

Integrated Impact Assessment

Local Transport Plan 5



Inclusive Growth

Sustainable Development and Strategy

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Non-Technical Summary

Luton Council has developed its fifth Local Transport Plan (LTP5). LTP5 will help deliver sustainable transport to help meet the 2040 vision for Luton, including decarbonising the transport network, moving more trips to active modes to create healthier communities, improving air quality and connecting people with opportunities and services.

An Integrated Impact Assessment (IIA) has been undertaken as part of LTP5 development. The IIA combines several sustainability appraisal processes, so that environmental and social impacts are identified and mitigated. 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 and related to biodiversity, landscape, air quality, noise, water flow and quality, climate change, health and wellbeing which are described alongside other sustainability aspects below.

Biodiversity: There are a number of protected sites for nature conservation in Luton that are designated at a national and local level, in addition to priority habitats for biodiversity. There is potential that LTP5 could result in small-scale habitat loss from strategic improvements to existing highways, busways and park and ride, depending on design. Significant negative effects were predicted if safeguarded land was developed for a new transport corridor (A6 to A505), a wildlife corridor with locally designated sites and a range of habitats, although future development is uncertain as subject to further investigations. Positive effects were also predicted from policies to protect the environment and opportunities to support green infrastructure and nature recovery.

Landscape: Luton lies adjacent to landscapes of national importance and also has locally important landscapes and green spaces within the authority. There are potential negative effects on landscape where design of strategic improvements to existing highways, new busways and park and ride may change local landscape character. Significant negative effects were predicted if safeguarded land was developed for a new transport corridor between the A6-A505, due to presence of local and nationally designated landscape, although future development is uncertain as subject to further investigations. Positive effects are also predicted from LTP5 measures which improve access to green and blue spaces, increased tree cover and integrate green infrastructure into transport.

Historic environment: Luton has a rich cultural heritage reflected in designated assets, particularly within the built environment. There are potential negative effects arising from strategic improvements to existing highways, new busways and park and ride, although these may be avoided when design is further developed. Significant negative effects were predicted if safeguarded land was developed for a new transport corridor between the A6-A505 due to nationally important and other potential archaeology, although future development is uncertain as subject to further investigations. Positive effects are also predicted from policies which protect and enhance the historic environment, reduce car traffic and promote active travel, particularly in Conservation Areas and historic landscapes.

Natural resources – land, soil and water: These are important natural capital assets in Luton and can be at risk of loss or degradation. There is potential for negative effects from small-scale land-take and potential for polluted drainage from strategic highways, busways and park and ride, although design is not known and effects may be avoided. Significant negative effects were predicted if safeguarded land was developed for an eastern transport corridor, due to presence of drinking water protection zones and loss of greenfield land, although future development is uncertain as subject to further investigations. Policy measures to protect and enhance the local environment, minimise land-take through use of existing infrastructure, improve or provide sustainable drainage systems would have positive effects on natural resources.

Climate change: There are global, national and local targets to reach 'net zero'. Transport significantly contributes to emissions of carbon dioxide in Luton, particularly road traffic. LTP5 plays a role in reducing emissions, positive effects were predicted for the majority of measures. There are uncertain and potentially negative effects where highways schemes may induce traffic increasing emissions. If safeguarded land was developed for an eastern transport corridor, this may involve embodied carbon in construction and materials although future development is uncertain as subject to further investigations.

Climate resilience: Future climate change has an effect on transport including flooding, increased temperatures and stormy weather. There is potential for negative effects from flood risk and increased run-off although there are also opportunities for improvements to drainage. If safeguarded land was developed for an eastern transport corridor, this may also involve loss of vegetation and increasing heat-island effects, although future development is uncertain as subject to further investigations. Measures such as asset management to maintain infrastructure and reduce damage from climate -related events, provision of travel information, and removing the need for travel from digital connectivity were predicted to improve resilience. Provision of green infrastructure also provides shading and reduces 'heat-island' effects in urban areas.

Air and Noise: There are several areas in Luton where air emissions previously haven't met national standards and road noise is also an issue. There were uncertain mixed effects for highway improvements on existing roads, as well as a potential new eastern transport corridor. Reducing congestion can have benefits on air quality but will reduce traffic with negative effects on air quality and noise. Several measures proposed by the LTP had positive effects on air quality and noise by reducing congestion, management of freight, use of zero emissions vehicles, providing alternative public transport and active travel options.

Communities: The majority of LTP5 measures are predicted to have positive effects on community connectivity, through provision of transport to jobs, employment, leisure and other communities. Active travel, public transport and improvements to the public realm support community interaction and reduce traffic in neighbourhoods. There was potential for mixed effects from the southeastern transport corridor, which would improve connectivity but also negatively affect communities through loss of greenspace.

Health and Equalities: Luton has a diverse and growing population. LTP5 provides access to services and employment, including for disadvantaged groups. Active travel, public transport and environmental protection measures were predominantly assessed as having positive effects on physical and mental health. A number of measures were designed to support lower income groups, young people and those with reduced mobility. Improved safety and accessibility were key considerations. A separate Health Impact Assessment and Equality Impact Assessment has been undertaken.

The IIA identifies a number of mitigation measures to avoid or reduce negative or uncertain effects and enhancement measures to ensure that opportunities are taken to maximise positive effects. Many of these are applicable to project level design. Monitoring of effects will also be important during implementation of LTP5.

Introduction

Background

Luton Council has a town wide 2040 vision to be a healthy, fair and sustainable town where everyone can thrive, and no-one has to live in poverty. Effective transport planning has a major part to play in the realisation of that vision, including:

- Decarbonising the transport network;
- Shifting more trips to sustainable and active modes to create healthier communities
- Improving air quality and:
- Connecting Luton's people and places with opportunities and services.

Luton Council is about to embark on the development of its fifth Local Transport Plan (LTP5).

An Integrated Impact Assessment (IIA) is being undertaken as part of the LTP5 development. IIA combines several sustainability appraisal processes, so that environmental and social impacts are identified and mitigated as part of plan development. This Report documents the IIA process.

Integrated Impact Assessment

The components of the IIA process are described below.

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.

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 Guidance 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.

Equality 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.

Habitats Regulations Assessment (HRA)

HRA is undertaken under the Conservation of Habitats and Species Regulations 2017 (SI 2017/1012, known as the Habitats Regulations) for plans or projects which are likely to have a significant effect on a European Site designated for nature conservation. Luton does not have any European Sites within the authority. Where policy measures have the potential to extend beyond the boundary of the authority (working in partnership with other transport providers), the potential for effects on European sites was reviewed but no further sites were identified (see Chapter 3).

Purpose of Report

This report represents the IIA process undertaken according to the SEA Regulations and best practice:

- Section 2 provides an overview of LTP5.
- Section 3 sets out the methodology used for the IIA.
- Section 4 provides an overview of the baseline, issues and opportunities.
- Section 5 summarises the assessment of LTP5 including the likely significant and cumulative effects.
- Section 6 sets out mitigation, enhancement and monitoring measures

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The Local Transport Plan

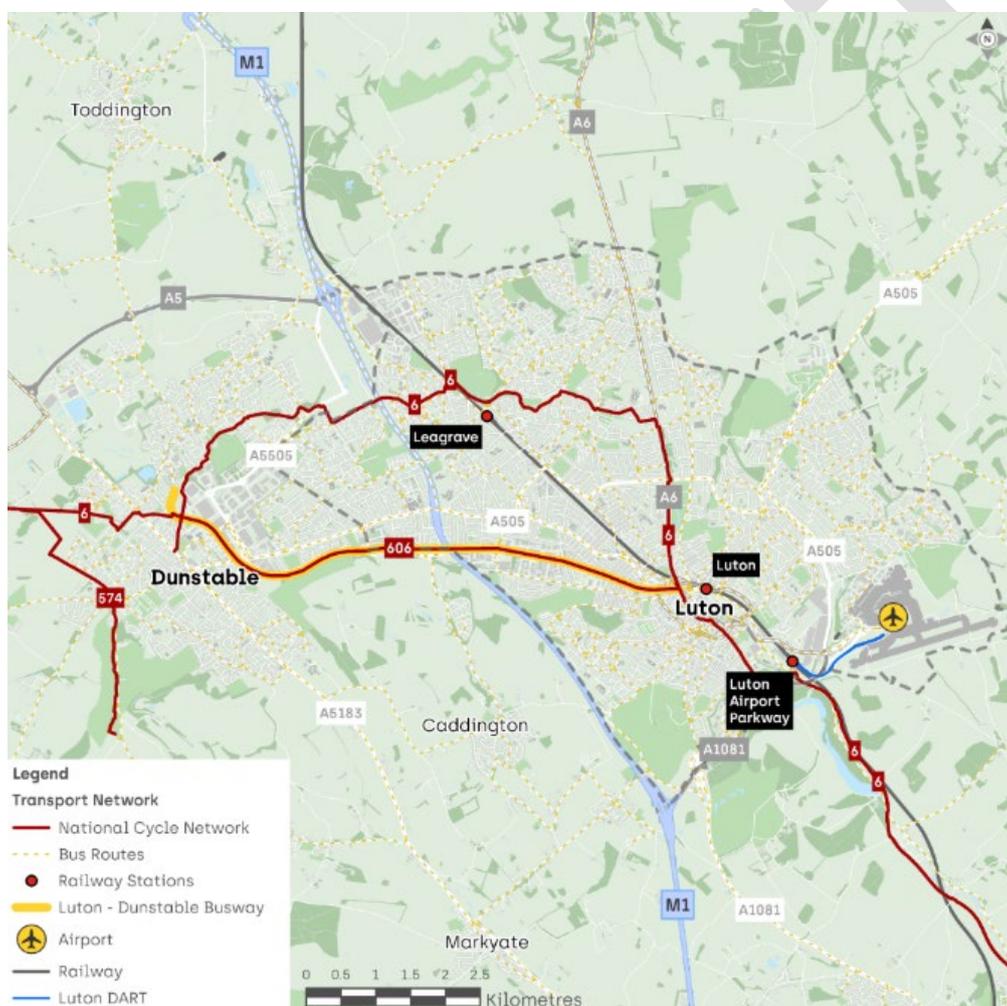
Introduction

LTP5 provides an opportunity to rebalance our transport system to enable more opportunities for active travel, public transport and journey sharing. Policies and interventions identified for LTP5 aim to be people and place focused, rather than modally specific. This approach helps to address broader, place-based policy issues such as crime, public health, decarbonisation, climate change and economic development.

Luton's key transport network

An overview of Luton's key transport network is presented in Figure 1 below, covering rail, bus, strategic active travel, and strategic and major road networks. Other aspects of transport in Luton comprise shared mobility, public transport, parking, park and ride, taxis and private hire, future mobility (e.g. autonomous and electric vehicles).

Figure 1: Luton's transport network



Overview of LTP5

The vision

The vision for transport in Luton is:

“By 2040, Luton will have a sustainable transport network enabling inclusive growth, providing access and improving health and wellbeing for all. Connections to and from the town will link residents, workers and employers to key economic hubs within the region, London and nationally.”

Objectives

The vision is underpinned by seven objectives, targeting improvements across all aspects of transport in Luton. The first five objectives focus on addressing thematic aspects of transport and related issues, while objectives 6 and 7 set a direction for ways of working to deliver the LTP.

Each objective is complemented by a set of strategic outcomes, tangible indicators that can be used to assess progress and success against objectives. There are also eight strategic principles that have been applied through the development of the LTP (the LTP provides more information in outcomes and principles).

Policies and policy measures

The LTP sets out policies and targeted policy measures. The policy measures are specific and actionable items, programmes or initiatives that are set to be delivered under the LTP. While objectives provide a strategic focus, policies and delivery of their related measures may have impacts on environmental and social sustainability and are assessed in the IIA.

Table 1 outlines the policies assessed under each objective in this report. A full list of policy measures is available in the LTP, with a summary provided in the assessment in Appendix B.

Table 1: Objectives and Policies for the fifth Local Transport Plan

Objectives	Policies (for assessment)
1: Create safer, active and healthier places that are liveable and improve quality of life for everyone (Chapter 3 of the LTP)	Active travel and public realm design principles Active travel infrastructure Access to parks, green spaces and the River Lea Education, training and promotion Transport safety and security
2: Tackle inequalities through accessible, affordable, and reliable transport choices that sustainably connect people with the key services and opportunities they need (Chapter 4 of the LTP)	Public transport infrastructure Public transport services and on-demand transport Customer experience and fares Integrated transport and reform
3: Increase sustainable transport choices for all and reduce car dependency (Chapter 5 of the LTP)	Rail (including rail freight) Inter-urban public transport Strategic and major highways Strategic demand management Digital connectivity
4: Enable inclusive growth through enhanced sustainable connectivity and access to economic opportunities (Chapter 5 of the LTP)	Planning principles Airport related development Parking Freight and urban logistics
5: Drive rapid decarbonisation in the movement of people and goods in line with local and central government targets, embracing innovation and technology (Chapter 6 of the LTP)	Low and zero emission bus and coach Rail electrification Electric vehicle infrastructure Budgets, offsetting and monitoring Protecting and enhancing the local environment Asset management and resilience
6: Embrace diversity across Luton through meaningful collaboration on transport plans, policies, and schemes (over-arching way of working)	Over-arching way of working. While there are benefits for equalities, no policies for assessment.
7: Support the financial viability of services through continued partnership working with other public sector bodies and the private sector, including neighbouring authorities, operators and employers (over-arching way of working)	Over-arching way of working in relation to partnerships and funding, no policies for assessment.

Carbon Assessment

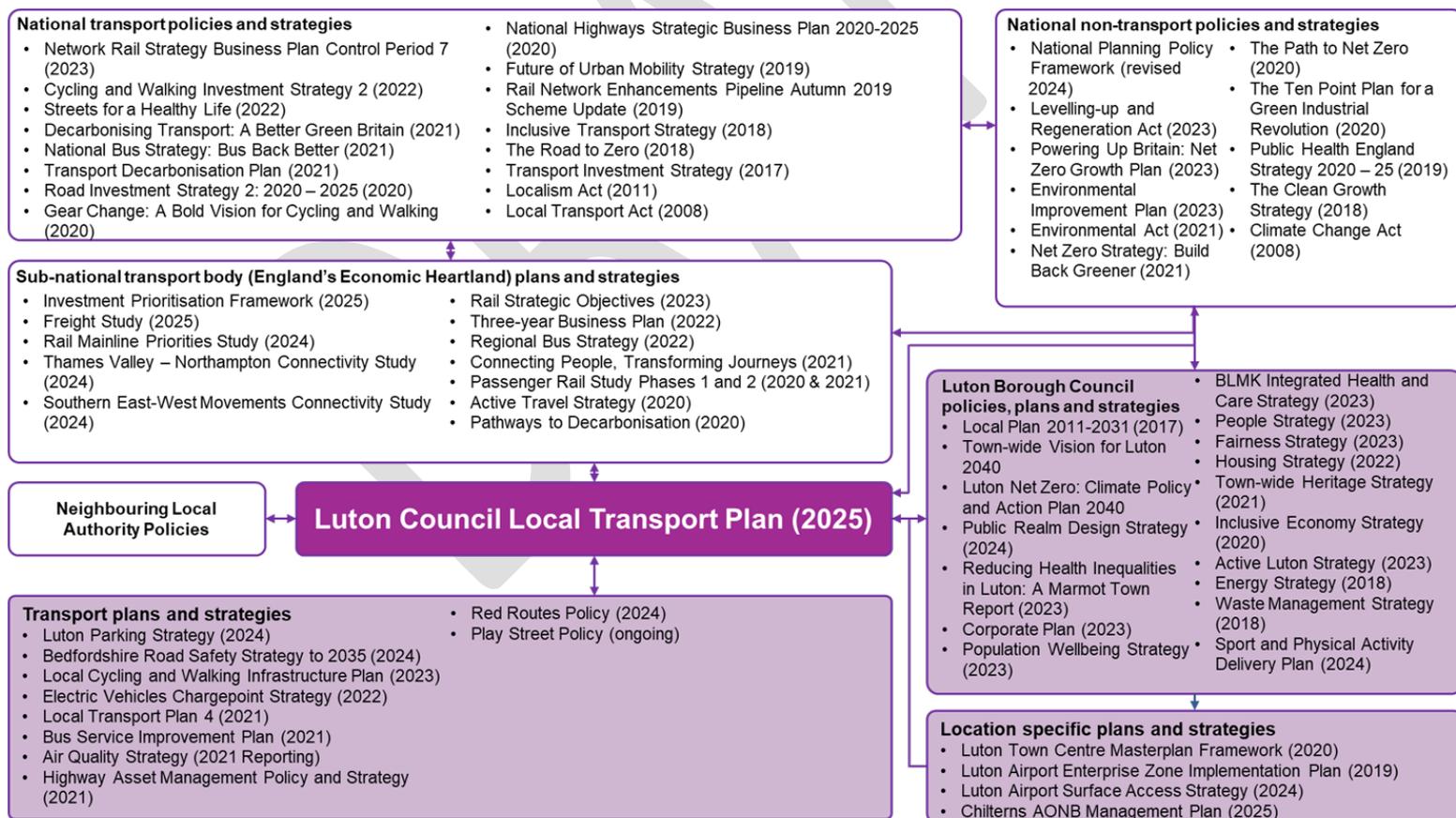
The Department for Transport’s (DfT) Decarbonisation Plan committed local authorities to ensure Quantified Carbon Reduction (QCR) assessments are undertaken so that transport interventions are measurable and aligned with overarching climate objectives¹. The Carbon Assessment Playbook (CAP) provides an evidence-informed, quantifiable approach to carbon reduction in the development of local transport strategies and plans. It has been used to quantify the carbon impact of all the recommended LTP policies to assess the extent to which they help achieve desired outcomes.

Relationship with other plans

Figure 2 below shows how LTP5 is related to other policies and plans in the hierarchy. This shows the relationships between LTP5, national policy, regional and local plans and their delivery. At a national level, transport policy is established. Much of this is related to decarbonisation of the transport.

A review of national, regional and local plans and their relevance to LTP5 and the IIA can be found at Appendix A of the IIA Scoping Report. From the IIA perspective it’s important that sustainability appraisal is taken at higher tiers, for example as part of the development of England’s Economic Heartland Regional Transport Strategy, as well as lower tiers, major schemes will also require environmental appraisal and Environmental Impact Assessment. IIA is also undertaken for the Luton Local Plan and plans of neighbouring authorities.

Figure 2: LTP5 Relationship with other policies and plans



Methodology

Strategic Environmental Assessment

The IIA methodology, tends to be driven by 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 LTP5 follows that set out in Government Guidanceⁱⁱ and meets the requirements of the SEA Regulations. It involves the development of an assessment framework comprising a series of objectives, assessment criteria and indicators. This framework is developed from an understanding of environmental issues and opportunities identified through a review of existing baseline information and a review of other plans, programmes and environmental protection objectives relevant to the plan area.

Figure 3 shows the key steps of the SEA process and the relationship with the LTP5 development process. This report is the product of Stages B and C, selecting and assessing options for the SEA and producing an Environmental Report for consultation.

Figure 3: Relationship between IIA and LTP5

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Stage A: Scoping

A Scoping Report was issued in January 2025 and represents Stage A of the process described in Figure 3 above. The Scoping Report sets the context and scope of the IIA and meets requirements of the SEA Regulations (Regulation 12 (3)). The Scoping Report provides:

- An overview of LTP5;
- A review of policies, plans, programmes and sustainability objectives which are relevant to the potential sustainability impacts of LTP5;
- Baseline information, future trends, and key sustainability issues and opportunities as well as a framework for assessment.

A summary of this information is provided in Chapter 4 of this report.

Consultation on the scope of the IIA was undertaken with the three statutory consultees (the Environment Agency, Historic England and Natural England) in addition to the Chiltern Society. Several suggestions were made relating to policy, sources of guidance, advice on future project level assessment and amendments to the assessment framework (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. Each sustainability objective is supported by guide questions. The objectives are developed using factors such as sustainability issues and opportunities for LTP5 (Chapter 4) and review of legislation and policy (Scoping Report). The guide questions are intended to provide more direction and focus to the sustainability objectives. The guide questions will assist the overall assessment process and help to ensure that it covers all issues. The IIA Framework is presented in Figure 1.

At this strategic level, the assessment can identify potential change from implementation of policy measures. Many of the policies don't apply to a specific location and as many of the measures have not yet been developed or modelled, it is not possible to quantify impacts (although a quantified carbon assessment has been undertaken for all the policies within the LTP, which is taken into account). The method is therefore qualitative, using professional judgement, to determine likely environmental performance against sustainability objectives and related guide questions.

Table 2: IIA Framework for LTP5

Sustainability Topic	Objective	Assessment criteria: Is the policy or intervention likely to....
Biodiversity	1. Protect and enhance biodiversity to support nature recovery.	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 nature recovery or green infrastructure?
Landscape	2. Protect and enhance character and distinctiveness of landscapes	Have an effect on the Chilterns National Landscape, local landscape designations or other green open spaces? Protect and enhance Luton's green infrastructure and support opportunity areas?
Historic Environment	3. Conserve and enhance the historic environment including cultural heritage.	Protect and/or conserve designated heritage assets and their settings? Protect and/or conserve the historic environment, including non-designated and unknown assets? Improve access to the historic environment and setting of assets?
Land, soil and water resources	4. Protect and enhance soil, land and water quality and resources.	Increase pollution, run-off or modification of surface and groundwater resources? Provide opportunities to improve the quality of water, soil and land? Make best use of existing transport assets to reduce impact natural resources?
Climate change	5. Reduce transport-related CO2 emissions.	Supports use of sustainable transport (active travel and public transport)? Supports shift to electric vehicle or alternative low carbon fuel? Reduces the need to travel using combustion engine vehicles? Involve development infrastructure with significant embodied carbon?
Climate resilience	6. Avoid or reduce flood risk and support climate change resilience?	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? Enable resilience gains through green/blue infrastructure?
Air quality and noise	7. Reduce transport related air pollution and noise.	Reduce emissions to air, particularly nitrogen oxides and fine particulate matter? Reduce transport-related noise?
Population and communities	8. Promote a sense of place and well-connected communities.	Provide access to employment and services for residents? Support a sense of place and community hubs? Promote social and community interaction through active travel and public transport?
Health and wellbeing	9. Improve health and wellbeing of residents.	Improve the active travel and public transport network? Increase road safety, as well as personal safety (real and perceived)? Promote healthy places in Luton (HIA)?
Equalities, diversity and inclusion	10. Promote equality of access to transport.	Improve accessibility for residents, particularly for disabled people, people living with reduced mobility (such as older people), and those from socio-economically disadvantaged backgrounds (EqIA)?

The IIA Framework above incorporates the requirements of SEA as set out in the SEA Regulations. The assessment of LTP5 under some of the objectives above is also be informed by other IIA processes:

- Objective 9 on health and well-being was informed by the HIA
- Objective 10 on equalities will be informed by the EqIA.

The IIA Framework was used to assess policy measures for LTP5. It also considers interdependencies between effects and cumulative effects. Where any significant or uncertain effects are identified, mitigation and monitoring was proposed (Chapter 6), in addition to opportunities for enhancement.

Stages C & D: Reporting and Consultation

This report sets out the results of the SEA and constitutes the Environmental Report under the SEA Regulations. This report identifies describes and evaluates the likely significant effects on the environment of implementing the plan or programme and reasonable alternatives considering the objectives and geographical scope of the plan or programme (regulation 12(2)). An SEA Statement will be prepared following the consultation period to summarise how responses to consultation and the SEA has influenced the development of LTP5, in addition to other requirements under Regulation 16.

Stage E: Monitoring

Chapter 6 of this report sets out recommendations for monitoring the environment effects of implementing LTP5 under Regulation 17.

Health Impact Assessment

An HIA for LTP5 has been undertaken and informs the IIA Assessment. Additional baseline information on the potential factors that determine health in Luton has been collected. The HIA is used as a tool to identify and assess the beneficial and detrimental effects of the proposed LTP5, whilst minimising its potential detrimental effects.

Equality Impact Assessment

An EqIA for LTP5 has been undertaken and informs the IIA Assessment. The EqIA focuses on identifying whether LTP5 will have a disproportionate impact on groups of people who share one or more protected characteristic, i.e. they will be significantly more affected by the change than other people.

Habitats Regulations Assessment

The first stage of HRA is Screening, to check whether LTP5 policy measures risk having a significant effect on a European site on its own or in combination with other proposals. While there are no European sites within Luton, proposed policy measures were reviewed in order to identify whether any sites (Ramsar, Special Protection Area and Special Area of Conservation) outside Luton needed to be screened for potential effects.

Table 3 sets out the policy measures that were identified as extending beyond the Luton local authority boundary and whether there were any designated sites that may be affected.

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Table 3: Review of policy measures for screening under the Habitats Regulations

Policy Measure	Identification of European sites
Full or partial busway: Luton to Bedford	Busways are likely to be on-line (follow existing routes) due to cost and feasibility of delivery, although some sections may be off-line. No sites within 2km of A6 between Luton and Bedford.
Full or partial busway: Luton to Leighton Buzzard and Milton Keynes	Busways are likely to be on-line (follow existing routes) due to cost and feasibility of delivery, although some sections may be off-line. No sites within 2km of A5/A505 between Luton and Leighton Buzzard. No sites within 2km of A4146 between Leighton Buzzard and Milton Keynes.
Full or partial busway: Luton to Aylesbury	Busways are likely to be on-line (follow existing routes) due to cost and feasibility of delivery, although some sections may be off-line. No sites within 2km of A418 between Leighton Buzzard and Aylesbury. No sites within 2km of B489 between Luton and Aylesbury (Chilterns Beechwoods SAC is just over 2.2km from B489).
Full or partial busway: Luton to Welwyn Garden City and Hatfield	Busways are likely to be on-line (follow existing routes) due to cost and feasibility of delivery, although some sections may be off-line. No sites within 2km of B653 between Luton and Welwyn Garden City and Hatfield.
Full or partial busway: Luton to Stevenage	Busways are likely to be on-line (follow existing routes) due to cost and feasibility of delivery, although some sections may be off-line. No sites within 2km of minor roads and between Luton and Stevenage.
Full or partial busway: Letchworth Garden City and Stevenage via A505	Busways are likely to be on-line (follow existing routes) due to cost and feasibility of delivery, although some sections may be off-line. No sites within 2km of A505/ A602 (or minor roads) between Luton, Letchworth and Stevenage.
Work with key stakeholders to deliver East West Rail in its complete extent, along with first-mile / last-mile connections to stations along its route	Construction of East West Rail between Oxford and Bletchley is underway and HRA was part of the consenting process. East West Rail is subject to a separate consenting process (Develop Consent Order) for Bletchley to Cambridge which is led by East West Rail Company and includes HRA. Connections to Luton will be via existing infrastructure, no sites identified.
Support the completion of the Midland Mainline Electrification programme	The electrification of the Midland Mainline is underway and led by Network Rail, including any HRA requirements. No sites along the South of Bedford Upgrade, running between Hendon, Luton and Bedford.

No potential sites were identified for Screening under the Habitats Regulations.

Limitations and Assumptions

The SEA Regulations require that any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information are described (Schedule 2 (8)). The assessment has been undertaken at a strategic level.

Some of the policy measures are not location specific (these are marked as 'P' for Policy or 'L' for location in Appendix B). Assessment of location-based measures is desk based, using information identified for the baseline at the scoping stage. Detail, including design relating to these measures not yet been developed, and it is assumed that construction of any infrastructure follows existing best practice and applicable environmental legislation and guidance (for example legislation for protected species). However, a precautionary approach is also taken where there are sensitive receptors nearby, such as environmental designations.

Several of the policy measures rely on working with the stakeholders who are responsible for transport delivery. This means that Luton Council is not directly responsible for project-level design and implementation, examples include:

- Busways extending outside Luton would require partnership working with neighbouring authorities, including North Hertfordshire and Central Bedfordshire Councils.
- Strategic highway improvements to Junction 10 of the M1 would require working with National Highways.
- Rail improvements such as electrification of the Midlands Mainline and development of East West Rail, would be delivered by network Rail and East West Rail Company respectively.

The Scope of LTP5 does not include Airport Expansion and related aviation emissions. This would be undertaken as part of airport master planning process. It does, however, include surface access to the airport, and transport for passengers and staff.

Identifying issues and opportunities

Introduction

The SEA Regulations require that the report should identify how LTP5 aligns with other relevant plans and programmes. While the SEA Regulations do not explicitly call for the use of objectives or indicators, these tools are widely recognised as effective way to describe, analyse, and compare environmental effects. The SEA objectives outline the intentions and the desired direction for environmental change for Local Transport Plan identified within Luton and surrounding area. 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 SEA 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 Luton and a summary of the issues and opportunities associated with change over the plan period, which were used to generate the objectives in Table 2. The Scoping Report, also issued for consultation, provides further information, including a full review of the environmental characteristics, evolution of the environment, existing problems and relevant legislation, policies and plans, including any environmental protection objectives (Appendix A of the Scoping Report).

Overview

Luton is a densely populated town with a rich history of economic development and cultural diversity. Luton is surrounded by the Green Belt to the south and the Chilterns National Landscape to the north and west, with the urban areas of Dunstable and Houghton Regis to the west of Luton.

The town enjoys easy access to high quality landscapes, wildlife areas and parks. However, access to greenspace is disproportional in some areas, and there is increasing pressure on these from housing for a growing population and economic development.

Luton became an established settlement during the medieval period, formed around the River Lee. There has since been significant expansion as a market town, industrial centre and in more recent decades, expansion of business parks and sectors such as aviation. There has been significant investment in civic spaces, regeneration sites and transport infrastructure which continues to be important to provide quality places to live and work.

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.

In the largely urban context of Luton, examples of ecosystem services include provision of recreation, clean air and flood defence through natural drainage. 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. For example, in Luton, greenspace is particularly important to local communities. As such, natural capital is overarching across the IIA and more specific examples are given under the sustainability topic below.

Goals set out within the national 25 Year Environment Planⁱⁱⁱ are focused on enhancing natural capital and ecosystem services, including enhancing the natural environment, clean air and water, mitigation and adaptation to climate change. This is also reflected in the requirement for environmental targets and biodiversity net gain in the Environment Act 2021.

Issues and Opportunities

The following issues and opportunities were identified from a review of legislation, policy and baseline information at the Scoping stage.

Biodiversity

As a densely urban area, Luton is home to very few sites for nature conservation. The pressure for additional housing combined with economic growth is likely to result in increased transport activity, which poses risks to biodiversity and nature conservation, including indirect effects through air emissions or disturbance.

- Green infrastructure, priority habitats and natural capital outside these designated areas in Luton are at risk of being lost, damaged or fragmented by new developments and supporting transport infrastructure. Similarly, there may be impacts on species.
- Potential impacts on biodiversity surrounding Luton include the loss of or severance of habitats due to land take for transport schemes required to support the increasing population and associated developments.
- There are potential opportunities for biodiversity net gain and enhanced natural capital through LTP5 policies and interventions. By adopting best practice wildlife-friendly designs into transport interventions or avoiding sensitive areas, LTP5 could support local nature recovery and improve biodiversity.
- Improved access to designated wildlife and conservation sites should enhance people's enjoyment of nature. However, increased visitor numbers could also have negative impacts due to recreational pressures on sensitive habitats.

Landscape

- There is huge development pressure in Luton, and there is potential for direct and indirect impacts (for example, new development, noise and lighting) on nationally and locally important landscapes.
- Luton is densely populated and nearly half of Luton's neighbourhoods have poor access to green space. There may be opportunities to provide greater access to valued landscapes and green infrastructure alongside transport improvements.

Historic Environment

- As Luton continues to grow, redevelopment pressures and supporting transport improvements may increase the risk of harm to designated and non-designated heritage assets and their settings.
- The majority of conservation areas and listed buildings are located in Luton town centre, where economic and leisure activities are concentrated, attracting a high volume of journeys. High volumes of vehicular traffic might adversely affect heritage assets and their setting through increased noise and pollution.
- Smaller scale transport interventions such as junction improvements, public transport enhancements, signage also potentially have visual impacts and erode Luton's historic character, particularly in the town centre, which is currently undergoing regeneration.
- Changes in traffic can lead to impacts on Luton's built heritage but also opportunities to reduce traffic congestion, reduce noise, lighting and deposition of particulate matter.
- There may be opportunities to improve accessibility to Luton's historic environment through active modes and improve setting of designated and non-designated assets.

Resources: Land, Soil and Water

- Transport can reduce quality of ground and surface water resources in Luton and have physical effects on already poor ecological water quality¹ of the River Lee and existing wildlife corridors along the river. LTP5 should support achieving improved water quality objectives through improving green infrastructure.
- Transport can pollute land and water, but there may also be opportunities to reduce existing effects through providing better pollution control, design and maintenance of sustainable drainage systems as part of transport interventions in Luton.
- New infrastructure can use natural resources and generate waste, adversely affecting the limited green space within Luton. By maximising use of brownfield land and existing infrastructure would minimise impact on modest provision of natural resources.

Climate Change: Greenhouse gases

- Transport generates a significant proportion of total carbon emissions in Luton, and the LTP will seek an 'avoid-shift-improve' framework that aims to reduce the need to travel including virtual alternatives and shift to more sustainable modes such as active travel and public transport.
- The LTP also has the opportunity to contribute to Luton's target of net zero carbon emissions by 2040, through use of technology, such as digital connectivity or alternative fuel sources for vehicles.
- There are opportunities to work in partnership with neighbouring authorities, England's Economic Heartland, government and the private sector to tackle long-distance trips and freight/ commercial fleet vehicle conversion.

¹ [Lee \(from Luton to Luton Hoo Lakes\) | Catchment Data Explorer | Catchment Data Explorer](#)

Climate resilience and flooding

- Surface water flooding affects 6% of Luton, which is situated on the northern edge of the London Basin, part of the River Thames drainage system. The Lea River, flowing through the town centre, presents a flood risk, particularly near the river. The primary flood risk comes from localised blockages and drainage network overload from intense rainfall. The LTP and IIA will need to consider flood risk within Luton, both impact on transport infrastructure and impact of new infrastructure on surface water.
- The LTP will need consider resilience of transport and impacts of storms and hotter temperatures. There are opportunities to include use of green infrastructure in Luton to reduce heat and flooding.

Air quality and Noise

- Transport is a key contributor to poor air quality, this is more significant for nitrogen oxide (NOx) than for fine particulate matter (PM2.5) particularly in around the M1 and on key corridors into Luton town centre.
- There are opportunities to improve air quality and reduce transport noise through LTP5 through encouraging electric vehicle uptake and use of alternative fuels, particularly buses and HGVs, and use of green barriers/ buffers. However, it should be noted that non exhaustive emissions like PM2.5 arise regardless of type of vehicle or mode of power.

Population, Health and Equalities

- Transport needs to be accessible for all, including different ages, those with reduced mobility, and people more likely to experience health inequalities from factors such as deprivation. The LTP will need to align with the 'Marmot Town' approach to tackle health inequalities.
- Transport can contribute to healthy places in Luton, for example by reducing vehicular traffic, providing safe active travel infrastructure, integrating green infrastructure in design and adequate seating and signage at bus stops.
- Transport can help facilitate socio-economic benefits in Luton by providing access to key areas of economic growth, education, healthcare and other services, community and leisure facilities and facilitating access between communities.
- The LTP needs to consider impact on key health and well-being, including those related to physical and mental health, personal safety and social connectivity.

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 LTP5, an initial list of potential policy measures were identified from a number of existing sources and in consultation with key stakeholders (see LTP5 for further information). A qualitative assessment of the proposed measures was undertaken using a Multi-Criteria Assessment Framework (MCAF), developed in line with the Transport Analysis Guidance (TAG). The list was also refined to remove duplication or consolidate measures.

Alternatives that were not taken forward for LTP5 and are assessed in Appendix B comprise:

- Smart Parking measures such as variable display boards indicating availability of car parking, ability to pay for parking by an app and variable parking charges based on demand. While smart parking generally had positive or no sustainability effects, these were not taken forward as too costly to develop while benefits can be delivered through other measures, including newer technologies and parking measures within the LTP5.
- A6 to M1 Link Road involves construction of a northern Luton bypass within Central Bedfordshire. An Environmental Statement was prepared and accompanies the planning application and permission was granted in 2019. There are mixed effects reported in the environmental assessment, but was not included due to a preference to support more sustainable transport options for new development.
- Newlands Way Park & Ride (nr. M1 Junction 10a), depending on design, has potential for negative effects on landscapes, the historic environment and natural resources, although there are likely to have positive effects from reducing traffic in Luton. It was not included in LTP5 as there was insufficient evidence that demand would support a commercially viable operation.

Assessment Results

The detailed assessment of policy measures for each LTP5 Objective is presented in Appendix B. It uses the IIA Framework shown in Figure 3 above to assess each policy and is accompanied by a commentary to provide a description of effects. For most policies, measures are assessed as a group as they have similar effects. However, in some cases where a measures may give rise to different effects, it is assessed separately. The results of the assessment are summarised for each of the IIA sustainability topics 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>
- Luton Local Plan Policies map
- Google maps satellite view for site level detail: <https://www.google.co.uk/maps>
- Where policy measures are under development, existing on-line information sources are used.

It is not practicable to assess all interventions in detail. For example, for some 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. Appendix B indicates which assessments are policy based (indicated by a 'P'), and which are location specific (indicated by 'L'). A summary of the measures under each policy is also provided in Appendix B. Location specific policy measures are also shown in

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Figure 4 and Figure 5 below.

The LTP5 Delivery Plan (covering the first three years of plan delivery) describes what the Council, and partners, want to achieve as the first steps towards delivering Luton’s 2040 vision. While there are a number of transport investments already underway or in advanced stages of development, for a number of schemes, investment and development is needed for longer-term delivery. For the purposes of a strategic assessment, which focuses on operational effects, the effects described are assumed to be long-term and permanent.

The scale used for the assessment of effects is shown in Table 4 below.

Table 4: Key to 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

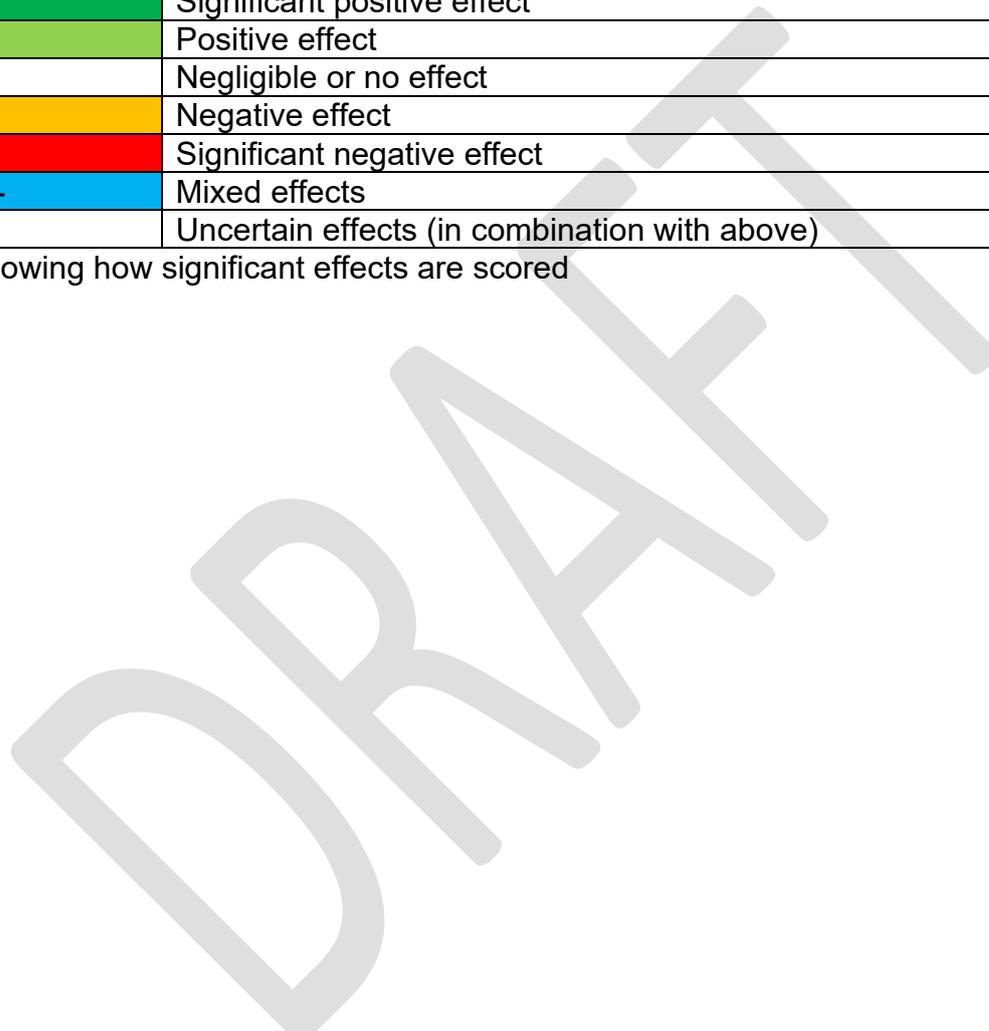


Figure 4: Key draft Local Transport Plan location- and corridor-specific policy measures

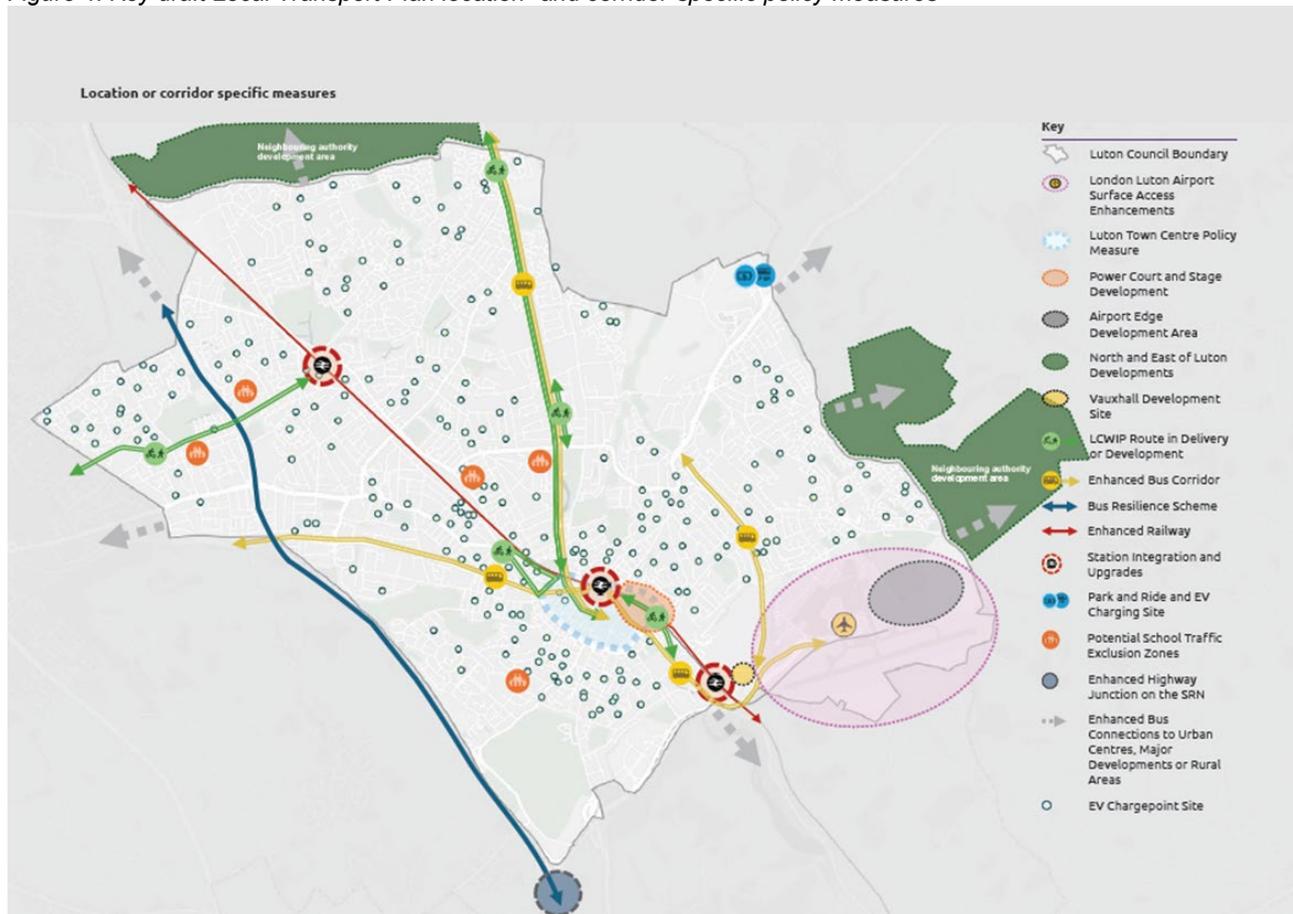
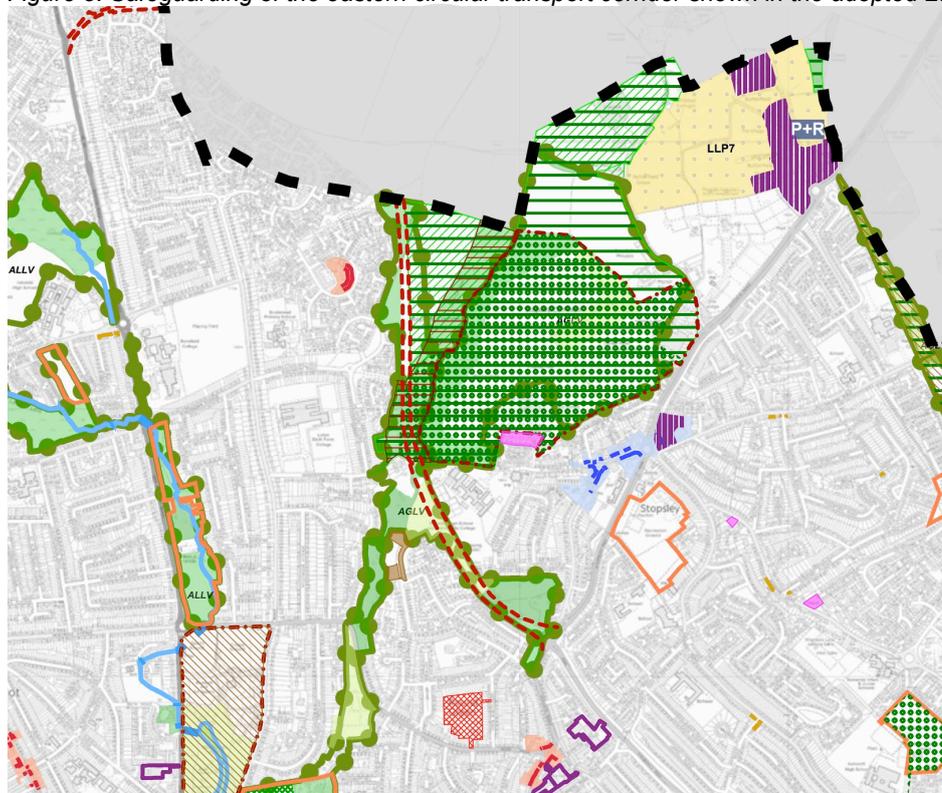


Figure 5: Safeguarding of the eastern circular transport corridor shown in the adopted Luton Local Plan 2011-2031



A map taken from the adopted Local Plan 2011-2031 Policies Map, with the safeguarded land for an eastern circular transport corridor shown as a dashed red line in the centre.

Policies map can be found here:
<https://www.luton.gov.uk/Environment/Lists/LutonDocuments/PDF/Local%20Plan/adoption/Luton-Local-Plan-2011-2031-policies-map.pdf>

Biodiversity Objective: Protect and enhance biodiversity to support nature recovery.

<p>Are the policy measures likely to:</p> <p>Have an effect on designated sites for nature conservation?</p> <p>Have a potential effect on habitats or species, including severance, fragmentation and disturbance?</p> <p>Provide opportunities to support nature recovery or green infrastructure?</p>	
++	<p>Policy measures that protect and enhance the local environment including protecting designated sites, environmental net gain, increased tree cover and enhancing green corridors for active travel, were predicted to have significant positive effects.</p>
+	<p>Other policy measures that were predicted to have positive effects comprise active travel and public realm design principles, including those that support increased tree cover and integrating green infrastructure. Active travel measures have minimal infrastructure so direct impacts on biodiversity are likely to be minimal. There may be opportunities to create or strengthen wildlife corridors alongside providing connectivity that would also benefit nature recovery. Examples include the connectivity to the Walden Hills through Stopsley Common to the north-east, the Lea Valley running north-west to and Stockwood Park and Luton Hoo in the south/south-west of the borough.</p> <p>However, there may also be increased disturbance for new networks and future routes will need to consider how disturbance to key species and habitats is avoided, particularly in existing designations - Dallow Downs and Winsdon Hill Site of Special Scientific Interest (SSSI), Cowslip Meadow SSSI, Galley Warden and Hills SSSI, and network of 25 County Wildlife Sites (CWS) and 14 District Wildlife Sites (DWS). There may also be indirect positive effects from modal shift, including reductions in noise and air pollution (nitrogen deposition).</p> <p>Planning principles that apply 'Healthy Streets' and a transport hierarchy are also more likely to protect and enhance biodiversity.</p>
0/ ?	<p>The majority of policies and measures have negligible or no impact on biodiversity as they do not create new infrastructure or lead to indirect effects such as air quality.</p> <p>Several policy measures propose busways to destinations, including several outside Luton. Design is not known and while online busways within the existing carriageway are unlikely to have an impact, carriageway widening can affect adjacent habitats such as hedgerows (there are a number of SSSIs alongside key routes), and any offline sections may result in further habitat loss, fragmentation, severance and greater disturbance. However, it is assumed that design development alongside further assessment can avoid significant effects.</p>
- / ?	<p>See above for unknown possible negative effects from busways.</p> <p>Butterfield Park and Ride is greenfield land allocated as part of business park development, so it is assumed that there is some loss of biodiversity to be offset by 10% net gain. Oaket Wood CWS and ancient woodland lie immediately to the north of the site and depending on design, there is potential for indirect negative effects.</p> <p>A number of strategic highway measures are likely to include minor infrastructure and it is assumed design can avoid direct impacts on sensitive sites including Vauxhall Way and adjacent Luton Parkway Verges DWS (mixed woodland and scrub); M1 Junction 10 and Stockwood Park CWS, although buffered by Newlands Road and development; A6 Highway improvements and Wardown Park DWS, Cowslip Meadow SSSI and CWS; Green Horizon Park Access Road and Wigmore CWS depending on design.</p>
-- ?	<p>One policy measure has potential for significant negative effects. The potential of a transport corridor between the M1-A6, enables possible infrastructure along an important wildlife corridor in the northeast of Luton which includes a number of CWS (including The Chase and Bradger's Hill) and DWS (including Hay Wood and Stopsley Common), and habitats such as deciduous woodland and grassland. Effects are uncertain as it not known whether this scheme will be progressed pending on outcome of further investigation.</p>
+/- ++/- -	<p>None of the policy measures were anticipated to have mixed effects on biodiversity.</p>

Landscape Objective: Protect and enhance character and distinctiveness of landscapes

<p>Are the policy measures likely to:</p> <p>Have an effect on the Chilterns National Landscape, local landscape designations or other green open spaces?</p> <p>Protect and enhance Luton’s green infrastructure and support opportunity areas?</p>	
++	<p>Active travel policy measures that enable and enhance access to parks, greenspaces and the River Lea were predicted to have significant positive effects. The policy measures for protection and enhancement of the local environment will also protect landscapes, in addition seeking opportunities for environmental net gain and connectivity to green spaces were predicted to have significant positive effects.</p>
+	<p>Other policy measures that were predicted to have positive effects comprise active travel and public realm design principles, including those that support increased tree cover and integrating green infrastructure. Application of planning principles that apply ‘Healthy Streets’ and a transport hierarchy are more likely to protect and enhance green infrastructure.</p>
0	<p>The majority of policies and measures have negligible or no impact on biodiversity as they do not create new infrastructure, this includes busways where the design is online.</p>
- / ?	<p>Butterfield Park and Ride is greenfield land allocated as part of business park development and is adjacent to the greenbelt and Chilterns National Landscape, although development would be set within the context of the surrounding business park.</p> <p>A number of strategic highway measures are likely to include minor infrastructure, and it is assumed design can avoid direct impacts on sensitive sites including:</p> <p>M1 Junction 10 - Stockwood Park Area of Great Landscape Value 100m from J10 at nearest point but buffered by development for business use and Park and Ride, between the M1 and Newlands Road.</p> <p>A6 Highway improvements: adjacent to Wardown Park Grade II Registered Park and Garden, Common Land, Neighbourhood Parks, River Lea Linear Park, and other green spaces.</p> <p>While design for busways is not yet known, carriageway widening or offline development may result in some impact on landscape features, and key corridors (A5, A506) are within the Chilterns National Landscape. Careful design of busway routes and associated infrastructure should enable effects to be mitigated.</p>
-- ?	<p>One policy measure has potential for significant negative effects. The potential of a transport corridor between the M1-A6, enables possible infrastructure along an important wildlife corridor in the northeast of Luton which includes a number of CWS (including The Chase and Bradger’s Hill) and DWS (including Hay Wood and Stopsley Common), and habitats such as deciduous woodland and grassland. Effects are uncertain as it not known whether this scheme will be progressed pending on outcome of further investigation.</p>
+/- ++/- -	<p>None of the policy measures were anticipated to have mixed effects on landscape.</p>

Historic Environment Objective: Conserve and enhance the historic environment including cultural heritage.

Are the policy measures likely to: Protect and/or conserve designated heritage assets and their settings? Protect and/or conserve the historic environment, including non-designated and unknown assets? Improve access to the historic environment and setting of assets?	
++	Design measures for active travel and public realm includes protection and enhancement of the historic environment and the policy to protect and enhance the local environment also includes a measure specifically for the historic environment. These were assessed as having a significant positive effect.
+	<p>Active travel measures in Luton town centre, including crossings and providing segregation, helps to encourage this mode, reducing motorised traffic. This can lead to less air pollution and deposition on historic structures and improved setting of heritage assets. These include Listed Buildings and Conservation Areas, such as Town Centre and High Town Road and Plaiter's Lea. Non-designated assets include locally listed buildings.</p> <p>Planning principles which provide sustainable transport alongside new development also have potential to reduce traffic adjacent to heritage assets.</p> <p>Active travel is also a better way to experience heritage and historic townscapes and landscapes, interventions that improve connectivity to green spaces can have indirect benefits to Historic Parks and Gardens: Luton Hoo, Putteridge Bury, Wardown Park and the Improvement Garden.</p>
0	The majority of policy measures are not predicted to have an effect on the historic environment as use existing highway infrastructure, this includes busways where the design is online.
- / ?	<p>While design for busways is not yet known, offline development may result in some impact on designated, non-designated and previously unidentified heritage assets adjacent to key routes (Ascott House Grade II* Park and Garden on A505). Impacts can be direct or indirect, including effects on setting.</p> <p>Strategic highway improvements are likely to be on-line but sensitive designations in proximity include and Wardown Park Grade II Registered Park and Garden on the A6 and Luton Hoo Grade II* Registered Park and Garden, 500m east of M1 Junction 10 improvements.</p> <p>The development of Butterfield Park and Ride may also affect unknown archaeology.</p>
-- ?	<p>One policy measure has potential for significant negative effects. The potential of a transport corridor between the M1-A6, enables a possible transport route within the safeguarded eastern circular transport corridor. This corridor crosses a Scheduled Monument (Strip lynchets on Stopsley Common), the route also has potential for unknown archaeology.</p> <p>Effects are uncertain as it not known whether this scheme will be progressed pending on outcome of further investigation.</p>
+/- ++/- -	None of the policy measures were anticipated to have mixed effects on the historic environment.

Natural Resources Objective: Protect and enhance soil, land and water quality and resources.

Are the policy measures likely to: Increase pollution, run-off or modification of surface and groundwater resources? Provide opportunities to improve the quality of water, soil and land? Make best use of existing transport assets to reduce impact natural resources?	
++	Policy measures to protect and enhance the local environment would have significant positive effects on natural resources. Measures to protect and enhance biodiversity are also likely to have positive effects on land and soils. Use of sustainable urban drainage systems would have positive effects on water quality.
+	The majority of policy measures in LTP5 have positive effects on this objective as they make best use of existing highways and infrastructure through active travel measures, public transport measures (bus and rail), mobility hubs, on-demand transport, digital connectivity, asset management and maintenance. These measures minimise the need for new infrastructure which can lead to loss of soils and greenfield land. Opportunities should be taken to improve existing drainage to reduce pollution entering surface and groundwater. Policies measures which improve green infrastructure are also likely to have benefits for soils and water resources.
0	The majority of policy measures are not predicted to have an effect on the natural resources as they relate to timetables, ticketing, and campaigns for behaviour change.
- / ?	The proposed Butterfield Park & Ride is on greenfield land, allocated as part of business park development. This would result in permanent loss of soils. Drainage design would need to ensure that additional run-off doesn't result in polluted run-off to surface or groundwater. Strategic highway proposals (Vauxhall Way, M1 Junction 10, A6 Improvements and Green Horizon Park Access Road) are largely online but would involve loss of small areas of greenfield land and could result in pollution of soils and water resources, including Source Protection Zones (SPZ). There are also opportunities to improve existing drainage, reduce pollution and improve the River Lea and its corridor.
- - ?	The potential of a transport corridor between the M1-A6, enables a possible transport route within the safeguarded eastern circular transport corridor. This transport corridor crosses greenfield land, involving loss of soils, and requires new development within Source Protection Zones (1 and 2). Effects are uncertain as it not known whether this scheme will be progressed pending the outcome of further investigation.
+/- ?	Impact on busways are uncertain due to a lack of design information. There is potential for mixed effects, if routes are online, they make best use of existing infrastructure and highway verge, and land-take is likely to be negligible. However off-line sections can result in loss of greenfield land, pollution and erosion of soils, result in modification of watercourses and potential for pollution to surface and groundwater.

Climate Change Objective: Reduce transport-related CO2 emissions.

<p>Are the policy measures likely to:</p> <p>Support use of sustainable transport – public transport, walking and cycling?</p> <p>Support shift to electric vehicle or alternative low carbon fuel?</p> <p>Avoid or reduce the need to travel using combustion engine vehicles?</p> <p>Involve development infrastructure with significant embodied carbon?</p>	
++	<p>Significant positive effects were predicted where policy measures facilitate modal shift from private vehicle, including provision for active travel or public transport infrastructure, zero emissions buses and electrification of rail infrastructure. Sustainable freight and urban logistics planning can also significantly reduce HGV mileage and increase EV and/or active travel modes.</p> <p>Significant positive effects were also predicted for measures such as strategic demand management, including road user charging, clean air zones, reduced parking provision as these de-incentivise car travel; also digital connectivity as this avoids journeys. Electric vehicle infrastructure, EV car clubs and private hire transition also enables this mode. This is also supported by the results of the carbon assessment.</p> <p>Environmental protection measures, consideration of embodied carbon are also likely to bring strong carbon benefits.</p>
+	<p>Positive effects were predicted for policy measures that support modal shift such as education, training and promotional campaigns, cycle hire schemes, design principles, and safety measures. Measures that facilitate ease of public transport use such as timetabling, ticketing, and mobility hubs also have positive effects.</p> <p>Planning principles aligned with decarbonisation, such as provision of sustainable transport alongside new development, are also likely to have positive effects, although weren't assessed as significant as only apply to new development.</p>
0	<p>The policy measures all had an effect on carbon emissions, although some indirectly as described above.</p>
-	<p>None of the measures were predicted to give rise to stand-alone negative effects on carbon emissions (see below for possible mixed effects).</p>
-- ?	<p>The potential of a transport corridor between the M1-A6, enables a possible transport route within the safeguarded eastern circular transport corridor .The safeguarded eastern circular transport corridor may induce more vehicular traffic increasing carbon emissions and likely to involve significant amounts of embodied carbon in construction.</p> <p>Effects are uncertain as it not known whether this scheme will be progressed pending the outcome of further investigation.</p>
+/- ?	<p>Small scale highway improvements will help ease congestion and reduce emissions, although need to be applied alongside other measures so they don't induce traffic which may cause a negative effect. There will be more embodied carbon associated with materials and construction than other LTP5 measures.</p>

Climate Resilience Objective: Avoid or reduce flood risk and support climate change resilience?

<p>Are the policy measures likely to:</p> <p>Avoid areas of flood risk or increase surface run-off 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>	
++	<p>Asset management for resilience is predicted to have significant positive effects. Ensuring that highways and active travel routes are maintained to a good standard reduce the chance of damage during storms and aids drainage. Digital connectivity is also important to provide information in a climate event, including up-to-date travel information and enabling people to work from home. Implementation or improvement of sustainable urban drainage alongside existing or new transport infrastructure also increases resilience through improving drainage in areas of flood risk.</p>
+	<p>Policy measures which increase green infrastructure, are likely to have positive effects on climate resilience through both shading during heatwaves, reducing 'heat-island' effects in urban areas and reducing run-off through natural drainage and infiltration. These include design for Healthy Streets, application of planning principles, mobility hubs and public realm improvements. Measures to increase access along the River Lea should ensure that design accommodates flood risk.</p>
0	<p>Several of the policy measures didn't have an effect on climate resilience, particularly if they do not involve new infrastructure, this includes online busways.</p>
-	<p>None of the measures were predicted to have negative effects on climate resilience.</p> <p>Impact on busways are uncertain due to a lack of design information. There are a number of flood zones with high to medium chance of flooding along key routes such as A505 to Leighton Buzzard and A418 to Aylesbury, so design would need to ensure that flood risk is not increased. Use of off-line routes is not known, but has potential to cross existing flood zones, putting routes at risk as well as increasing run-off and flood risk.</p>
-- ?	<p>The potential of a transport corridor between the M1-A6, enables a possible transport route within the safeguarded eastern circular transport corridor. The safeguarded eastern circular transport corridor would result in loss of vegetation, increasing surface run-off and increasing heat-island effects in Luton. While not within a flood zone, the area drains to the River Lea.</p> <p>Effects are uncertain as it not known whether this scheme will be progressed pending the outcome of further investigation.</p>
+/- ?	<p>Impact from strategic highways will depend on design. The A6 runs adjacent to the River Lea and areas of floodplain, so drainage could potentially be improved although design would need to consider increased run-off. Vauxhall Way improvements and Green Horizon Park Access Road potentially drain to existing flood zones.</p>

Are the policy measures likely to: Reduce emissions to air, particularly nitrogen oxides and fine particulate matter? Reduce transport-related noise?	
++	<p>Design and delivery of active travel and public transport measures in Luton’s urban areas have potential to significantly reduce air pollution and noise. This is particularly the case for shorter or regular journeys where these modes are more suited and can be as, if not more, efficient than choosing to drive. These include a programme of local cycling and walking improvements, bus lanes, priority measures and on-demand services. Demand management measures also dis-incentivise travel by car or encourage use of zero emissions vehicles.</p> <p>Support with rail improvements, including rail freight were also assessed as significant positive, as they also provide an alternative to vehicular transport and although they generate noise, this is within the existing rail corridor. Policies for freight and urban logistics also reduce the number of HGV or other diesel/ petrol vehicle deliveries.</p>
+	<p>Measures which also have positive effects on air quality and transport-related noise support active travel, public transport and zero emissions vehicle measures described above which can support the uptake of these modes. These include safety measures such as segregated active travel routes and providing access to bikes and e-cycling, as well as awareness, training and promotional campaigns. They include a suite of measures which support use of public transport such as timetabling, ticketing, use of mobility hubs.</p> <p>EV infrastructure, alternative fuels and vehicle use is also likely to have a positive effect on transport related noise and air pollution (NO₂), although particulate matter is still an issue. Digital connectivity also has positive effects on reducing the need to travel.</p> <p>For new development there are anticipated to be positive effects from sustainable transport planning to minimise new sources of transport emissions.</p>
0	<p>Several measures have no or negligible impact on air quality and noise, such as safety measures or asset management.</p>
-	<p>None of the measures were predicted to give rise to stand-alone negative effects (see below for possible mixed effects).</p>
--	<p>None of the policy measures were anticipated to have stand-alone significant negative effects on air and noise (see below for possible mixed effects).</p>
+/- ++/-- ?	<p>There were uncertain mixed effects where online strategic highway improvements to reduce congestion can have benefits on air quality, but can also induce more traffic with negative effects on air quality and noise.</p> <p>The potential of a transport corridor between the M1-A6, enables a possible transport route within the safeguarded eastern circular transport corridor The safeguarded eastern circular transport corridor may improve traffic flow on the existing network is likely to improve air quality, it may induce more vehicular traffic and will also increase emissions and noise along this corridor, with potential for significant effects. Effects are uncertain as it not known whether this scheme will be progressed pending the outcome of further investigation.</p>

Communities Objective: Promote a sense of place and well-connected communities

<p>Are the policy measures likely to:</p> <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>	
++	<p>The majority of policy measures under the objectives had significant positive effects on this objective. Delivery of active travel and public transport measures support community interaction and reducing traffic in communities, and helps to create a sense of place, particularly when combined with improvements to the public realm. Measures which enable movement of freight but reduce HGVs in key areas also have significant benefits for communities. Other measures which support connectivity such as access to green infrastructure, mobility hubs and environmental protection measures.</p> <p>Significant positive effects were also predicted for measures which provide better of connectivity to key employment centres like the Airport, as well as connectivity to the surrounding area including Leighton Buzzard, Aylesbury, Bedford, Letchworth and St Albans, and beyond through connections through the Midlands Mainline and East-West Rail.</p>
+	<p>Positive effects were identified for some measures which support active travel and public transport indirectly, for example through education campaigns, partnerships and safety. Planning principles for new development will support community connectivity through provision of sustainable transport</p> <p>Measures to maintain highways and ease traffic congestion, including on-line improvements would also have positive effects. While measures such as parking and demand management may dis-incentivise car journeys and for some people reduce connectivity, improvements to the public realm from reduced traffic, alternative transport and overall improved journey times have positive effects. The latter also applies to EV infrastructure and use of zero emissions vehicles.</p>
0	<p>A few of the measures, mainly those aimed at specific issues such as carbon budgets and alternative fuels have no or negligible effects on community connectivity.</p>
-	<p>None of the measures were predicted to give rise to stand-alone negative effects (see below for possible mixed effects).</p>
--	<p>None of the policy measures were anticipated to have significant negative effects on community connectivity.</p>
+/- ?	<p>The potential of a transport corridor between the M1-A6, enables a possible transport route within the safeguarded eastern circular transport corridor The safeguarded eastern circular transport corridor is likely to improve connectivity, however, loss and fragmentation of limited natural greenspace within Luton can also likely to have negative effects on communities. Effects are uncertain as it not known whether this scheme will be progressed pending the outcome of further investigation.</p>

Health and Well-being Objective: Improve health and wellbeing of residents.

Are the policy measures likely to:
Improve the active travel and public transport network?
Increase road safety, as well as personal safety (real and perceived)?
Promote healthy places in Luton?

++	<p>Active travel policies and measures were predominantly assessed as having significant positive effects on physical and mental health. Measures which encourage short distance and regular commuting journeys are likely to enhance these benefits as encourage regular exercise. Improving access to parks and open spaces, as well as public realm improvements provide mental health benefits, by connecting people to blue and green spaces. Protection and improvements to the natural and built environments have health, well-being benefits for communities.</p> <p>There are significant positive effects from policies and measures which improve safety such as asset management and maintenance, and transport safety and security measures. In addition policies which promote electric cycles and micro-mobility.</p> <p>In addition there are significant positive effects, from corresponding reductions in traffic, emissions to air and transport noise, including demand management measures.</p>
+	<p>There are also health benefits from use of public transport, in addition to measures which support access or ease of use. People are more likely to use active travel to reach rail and bus services, and public transport modes can increase social interaction benefiting mental health. Measures which improve customer experience and personal safety support these benefits.</p> <p>For new development there are anticipated to be positive effects from sustainable transport planning to maximise benefits of active travel and public transport as described above.</p>
0	<p>A few measures did not have any impact on health and well-being, for example because the corresponding effect from improved air quality was anticipated to be small.</p>
-	<p>None of the measures were predicted to give rise to stand-alone negative effects (see below for possible mixed effects).</p>
--	<p>None of the policy measures were anticipated to have stand-alone significant negative effects on health (see below for possible mixed effects).</p>
+/- ++/- - ?	<p>There were uncertain mixed effects where strategic highway improvement to reduce congestion can have benefits on safety, stress and air quality, but can also induce more traffic with negative effects on air quality and noise.</p> <p>The potential of a transport corridor between the M1-A6, enables a possible transport route within the safeguarded eastern circular transport corridor The safeguarded eastern circular transport corridor would incorporate public transport and active travel measures, with benefits to health and equalities groups. However, loss and fragmentation of limited natural greenspace within Luton can have negative effects on health, including mental health. Effects are uncertain as it not known whether this scheme will be progressed pending the outcome of further investigation.</p>

Are the policy measures likely to:

Improve access and accessibility for residents, particularly for disabled people, people living with reduced mobility (such as older people), and those from socio-economically disadvantaged backgrounds?

++	<p>LTP5 policy measures can provide safer and more accessible routes for active travel, particularly benefiting young people and people with reduced mobility. Active travel policy measures are also affordable for those on low incomes.</p> <p>Active travel and public realm design for accessibility is likely to benefit groups with reduced mobility. Transport safety and security measures may benefit some groups such as 20 mph zones would benefit children and young people, disabled people and personal safety measures would benefit women, the elderly and other groups who may be more vulnerable.</p> <p>Policy measures that improve customer experience and fares, reduce anxiety relating to journeys by public transport. This is likely to benefit some protected groups, particularly if they are considered in engagement and provision of information.</p> <p>Enhancing access to greenspace may also benefit some protected groups. Protection and improvements to the natural and built environments have can be particularly beneficial for groups with protected characteristics.</p>
+	<p>Digital connectivity and flexible working may also benefit some protected groups, although digital information will need to be in a form which is accessible to a range of users.</p> <p>Air quality improvements will provide a positive impact as a result of decreased vehicle pollutants for some groups including age, pregnancy and maternity, and some disabilities.</p> <p>Loan schemes for e-bike and e-cargo bikes, cycle clubs, cycle training, cycle to work schemes may benefit those on low incomes who would not otherwise have access, or benefit groups who may be less confident cycling such as women or some minor ethnic groups.</p>
0	<p>A few of the policy measures didn't have an effect on equalities.</p>
- / ?	<p>None of the measures were predicted to give rise to stand-alone negative effects (see below for possible mixed effects).</p>
--	<p>None of the policy measures were anticipated to have stand-alone significant negative effects on equalities.</p>
+/- ++/- - ?	<p>Reallocation of road space and parking (e.g. for active travel infrastructure, bus lanes), may benefit some protected groups, there is also the potential to disproportionately impact disabled people who drive, who may rely on private vehicles for essential mobility.</p> <p>While reducing congestion improves air quality and provides benefits for protected characteristics who may rely on private vehicle, the potential for induced demand on roads by private vehicles may also have negative effects.</p> <p>Potential for digital policies can improve connectivity for some people, there is a potential to contribute to digital exclusion, though this may be for some disabled and older people.</p> <p>The potential of a transport corridor between the M1-A6, enables a possible transport route within the safeguarded eastern circular transport corridor The safeguarded eastern circular transport corridor would incorporate public transport and active travel measures, with benefits to health and equalities groups. However, loss and fragmentation of limited natural greenspace within Luton can have negative effects on equalities groups. Effects are uncertain as it not known whether this scheme will be progressed pending the outcome of further investigation.</p>

Cumulative Effects

Cumulative effects with other plans and projects also need to be identified. Figure 3 in Chapter 2 sets out the plan's relationship with other plans and while many will be aligned with LTP5, there is potential for cumulative effects, particularly where plans propose new infrastructure.

Luton Local Plan 2011-2031^{iv} and Local Plan Review.

The Luton Local Plan sets out policies, development allocations and actions to meet the environmental, social and economic challenges facing the area over the 20-year plan period. The Luton Local Plan provides a strategy for the distribution and level of development and supporting infrastructure, a set of proposals to meet that strategy, policies to deal with planning applications and proposals for monitoring the success of the plan.

LTP5 contains a number of policies that support planning for growth and new development with sustainable transport so that cumulative effects are minimised. These include aspects such as the natural and built environment, carbon emissions, noise and air quality, communities, health and equalities. Key LTP 5 policies for planning comprise:

- Planning principles alignment to the Local Plan
- Healthy and active communities (Healthy Streets design)
- Active travel and public realm design principles
- Planning measures for public transport infrastructure
- Airport related development and broader developments (e.g. Power Court and Stage Development, Vauxhall Development Site).

In addition, environmental protection objectives in the Luton Local Plan and IIA Scoping Report for the emerging plan were considered in this IIA.

Neighbouring authorities' local plans.

These comprise the Central Bedfordshire Local Plan 2015-2035^v and New Local Plan and North Hertfordshire Local Plan 2011-2031^{vi} and Local Plan Update 2025-2045.

These Plans contain policies for sustainable development including environmental protection and enhancement. They also contain policies for new growth and development. Specific examples include housing sites to the north of Luton and employment sites within Dunstable and Houghton Regis in the Central Bedfordshire Local Plan and housing to the east of Luton in the North Herts Local Plan.

Potential cumulative effects include effects on natural capital and greenhouse gas emissions as set out 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 transport (see below) and energy use from new development.
- 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.

Policy measures in LTP5 have been incorporated to accommodate growth outside Luton such as inter-urban transport (busways) to neighbouring towns and employment centres - Bedford, Leighton Buzzard and Milton Keynes, Aylesbury, Welwyn Garden City and Hatfield, Stevenage. Butterfield Park and Ride and Strategic Highways including Vauxhall Way, M1 Junction 10; A6 Highway Improvements; Green Horizon Park Access Road facilitate travel to Luton's employment centres.

England's Economic Heartland Transport Strategy, 2021^{vii}

The Strategy encompasses the Oxford-Cambridge Arc, including 12 constituent Authorities.

The Strategy sets out a five-point action plan comprising 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. An IIA was undertaken for the Strategy and LTP5/ IIA sit within this regional framework.

Interventions and policies in the EEH Strategy, were incorporated into development of the LTP, and include decarbonisation, such as electrification of the Midlands Mainline and delivery of East West Rail as an electrified route, in addition to supporting sustainable transport to Luton Airport and increased use of rail freight.

Therefore, cumulative effects of EEH are already incorporated into the IIA.

Neighbouring Local Authority Transport Plans.

The Hertfordshire Transport Plan 2018-2031^{viii} accelerates the transition from a previous transport strategy that was largely car-based to a more balanced approach which caters for all forms of transport and seeks to encourage a switch from the private car to sustainable transport (e.g. walking, cycling and passenger transport) wherever possible. The Local Transport Plan sets out the objectives, policies, and key schemes that will achieve this switch.

Key schemes in the Plan which interact with LTP5 include Luton Airport parkway Station and M1 to A6 Road Link (an alternative to LTP5), which have been assessed within this IIA. Packages around cycle provision, transport hubs at rail stations and other decarbonisation measures will have cumulative positive effects on carbon emissions, air quality, noise and health effects in particular.

The Bedfordshire Local Transport Plan 3 2011-2026^{ix} and draft LTP 4 2026-2040 sets the direction for how transport is managed in Central Bedfordshire. It includes active travel, driving a car, taking public transport, and new/ emerging technologies. There are likely to be cumulative positive effects on carbon emissions, air quality, noise and health effects in particular. Schemes which interact with LTP5 include the Luton-Dunstable Busway (constructed), A6 to M1 Luton Northern bypass (alternative to LTP5), M1 Junction 10a improvements, Park and Ride on A6 North of Luton, New parkway station in the vicinity of M1 Junction 11a.

Mitigation, Enhancement 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 **Error! Reference source not found.** also includes mitigation where assumptions have been made regarding best practice, in addition to opportunities for enhancement. Monitoring has also be developed as part of the LTP5 Monitoring and Evaluation Plan and this should also be referred to for Objective-specific measures.

It should be noted that some of these measures would be developed by the scheme promoter, where they fall outside Luton 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 policies that are included in LTP5 and/or amended as a result of the IIA include:

Examples of Sustainability Policies in LTP5

- Develop and deliver transport schemes in accordance with national and relevant international legislation, ensuring transport infrastructure will not adversely affect the integrity of statutory designated sites (Special Protection Areas, Special Areas of Conservation, Ramsar sites, Sites of Special Scientific Interest), including indirect pollution through noise, lighting, recreation pressure, loss, deterioration of fragmentation of habitats.
- Ensure that new transport and public realm proposals protect existing biodiversity and provide a positive contribution by encouraging additional biodiversity (and nature recovery) with a minimum net gain of 10% in line with national legislation,
- Monitor and take steps to manage and mitigate areas of air pollution in line with legal requirements and Luton 2040, ensuring that transport associated with new developments does not contribute to thresholds being exceeded (again, a statutory requirement).
- Monitor and take steps to manage and mitigate areas of noise pollution ensuring that transport associated with new developments does not contribute to thresholds being exceeded.
- Develop a robust highway drainage strategy to mitigate against flooding, including re-culverting the River Lea and the use of Sustainable Drainage Systems (SuDS) thus ensuring resilience of key strategic highway networks against, in part, extremities of weather and climate change, working with key partners where necessary
- Protect and enhance the historic and built environment in the design and delivery of transport schemes and associated travel (in line with the Local Plan and supporting strategies such as Healthy Estates).
- Monitor carbon (and equivalent) emissions from travel and quantify the impacts of new transport interventions, and use to inform decision-making

Table 5 below sets out proposed mitigation, enhancement and monitoring.

Table 5: Mitigation, enhancement and monitoring

Topic	Description of mitigation/ monitoring	Policy/ Policy measures
All	Further investigation of environmental, social and economic feasibility and consultation, prior to decision-making.	Potential for a new transport corridor (A6 to A505)
Biodiversity, Landscape, Historic Environment, Natural Resources	Design to avoid impacts on sensitive environmental receptors, including designated sites and non-designated habitats, heritage assets and landscapes. Design should consider on-line improvements prior to off-line.	Full or partial busways: between Luton town and Airport, Luton Airport Parkway Station, Bedford, Leighton Buzzard and Milton Keynes, Aylesbury, Welwyn Garden City and Hatfield, Stevenage. Strategic Highways: Vauxhall Way, M1 Junction 10; A6 Highway Improvements; Green Horizon Park Access Road
Biodiversity, Landscape, Historic Environment, Natural Resources	Further options to be assessed to determine location and design to maximise sustainability benefits and avoid or minimise impacts. For example, EEH has developed Guidance for Mobility Hubs ² .	Mobility hubs (Active travel infrastructure)
General: Biodiversity, Landscape, Historic Environment, Water	Seek opportunities to enhance green and blue infrastructure, achieve greater biodiversity net gain and nature recovery.	Butterfield Park and Ride Active travel infrastructure Access to parks, greenspaces and River Lea
Biodiversity	Design of new PRoW and active travel infrastructure to avoid disturbance to wildlife.	Access to parks, green spaces and the River Lea
Biodiversity/ Landscape	Design to avoid impacts on adjacent habitats, including designated sites and locally designated landscapes.	Butterfield Park and Ride Strategic highway proposals
Landscape	Any new infrastructure or policy measures delivered by Luton Council, falling within or adjacent to the Chilterns National Landscape should have regard to the latest Management Plan ^x (as amended).	Busways (Inter-urban transport) Butterfield Park and Ride
Historic Environment	Where new infrastructure works are delivered by the Luton Council, the Historic Environment Record should be consulted to identify assets, and assess their significance, as well as potential for unidentified heritage assets. Where required a staged approach should	Strategic highway proposals Butterfield Park and Ride Busways (Inter-urban transport)

² <https://www.englandseconomicheartland.com/evidence-base/mobility-hubs-business-case-guidance/>

Topic	Description of mitigation/ monitoring	Policy/ Policy measures
	be taken to archaeological monitoring and evaluation and potential impacts assessed in line with planning guidance and practice ^{xi} . Heritage impact assessment should be undertaken in consultation with Luton heritage team.	
Historic Environment	Where policy measures are not location specific, but apply to the historic environment, for example public realm, town centre access improvements, EV infrastructure which may fall within Conservation Areas, ensure design does not affect significance of assets. Guidance is available from Historic England on design of public realm in historic locations ^{xii} .	Sustainable transport to broader development sites (e.g. Power Court and Stage Development, Vauxhall Development Site). Active travel infrastructure Public transport infrastructure Station improvements (Rail) Electric vehicle infrastructure
Historic Environment	Seek opportunities to improve access, interpretation and enjoyment of the Historic Environment.	Active travel infrastructure Station improvements (Rail) Sustainable transport to broader development sites (e.g. Power Court and Stage Development, Vauxhall Development Site).
Water, Biodiversity	Design to incorporate any improvements to the natural geomorphology of River Lea and habitat in river corridor.	A6 Highways improvements Access to parks, green spaces and the River Lea
Natural resources	Drainage design to consider SUDS to prevent pollution from new infrastructure and improve existing drainage for new infrastructure.	Strategic highway proposals Asset management and resilience.
Natural resources	Pollution prevention and control using construction industry practice, including but not limited to: Land contamination Waste Protection and handling of soils Protection of water resources	Strategic highway proposals Asset management and resilience Butterfield Park and Ride
Climate resilience	Highway works should not increase flood risk and seek opportunities to improve drainage to reduce existing risk. Refer to Planning Policy Guidance on Flood Risk ³	Strategic highway proposals Asset management and resilience

³ <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	Policy/ Policy measures
Climate resilience	Provision of alternatives for active travel in flood zones	Access to River Lea linear park
Climate resilience	Provision of shading, preferable by use of tree cover in design	Active travel infrastructure
Climate change	Continue to monitor transport emissions to evaluate and make changes to policy measures.	All measures
Air Quality	Monitoring (as per policy measures in LTP5) for air quality including where required Luton Air Quality Management Areas	Applies to multiple measures acting in combination to reduce emissions, particularly Town Centre (AQMA3) Dunstable Road by Kenilworth Road through to Stuart Street and Chapel Viaduct by Latimer Road, including Castle Street to Holly Street and Telford Way
Health	Management of electric cycles and micromobility when not managed effectively, can increase street-clutter and impact the accessibility of the urban realm for certain groups.	Electric cycles and micro-mobility Education campaigns
Health and Equalities	Consideration of design measures in relation to health and accessibility can include toilets, seating toilets, water points, sources of shade and cooling (preferably green/blue infrastructure) lighting and security and accessibility measures.	Station improvements Mobility hubs and access to green spaces and parks Active travel infrastructure Strategic integration - Butterfield Park and Ride facility
Health and Equalities	Engagement with the community in planning and design in order to meet the needs of different users. Includes lighting and personal safety.	Improvements to public realm Planning and design principles Access to green spaces and parks Active travel infrastructure
Equalities	Ensuring there is adequate access for those who rely on door-to-door access to services and private vehicles as essential mobility aids, such as Blue Badge parking spaces and parent and child parking	Parking Travel demand management
Equalities	Provision of travel information and educational campaigns so that it is accessible for a range of user groups, including older and disabled people.	Digital connectivity measures Education, training and promotional campaigns Customer experience and fares Strategic demand management

Appendix A Feedback from scoping

Following consultation on the Scoping Report, feedback has been considered in the LTP and IIA as set out below.

Consultee: Historic England Summary of comment	Consultee: Historic England Response in LTP/ IIA
<p>Policies: Agreement with policy review undertaken for Scoping, recommendations for national and local policy:</p> <ul style="list-style-type: none"> • Government’s statement on the Historic Environment • National Planning Policy Framework • National Planning Practice Guidance • Streets for All East of England • Local Plans of adjoining authorities • Historic Environment Record • National Landscape (former AONB) Management Plans • Other Strategies (e.g. cultural or tourism) • Listed building Heritage Partnership Agreements 	<p>Table 5 references the approach to potential effects on the historic environment in accordance with the NPPF and Planning Practice Guidance. This aligns with the Government’s Statement on the Historic Environment.</p> <p>The LTP includes policies for both the protection of the historic environment and Guidance in Streets for All has been referenced for future design in Table 5.</p> <p>While design information is not sufficiently progressed to undertake a search of the HER, this is recommended in Table 5.</p> <p>The Scoping Report refers to Luton’s Heritage Strategy and the Chilterns National Landscape Management Plan. The assessment did not identify effects on listed buildings. If unforeseen effects arise, these are covered by the assessment approach taken through Planning Policy Guidance in Table 5.</p>
<p>Baseline information: agree with inclusion of designated assets and mapping in the Scoping Report, including reference to non-designated assets, which should be mapped.</p> <p>Recommend inclusion of unknown heritage assets, undesignated assets, setting, Conservation Area Management Plans and other assessment where available.</p>	<p>The majority of policy measures within LTP5 do not involve significant infrastructure and development.</p> <p>Where new infrastructure is required, existing designated heritage assets have been identified, and the assessment acknowledges potential effects on non-designated and unknown assets. Table 5 has required further investigation and assessment in line with guidance set out above.</p>
<p>Issues and Opportunities: welcome issues and opportunities listed.</p> <p>Change ‘historic assets’ to ‘heritage assets’</p> <p>It is considered that the historic environment can make a significant contribution to the success of development and there may be opportunities for the enhancement of the historic environment which comes from sustainable development proposals. The IIA should highlight these opportunities.</p>	<p>Change made in Chapter 4 of this report.</p> <p>The LTP includes policies for protection and enhancement of the Historic Environment.</p> <p>The IIA has identified where Active Travel policy measures in the town centre can improve experience of heritage (Chapter 5 of this report)</p>
<p>IIA Framework: Recommend Objective 3 is amended to read ‘Conserve and enhance the historic environment including cultural heritage’ and in relation to assessment criteria questions, the first two start with ‘Have an effect on ...?’, recommend that this should be amended to ‘will the option protect and/or conserve ...’</p> <p>Impacts on significance are not just based on</p>	<p>Changes to Objectives and Assessment Criteria made in Table 2 and Chapter 5.</p> <p>At this stage, design information is not available for detailed site evaluation, so sensitive locations are identified. While it is considered unlikely that designated assets would be affected based on available information, mitigation has been set out to reflect that design should seek to avoid impacts</p>

Consultee: Historic England Summary of comment	Consultee: Historic England Response in LTP/ IIA
<p>distance or visual impacts, and assessment requires a careful judgment based on site visits and the available evidence base.</p> <p>We would suggest that you avoid summing the scores indicating how each proposal performs against the criteria to give an aggregate contribution to each relevant IIA objective since such an approach may inadvertently mask 'showstoppers' by effectively averaging out the scores.</p> <p>The historic environment should be a factor when considering a method for the generation of alternatives.</p>	<p>on heritage and further evaluation would be required.</p> <p>The assessment records effects individually and does not sum scores, mixed positive and negative effects are also recorded.</p> <p>The assessment shows that alternative policy measures that have not been included in the LTP had potential for significant negative effects on the historic environment.</p>
<p>Archaeology and other assessment methodologies: Provision of guidance on archaeological evaluation and further assessments including heritage Impact assessments, future assessment of route or infrastructure options, including involvement of local authority heritage team.</p>	<p>Table 5 sets out mitigation including prioritising on-line options over off-line for new busways, archaeological evaluation and heritage impact assessment, in addition to consultation with the Luton's heritage team.</p>

Consultee: Natural England Response in LTP/ IIA	Consultee: Chilterns Society Response in LTP/ IIA
<p>Natural England has no specific comments to make on the Integrated Impact Assessment Scoping Report for Luton's Local Transport Plan 5.</p>	<p>Following a review of policy measures which extend beyond Luton Council boundary, no further sites were identified for HRA.</p>

Consultee: Chilterns Society Response in LTP/ IIA	Consultee: Chilterns Society Response in LTP/ IIA
<p>Baseline: Section 3 summarises the current situation BUT this is not the baseline that should be used in the assessment. "The term 'baseline information' refers to the existing environmental characteristics of the area likely to be affected by the plan, and their likely evolution without implementation of the plan.". So the baseline needs to incorporate current trends. For example:</p> <ul style="list-style-type: none"> • Population will probably grow another 10%, intensifying demand for transport and use of green space. • Biodiversity is declining rapidly and we need to take positive steps to halt the decline. • Climate adaption needs to be done beyond the transport network to manage increasing flood risks. • There will be increased traffic from airport expansion and warehousing near J10. 	<p>In the Scoping Report, trends are identified within each section and captured in the issues and opportunities boxes:</p> <p>Population growth is captured under 'Population, Health and Equalities' and pressure on greenspace is covered under landscape.</p> <p>Nature decline is noted under Biodiversity and positive steps for the LTP are listed.</p> <p>While the scope of the LTP is limited to the transport network, the assessment does identify potential issues with flood risk and recommends natural solutions to transport drainage where applicable.</p> <p>The LTP proposes several policy measures to address traffic around the Airport.</p>
<p>Issues and opportunities: Luton's target to get to Net-zero by 2040. So the assessment criteria needs to be not "will it help?" but "will it make a big enough contribution?"</p>	<p>The carbon assessment for the LTP has quantified emissions for all policies against the Sixth Carbon Budget Trajectory.</p>
<p>It would have been helpful to include a summary of current trip splits (walk, cycle, car, bus) and an estimate of current electric vehicle usage.</p>	<p>This is provided in the LTP evidence base.</p>
<p>The policies in the local plan are likely to will be phrased in a way that gives a positive assessment. The assessment needs to review whether polices are realistic and achievable or to what extent a target will be achieved.</p>	<p>The assessment focuses on policy measures, which set out how the objectives will be implemented. The assessment score (whether significant or not) considers the likely extent of the change. Several of the policies have been strengthened as part of the process (see Chapter 5). The purpose of the assessment is to identify potential negative effects so that that these can be avoided or mitigated.</p>
<p>IIA Framework:</p> <p>Objective 5 'Reduce transport-related CO2 emissions</p> <p>It's not clear what the assessment criteria mean: "Use technology such as digital or low carbon energy sources?" and "Reduce the need to travel and improve connectivity via nonvehicular transport modes?" Is it really about "Use technology to reduce the need to travel". Do you mean non-motorised transport?</p> <p>Maybe it would be better for the second criteria to be about modal shift to lower carbon forms of transport.</p> <p>If achieving the objective requires a significant development, you need to factor in "Infrastructure Carbon".</p>	<p>Changes to Objectives and Assessment Criteria made in Table 2 and Chapter 5.</p> <p>At this stage, design information is not available for detailed site evaluation, so sensitive locations are identified. While it is considered unlikely that designated assets would be affected based on available information, mitigation has been set out to reflect that design should seek to avoid impacts on heritage and further evaluation would be required.</p> <p>The assessment records effects individually and does not sum scores, mixed positive and negative effects are also recorded.</p> <p>The assessment shows that alternative policy measures that have not been included in the LTP had potential for significant negative effects on the historic environment.</p>

Consultee: Environment Agency Response in LTP/ IIA	Consultee: Environment Agency Response in LTP/ IIA
<p>No concerns about the contents and are pleased to see the positive approach Luton is taking with its transport plan to enable more active travel, public transport and journey sharing due to the benefits this will have on climate change and your goal to be a net zero town by 2040.</p>	<p>N/A</p>
<p>Is there a reason that the plan is excluding aviation carbon emissions? The exclusion of this data would appear to give an unrealistic picture of the situation and unlike the M1 roads exclusions, Luton council being co-owner of the airport would have potential influence over these emissions. The plan does not really justify why these have been omitted.</p>	<p>The scope of the LTP does not include changes to aviation. This would be undertaken as part of the Airport Masterplan.</p>
<p>The plan has identified a number of positive opportunities to improve biodiversity, and reduce flooding, all of which we encourage going forward. You have also identified that water quality in respect of the river lea is poor and that a main driver of this is urban runoff so any policies to improve this will be highly beneficial.</p>	<p>The IIA in Appendix B and summaries in Chapter 5 identify potential effects and opportunities for enhancement in relation to biodiversity, flood risk and water quality.</p>
<p>Page 19 specifically mentions Source Protection Zones (SPZ), including both inner and outer zones and then references Figure 3.5. However, Figure 5 does not show any SPZ information. For an up to date SPZ map please use MAGIC map.</p>	<p>The Scoping Report has not been updated but magic map has been used as source of information on SPZs which have been considered in the assessment of natural resources in Appendix B and Chapter 5.</p>

Appendix B Assessments

See separate document

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- ⁱ Department for Transport, 2025, Local transport quantifiable carbon guidance, available at: <https://www.gov.uk/government/publications/quantifying-carbon-emissions-for-local-transport-planning>
- ⁱⁱ Government guidance on Strategic Environmental Assessment and Sustainability Appraisal available at: <https://www.gov.uk/guidance/strategic-environmental-assessment-and-sustainability-appraisal>
- ⁱⁱⁱ HM Government, 2018, A Green Future: Our 25 Year Plan to Improve the Environment <https://www.gov.uk/government/publications/25-year-environment-plan>
- ^{iv} Luton Borough Council, November 2017, Luton Local Plan 2011-2031: <https://www.luton.gov.uk/Environment/Lists/LutonDocuments/PDF/Local%20Plan/adoption/Luton-Local-Plan-2011-2031-November-2017.pdf>
- ^v Central Bedfordshire Council, July 2021, Central Bedfordshire Local Plan 2015-2035 and New Local Plan: https://www.centralbedfordshire.gov.uk/info/153/central_bedfordshire_local_plan_2015_to_2035
- ^{vi} North Herts Council, 2019, North Hertfordshire Local Plan 2011-2031 and Local Plan update 2025-2040. Available at: <https://www.north-herts.gov.uk/planning-policy>
- ^{vii} England's Economic Heartland, 2021, Connecting People, Transforming Journeys, Regional Transport Strategy: <https://www.englandseconomicheartland.com/our-work/our-strategy/>
- ^{viii} Hertfordshire County Council, 2018, Hertfordshire's Local Transport Plan, 2018-2031: <https://www.hertfordshire.gov.uk/media-library/documents/about-the-council/consultations/ltp4-local-transport-plan-4-complete.pdf>
- ^{ix} Central Bedfordshire Council, 2011, Location Transport Plan 3, 2011-2026. Available at: https://www.centralbedfordshire.gov.uk/info/55/transport_roads_and_parking/596/transport_strategy
- ^x Chilterns Conservation Board, Chilterns National Landscape (previously AONB) Management Plan and amendments available at: <https://www.gov.uk/guidance/conserving-and-enhancing-the-historic-environment>
- ^{xi} MHCLG, 2024, National Planning and Policy Framework (as updated). Available at: https://assets.publishing.service.gov.uk/media/67aafe8f3b41f783cca46251/NPPF_December_2024.pdf and Planning Practice Guidance for the Historic Environment (updated July 2019) and available at: <https://www.gov.uk/guidance/conserving-and-enhancing-the-historic-environment>
- ^{xii} Historic England, 2017, Streets for All, East of England. Available at: <https://historicengland.org.uk/images-books/publications/streets-for-all-east-of-england/>