

West Northamptonshire **Integrated Impact Assessment**

Local Transport Plan

West Northamptonshire Council

July 2024

Version 2

West Northamptonshire Local Transport Plan
Integrated Impact Assessment

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Non Technical Summary

An Integrated Impact Assessment (IIA) has been undertaken as part of the Local Transport Plan (LTP) for West Northamptonshire. The IIA combines several sustainability appraisal processes, so that environmental and social impacts are identified and mitigated. The results of the assessment of the 16 LTP policies and 68 interventions (for example new projects) are summarised below.

Natural Capital: Natural capital refers to the elements of the natural environment which provide valuable goods and services to people (also known as ecosystem services). It is an overarching theme across the IIA as it is fundamental to health, biodiversity, landscape, air quality, water, climate change, communities and other topics considered in the assessment.

Biodiversity: LTP Policy 10 on biodiversity and access to nature is predicted to have significant positive effects. Several policies and interventions relating to active travel also provide opportunities for nature recovery and to enhance green/blue corridors. There were twelve interventions with precautionary negative effects, included new highway or rail infrastructure, where there was potential for habitat loss and biodiversity net gain would be required. There were mixed (positive and negative) and uncertain effects where policies had potential to reduce indirect effects from traffic, such as air pollution, but depending on implementation may also cause habitat loss and fragmentation. The Habitats Regulations Assessment Screening exercise identified potential impact pathways on the Upper Nene Valley Gravel Pits SPA and Ramsar Site from Policy 6 (from disturbance), and several interventions, for example through hydrological connectivity, run-off, lighting and noise, Policy 10F prevents adverse effects on site integrity and further HRA is being undertaken to support this.

Landscape and townscape: In addition to significant positive effects from Policy 10, there were also positive effects from policies which enhanced the public realm and included greening of transport assets and drainage systems. Transport interventions were also predicted to have positive effects, for example where they reduced traffic in town centres or provided opportunities for active travel and new green infrastructure. Precautionary negative effects were predicted where limited new infrastructure could lead to loss of vegetation with minor effects on landscape or visual amenity. There were mixed and uncertain effects where policies had potential to reduce traffic and congestion, but depending on implementation, may also cause loss of greenfield land.

Historic environment: Policy 10 on Biodiversity had significant positive effects, as this can also benefit access to and setting of heritage assets, including historic landscapes. Policies and interventions which reduce traffic and air pollution improve the setting of Conservation Areas, Listed Buildings and Scheduled Monuments; active travel routes are also likely to improve setting and enjoyment of heritage. Precautionary negative effects were predicted where limited new infrastructure may have effects on unknown archaeology or are in proximity to designated assets. There were mixed and uncertain effects where policies had potential to reduce traffic and congestion in town centres but, depending on design, may impact setting of heritage or unknown archaeology.

Land, soils and water resources: Policy 10 on Biodiversity was predicted to have significant positive effects as it supports creation and enhancement of green/blue infrastructure, providing opportunities to improve quality of surfacewater and soils. Other policies and interventions were predicted to have positive effects, where they make best use of existing infrastructure (e.g. repurposing highway lanes, increase capacity of public transport) as these protect land and soil resources, or reduce pollution and improve drainage. There were negative and uncertain effects where there is potential for small-scale land take for delivery of some interventions. Mixed effects were identified for policies where brownfield land is likely to be utilised, but there is also potential for new sources of pollution or land-take.

Climate change mitigation: Policies and interventions had potential for significant positive effects where they promote or deliver sustainable transport modes (cycling, walking, bus, rail or mobility hubs), four policies and 27 interventions were assessed to be significant. Six interventions associated with highway works were predicted to have precautionary negative effects at this stage, as reduced congestion may induce some additional traffic.

Flooding and climate resilience: Three policies were predicted to have significant positive effects, due to improving design, contingency planning or improved drainage. Policies and interventions were also predicted to have positive effects where they provide alternative transport or information in climate events and provide measures such as green infrastructure, providing a cooling effect and improved urban drainage. Interventions had potential negative effects, due to the likely location or drainage to Flood Zones 2 or 3 from fluvial flooding, or at medium to high risk of flooding from surface water. Many of these effects were uncertain, due to lack of further design.

Air and noise pollution: Five policies and 27 interventions which promote alternative modes of transport to the private car, have potential for significant positive effects on air quality. Positive effects were also predicted for interventions where better vegetation screening or management of freight movements can reduce air and noise. One policy and eight interventions potentially had mixed effects where highway improvements ease congestion and build-up of emissions but may also induce traffic.

Communities: The majority of policies and interventions were predicted to have significant positive effects, where they promote a sense of place, different modes of transport or digital connectivity to urban centres, including from rural areas. These provide access to jobs and education, including opportunities outside West Northamptonshire. The remainder had positive effects including policies for biodiversity, safety and maintenance as they improve public realm, providing a sense of place, access and support communities at a small-scale (e.g. ticketing, bike shares, junction improvements).

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Health and wellbeing: Five policies and 18 interventions were predicted to have significant positive effects, where they support West Northamptonshire health outcomes related to safety when out and about; connections to family and friends; a clean and green local environment; opportunities to be fit and well. These include those that reduce air pollution, reduce social isolation, improve safety, or increase active travel with associated mental and physical health benefits. Ten other policies and 47 interventions also have similar positive effects, but likely to be at a smaller scale, for example through walking to public transport connections. A Health Impact Assessment has also been undertaken for the LTP.

Equalities: Significant positive effects were predicted where policies and interventions improved access to health care, personal security and traffic safety for vulnerable groups, or supported people with reduced mobility or don't drive. There were also positive effects for interventions including improved provision of information, ticketing, rural active travel networks and mobility hubs. There were benefits for the following equalities groups: age, disability, pregnancy and maternity, gender reassignment, sex, sexual orientation and socio-economic deprivation. An Equality Impact Assessment has also been undertaken for the LTP.

1. Introduction

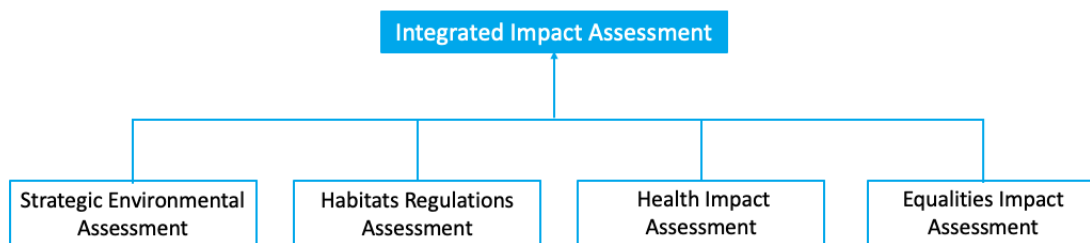
West Northamptonshire Council was formed in April 2021 merging three local authorities – Daventry District, Northampton Borough and South Northamptonshire Councils. The Local Transport Plan (LTP) for West Northamptonshire will be the Council's first and will cover its full region of responsibility.

An Integrated Impact Assessment (IIA) has been undertaken as part of the LTP development. IIA combines several sustainability appraisal processes, so that environmental and social impacts are identified and mitigated.

Integrated Impact Assessment

The components of the IIA process are set out in Figure 1.1 below and each process is then briefly described.

Figure 1.1 Processes within Integrated Impact Assessment



A diagram of Integrated Impact Assessment processes

Strategic Environmental Assessment (SEA)

SEA is used to describe the application of environmental assessment to plans and programmes in accordance with the "Environmental Assessment of Plans and Programmes Regulations" (SI 2004/1633, known as the SEA Regulations). The SEA Regulations place an obligation on local authorities to undertake SEA for certain plans and programmes which are likely to have significant effects on the environment, this usually applies to Local Transport Plans.

Habitats Regulations Assessment

HRA is undertaken under the Conservation of Habitats and Species Regulations 2017¹ (SI 2017/1012, known as the Habitats Regulations) for plans or projects which are not directly connected to the management of the site and would be likely to have a significant effect on a European Site designated for nature conservation, either alone or in combination with other plans. These comprise Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites.

¹ Updated by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

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Health Impact Assessment (HIA)

Health Impact Assessment is a process to identify the likely health effects of plans, policies or projects and to implement measures to avoid negative impacts and / or promote opportunities to maximise the benefits. A HIA is not a statutory requirement, however, Planning Practice Guidance² states that planning can create environments that support and encourage healthy lifestyles and that a HIA is a useful tool when there are expected to be significant impacts.

Equalities Impact Assessment (EqIA)

EqIA is undertaken under the Equality Act 2010 to ensure that plans, policies or projects do not discriminate or disadvantage people. It applies to people with the following 'personal protected characteristics': age, disability, gender, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, and sexual orientation. Income is often included within EqIA as an additional consideration.

Purpose of this Report

This report represents the IIA, in accordance with the SEA Regulations and best practice³. It documents the SEA process, as well as drawing on the results of the HIA, EqIA and HRA.

² Ministry of Housing, Communities and Local Government, 2019, Guidance – Healthy and Safe Communities. <https://www.gov.uk/guidance/health-and-wellbeing>

³ Government guidance on Strategic Environmental Assessment and Sustainability Appraisal available at: <https://www.gov.uk/guidance/strategic-environmental-assessment-and-sustainability-appraisal>

2. The Proposed Local Transport Plan

The vision and objectives for the LTP were shaped by stakeholders, officers, and elected members since early 2024. The Vision is set out below:

West Northamptonshire has moved rapidly to achieve a net zero emissions transport system by 2045. Working together with our communities we have made travel by active modes like walking and cycling the natural first choice for short trips, travel by public transport has become increasingly attractive and accessible, and communities are less dependent on private cars.

Our transport system is both safer and cleaner, benefitting our health and the environment, and supporting the access needs of everyone in our community to foster social inclusion and wellbeing. More resilient infrastructure and services increase opportunities for people to live their best lives by facilitating vibrant town and local centres, and a thriving local economy.

The Vision is supported by six objectives:

1. Improve the accessibility of the public transport, walking and cycling networks, to promote a system that is fair and provides attractive travel alternatives to key destinations.
2. Create thriving communities through local investment in a more resilient transport network, services and the public realm in urban and rural towns and villages across West Northamptonshire.
3. Improving road safety and reducing pollution, while expanding active travel networks and supporting infrastructure that facilitates public health outcomes.
4. Enhance local environments and further reduce carbon emissions from transport by investing in low carbon and electric modes, without compromising local heritage.
5. Reducing inequalities through better transport connections to key employment and education opportunities, to support local socio-economic growth.
6. Maximise the benefits to communities and businesses through use of technology and innovation.

The LTP comprises 16 Policies, with supporting policy measures. These have been developed through stakeholders groups, in addition to input from the IIA.

A summary of the policies is presented below:

- **Policy 1: Sustainable Transport Hierarchy** - *This policy provides the approach West Northamptonshire will take going forward to the consideration of different modes of travel and the interchange and integration between them.*
- **Policy 2: Connected and Accessible Networks** - *This policy seeks to ensure West Northamptonshire benefits from a more efficient and connected transport system consisting of networks across all modes, for all people, and kinds of journey.*
- **Policy 3: Improvement Interchanges and Mobility Hubs**- *This policy supports better integration between specific modes, routes and services at key strategic locations to create more seamless travel and transfers for journeys involving multiple stages or modes of travel.*

- **Policy 4: Bus, Coach and Mass Transit** - *This policy drives the protection of existing bus and coach services across the Council area while seeking to improve availability and service levels to increase reliability, uptake and use.*
- **Policy 5: Rail Services and Stations** - *This policy sets out our ambitions for railway services on existing routes and those under development, as well as existing and new railway stations benefiting West Northamptonshire.*
- **Policy 6: Active Travel Network** - *This policy helps unlock the individual and public health benefits available by removing barriers to more people choosing to walk, wheel, cycle, scoot or ride for all or part of their journeys*
- **Policy 7: Network Operations and Maintenance** - *This policy aids the effective operation of all modes across the Council area and wider region through leading approaches to maintenance of our roads, cycles routes, public rights of way and footpath*
- **Policy 8: Road and Transport Safety** - *This policy takes a proactive and integrated approach to avoiding and reducing the actual and perceived impact of motor vehicles, collisions between users and violence on public transport, on the safety and lives of individuals and families*
- **Policy 9: Climate Change Mitigation and Adaptation** - *This policy reiterates our goal to achieve net zero by 2045 while ensuring infrastructure and services are resilient against the increased severity and frequency of severe weather events*
- **Policy 10: Biodiversity and Access to Nature** - *This policy recognises the inherent value of our natural environment and its benefits to the wider community while seeking to increase biodiversity and individual access to nature*
- **Policy 11: Air and Noise Pollution** - *This policy reinforces our commitments to reducing air and noise pollution, particularly in known problem areas where negative impacts on communities are the greatest*
- **Policy 12: Reducing Isolation and Improving Rural Access** - *This policy seeks to ensure everyone has access to the benefits of available and affordable transportation options, reducing the negative impacts of dependency on any single mode.*
- **Policy 13: Supporting Business and Freight Movements** - *This policy acknowledges the unique transport needs of businesses and supports the more efficient movement of goods as well as the region's leading role in the logistics sector.*

- **Policy 14: Sustainable Developments and Embracing of Technology** - *This policy ensures transport planning is fully integrated with land use and development planning, and that all of these are prepared for and can benefit from the latest technologies.*
- **Policy 15: Shared and On-Demand Mobility Options** - *This policy sets out how shared and on-demand transport options can best be developed, supported, and monitored to complement fixed route and regular timetabled services.*
- **Policy 16: Community Engagement and Collaboration** - *This policy puts communities at the heart of our decision making, giving more opportunities to be involved in the development and operation of transport infrastructure and services.*

The LTP also includes 64 short term transport interventions, examples include:

- **Bus Service improvements and enhancements** – The programme covering bus priority measures and improving connectivity to serve employment hubs, rural areas and rail stations for a more integrated public transport network. Focus on improving journey time and service reliability, as well as enhancing existing services and infrastructure. Reinforced by the Council's Bus Service Improvement Plan and vision to provide attractive and accessible bus services.
- **Northampton Bus and Coach Station Upgrade and Integration** – An enhanced bus station and coach facility in Northampton town centre to accommodate additional services, provide enhanced amenities for customers, and improved connectivity and wayfinding with Northampton Railway Station.
- **A45 Junction upgrades** – Upgrades at Queen Eleanor Interchange, Brackmills and the Great Billing Interchange form part of the Northampton Growth Management Scheme, a joint project between the Council and National Highways to improve junctions along the A45 between M1 Junction 15 and the Great Billing Interchange. These upgrades will help to resolve network congestion and improve journey reliability.
- **A43 Dualling Phase 3 to Holcot/Sywell Junction** – Following on the delivery of Phase 1 and 2, Phase 3 will contribute to relieved congestion hotspots, reduced journey time delay and improved road safety.
- **Mobility Hubs** – Bring modes together in strategic locations and support frictionless transfers. There are planned interventions to deliver these in Brackley, Towcester and Silverstone that help to better integrate existing and planned public transport and active travel networks.
- **Local Cycling and Walking Infrastructure Plans** – A detailed strategic approach to identifying cycling and walking improvements at a local level, benefitting key urban towns and their surrounding areas. A network plan will identify preferred routes and a prioritised programme of infrastructure improvements for future investments.

- **Measures to support decarbonisation of the traffic, bus and freight** – Targeted at reducing emissions from transport, and supporting the transition to electric vehicles, bicycles, vans and low emission buses. These support movements of people and goods, cleaner air quality and will help West Northamptonshire to meet their net zero targets.

Some of the interventions will be delivered by other bodies such as Network Rail and National Highways, for example new rail services (Northampton Loop), stations (e.g. South Northampton, Weeden Bec) and trunk road infrastructure (A43/A5 Towcester Roundabout Improvements).

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3. Methodology

The IIA methodology, tends to be driven by the SEA process and other sustainability assessments are incorporated into this. SEA is an iterative process of gathering data and evidence, assessment of environmental effects, developing mitigation measures and making recommendations to refine plans or programmes in view of the predicted environmental effects.

The approach adopted for the SEA of the LTP follows Government Guidance and meets the requirements of the SEA Regulations. It involves the development of an assessment framework comprising a series of sustainability objectives and assessment criteria. This framework is developed from an understanding of environmental issues and opportunities identified through a review of existing baseline information and other plans, programmes and environmental protection objectives relevant to the plan area.

Stage A: Scoping

Consultation on the scope of the IIA was undertaken via a Scoping Report issued in February 2024 to the statutory bodies. These comprise the Environment Agency, Historic England and Natural England, a summary of responses is presented in Appendix A.

Stage B: Assessment

The use of objectives is not a requirement of the SEA Regulations, but their use is a recognised method of assessing the effects of a plan. The objectives are focused on the issues and opportunities for the LTP. Each sustainability objective is supported by guide questions, which are intended to provide more direction and focus to the sustainability objectives. The IIA Framework for assessment is presented in Table 3-1. It was developed at the scoping stage and updated following the scoping consultation.

Table 3-1: IIA Framework for the LTP

Sustainability Topic	Objective	Guide questions - Will the policy or intervention...:
Biodiversity	1. Protect and enhance biodiversity and priority areas for natural capital.	Have an effect on designated sites for nature conservation? Have a potential effect on habitats or species, including severance, fragmentation and disturbance? Provide opportunities to support strategic green infrastructure corridors or projects in West Northamptonshire?
Landscape and townscape	2. Protect and enhance character and distinctiveness of landscapes and townscapes.	Have an effect on local landscape or townscape quality and character and visual amenity? Protect and enhance West Northamptonshire’s green infrastructure corridors and public realm, including strategic sustainable movement network?
Historic Environment	3. Protect and enhance the historic environment.	Have an effect on designated heritage assets and their settings? Have an effect on the historic environment, including non-designated and unknown assets? Improve access to the historic environment?

Sustainability Topic	Objective	Guide questions - Will the policy or intervention...:
Land, soil and water resources	4. Protect soil, land and water quality and resources.	<p>Make best use of existing transport assets to reduce impact on land and soils?</p> <p>Avoid loss of mineral resources and soils, particularly BMV agricultural land?</p> <p>Increase pollution, run-off or modification of surface and groundwater resources?</p> <p>Provide opportunities for ecosystem services related land, soils and water resources?</p>
Climate change mitigation	5. Deliver climate change mitigation through reduction in transport related CO2 emissions.	<p>Promote sustainable transport – public transport, walking and cycling?</p> <p>Use technology such as digital or low carbon energy sources?</p> <p>Reduce the need to travel and improve connectivity via non-vehicular transport modes?</p>
Flood risk and climate resilience	6. Avoid or reduce flood risk and support resilience of transport to the potential effects of climate change.	<p>Avoid areas of flood risk including adaptation of existing network?</p> <p>Adapt to changes in climate such as more extreme weather events, precipitation and temperatures?</p> <p>Provide opportunities to improve resilience through green/blue infrastructure?</p>
Air quality and noise	7. Reduce transport related air pollution and noise.	<p>Reduce emissions to air, particularly nitrogen oxides and fine particulate matter?</p> <p>Reduce noise?</p> <p>Provide opportunities for natural capital that provides air quality and noise regulation, for example, planting?</p>
Communities	8. Promote a sense of place and well-connected communities.	<p>Provide access to employment and services for existing and future residents?</p> <p>Support a sense of place and community hubs?</p> <p>Promote social and community interaction through active travel and public transport?</p>
Health and wellbeing	9. Improve health and wellbeing of residents.	<p>Provide active travel and strategic sustainable movement network?</p> <p>Increase personal and road safety?</p> <p>Promote West Northamptonshire's health and wellbeing outcomes? (HIA)</p>
Equalities	10. Promote equality of access to transport.	<p>Provide access to people, including people with disabilities, reduced mobility, different ages, social and cultural backgrounds? (EqIA)</p>

The assessment of the LTP under some of the objectives above is also informed by other IIA processes:

- Objective 1 on biodiversity has been informed by the HRA.
- Objective 10 on health and well-being has been informed by the HIA.
- Objective 11 on equalities has been informed by the EqIA.

The IIA Framework has been used to assess the emerging policies, interventions, including different options, for the LTP (Chapter 5 and Appendix B). Where any significant or uncertain effects are identified, mitigation and monitoring has been proposed (Chapter 6 of this report).

Stages C & D: Reporting and Consultation

This report sets out the results of the IIA and constitutes the Environmental Report under the SEA Regulations. The IIA accompanies the Draft LTP for public consultation.

A Statement will be prepared following the consultation period to summarise how responses to consultation and the results of the IIA has influenced the development of the LTP.

Stage E: Monitoring

Chapter 6 of this report sets out recommendations for mitigation and monitoring the environmental effects of implementing the LTP. A monitoring and evaluation plan will be developed for the LTP following consultation and will also include sustainability aspects.

Limitations and Assumptions

The LTP will apply to the plan period 2024-2045. The project interventions are at various stages of development including early feasibility studies (e.g. Northampton Future Mass Transit Options Assessment) and depending on the outcome, will be delivered in the longer term. Other interventions will be implemented in the short-term, by 2030. It is acknowledged that longer term effects generally have a greater level of uncertainty than shorter-term, more immediate effects.

The assessment assumes that construction of any infrastructure follows existing best practice and applicable environmental legislation and guidance (for example legislation for protected species and construction best practice). Therefore, it is assumed that construction of small scale infrastructure including improving footpaths and cycleways, online bus, rail and highway (minor online works) infrastructure would generally not give rise to significant environmental effects, unless adjacent to a sensitive receptor such as a designated site. Larger infrastructure such as new railways, roads and dualling and offline mass transit may have some significant effects, and these are identified in the assessment.

As described in Chapter 2, West Northamptonshire Council will not lead the delivery of some interventions, particularly railways and trunk roads. Sustainability appraisals, including environmental assessments, will also be undertaken by organisations such as Network Rail and National Highways for these projects. However, this IIA assesses the effects at a strategic level, so they are captured within the LTP.

Several of the interventions have come through England's Economic Heartland (EEH) Regional Transport Strategy, for which an IIA has been undertaken⁴ and reviewed as part of this assessment. In some cases, the LTP for West Northamptonshire only covers elements of the EEH schemes, where they would be delivered separately as stand-alone projects (e.g. some of the long distance active travel routes). Where interventions go beyond the local authority boundary, baseline data in neighbouring authorities has been reviewed and effects captured within the assessment. Cumulative effects are also captured in

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⁴ <https://www.englandseconomicheartland.com/our-work/our-strategy/>

Table 5-12.

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4. Baseline Issues and Opportunities

Introduction

The SEA Regulations require the inclusion of:

- *The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme (Schedule 2, paragraph 2),*
- *The environmental characteristics of areas likely to be significantly affected (Schedule 2, paragraph 3),*
- *Any existing environmental problems which are relevant to the plan or programme (Schedule 2, paragraph 4), and*
- *The environmental protection objectives, established at International, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been considered during its preparation (Schedule 2, paragraph 5).*

The Regulations cover the effects on the environment on issues such as: *biodiversity, population, human health, fauna and flora, soil, water, air, climatic factors, material assets, cultural heritage, including architectural and archaeological heritage and landscape (Schedule 2, paragraph 6).*

This chapter provides an environmental overview of West Northamptonshire and issues and opportunities associated with change over the plan period, which were used to generate the objectives in Table 3-1. The Scoping Report provides further information, including a full review of relevant legislation, policies and plans.

Natural Capital and Ecosystem Services

Natural capital refers to the elements of the natural environment which provide valuable goods and services to people (also known as ecosystem services). A natural capital approach is a way of describing, quantifying and valuing natural resources and the benefits they bring to people, to aid decision making. In this way the natural environment can be valued alongside other types of assets.

Examples of ecosystem services include provision of food, recreation, clean air and flood defence. Some ecosystem services fall across a number of sustainability topics, for example, recreational and aesthetic value services could be considered under the health, biodiversity, landscape, air quality and natural resources topics, amongst others.

A natural capital approach is therefore useful for understanding the inter-dependencies between nature, people, the economy and society, and ensuring that natural capital is considered as an integrated system. Degradation of natural capital (including biodiversity loss) has an adverse effect on the benefits that we receive from the natural environment. As such, natural capital is overarching across the IIA.

Evidence for natural capital at a strategic level for West Northamptonshire has been collected for the Local Plan⁵. The evidence incorporated information from several studies including the Northamptonshire & Peterborough Habitat Opportunity Mapping Project. Areas with the greatest need for green infrastructure and natural capital are identified and prioritised. Of importance to the LTP, the strategic sustainable movement network has been mapped. Greenways are strategic access links between major settlements through open countryside, formed by the public rights of way network and cycle routes. Blue Ways are strategic access links between major settlements through open countryside along rivers, canals or navigations. Green and blueways comprise:

- Brampton Valley Way
- Nene Valley Way
- Althorp Way
- Canons Ashby and Sulgrove Way
- Forest Way
- Steane Way
- Wootton-Salcey Way
- Oxford – Grand Union Canals Link
- Nene Valley Blue Way
- Grand Union Canal Blue Way
- Oxford Canal Blue Way

A framework for sub-regional and local corridors identified. Based on comparison with the natural capital opportunities mapping, priority areas and projects potentially related to transport comprise (

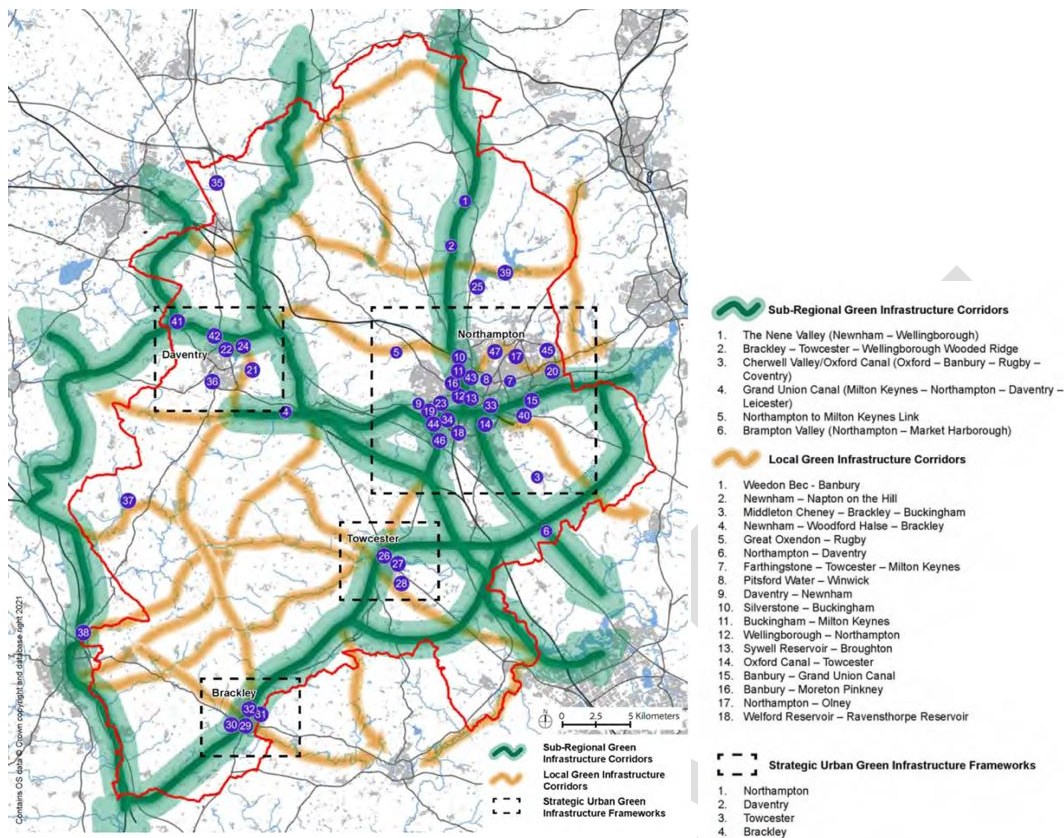
⁵ West Northamptonshire Council, 2022, West Northamptonshire Strategic Plan, GI & Natural Capital Evidence. Available at: <https://www.westnorthants.gov.uk/planning-policy/new-local-plan-west-northamptonshire>

Figure 4.1):

- Grand Union Canal (Milton Keynes – Northampton – Daventry – Leicester) Sub-Regional GI Corridor 4;
- Northampton Urban GI Framework Area – Cycle path extension into the Town Centre (43); East-West cycle and Footpath links (44); and
- Daventry Urban GI Framework Area – Braunston Grand Union and Oxford Canals Access Improvements (41); Braunston to Daventry Cycle link (42).

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Figure 4.1 Strategic Green Infrastructure Framework



A map showing strategic green infrastructure

The evidence also includes a natural capital assessment⁶ for a number of ecosystem services. These services are referred to where relevant to the LTP and include air purification, noise regulation, climatic regulation, water flow and quality regulation, food and timber production and accessible nature. These ecosystem services and the natural capital opportunities mapping can also inform assessment of any potential impacts from the LTP.

⁶ Natural Capital Solutions, 2021, West Northamptonshire Strategic Plan GI and Natural Capital Evidence – Natural Capital Assessment.

Sustainability Issues and Opportunities

Issues and opportunities for the LTP identified during the scoping process are set out in Table 4-1 below, many of these are linked to natural capital.

Table 4-1 Sustainability Issues and Opportunities for the LTP

Topic	Issues and Opportunities
Biodiversity	<ul style="list-style-type: none"> • Potential for the LTP to affect designated sites for nature conservation, including indirect effects through air emissions or disturbance of species (HRA). • Green infrastructure, priority habitats and natural capital outside these designated areas are at risk of being lost, damaged or fragmented by transport infrastructure. Similarly, there may be impacts on species. • There are potential opportunities for natural capital and green infrastructure through the LTP. Where opportunities exist, transport could support strategic green infrastructure corridors and projects.
Landscape and townscape	<ul style="list-style-type: none"> • There is huge development pressure in West Northamptonshire, and new transport infrastructure could directly and indirectly affect rural landscapes. • Smaller scale transport interventions such as junction improvements, public transport enhancements, signage also have the potential to have visual impacts and erode landscape and townscape character. • There may be opportunities to provide greater access to valued landscapes and green infrastructure alongside transport improvements.
Historic Environment	<ul style="list-style-type: none"> • New transport infrastructure has the potential to directly impact on designated and non-designated heritage assets and their settings. • Smaller scale transport interventions such as junction improvements, public transport enhancements, signage also potentially have visual impacts and erode historic character. • Changes in traffic can lead to impacts but also opportunities to improve congestion, noise, lighting and deposition of particulate matter. • There may be opportunities to improve access to the historic environment and improve setting of assets.
Land, soil and water resources	<ul style="list-style-type: none"> • New transport infrastructure can result in loss or damage to soils, an important resource for food production, as well as mineral resources. Reuse of existing infrastructure or brownfield land can minimise loss of these resources. • Transport can reduce quality of ground and surface water resources and have physical effects on freshwater habitats. Proposals should support achieving water quality objectives. • Transport can pollute land and water, but there may also be opportunities to reduce existing effects through providing better pollution control and design of sustainable drainage systems.

Topic	Issues and Opportunities
Climate change mitigation	<ul style="list-style-type: none"> • There is a need to change travel behaviours in order to meet net zero carbon emissions by 2050 in line with international, national, regional and local policy. • Given the significant proportion of carbon emissions from transport, particularly use of private car, there are opportunities for the LTP to contribute to targets to reduce carbon emissions. • The LTP will need to consider opportunities for resilience, in particular flooding (both impact on transport infrastructure and impact of new infrastructure on flood risk), but also impacts of storms and hotter temperatures. Opportunities include use of green infrastructure to reduce heat and flooding.
Air quality and Noise	<ul style="list-style-type: none"> • Transport is a key contributor to poor air quality, particularly in towns centres, and noise along key corridors. • There are opportunities to improve air quality and reduce transport noise through the LTP.
Communities, Health and wellbeing, Equalities	<ul style="list-style-type: none"> • The population of West Northamptonshire is increasing, particularly the older age group who will have different transport needs. • Transport needs to provide access and connectivity for a growing population, including those with protected characteristics and a diversity of needs. • The LTP needs to consider impact on key health and well-being outcomes, including those related to physical and mental health, personal safety and social connectivity.

5. Assessment

The SEA Regulations require the inclusion of:

- *The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscapes and the interrelationship between the above factors. These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects (Schedule 2, para 6).*
- *An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information (Schedule 2, para 8).*

Alternatives considered

As part of the development of the LTP, an initial list of over 300 potential interventions for the LTP were identified.

A qualitative assessment of the proposed interventions was undertaken using a Multi-Criteria Assessment Framework (MCAF), developed in line with the Transport Analysis Guidance (TAG). The MCAF approach uses sustainability criteria, supported by the IIA. Following the analysis, **67 interventions** were taken forward for the plan. The two that were not taken forward comprise:

- The A43 Dualling compared poorly against an alternative that better supports delivery of a multi-modal corridor including bus and active travel journeys. The induced demand on similar road only projects has also been found to limit potential benefits.
- The Northampton Northern orbital compared poorly with other schemes in the appraisal, the expanded road capacity is likely to lead to increased congestion through induced demand, with no clear indication project will improve public transport or active travel modes to mitigate negative impacts.
- The Northampton - Market Harborough Connectivity Study will not be taken forward at this time as further technical work is needed in the future to determine if this is a feasible long-term solution.

Assessment Results

The assessment covers **16 LTP policies**, and **64 short term interventions** (including alternatives) and is presented in Appendix B. It uses the IIA Framework shown in Table 3-1 above to assess each policy or intervention and is accompanied by a commentary to provide a description of effects. The results of the assessment are summarised for each of the IIA sustainability topics in Table 5-2 -

Table 5-11 presented in this Chapter.

A number of sources have been used to aid assessment at a strategic level, these include:

- Defra Magic Map Application: <https://magic.defra.gov.uk/magicmap.aspx>
- West Northamptonshire Interactive Mapping: <https://westnorthants.cloud.cadcorp.com/WebmapPublic/Map.aspx?MapName=WNCMap>
- Google maps satellite view for site level detail: <https://www.google.co.uk/maps>

It is not practicable to assess all interventions in detail. For many of the interventions, exact geographic locations are not known. Where some geographic information is available, a precautionary broad overview of designations in the wider area is used to inform the assessment.

The scale used for the assessment of effects is shown in Table 5-1 below.

Table 5-1: Key for assessment of effects

Assessment scale	Significance of effect
++	Significant positive effect
+	Positive effect
0	Negligible or no effect
-	Negative effect
--	Significant negative effect
+/- ++/- -	Mixed effects
?	Uncertain effects (in combination with above)

A table showing how significant effects are scored

Overall, the majority of policies had significant positive, positive or no effect on sustainability objectives. However, there were some mixed (positive and negative) and uncertain effects, where there may be effects from new infrastructure, but these are not associated with proposals for development. There were varied effects from the assessment of interventions. The two alternatives not included in the LTP had potential for significant negative effects, while there were also precautionary and uncertain negative effects for minor infrastructure, particularly where design and/or location is still uncertain. There were also positive effects, many of which were significant, particularly for climate change mitigation, community, health and equalities objectives.

Table 5-2 Summary of Assessment: Biodiversity

<p>Objective 1: Protect and enhance biodiversity and priority areas for natural capital.</p> <p>Will the policy or interventions:</p> <ul style="list-style-type: none"> • Have an effect on designated sites for nature conservation? • Have a potential effect on habitats or species, including severance, fragmentation and disturbance? • Provide opportunities to support strategic green infrastructure corridors or projects in West Northamptonshire? 	
++	<p>One policy was predicted to have significant positive effects (Policy 10, Biodiversity and access to nature). The policy supports nature recovery and opportunities for enhancement of green/blue infrastructure.</p>
+	<p>Four policies had potential positive effects, where they are more likely to protect biodiversity (Policy 1 Sustainable hierarchy) offer opportunities for enhancing green infrastructure (Policy 6, active travel, Policy 9 Climate change adaptation) or reduce impacts of indirect effects (Policy 11, air quality and noise).</p> <p>There are three interventions with positive effects, relating to new active travel routes between urban areas as they present opportunities to enhance green infrastructure corridors. There is some uncertainty due to route and design.</p>
-	<p>None of the policies were predicted to have negative effects.</p> <p>12 interventions have a precautionary uncertain negative effect, including minor loss of habitat where there is junction widening or works at railway stations. It also includes A43 Phase 3 dualling for multi-modal corridor, while there are no designated sites in the corridor, there is potential for loss of habitats adjacent to the highway boundary and increased severance (vehicle traffic levels remain the same).</p> <p>These should be mitigated through BNG requirements and there are opportunities for enhancement, particularly of the Nene Valley Nature Improvement Area.</p>
--	<p>None of the policies or interventions in the LTP were predicted to have significant negative effects.</p> <p>However, two interventions, not taken forward within the LTP had potential for significant negative effects, these include the A43 dualling (no multi-modal corridor so increased impact from traffic-related pollution) and the Northampton Northern Orbital, while no route is available, there are potentially sensitive areas of habitat in the vicinity, including woodland.</p>
+/- ++/- -	<p>Three policies have uncertain mixed effects, Policy 2 requires a balanced approach for delivery of road capacity, Policy 5 can involve supporting new rail infrastructure, and Policy 13 explores freight consolidation and driver facilities, all of which have potential to reduce indirect effects from traffic such as air pollution but may also involve habitat loss and fragmentation without mitigation.</p> <p>One intervention, the inter-urban urban active travel network has potential for mixed effects, although at this stage without routing information, these are uncertain. There is potential for significant positive effects, due to the extent of the network, there are extensive opportunities for enhancing green infrastructure. There may be the need for offline sections so effects on small-scale habitat loss and other impacts are not known.</p>
0 ?	<p>The majority of the policies and interventions had no effect on biodiversity. There is some uncertainty, particularly where location or design is not known, but likely to be on brownfield land. Mitigation is required to address uncertain effects (Chapter 6).</p> <p>While the HRA Screening exercise identified potential impact pathways on the Upper Nene Valley Gravel Pits SPA and Ramsar Site from Policy 6 (from disturbance), and several interventions, for example through hydrological connectivity, run-off, lighting and noise, Policy 10F prevents adverse effects on site integrity and further HRA is being undertaken to support this.</p>

Table 5-3 Summary of Assessment: Landscape and townscape

Objective: Protect and enhance character and distinctiveness of landscapes and townscapes.	
Will the policy or interventions:	
<ul style="list-style-type: none"> Have an effect on local landscape or townscape quality and character and visual amenity? Protect and enhance West Northamptonshire's green infrastructure corridors and public realm, including strategic sustainable movement network? 	
++	One policy was predicted to have significant positive effects, Policy 10 on Biodiversity includes policies for enhancement, including along footpaths and providing access to green/ blue space and can support development of green infrastructure.
+	Four policies had positive effects, climate change adaptation (9) includes greening of transport assets and drainage systems; policies which reduce traffic and pollution (11) and encourage active travel (6) and prioritise other modes over private car in a hierarchy (1) are likely to improve townscape and public realm. 11 interventions had positive effects due to the reduction of private vehicular traffic, improving townscapes and public realm in urban centres such as Northampton Town Centre, including Abington square. New active travel routes e.g. Northampton/ Wellingborough/Buckingham provide opportunities to combine green infrastructure corridors with sustainable movement in rural areas and along existing transport corridors.
-	Eight interventions had a precautionary negative effect, although this was uncertain – these potentially involve some vegetation loss for a limited amount of infrastructure, usually associated with existing development such as housing, existing roads and rail infrastructure, which could have minor impact on landscape/ townscape/ visual amenity.
--	None of the policies or interventions in the LTP were predicted to have significant negative effects. One intervention, the Northampton Northern Orbital, was not taken forward within the LTP and had potential for significant negative effects. While no route is available, there are potentially sensitive areas, including woodland, adjacent to urban areas, affecting landscape & townscape quality and visual amenity.
+/- ++/- -	Three policies have uncertain mixed effects, Policy 2 requires a balanced approach for delivery of road capacity, Policy 5 can involve supporting new rail infrastructure, and Policy 13 explores freight consolidation and driver facilities, all of which have potential to reduce the negative indirect effects from traffic and congestion in landscapes and townscapes but may also involve loss of greenfield land.
0	The majority of the policies and interventions had no effect on landscape and townscape, for example because they use or maintain existing transport infrastructure (provision of more bus or train services). There is some uncertainty, particularly where location or design is not known, but likely to be on brownfield land. Mitigation is required to address uncertain effects (Chapter 6).

Table 5-4 Summary of Assessment: Historic Environment

Objective 3: Protect and enhance the historic environment.	
Will the policy or intervention:	
<ul style="list-style-type: none"> • Have an effect on designated heritage assets and their settings? • Have an effect on the historic environment, including non-designated and unknown assets? 	
++	<p>One policy was predicted to have significant positive effects, Policy 10 on Biodiversity includes measures for enhancement, including along footpaths and providing access to green/ blue space can also benefit the setting of heritage assets, including historic landscapes.</p> <p>One intervention was predicted to have significant positive effects -the pedestrianisation of St Giles Street in Northampton would benefit the setting of the All Saints Conservation Area and associated Listed Buildings, improving people's enjoyment and potentially interpretation of these assets, without vehicular traffic.</p>
+	<p>Three policies were predicted to have positive effects, policies which reduce traffic and deposition of airborne particulates (11), encourage active travel (11), and prioritise other modes over private car in a hierarchy (1) are likely to improve setting and experience of heritage assets.</p> <p>Nine interventions had positive effects due to the reduction of private vehicular traffic and encouraging active travel, improving setting of Conservation Areas and enjoyment of heritage assets such as Listed Buildings and Scheduled Monuments in historic urban centres such as Northampton, Towcester, Daventry, and Brackley. New active travel routes outside of town centres also have potential to improve access to Scheduled Monuments, village Conservation Areas and non-designated assets such as historic landscapes.</p>
-	<p>Ten interventions had a precautionary negative effect, although this was uncertain – these largely involve modification to existing infrastructure, such as rail stations, additional highway lanes or junction modifications. Effects include potential for unknown archaeology, setting of Listed Buildings or Conservation Areas or proposals are in proximity to heritage assets (e.g. A45 Junction Improvements and Registered Battlefield Battle of Northampton 1460 and Scheduled Monument (Eleanor Cross)).</p>
--	<p>None of the policies or interventions in the LTP were predicted to have significant negative effects.</p> <p>One intervention, the Northampton Northern Orbital, was not taken forward within the LTP and had potential for significant negative effects, although this is uncertain as the archaeological potential of greenfield land-take is not known. It should be noted that where there is uncertainty, other effects could be significant if unknown archaeology of national significance was present and also require mitigation.</p>
+/- ++/- -	<p>Three policies have uncertain mixed effects, Policy 2 requires a balanced approach for delivery of road capacity, Policy 5 can involve supporting new rail infrastructure, and Policy 13 explores freight consolidation and driver facilities, all of which have potential to reduce traffic and improve setting of heritage assets but may also negative effects on setting from new infrastructure as well as impact unknown archaeology.</p> <p>The route of an inter-urban active travel network is uncertain and could lead to mixed effects as while access and interpretation could be improved to a number of assets such as Scheduled Monuments, there may be loss of archaeological resource during construction.</p>
0	<p>The majority of the policies and interventions had no effect on the historic environment, for example because they use or maintain existing transport infrastructure (e.g. provision of more bus or train services).</p>

Table 5-5 Summary of Assessment: Land, soil and water resources

Objective 4. Protect soil, land and water quality and resources.	
Will the policy or interventions:	
<ul style="list-style-type: none"> • Make best use of existing transport assets to reduce impact on land and soils? • Avoid loss of mineral resources and soils, particularly BMV agricultural land? • Increase pollution, run-off or modification of surface and groundwater resources? • Provide opportunities for ecosystem services related to land, soils and water resources? 	
++	One policy was predicted to have significant positive effects (Biodiversity and access to nature). The policy supports creation and enhancement of green/blue infrastructure, providing opportunities for example to improve quality of surface water and soils, and related services they provide.
+	Ten policies were predicted to have positive effects, policies on active travel, public transport, maintenance of assets and shared mobility (policies 1-7, 15) make best use of existing infrastructure, protecting resources such as land and soils. Policy 11, reducing air pollution, has potential to reduce deposition of nitrogen and particulates on land, vegetation and water. Policy 9 on climate change adaptation seeks to implement sustainable urban drainage, reducing polluted run-off. 25 interventions had positive effects, including traffic calming, signal improvements, use of priority lanes, active travel, bus and rail service improvements, car and bike shares and mobility hubs as these maximise use of existing infrastructure, avoiding the need to build new, and therefore protecting land, soils and water resources.
-	Eight interventions had uncertain negative effects, as there is potential for small-scale land-take – for example, minor rail infrastructure, highway junction improvements and a short stretch of dual carriageway on the A43. Impacts such as pollution of watercourses, damage to soils are uncertain as will depend on design.
--	None of the policies or interventions in the LTP were predicted to have significant negative effects. One intervention, the Northampton Northern Orbital, was not taken forward within the LTP and had potential for significant negative effects due to loss of greenfield land, including agricultural land of Grade 2 or 3a quality and food production services. There is also potential for pollution of soils and run-off to watercourses.
+/- ++/- -	Two policies had uncertain mixed effects, Policy 2 requires a balanced approach for delivery of road capacity and Policy 13 explores freight consolidation and driver facilities. While these have potential to utilise brownfield land or existing infrastructure, minimising or avoiding effects on land or soils, there is also potential for impacts on land and soils, and new sources of pollution.
0	The remainder of the policies and interventions had no effect on natural resources, for example as they are related to ticketing or safety. There is also some uncertainty, particularly where location or design is not known, but likely to be on brownfield land. Mitigation is required to address uncertain effects (Chapter 5).

Table 5-6 Summary of Assessment: Climate change mitigation

Objective 5: Deliver climate change mitigation through reduction in transport related CO2 emissions.	
Will the policy or interventions:	
<ul style="list-style-type: none"> Promote sustainable transport – public transport, walking and cycling? Use technology such as digital or low carbon energy sources? Reduce the need to travel and improve connectivity via non-vehicular transport modes? 	
++	<p>Four policies have potential for significant positive effects: Policy 3 Mobility hubs; Policy 4 Bus, coach and mass transit; Policy 5 Rail services and stations; and Policy 6 Active travel network. These promote sustainable transport modes, including improved services to increase use over private car.</p> <p>For similar reasons 27 interventions had significant positive effects on this objective as they provided or improved active travel, mobility hubs, rail and bus services.</p>
+	<p>Eight policies had positive effects on reducing CO2 emissions, these include those that increase awareness (Policy 16), sustainable transport measures which potentially have a smaller uptake or coverage (Policies 13 and 15), development planning and sustainable travel hierarchy (Policies 1 and 14), and those which may indirectly reduce carbon through other environmental benefits (Policies 9-11).</p> <p>16 interventions were predicted to have positive effects in reducing transport-related CO2, these included active travel or public transport measures, where uptake would be smaller, for example they may be used less of commuting and more for occasional trips (e.g. long distance active travel, demand responsive travel).</p>
-	<p>Six interventions associated with highway works were predicted to have precautionary negative effects at this stage, as reduced congestion may induce some additional traffic.</p>
--	<p>None of the policies or interventions in the LTP were predicted to have significant negative effects.</p> <p>One intervention, the Northampton Northern Orbital, was not taken forward within the LTP and had potential for significant negative effects as has potential to increase road capacity and use of motorised vehicles, increasing CO2 emissions in construction and operation.</p>
+/- ++/- -	<p>One Policy had mixed effects, Policy 2, connected and accessible networks focuses on sustainable travel for shorter journeys, but also facilitates road capacity and junction improvements.</p>
0	<p>Three policies and 11 interventions had no effect on this objective, for example they were related to safety such as traffic calming or speed limits.</p>

Table 5-7 Summary of Assessment: Flooding and climate resilience

<p>Objective 6: Avoid or reduce flood risk and support resilience of transport to the potential effects of climate change.</p> <p>Will the policy or interventions:</p> <ul style="list-style-type: none"> • Avoid areas of flood risk or increase surface run-off, including adaptation of existing network? • Adapt to changes in climate such as more extreme weather events, precipitation and temperatures? • Provide opportunities to improve resilience through green/blue infrastructure? 	
++	<p>Three policies were predicted to have significant positive effects, Policy 9, on climate adaptation seeks to maintain assets for better resilience and contingency planning (also Policy 7), in addition to improving resilience through green infrastructure and drainage (for example through reducing heat and flood risk), these benefits are also reflected in Policy 10, Biodiversity.</p>
+	<p>Three policies had positive effects (Policies 3, 6, 15), by offering transport choices and flexibility, some investment in asset maintenance and green infrastructure. 12 interventions had positive effects for similar reasons, for example mobility hubs and demand responsive travel. Cycling and walking interventions provide alternative transport options in urban areas, where there are also opportunities to enhance the public realm with resilient measures like green infrastructure, providing a cooling effect and improved urban drainage.</p>
-	<p>Ten interventions had potential negative effects, due to the likely location within Flood Zones 2 or 3 from fluvial flooding, or at medium to high risk of flooding from surface water. Many of these effects were uncertain, due to lack of further design information.</p>
--	<p>None of the policies or interventions in the LTP were predicted to have significant negative effects. One intervention, the Northampton Northern Orbital, was not taken forward within the LTP and had potential for significant negative effects due to increased area of hardstanding in proximity to areas of flood risk.</p>
+/- ++/- -	<p>Three policies have uncertain mixed effects, Policies 2, 5 and 13 have potential for new road, rail and freight infrastructure, which may increase existing surface run off, or impact areas of flood risk depending on design and location. Seven interventions had unknown mixed effects. In some cases, modification to existing infrastructure, while avoiding areas of flood risk, is in proximity to areas where surface run-off may exacerbate flooding. Where exact location of interventions is not yet known, there are opportunities to avoid existing areas of flood risk and incorporate climate resilient design.</p>
0	<p>The remainder of the policies and interventions had no effect on climate resilience, the majority of which did not involve new infrastructure, such as improved services.</p>

Table 5-8 Summary of Assessment: Air quality and noise

Objective 7: Reduce transport related air pollution and noise.	
<p>Will the policy or interventions:</p> <ul style="list-style-type: none"> • Reduce emissions to air, particularly nitrogen oxides and fine particulate matter? • Reduce transport noise? • Provide opportunities for natural capital that provides air quality and noise regulation, for example, planting? 	
++	<p>Five policies have potential for significant positive effects: Policy 3 Mobility hubs; Policy 4 Bus, coach and mass transit; Policy 5 Rail services and stations; and Policy 6 Active travel network. These promote sustainable transport modes, including improved services to increase use over private car, improving air quality. Policy 11 on air and noise look at working with stakeholders on a range of measures to reduce existing transport-related impacts.</p> <p>27 interventions had significant positive effects on this objective as they provided or improved active travel, mobility hubs, rail and bus services, providing alternatives to traffic related emissions and noise.</p>
+	<p>Seven policies had positive effects, these comprise better managing freight movements (Policy 13), development planning and sustainable transport (Policies 1, 14 and 15), and those which provide opportunities for green infrastructure, which can reduce impact of air and noise (e.g. through vegetation screening (Policies 9 and 10) and can lead to raised awareness of how to reduce impacts (Policy 16) .</p> <p>46 interventions were predicted to have positive effects in reducing transport-related air and noise, the majority included active travel and public transport measures (mobility hubs, rail, bus services) or highway improvements which ease congestion without inducing traffic, such as use of priority lanes for public transport, facilitate use of electric vehicles and alternative fuels.</p>
-	<p>None of the policies nor interventions were predicted to have negative effects, without combining with positive effects, and these are set out below.</p>
--	<p>None of the policies or interventions in the LTP were predicted to have significant negative effects.</p> <p>One intervention, the Northampton Northern Orbital, was not taken forward within the LTP and had potential for significant negative effects as has potential to increase road capacity and use of motorised vehicles, increasing CO2 emissions in construction and operation.</p>
+/- ++/- -	<p>Policy 2, connected and accessible networks focuses on sustainable travel for shorter journeys, but also facilitates road capacity and junction improvements.</p> <p>Eight interventions had mixed effects, while junction improvements and minor highway works ease congestion and build-up of emissions in certain locations, they may also induce traffic by improving journey times. Implementation alongside active travel and public transport measures reduces the impact.</p>
0	<p>The remainder of policies and 11 interventions had no effect on this objective as were related to safety, for example they were related to safety such as traffic calming or speed limits.</p>

Table 5-9 Summary of Assessment: Communities

Objective 8. Promote a sense of place and well-connected communities.	
Will the policy or interventions:	
<ul style="list-style-type: none"> • Provide access to employment and services for existing and future residents? • Support a sense of place and community hubs? • Promote social and community interaction through active travel and public transport? 	
++	Seven policies were predicted to have significant positive effects. Policies promoting different modes of transport or digital connectivity to urban centres, including from rural areas, provide access to jobs and education, including opportunities outside West Northamptonshire. The majority of interventions (52) have significant positive effects, through promoting public transport and active travel, providing connectivity or improving a sense of place, e.g. by reducing traffic or promoting safety such as reduced speeds.
+	Nine policies had positive effects on community connectivity, including policies for biodiversity, safety and maintenance as they improve public realm, providing a sense of place. 15 interventions had positive effects, including improved ticketing, junction improvements, car and bike shares, freight management benefitting urban areas which provide access and support communities at a smaller scale.
-	None of the policies or interventions were predicted to have negative effects.
--	None of the policies or interventions were predicted to have significant negative effects.
+/- ++/- -	None of the policies or interventions were predicted to have mixed effects.
0	The remainder of the interventions had no effects, as there was no direct relationship, for example some of the wider freight management measures.

Table 5-10 Summary of Assessment: Health and wellbeing

<p>Objective: 9. Improve health and wellbeing of residents.</p> <p>Will the policy or intervention:</p> <ul style="list-style-type: none"> • Provide active travel and support the strategic sustainable movement network? • Increase personal and road safety? • Promote West Northamptonshire’s health and wellbeing outcomes? (HIA) 	
++	<p>Five policies were predicted to have significant positive effects. Policy 6 Active Travel Network and Policy 12 Reducing isolation and improving rural access both have health benefits including increased exercise to support mental and physical health. Policy 11, Air pollution and noise, reduces sources of respiratory disease and annoyance. Policy 7, Network maintenance and operation, and Policy 8 Road and transport safety reduces risk of injury and improves personal safety.</p> <p>18 interventions have significant positive effects, including through providing active travel; improving public realm in urban centres, reducing traffic; and delivery of safety measures such as traffic calming.</p> <p>These support West Northamptonshire health outcomes related to safety when out and about; connections to family and friends; a clean and green local environment; opportunities to be fit and well.</p>
+	<p>Ten other policies had positive effects, which also improve access and safety (Policy 2), support public transport, and related benefits of connected active travel, in particular walking, and social interaction (Policies 3-5, 14-16), environmental improvements for well-being (Policies 9-10).</p> <p>45 interventions had positive effects on health and wellbeing, many of which were delivery or promotion of public transport. People tend to walk, particularly to bus stops, increasing exercise levels. Use of public transport can reduce isolation and increase social interaction.</p> <p>West Northamptonshire health outcomes are supported as per above.</p>
-	<p>None of the policies or interventions in the LTP were predicted to have negative effects.</p>
--	<p>None of the policies or interventions in the LTP were predicted to have significant negative effects.</p>
+/- ++/- -	<p>One intervention, the Northampton Northern Orbital, was not taken forward within the LTP and had mixed but uncertain effects, as although safety and pollution may be improved, by removing traffic from the town centre, roads can discourage more active forms of travel, depending on design.</p>
0	<p>One policy and five interventions had no effect on health and well-being, for example they were associated with HGV signals or lanes.</p>

Table 5-11 Summary of Assessment: Equalities

Objective: 10. Promote equality of access to transport.	
Will the policy or interventions:	
<ul style="list-style-type: none"> Provide access to people, including people with disabilities, reduced mobility, different ages, social and cultural backgrounds? (EqIA) 	
++	<p>Seven policies were predicted to have significant positive effects. These comprise connected and accessible networks (Policy 2), reducing isolation and improving rural access (12), policies for public transport and shared on-demand transport (4, 5, 15), working with vulnerable groups to improve personal security (8), shared and on-demand options (15) and consulting with different groups to deliver priorities (16).</p> <p>20 interventions had significant positive effects, particularly those that improved traffic safety, access around urban areas and the public realm, and support people who don't drive and with reduced mobility such as public transport access and services.</p> <p>The EqIA identified the following groups: age, disability, pregnancy and maternity, gender reassignment, sex, sexual orientation and socio-economic deprivation.</p>
+	<p>Seven policies had positive effects; a sustainable transport hierarchy (Policy 1) give consideration of transport options across the community. Policies 3, 6, 7, 14 improve wayfinding, provide information, access to public transport and active travel. Policies 10 and 11 make environmental improvements, which have benefits for some groups.</p> <p>32 interventions had positive effects, including improved provision of information, ticketing, rural active travel networks and mobility hubs.</p> <p>The EqIA identified the following groups: age, disability, pregnancy and maternity, gender reassignment, sex, sexual orientation and socio-economic deprivation.</p>
-	None of the policies or interventions in the LTP were predicted to have significant negative effects.
--	None of the policies or interventions in the LTP were predicted to have negative effects.
+/- ++/- -	None of the policies or interventions in the LTP were predicted to have mixed effects.
0	Two policies had no effects on equality of access, they were related to freight and climate change adaptation.

In addition to assessment of the LTP, cumulative effects with other plans and projects also need to be identified.

Table 5-12 below sets out cumulative effects of the LTP.

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Table 5-12 Potential Cumulative Effects

Local Plans	Potential for Cumulative Effects
<p>West Northamptonshire Joint Core Strategy Local Plan (Part 1) Adopted December 2014⁷</p> <p>New Local Plan for West Northamptonshire⁸</p> <p>Daventry Local Plan (Part 2) 2011-2029, Adopted Feb 2020⁹</p> <p>Northampton Local Plan Part 2 2011-2029, Adopted 2023¹⁰</p> <p>South Northamptonshire Local Plan (Part 2) 2011-2029¹¹</p> <p>Northamptonshire Minerals and Waste Local Plan 2017-2031¹²</p>	<p>Local Plans contain planning policies for sustainable development including environmental protection and enhancement. Proposed development within the West Northamptonshire has been taken into account in the preparation of the LTP so that transport infrastructure can facilitate proposed growth and environmental protection objectives were identified in the IIA Scoping for the LTP. Potential cumulative effects include effects on natural capital and greenhouse gas emissions as set out below:</p> <ul style="list-style-type: none"> • Cumulative effects on natural capital (see below) • Direct and indirect effects on ecology, including designated or undesignated sites, habitats and species from new development. • Direct and indirect adverse effects on designated, non-designated or unknown heritage assets, for example due to land take or due to indirect effects on the setting of these assets. • Direct and indirect effects on landscape and townscape where proposed developments are located in close proximity to new transport schemes and in-combination erode character or introduce visual intrusion. • Adverse effects on surface water flooding due to increases in impermeable areas. • Increased greenhouse gas emissions from highways schemes and energy use from new development. <p>Adverse impacts from new development, including housing, land for economic growth and transport infrastructure identified in these plans will need to be mitigated and opportunities for environmental net gain maximised.</p> <p>Policies in the West Northamptonshire LTP which help mitigate cumulative effects comprise Policy 1, Sustainable transport hierarchy and Policy 14, Sustainable development and embracing technology.</p>

⁷ <https://www.westnorthants.gov.uk/west-northamptonshire-joint-core-strategy/west-northamptonshire-joint-core-strategy-local-plan-part>

⁸ <https://www.westnorthants.gov.uk/planning-policy/new-local-plan-west-northamptonshire>

⁹ <https://www.westnorthants.gov.uk/planning-policy/daventry-local-plan-part-2>

¹⁰ <https://www.westnorthants.gov.uk/planning-policy/northampton-local-plan-part-2>

¹¹ <https://www.westnorthants.gov.uk/planning-policy/south-northamptonshire-local-plan-part-2>

¹² <https://www.westnorthants.gov.uk/minerals-and-waste-planning-policy/adopted-minerals-and-waste-local-plan>

Transport Plans	
<p>England's Economic Heartland (EEH) Transport Strategy, 2021¹³ and constituent Local Transport Authority Plans.</p>	<p>The Strategy encompasses the Oxford-Cambridge Arc, including 12 constituent Authorities. It sets out a five point action plan comprising:</p> <ul style="list-style-type: none"> • decarbonisation of the transport system, • investment in digital infrastructure, • delivery of strategic public transport schemes, • investment in active travel and shared transport, • ensuring the needs of the freights and logistics sector whilst lowering its environmental impact. <p>Interventions and policies in the EEH Strategy, were incorporated into development of the LTP, and include the A43 Improvements, A421 HGV lanes and signalisation and long-distance public transport (such as bus service) improvements. Effects, such as induced traffic or reduced carbon emissions are already incorporated into the assessment.</p> <p>The assessment also covers support for relevant interventions outside the local authority including new Rugby Parkway Railway Station, rail capacity enhancement between Bletchley and Milton Keynes and a new rail service connecting communities between Northampton, Aylesbury, Princess Risborough, High Wycombe, and Old Oak Common.</p>



¹³ England's Economic Heartland, 2021, Connecting People, Transforming Journeys, Regional Transport Strategy: <https://www.englandseconomicheartland.com/our-work/our-strategy/>

6. Mitigation and monitoring

The SEA Regulations require:

- The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme (Schedule 2, para 7)
- A description of measures envisaged concerning monitoring in accordance with regulation 17 (Schedule 2, para 9).

Where potential for negative or uncertain effects were identified in the assessment in Appendix B, mitigation and monitoring is specified in

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Table 6-1. Monitoring is also being developed as part of the LTP Monitoring and Evaluation Plan following LTP consultation.

It should be noted that some of these measures would be developed by the scheme promoter, where they fall outside West Northamptonshire Council's remit, for example, Network Rail on railways or Highways England on the strategic road network.

Mitigation was embedded in the policies, as they were aligned with sustainability objectives throughout their development, including the MCAF process and stakeholder inputs. Specific additional measures from the IIA include:

- Policy 02F, 03F, 04H, 13H – Site selection and design any for new infrastructure, should minimise sustainability impacts, for example by minimising land-take.
- Policy 2 (P02B) references making public transport facilities more accessible, inclusion of measures such as wheelchair access, seating, toilets, water points as appropriate to support inclusive use
- Policy 9 (P09C) added consideration of flood risk and drainage from transport infrastructure, including Sustainable Drainage Systems (SuDS).
- Policy 10 (P10A) in addition to biodiversity net gain, this also includes environmental net gain and reference to the Water Environment Regulations for clarity on water resources.
- P10E: includes reference to green/blue infrastructure and supporting nature recovery.
- Policy 10 (P10F), an additional policy to support the HRA and ensure that transport infrastructure will not adversely affect the integrity of designated Natura 2000 sites (Special Protection Areas, Special Areas of Conservation, Ramsar sites), including indirect pollution through noise, lighting, recreation pressure, loss, deterioration of fragmentation of habitats.

Table 6-1 Mitigation and Monitoring for Interventions

Topic	Description of mitigation/ monitoring	Specific Interventions
General	<p>Further options to be assessed to determine location and design to maximise sustainability benefits and avoid or minimise impacts.</p> <p>For example, EEH has developed Guidance for Mobility Hubs¹⁴.</p>	<ul style="list-style-type: none"> • New Railway Station serving South Northampton • New Railway Station serving Weedon Bec and Daventry • New Rugby Parkway Railway Station • New Strategic Mobility Hub and Coach Interchange at M1 J15 • Mobility hubs – Brackley, Daventry, Silverstone, Towcester • Northampton Loop Speed and Capacity Improvements – sensitive areas include the Grand Union Canal, Nene Valley Nature Improvement Area, Road Cutting SSSI, areas of woodland, historic landscapes (Watford Park Scheduled Monument, Watling Street Roman Road SM) • Northamptonshire Mass Rapid Transport Scheme • Northampton-Brackmills (and Bedford) Rail Corridor Options Assessment • Rail Capacity Enhancement between Bletchley and Milton Keynes • Weedon Fast Line Freight Loops on West Coast Main Line
Biodiversity	Requirement for minimum 10% Biodiversity Net Gain	<p>All schemes resulting in habitat loss, likely to include:</p> <ul style="list-style-type: none"> • A43 Dualling for multi-modal corridor between Northampton and Kettering • A45 Junction upgrades (all schemes) • Active travel routes which may have off-line sections, e.g. Inter-urban active travel, Route between Wellingborough and Northampton. • Long Buckby Railway Station Access Improvements and Platform Lengthening • New Railway Station serving South Northampton • New Railway Station serving Weedon Bec and Daventry

¹⁴ <https://www.englandseconomicheartland.com/evidence-base/mobility-hubs-business-case-guidance/>

Topic	Description of mitigation/ monitoring	Specific Interventions
Biodiversity	Support nature recovery, in particular Nene Valley Nature Improvement Area	<ul style="list-style-type: none"> • A43 Dualling for multi-modal corridor between Northampton and Kettering • A45 Junction upgrades (all schemes) • New Active Travel Route between Wellingborough and Northampton • New Railway Station serving South Northampton • New Strategic Mobility Hub and Coach Interchange at M1 J15 • Northampton-Brackmills (and Bedford) Rail Corridor Options Assessment • Northamptonshire Mass Rapid Transport Scheme
Biodiversity, Landscape/ Townscape, Soil, Land and Water Resource	Seek opportunities to enhance green and blue infrastructure. This includes greenways and blueways, sub-regional and local green infrastructure corridors, strategic urban green infrastructure frameworks, and (see Natural Capital in Chapter 4 and Figure 4.1)	<p>Interventions include, but are not limited to:</p> <ul style="list-style-type: none"> • A43/A5 Towcester Roundabout Improvements • Brackley to Banbury Active travel link • Inter-Urban Active Travel Network • LCWIP cycling and walking corridors in Brackley, Daventry (Daventry Urban GI Framework Area), Northampton, and Towcester • New Active Travel Route between Wellingborough and Northampton (including Northampton Urban GI Framework Area), • Northampton-Brackmills (and Bedford) Rail Corridor Options Assessment • Northamptonshire Mass Rapid Transport Scheme

Topic	Description of mitigation/ monitoring	Specific Interventions
Historic Environment	Sensitive design to avoid or minimise impact on designated heritage assets. Depending on scheme and location, this can include Heritage Impact Assessment.	<ul style="list-style-type: none"> • A361 Byfield Village traffic calming - Market Cross Scheduled Monument and Listed Buildings. • A422 Farthinghoe traffic calming - Conservation Area and St Michael's Church Grade II* Listed Building. • A45 Junction upgrades at the Brackmills and Great Billing Interchanges - Scheduled Monument (Eleanor Cross), adjacent Registered Battlefield (Battle of Northampton 1460). • New Strategic Mobility Hub serving Brackley - Brackley Conservation Area, Listed Buildings and Brackley Motte and bailey castle Scheduled Monument. • New Strategic Mobility Hub serving Daventry - Daventry and Reservoir Conservation Areas, Listed Buildings and Borough Hill Scheduled Monument. • New Strategic Mobility Hub serving Silverstone - Silverstone Conservation Area and Listed Buildings • New Strategic Mobility Hub serving Towcester- Towcester Conservation Area, Listed Buildings and Scheduled Monuments. • Northampton Bus and Coach Station Upgrade. All Saints Conservation Area and listed buildings
Historic Environment	Staged archaeological investigation for new infrastructure works	<p>New infrastructure schemes, likely to include:</p> <ul style="list-style-type: none"> • A43 Dualling for multi-modal corridor between Northampton and Kettering • A45 Junction upgrades (all schemes) • Active travel or public transport routes which may have off-line sections, e.g. Inter-urban active travel, Route between Wellingborough and Northampton.
Historic Environment	Routing of active travel to consider access to heritage assets	<ul style="list-style-type: none"> • New Active Travel Route between Wellingborough and Northampton – e.g. Conservation Areas adjacent to A4500 • New Active Travel Route between Aylesbury to Northampton via Buckingham • New National Cycle Route alongside HS2 - historic village centres of Greatworth, Martson St Lawrence, Thorpe Mandeville, Sulgrave, Culworth, Chipping Warden; in addition to offline Scheduled Monuments, e.g. at Sutchbury.

Topic	Description of mitigation/ monitoring	Specific Interventions
Land, soils and water	<p>Pollution prevention and control using construction industry practice, including but not limited to:</p> <ul style="list-style-type: none"> - Land contamination - Waste - Protection and handling of soils - Protection of water resources 	<p>All schemes with new infrastructure, but particular interventions which may be sensitive, e.g. due to water resources, potential for contaminated land, etc, comprise:</p> <ul style="list-style-type: none"> • Weedon Fast Line Freight Loops on West Coast Main Line • New Railway Station serving Weedon Bec and Daventry • New Railway Station serving South Northampton • A5 Towcester Relief Road Upgrade and Traffic Calming • Inter-urban active travel network • New Rugby Parkway Railway Station • New Strategic Mobility Hub and Coach Interchange at M1 J15
Air quality & noise	<p>West Northamptonshire Council monitor for nitrogen dioxide on roads across the authority. The Local Air Quality Management Plan¹⁵ under preparation, includes measures proposed such as reducing congestion, encouraging active travel, promoting low emissions vehicles, and planning development to maximise sustainable transport.</p>	<ul style="list-style-type: none"> • A45 Queen Eleanor Interchange • A45 Wootton Interchange • A45 Queen Eleanor Interchange • A45 Junction upgrades at the Brackmills and Great Billing Interchanges • A43/A5 Towcester Roundabout Improvements • A43 Dualling (Northampton Kettering Improvements Phase 3) <p>Potential positive effects will also be monitored at AQMAs linked to interventions such as New Strategic Mobility Hub serving Towcester and Plough Junction Improvement</p>
Flood risk and Climate resilience	<p>Highway works should not increase flood risk and seek opportunities to improve drainage to reduce existing risk. Refer to Planning Policy Guidance on Flood Risk¹⁶</p>	<ul style="list-style-type: none"> • A361 Byfield Village traffic calming • A422 Farthinghoe traffic calming • A43 Dualling for multi-modal corridor between Northampton and Kettering • A43/A5 Towcester Roundabout Improvements • A45 Junction upgrades (all schemes) • New Strategic Mobility Hub and Coach Interchange at M1 J15

¹⁵ https://westnorthants.citizenspace.com/public-health/have-your-say-on-our-plans-to-improve-air-quality/user_uploads/draft-air-quality-action-plan.pdf

¹⁶ <https://www.gov.uk/guidance/flood-risk-and-coastal-change#:~:text=Ongoing%20coastal%20erosion%20or%20change,sustainable%20in%20the%20long%20term.>

Topic	Description of mitigation/ monitoring	Specific Interventions
Health & Wellbeing / Communities/ Equalities	Consideration of design measures in relation to health can include toilets, seating toilets, water points, sources of shade and cooling (preferably green/blue infrastructure) lighting and security and accessibility measures.	<p>Where applicable on public transport stations and active travel, for example:</p> <ul style="list-style-type: none"> • New Railway Station serving South Northampton • New Railway Station serving Weedon Bec and Daventry • New Rugby Parkway Railway Station • New Strategic Mobility Hub and Coach Interchange at M1 J15 • Mobility hubs – Brackley, Daventry, Silverstone Towcester • Inter-Urban Active Travel Network • LCWIP cycling and walking corridors in Brackley, Daventry, Northampton, and Towcester • New Active Travel Route between Wellingborough and Northampton (including Northampton Urban GI Framework Area)

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Appendix A – Responses to Scoping

Summary of Consultee Comment	Response
Historic England	
<p>Guidance in relation to Sustainability Appraisals can be found here: https://historicengland.org.uk/images-books/publications/sustainability-appraisal-and-strategic-environmental-assessment-advice-note-8/</p>	Noted.
<p>Reference to heritage assets and their settings and including non-designated heritage assets is welcomed within paragraphs 3.20 – 3.23. No specific comments in relation to Appendix A. The section within Table 4.1 relating to the Historic Environment is welcomed, together with the objective and guide questions.</p>	N/A
Natural England	
<p>Comments on the IIA Framework: The process should be clear and transparent in showing how the various policies / options have been assessed and how the impacts (positive and negative) have been considered to inform the plan.</p> <p>Process should show that the transport plans can be achieved in a sustainable way – e.g. protect air, water, protected sites.</p>	<p>Assessments are in Appendix B, Section 6 sets out how LTP policies have incorporated sustainability considerations and mitigation for future interventions.</p>
<p>The Environment Act has been referred to though without much reference to BNG. It was noted that new infrastructure can bring opportunities to contribute to nature recovery (pg.1 in the 'Biodiversity' summary) and BNG is a key way to achieve this. BNG is not yet mandatory for NSIPs (e.g. road schemes) but we'd encourage infrastructure projects to be thinking about this / be as ambitious as possible with their schemes in the meantime.</p>	<p>We note that requirements for 10% biodiversity net gain for most permissions (including transport schemes) came into force earlier in 2024 and although are not yet mandatory for National Significant Infrastructure Schemes (NSIPS), the IIA takes into account the need for meeting this target. At the strategic level, the summary of the assessment in Section 5 of the IIA for Biodiversity identifies where BNG is most likely to apply.</p>
<p>When considering potential impacts on protected sites, consider loss, deterioration, <i>and</i> fragmentation. This may be relevant to sites outside of the protected sites network too, e.g. any that are in a strategic location and may be valuable for the NRN or LNRS (e.g. to link or restore habitat).</p>	<p>Fragmentation will be considered for both designated and non-designated sites. Guide question has been reworded in Table 3.1:</p> <p>Have a potential effect on habitats or species, including severance, fragmentation and disturbance?</p>
<p>In looking at the sustainability issues and opportunities, also consider the inter-dependencies between them (e.g. links between air quality, human health, green infrastructure). Consider in-combination effects throughout the process.</p>	<p>The HIA in particular considers the dependencies between health, green space and air quality. Table 5.11 assesses in-combination effects.</p>

Summary of Consultee Comment	Response
<p>Air quality – think about impacts on protected sites too as well as health. Air quality is considered within the document in relation to human health; the impact of poor air quality on the natural environment will also need to be assessed. In particular, traffic impacts associated with new development are likely to increase nitrogen emissions which can be detrimental to the natural environment. Potential air quality impacts on protected sites like SPAs will require detailed assessment through the HRA process.</p>	<p>The Scoping Report acknowledges that there are potential impacts on biodiversity from emissions to air. The biodiversity assessment considers indirect effects from air quality. Potential for impacts to SPAs, SACs and Ramsar sites are assessed in the Habitats Regulations Assessment.</p>
<p>Opportunities for active travel / green corridors etc have been considered, which we welcome. Seek opportunities wherever possible.</p>	<p>Noted and agree.</p>
<p>Make best use of existing data and be informed by priorities – e.g. HOM [habitat opportunity mapping], any opportunities for strategic green corridors.</p>	<p>The IIA uses existing data sources and identify opportunities, particularly green infrastructure corridors.</p>
<p>Consideration of any local sensitivities as well as strategic ones, e.g. any sites at particular risk of poor water quality?</p>	<p>The assessment of interventions considers water quality and identifies sensitive sites where relevant, including the Grand Union Canal.</p>
<p>The Environment Agency</p>	
<p>Whilst much of West Northamptonshire falls within the catchments of the Rivers Nene and Welland, some land in the west of the Council area falls within the catchment of the River Cherwell and land in the south east falls within the catchment of the River Great Ouse. In considering transport, the Oxford Canal is near to the western border of West Northamptonshire. Part of the Oxford Canal overlaps with the District near Clifton.</p>	<p>These catchments are reflected in the Scoping Report. The Oxford Canal has been considered within the LTP although no interventions are located in proximity.</p>
<p>In general terms, we have assessed the information and are happy with what is contained within the scoping report. We have noted that there is some mention of flood risk. However, this is located within other aspects of the report. It would be useful to have a stand-alone section on flood risk to help with clarity, rather than it being addressed under climate change or perhaps the title of this section could be changed.</p> <p>In addition, whilst the documentation makes reference to the National Planning Policy Framework, we would like you also to consider Planning Policy Guidance on Flood Risk and Coastal Change which is linked to NPPF flood risk paragraphs.</p>	<p>The title has been amended to 'Flood risk and climate resilience' as flooding is a substantial part of this area of impact.</p> <p>Planning Policy Guidance is referred to in Table 6.1, mitigation.</p>

Summary of Consultee Comment	Response
<p>We also note you mention Local Plans. We would recommend that they also look at the Strategic Flood Risk Assessments within those Local Plans as a good basis to build on their flood risk information.</p> <p>It is good that the “Climate Change – Migration and Adaption” section key policies include the FWMA 2010 and the Northamptonshire Flood Risk Management Strategy, 2017.</p> <p>We feel that the National Flood Strategy 2020 needs to be included.</p> <p>Also, the West Northamptonshire Strategic Flood Risk Assessment (SFRA) will also need to be included as this will be one of the key evidence base documents for the local plan update.</p>	<p>The Northamptonshire Flood Risk Management Strategy, 2016, is referred to in Appendix A of the Scoping Report.</p> <p>Appendix A of the Scoping Report has been updated to refer to the West Northamptonshire Strategic Flood Risk Assessment, 2019 and National Flood Strategy 2020.</p>
<p>Provision of links to:</p> <ul style="list-style-type: none"> • Map showing peak river flow climate change allowances • Map showing natural flood management opportunities in the Cherwell and Ray Catchments. 	<p>This information can be used where relevant for the assessment.</p>
<p>This section [Climate adaptation] should not just be looking at flood risk to the network but where road schemes are proposed, you must ensure they do not increase flood risk elsewhere and just as important how can you reduce flood risk to communities as part of their scheme.</p> <p>You could incorporate small changes that could have huge benefits to areas. Where there are areas already at flood risk or nearby areas, we would welcome the opportunity to look at ways to reduce flood risk through highways schemes.</p>	<p>Agree, these impacts and opportunities are considered for interventions in the LTP. Minor amendments have been added to the Scoping Report to clarify.</p>
<p>Figure 3.9 “Area at Risk of Flooding” currently shows only the Flood Zones related to river flooding. The figure title needs changing to state that it is the risk of flooding from rivers. It is optional to include the risk of flooding from surface water. There is an opportunity to include a link to the SFRA as mentioned above.</p>	<p>Noted. Additional sources of flooding will be considered in the assessment, including SFRA mapping reflected in WNC interactive mapping.</p>
<p>“Climate - Issues and Opportunities for the LTP” The final bullet point indicates that the LTP needs to consider a range of resilience from flooding and droughts to hotter temperatures. The geology for this area is largely mudstone and clays that could have an impact on road infrastructure resilience.</p>	<p>Added a sentence to the land and soils section of the Scoping Report.</p>

Summary of Consultee Comment	Response
<p>It is good to see that flood risk areas to be avoided and that adaptation is included for existing infrastructure at risk. You could look to use the following text: Provide opportunities to improve resilience through blue / green infrastructure? Table 4.1 should clearly include Climate Change and Flood Risk. Flood risk of the transport network, from and to it, is an important aspect that should feature not just within climate change section but as a 'topic' and therefore be clearly within the title. In addition, what about areas where flood risk cannot be avoided? Any infrastructure should be designed in such a way to ensure that it remains resilient.</p>	<p>The following changes have been made:</p> <p>Objective 6: Avoid or reduce flood risk and support resilience of transport to the potential effects of climate change.</p> <p>Guide questions include: Provide opportunities to improve resilience through green/blue infrastructure?</p> <p>At this stage, flood risk has not been made a separate topic, but emphasised within the climate resilience topic. There are limited interventions put forward by the LTP that require large infrastructure (including highway) projects, so these have been combined for the assessment.</p>
<p>Identifying Issues and Opportunities, specifically under the subsection Resources: Land, Soil and Water, we are generally satisfied with the policy records and baseline information referred into the report. However, we wish to highlight several points regarding groundwater protection that we believe should be incorporated into the baseline. Importance has been given to look after the water quality within the Nene catchment area (from agricultural sources but also some urban and run-off which transport contributes). Additionally, it is important to look for any unidentified sources of contamination/previous land contamination arises at any time during construction, need of dewatering or groundwater control method during construction, implementation of SuDs on contaminated land after remediation, use of material during construction work, location of Principal and Secondary Aquifers and Source Protection Zone 1. We want to ensure that the proposed development in Local Transport Plan, situated above a Principal and secondary A aquifer or Source Protection Zone 1 do not pose any unacceptable risk to the water environment. Therefore, we recommend a contamination investigation and remediation strategy.</p>	<p>The Scoping Report has been updated to include a paragraph on aquifers and source protection zones. None of the interventions are in proximity to source protection zones.</p> <p>Table 6.1 sets out measures to minimise risk of pollution during construction.</p>

Summary of Consultee Comment	Response
<p>Related to this, we have looked at the baseline information already included in the Scoping report. We suggest that the additional baseline information that may be relevant when siting new infrastructure in West Northamptonshire could include aquifer and source protection designations as well as the sites of previously used land. With regard to the protection of groundwater, we suggest that the following legislation and regulations that may need to be included are:</p> <ol style="list-style-type: none"> 1. The Environment Agency’s approach to groundwater protection (publishing.service.gov.uk), with particular reference to the position statements in section C in relation to infrastructure, and G13 in relation to sustainable drainage systems (SuDS) which must be provided in new developments wherever appropriate; and 2. The Land Contamination Risk Management guidance Land contamination risk management (LCRM) - GOV.UK (www.gov.uk) when dealing with contaminated land or other land uses such as historic landfills. 	<p>Source protection zones have been added to the scoping report.</p> <p>The Scoping Report covers policy and legislation at this stage, however, guidance – including groundwater protection and contaminated land risk management - can be included as mitigation where potential for significant effects is identified in the assessment.</p>
<p>We have also reviewed the Scoping Report with regard to issues and opportunities and suggest there may be additional issues or opportunities surrounding the development of previously used land and protecting groundwater resources.</p>	<p>The following amendments to issues and opportunities have been made:</p> <ul style="list-style-type: none"> • New transport infrastructure can result in loss or damage to soils, an important resource for food production, as well as mineral resources. Reuse of existing infrastructure or brownfield land can minimise loss of these resources. • Transport can reduce quality of ground and surface water resources and have physical effects on freshwater habitats.
<p>In Section 3.28 of the February 2024 scoping, report we would like this to also include the following comment for the River Cherwell: “Likewise the upper reaches of the River Cherwell and its tributaries also face challenges with water quality (from both agricultural run-off and point source sewage works) and have opportunities for physical enhancement particularly around the addition of gravel to the bed and habitat restoration”.</p>	<p>This sentence has been added to the Scoping Report.</p>
<p>The Integrated Impact Assessment for the West Northamptonshire Local Transport Plan identifies the Water Framework Directive (WFD) in Appendix A and the Anglian and Thames River Basin Plans as key legislation. The report does not, however, recognise the duty the WFD imparts on public bodies to have regard for waterbody objectives when making plans. We would welcome inclusion in the IIA scoping report, a statement acknowledging that, in accordance with the precautionary principal in the planning system and the no deterioration requirement of the WFD, development proposals must not cause deterioration of waterbodies under the WFD and should not compromise the achievement of waterbody objectives.</p>	<p>Additional text has been added to Appendix A of the Scoping Report to clarify and also issues and opportunities text.</p>

Summary of Consultee Comment	Response
<p>In addition, in accordance with the principal for planning betterment, of biodiversity and environmental Net Gain and with the ambition to implement measures to achieve waterbody objectives under the WFD, the plan should make a statement about development proposals seeking to implement measures that achieve those WFD objectives, where possible and material to proposals.</p>	<p>This will be incorporated into the assessment and the Local Transport Plan.</p>
<p>We note the documentation refers to construction. We have therefore attached some guidance regarding managing construction waste. The document provides links to the relevant Environment Agency guidance documents.</p>	<p>The assessment of the LTP will be undertaken at a strategic level and at this stage the construction impacts on individual interventions will not be known. However, mitigation principals for construction have been identified in Table 6.1.</p>
<p>In addition, as general comment, we do find that waste criminality is helped with access to sites using arterial roads. Some of our otherwise quiet towns can be used for illegal waste storage and processing due to their access and proximity to larger towns and cities. Finally, a lot of our Waste Permits will be asking the operators how they risk assess Environmental change. This could include how they would deal with excess heat or flood and the impact this has on their business and the environment. The Transport Plan should highlight this as an emerging matter.</p>	<p>To some extent this is reflected in Policy 7 - Network Operations and Maintenance; Policy 9 – Climate change and adaptation; and Policy 13 – Supporting business with freight movements.</p>

Appendix B – Assessments (separate document)

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