and presents the objectives for development in the area. Core Policy 12, Biodiversity and Green Infrastructure includes the following extracts with relevance to arboriculture:

6.54 The policy states that the council will:

"Expect proposals to take into account the need for continued protection of the District's ecological, biological and geological assets. With particular regard to sites of international, national and local significance, Ancient Woodlands and species and habitats of principal importance identified in Section 41 of the Natural Environment and Rural Communities Act 2006 and in the Nottinghamshire Local Biodiversity Action Plan;

Seek to secure development that maximises the opportunities to conserve, enhance and restore biodiversity and geological diversity and to increase provision of, and access to, green infrastructure within the District;

Promote the appropriate management of features of major importance for wild flora and fauna."

6.55 The Scheme as reported in the AIA may not conserve or protect ecological and biological assets such as wood pasture/parkland and deciduous woodland priority habitats which are at risk or potentially at risk. The Scheme also does not promote the appropriate management of veteran trees due to the RPA incursions (and possible loss or deterioration of other trees not classified as veteran) which typically provide niche habitat to some of the most threatened species in Europe (e.g. saproxylic invertebrates).

Wider ES Review

6.56 Chapter 8: Biodiversity of the ES has also been reviewed in relation to impacts on veteran trees, given the matters raised above.

6.57 Paragraph 8.9.37 states: *"One veteran tree currently 4.5 metres in height pre-construction, will undergo a crown lift during construction. Following this initial crown lift, it is anticipated that crown clearance management will be minimal during operation, as a low frequency of vehicles will use the maintenance track annually."*

6.58 This indicates the tree is 4.5m in height but it is actually inferring that the tree has a crown clearance of 4.5m above existing ground level.

6.59 The AIA Table 4.2 indicates that the crown lift will be to 4.5m (and Appendix C records current canopy clearance for the tree as 4m with the first significant branch at 3m to the south). Paragraph 4.1.8 of the AIA indicates the tree will be pruned on its southern side by 0.5m. As the first significant branch is at 3m (as per the Appendix C) this would only achieve a 3.5m clearance of existing ground level.

6.60 As per the comments made above, it is uncertain if the proposed crown lift has taken into account the likely increase in ground levels for the haul route and maintenance track, in other words, where the ground level is increased the level of pruning will need to increase to achieve the same vertical clearance. The level/extent of earthworks shown on the plans suggests a relatively substantial increases in levels.

6.61 Paragraph 8.10.4 states that: *"Two layers of permeable Cellweb matting, or similar brands, will sufficiently distribute the load of heavy construction plant that cannot be excluded from the RPA of retained veteran trees, mitigating compaction of the soil along this track and resulting in no change to water availability to the veteran tree RPA. The physiological condition of veteran trees will be monitored prior to the commencement of construction and following the installation of temporary protection measures. Further details on the methods for the protection of trees are provided in Appendix 7.4 (Arboricultural Impact Assessment) of this ES Appendices (TR010065/APP/6.3). Annual inspections will be undertaken of veteran trees T038, T136 and T139 during construction to monitor the physiological condition and effectiveness of mitigation detailed in the aforementioned appendix. This matting will also be used in Great North Road Grassland LWS where lowland meadow will be subject to temporary long-term loss (during the construction period) to reduce soil compaction, ensuring suitable ground conditions endure to allow for successful recreation of lowland meadow from green*

hay cut post-construction. These measures are secured via Table 3-2 REAC within the First Iteration EMP (TR010065/APP/6.5)."

6.62 The proposals indicate extensive earthworks as well as new haul route/maintenance tracks. The applicant should confirm whether the earthworks will take place on top of the Cellweb (or equivalent) matting or whether this will be sited on unprotected ground.

6.63 BS5837 section 7.4 indicates that this approach (e.g., Cellweb) is not appropriate for veteran trees. Notwithstanding this, if it is unavoidable, this methodology would be an appropriate measure to minimise compaction of the soil, and although there is limited robust evidence of the effectiveness of such systems, they are well used and generally accepted. Alternatives could include raised surfaces supported on piles to bridge the RPA.

6.64 Moreover, veteran trees typically develop a symbiotic relationship with mycorrhizal fungi which help the tree access water and nutrients. Any change to the soil environment (such as covering it with geotextiles and washed stone contained within geoweb panels) could have a negative impact on these fungi which could lead to a negative impact on the tree, as its ability to access water and nutrients would be reduced.

6.65 Paragraph 8.11.12 states: *"Whilst Scheme design iterations have resulted in the retention of all veteran trees, there will be an unavoidable permanent adverse impact to three veteran trees due to the direct partial impact to their RPAs and the proximity of one of these veteran trees to the Order Limits, which will require a minor crown lift (<0.5 metres). It is very unlikely that this would result in a slow decline in tree health or accelerate the death of the tree and therefore the integrity of this resource will not be affected. It is anticipated that, with arboricultural supervision to ensure works are undertaken in line with best practice, the level of disturbance stated above can be tolerated by these trees. It is difficult to predict this with certainty and therefore ongoing monitoring is proposed to inform any remedial action. Following the implementation of this mitigation, a minor adverse impact on an irreplaceable resource of national importance is anticipated, resulting in a Slight Adverse effect during construction that is not significant."*

6.66 The Applicant acknowledges that there is uncertainty surrounding the impact of the Scheme on veteran trees (in particular, T139), where it is stated in paragraph 8.11.12 "*It is difficult to predict this with certainty and therefore ongoing monitoring is proposed to inform any remedial action"*. It is correct to acknowledge the level of uncertainty in relation to any impact on the health and condition of the veteran trees. In the context of this acknowledged uncertainty, Nottinghamshire County Council do not agree with the conclusion that "*It is **very** unlikely that this would result in a slow decline in tree health or accelerate the death of the tree and therefore the integrity of this resource will not be affected*" as set out in paragraph 8.11.12, in particular, given that the exact extent of earthworks and construction methods is unlikely to be known at this stage. The assessments reported in the ES should assume a reasonable worst case where there is uncertainty and should take into account the established Limits of Deviation (LoD). Paragraph 2.5.120 of Chapter 2: The Scheme, states that *"the vertical LoD are referenced against the vertical profile levels indicated on the Engineering Plans and Sections [TR010065/APP/2.6]… and permit deviation of up to a maximum of 1 metre upwards or downwards for all works"*. In addition, the Works Plans [TR010065-000353-2.3] show the lateral LoD for highways works and drainage assets, Sheet 3 of 7 illustrates that the LoD for highways works and drainage assets in the vicinity of T139 and T136 is beyond that of the earthworks, which are shown in Figure 1 above. Therefore, the highway works and drainage assets could be located further within the RPA of these veteran trees, worsening the stated impacts on them. **The Applicant should confirm if the conclusion regarding impacts on veteran trees within ES Chapter 8: Biodiversity has taken into account the lateral and vertical LoD of highways works and drainage assets**.

6.67 Nottinghamshire County Council welcome the commitment to monitoring as set out in paragraph 8.11.12 of ES Chapter 8: Biodiversity. However, whilst, monitoring will allow an understanding of changes in tree condition, deterioration can be very difficult to address once

it becomes visible, therefore, **a robust framework of remedial measures should be committed to in the event that the trees do show decline during the monitoring period**.

Potential Conflicts

6.68 The AIA generally accords with BS5837 and contains a reasonable level of detail in relation to the tree survey. The report indicates that trees were provisionally positioned using GPS and aerial imagery and then were subsequently checked against topographical information and no significant accuracy issue was detected. Where trees (particularly veteran trees) are subject to impacts its key that they are accurately positioned so the extent of impact is fully understood. The AIA does not allow an understanding of whether trees are positioned to topographical stem position locations or not (this could be achieved by showing the topographical survey plan as a layer in the Tree Constraints Plan or by marked tree records with an Asterix or other symbol to denote indicative positioning).

6.69 The Scheme impacts three recorded veteran trees and there is limited justification that this will not negatively impact on their health and condition. A number of trees not classified as veteran could be considered potential veterans based on the survey data provided in the AIA (although it is noted that the arboricultural classification of veteran trees is relatively subjective) and some of these trees are subject to impacts or removal.

6.70 The Scheme requires the removal of areas of priority habitat (Deciduous Woodland and Wood Pasture & Parkland). If the wood pasture were to be ancient this would equate to a form of ancient woodland.

6.71 Within the AIA there is no reference to compensation for tree and woodland loss and limited mitigation or enhancement (generally focused on tree protection).

6.72 In relation to NPSNN 2014 and 2024 the AIA does not fully address the potential deterioration of irreplaceable habitat associated with the three veteran trees subject to an RPA incursion and also includes references to further potential veteran trees (not identified at such) at risk of impact or loss.

6.73 On this basis, Nottinghamshire County Council believes that the AIA does not satisfy the requirement of either iteration of the NPSNN, unless:

a) the AIA can further justify no impact (resulting in deterioration) for the three veteran trees

b) robust justification can be provided that other trees with veteran features should not qualify as veterans;

c) the benefits of the Scheme outweigh the loss (in relation to NPSNN 2014); and

d) wholly exceptional circumstances can be demonstrated, with compensation measures provided (in relation to NPSNN 2024).

6.74 The Scheme may not meet the requirement of either NPSNN 2014 or 2024 in relation to the Protection of Habitats of Principal Importance (such as Lowland Deciduous Woodland and Wood Pasture & Parkland) which are removed or partly removed for the Scheme - in arboricultural terms this equates to harm. Therefore, Nottinghamshire County Council believes that the AIA does not meet this requirement unless the benefits of the Scheme clearly outweigh the harm.

6.75 **Nottinghamshire County Council is concerned with the proposed mitigation measures for veteran trees and requests that the Applicant set out and commit to monitoring of veteran tree health, and remedial measures that could be implemented where veteran tree health to decline**.

6.76 **Nottingham County Council requests that the Applicant confirm if the conclusion regarding impacts on veteran trees within ES Chapter 8: Biodiversity has taken into**

account the lateral and vertical LoD of highways works and drainage assets, as shown in Sheet 3 of 7 on the Works Plans [TR010065-000353-2.3] and as described in paragraph 2.5.120 of Chapter 2: The Scheme.

Summary

6.77 In summary, the AIA contains a reasonable level of detail and generally follows industry best practice in relation to the level of detail collected.

6.78 The Scheme results in extensive tree loss, much of which is likely to be unavoidable due to the nature and layout of the proposals.

6.79 There are some inconsistencies in relation to tree retention close to areas of works and therefore tree removals in practice could be greater than those reported.

6.80 Tree loss includes trees located within habitats of principal importance such as deciduous woodland.

6.81 The AIA assessment in relation to veteran trees is inconsistent and requires further robust justification, including a re-evaluation of some trees not classed as veterans but with clear veteran characteristics.

6.82 Nottinghamshire County Council requests that monitoring and remedial actions in relation to veteran trees are committed to at this stage.

7. Landscape

7.1 The review has carried out with reference to the documents listed below:

2.6 Engineering Plans and Sections (Application document reference: TR010065/APP/2.6) Rev 1 April 2024

- Part 1 – Typical Cross Sections

6.1 Environmental Statement (Application document reference: TR010065/APP/6.1) Rev 1 April 2024

- Chapter 2 The Scheme
- Chapter 7 Landscape and Visual Effects
- Chapter 15 Combined and Cumulative Effects

6.2 Environmental Statement (Application document reference: TR010065/APP/6.2)

- Figure 2.2 Environmental Constraints Plan
- Figure 2.3 Environmental Masterplan
- Figure 2.4 Locations of Temporary Works Areas Required During Construction
- Figure 7.1 Published Regional Character Areas and Policy Zones
- Figure 7.2 Landscape Character Areas
- Figure 7.3 Zone of Theoretical Visibility
- Figure 7.4 Visual Receptor Location Plan
- Figure 7.5 Visual Effects Plan
- Figure 9.1 Topography

6.3 Environmental Statement (Application document reference: TR010065/APP/6.3)

- Appendix 7.1 Landscape Character Policy Zone Descriptions
- Appendix 7.2 Visual Baseline and Impact Schedules
- Appendix 7.3 Key Visual Receptor Photographs and Photomontages Part 1
- Appendix 7.3 Key Visual Receptor Photographs and Photomontages Part 2

Landscape and Visual Impact Assessment (LVIA) Methodology

7.2 The LVIA methodology adopted for this application is in line with the methodology as set out within the Design Manual for Road and Bridges (DMRB) LA 107 Landscape and Visual Effects assessing construction and operational impacts for Year 1 and Year 15. It also follows industry best practice which is currently:

- Guidelines for Landscape and Visual Impact Assessment (Landscape Institute and the Institute for Environmental Management and Assessment Third Edition 2013),
- Landscape Character Assessment (Natural England 2014) and for the visualisations:
- TGN 06/19 Visual Representation of Development Proposals (Landscape Institute 2019)

Summary

7.3 The correct methodology and guidance document have been followed and the applicant has applied these to the assessment.

Study Area

7.4 The study area (shown on Figure 7.1 to Figure 7.3 of the Environmental Statement) is identified as two km from the Scheme alignment. This has been determined by the extent of the Scheme using the guidance within DMRB LA 107. Chapter 7 Landscape and Visual Effects, paragraph 7.7.1. (Application document reference: TR010065/APP/6.1) sets out the factors that were considered to determine the study area.

7.5 Beyond the study area the applicant did not consider that there would be significant effects upon landscape character due to intervening built form and existing vegetation (Chapter 7 Landscape and Visual Effects, paragraph 7.7.3). We agree with this conclusion. However, we noted that the last sentence of this paragraph is repeated. Clarification on whether this is referring to visual receptors is required from the applicant as built form and existing vegetation would also limit the extent of visibility of the Scheme from visual receptors at this distance.

Zone of Theoretical Visibility

7.6 The applicant's Zone of Theoretical Visibility (ZTV) is based on the operational Scheme and shown on Figure 7.3. This is based on a viewer height of 1.6m and a maximum height of 4.2m for heavy goods vehicles (HGVs) (Chapter 7, paragraph 7.5.5). The applicant's ZTV was based on a Digital Surface Model (DSM) with woodland/buildings beyond the highway corridor included as screening elements but to give a worst-case scenario the existing vegetation alongside the road corridor had not been included.

7.7 To check the validity of the ZTV we mapped the ZTV using the same parameters (in terms of viewer height and HGV height) using both a digital terrain model (DTM) that uses contour heights only and DSM that uses both contour and heights of surface features buildings/vegetation. Our results were broadly similar with the applicant's ZTV but gave a slightly reduced coverage of area of ZTV likely to be due to the inclusion of existing roadside vegetation acting as a screen/filter along the road corridor.

7.8 Whilst the applicants ZTV shows the ZTV being clipped at the 2km study area boundary the ZTV goes beyond this. However, we agree that due to the distance, low lying land in proximity to the scheme and extent of intervening overlapping vegetation that impacts to visual receptors would be negligible and beyond this there would not be significant visual impacts.

7.9 The areas of greatest magnitude of visual change are where there will be new elevated sections of carriageway introduced into the landscape where currently the road alignment is at grade. The applicant's typical cross sections (*Application document reference: TR010065/APP/2.6)* show these are located at the Cattle Market Junction *(Sections E, F)* and around the Brownhills junction *(Sections M, N, O).* The applicant doesn't specifically reference the height of the proposed structures around the Brownhills Junction but for the Cattle Market Junction the proposed grade separated junction is estimated to be around 7- 8 metres above the existing ground level (p. 2.5.11 ES Volume 1 Chapter 2 The Scheme). Further information on the height of proposed earthworks above the existing ground level around the Brownhills junction should be provided within Chapter 7.

Summary

7.10 The ZTV captures the extent of theoretical visibility within the Study area and has been used as suitable aid to identify key visual receptors. We agree with the ZTV as shown on Figure 7.3. Clarification on the height of the proposed carriageway, and embankments around the proposed Brownhills Junction should be provided.

Local Designations

7.11 Local designations within the study area are shown on Figure 2.2 Environmental Constraints Plan and listed in Table 7.6 of the ES Chapter 7. The table has listed five conservation areas of which two are in close proximity to the Scheme (within Order Limits). These are Winthorpe Conservation Area and Newark Conservation Area. Other designations are listed buildings, scheduled monuments, Newark Castle Gardens Registered Park and Garden and designated trees (those identified as notable, veteran and with TPOs). Nature conservation designations have not been within Table 7.6. and whilst Chapter 7 Landscape and Visual Effects does not cover the ecological value and significance (contained in Chapter 8 Biodiversity) these designations do contribute to the landscape character and visual qualities of the Scheme's location. This is particularly relevant for those visual receptors on Public Rights of Way (PRoW) along the River Trent where Local Wildlife Sites (LWS) contribute to the local character of the area. Examples of these receptors are:

- VP11 - PRoW Farndon Bridleway within River Trent Staythorpe LWS to the southwest of the Scheme.
- VP13 - PRoW Newark Bridleway 5 within Newark Trent Grasslands LWS
- Representative views covered by VP 31 and 32 - PRoW Newark Bridleway 5, Trent Banks/Wharves, Newark Local Wildlife Site (LWS) which extends over the section of the River Trent between Farndon Marina to the southwest to the southern side of Nether Lock Viaduct to the north.

Summary

7.12 The applicant has not identified all key designations that contribute to Landscape Character or visual matters which include nature conservation sites. These designations haven't been listed in Table 7.6. though they have been identified on the Constraints Plan Figure 2.2 Environmental Constraints Plan. These should be included within Chapter 7 Landscape and Visual Effects assessment.

Landscape Character

7.13 The study area lies within National Character Area 48 *Trent and Belvoir Vale* (Natural England 2014) and at a county level the Newark and Sherwood (NSDC) Character Areas and Policy Zones as set out in the Landscape Character Assessment Supplementary Planning Guidance

(Newark and Sherwood District Council 2013). Refer to Figure 7.1 Published Regional Character Areas and Policy Zones.

7.14 The applicant has identified landscape character areas, LCAs (shown on Figure 7.2 Landscape Character Areas) which broadly reflects the Character Areas within NSDC SPD providing further level of definition particularly to the urban areas around Newark, Farndon and the area around Winthorpe. The sensitivity to change of each of these LCAs was determined as follows:

LCA 1 Trent Washlands – Medium sensitivity
LCA 2 Winthorpe Village and Farmlands – High sensitivity
LCA 3 East Nottinghamshire Sandlands – Low sensitivity
LCA 4 Newark - High sensitivity
LCA 5 South Nottinghamshire Farmlands - Medium sensitivity
LCA 6 Farndon Village - High sensitivity
LCA 7 Mid- Nottinghamshire Farmlands – Medium sensitivity

7.15 The applicant determined the levels of magnitude of change for the construction and operational stages for each of the LCAs as set out below.

Magnitude of Change

Landscape Character Area	Magnitude of Change Construction	Magnitude of Change Operation Yr1	Magnitude of Change Operation Yr15
LCA 1 Trent Washlands	Moderate adverse	Moderate adverse	Minor adverse
LCA 2 Winthorpe Village and Farmlands	Major adverse	Major adverse	Moderate adverse
LCA 3 East Nottinghamshire Sandlands	Moderate adverse	Minor adverse	Minor adverse
LCA 4 Newark	Negligible	No change	No change
LCA 5 South Nottinghamshire Farmlands	Negligible	No change	No change
LCA 6 Farndon Village	Negligible	No change	No change
LCA 7 Mid- Nottinghamshire Farmlands	Negligible	No change	No change

7.16 As the Scheme directly impacts on the Trent Washlands, Winthorpe Village and Farmlands and East Nottinghamshire Sandlands LCAs these will be the areas that will experience change to landscape character. We agree with these findings.

Landscape Effects

LCA	Landscape Effect Construction	Landscape Effect Operation Yr1	Landscape Effect Operation Yr15
LCA 1 Trent Washlands	Moderate adverse	Moderate adverse	Slight adverse
LCA 2 Winthorpe Village and Farmlands	Large adverse	Large adverse	**Moderate adverse (residual significant effect)**
LCA 3 East Nottinghamshire Sandlands	Slight adverse	Slight adverse	Slight adverse
LCA 4 Newark	Slight adverse	No change	No change
LCA 5 South Nottinghamshire Farmlands	Neutral	Neutral	Neutral
LCA 6 Farndon Village	Slight adverse	Neutral	Neutral
LCA 7 Mid- Nottinghamshire Farmlands	Slight adverse	Neutral	Neutral

7.17 The resulting level of significance of effect are a combination of level of sensitivity and magnitude of change summarised above and shown in Table 7-7 Chapter 7 Landscape and Visual Effects. Significant effects are those that are classed as Moderate adverse or above. Winthorpe Village and Farmlands is the only LCA that still has a residual Significant Impact in Year 15. We agree with these finding but consider further mitigation could provide improved

landscape integration into the surrounding area as outlined in the Table 1 below setting out additional mitigation.

Summary

7.18 The defined landscape character areas within the study area and their baseline levels of sensitivity to change are appropriate. We agree with the levels of effect for the character area for the construction and operational period as set out in paragraphs 7.11.3 to 7.11.20, 7.7.11.27 to 7.11.37 and summarised in Table 7-7. However, there may be scope for additional planting particularly within Trent Washlands LCA (focused on Cattle Market Junction) and within Winthorpe Village and Farmlands the latter being where the residual impact is still significant at year 15. Refer to Table 1 for recommendations.

Viewpoint Selection and Assessment of Visual Receptors

7.19 The applicant assessed 63 visual receptors of which seven are associated with the proposed works to accommodate Kelham and Averham Flood Compensation Area. Residential visual receptors were grouped with a representative viewpoint of the most severe impact for the group.

7.20 Visual Baseline and Impact Schedules (Appendix 7.2 Visual Baseline and Impact Schedules) described the sensitivity, baseline changes in view and effect on visual receptors for construction Year 1, winter and Year 15 summer for the Scheme. A number of these were classed as key visual receptors of which baseline winter and summer photographs were provided for Viewpoints 9, 10 11, 18, 31, 32, 36, 47 and 49 with photo montages and visualisations (LI Type 4) provided for 3, 24, 41, and 43.

7.21 We carried out a site visit to check key viewpoints on site that were identified following a review of the development proposals. These particularly focused on those areas where new structures would be introduced into the landscape and from visual receptors in closer proximity to the proposed development.

7.22 The majority of residential receptors are to the southeast of the scheme along the northwestern edge of Newark as it fringes the River Trent and existing infrastructure corridor. The A46 is primarily being widened to the north which allows for existing vegetation to be retained along the southeast facing road embankment. Should existing vegetation subsequently need to be removed in localised areas or ash die back be found to thin the canopy allowing views out to the road then replacement planting should be provided.

7.23 The proposed Scheme be will most visible where the road is a new element in the landscape particularly where it is elevated. This is notably around the Cattle Market Junction and Brownhills Junction. These areas are also in closer proximity to more sensitive areas of landscape, form the approach to the castle and historic core of Newark (lying within Newark Town conservation area) and Winthorpe Conservation Area respectively.

7.24 Viewpoints where we consider there could be additional mitigation are listed below.

Table 1: Viewpoint Analysis

Viewpoint number	Comments	Recommendation
Viewpoint 11	In the winter there will be medium distance views east from the bridleway (Farndon BW1 bridleway) located further north from viewpoint 11 across to Farndon West Borrow Pits Area and to the new road embankment. Aerial photography shows some gaps in existing riverside vegetation along the River Trent in this location.	Sensitively placed additional planting would help filter views across the river from this bridleway.
Viewpoint from Great North Road, Newark in a north-northwest direction towards Castle Market Roundabout	Viewpoint 18 view is representative of elevated views to the north from the top of the castle Gate House. North of the Nottingham-Lincoln railway line crossing there are also views experienced by pedestrians/ road users along Great North Road heading towards Cattle Market Junction away from Newark. Although this is within a narrow field	The views from receptors leaving Newark travelling towards Cattle Market junction should be considered from Great North Road. Additional street tree planting would filter views on the approach to this junction from Newark.
	of view, framed by existing street trees, the elevated carriageway will be more apparent particularly as a lit structure with moving traffic.	
Viewpoint 24	We agree with the levels of visual effect for the elevated carriageway and retaining wall viewed from Sandhills park. These are: Construction year - Very large adverse Year 1 and Year 15 - Large adverse. However unclear as to why these visual effects cannot be reduced by additional planting to filter views of the retaining wall and lit elevated junction. The environmental function of proposed planting immediately northeast of Sandhills is *water quality* and *nature conservation* (coded EFH/D on Figure 2.3 Environmental Masterplan Sheet 3 of 7) presumably as this area is part of a Local Wildlife Site. Additional planting here should also have a visual screening function (EFA) and enhancing the built environment function (EFC).	Include additional planting between the proposed roundabout junction and the residential area along Sandhills Park to help screen the proposed retaining wall from residents and improve the road frontage.

Viewpoint 25	We agree with the levels of visual effect from this viewpoint. However closer to this junction, for pedestrians and road users approaching Newark from the Great North Road, the elevated road with lit traffic will be more visible and potentially in the same view as the top part of St Mary Magdalene Church Spire for a short section of footway. This view is also the approach into Newark for road users, and users of the proposed footway/cycleway around the junction.	Given the gateway location of this junction and proximity to the town centre, the ability to contribute to the streetscape with sensitive design and street tree planting should be fully explored. As shown (Figure 2.3 Environmental Masterplan Sheet 3 of 7) the location of the proposed noise barrier along the southwestern corner of the roundabout leaves limited scope for planting. The reconfiguration of the noise barrier (tested by modelling if necessary) to allow for some additional visual mitigation should be carried out.
Viewpoint 41 (Photomontage 41)	The photomontage representing the visual change for viewpoint 41 shows the proposed the elevated A46 on 1:2 gradient embankments	Consider additional planting on the proposed embankment of the A46 and hedgerow trees within the proposed hedge along the
(Within Winthorpe Village and Farmlands LCA 2)	with the A46 Brownhills roundabout junction in the midground with new light columns. The height of the new overbridge is not specified in Chapter 2 The Scheme or Chapter 7 Landscape and Visual Effects but is assumed to be around 8m in height. This structure could be better integrated by additional planting. Further planting to filter views south from properties to the southern end of the end of The Spinney in Winthorpe from impacts of lighting around the slip road to the service station	connecting road between Winthorpe Lane and the new roundabout would help to filter views from visual receptors represented by viewpoint 41. Provision of additional tree planting (potentially with an evergreen component to reflect other similar species in LCA 2) north of the alongside the acoustic barrier along slip road to service station.

Lighting proposals

7.25 Chapter 2 describes the extent of proposed lighting (p. 2.5.88) but does not explicitly show on a drawing where there is an introduction of lighting into the landscape which was previously unlit as opposed to an upgrade to existing lighting already present. We assume that lighting proposals will be modified/upgraded at junctions already lit (Farndon, Cattle Market Junction, Brownhills/Friendly Farmer Junctions Winthorpe Roundabout) with new lighting along the new Friendly Farmer link road and the new Brownhills roundabout junction to the west of the A1.

Summary

7.26 We broadly agree with the applicants' findings for the levels of effect on visual receptors. Chapter 2 describes the extent of proposed lighting (p. 2.5.88) but does not explicitly show on a drawing where there is an introduction of lighting into the landscape which was previously unlit as opposed to an upgrade to existing lighting already present. This should be included in

the descriptions within the LVA with an estimate as to the height of the columns. Further information is required for those viewpoints identified in Table 1

Mitigation

7.27 Mitigation proposals are shown on Figure 2.3 Environmental Masterplan where proposed indicative plant mixes for plant species mixes (e.g. LE2.1 Woodland Indicative mix etc.) have been set out on Sheet 1 of 7. The retention of existing roadside vegetation to the southern side of the road corridor along with its enhancement (so that it can continue to screen a large amount of the road corridor) is essential to minimise impacts to both landscape character and visual receptors within Newark and along the River Trent. The condition of existing trees has been discussed (paragraph 7.4.2 Chapter 7) in relation to the impact of proposed construction works. Gapping up of existing tree belts that are in decline should be incorporated into the detail design proposals.

7.28 Although the extent of mitigation provided is generally appropriate there is limited scope for any visual screening between the link road and between Friendly Farmer Roundabout and Winthorpe Roundabout to the north of Newark Showground. This is due to a proposed development (Nua/MU/1) A native hedge is proposed along this boundary. This would benefit from the inclusion of hedgerow trees to aid visual screening.

Landscape character.

7.29 To reflect the landscape character of this part of Nottinghamshire the plant mixes along the route corridor should contain those species found within the character area of NSDC Landscape Character Assessment within which the Scheme crosses. The majority of the Scheme is within the *Trent Washlands* character area which covers the Scheme as set out on Figure 2.3 Sheet 1 to 4 and Sheet 7 (covering the Kelham and Averham flood compensation area). The northeastern end of the Scheme (Sheets 5 and 6) lies within a different character area *East Nottinghamshire Sandlands* and therefore should be based on the native plant species typical to this area. At a finer grain Winthorpe has its own local landscape character with established shelter belts and parkland trees. These characteristics should be incorporated into the detail design of the mitigation planting.

Visual Impact

7.30 Provision of additional planting to reduce visual effects for specific viewpoints is recommended in Table 1. The proposed planting to the north of the potential construction compound area south of Cattle Market junction should include a woodland mix to provide the density of overlapping branches to screen the retaining wall as much as possible in the winter months.

7.31 Whilst the proposed acoustic barrier reduces the impact of noise to surrounding receptors this can be a visually intrusive element in the landscape particularly where this runs immediately adjacent to the carriageway. Providing some planting to break runs of acoustic barrier would be appropriate around Cattle Market Junction where it links to the Great North Road on the approach to Newark as well as on the northwest side of the A46 east of the Esso Service station.

Summary

7.32 The landscape proposals shown on the Environmental Masterplan generally mitigate the majority of adverse impacts to surrounding receptors. Key points to note are:

7.33 Existing mature vegetation (embedded mitigation) that filters the route corridor should be retained and enhanced so that it is still able to provide a visual screen beyond Year 15.

7.34 Where there is scope to provide additional planting that reinforces landscape character, and reduces visual impacts, particularly those viewpoints where there are still residual effects that are significant this should be re considered. Refer to Table 1.

Cumulative effects

7.35 Cumulative effects are considered in Chapter 15 (6.1 Environmental Statement Chapter 15 Combined and Cumulative Effects) for visual receptors experiencing a slight adverse effect or worse during construction and Year 1. A 1km Zone of Influence (ZOI) was established for landscape and visual impacts informed by the ZTV.

7.36 There were six developments that were considered to have temporary moderate to large adverse cumulative landscape and visual effect on visual receptors during construction and Year 1 of operation. The applicant concluded "*that significant effects are due to the possible but unlikely overlap of unavoidable construction activities as well as temporary operational effects which will reduce to Not Significant by Year 15 between the above developments and the Scheme" Paragraph 15.5.6.*

Summary

7.37 As these significant effects are temporary no additional mitigation is deemed to be required other than that included in the first iteration Environmental Management Plan. We are satisfied that the cumulative effects have been assessed for landscape and visual receptors and agree with conclusions set out in Chapter 15.

8. Cultural Heritage

8.1 The Environmental Statement (ES) dated April 2024 (TR010065/APP/6.1) has been produced by National Highways (NH). Chapter 6 of the ES (DCO documents APP-050) refers to Cultural Heritage.

8.2 The methodology used for the assessment of the heritage assets in set out in section 6.5. The Council agree with the methodology used, however, the methodology hasn't been followed correctly within the 'residual effect' assessment as set out in Table 6-7 Summary of Likely significant effects and mitigation requirements during construction of scheme. The residual effect for many of the heritage assets include 'not significant', which is not considered to be a sound assessment of the effect of the development.

8.3 The National Networks Planning Policy Statement (NNPPS) (2014)[5] which is applicable to this development over the latest publication from 24 May 2024 as the DCO was not accepted until 23 May 2024, states that the "*construction and operation of national networks infrastructure has the potential to result in adverse impacts on the historic environment."* (para 5.120)

Built Heritage

8.4 The study areas for cultural heritage have been defined in accordance with Design Manual for Roads and Bridges LA 106 Cultural heritage assessment[6] which states that the assessment shall define a study area according to the sensitivity of the environment and the potential impacts of the Scheme. Where a new road or road improvement is proposed, the study area

[5] Microsoft Word - 141210 FINAL NPS_IAN (publishing.service.gov.uk)
[6] https://www.standardsforhighways.co.uk/tses/attachments/8c51c51b-579b-405b-b583-9b584e996c80?inline=true

shall include the footprint of the Scheme plus any land outside that footprint which includes any heritage assets which could be physically affected. The study area should also include the settings of any designated or other heritage assets in the footprint of the Scheme or within the zone of visual influence. The study area has been consulted on by NH with Nottinghamshire County Council Senior Practitioner Archaeology and the District Council's Conservation Officer. This study area is shown within DCO reference AS-035 Figure 6.2 Heritage Survey Areas.[7]

8.5 There are 4 designated heritage assets located within the Order Limits

Grade	List Entry Number	Reference number	Name	Designation Date
Grade II*	1297721	MM038	Concrete Footbridge across River Trent	23rd October 1989
Grade II	1196289	MM141	Causeway Arches 650 metres Northwest of Level Crossing	designated 19th May 1971
Grade II	1228733	MM228	Causeway Arches 500 metres Northwest of Level Crossing	designated 19th May 1971
Grade II	1297727	MM389	Causeway Culvert 420 Metres Northwest of Level Crossing	designated 19th May 1971

8.6 However, an additional study area of 1km buffer from the Order Limits of the Scheme has been defined to capture and assess potential changes to the setting of designated heritage assets including schedule monuments, listed building, registered parks and gardens and conservation area. This is important to the settlement of Newark as this then includes the setting of key landmark buildings in the Newark Conservation Area.

8.7 Within the 1km buffer study area there are:

Designation type	Number
Schedule Monument	15
Grade I	7
Grade II*	15
Grade II	379
Conservation Area	5
Registered Park and Garden	1
Non-designated historic building	123
Non-designated historic landscape	5

8.8 Section 6.1 Environmental statement chapter 6 Cultural heritage identifies 37 of these designated heritage assets as having the potential to be impacted by the scheme. These heritage assets have been further assessed and it was concluded that 8 listed buildings and 1 conservation area would potentially experience **significant effects**.

8.9 The National Planning Policy Framework (NPPF) (2023) Chapter 16 (Conserving and enhancing the historic environment), sets the national framework for assessing developments which impact upon heritage assets and the historic environment. This is in addition to Legislation of Planning (Listed Buildings and Conservation Areas Act) 1990 and National Policy Statement for National Networks (2014) and the Council's local policies within the Amended Core Strategy Development Plan Document (2019) and Allocation and Development Management Development Plan Document which is currently under review with examination taking place in November 2024.

8.10 It is accepted and is a running theme through the policy documents above, that any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of development, recognising that the greater the harm to the significance of the heritage asset, the greater the justification that will be needed for any loss. The Secretary of

[7] TR010065-000399-6.2 Figure 6.2 - Heritage Survey Areas.pdf (planninginspectorate.gov.uk)

State should refuse consent unless it can be demonstrated that the substantial harm/less than substantial harm or loss of significance is necessary in order to deliver substantial public benefits that outweigh that loss or harm. Opportunities to better reveal the significance of heritage assets and preserve those elements of the setting that make a positive contribution to, should be treated favourably.

8.11 The Council have identified additional heritage assets that have the potential of being impacted by the scheme. These include.

- The Causeway Culvert 420m Northwest of level crossing (LEN 1297727) has not been included within this further assessment even though this designated heritage asset is within the Order limits.
- Grade I Church of St. Mary Magdalene and attached railings (LEN 1279450), which is located within the 1km designated heritage asset study area has not been included. The spire of the church is a significant focal point along the Great North Road when travelling south towards Newark.

Cattle Market Roundabout

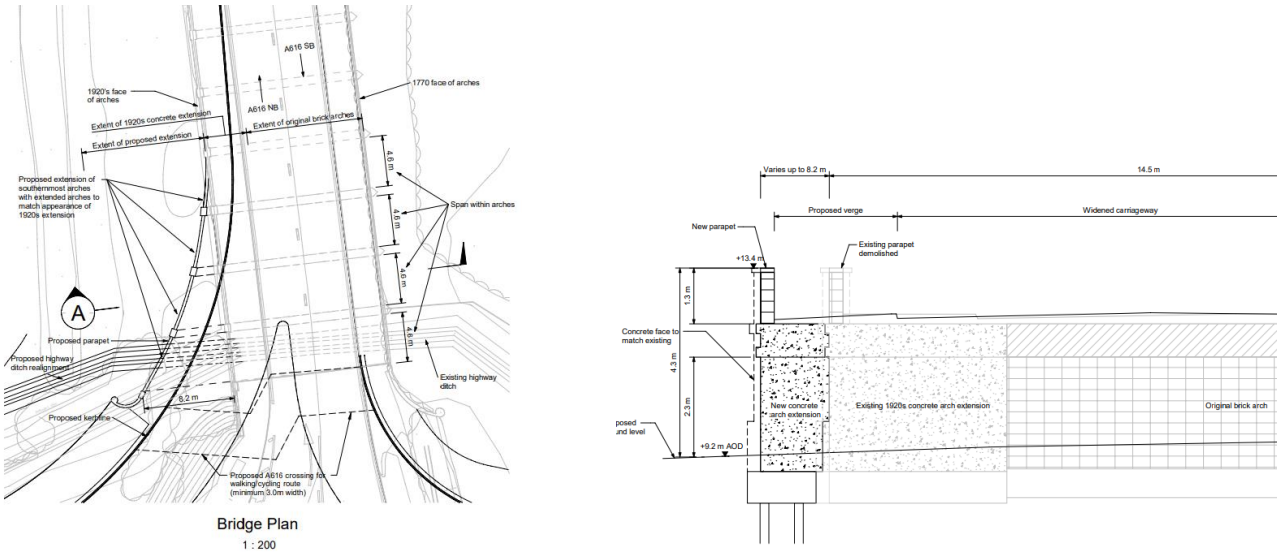
Smeaton's Arches

8.12 Some of the heritage assets in the area of the Order have value in their group association, in particular the grade II listed Smeaton's causeway arches and viaduct. There is a total of 11 different designations, all of which are grade II listed however only 5 of these designations are located within or adjacent to the Order Limit. Part of the significance of these heritage assets is their alignment along a historic route into and out of Newark.

8.13 The Council would like it known that paragraph 6.11.9 outlines that the heritage asset 'Causeway Arches 650 metres Northwest of Level Crossing (MM141)' (also known as Smeaton's Arches) is located outside the Order Limits. Whereas it is stated that the heritage asset is located within the Order Limits in Table 6-7 (Summary of likely significant effects and mitigation requirements during construction of the Scheme) in Section 6.1 Environmental statement chapter 6 Cultural heritage document. The Council agree that the heritage asset **is** located within the Order Limits.

8.14 The proposal includes permanent alterations to Causeway Arches 500 Metres Northwest of Level Crossing (LEN 1228733) (MM228). The arches have previously been altered during phases of road alterations; however, these proposed alterations will have an impact on the heritage asset. As part of the Statement of Common Ground, Nottinghamshire County Council and the District Council have been in discussions with NH on the proposed impact to this structure which has helped to secure an acceptable development and mitigation works for the structure. The alterations to Causeway Arches 500 metres Northwest of Level Crossing are permeant.

8.15 The extent of the works include some demolition to the structure on the southern side which was extended in the 1920s, to include the widening of the road and will result in the loss of historic (although not original) fabric and an alteration in its dimensions. This will affect the ability to appreciate its historic interest. Section 6.1 Environmental statement chapter 6 Cultural heritage concludes that the effect of the alterations will be 'Permanent large adverse' to the heritage assets. The realignment will have an effect on the associated heritage assets located along Great North Road, due change in alignment. The Council consider that the development will have a less than substantial harm on the heritage asset with of permanent large adverse residual effect.



(Extract from drawing no. HE551478 Rev C03 Structures general arrangements Sheet 6 of 12)

Church of St. Mary Magdalene

8.16 The 5 mile stretch along the A46 experiences views of various heritage assets with the most prominent heritage asset being the Church of St. Mary Magdalene and the Council is disappointed that this has not been given more consideration by NH in the development and assessment of the scheme with the production of visual information. This church and its prominence is an important visual consideration in part due to the height and elevated position provided by the C13th spire of the Church which is a prominent feature within the landscape.

8.17 As the parish church, the prominence of the spire is an intentional design feature meant to promote the siting and presence of the church within the vicinity. The church spire is also a significant landmark while travelling south along the Great North Road (A616) and can be seen on the approach to the Cattle Market roundabout. The Council considers that the submitted Key Visual Receptors shown on DCO ref. APP-138 and 139 do not adequately reflect the impact of the Cattle Market roundabout and the changes to the visual impact. Specifically there is no representation of photographic montages or existing baseline data on the existing or proposed impact or relationship on the gateway in to Newark from this elevation.

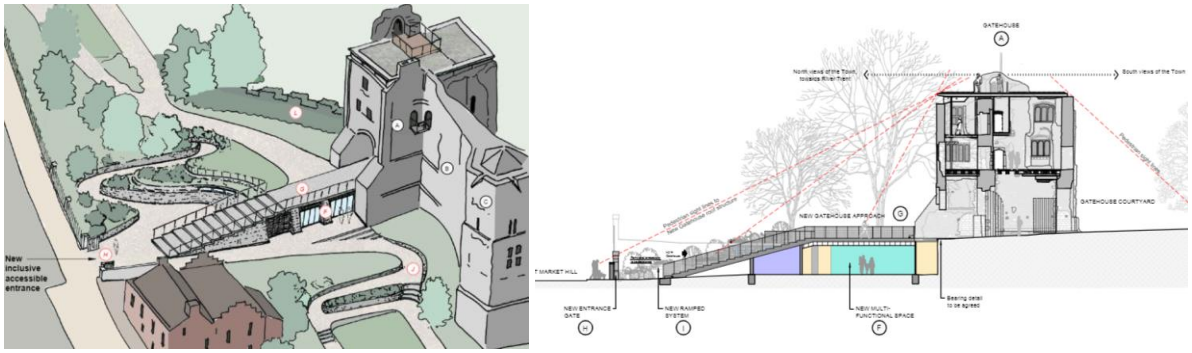
8.18 The new flyover at the Cattle Market roundabout elevates the road infrastructure and from reviewing the only photomontage which has been provided at viewpoint 24 (Sandhills Park), the design of the elevated sections would be harsh infrastructure which is expected to continue on both sides of the roundabout (see below). This infrastructure has the potential of disrupting and dominating views of the Church of St. Mary Magdalene when travelling along the Great North Road (A616) into Newark.

VP24 Year 1

VP24 Year 15

Newark Castle

8.19 Other significant heritage assets within Newark, includes Newark Castle (MM001). Developed from an original timber episcopal fortress built 1135-39. The Castle is large in scale, however there are only limited glimpses of the structure as you enter Newark along the Great North Road. However, there are long ranging views northwards from the Castle. Recent planning permission approved (21/02690/FUL[8] and 24/01268/S73) at the castle to provide a larger viewing platform on the gatehouse will retain and likely enhance these views as visitors will be able to stand at the top of the currently inaccessible castle.



Extract of plans from submission of 21/02690/FUL, Newark Castle

8.20 The existing A46 is currently largely screened with mature trees, however with the approach along Great North Road and the Newark Lorry Park being opened up with the felling of trees (see DCO ref.AS-088 Sheet 7 and 8), this aspect will open up, making the presence of the A46 more apparent and dominating in the locale, especially given the committed development allowing an elevated public vantage from the Castle.

8.21 DCO ref. AS-041 categorises the harm around the Cattle Market as neutral to slight adverse and the impact on both Newark Castle and Church of St. Mary Magdalene have not been considered in Table 6-7 Summary of likely significant effects, which the Council considers they should. Without photographic evidence on this proposal to show this relationship and how the spire of the church and the presence of the Newark Castle is impacted upon, the Council reserves the right to disagree with this conclusion. It is acknowledged that the Examining Authority have requested additional viewpoints from NH which are unfortunately not due until Deadline 1 (22 October 2024) which is the same deadline as the LIR is required. Therefore, this may impact the position the Council has taken in this section.

Concrete footbridge

8.22 During the construction phase of the A46, the Grade II* Concrete Footbridge across the River Trent (MM038) (Elbow Bridge) will be closed to the public and have a temporary works area.

8.23 The bridge is of concrete construction from around 1915 and restored in the C20. The single span bridge is an early example of the structural use of reinforced concrete which makes it of high significance.

[8] https://publicaccess.newark-sherwooddc.gov.uk/online-applications/simpleSearchResults.do?action=firstPage Newark Castle Gatehouse project

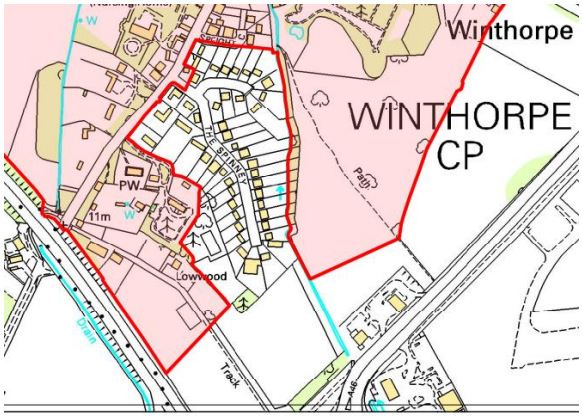
8.24 The bridge is located along an existing network of footpaths (Newark FP66 and Newark BW5 & 6) that takes walkers along the west side of the river Trent. This will affect the accessibility and appreciation of the heritage asset during this phase although accepted it is temporary. The other pedestrian crossing point over the Trent is approximately 600m south (off Cow Lane).

8.25 In addition, with the asset being located within the Order Limits, during the construction phase, the presence of construction machinery, traffic, lighting, noise and vibration will have a negative impact on the setting of the heritage asset. Section 6.1 Environmental statement chapter 6 Cultural heritage concludes that the effect of the construction will have 'Temporary Moderate adverse' effect on the heritage assets. The potential structural impacts during the construction phase has the potential of causing some permanent adverse effects that may require significant repairs to the structure.

8.26 The setting of the Concrete Footbridge is already dominated by the existing A46 and with the new carriageway for the A46 located to the west of the existing carriage way, the Council considers therefore it will have a neutral effect.

Brownhills Roundabout and Friendly Farmers Roundabout

8.27 Winthorpe Conservation Area (CA) (MM432) was first designated in 1974 with a subsequent review and extension in 2007[9] and extends up to the A1 to the southwest.



Extract of the Winthorpe CA 2007

8.28 Historically the Grade II listed high-status dwellings, such as Lowwood (MM053) and the Grove (MM062), and orientated with a view to the south. This view today and the southern boundary of the CA along the A1 is now largely screened behind a mature treeline. Many of the individual listed buildings located in Winthorpe are screened from wider views, however the spire of the Church of All Saints (MM063) is a key landscape feature from both the A46 when travelling north and A1 when travelling south. The prominence of the spire is due to the height of the building. The broach spire is unusual in the landscape with its tiled roof. There is potential that the Brownhills Junction flyover and A1 flyover, due to its more elevated positions could affect these wider views and the dominate the existing views of the spire of The Church of All Saints.

[9] https://www.newark-sherwooddc.gov.uk/media/nsdc-redesign/documents-and-images/your-council/planning-services/heritage-and-tree-conservation/conservation-areas/Winthorpe-1.pdf

8.29 The viewpoint from Bridge Farm (VP41) shows the only photomontage of the intended structure with a sloped green embankment as opposed to the harsh flyover at the Cattle Market. Whilst this is appreciated it is not representative of the experience from within the CA.

8.30 The eastern boundary of Winthorpe Conservation Area is more open, due to the historic parkland associated with Winthorpe House (LEN 1302281), with views that extends towards the A46. The setting and wider views from the eastern boundary of the CA is impacted by the existing A46 network at the Friendly Farmer roundabout and the industrial buildings beyond. However, the proposed A46 works brings the road network closer to the CA.

8.31 The photomontage from VP43 along the footpath (Winthorpe FP2), in the Council's opinion does not include a sufficient representation of the experience around this area and the photo should be angled towards the flyover which is likely to result in the greatest harm to the setting of the CA.

8.32 Section 6.1 Environmental statement chapter 6 Cultural heritage concludes that the effect of the alterations to the infrastructure will have 'Permanent slight adverse (not significant)' to the heritage assets. The use of the term 'not significant' isn't clear and doesn't follow the criteria. The council consider the works will have a less than substantial harm to Winthorpe Conservation Area, Lowwood and Church of All Saints. The full extent of the effect is unknown due to the limited visuals of the A1 flyover and the Council therefore requests that additional information by way of photomontages is submitted by National Highways to cover this matter.

Winthorpe Roundabout

8.33 Langford Hall (MM026) is a Grade II* listed country house C1780/90 by John Carr of York. Within the grounds there are also Grade II stables and Grade II Coach House. The house enjoys a rural setting located within its own parkland that extends eastwards toward the A46. The alterations to the Winthorpe roundabout, including embankments and traffic lights will increase the prominence of the road infrastructure, moving it slightly closer to the listed building and its parkland setting.

8.34 The historic driveway for Langford Hall is currently accessed from the A46, north of the current Winthorpe roundabout, continuing west through the parkland. It is proposed to alter this creating a new access to the south from the A1133, through land which isn't associated with the Hall and detaches Langford Hall from its original lodge and entrance. The harm to which is considered Less than substantial permanent slight adverse.

8.35 During the construction phase it is proposed to have a temporary works area which will also alter the setting of the heritage assets during this period. But it is accepted that this is only temporary and thus as a result the harm would be transient.

8.36 Section 6.1 Environmental statement chapter 6 Cultural heritage concludes that the effect of the alterations to the driveway will have 'Permanent slight adverse (not significant)' to the heritage assets. The use of the term 'not significant' isn't clear and doesn't follow the criteria. The council considers that the development will have a Less than substantial harm on the heritage asset of permanent slight adverse residual effect.

Farndon Roundabout

8.37 Over the last couple of years, the river Trent has experienced higher water levels than normal and especially during the storms in late 2023. Listed buildings, such as Farndon Windmill (Grade II Listed) have suffered from damage from the flooding from the River Trent. This needs to be taken into account when carrying out structural assessments of relevant heritage assets and potential impact of vibrations during the construction.

8.38 During the construction phase, the presence of construction machinery, traffic, lighting, noise, and vibration will have a negative impact on the setting of the heritage asset. Section 6.1 Environmental statement chapter 6 Cultural heritage concludes that the effect of the

alterations will have 'Permanent slight adverse (not significant)' to the heritage assets. The use of the term 'not significant' again isn't clear and doesn't follow the criteria. Due to the potential structural impacts during the construction phase, has the potential of causing some permeant adverse effects that require significant repairs to the structure.

8.39 The new A46 carriageway will be at the same height as the existing and the Council considers the development will have Less than substantial harm on the heritage asset of permanent slight adverse residual effect.

Mitigation measures

8.40 In terms of mitigation, measures that ensure the appropriate recording of the structure at Smeaton's Arches should be included in the Construction Environmental Management Plan (CEMP) and that appropriate mitigation is sought for surveying the buildings which could be impacted by vibration. The council would encourage their involvement agreeing recording methodology for Smeaton's Arches and the surveying and repair methods for those buildings affected.

8.41 As part of the noise assessment within the ES Volume 6.1 Chapter 11 this identifies various areas within the study area which would be impacted by either operation or construction noise as a result of the development. As part of that, additional mitigation measures have been embedded in the Scheme which is stated at paragraph 11.10.3 and 11.10.4 and reiterated below, which include:

- three landscape bunds at a height of 2.0-2.5 metres would be included north of the A46 section between the A1 and Winthorpe Roundabout which will also provide noise screening;
- Six noise barriers at a height of 2 metres from the road surface (or from local ground, if not positioned along the A46) would be included along the Scheme, including:
    - Two located along the southbound entry slip from Cattle Market Roundabout extending part way down the west side of the Great North Road south of Cattle Market Roundabout;
    - One located at the southbound entry slip road at Brownhills Junction;
    - One along the northbound carriageway from the Brownhills Junction to the Esso Service Station;
    - Two located from the Esso Service Station to the Winthorpe Roundabout at the northern extreme of the Scheme, transitioning at the midpoint from barrier at the roadside to barrier on the crest of the adjacent bund.

8.42 The Council is mainly concerned with regards to the impact of the acoustic barriers at the Cattle Market roundabout. No design details are shown of how this will interact with the roundabout and the Council raise concerns that a potential 2.5m high close boarded fence around the roundabout, which is an existing verdant and rural character would result in harm to this key gateway into Newark. Figure 2.3 Environmental Masterplan of Chapter 6.2 ES illustrates the siting of the acoustic fence and the Council request that although trees are proposed to the south of the fence this does not mitigate for the visual harm caused to the setting of the heritage assets. A balanced judgement on this matter would be required however a solution could be sought which softens this aspect but still able to achieve the same outcome, however the Council currently considers this to be harmful.

8.43 The construction of the bunds around Winthorpe to the east of the CA will alter the rural/parkland setting of the CA and will erode into this relationship whilst still maintaining a verdant character.

Built Heritage Conclusion

8.44 The A46 development will have an impact on a wide range of different heritage assets of various significance. The magnitude of harm on some of the heritage assets cannot be concluded due to the limited information and therefore at present the Council must conclude that the proposal fails to accord with local policy and objectives of National Policy. Should further information such as mitigation and a demonstration of visual impact in the form of additional montages be submitted then the Council's position on this matter may change. However, the Council considers the works will cause less than substantial harm, with some areas being of permeant large adverse effect.

9. Archaeology

National and Local Policy

Key Local Policy

Newark and Sherwood District Council

9.1 Core Policy 14: Historic Environment (Local Development Framework, Amended Core Strategy 2019) – Protection of potential archaeological sites;

National Policy

National Networks National Policy Statement, 2024:

9.2 Section 5.204 acknowledges that *the construction, of national networks infrastructure has the potential to result in adverse impacts on the historic environment.*

9.3 Sections 5.210 to 5.211 lay out requirements to provide an assessment of the significance of heritage impacts from the development and also to describe the significance of the affected heritage assets;

9.4 Sections 5.212 to 5.215 present requirements for mitigation of development impacts on archaeology identified within the order limits, stating '*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*'.

National Planning Policy Framework, 2023:

9.5 Chapter 16 (paragraphs 195-214) of the NPPF sets out a framework for the management of the historic environment and provides guidance for proposals affecting heritage assets;

9.6 Paragraph 200 sets out a requirement for assessment of impact on heritage assets during the application process '*In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting.'*

9.7 Paragraphs 205, 206 and 208 provide guidance on impact to designated heritage assets;

9.8 Paragraph 211 makes provision for mitigation of development impacts '*Local planning authorities should require developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible'*.

9.9 It is the Council's position that the applicant must provide sufficient desk-based research, non-intrusive survey and intrusive field evaluation to adequately assess the archaeological

potential of this scheme and provide an agreeable Outline Archaeological Mitigation Strategy (OAMS) for Examination. The Environmental Statement (ES) must present the full range of findings from this archaeological work to provide the evidential basis for the OAMS.

9.10 The scheme runs through areas of known archaeological potential dating from the late Palaeolithic to post-medieval period and all archaeological periods in between are represented on the Nottinghamshire HER. Of particular note is the internationally significant late Upper Palaeolithic site at the north end of Farndon and southern end of the scheme. Known and notable Roman and Anglo-Saxon sites are also present within the order limits and there is a high potential for additional, currently unknow sites dating to these periods and further Civil War activity associated with the sieges of Newark in the 17th century.

Baseline

9.11 The applicant has submitted an Environmental Statement in support of the application and considers Cultural Heritage at Chapter 6 (APP-050). Supporting appendices have also been submitted and comprise:

- 6.1 (Desk-based Assessment (DBA) APP-132),
- 6.2 (Assessment of Heritage Value APP-133),
- 6.3 (Assessment of Cultural Heritage Effects During Construction of the Scheme APP-134), and
- 6.4 (Assessment of Cultural Heritage Effects During Operation of the Scheme APP-135).

9.12 Chapter 6 and the DBA make reference to several surveys and field evaluations including geoarchaeological evaluation, metal detector surveys, field walking, monitoring of GI and trial trench evaluation. It is essential that the full reports for these should be included as appendices so that a proper assessment of the data can be scrutinised and allow for a formal position on the extent to which the scheme has been sufficiently evaluated.

9.13 The applicant's archaeological consultants have engaged well with the County and other stakeholders with regard to archaeology, as detailed in Section 6.4.

9.14 Chapter 6 incorporates the data derived from the DBA, metal detector and fieldwalking surveys, geoarchaeological investigation and geophysical survey. Crucially, it has not included the data from the trial trench evaluation work which was undertaken in 2023/24, which the report acknowledges at Section 6.8.116. The inclusion of this data in the assessment in Chapter 6 is essential to understanding the development impacts and the assessment will not have been completed to a satisfactory standard until it has been. However, the applicant has provided draft copies of these reports which will be submitted for Deadline 1 which is welcomed and will resolve the above issue.

9.15 Section 6.9 details potential impacts which includes the removal or truncation of heritage assets as a result of excavation, ground disturbance, de-watering and compaction associated with the construction of the Scheme and associated works (Section 6.9.3). Where archaeology is present this would be a **significant, adverse, negative impact**.

9.16 It also identifies operational impacts, particularly the depreciation in value of below ground heritage assets as a result of damage caused by compaction, vibration, dewatering and changes in hydrology for the Scheme and associated floodplain compensation works. It should also include potential impacts from maintenance and other works. Where archaeology is present this would be a **significant, adverse, negative impact**.

9.17 Section 6.10 provides a very broad mitigation proposal based on the evidence presented, although there is some detail of design alterations, which is welcomed. However, this is necessarily lacking crucial information from the evaluation trenching and other reports that have not been included with the DCO submission.

9.18 The mitigation proposals in Section 6.10 that relate to archaeology, comprise avoidance and excavation/surveys to *understand and record the heritage encountered along the route creating a greater knowledge of the area's heritage*. While this high-level approach would be broadly agreeable (as with any scheme), it is essential that a detailed OAMS be presented for Examination, and this be based on the full range of reports rather than the limited submission to date. The applicant has recently consulted the Council's advisors on a detailed, draft OAMS which will be submitted at Deadline 1. This broadly addresses the concerns above, but further comments and revisions may be necessary for Examination.

9.19 The OAMS must identify each archaeologically sensitive area, the impacts from the proposed development and a detailed programme of archaeological works for each that will offset the impacts. This will include excavation, monitoring, preservation *in-situ* (archaeological exclusion zones) and design solutions. The currently submitted proposals are insufficient and limited and the impact from development remains **adverse and negative,** however this will be largely addressed with the applicant's submission at Deadline 1 and following any alterations required.

Summary

9.20 This office is aware of the level of archaeological work that has been undertaken by the applicant and has monitored much of it. We can advise that the archaeological work to date is of a sufficient level to appropriately inform the ES Chapter, however it has not yet been presented in full and consequently the ES Chapter is lacking sufficient detail on the proposed impacts for Examination.

9.21 The evidence presented to date indicates the presence of significant archaeology but does not yet provide sufficient site-specific detail on the development impacts or an agreeable programme of mitigation work to offset those impacts. Therefore, the Council's position must be that the development will have a **significant, adverse and negative impact** on the archaeological resource encountered in the Order Limits.

9.22 This position will alter when the applicant submits their detailed OAMS for Examination, based on all the archaeological work to date including the outstanding reports. The ES Chapter will need to be updated accordingly to reflect the current level of work undertaken.

10. Noise and Vibration

Baseline

10.1 Existing road and rail noise sources are identified in the ES as the dominant noise sources in the vicinity of the scheme, in particular the existing A46 and A1. With some additional contributions from aircraft and natural sounds such as birdsong.

10.2 Baseline noise monitoring was undertaken in 2022 at seven long term sites and two short term sites along the scheme. As stated in Appendix 11.2 of the Environmental Statement (ES) Nottinghamshire County Council (NCC) was consulted on the proposed locations and methodology in February 2022.

10.3 Further detail on meteorological conditions during the survey, in particular information on the wind direction and any periods excluded due to adverse weather, which are not provided, would be beneficial. However, overall the baseline monitoring is considered to be suitable and sufficient for the purposes of the noise impact assessment.

10.4 The identification of noise sensitive receptors along the scheme, in particular residential dwellings and noise important areas (NIAs), is set out in the ES and captures the main areas of receptors with the potential to be impacted. No information is provided on other noise sensitive receptors in the study area such as educational, medical and community facilities. Based on section 11.11 'Assessment of likely significant effects' a large number of other

sensitive receptors have been included in the assessment. It is assumed educational, medical, and community facilities are included in these other sensitive receptors. Section 11.11 identifies potentially significant effects at a number of commercial properties, although such properties would not normally be considered as potentially noise sensitive.

10.5 Overall the baseline set out in the ES is considered to be proportionate and adequately derived.

National and Local Policy

National Policy

10.6 The National Policy Statement for National Networks (NPSNN) is the key policy the scheme must comply with. The ES is based on the 2014 version which was current at the time of the assessment and the draft revision which was published in March 2023. A revised version was issued in May 2024. With regard to noise, there are no material differences between the various versions of the NPSNN.

10.7 The DCO application includes the document 'National Policy Statement for National Networks Accordance Tables', which sets out how the scheme complies with each section of the NPSNN, mainly through reference to the relevant sections of Chapter 11: Noise and Vibration of the ES.

10.8 The noise/vibration prediction/assessment methodologies are stated as being in accordance with the relevant UK guidance for assessing road schemes: the Design Manual for Roads and Bridges (DMRB) LA 111: Noise and Vibration.

Construction

10.9 No significant adverse noise effects due to construction traffic on local roads during the day are identified, as the magnitude of the predicted change in traffic noise levels along affected roads is only negligible or minor. No construction traffic is anticipated at night.

10.10 No significant adverse effects due to the various temporary night-time road diversions are identified as it is assumed that the duration of each diversion can be managed to not exceed the duration significance criteria set out in DMRB of 10 days in 15 consecutive days or 40 days in 6 consecutive months. However, this assumption is not secured by a commitment in the First Iteration Environmental Management Plan (FIEMP). **NCC request that a commitment is made in the FIEMP to night-time diversions not exceeding the duration significance criteria set out in DMRB LA 111, i.e. 10 days in 15 consecutive days or 40 days in 6 consecutive months.**

10.11 As would be expected, exceedances of the levels at which a potentially significant adverse construction noise/vibration effect occurs are predicted at the closest receptors to some of the construction activities.

10.12 Each construction activity has been assessed individually. **While it is potentially reasonable to assume the worst-case impacts of multiple activities will not coincide at individual receptors, without specific information on the timing and duration of activities it is not possible to determine if multiple activities could coincide resulting in additional significant adverse effects**. For example, the use of the haul routes within the site and the site compounds at the same time as other construction activities would not be unexpected.

10.13 The ES concludes that all the identified potentially significant adverse construction noise and vibration effects can be mitigated to either reduce the levels at the receptors to below the relevant noise/vibration level or to reduce the duration of the exceedance to below the duration criteria set out in DMRB. Therefore, no residual significant adverse noise or vibration effects during construction are identified. The FIEMP includes the majority of the specific commitments set out in the ES. **However, implementing such measures, in particular,**

limiting the operating times of specific plant and the duration of works in specific locations may not be practical. There is therefore a risk of significant adverse construction noise/vibration effects at the closest receptors to the works.

10.14 However, some residual significant adverse effects would not necessarily indicate non-compliance with the NPSNN, as the avoidance of significant adverse effects and the requirement to mitigate and minimise adverse effects is within the context of government policy on sustainable development.

10.15 To identify sustainable noise mitigation measures, various factors must be considered, including the nature/source of the adverse effect to be mitigated, the circumstances of the receptor, the cost versus the benefit, engineering practicality, safety considerations, generation of knock-on impacts (such as access issues, ecological impacts, landscape and visual impacts), and consultation and stakeholder engagement responses.

10.16 The ES and FIEMP contain industry standard mitigation measures, such as the requirement to implement Best Practicable Means (BPM), and specific mitigation measures such as temporary barriers in specific locations. Therefore, all sustainable mitigation measures have been identified.

10.17 To conclude, whilst the conclusion of the ES that all significant adverse construction effects can be avoided is not completely certain, the assessment is considered to comply with the policy requirements of the NPSNN. In addition, powers are available to the Local Authority to control construction noise/vibration during the works.

Operation

10.18 Traffic noise impacts on the NIAs in the vicinity are identified in the ES as negligible or minor beneficial. The impact at the two NIAs for which NCC are responsible on the A617 is minor beneficial.

10.19 Potentially significant operational traffic noise effects, based on the DMRB noise change criteria, are identified in the ES at the following number of sensitive receptors in the opening year:

- Moderate increase (3.0 to 4.9 dB) - 23 (15 residential) daytime and 66 (54 residential) night-time;
- Major increase (≥ 5 dB) – 67 (59 residential) daytime and 22 (18 residential) night-time;
- Minor increase (1.0 to 2.9 dB) combined with existing 'high' noise levels (at or above the Significant Observed Adverse Effect Level (SOAEL)) – 13 (3 residential) daytime and 12 (3 residential in the night-time);
- Moderate decrease (3.0 to 4.9 dB) – 244 (226 residential) and 170 (154 residential) night-time; and
- Major decrease (≥ 5 dB) – 4 (4 residential)) and 2 (2 residential) night-time.

10.20 In the long term (comparing the opening year without the scheme to 15 years after opening with the scheme) the number of moderate (5.0 to 9.9 dB) and major (≥ 10 dB) increases and decreases is reduced. This is primarily because the DMRB criteria are larger to allow for changes in traffic that would have occurred even without the scheme over the 15 years.

10.21 DMRB requires that the effects that are initially identified as significant based on the impact in the opening year are considered in light of a range of other factors including: how close the change is to the noise change category boundary, the long-term change, the absolute level, the location of sensitive parts of a receptors, the acoustic character of the area and the likely perception of the change by occupiers.

10.22 Applying these additional factors the ES concludes that all the initially identified potentially significant adverse effects are not significant. No discussion of the potentially significant decreases in traffic noise is provided in the ES.

10.23 Whilst some of the locations identified in the ES as potentially experiencing a significant adverse effect are concluded to be not significant as they are commercial non-sensitive receptors, some are residential. In particular, the 74 residential properties on Pelham Street and Victoria Street/Portland Street/Clinton Street/Albert Street in Newark, are predicted to experience a moderate or major increase in traffic noise in the opening year. At these locations, an argument can be made that a significant adverse effect would occur.

10.24 However, some residual significant adverse effects do not indicate non-compliance with the NPSNN as the avoidance of significant adverse effects and the requirement to mitigate and minimise adverse effects is within the context of government policy on sustainable development.

10.25 As stated above with regard to construction effects, to identify sustainable noise mitigation measures, various factors must be considered, including the nature/source of the adverse effect to be mitigated, the circumstances of the receptor, the cost versus the benefit, engineering practicality, safety considerations, generation of knock-on impacts (such as access issues, ecological impacts, landscape and visual impacts), and consultation and stakeholder engagement responses.

10.26 There are unlikely to be any additional locations where sustainable mitigation would be effective and feasible. The minor roads in Newark which experience a moderate or major increase in traffic noise are not adjacent to the scheme, and the impact is due to traffic re-routing on surrounding roads. It is possible the predicted moderate and major impacts are due to a simplification of the traffic model if not all the local roads are incorporated. In any case, mitigation, such as noise barriers on an existing road with many properties fronting onto the road, would not be practicable and would not constitute sustainable mitigation.

10.27 Therefore, the operational noise mitigation measures set out in the ES are in accordance with the NPSNN requirement to demonstrate good design.

10.28 To conclude, whilst the conclusion of the ES that none of the operational adverse effects are significant could be open to debate, the operational noise assessment is considered to comply with the policy requirements of the NPSNN.

Local Policy

10.29 The Nottinghamshire Local Transport Plan 2011-2026 identifies addressing noise issues as a means to improve health, wellbeing and quality of life. It therefore states, ‘priority will be given to highway measures that reduce noise in areas where there are high levels of road traffic and significant noise sensitive properties affecting a high number of people’.

10.30 As illustrated in Figure 11.9 of the ES, which displays the change in traffic noise levels in the opening year due to the scheme, there are areas where the scheme provides a reduction in traffic noise levels. Areas of predicted increases in traffic noise levels are generally negligible or minor in magnitude.

10.31 Whilst the noise section of the Local Transport Plan does not explicitly state that noise impacts should be considered in the context of sustainable development the over-arching principle of sustainability is inherent within the plan.

10.32 With the inclusion of the embedded mitigation, the scheme is considered to comply with local policy.

Potential conflicts

10.33 Whilst the conclusions of the ES that none of the construction or operational adverse effects are significant could be open to debate, the assessment is considered to comply with the policy requirements of the NPSNN.

10.34 No significant adverse effects due to the various temporary night-time road diversions are identified as it is assumed that the duration of each diversion can be managed to not exceed the duration significance criteria set out in DMRB of 10 days in 15 consecutive days or 40 days in 6 consecutive months. **NCC request that a commitment be made in the FIEMP to night-time diversions not exceeding the duration significance criteria set out in DMRB LA 111, i.e. 10 days in 15 consecutive days or 40 days in 6 consecutive months**.

10.35 The initial assessment as part of the ES indicates no residential properties are likely to qualify under the Noise Insulation Regulations 1975 (as amended 1988). However, if the scheme goes ahead National Highways have a statutory obligation to complete a final assessment within six months of the scheme opening, using the final scheme design and traffic data.

11. Air Quality

Baseline

11.1 The Applicant describes the air quality baseline conditions in Section 5.8 of the Environmental Statement (ES) Chapter 5: Air Quality (Ref: TR010065/APP/6.1). The information presented in the ES regarding baseline air quality has been derived from information held by Newark and Sherwood District Council (NSDC), National Highways and The Department for Environment, Food and Rural Affairs (Defra).

11.2 The air quality assessment has been undertaken in accordance with the Design Manual for Roads and Bridges (DMRB) LA 105 Air Quality. The assessment uses the most recent (at the time of undertaking the assessment) air quality tools and spreadsheets provided by National Highways and Defra.

11.3 Within Section 5.8 of the ES, annual mean nitrogen dioxide (NO_2) monitoring data from NSDC has been provided for 2018 to 2022 for the 12 monitoring locations within 0.6 km of the Scheme or affected road network ((ARN) i.e. air quality study area). Paragraph 5.8.10 states that there were no exceedances of the annual mean NO_2 objective in 2022, with the highest annual mean NO_2 concentration of 26.6 µg/m^3 monitored at 16N, located less than 10 m from the Scheme. The ES notes that there are no air quality management areas (AQMAs) declared by NSDC.

11.4 Paragraph 5.8.9 discusses the effect of the national lockdowns during the COVID-19 pandemic on air quality concentrations in 2020 and 2021; however, by 2022 concentrations are considered to be representative of 'normal' conditions post-COVID-19 lockdowns.

11.5 Paragraph 5.8.7 confirms that NSDC undertakes no automatic monitoring and therefore no monitoring of particulate matter (PM_{10} or $PM_{2.5}$) is undertaken within the study area.

11.6 Paragraphs 5.8.11 to 5.8.14 provide details of Scheme specific monitoring undertaken in 2022 to support the assessment and to update the Applicant's monitoring survey previously undertaken in 2016. Monitoring was undertaken at 27 locations between May 2022 and November 2022. The monitored concentrations were bias adjusted and annualised as described in Appendix 5.3 Air Quality Monitoring Report (Ref: TR010065/APP/6.3). The results indicated that there were no exceedances of the NO_2 annual mean objective. The highest NO_2 annual mean concentration of 33.0 µg/m^3 was recorded at a site on the A113 adjacent to Winthorpe Roundabout.

11.7 Consultation with the NSDC Environmental Health Officer (EHO) was held on 14th September 2022, with agreement on the location of the monitoring sites for the Scheme specific survey.

11.8 Paragraphs 5.5.55 to 5.5.59 describe the comparison exercise which has been undertaken between the Defra modelled background NO_x and NO_2 concentrations and two NSDC and nine Scheme specific background sites which are considered representative of air quality

conditions across the study area. The comparison indicated that the Defra modelled background concentrations were lower than the monitored concentrations in 2022. Therefore, the Defra modelled NO_x, NO_2 and PM_{10} background concentrations applied to the assessment have been uplifted by an average factor of 1.46.

11.9 The Applicant has referred to the Defra Pollution Climate Mapping (PCM) model to confirm that there are no PCM links which intersect the ARN.

11.10 Baseline information for habitat type, critical loads and background nitrogen deposition rates for designated sites sensitive to nitrogen have been derived using data on the Air Pollution Information System (APIS) website.

11.11 Overall the baseline set out in the ES is considered to be proportionate and adequately derived.

Wider ES Review

11.12 Construction phase dust mitigation measures are discussed in Chapter 5: Air Quality paragraphs 5.10.1 and listed in paragraph 5.10.2. Paragraph 5.10.1 states that an air quality and dust management plan will also be prepared in full prior to construction commencing. These dust mitigation measures are included in the First Iteration of the Environment Management Plan (EMP) (Ref: TR010065/APP/6.5) which will be developed into a Second Iteration EMP. As stated in the First Iteration EMP the air quality and dust management plan will include measures to monitor the effectiveness of mitigation as part of the Second Iteration EMP. Measures include daily on site and off site inspections and a record of complaints/exceptions of dust events to be included in the EMP. **It would be beneficial for an outline air quality and dust management plan to be submitted as part of the DCO Examination to enable Nottinghamshire County Council (NCC) and relevant parties to undertake a review and provide comments if necessary.**

11.13 Paragraph 5.4.2 states that consultation was undertaken on 21st June 2023 with EHO from NSDC to discuss and agree on the assessment findings and proposed mitigation for air quality.

11.14 It is noted that there is no consideration of the potential combined air quality effects associated with construction vehicle flows and traffic management measures during the construction phase. **Further information is required to understand the combined effects associated with the Scheme during the construction phase for air quality.**

11.15 The operational phase air quality assessment set out in the ES is considered to be proportionate and adequately derived. **Further information is requested regarding the combined effects of construction vehicle flows and traffic management measures during the construction phase**. In addition, the First Iteration Environmental Management Plan (FIEMP) (Ref: TR010065/APP/6.5) states that an Air Quality and Dust Management Plan will be created and submitted with the Second Iteration Environmental Management Plan (SIEMP). **It is requested that NCC be consulted on the contents of this management plan.**

Summary of Legislative and Policy Framework Review

National Policy

11.16 The National Policy Statement for National Networks (NPSNN) sets out the policy which the Scheme should comply with and forms the basis for informing the judgement on the impacts of the Scheme. The ES is based on the 2014 version which was current at the time of the assessment and the draft revision was published in March 2023. A revised version was issued in May 2024.

11.17 The DCO application includes the document 'National Policy Statement for National Networks Accordance Tables', which sets out how the Scheme complies with each section of the

NPSNN published in 2014, mainly through reference to the relevant sections of Chapter 5: Air Quality of the ES. It also includes the document 'draft National Policy Statement for National Networks Accordance Tables' which sets out how the Scheme complies with each section of the draft NPSNN published in March 2023.

11.18 Table 1 below outlines the requirements of the NPSNN (version 2014) for air quality and following the review of the DCO application, whether the requirement is adequately met. Based on the number of requirements for the Air Quality discipline included in the NPSNN, these are presented in a tabulated format.

Table 1: Compliance with NPSNN for air quality

Paragraph of NPSNN	Requirement of the NPSNN	Does the ES comply with the requirement
5.3	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 and protected species and habitats.	Yes. ES Chapter 5: Air Quality, Section 5.9, describes the results of the assessment of the impacts of the Scheme during the construction and operational phases. Further information is needed on the construction phase, as set out above.
5.4	Current UK legislation sets out health-based ambient air quality objectives. In addition, the European Union has established common, health-based and eco-system based ambient concentration limit values (LVs) for the main pollutants in the Ambient Air Quality Directive (2008/50/EU) ('the Air Quality Directive'), which Member States are required to meet by various dates.	Yes. Relevant air quality standards and objectives are outlined in the ES Chapter 5: Air Quality, Section 5.3.
5.6	Where the impacts of the Scheme (both on- and off-Scheme) are likely to have significant air quality effects in relation to meeting EIA requirements and/or affect the UK's ability to comply with the Air Quality Directive, the applicant should assess the impacts of the Scheme as part of the ES.	This requirement has been addressed in Chapter 5: Air Quality in Sections 5.9 and 5.11, where the assessment of the impacts of the Scheme has been presented. This is in line with DMRB LA105, which meets the requirements of the NPSNN.
5.7	The environmental statement should describe: • existing air quality levels; • forecasts of air quality at the time of opening, assuming that the Scheme is not built (the future baseline) and taking account of the impact of the Scheme; and • any significant air quality effects, their mitigation and any residual effects distinguishing between the construction and operation stages and taking account of the impact of road traffic generated by the project.	Yes Baseline air quality concentrations are adequately described in Section 5.8 of the ES Chapter 5: Air Quality. Modelled air quality concentrations have been predicted for the DM and DS scenarios in the Scheme's opening year. Concentrations are presented and discussed in Section 5.9 of the ES Chapter 5: Air Quality. The significance of the air quality effects is described in the ES Chapter 5: Air Quality, Section 5.11. Appropriate mitigation is discussed in Section 5.10 of the ES Chapter 5: Air Quality and secured in the First Iteration EMP. **Noting, further information on the management of dust is requested, as described above.**

5.8	Defra publishes future national projections of air quality based on evidence of future emissions, traffic and vehicle fleet. Projections are updated as the evidence base changes. Applicant's assessment should be consistent with this but may include more detailed modelling to demonstrate local impacts	Yes. The operational phase assessment methodology is described in the ES Chapter 5: Air Quality, Section 5.5. The most recent (at the time of undertaking the assessment) Defra's Emissions Factors Toolkit EFT (v11.0) has been used, as well as Defra background concentrations and the long-term trend gap analysis factors.
5.9	In addition to information on the likely significant effects of a project in relation to EIA, the Secretary of State must be provided with a judgement on the risk as to whether the project would affect the UK's ability to comply with the Air Quality Directive.	This requirement is addressed in paragraph 5.11.38 of the ES Chapter 5: Air Quality in accordance with DMRB LA 105, therefore meeting the requirements of the NPSNN.
5.14/5.15	The Secretary of State should consider whether mitigation measures put forward by the applicant are acceptable. A management plan may help codify mitigation at this stage. The proposed mitigation measures should ensure that the net impact of a project does not delay the point at which a zone will meet compliance timescales. Mitigation measures may affect the project design, layout, construction and operation, and/or may comprise measures to improve air quality in pollution hotspots beyond the immediate locality of the Scheme. Measures could include but are not limited to, changes to the route of the new Scheme, changes to the proximity of vehicles to local receptors in the existing route, physical means including barriers to trap or better disperse emissions, and speed control. The implementation of mitigation measures may require working with partners to support their delivery.	Yes. Detail regarding appropriate mitigation measures is provided in Section 5.10 of the ES Chapter 5: Air Quality. These measures are also included in the FIEMP which will be developed into a SIEMP. As stated in the FIEMP an air quality and dust management plan will be prepared and include measures to monitor the effectiveness of mitigation. Measures include daily on site and off site inspections and a record of complaints/exceptions dust events to be included in the EMP. **It is requested that NCC be consulted on the contents of this management plan**.

11.19 Overall, the requirements of the NPSNN for air quality are adequately met in the DCO application documents, with limited additional information requested for the construction phase.

11.20 In May 2024, the NPSNN was updated and includes additional requirements for air quality, as described in Table 2.

Table 2: Compliance with NP SNN (May 2024) for air quality

Paragraph of NPSNN	Requirement of the NPSNN	Does the ES comply with the requirement
5.9	The government has legally binding targets to reduce emissions of five key air pollutants ($PM_{2.5}$, nitrogen oxides, sulphur dioxide, ammonia and non-methane volatile organic compounds) by 2030. In addition, 2 new air quality targets for 2040 – one for annual mean concentrations of $PM_{2.5}$ and a population exposure reduction target for $PM_{2.5}$ – have been set under the Environment Act 2021. These targets are in addition to the maximum permissible levels for pollutants in ambient air as set out in the Air Quality Standards Regulations (2010) and reiterated in the Air Quality Strategy. Local authorities and relevant public authorities must also meet local air quality objectives under the Environment Act 1995.	Paragraphs 5.3.2 to 5.3.14 of the ES Chapter 5: Air Quality describes the relevant air quality objectives. More specifically paragraphs 5.3.10 to 5.3.13 describe the $PM_{2.5}$ targets and include the two new $PM_{2.5}$ targets: • an annual mean concentration target for $PM_{2.5}$ of 10 µg/m^3 at any monitoring station by 2040. • A population exposure reduction target of 35% by 2040 compared to a 2018 baseline.
5.13	The assessment should describe: • the predicted emissions, concentration change and absolute concentrations of the proposed project after mitigation methods have been applied. • any potential impacts on nearby designated habitats from air pollutants • the proximity and nature of nearby receptors which could be impacted, including those more sensitive to poor air quality	Yes. The operational phase concluded that the air quality effects associated with the Scheme were not significant and therefore no mitigation is required. As such, an assessment of a 'with mitigation' scenario is not required. Potential impacts on designated habitats are included in the air quality assessment. The results are described in the ES 5, paragraphs 5.11.33 to 5.11.35. Figure 5.1 Air Quality Receptors clearly illustrates the location of each receptor and the proximity of the receptors to the affected road network. Paragraph 5.5.40 describes how worse case receptors were selected and includes residential properties, schools and hospitals; however, the receptor list in Appendix 5.1: Air Quality Receptor Results does not distinguish between the type of receptor selected e.g. whether it was a school or residential property.
5.14	In addition, applicants should consider The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 by following available Defra guidance, including interim guidance.	The $PM_{2.5}$ targets are discussed in paragraphs 5.3.10 to 5.3.13 of the ES Chapter 5: Air Quality.

5.20	With respect to The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023, the applicant should take all reasonable steps to reduce emissions of $PM_{2.5}$ and its precursor pollutants in the construction and operational stage of the development by following available Defra guidance.	The assessment does provide an assessment of potential $PM_{2.5}$ impacts and states that the reason for not including this pollutant is in accordance with DMRB LA 105. The DMRB LA 105 states that "*there should be no need to model $PM_{2.5}$ as the UK currently meets its legal requirements for the achievement of the $PM_{2.5}$ air quality thresholds and the modelling of PM_{10} can be used to demonstrate that the Scheme does not impact on the $PM_{2.5}$ air quality threshold*", In paragraph 5.5.21 of the ES Chapter 5: Air Quality, the results of the PM_{10} modelling have been used to indicate that the current and future $PM_{2.5}$ concentrations are lower than the target value of 20 µg/m^3 and the Scheme will not impact the $PM_{2.5}$ air quality threshold at any of the human health receptors considered.

Local Policy

11.21 Newark and Sherwood Amended Core Strategy Development Plan sets out policy up until 2023 and presents the objectives for development in the area. The policy of relevance to this assessment is Core Policy 12, Biodiversity and Green Infrastructure.

11.22 This policy states that the council will:

> "*work with partners to develop a strategic approach to managing air quality in the Sherwood Area, including through the development of a Supplementary Planning Document*".

11.23 The Scheme does not adversely affect the above local air quality policy.

11.24 The ES Chapter 5: Air Quality states that the air quality supplementary planning document (SPD) is currently under review and is yet to be adopted as either policy or guidance. This document, 'Air Quality and Emissions Mitigation, Guidance for Developers' is now available on the NSDC website.

11.25 The guidance describes the air quality assessment methodology and appropriate mitigation measures for new developments. For 'large' developments, Type 1, 2 and 3 mitigation are required and the calculation of damage costs.

11.26 As described in ES Chapter 5: Air Quality an air quality assessment has been undertaken following an appropriate methodology (DMRB LA 105). Construction phase dust mitigation measures are discussed in Chapter 5: Air Quality paragraphs 5.10.1 and listed in paragraph 5.10.2 as well as within the FIEMP. Operational air quality costs have been calculated and are included in the Transport Assessment (Ref TR010065/APP/7.4). According to the Transport Assessment, the local air quality valuation, based on the Department for Transport (DfT) guidance is £1,747,000. This approach, based on national guidance, is more appropriate for Development Consent Order schemes, than following the SPD.

Conflicts

11.27 In summary, the baseline and operational phase air quality assessment set out in the ES Chapter 5: Air Quality, is considered to be proportionate and adequately derived. **Further information is requested regarding the combined effects during the construction phase of construction vehicle flows and traffic management measures. In addition, NCC requests to be consulted with regard to a draft version of the air quality and dust management plan.**

11.28 The air quality assessment is considered to overall comply with the policy requirements of the 2014 version of the NPSNN. The updated version published in 2023 includes additional requirements such as the inclusion of potential air quality impacts at designated habitats and potential $PM_{2.5}$ impacts associated with the Scheme. The ES Chapter 5: Air Quality meets the overall requirements of the 2023 version of the NPSNN.

12. Geology and Soils

Baseline

12.1 The Applicant has assessed the likely significant effects on Geology and Soils for the A46 Newark Bypass Scheme as part of the Environmental Statement (ES).

Preliminary Sources Study Report

12.2 The Preliminary Sources Study Report (PSSR) includes baseline information summarised from a Landmark Envirocheck report (dated July 2018) which includes historical mapping, a geo-insight report and an enviro-insight report. The historical mapping of the site is dated up until 2018 with the most recent walkover undertaken in January 2021. The Applicant has reviewed additional reports on the existing available information on the Scheme from the Highways Agency (now known as National Highways) which include Geotechnical Data Management System Documents which are dated between 1978 and 2023.

12.3 A number of online sources have been used to establish the baseline conditions at the Scheme and are referenced within Section 9 of the PSSR. These sources have been used to identify the geology, coal mining history, hydrogeology, designated sites, history, agricultural land classification and unexploded ordnance. Using this data, the Applicant has identified potential sources, pathways and receptors of contamination from this data which is considered to be an appropriate and proportionate assessment of the Scheme.

12.4 **An assessment of more recent mapping and a walkover to assess any changes at the Scheme within the past three years would identify any changes to the site and ensure that the most up to date information to inform the CSM contamination sources, pathways and receptors that have been assessed in the risk assessment**.

12.5 It is that further ground investigation at the Scheme is undertaken to delineate point sources of contamination and produce an updated risk assessment for identified receptors and to determine possible geo-environmental constraints of the proposed route options and inform any required remediation.

Contamination Assessment

12.6 The PSSR included as Appendix 9.1 identifies the potential sources of contamination that may affect the Scheme and Section 7 includes a Preliminary Land Contamination Assessment conceptual site model. This assesses the risks to human health, controlled waters and property receptors from potential contamination associated with the previous development on-site including Made Ground highway infrastructure and a Chemical Manure manufacturing & malthouse. As well as off-site including Made Ground associated with previous developments and historical and present-day contaminative land uses.

12.7 Appendix 9.2 includes a Contaminated Land Risk Assessment which includes the same preliminary CSM as Appendix 9.1. Following a review of ground investigation data, a revised CSM is included as part of the assessment. The sources, pathways and receptors which have been identified within the CSM are reasonable given the nature of the site and given the baseline information identified by the Applicant. The CSM could account for unknown contamination and hotspots in unexplored areas of the site and the potential for construction

workers to come into contact with these. The assessment could include consideration for other sources of ground gases, although given the nature of the site, the risk is likely to be negligible, the probability and risk should still be assessed. On-site sources of ground gases could include the Made Ground and other sources could include consideration for alluvial deposits comprising organic layers such as peat that may be present beneath the site or in backfilled areas such as borrow pits. The impacts and risk ratings are proportionate to the severity and risk of the sources.

Agricultural Land Classification Report

12.8 Desk-based studies and fieldwork at the Scheme have been undertaken to establish the agricultural land classification (ALC) and anticipated geology at the Scheme. The spread of survey boreholes across the Scheme where reasonably practicable has been undertaken to provide an accurate classification of the land areas. Where data gaps are missing from the assessment and could not be surveyed, the Applicant has used Soil Survey England and Wales (SSEW) soils data to ensure a comprehensive assessment of the entire Scheme area has been undertaken. NCC has assessed the application and is of the opinion that the level of survey effort, methodology and desk-based research to categorise the ALC at the Scheme is proportionate and adequate for the current stage of the application.

Soil Nutrient Survey

12.9 A Soil Nutrient Survey has been undertaken to establish the baseline soil conditions at the Scheme as included in Appendix 9.4 to the ES. The analysis undertaken of soils at the Scheme identifies the pH, concentrations of available phosphorous, potassium, magnesium and soil organic matter (SOM). This data was used to identify areas of low fertility Topsoil, multipurpose Topsoil, and atypical nutrient profiles which informs the Soils Management Plan (SMP) to allow for appropriate soil management during the construction stage of the Scheme. A reasonable assessment has been undertaken by the Applicant and the report is in accordance with the Specification for Topsoil (British Standard BS3992) and Soils and Agri-environment Schemes: Interpretation of soils analysis (Natural England TIN036 guidance).

12.10 Overall, it is considered that the baseline is proportionate and adequate for the current stage of the application.

Environmental Statement

12.11 Chapter 9: Geology and Soils encompasses the three subtopics of soils, geology and contamination within the Scheme area. The review of baseline information has included site reconnaissance, topography, geological mapping, an Envirocheck insight report with historical mapping, designated sites review, geology, ground stability, hydrogeology, hydrology and assessment of previous ground investigations. This information is considered relevant to the assessment to provide an accurate ground model and to inform the risk assessment.

12.12 The Study Area used for Contaminated Land sources and sensitive receptors (including groundwater and surface waters) is 500m from the Order Limits. The Study Area for Geology and Soils is the Order Limits as these receptors are only likely to be impacted where the Scheme directly crosses them. The Study Area is considered suitable.

12.13 It is considered that the baseline assessment undertaken within Chapter: 9 Geology and Soils provides a proportionate and reasonably adequate estimate of the geology and soils that may be affected by the Scheme. However, some of the information is considered outdated and more up to date information would be required for the historical mapping and site reconnaissance to ensure an accurate conceptual site model for the Scheme in its current state.

12.14 A Risk Assessment of the likely significant effects of the construction stage of the scheme has been undertaken whereby the sensitivity (value) of receptors has been determined in accordance with the Design Manual for Roads and Bridges (DMRB) (LA 109 guidance) by

National Highways. Section 9.5 of Chapter 9: Geology and Soils follows the framework for assessing and managing the effects associated with geology and soils that the Scheme may have by identifying the magnitude of impact on receptors. The significance of effect from the receptor value and magnitude of impact has been assessed in line with DMRB LA 104 Environmental Assessment and Monitoring. The assessment has adopted a worst-case scenario approach to adequately account for all possible impacts. This assessment is considered appropriate for the nature of the Scheme and the DCO submission.

National and Local Policy

National Policy

12.15 Within Chapter 9: Geology and Soils, an assessment of compliance with the National Policy Statement for National Networks (NPSNN) that was current at the time of writing, published for consultation in March 2023, has been undertaken. NCC has assessed the compliance of the Scheme and its assessments in accordance with the latest NPSNN published in March 2024, as there have not been any substantive changes to policy relating Geology and Soils. Table 1 below sets out relevant paragraphs of the NPSNN (2024) and a statement setting out Nottinghamshire County Council's opinion as to whether the policy has been met or not. Based on the number of requirements relating to Geology and Soils within in the NPSNN, these are presented in a tabulated format.

12.16 The requirements of NPSNN 2014 are generally the same as those set out in NPSNN 2024 and therefore, a review against NPSNN 2014 has not be undertaken.

Table 1: Review of NPSNN 2024 policy in respect of Geology and Soils

NPSNN (2024)	Nottinghamshire County Council Review
Paragraph 4.45 sets out that planning systems and pollution control must both be considered within applications to ensure that developments protect and improve the natural environment as well as controlling the development and use of land in the public interest. This allows pollution prevention measures which limit the release of substances into the environment to the lowest practicable level and that environmental quality standards are met.	The Applicant has provided the baseline conditions and initial assessment of the Scheme in accordance with guidance and legislation to ensure appropriate control measures are in place to protect and improve the local environment.
Paragraph 4.46 states the following: *"Issues relating to discharges, emissions or abstractions from a proposed project which lead to other direct and indirect impacts on air quality, water quality and land quality, or which include noise, light and vibration, may be subject to separate regulation under the pollution control framework or other consenting and licensing regimes. Relevant permissions will need to be obtained for any activities within the development that are regulated under those regimes before the activities can be operated."*	The Applicant has identified any possible relevant discharge consents and abstractions on and within the Order Limits of the Scheme which may be impacted by the development. The potential impacts to water and land quality are discussed within Chapter 9: Geology and Soils in line with the appropriate guidance and legislation.
Paragraph 4.47 details that pollution from industrial installations will be controlled by the Environmental Permitting (England and Wales) Regulations 2016 (the Environmental Permitting Regulations). The Applicant is required to demonstrate that processes are in place to meet all relevant Environmental Permit requirements.	The Applicant has identified the existing Environmental Permit data relating to the Scheme within the Enviro Insights report. During the construction phase of the Scheme, the Applicant has identified that during excavations there is a risk from sediment run-off to controlled water receptors and dewatering activities which will require appropriate discharges. The Outline Materials Management Plan (MMP) identifies where environmental permits may be required for re-use of waste. The First Iteration Environmental Management Plan (FIEMP) details where discharges from the Scheme are required, appropriate environmental permits and consents would be obtained and followed. The Consents and Agreements Position Statement included in Appendix 3.3 details the consents are permits for the Scheme.
Paragraph 5.190 details that field surveys should be undertaken, if necessary, to establish the Agricultural Land Classification grades (ALC) to the current criteria at the time to identify soil types to inform soil management at the construction, operation and decommissioning phases in line with the Defra Construction Code. Applicants are encouraged to	This should be in-line with the ambition set out in the FIEMP for sustainable management of agricultural soils. An Outline SMP (Appendix 3.B to the FIEMP) has been produced by the Applicant. ALC surveys were undertaken at the site on behalf of the Applicant in 2021 and further surveys were undertaken in 2023 to fill data gaps. The area south of

NPSNN (2024)	Nottinghamshire County Council Review
develop and implement a Soil Resources and Management Plan which could help to use and manage soils sustainably and to minimise adverse impacts on soil health and land contamination.	Farndon was unable to be surveyed on both occasions due to access constraints and SSEW soils data was used to determine suitable soil management guidance for the Outline SMP. The ALC Report is included as Appendix 9.3. The Applicant has assessed the ALC of the land and identified the potential impacts to the soils within the construction and operation phases and the decommissioning phase is not required given the Scheme is to be a road.
Paragraph 5.43 states that – *"Biodiversity is the variety of life in all its forms and encompasses all species of plants and animals, the genetic diversity they contain and the complex ecosystems of which they are a part. Geological conservation relates to the sites that are designated for their geology and/or their geomorphological importance. The policy set out in the following sections recognises the need to protect and enhance biodiversity and geological conservation interests."* **Paragraph 5.45 states that** – *"The wide range of international and national legislative provisions impacting planning decisions affecting biodiversity and nature conservation issues are set out in the National Planning Policy Framework. The Natural Environment Planning Practice Guidance (NEPPG) document sets out good practice in England in relation to planning for biodiversity and geological conservation".* **Paragraph 5.47** – the applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests.	Within the assessment, the Applicant has reviewed sites of geological interest under European or UK Legislation. There are no sites located within the Scheme or the Order Limits. The Applicant is recommended to reference the NEPPG document to ensure that good practice is followed in relation to planning for biodiversity and geological conservation.
Paragraph 5.55 sets out that as a general principle and subject to specific policies, the development should first avoid significant harm to biodiversity and geological conservation interests including through mitigation and reasonable alternatives. Where harm cannot be avoided or mitigated, it should be compensated on-site before consideration is given to off-site.	Within Chapter 9: Geology and Soils, the Applicant describes the impacts required during the construction phase of the Scheme. Impacts include loss of BMV land, temporary removal of land from agriculture, deterioration of ALC from flooding due to soil reprofiling and deterioration of soil resources during construction and stockpiling, as well as impacts from contamination have been identified for groundwater and surface waters. There are not considered to be any effects of loss of agricultural land during the operational phase. The Outline SMP details the mitigation measures to minimise land loss to ALC graded land. A decommissioning phase is unlikely to be required due to the nature of the Scheme as a road.

NPSNN (2024)	Nottinghamshire County Council Review
	There are no designated or non-designated geological sites or features of interest within 500 m of the scheme.
Paragraph 5.51 states that – *"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."*	The Applicant identified the principal receptors of the Scheme within Table 9-8 of Chapter 9: Geology and Souls and statutory designations within Appendix 9.1. The current NSPNN includes the provision for irreplaceable habitats and areas prioritised for natures recovery in the relevant local nature recovery strategies to minimise the impact on the local area. The Applicant has identified that the construction works would result in the loss of ALC grade of 2 (very high sensitivity) land of 5.9 hectares. The Applicant highlights that this would be only a temporary loss and mitigation for this is highlighted in the Outline SMP, included as Appendix 3.B of the FIEMP (Ref. TR010065/APP/6.5).
Paragraph 5.56 sets out that the appropriate weight should be 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 natures recovery in the relevant local nature recovery strategies.	
Paragraph 5.57 sets out that advice must be sought from Natural England and/or the Marine Management Organisation and/or the Environment Agency as regards to any mitigation measures and whether these organisations will grant or refuse any relevant licenses or permits including protected species mitigation licenses.	The Applicant is encouraged to engage with Natural England and use their Letter of No Impediment (LONI) approach. The Applicant has stated that for the protection of surface waters '*Necessary consents and permits for activities such as discharging into surface water will be sought and details regarding these consents are detailed in the Scheme Consents and Agreements Position Statement (TR010065/APP/3.3). There is to be no uncontrolled discharges to surface water and/or groundwater*.' Natural England was consulted and gave their approval on the methodology for ALC surveys in March 2023. Consultation is currently being undertaken with the EA's Groundwater and Contaminated Land (GWCL) Officer as discussed within Section 9.4 of Chapter 9: Geology and Soils, it is understood the GWCL Officer will provide further comment regarding the known contamination hotspot and the risk to controlled waters once they

NPSNN (2024)	Nottinghamshire County Council Review
	have received the contaminated land risk assessment report. It is understood that this will be provided at a later date.
Paragraph 5.65 summarises that sites of regional and local biodiversity and geological interest include Local Geological Sites, Local Nature Reserves and Local Wildlife Sites, and Nature Improvement Areas. These are important for conservation, ecological networks and nature recovery. Development should not be refused based on harm to biodiversity and geological features of regional or local importance given the need for new infrastructure and the mitigation hierarchy shall apply.	The Applicant has identified that these sites of importance are not located on the Scheme or within the Order Limits.
Paragraphs 5.152 to 5.159 summarise the importance of considering land contamination and instability effects on the development and in the context of the surrounding area. The section also states that where possible, remediation should be undertaken to prevent issues to human health and controlled water receptors. To prevent the land being determined as contaminated land under Part IIA of the Environmental Protection Act 1990. The Applicant is required to consider land contamination and instability as part of the development proposal and prevent unacceptable risks. Advice should be sought and consultation undertaken if necessary to carry out appropriate assessment. Applicants are also required to carry out investigations in accordance with LCRM guidance to identify the risk to the site and identify sensitive receptors.	The Applicant has identified the potential sources of contamination and ground instability at the site and within the Order Limits and conducted risk assessments in accordance with LCRM guidance to identify the risks to the site and receptors. The Applicant states within Section 9.6.2 that if any previously unidentified contamination or unforeseen ground conditions are encountered then any required remediation will take place.
Paragraph 5.155 sets out that applicants should ensure and demonstrate that they have considered the risks posed by land contamination in accordance with the Land Contamination Risk Management (LCRM) Guidance. The Applicant should carry out a preliminary assessment of land contamination and/or ground instability at the earliest possible stage before a detailed DCO application is produced.	Appendices 9.1 and 9.2 to the ES include a Preliminary Sources Study Report and a Contaminated Land Risk Assessment in accordance with the LCRM assessment framework and guidance.
Paragraph 5.189 states that – *"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*	The recent NSPNN update highlights the importance of soil as a natural capital resource and to improve soils as well as minimising impacts and utilising mitigation and using Defra's Construction Code of Practice for the Sustainable Use of Soils on Construction Sites. As the first principle, the proposal should be on previously developed (brownfield) sites provided that it is not of high environmental value. The Applicant has highlighted

NPSNN (2024)	Nottinghamshire County Council Review
should also identify any effects, and seek to minimise impacts, on soil health and protect and improve soils, taking into account any mitigation measures proposed. Soil is an important natural capital resource, providing many essential services such as storing carbon (also known as a carbon sink), reducing the risk of flooding, providing wildlife habitats and delivering global food supplies. Guidance on sustainable soil management can be found in Defra's Construction Code of Practice for the Sustainable Use of Soils on Construction Sites. As a first principle, developments should be on previously developed (brownfield) sites provided that it is not of high environmental value (see paragraphs 5.152 to 5.159).”	that the total area of BMV land identified within the Order Limits (grades 2 and 3a) is 24.1 hectares, with 89.3 hectares of non-BMV land (grades 3b and 4 and other land). The Applicant has undertaken ALC surveys where reasonably practicable and has used reliable data sources to fill data gaps where required to grade the site in accordance with the ALC grading system. The Applicant has adopted the worst-case scenario for areas where the ALC is not available. The ALC Report is included as Appendix 9.3. The Outline SMP (Appendix 3.B to the FIEMP) is written in accordance with Defra’s Construction Code of Practice.
Paragraph 5.190 states that – *“The Agricultural Land Classification is the only approved system for grading agricultural quality in England and Wales. If necessary, field surveys should be used to establish the Agricultural Land Classification grades in accordance with the current grading criteria, or any successor to it and identify the soil types to inform soil management at the construction, operation and decommissioning phases in line with the Defra Construction Code. Applicants are encouraged to develop and implement a Soil Resources and Management Plan which could help to use and manage soils sustainably and minimise adverse impacts on soil health and potential land contamination. This is to be in line with the ambition set out in the Environmental Improvement Plan for sustainable management of agricultural soils.”*	
Paragraph 5.196 states that – *“Where a proposed development has an impact on a Mineral Safeguarding Area, the Secretary of State should ensure that the applicant has put forward appropriate mitigation measures to safeguard mineral resources.”*	The Applicant has undertaken appropriate research into available mining records within the PSSR and has identified that there are no known records of coal mining directly on the site. Non-coal mining activity was identified to the north-west of the Nottingham-Lincoln railway line and was determined to not be directly adjacent to the Scheme. Mineral Safeguarding areas are identified within Chapter 10: Material Assets and Waste.

NPSNN (2024)	Nottinghamshire County Council Review
Paragraph 5.192 states that – "*Applicants can avoid, or minimise, the direct effects of a project on the existing use of the proposed site or proposed uses near the site, by the application of good design principles, including the layout of the project and the protection of soils during construction"*. **Paragraph 5.202** details that economic and other benefits of the best and most versatile land should be accounted for and where significant development of agricultural land is necessary, areas of poorer quality should be preferred to those of higher quality.	The SMP, to be produced by the Applicant, will detail the protection of soils during construction and is considered appropriate mitigation to minimise impacts to soils or soil resources.

Local Policy

12.17 The local policies assessed which are pertinent to Chapter 9: Geology and Soils are as follows:

- Nottinghamshire County Council Nottinghamshire Minerals Local Plan (Adopted 2021);
- Nottinghamshire County Council (2013) Waste Core Strategy 2020;
- The Newark & Sherwood Local Development Framework Core Strategy (adopted 2019) Spatial Policy 3 – Rural Areas deals with agriculture, stressing the need to protect agriculture in developments within a rural setting; and
- Newark & Sherwood District Council's contaminated land strategy is in the process of being updated at the time of writing. The Newark & Sherwood District Council's website states that a link to the new contaminated land strategy will be provided once it is complete.

12.18 Table 2 provides a review of these local policies in respect of the Geology and Soils assessment and information provided as part of the Applicant's DCO application.

Table 2: Review of local planning policy in respect of Geology and Soils

Local Policy	Nottinghamshire County Council Review
Nottinghamshire County Council's Minerals Local Plan	
Development Management (DM) Policy 15 – Borrow Pits – The policy states that proposals for borrow pits will be supported where: *"a) They are adjacent to or close to the project/s they are intended to serve;* *b) They are time limited to the life of the project and material is to be used only for the specified project;* *c) They can be worked and reclaimed without any unacceptable environmental impacts;* *d) There are overriding environmental or other benefits compared to obtaining materials from alternative sources;* *e) Proposals provide for appropriate restoration measures which include full use of surplus spoil from the project."*	Within paragraph 9.11.2 of Chapter 9: Geology and Soils the Applicant details that borrow pits will be required during the construction phase of the Scheme. The Applicant has identified Borrow Pits within initial desk-top studies of the main Scheme area from provisional ALC mapping. The mapping similarly indicated that the main portion of the Farndon East and West Borrow Pits FCA consists of grade 3 land, with an area of grade 2 ('very good') in the northern extent. ALC surveys were undertaken throughout the main Scheme alignment and in both the Farndon East and West Borrow Pits FCA. The 2021 ALC survey was conducted by Atkins along the main Scheme alignment, with only minor coverage of the Farndon East and West Borrow Pits. The ALC survey conducted in 2023 (undertaken by Skanska Mott MacDonald) found the Farndon East and West Borrow Pits FCA to consist of grade 3b (35.9 hectares, 84%), 4 (6.0 hectares, 14%) and non-agricultural (0.7 hectares, 2%).
DM3: Agricultural Land and Soil Quality – The policy states that proposals that where alternative options are limited to varying grades of best and most versatile land (BMV), the development should be located within the lowest grade. The policy also states that measures will be taken to ensure that soil quality will be adequately protected and maintained throughout the life of the development and in particular during stripping, storage, management and final placement of soils, subsoils and overburden arising's as a result of site operations.	The Applicant has identified the ALC of the Scheme and the effects on BMV land which would arise from the Scheme construction. Mitigation measures within the Outline SMP (included as Appendix 3.B to the FIEMP) include design to minimise the area of land lost and to minimise loss of soil function as a resource. The Applicant has identified how the soil quality will be maintained and is detailed within the Outline SMP (included as Appendix 3.B to the FIEMP). This report accounts for pre-construction planning, soil handling constraints, appropriate weather and ground conditions, soil stripping for topsoil and sub-soil, stockpiling including formation and maintenance, soil reinstatement and reuse, soil placement and aftercare and monitoring. The consideration to ensure that soil quality will be adequately protected and maintained is considered to be adequate.

DM4 - Protection and Enhancement of Biodiversity and Geodiversity – The policy states that where impacts on designated sites of priority habitats or species cannot be avoided, the following applies:	The Applicant has identified designated and non-designated sites which are of geological and biological interest such as Special Areas of Conservation, Special Protection Areas and RAMSAR sites.
" a) In the case of European sites, mitigation must be secured which will ensure that there would be no adverse effect on the integrity of the site(s). Where mitigation is not possible and the applicant relies upon imperative reasons of overriding public interest, the Council will need to be satisfied that any necessary compensatory measures can be secured.	The Applicant has assessed the impact to designated sites and receptors within the PSSR and CSMs where necessary and identified where mitigation measures are required if appropriate.
b) In all other cases, adequate mitigation relative to the scale of the impact and the importance of the resource must be put in place, with compensation measures secured as a last resort."	

Waste Core Strategy

SO2 Care for our environment – protect our landscape, countryside, wildlife and valuable habitats from harmful development and make the most of opportunities to enhance existing open space and provide new habitats. Protect water, soil, and air quality across the county. Protect our heritage assets and their settings, including archaeological remains and protect the character of our townscapes.	The Applicant has assessed the proximity to sites of importance for nature conservation, landscape, open space and cultural heritage within the local area to assess the impacts that the Scheme may have on these within the ES. The Scheme involves widening the current A46 road and so utilises existing infrastructure.

Newark & Sherwood Local Development Framework Core Strategy (adopted 2019)

Paragraph 5.63 highlights the Natural England designated sites which the District Council is required to protect for nature and geological conservation on local, national and international scales.	The Applicant identifies the designated sites which are on or within the vicinity of the Scheme within Appendix 9.1. The Applicant did asses**s** the impacts to Local Nature Reserves (LNRs), Sites of Interest in Nature Conservation and Conservation Areas within the Order Limits of the Scheme as shown on the Policies Map as part of the Newark and Sherwood Local Plan. The Farndon Ponds and Devon Park Pastures LNRs and Conservation Areas are present at Farndon and Newark within the 500 m buffer of the Order Limits. This ensures that the application protects nature and geological conservation on a local level.
Policy 12 for Biodiversity Infrastructure states that the District Council will expect proposals to take into account the need for the continued protection of ecological, biological and geological assets of the District	Continued protection of geological assets by using the existing road and brownfield land and lower ALC grades where possible should be

with particular regard to sites of international, national and local significance. The District will also seek to secure development that maximises the opportunities to conserve, enhance and restore biodiversity and geological diversity. Provide Suitable Alternative Natural Green Space to reduce visitor pressure on the District's ecological, biological and geological assets, particularly in the Newark area.

undertaken. No Regionally Important Geological Sites (RIGS) have been identified as part of the assessment within 500m of the Scheme.

Newark & Sherwood District Council's contaminated land strategy – Development on land Affected by Contamination (July 2023)

The Development of Land Affected by Contamination guidance by the Yorkshire and Lincolnshire Pollution Advisory Group specifies what information should be submitted to the Local Planning Authority in accordance with LCRM best practice. The guidance explains the requirement for a Preliminary Risk Assessment, Site Investigation and Risk Assessment, Remediation Strategy if required and subsequent Verification reporting.

The Applicant has provided the Preliminary Risk Assessment as the Preliminary Sources Study Report and the Contaminated Land Risk Assessment included as Appendix 9.1 and 9.2 in line with LCRM guidance. Chapter 9: Geology and Soils states in Section 9.12.4 that if contaminated land or groundwaters are encountered which have not been previously identified within the ES if required, a remediation strategy including a programme for the remedial measures will be provided and carried out once approved by the EA and relevant planning authority.

Potential Conflicts

12.19 Based on the review of Chapter 9: Geology and Soils and associated appendices, Nottinghamshire County Council note that baseline data has been relied upon from the Envirocheck Report that was obtained in 2018 and a site reconnaissance was undertaken in 2021. The data used in the baseline is generally old and it may be worthwhile updating this data. However, it is not anticipated to have changed significantly based on the rural nature of the site area.

13. Climate Change

Baseline

Summary of Scheme derived Greenhouse Gas emissions

13.1 The construction stage of the Scheme would have an adverse effect on the climate as it would give rise to emissions from material production, transportation to the site and onsite construction activities. This would have the effect of releasing an additional 143,887 tCO_2e into the atmosphere:

- Product stage (A1-A3): 95,176 tCO_2e;
- Construction processes - transport to the site (A4): 30,001 tCO_2e; and
- Construction processes – construction and installation (A5): 18,710 tCO_2e.

13.2 The operational stage of the Scheme would give rise to emissions from road users and operational energy use. During the opening and design years, the Scheme will cause an increase in road user emissions of 7,995 tCO_2e and 8,828 tCO_2e respectively.

13.3 Overall, the Scheme is likely to contribute 226,479 tCO_2e to the UK's Carbon Budgets across the period 2023-37, compared with the Do-Minimum scenario. The assessment has identified that the emissions arising as a result of the Scheme represent less than 0.007% of the total emissions in any 5-year UK legally binding carbon budget during which they would arise.

13.4 Nottinghamshire County Council has set internal carbon reduction targets, but these do not apply to road transport emissions emitted by users of the County's highway network; they apply to the Council's daily activities only. In addition, Nottinghamshire County Council does not have its own carbon budget.

Vulnerability of the Scheme to Climate Change

13.5 Chapter 14 outlines that there are a number of climatic variables (i.e. severe weather events, increased frequency of dry spells and heavy precipitation, increased average temperature and heatwaves) that may cause the Scheme to be vulnerable to climate change.

Summary of Legislative and Policy Framework Review

13.6 In Chapter 14, Section 14.3 Legislative and Policy Framework, the following policies and legislations were reviewed and summarised:

- United Nations Framework Convention on Climate Change (UNFCCC).
- Kyoto Protocol (1997).
- Paris Agreement (2015).
- Climate Change Act (2008).

- National Policy Statement for National Networks (NPSNN) (2023 draft for consultation).
- Department for Transport: Decarbonising Transport – setting the challenge (2020).
- Department for Transport: Highways England (now National Highways): Licence – Secretary of State for Transport statutory directions and guidance to the strategic highways company (2015).
- Ten Point Plan for a Green Industrial Revolution.
- Net Zero Strategy: Build Back Greener.
- 25 Year Environment Plan.
- Newark-on-Trent and Sherwood Local Development Framework Core Strategy Development Plan (amended 2019).
- National Highways Net Zero (2021).
- National Highways: Preparing for climate change on the strategic road network – third adaptation report under the Climate Change Act (2022).
- National Highways: Strategic Business Plan 2020-2025 (2020).

Guidance

13.7 The assessment was conducted in line with the following guidance:

- Design Manual for Roads and Bridges (DMRB) LA114 Climate.
- British Standards Institution (BSI) Publicly Available Specification (PAS) 2080 – Carbon management in infrastructure in 2016.
- Institute of Environmental Management & Assessment (IEMA) Guide: Assessing Greenhouse Gas Emissions and Evaluating their Significance 2nd Edition (2022).
- IEMA Environmental Impact Assessment Guide to: Climate Change Resilience & Adaptation (2020).

Mitigation and Enhancement

13.8 Paragraph 5.34 of the NPSNN (2024) 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” To effectively manage and mitigate the effects that the development will have on climate change, paragraph 14.10.3 (of Chapter14: Climate) states that a carbon management process (aligned to PAS2080) was followed for the design (as referred to in paragraph 5.34 of the NPSNN), and paragraph 14.10.10 states that a construction carbon management system will be developed by the contractor. These are deemed adequate and fulfil the requirements of the National Highways Net Zero Plan and the NPSNN, which requires that an accredited carbon management system be in place.

13.9 Mitigation measures have been set in place to support the resilience of the Scheme to climate change. These are described in Paragraphs 14.10.14 to 14.10.22 and follow the design principles and mitigation hierarchy outlined in DMRB LA 114 Climate.

13.10 Details on how the mitigation measures will be secured within the draft DCO are provided in Chapter 4: Environmental Assessment Methodology of the ES.

13.11 No enhancement measures have been identified for the effects of the Scheme on the climate, or the vulnerability of the Scheme to climate change. As detailed above, mitigation measures have been considered to minimise the effects of the Scheme on the climate, and enhancement measures for the resilience of the Scheme to climate change will be considered further as part of the detailed design of the Scheme.

Conflicts

Policy related Concerns

13.12 Chapter: 14 Climate assessed the impacts of the Scheme in compliance with the NPSNN that was current at the time of writing and published for consultation in March 2023. Noting that the updated NPSNN is now published, the assessment should be updated to reflect the updated 2024 NPSNN, such as:

- Paragraphs 14.3.12 to 14.3.21 of Chapter: 14 Climate are part of the National Policy Review Section and provide a summary review of the 2014 NPSNN; this should be updated to reflect the 2024 NPSNN update.
- Paragraph 14.11.10 of Chapter: 14 Climate states that in line with the NPSNN, an assessment of the Scheme's GHG emissions impact should be undertaken against the UK carbon budgets, even though it is very unlikely that a road project, in isolation, would affect the ability of the government to meet its carbon reduction plans. This vision is no longer supported by the 2024 updated version of the NPSNN, and therefore it should be updated.
- The 2024 update to the NPSNN emphasises the need for a robust mitigation strategy, to support carbon reduction where possible, and offset or remove any residual carbon emissions, stating that the applicant should take all reasonable steps to reduce the total carbon emissions at all stages of development. Chapter: 14 Climate does not currently mention whether or not offsets or removals were considered as part of the mitigation strategy.

13.13 As per the recommended best practice, Chapter: 14 Climate conducted the assessment in line with PAS2080. However, Chapter: 14 Climate references the 2016 revision of the guidance, which was superseded last year with the launch of PAS 2080:2023. The assessment should be updated and reference the current version of PAS2080.

13.14 Chapter: 14 Climate references that Leicester City Council, Leicestershire County Council and Nottingham City Council have pledged to bring their council emissions to net zero by 2030. However, **there is no mention of the Nottinghamshire County Council Net Zero Framework, which states that they aligned with the national government's 2050 net zero target. The Framework also states that NCC is committed to decarbonising transport and its infrastructure and supporting low carbon mobility, which Chapter: 14 Climate should acknowledge**.

13.15 There is a lack of reference to, and acknowledgement of, the Government's strategic priorities of reducing emissions, and increasing modal shift to active travel. Segregated cycling routes along the stretch of the Scheme, would contribute to creating a network of cycleways and footways that would encourage active travel and reduce the reliance on vehicle use.

13.16 The National Highways Net Zero Plan states that to enable them to reach their net zero target by 2040, they have set interim targets, including a trajectory to reduce their construction emissions of 0-10% by 2025 and 40-50% by 2030. The Scheme will directly affect the maintenance and construction emissions of National Highways, and it is not clear how the Scheme will align with it.

Assessment related Concerns

13.17 The extent of the projected uptake of lower carbon fuels, electric vehicles (EVs) and improved vehicle technology since the UK Government announced the move to end the sale of new petrol and diesel cars by 2030 is not currently fully captured in the modelling scenarios of future road traffic emissions. This means that the assessment is likely to lead to an overestimation of operational emissions and not provide a true picture of the likely impact.

13.18 The assessment does not appear to mention electric vehicle charging infrastructure, which seems like a missed opportunity. **Every opportunity should be explored to see if there is any possibility to support additional EV infrastructure along the corridor, to actively seek to address the increase in road user carbon that is predicted.**

13.19 Chapter: 14 Climate references the fact that measures around habitat creation for carbon sequestration will be included as part of the detailed design where feasible. **It would be beneficial if these measures were secured at this stage to guarantee their implementation and allow for the estimation of the associated carbon benefits**.

13.20 The in-combination assessment does not include an analysis of the impact of climate change on air quality. Vehicle emissions will be intensified as hotter summers will increase the formation of ground-level ozone, which is a dangerous air pollutant.

13.21 Chapter: 14 Climate mentions that a "carbon management process" was followed during the design, however, **it is unclear if this means that a carbon management plan was developed and implemented for the design phase of the project**. NPSNN 2024 states at paragraph 5.35 that *"a carbon management plan should be produced as part of the Development Consent Order submission"*, with emphasis on this being provided as part of the DCO submission. It is noted that the Applicant has committed to construction Carbon Management Plan being provided as part of the Second Iteration Environmental Management Plan (paragraph 14.10.10 of Chapter 14).

Summary

13.22 In summary, the baseline and assessment set out in Chapter 14: Climate, is considered to be proportionate and adequately derived. However, a few matters require further clarification:

- There is no mention of the NCC Net Zero Framework, Chapter 14: Climate should acknowledge the Framework.
- It would be beneficial if carbon sequestration measures, such as habitat creation, were secured at this stage to guarantee their implementation and allow for estimation of the associated carbon benefits.
- It is unclear if a Carbon Management Plan was developed and implemented for the design phase of the project, noting that NPSNN 2024 requires this to be provided as part of the DCO submission. Nottinghamshire County Council request that the Carbon Management Plan is provided for review.