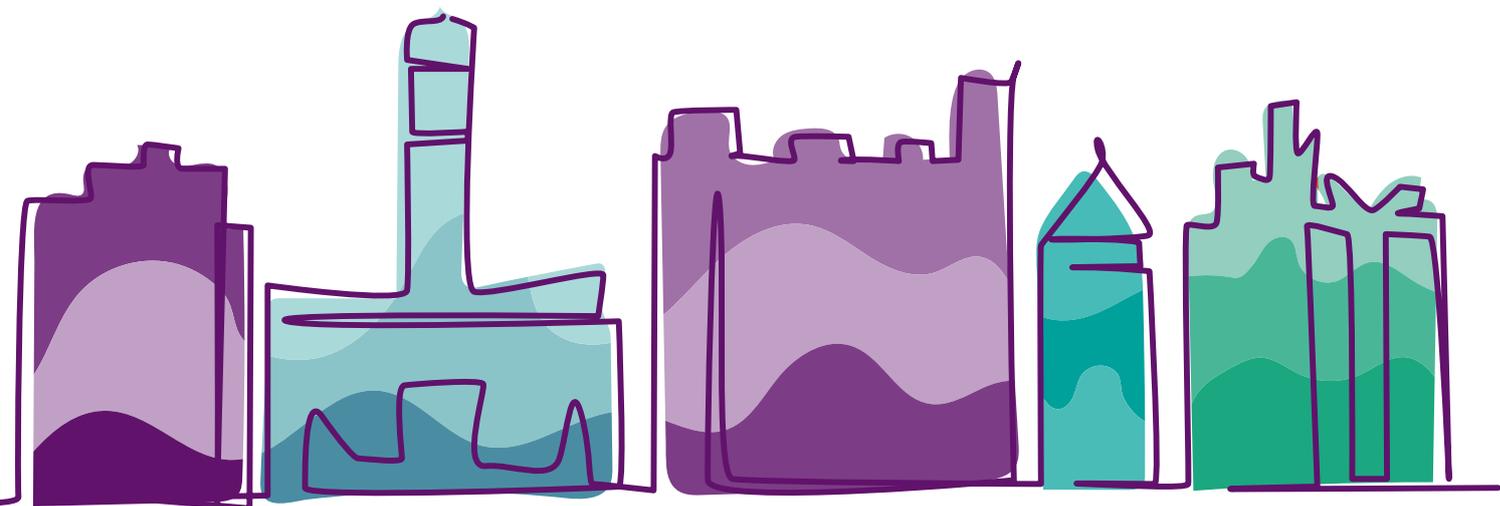
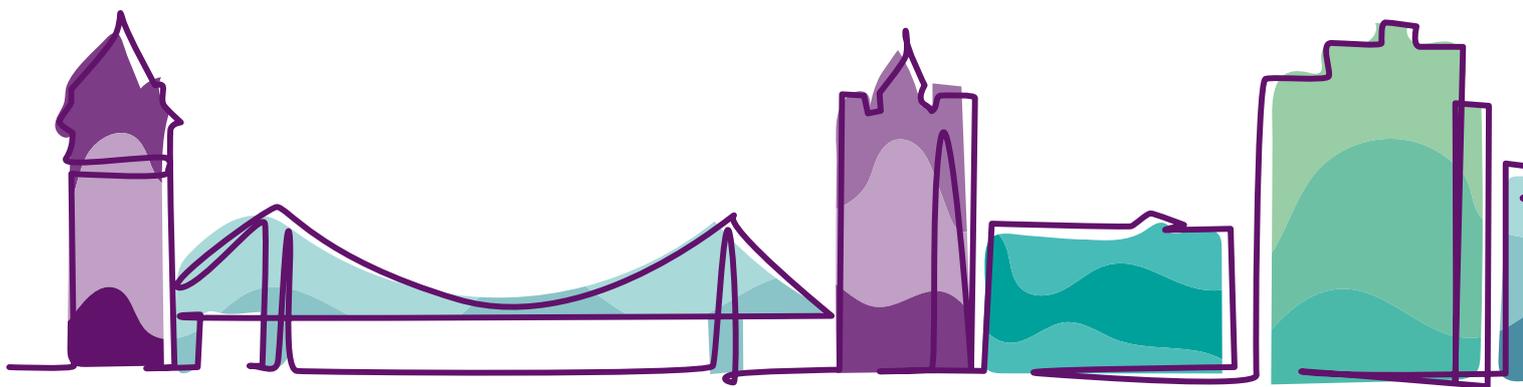


Transport Strategy and Local Transport Policies



April 2021



Welcome to our fourth Local Transport Plan, which sets out Luton's strategic priorities and policies to achieve more sustainable access to goods and services in the town over the next 20 years by encouraging and enabling more walking, cycling and the use of public transport

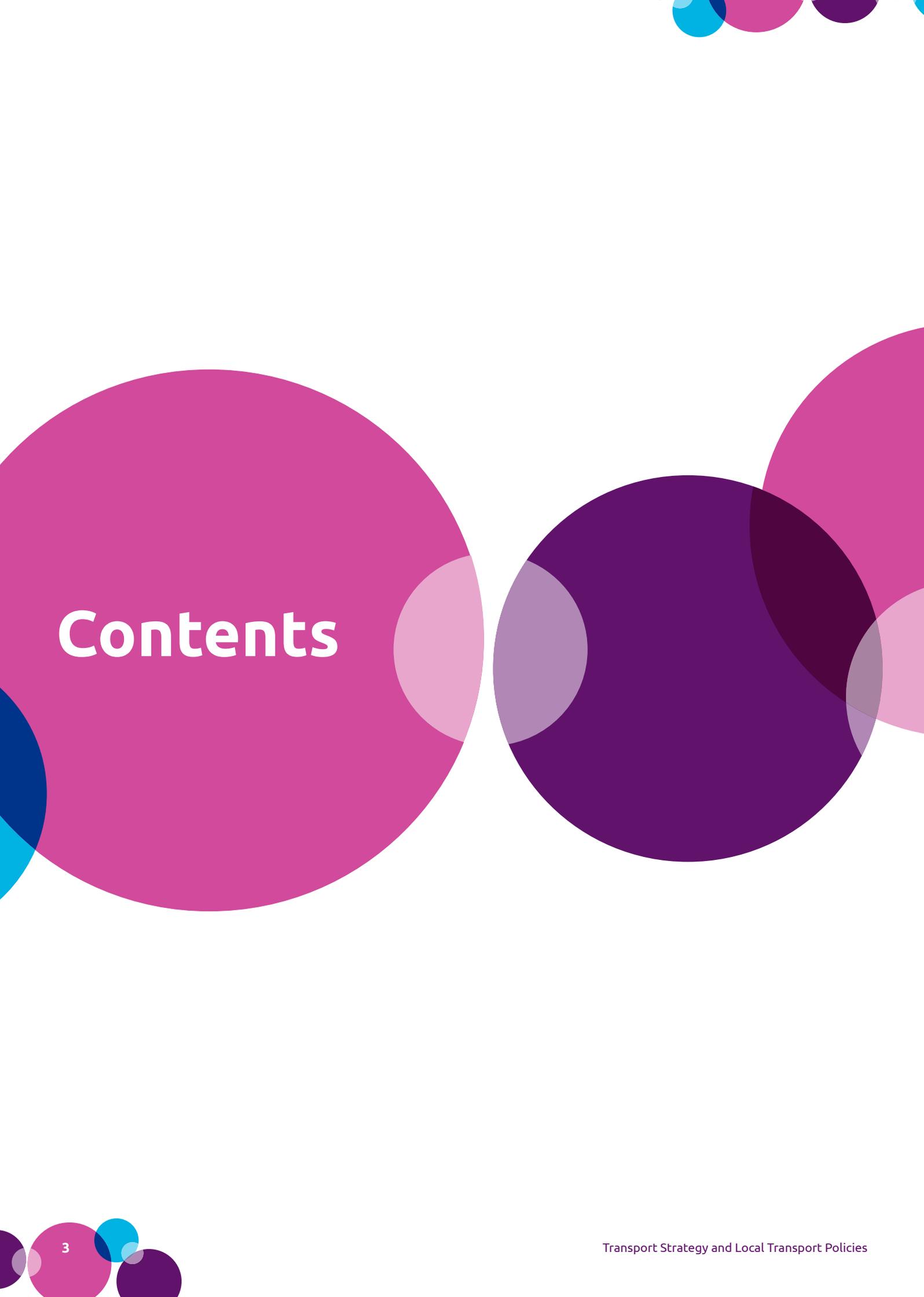
It builds on our corporate priorities of our Luton 2040 vision published last October to reduce poverty and improve inclusion in Luton and to embrace carbon reduction. Its strategic vision is ***to make Luton carbon neutral and improve the quality of life and wellbeing whilst realising sustainable growth opportunities.***

Travel provides the connectivity necessary for the community in Luton to access goods, services, and opportunities to work, access education and enjoy their leisure time. and the 2011 Census shows that single occupancy car journeys to work are high, despite the fact that half of people that either live or work in Luton commute less than 5 Km.

Whilst the way that we travel about has changed over the last decade, further technological changes are unlikely to meet the council's target of achieving net zero emissions by 2040.

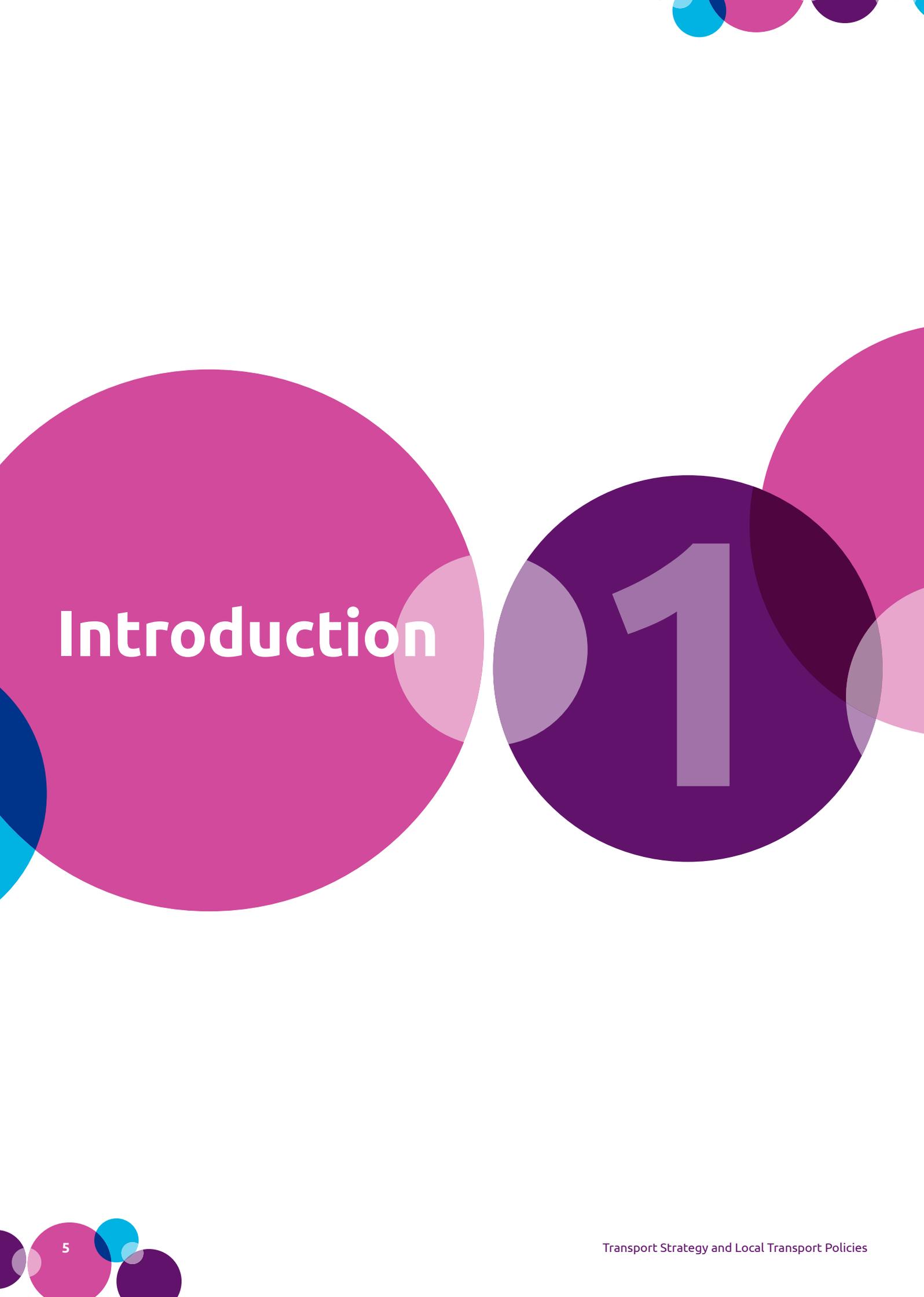
The Pandemic has been a challenging time but it has shown that we can change the way we travel to improve our environment. The first lockdown in Spring 2020 saw a large reduction in road traffic which resulted in a 25-30% improvement in recorded Nitrogen Dioxide emissions in the town. There were also increases in walking and cycling which further benefitted the environment and improved our community's health and wellbeing.

Our transport policies provide further details about how the strategy will be implemented and they are supported by a number of shorter term plans such as the Local Cycling and Walking Infrastructure Plan and the Bus Service Improvement Plan that further develop the policy background and set out actions to be implemented over the next 2-5 or so years.



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Introduction

1

This Transport Strategy is the first part of Luton’s 4th Local Transport Plan, referred to as LTP4. It is a strategic document for the Council and drives our key ambitions to:

- Embrace carbon reduction
- Reduce poverty and improve inclusion in Luton, which links to our Health and Wellbeing ambitions
- Ensure links with development, with particular regard to the Luton Local Plan

Chapters 2 to 4 provide further background to the existing conditions in the town that have influenced the aforementioned local policy drivers, and reflect on the potential impacts of a post-Covid19 change in attitude to avoid returning to the pre-Covid19 norm.

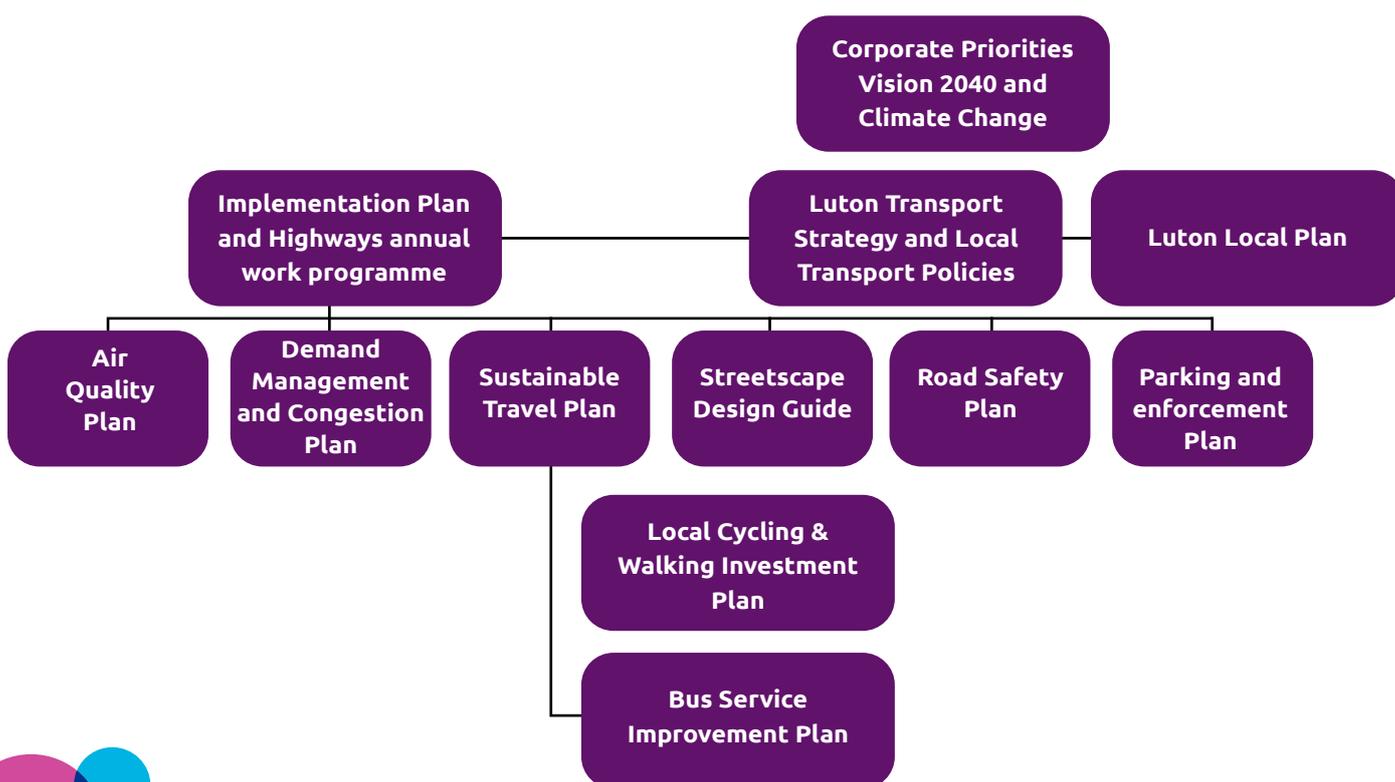
Based on these, Chapter 5 then sets out the vision and objectives of our Transport Strategy, and sets long-term targets for achieving mode shift. Chapter 6 then provides the National and Sub-National policy context of our local ambitions. It also draws on guidance from the National Institute for Clinical Excellence (NICE) that demonstrates the link between physical activity and the quality of the built environment.

Chapter 7 builds on the Council’s approach to climate change and its commitment to net zero carbon by 2040, alongside the ambition to eradicate poverty, recognising the importance of non-car based mobility, active travel and the wider impacts of poor air quality on health.

Finally, Chapter 8 sets out how the various elements of the Strategy could be implemented and the funding required in particular for strategic interventions to deliver decarbonisation of transport. However this chapter recognises that most of our local and neighbourhood transport priorities will be delivered through our LTP Implementation Plan. This is complemented by the Council’s annual work programme published each February, which provides further details of what highway and transport improvements will be happening in Luton over the coming year and years 2-5.

Having set out our strategic approach to transport, Part 2 of the LTP4 sets out policies to implement the strategy. Part 2 is supplemented by action plans that further develop the policy background and set out actions to be implemented over a five year period.

The relationship between our strategic ambitions, the LTP4 and these thematic action plans, and the Councils annual review of its five year work programme is shown below:





Embracing carbon reduction

In September 2019 the Council commissioned climate change specialists Anthesis to review the current carbon dioxide (CO₂) emissions profile in the town and consider future emissions pathways to achieve being a carbon-neutral town by 2040. The study concluded that surface transport contributes 24% (road 23% and rail 1%) to overall carbon emissions, recognising that in recent years the Council had made significant progress in reducing CO₂ by reducing energy use, improving energy efficiency and promoting sustainable travel.

The Anthesis report was approved by the Council's Executive on 13th January 2020, resulting in the Council declaring a Climate Change emergency and endorsing a target of being carbon neutral by 2040. The Executive report also included a draft action plan that set out a number of opportunities to reduce CO₂ carbon emissions by:

- Encouraging more cycling, walking and public transport use, both by providing infrastructure and training
- Investigating options to discourage car from the town centre (e.g. user charging) and near schools (e.g. the introduction of Traffic Exclusion Zones around schools)
- Promoting the benefits of 'shared transport' including car share
- Providing more charging infrastructure for electric vehicles and including renewable energy.

Following on from further community and stakeholder consultation, Executive approval of the final Action Plan is being sought in January 2021.

Travel is a means to an end, in providing the connectivity necessary for the community in Luton to access goods, services, and opportunities to work, train and enjoy their leisure time. Whilst the way that we access these goods and services has changed over the last decade, further technological changes in order to meet the Council's target of achieving net zero carbon emissions by 2040 are unlikely to meet these targets.

Substantial changes to our travel behaviour will also be required (Committee for Climate Change,

2016); yet the way we travel has always been regarded as more difficult to change (Stern et al, 2006) compared say with de-carbonising the energy sector.

Experience following the Covid19 pandemic, along with the evidence based on events such as the severe winter of 2013 and extensive flooding in 2014 (Marsden et al, 2020) has shown that the community can compensate for such events by changing how they travel (e.g. either negating the need to travel by 'working from home' or walking/cycling locally for essential goods), re-timing their trips or re-scheduling their journey to a later date. Reducing or re-timing trips, along with re-routeing (using less busy parts of the network) or moving to less busy modes, form the DfT's four travel demand principles to influence how people travel.

The Covid19 lockdown saw large declines in road traffic resulting in a 30% improvement in recorded Nitrogen Dioxide emissions in April 2020 at the two real time air quality monitoring sites in the town.

Whilst no data was collected from other air quality monitoring sites in April and May 2020, there was a similar average NO₂ reduction between the period February-July in 2019 and 2020.

The consultation survey included questions about how local people travelled pre-covid, during the first lockdown, and as restrictions were eased in summer 2020. The results indicated there was a significant increase in walking and cycling, in particular for social/leisure trips and, to a lesser extent, shopping that could have both benefited the environment and improved the community's health. The main survey conclusion is that a significant proportion of people continue to work from home after lockdown. Initial work carried out by England's Economic Heartland has shown that about half of Luton residents could 'work from home' more often, reducing travel demand.

The Prime Minister's announcement on 28th July 2020 focused on measures to encourage more healthy lifestyles and the role that more walking and cycling can play in both increasing physical activity and reducing carbon emissions to avoid returning to a pre-Covid19 norm. On 15th March

2021, the Government also published its National Bus Strategy. 'Bus Back Better', which recognises the important role that bus services provide in local transport. In this context our consultation survey showed that there was a significant reduction in public transport use during lockdown and will take time to recover.

The concept of environmentally managed growth goes further than implementing measures to encourage more sustainable travel. It includes actions to embrace advancements in technology and to improve environmental capital such as encouraging biodiversity and ensuring the

Distance travelled to work	Train, underground, metro, light rail or tram	Bus, minibus or coach	Driving a car or van	Passenger in a car or van	Bicycle	On foot	Other	Work mainly at or from home	Method of travel to work
< 2km	177	930	6,910	1,149	302	8,079	402		17,949
2km - 5km	321	2,529	12,798	1,957	553	1,901	601		20,660
5km -10km	252	1,194	6,446	866	155	309	209		9,431
10km -20km	408	586	6,927	1,390	29	162	170		9,672
20km -30km	248	328	4,649	697	26	103	86		6,137
30km -40km	202	93	1,937	235	7	47	32		2,553
40km -60km	3,136	244	2,467	184	10	108	81		6,2320
> 60km	144	139	1,209	160	15	148	36		1,851
Work mainly at or from home								6,239	6,239
Other	537	503	5,970	873	59	460	465		8,867
Total	5,425	6,546	49,313	7,511	1,156	11,317	2,082	6,239	89,589

Table 2.1: mode of travel to work and the distance for those residents in Luton

community is resilient to the impacts of flooding, extreme temperatures and drought. Such impacts of climate change could seriously harm people's quality of life, particularly the health and social and economic welfare of vulnerable groups of people. The introduction of planting (trees can increase carbon sequestration) and sustainable drainage measures as part of the 'streetscape' can improve our local communities and also encourage more sustainable travel locally.

Analysis of the Travel to Work question in the 2011 Census indicates that 55% of all journeys to

work for Luton take place within the town. The following Table provides further information on the mode of travel to work and the distance for those residents in Luton.

This shows that overall the mode-share for single occupancy car journeys to work is high, despite the fact that 50% of people that either live or work in Luton commute less than 5 Km. The supporting Evidence Base study includes a comparison of the latest Travel to work information with that from the 2001 Census, which shows that over that period there has been a large increase in both

in-commuting and out-commuting, and that the increase in in-commuting is skewed towards car use.

This Transport Strategy is supported by an Evidence Base study that summarises a number of key findings and issues, including transport-related safety and air quality impacts, both now and for the future. The study identifies the greatest threats as:

- Increases in in-commuting which, with much of Luton's planned housing growth for delivery outside of its administrative area, could result in continued increases in congestion (as well as extra demand for long-stay car parking)
- More Road Traffic Collisions (a high and increasing casualty rate with a disproportionately high number of pedestrian casualties)
- worsening air quality and its resulting health impacts (Luton's fraction of mortality attributable to particulate matter [PM2.5] air pollution indicator is 6%, compared to 5.3% in England).
- Low levels of walking and cycling are also a contributory factor in higher than average levels of obesity and Coronary Heart Disease in adults.

Notwithstanding these threats, the Evidence Base study demonstrates the following opportunities to improve sustainable travel:

- Good connectivity to national and regional public transport networks;
- Rail usage is continuing to grow at the three Luton stations;
- Increase in people travelling to the airport by public transport;
- Clear scope to increase cycling levels for local journeys;
- Low per capita road transport CO2 emissions that are predicted to continue declining;
- Improvements in footway condition and the number of accessible pedestrian crossings;
- Air Quality is improving; and potential for new forms of mobility, in particular 'shared mobility'

The concepts of encouraging more sustainable travel and local streetscape improvements are explored further in our strategic priorities in Chapter 7.



Reducing poverty and improving inclusion



This chapter provides the background to existing socio-economic influences such as deprivation and the socio-economic status of different communities.

The town has higher than average levels of unemployment and low qualifications/skills of residents. There is also a lack of affordable homes in Luton. A combination of these and other factors result in high levels of deprivation in some parts of the town.

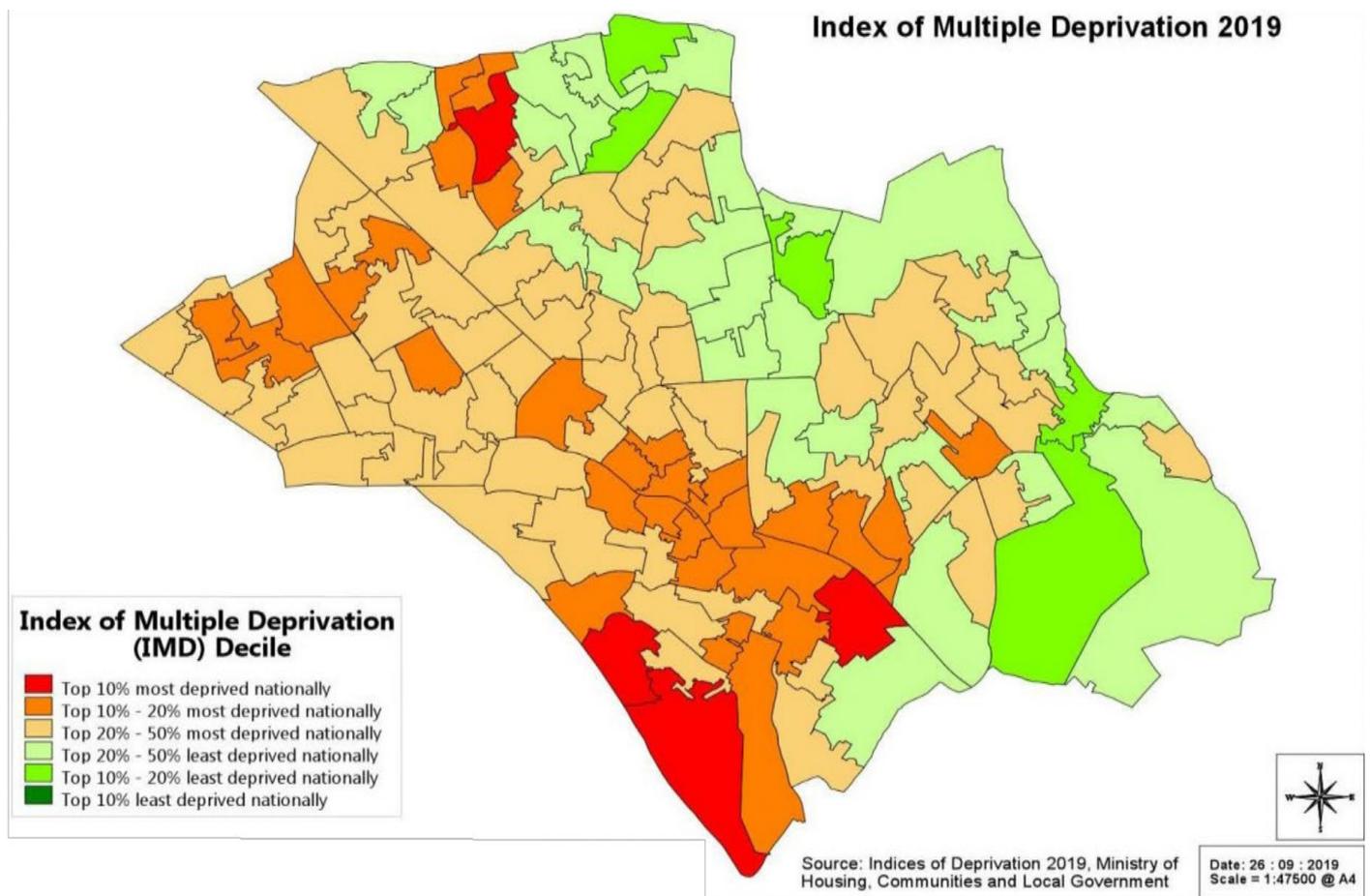


Figure 3.1 2019 Index of Multiple Deprivation for Luton

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In late 2019, the Council consulted the local community on its vision for the town by 2040. The vision drew extensively on the work of an independent local 'Inclusive Growth' commission set up in autumn 2018, comprising experts from business, education, housing, infrastructure, health, community and welfare sectors. Their collective expertise resulted in a wide range of evidence and 'Case studies' being collated over

a 6 month period. Their final report 'Growing Luton Together' published in September 2019 made a series of recommendations for a more inclusive economy in Luton developed around three key 'ambition' themes of making Luton a more productive place, more collaborative communities, and happy, healthy and successful people.

Based on this report, and encouraged by improving trends in the overall level of poverty in the town compared to other areas in England (as reflected in the Government’s Index of

Multiple Deprivation published every 3-4 years), the Council has developed a vision to ensure that by 2040:

“Luton is a town built on fairness, where our young people can reach their full potential and our strong and diverse community can support all our people to enjoy a good quality of life. Luton will be a vibrant, resilient and sustainable town where we work together to ensure no-one has to live in poverty”.

The key priorities of that vision and their relationship to travel are set out in the following table.

Vision 2040 Priorities	Relationship to transport
Securing a strong and sustainable economic recovery which protects businesses, jobs and incomes and enables us to build opportunities they need to thrive and enables us to build a more inclusive economy by 2040	Accessibility to local high-quality jobs, goods and services.
Reducing our net carbon emissions to enable us to meet our long-term goal to be a carbon neutral town by 2040	Increase walking, cycling and public transport use.
Protecting the most vulnerable in our town by prioritising services and interventions that alleviate the impact of poverty and reduce health inequalities	Road Traffic Collisions and personal safety concerns are greater in areas of higher deprivation. Walking and cycling improves community health and wellbeing.
Making Luton a child-friendly town, where our young people grow up feeling safe and secure, with a voice that matters and the opportunities they need to thrive.	Young adults have greater potential to use shared transport to access jobs, goods and services.
Building a closer relationship with our community, which enhances its ability to be active, resilient and socially responsible.	Social responsibility & behavioural change to more active & sustainable travel.

Table 3.1: Vision 2040 Priorities

In terms of the link between health and wellbeing, Luton's Strategic Vision for Sport and Physical Activity (2018-22), highlights the significant increase in obesity in adults and children and also the relatively high levels of inactive people in the Borough, with 29% of residents failing to complete the 30 minutes of moderate intensity activity per week. The strategic vision has a mission to increase levels of physical activity with a target of an additional 22,000 people leading more active lifestyles by 2022. The implementation of this vision is delivered by three strategic sub groups, including an environmental sub-group, one of the key priorities of which is to facilitate behaviour change amongst our population to improve air quality, reduce traffic volumes, and provide a high quality and appealing public realm through the promotion of active travel opportunities and infrastructure.

There is also a strong link between the areas of higher deprivation in **Figure 3.1** above and the

proportion of households with no access to a car or van as shown in **Figure 3.2** below.

Based on the 2011 Census, just over a quarter (27.4%) of Luton residents do not have access to a private car; a slight rise since the 2001 Census when it was 26.4%. However as shown in Figure 3.2, non-car ownership is higher than average in more deprived Wards such as Biscot and Dallow (37.1%), High Town (42%) and South (53.2%). Residents in these areas of low car ownership are therefore reliant on public transport, walking and cycling to access goods and services.

The 'Urban Cohesion' Persona classification (see section 7.2.5) is also highest in these inner Wards, characterised as residents of settled, often multicultural, urban communities with a strong sense of identity. These areas also include local shops and community facilities that support these diverse cultures.

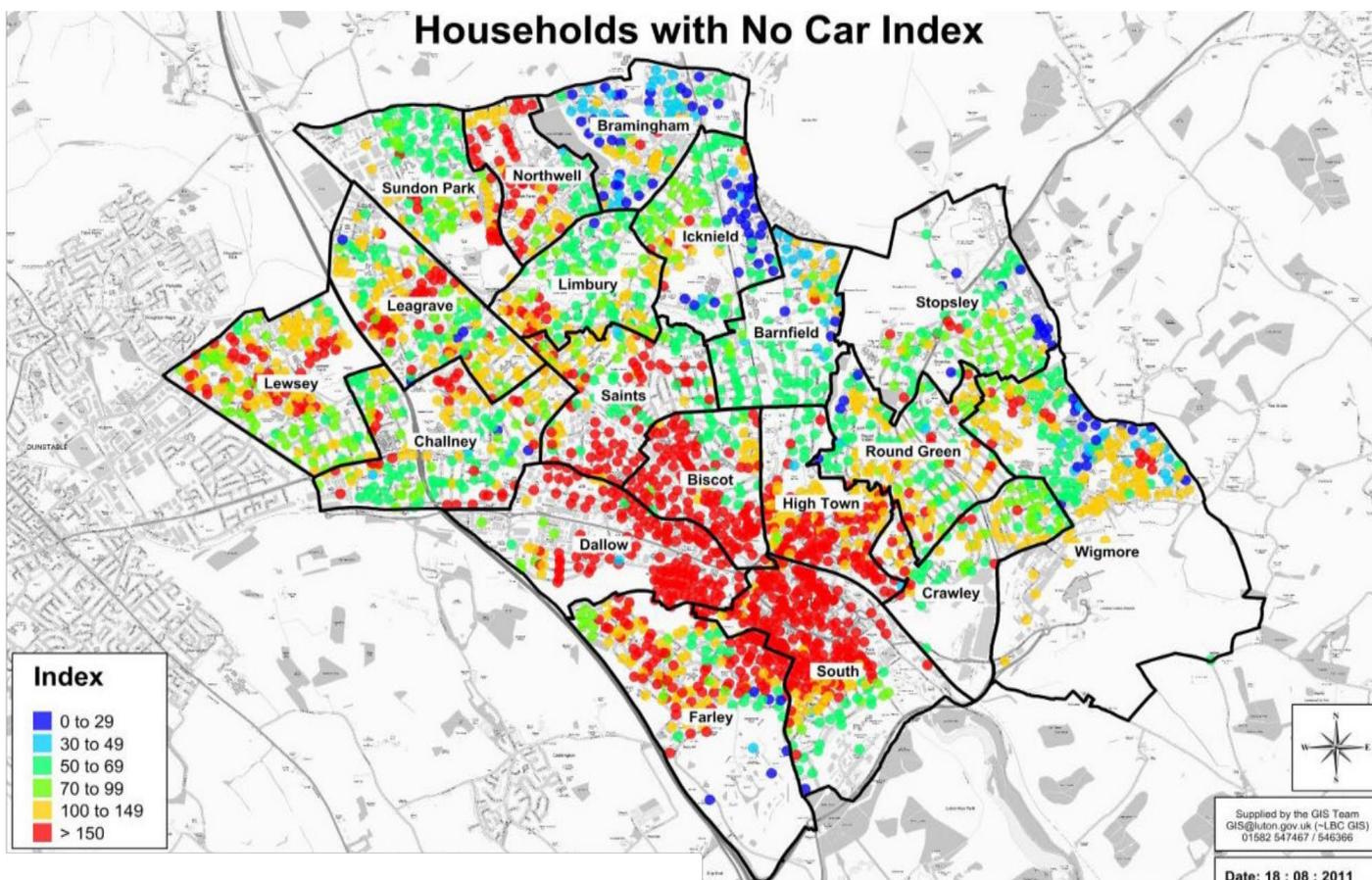


Figure 3.2 Variation in non-car ownership by Ward

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Development in Luton

4

With a resident population of about 214,100 people living in 79,300 households and covering an area of 43.35 square kilometres, Luton is one of the most densely populated urban areas in the UK, with a population density of 4,939 people/square kilometre which is similar to that of many London Boroughs. The population density varies in different areas of Luton, with the areas of greatest highest population density being in the wards around the town centre (coincident with areas of greatest deprivation and lowest car ownership set out in Chapter 3) and extending along the corridor towards Dunstable, with the lowest population density in wards to the north and east of the town that have been developed over the last 30-40 years.

Whilst there is pressure to deliver more housing in Luton, a combination of the densely built up nature of much of Luton and the lack of space means that Luton has and will continue to rely on development outside Luton to contribute in particular to the number of new and affordable homes required. It also provides an important steer for future planning policy strategic transport infrastructure and other cross-boundary matters both for the whole conurbation and the planned growth in the Oxford-Cambridge Arc.

The Luton Local Plan 2011-31 (LLP) adopted in November 2017 establishes Luton's long-term spatial vision for the Town and through the provision of objectives and policies demonstrates how this vision will be achieved. This LLP sets out the challenges and opportunities associated with the growth of the town, and includes chapters on each of the council's main delivery areas, which analyse the baseline situation and set out policies along with supporting evidence to shape delivery.

The Local Plan Vision identifies a commitment to protect and enhance the town's natural features and provide multi-functional open space and leisure opportunities and to provide a better-connected town, which is less dependent on the car to promote healthy communities with good access to jobs and services.

Of the eleven 'Strategic Objectives' within the LLP, four have direct relationships to transport:

- **Strategic Objective 1:** To retain and enhance Luton's important sub-regional role as a place for economic growth and opportunity, including the safeguarding of London Luton Airport's existing operations and to support the airport's sustainable growth over the plan period based on its strategic importance;
- **Strategic Objective 2:** To utilise Luton's economic, social and environmental resources efficiently and sustainably within the limited physical land capacity of the Borough whilst ensuring the permanence of the Green Belt;
- Part of **Strategic Objective 4** is also relevant in terms of improving health and wellbeing through improved access by train, bus, walking and cycling to a mix of uses including shopping, services and jobs, and
- **Strategic Objective 8:** Improve accessibility, connectivity, sustainability and ease of movement to, from and within the borough

Furthermore Strategic Objective 10, to "Improve the quality, accessibility and recreational value of green space and natural areas, whilst protecting and enhancing biodiversity", is also relevant as it relates to use of Open Space.

Chapter 11 of the Plan on Transport, Climate Change and Communications sets out the issues related to planning and transport in Luton and includes policies which seek to address those focusing on the role of sustainable transport in a tightly constrained urban area. Appendix 2 of the LLP covers parking standards and Appendix 7 outlines the requirements for developers to produce Transport Assessments/ Transport Statements and to prepare a Travel Plan. Chapter 4 of the Luton Local Plan identifies eight strategic development sites, seven of which are located in the south and east of Luton (including the Power Court and Creative Quarter sites on the east side of the town centre). There are two 'Gateways' from

Luton onto Highways England's Strategic Road Network (SRN), the A1081/A505 connects the south and east of Luton including the town centre and airport to M1 Jct 10a and Dunstable Road and Hatters Way link the town centre to M1 Jct11).

The A6 north of Luton and the A505 in east Luton and towards Hitchin also form part of the Major Road Network (MRN). Figure 4.1 below shows the extent of the main corridors that connect the town centre to the main development sites in around Luton.

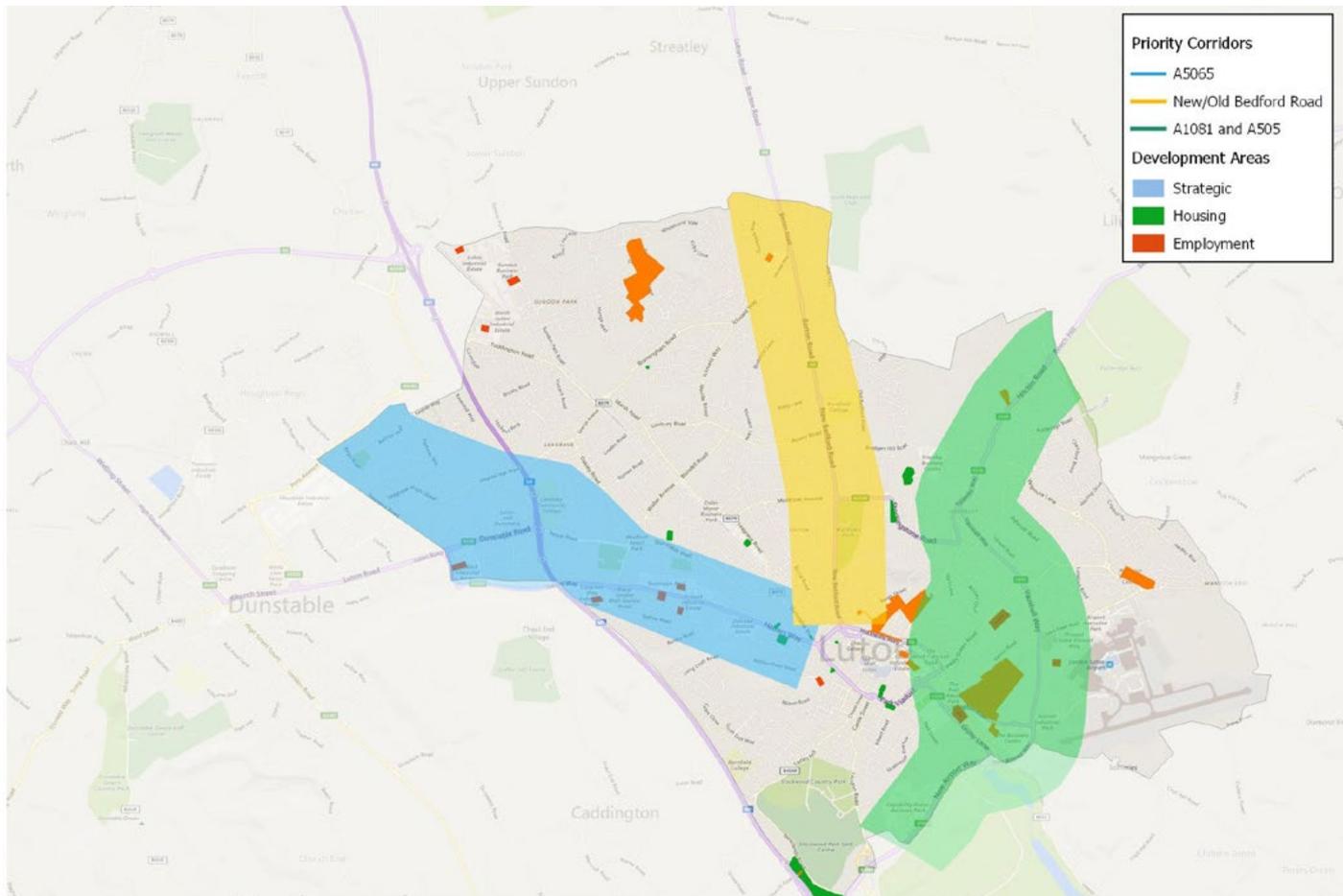


Figure 4.1 Main Luton travel corridors connecting to the SRN/MRN

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The following table summarises the extent to which local travel by more sustainable modes is already provided for in each of these 3 corridors and identifies those in which further improvement is needed.

Corridor	Walking	Cycling	Bus	Access to rail station
Dunstable Road	++	+	++	++ 1,2
New Bedford, Hatters Way Road	++	++	+	+ 1,2
Hitchin Road/ Vauxhall Way/ Airport Way	-	--	+	- 1,3

Key to level of provision: ++Good +Moderate -Poor --Very Poor

Most convenient rail station 1 Luton 2 Leagrave 3 Luton Airport Parkway

Table 4.1: extent of local travel provision by sustainable modes and further improvements

The above assessment only takes account of the provision in these corridors; a separate study of the town centre has identified that sections of the ring road, as well as some radial routes, present a barrier to pedestrian and cycle movement into the town centre core from the surrounding areas. These will be implemented through co-ordination with the town centre improvements.

Whilst the strategic priorities and policies of this LTP4 cannot over-rule the adopted Luton Local Plan (2016-31), in some cases they could be considered if they align with Government transport policy and the latest version of the National Planning Policy Framework.

The Council will be undertaking a review of its Local Plan which is likely to still rely on development outside Luton to contribute in particular to the number of new and affordable homes required. The key principles in this Transport Strategy will inform the Plans approach to sustainable growth, access to services and movement both within and beyond the town's boundary.

It is anticipated that the emerging Luton Local Plan will:

- strengthen parking policies to include cycle parking and electric vehicle charging;
- include a requirement for Travel Plans to set and meet mode shift targets for development;
- include proposals for setting up 'car clubs';
- set requirements for improving air quality; and
- include policies to encourage renewable energy and district heating opportunities.



Vision and Objectives

5.1 Vision

Based on the wider policy background for the Luton area, and in particular the need to reduce both CO₂ and other transport-related emissions harmful to human health, the vision for this long term transport strategy is summarised below.

Transport Vision for 2040

To make Luton carbon neutral and improve the quality of life and wellbeing whilst realising sustainable growth opportunities, we will connect residents and the business community with opportunities to live, work, learn and have fun by providing an integrated, safe, accessible and more sustainable transport system to enable active travel and reduce unnecessary car use, thereby improving air quality, enhancing the natural, built and historic environment and improving health and quality of life for all.

5.2 Objectives

To achieve this vision, we will work in partnership with other Government Agencies (e.g. Network Rail and Highways England), neighbouring Councils, the private sector, community/voluntary groups and social enterprises to develop a transport system in Luton that will work to achieve the following aims:

- Enable people to choose more sustainable travel habits by implementing transport schemes and travel planning initiatives to maximise the role of greener public transport, walking and cycling, thus reducing vehicular emissions and increasing physical activity;
- Generate continued employment and prosperity by improving access to high quality jobs and skills/training opportunities for local residents (respectively increasing local spend and apprenticeships), and funding (both through Government and developers) improvements to existing and provision of new transport infrastructure and other measures that support local businesses, climate change objectives and the diversification of the local economy;

- Promote equitable opportunities and access to services for all members of the community by improving choices of modes of transport and the design of transport facilities for Non-Motorised Users (NMUs) together with mobility-impaired and other vulnerable people;
- Create and preserve an attractive natural, built and historic environment and pleasant living conditions by maintaining and enhancing pedestrianised areas in the town and local centres and 20mph speed limits in residential areas and around schools, together with improving the condition of green space in and around the conurbation and conserving/enhancing the surrounding Chilterns AONB to encourage greater access by walking and cycling;
- As the main international Gateway within England’s Economic Heartland, work with them to support the wider regional economy by improving sustainable transport connectivity for residents and businesses to international markets and opportunities; and

- Lay the foundations for future expansion to serve Luton’s growth by ensuring accessibility (by more sustainable transport modes) between the new residential developments, existing and proposed employment areas including the Luton Airport Enterprise Zone, the town centre, and hubs at existing and new community facilities.

5.3 Increasing Active Travel

As set out in Table 2.1, many people in Luton are undertaking short distance car journeys (under 5km) that could otherwise be viably accommodated by walking, cycling or public transport. This strategy also needs to reflect a change in attitudes toward local travel during the Covid19 lockdown which saw large declines in road traffic and increases in walking and cycling resulting in a 30% improvement in Nitrogen Dioxide emissions in Luton. As such, there is substantial scope and opportunity for encouraging a modal shift to more sustainable transport modes, particularly for those travelling to work and school.

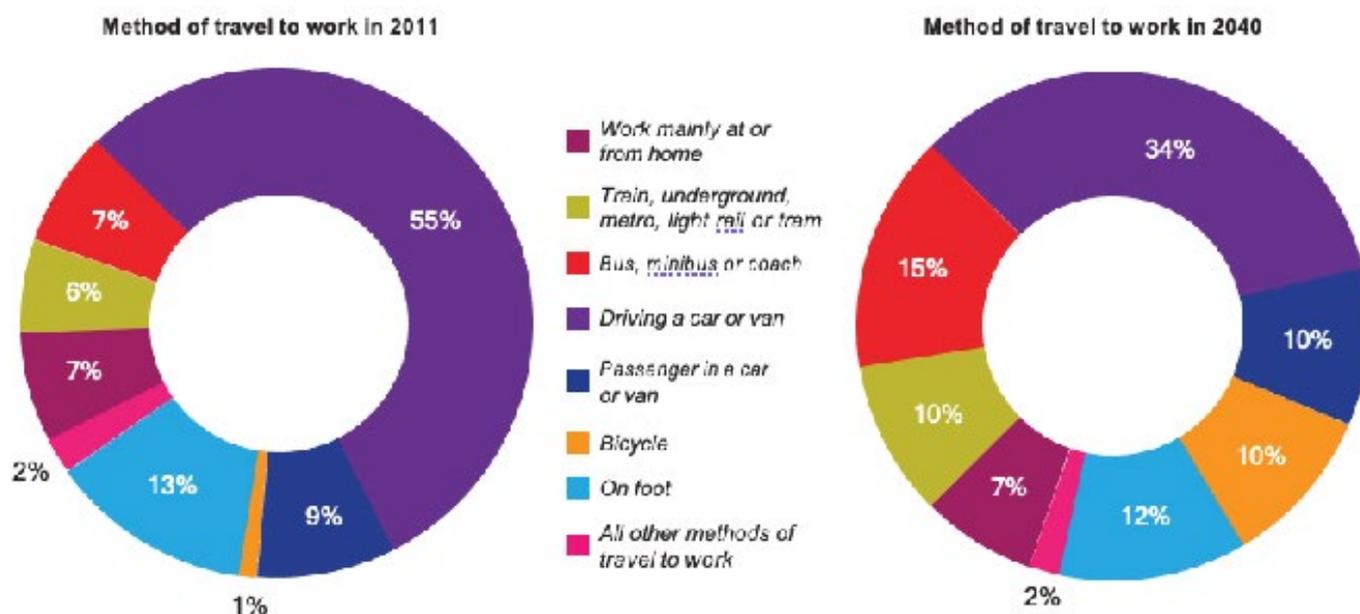


Figure 5.1 below shows the existing modes of travel to work based on the 2011 Census along with aspirational modal shift for Luton that could be achieved by 2040.

From the perspective of travel to work, the ambition of this Transport Strategy is therefore by 2040 to achieve a tenfold increase in cycling and double walking, which is anticipated will result in a 40% reduction in car travel to work. However it is acknowledged that these targets may need to be reviewed, both to reflect changes in travel to

work patterns stabilise post-Covid19 situation or in responding to updated statistics both in terms of travel to work and carbon emissions.

This takes account of the length of journeys to work in 2011 (see Chapter 2) along with the anticipated change in population and age profile by 2040 set out in the table below.

	<16	16-24	25-44	45-64	65-84	>85
2017	51800	23900	66200	46300	22800	3700
2037	54500	31200	68100	57800	33500	6700
% change	+5.2%	+30.5%	+2.9%	+24.8%	+46.9%	+81.1%

Table 5.1: anticipated change in population and age profile

This table shows the most significant changes over the next 20 years will be significant growth in the number of young adults and also the elderly. Whilst schoolchildren are now being taught about the benefits of travelling sustainably, to realise those benefits we also need to make the town a safer place for children & young people. In terms of the elderly and other vulnerable people, improving accessibility to goods and services is important for reducing social isolation.

The above targets for changing modal shift, in particular to encourage more active local travel will not only reduce carbon emissions but also have associated health outcomes as a result of improvements in air quality, increased physical activity, improved accessibility to local services and stronger communities through civic pride.



National and sub-national policy context

6.1 National Policy background

6.1.1 National Transport Policy

The Government's White Paper published in January 2011 is based on two overarching themes; encouraging economic growth and sustainable travel. This was the culmination of the response to the Eddington Report and the Stern Review on the impact of Climate Change. From a policy perspective the White Paper still forms the basis of Government Policy, namely continuing to encourage economic growth but at the same time using the 'nudge' principle to get people to travel sustainably by:

- implementing schemes to encourage more sustainable travel,
- incentivising people to use those schemes through 'travel planning' and,
- in the event these don't achieve sufficient mode shift, to introduce disincentives such as increased parking charges, Workplace Parking Levy and road user charging.

Since the White Paper was published in 2011, there have been significant changes in technology, with gradual increases in use of Electric and Ultra Low Emission vehicles, greater use of technology to reduce congestion and improve air quality, and testing of Connected and Autonomous Vehicles.

Some elements of the aforementioned recent changes have progressed to Parliamentary Bills/ Acts.

In July 2017, the Government published a White Paper "Transport Investment Strategy-moving Britain ahead" (Cmnd 9472), which recognises the importance of continuing to invest in transport infrastructure. The Transport Investment Strategy is about funding transport infrastructure to support economic growth (both locally and globally) along with housing growth, and ensuring the investment creates a more reliable, less congested and better connected transport network. Its focus is about:

- links with the Government's Industrial Strategy,
- devolved funding streams to Mayoral and Combined Authorities,
- funding streams that relate to productivity (eg the DfT National Productivity Investment Fund) and reducing congestion (e.g. DfT Pinchpoint Fund),
- recognising the role of the links between Highways England's Strategic Road Network and sub-Nationally important road network (DfT's Major Road Network and related funding),
- the role of Sub-national Transport Bodies, and
- ensuring a robust appraisal process that takes account of the wider economic benefits of housing growth.

This will mean investing in our transport networks core capability; its condition, capacity and connectivity, but also improving the user experience and adapting the network to safeguard our environment and health and prove adaptable in the face of uncertainty and change.

The 2017 White Paper also recognises the importance of seizing the opportunities provided by investment in innovation, research and technology including developing ultra-low emission vehicles together with Connected and Autonomous Vehicle (CAV) technologies. There could be significant safety and economic benefits of CAVs, with trials currently underway in the UK. However there is uncertainty about how long it would be before autonomous vehicles become part of the mainstream transport mix in UK towns and cities.

6.1.2 UK Industrial Strategy and improving mobility

The Government published its Industrial Strategy in November 2017; one of the Grand Challenges identified was for the UK to become a world-leader in mobility and in particular the application of technology to the way people and goods are transported and services are provided.

In March 2019, the Government published its Urban Mobility Strategy, the nine principles of which are:

- New modes of transport and new mobility services must be safe and secure by design.
- The benefits of innovation in mobility must be available to all parts of the UK and all segments of society.
- Walking, cycling and active travel must remain the best options for short urban journeys.
- Mass transit must remain fundamental to an efficient transport system.
- New mobility services must lead the transition to zero emissions.
- Mobility innovation must help to reduce congestion through more efficient use of limited road space, for example through sharing rides, increasing occupancy or consolidating freight.
- The marketplace for mobility must be open to stimulate innovation and give the best deal to consumers.
- New mobility services must be designed to operate as part of an integrated transport system combining public, private and multiple modes for transport users.
- Data from new mobility services must be shared where appropriate to improve choice and the operation of the transport system.

Taken together, these principles define the Government's vision for urban transport. Increased internet access through mobile technology is driving rising customer expectations in providing information about services that are more affordable, convenient and personalised. Whilst dense urban areas are likely to see some of the greatest opportunities for such changes, the Government recognise these are also areas where some of the biggest risks may lie, in particular for sections of the community that do not wish, or are unable, to access and pay for such services using mobile devices.

6.1.3 Decarbonising Transport

In June 2019, the UK became the first major global economy requiring net-zero greenhouse gas (CO₂) emissions by 2050. In June 2021 the government committed to a 78% reduction in 1990 CO₂ levels by 2035.

In March 2020 the Department for Transport published 'Decarbonising Transport-setting the challenge', with the aim of publishing the final plan later this Autumn. The report set out, for different modes of travel, how transport could contribute to reducing CO₂ emissions. To achieve this it identified six strategic priorities:

- accelerating modal shift to public transport and Active Travel
- decarbonisation of road vehicles
- decarbonising goods deliveries
- place based solutions
- the UK's role in green transport technology and innovation, and
- reducing carbon in a global economy.

Whilst the DfT's final Decarbonising Transport Plan has not yet been published, the first of their strategic priorities has been covered in the

Government's subsequent 'Gear Change' and 'Bus Better Back' publications. In addition the Local Government Association published six briefing notes on transport and climate change in October 2020.

6.1.4 National Planning Policy Framework

The Government's National Planning Policy Framework (NPPF), which guides the planning process for the years to come, was last updated in February 2019. The transport related policy within the document is dealt with in Chapter 4 - Promoting sustainable transport, where it is recognised that transport policies have an important role to play in facilitating sustainable development but also in contributing to wider sustainability and health objectives. The NPPF states that "Crucially, Local Plans should plan positively for the development and infrastructure

required in the area to meet the objectives, principles and policies of this Framework... (paragraph 157)

As stated in the NPPF, it is important that a sustainable transport solution is considered involving all modes of transport to cater to the movement of people and goods, including through use of public transport, walking and cycling.

6.1.5 Environment and health

Following publication of its 25 year Environment Plan 'A Green Future: a 25 year plan' (Defra, 2018), the Government consulted on its Clean Air strategy, the final version of which was published in January 2019. That strategy included further information on the relationship between air quality and health.

The related Environment Bill includes Powers to improve air and water quality, control plastic pollution, restore wildlife and protect our climate. It also recognises that there are physical and mental human health benefits of improving our environment. The Bill was due to return to Parliament in January 2021; whilst this was delayed until the spring, the Bill is expected to become law later in 2021.

In March 2019, Public Health England published a 'Review of interventions to improve outdoor air quality and public health' that provides evidence based advice focussed on national actions and those local authorities can take to improve air pollution and reduce its impact on the health of the local community. This evidence base review considered a range of interventions under five broad categories relating to transport, planning, industry, agriculture and behaviour. The report set out which interventions in each of these categories are likely to have the greatest impact at both a national and local level, concluding that strategies that:

- evidence of cost effectiveness or cost benefit of transport interventions is limited;
- deliver the greatest public health benefits relative to transport were actions to reduce the most polluting forms of transport, such as road

pricing and restrictions on certain vehicles in Low Emission Zones or retrofitting those with

- equipment to abate poor air quality (at a National level);
- include local measures to promote modal shift to public transport (including lower fares and integrated ticketing), car park management and more active travel, which can all contribute to reducing congestion;
- regulate or increase the cost of travel have the potential to increase inequalities;
- deliver active travel which, whilst on its own has low impacts, have public health, environmental, safety and landscaping benefits;
- Behaviour changes, when implemented on their own, had the most limited effectiveness, except in relation reducing exposure of vulnerable road users at times of high pollution episodes and significant behaviour changes interventions ;
- Measures in each category performed better when delivered in combination, such as:
 - a. infrastructure to encourage more cycling, walking and public transport (either delivered by Councils or by developers through the Planning process) alongside behaviour change.
 - b. promoting eco-driving, anti-idling and speed management can contribute to reduced congestion resulting in savings in fuel consumption.
 - c. co-implementation of transport/planning policies along with infrastructure.

However given the limited information on costs and benefits of the wide range of interventions considered, the report concluded that further work was required on the health impacts of each intervention along with their costs/benefits.

Notwithstanding this, the local strategic approach, together with the policy background and how that will be implemented included (see Part 2 of this Local Transport Plan) are consistent with the interventions in this Public Health Evidence, in particular those relating to planning, vehicle/fuel and behavioural change.

Transport is a key determinant of health and is therefore an important consideration for improving health and wellbeing, as set out in public health guidance from the National Institute of Health and Clinical Excellence (NICE) and reflected in the Prime Minister's announcement on 28th July 2020 focused on measures to encourage more healthy lifestyles. Evidence from NICE public health guidance Note 8 shows how physical activity and the built environment are intertwined and, by applying the recommendations from this guidance, local transport plans can contribute to the reduction in rising obesity levels in children and adults. The key recommendations of NICE Note 29 are to maintain road safety partnerships and to introduce engineering measures and lower speed limits in order to reduce speeds in residential areas or other areas of high pedestrian and cycling activity, a process will also be informed by implementing key recommendations from the NICE Note 31.

Most studies have shown that there is a direct cost to the NHS due to physical inactivity. Nationally, a 20% increase in cycling would save the NHS £50 million per year in treatment of diseases related to inactivity. However, the indirect costs, including expenditure not directly attributed to the NHS, such as informal care, inferior physical and mental function, have been conservatively estimated at £8.2 billion per annum (at 2002 prices). Emerging evidence show the costs of illness as a result of physical inactivity to the NHS amounts to over £1 billion per year. It also contributes to economic benefits to the wider society, particularly in the workplace where evidence has shown that intensive changes in travel behaviour, through active travel to work, lead to significant health improvements and reduce absenteeism.

6.2 Sub-national Policy

6.2.1 Background

The aforementioned Transport Investment Strategy also recognises the important role of Sub-national Transport Bodies and Local Enterprise Partnerships in improving regional transport connectivity that is vital to sustainable economic growth. In this context the strategy recognises the importance of investment in road and rail network that complement Highways England's Strategic Road Network and the national rail network.

6.2.2 England's Economic Heartland

England's Economic Heartland (EEH) is the Sub-national Transport Body covering the area from Swindon through Oxfordshire and Milton Keynes to Cambridgeshire in the east, and from Northamptonshire in the north to Luton and Hertfordshire in the south. The area covers four Local Enterprise Partnerships (Swindon and Wiltshire, Bucks Thames Valley, Oxfordshire, South East Midlands) together with the Cambridgeshire and Peterborough Combined Authority, and its eleven constituent Highway Authorities which include Luton.

A Strategic Transport Forum (STF) has been established, which brings together the political and business leaders and allows partners to work together with one voice, when formulating policy.

The Strategic Transport proposition for England's Economic Heartland published in October 2016 set out the key areas of investment required, recognising the linkage between improving transport infrastructure and economic growth. It also recognises the importance of London Luton Airport as the main airport serving the Heartland area, with a contribution of £1,254 billion to the local economy with flights to Europe, North Africa and, the Middle East. It's also the busiest airport in the UK for private flights. Other international airports just outside the area (e.g. London Heathrow, London Stansted, London City, Birmingham, and East Midlands) are within an hour's drive time. Development of fast, public transport connectivity to more of these hubs is essential to capitalise fully on this advantage.

In July 2019 EEH consulted its partners and other key stakeholders on a framework for its outline Transport Strategy. At its heart was a draft vision of “Connecting People with Places, Opportunities and Services”. Since then EEH has been working to develop the Transport Strategy and supporting documents, the consultation on which was undertaken between July and September 2020.

Having considered the consultation responses, the EEH Transport Strategy was submitted to the DfT on 24th February 2021. The ambition of the EEH Strategy is:

“To support sustainable growth and improve quality of life and wellbeing through a world-class decarbonised transport system which harnesses the region’s global expertise in technology and innovation to unlock new opportunities for residents and businesses, in a way that benefits the UK as a whole”.

This is supported by four key principles to:

- Achieve net-zero carbon emissions from transport no later than 2050 , with an ambition to reach this by 2040
- Improve quality of life and wellbeing through a safe and inclusive transport system accessible to all which emphasises sustainable and active travel
- Support the regional economy by connecting people and businesses to markets and opportunities
- Ensure the Heartland works for the UK by enabling the efficient movement of people and goods through the region and to/from international gateways, in a way which lessens its environmental impact

The background to de-carbonising transport is at the heart of the EEH policies, supporting proposals to de-carbonise the rail and road network and ensuring other transport proposals prioritise active travel, public transport, and low/zero carbon emission private vehicles over meeting the needs of other motor vehicles. The EEH strategy recognises that East West Rail will

transform east west connectivity in the area, but also states that priority will be given to infrastructure to support economic and housing growth in a north arc connecting Northampton/ Corby and Peterborough/Cambridge and a south arc connecting central Buckinghamshire with Watford/ southern Hertfordshire. Notwithstanding the transformative benefits of these east-west corridors, the strategy recognises that other interventions to improve north-south connectivity and other intra and inter-regional journeys will be required.

A number of supporting documents accompany the EEH strategy, notably a First Mile - Last Mile study to promote new forms of sustainable mobility as part of a longer distance trip to the main urban centres and a de-carbonisation study of potential approaches to achieving net zero emissions in the EEH area by 2050, together with an assessment of corridor studies to identify an investment pipeline of projects.

The de-carbonisation study assesses the following four pathways to achieving net zero carbon emissions by 2050 against a baseline of ‘Business as Usual’:

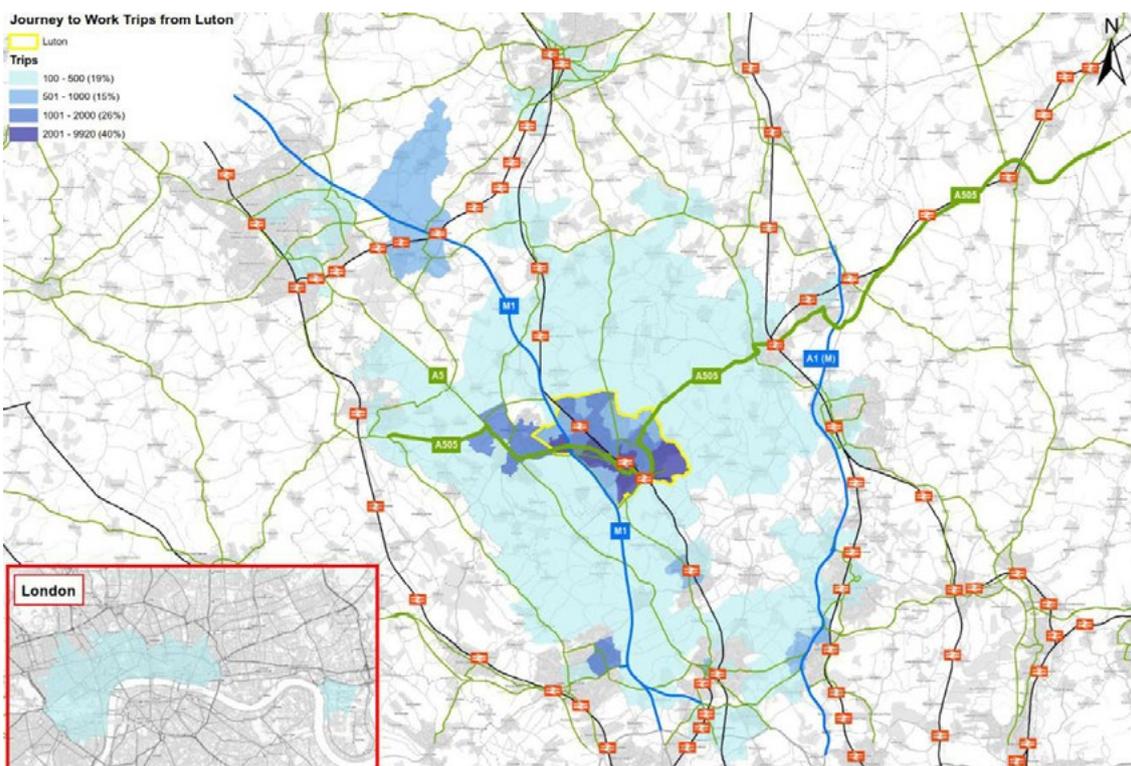
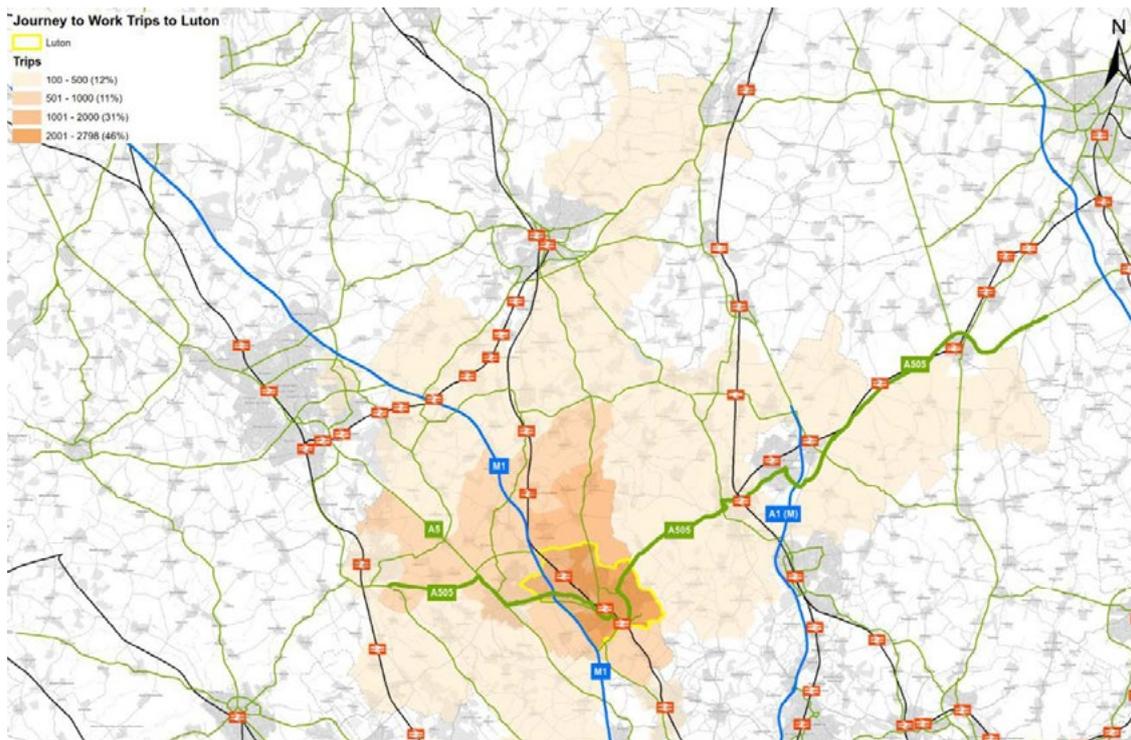
- Pathway 2: Highly Connected – increased use of digital communications and embedded technologies.
- Pathway 3: Adapted Fleet – technological development of the vehicle stock.
- Pathway 4: Behaviour Shift (policy-led) – achieved through road pricing and education measures.
- Pathway 5: Behaviour Shift (results-led) – assumes that societal change takes place, regardless of policy choices

The study concluded that a combination of pathways 2 and 4 provided the greatest opportunity to reduce carbon emissions in the Heartland by 2050.

The rail passenger study emphasised that completion of electrification of the Midland Main Line north of Bedford will provide for

two trains an hour in each direction between Corby and London St Pancras, improving rail connectivity to the East Midlands. However Inter-City rail journeys north of Kettering will require interchange there, and the Council is continuing to lobby East Midlands Railway to continue to stop the hourly Nottingham service at Luton Airport Parkway station.

Whilst improving the long rail journey times on the Marston Vale Line (MVL) between Bedford and Bletchley as evidenced in the EEH Passenger Rail Study could contribute to improving rail journeys between Luton and Milton Keynes via the Bedford area, given that the EEH Freight Strategy recognises the importance of EWR for the movement of freight, the Council is concerned that the alignment of the St John’s curve in Bedford could constrain the strategic movement of rail



freight. We believe that it would be more efficient to construct a short rail chord between the MVL and the Midland Main Line north of Stewartby, providing interchange with passenger services on that route at Wixams.

In addition to the opportunities provided by East West Rail, the consultation on the framework for the EEH transport strategy identified a number of sub-regional journey pairs that could require highway improvements in order to improve journey time reliability by road.

The two plans in **Figure 6.1** overleaf respectively show the main areas where people living in Luton travel to work outside of the town and where people working in Luton commute from. Figure 6.1 shows that after the Luton-Dunstable conurbation, the areas around Brogborough and Cranfield near M1 Junction 13, together with St Albans and the business parks in Hatfield and Hemel Hempstead are important work destinations for Luton residents, and trips to work in Luton are mainly from Barton-le-Clay to the north and Hitchin/Stevenage to the east. St Albans is only 15 minutes by train from Luton, from where there are bus services to both Hatfield and Hemel Hempstead. We will work with Hertfordshire to promote more sustainable travel to Luton residents working in these areas.

Following a shortlisting of those corridors (including the combination of some corridors with adjacent ones), each corridor was independently assessed against the four key principles of the draft EEH Transport Strategy (see section 3.2.1) in order to prioritise a list of corridor studies that would form the basis of an investment pipeline for future investment by EEH. Of the aforementioned corridors important for travel to work to/from Luton, that prioritisation process has identified the Luton- Milton Keynes-Daventry corridor as a high priority (to be undertaken in 2022/23) and Luton-Bedford- Northampton (to be undertaken in 2023/24).

6.2.3 The South East Midlands Local Enterprise Partnership

The South East Midlands Local Enterprise Partnership (SEMLEP) published its first Strategic Economic Plan (SEP) in 2014, which was updated in September 2017. The mission of that Plan is

to build on the area's reputation as a premier location for growth, innovation, creativity and world-leading technologies, resulting in the doubling of GVA by 2050. To achieve this mission, the objectives of the SEP are set out across three priority themes (Growing Business, Growing People and Growing Places), underpinned by a cross cutting commitment to ensure that this growth is undertaken in a manner that promotes social inclusion and environmental sustainability. The key to achieving these priorities is to deliver the necessary infrastructure in the decade to 2025/26 in order to:

- build 130,000 new homes planned;
- increase private sector investment and grow the number of jobs by 10%, and;
- an employer-led approach to skills attainment, including 170,000 apprenticeships.

Appendix A to the latest SEP identifies 36 key projects that are currently programmed cover the areas of transport and other infrastructure needed to deliver growth. Following the publication of the Government's Industrial Strategy, they asked SEMLEP to prepare a Local Industrial Strategy that "identifies local strengths and challenges, future opportunities, and the action needed to boost productivity, earning power and competitiveness". That was published in June 2019, following consultation with key stakeholders, and identifies service activities incidental to land transport as being a key local strength of the area, contributing around 25% to the GVA and 31% to employment in the SEMLEP area.

SEMLEP's Local Industrial Strategy published in July 2019 identifies the Luton area as having a key role in the aerospace sector based on business clusters around the airport and, given that one of the UK Grand challenges in the Government's Industrial Strategy was for transport to support achieving net zero emissions by 2050, the move towards electric vehicle manufacturing. SEMLEP's industrial strategy includes a commitment to work with local authority partners and businesses to support the increased electric vehicle infrastructure within the SEMLEP.



Strategic Priorities

7

7.1 Background

The priorities for implementation of transport schemes and initiatives within this Transport Strategy are improving travel within the conurbation by focussing on active and sustainable travel.

The priorities in Luton set out in Section 7.2

(see the related sub-sections) will be based on transport applying the following principles in local neighbourhoods:

- local measures to promote modal shift to more active travel and public transport (including lower fares and integrated ticketing on public transport and with other modes using Mobility as a Service) for local journeys, which can all contribute to reducing CO₂/congestion and addressing health inequalities.
- improving quality of life and safety by enhancing streetscape and public realm;
- meeting the mobility needs of different groups in the community to access local services and shared transport, in particular using new and innovative technologies; and
- as developments come forward in the planning process, to integrate those sites with existing neighbourhoods and to improve connectivity to the strategic corridors identified in Figure 4.1 and other focal points including the town centre and the nearest rail station.

Luton provides a workforce and housing for a wider economic area; a good example of this is London Luton Airport which draws almost 80% of its employees from within Bedfordshire, Hertfordshire and Buckinghamshire, providing income and wealth across a wider area. As a result, strategic transport schemes for Luton cannot be delivered in isolation from this wider area. Network connectivity is generally good in and around Luton, but key parts of the network suffer from congestion, which may become significantly worse in the face of planned housing and employment growth.

7.2 Improving local connectivity

7.2.1 Improving mobility in the Luton-Dunstable conurbation

In addition to ensuring consistency of the relationship between transport and the Local Plan, in order to demonstrate how many sustainable transport-related initiatives can contribute to the overall improvement of air quality in Luton, the layout of this section chapter is based on DEFRA's key themes of Air Quality Action Plans which include:

- infrastructure to encourage alternatives to private vehicle use,
- "softer" measures to promote increased use of sustainable travel,
- Providing information about travel conditions on the network, and
- Managing travel demand.

To encourage greater and safer use of transport for all street users, the council will consider the user need prioritisation in the following order:

1. Pedestrians and vulnerable street users
2. Bicycle and scooter users (including shared use)
3. Public Transport users
4. Reducing single occupancy car use through Travel Demand Management (e.g working from home more often or encouraging Active Travel)
5. Car and other private motorised vehicle users

The greater priority given to walking over cycling is a reflection of the importance in managing the potential safety conflict between pedestrians (and in particular vulnerable users) and cyclists.

In relation to shared car use, it should be noted that school-related car share only applies when children from different families are driven to a school which would have otherwise been driven separately.

Whilst the focus of many journeys to work is to the town centre, there is a balance to be struck between encouraging sustainable transport and provision of car parking and related enforcement/management.

However we recognise that for some journeys there may be no alternative to private vehicle use, and highway improvements together with network management has an important role to play. The priorities of our approach to managing the transport network in the town will therefore be to:

1. Implement transport schemes, including support for strategic schemes being developed by Central Bedfordshire Council and Highways England;
2. Encourage viable alternatives to the car including public transport, Park and Ride, walking and cycling;
3. Implement road space management and information systems both by deploying advanced technologies and coordinating traffic signals using an integrated Urban Traffic Management and Control system;
4. Make effective use of the land-use planning process to ensure the impacts of new developments are managed;
5. Having established viable alternatives to travel by private car, to gradually introduce disincentives for private vehicle use or restrictions on certain classes of vehicles, including feasibility studies of introducing a Workplace Parking Levy or Low (or Ultra Low) Emission Zone in the town centre.

In relation to managing demand for private vehicle use and introducing disincentives for their use, the Council has been enforcing parking in the town since 1997, and over the last 2 years has introduced Red Routes on some roads in the town centre and on Airport Way.

In Autumn 2020 the DfT consulted on three options to control parking on pavements; a national prohibition, allowing councils powers to enforce obstruction of the pavement, and improving the Traffic Regulation Order process.

The Councils preference is to introduce local restrictions; we have already introduced footway parking measures in three areas (Dunstable Road, Bury Park and Third Avenue) with a further two planned (Lalleford area and Biscot Road) which will be monitored before deciding whether to introduce further schemes.

7.2.2 Alternatives to private vehicle use: walking and cycling

Supporting communities to change unhealthy (or health limiting) behaviour is a key aim of this

Transport Strategy; promoting and making it easier to undertake active travel and leisure will make a significant positive contribution to people's physical and mental health and well-being. Active travel also plays a part in reducing vehicular emissions, so we will encourage cycling and walking as a sustainable way to travel, and promote the health benefits that can be delivered through an increased take up of these modes, particularly for shorter distances of up to 5km. In addition to lowering emissions, there are a range of other benefits including increased social interaction, supporting local businesses, promoting a vibrant town centre and providing a high-quality and appealing public realm.

Luton has already made improvements that allow more Active Travel participation. The Luton Dunstable Busway is key to improving connectivity in the Luton Dunstable conurbation, not only in terms of public transport but also walking and cycling on the access track that runs alongside it, which was classified by Sustrans in 2017 as National Cycle Network (NCN) route 606. Along with NCN route 6, which follows the River Lea corridor through Luton and continues under the M1 Motorway to Houghton Regis and the north of Dunstable. These two strategic routes converge on Luton town centre; Figure 7.1 overleaf shows walking and cycle journey times to central Luton. In order to promote Active Travel, the Council, in engagement with key stakeholders, is also preparing a Local Cycling and Walking Investment Plan (LCWIP), which builds upon the existing strategic network of Sustrans routes NCN6 and NCN606, creating additional 'secondary

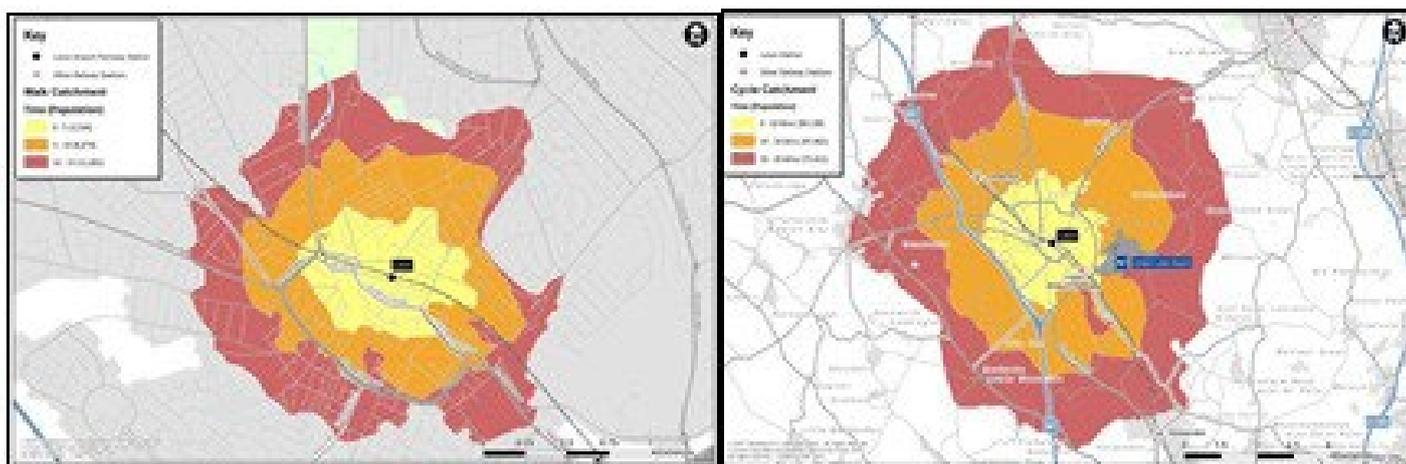


Figure 7.1 Walk and cycle access to Luton town centre

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routes to improve access between residential areas and:

- strategic employment areas,
- Luton’s three rail stations, and
- local facilities and services and provide a focus for street scene improvements in local/ neighbourhood centres

In addition to creating a network of cycle routes to enable residents to safely cycle to neighbourhood facilities and to work, it is important to provide secure cycle parking at the other end of the trip, e.g at rail stations, workplaces and shops. The recent Town Centre Framework Plan proposes a number of transport hubs in the town centre that will include secure cycle parking, and opportunities for cargo bike hubs and e-bike charging to be considered in implementing the Town Centre Framework Plan.

7.2.3 Alternatives to private vehicle use: Public Transport

Following a presentation to the Council’s Overview and Scrutiny Board in January 2019 about the opportunities the 2017 Buses Act provides for improving bus services in the town, in April 2019 the Government produced further guidance on those opportunities, and in October committed to development of a national bus strategy and greater funding for bus services. An update was provided to the Board in January 2020 which

proposed exploring opportunities such as the introduction of an Enhanced Quality Partnership in the town.

Chapter 2 of the Government’s Bus Strategy ‘Bus Back Better’ published in March 2021 sets out what it expects of Councils, in partnership with local bus operators, to improve local bus services. These are consistent with the criteria set out in Table 1 of the DfT’s guidance on the ‘New Powers and Opportunities of the 2017 Bus Services Act’, the Board suggested the following priorities for improving bus services; first Better places, followed by Better buses and third, Better value.

The Government requires the Council to publish a Bus Service Improvement Plan, the content of which is set out on pages 41-42 of ‘Bus Back Better’ including the need for a passenger charter to be agreed with operators. The remainder of this section summarises the background to existing public transport services and our initial views about potential improvements, which provides a starting point in developing an improvement plan for Luton.

All bus services in and interurban services to Luton are currently operated commercially. The five operators provide mobile phone ticketing, and Arriva and Stagecoach operate contactless payment on all their services.

Key Theme	Sub-theme	Opportunities to be considered
Better Places	New and better links to jobs	Demand Responsive Transport services for employees at the airport and the L&D hospital
	Fewer car journeys in congested town centres	Local Road User Charging (RUC) scheme could reduce car trips to and congestion in Luton town centre
	Thriving community transport services	More efficient operation of Council-run bus services to schools/community centres
Better Buses	Better bus networks	Use the RUC revenue to improve bus services in those areas not well served (including at evenings/weekends)
	Tickets that work across operators and modes	Migrate Hip-Hop ticket to a Smart Card and add on-s for different modes, where possible considering use of existing smartcards (e.g 'Swift' in Milton Keynes)
	Step change in timetable and fare information	Use of 'Open Data' to improve information about bus service timetables and fares
Better Value	Joined-up services- school and health services integrated with regular bus services	Better integration between Council operated services to schools/community centres with commercial service

Table 7.1: potential opportunities for improvements

In recent years they have also invested in new buses, in particular the predominant operator Arriva, 2/3 of whose fleet are Euro5/6 (some hybrid) with Wi-Fi and USB. The opening of the Busway in late 2013 saw the roll-out of real time passenger information and introduction of the Hip-Hop multi-operator ticket on Arriva, Centrebus and Grant Palmer services Rail passengers to Luton also benefit from the 'Plusbus' add on ticket. Concessionary bus passes issued by the Council also entitle users to half price off- peak rail fares for stations between Bedford and Elstree.

The potential opportunities for improvements are summarised in the following Table.

In relation to Demand Responsive Transport, there are three categories of operating model; the common thread amongst all is that they all have a defined 'area of operation'. However some operating models can respectively pick up passengers from locations within or outside the area of operation;

in this context there are similarities with Hackney Carriages and Private Hire Vehicles, which are an important element of public transport in Luton. We recognise that in some cases ride hailing may

lead to an increase in single occupancy vehicle journeys.

Luton also has three rail stations at Luton Airport Parkway, Luton and Legrave. From 2021, the frequency of limited stopping trains between Corby and St. Pancras will double to two trains per hour.

However after that date passengers wishing to travel to/from key destinations in the East Midlands and South Yorkshire will need to change trains at Kettering. The Council will continue to work with EEH and neighbouring councils to lobby East Midlands Railway to continue to stop direct inter-city services at Luton.

The Government's rail strategy 'Great British Railways' published in June 2021 sets out major changes to the organisation structure of train services, with the one company responsible for rail infrastructure and delivery of passenger services. Importantly, it also simplifies rail fares and integrates ticketing with other modes.

In considering the application of First Mile/Last Mile for journeys within Luton, the benefits of using local rail services should be promoted. In this

context as part of our Bus Service Improvement Plan we will work with GoVia Thameslink Railway and local bus operators to better integrate bus and rail ticketing in the town.

7.2.4 Improving quality of life and health/wellbeing in our communities

What a place looks like is strongly influenced by the highway, often the main component of an area's public space. The highway has a number of functions. The aim of this strategic priority is to

help turn many local highways back into streets that people can enjoy and that contribute positively to the appearance and feel of a local area. This policy will notably build on the roll-out

of 20mph zones and the consequent reduced traffic dominance on local streets and high streets in Luton, and the associated reduction in traffic related street furniture that can clutter local areas.

Urban regeneration is a key issue in Luton There will be a need to make sure transport contributes to a higher quality built environment as part of the redevelopment of the town centre and regeneration projects in general. Appropriate planning, design and implementation of transport interventions can play a key role. In preparing the next Local Plan, the Council intends to produce a design guide in line with Policy 25 of the adopted



Figure 7.2 Transforming Luton's streets

Plan. In doing this we will take account of research undertaken by the University of Leeds (<http://www.visions2030.org.uk/aStart.html>) to create an urban setting that is safer, more inclusive and less environmentally damaging based on a future vision that reflects best practice in the UK Government's 'Manual for Streets' (MFS) in particular to encourage more walking and cycling, as well as longer term visions based around car-free orientated and energy efficient travel that maximise the opportunity for travel by sustainable modes.

In this context the research considered five different areas in an urban environment; Victorian streets close to the town/city centre, neighbourhood shopping areas and interchanges in suburban areas, more modern residential areas generally on the outskirts, and edge of town locations.

The residential areas surrounding Luton town centre largely comprise Victorian terraced properties so, as an example, the images in Figure 7.2 below demonstrate the existing situation and the sorts of interventions that could be implemented in such areas for each of the future year scenarios described above, in order to promote modal shift and improve the public realm.

In terms of improving the layout of new developments, Luton will follow the principles set out in the MFS along with associated professional guidance. In 2017 the Council signed a Memorandum of Understanding with the Alzheimers Society to make Luton a Dementia Friendly town. Studies by this society identified that, in particular, physical spaces around buildings should be accessible to people with dementia and incorporate appropriate way-finding into the streetscape.



Figure 7.3 Healthy Streets approach
 Source: Lucy Saunders

Clean air

Improving air quality delivers benefits for everyone and reduces health inequalities.

People choose to walk, cycle and use public transport

Walking and cycling are the healthiest and most sustainable ways to travel, either for whole trips or as part of longer journeys on public transport. A successful transport system encourages and enables more people to walk and cycle more often. This will only happen if we reduce the volume and dominance of motor traffic and improve the experience of being on our streets.

People feel safe

The whole community should feel comfortable and safe on our streets at all times. People should not be worried about the danger of travel or feel their personal safety is threatened.

Not too noisy

Reducing the noise impacts of motor traffic will directly benefit health, improve the ambience of street environments and encourage active travel and human interaction.

Easy to cross

Making streets easier to cross is important to encourage more walking and to connect communities. People prefer direct routes and being able to cross streets at their convenience. Physical barriers and fast moving or heavy traffic can make streets difficult to cross.

Places to stop and rest

A lack of resting places can limit mobility for certain groups of people. Ensuring there are places to stop and rest benefits everyone, including local businesses, as people will be more willing to visit, spend time in, or meet other people on our streets.

Shade and shelter

Providing shade and shelter from high winds, heavy rain and direct sun enables everybody to use our streets, whatever the weather.

People feel relaxed

A wider range of people will choose to walk or cycle if our streets are not dominated by motorised traffic, and if pavements and cycle paths are not overcrowded, dirty, cluttered or in disrepair.

Things to see and do

People are more likely to use our streets when their journey is interesting, with attractive views, buildings, planting and street art and where other people are using the street. They will be less dependent on cars if the shops and services they need are within short distances so they do not need to drive to get to them.

Pedestrians from all walks of life

Luton's streets should be welcoming places for everyone to walk, spend time in and engage in community life.

The focus of this long term Strategy is to achieve significant modal shift by applying the principles set out in the Healthy StreetsTM approach set out in **Figure 7.3 overleaf**, which builds upon TfL’s approach to ‘Link and Place: A Guide to street

Planning and design’ which was developed from the concept of Place and Movement adopted in MfS. These principles are therefore embedded into the Council’s Streetscape design guide.

7.2.5 Sustainable Travel as one stage of a journey

In developing its transport strategy, England’s Economic Heartland (EEH) have undertaken a study of the opportunities for improving sustainable travel for the First Mile and Last Mile of longer journeys.

However, as recognised in the Government’s Urban Mobility Strategy, the right methods for delivery will

Persona group ¹	Luton (overall) ²	Most dense wards ³	2nd mostdense ⁴	3rd mostdense ⁵	Least dense wards ⁶
Urban cohesion	25.8%	60.6%	22.2%	3.1%	7.0%
Rental hubs	12.3%	5.9%	19.6%	5.8%	3.5%
Aspiring homemaker	12.3%	6.4%	8.8%	15.9%	29.1%
Family basics	10.4%	8.6%	12.2%		14.5%
Transient renters	9.5%	5.9%	10.9%	10.3%	8.6%
Senior security	8.1%	4.9%	7.3%	17.4%	7.8%
Suburban stability	4.9%	0.6%		10.7%	11.9%
Domestic success	4.1%		3.5%	11.1%	5.2%
Modest traditions	3.6%	3.3%	2.7%	5.2%	4.2%
Prestige positions	3.5%			15.2%	4.9%
Vintage value		2.3%	3.2%	3.6%	
Municipal challenge		1.1%	5.3%		

Table 7.2: socio- economic profile by persona group

Notes:

1. Other categories are city prosperity, rural reality & country living
2. Percentages do not add up to 100 as this table only shows the top 10 categories in each area
3. Biscot, Bury Park, Challney, Dallow, Lewsey and Saints wards
4. Farley, High Town, Leagrave, Limbury, Northwell, Round Green, South and Sundon Park wards
5. Barnfield, Bramingham and Icknield wards
6. Crawley, Stopsley and Wigmore wards

depend on local conditions and community needs. In the past socio-economic profiles have been based on the nature of household employment and the amount of disposable income, although in relation to mode of travel the picture is more complex. For example in households with no children, mode choice is less constrained.

The socio-economic profiles classification in Table 7.2 below is based on different 'Persona' groups (see Appendix 1 for more details) in Experian's 'Mosaic', using a 'model' developed by EEH which takes account of the density of development and accessibility to jobs and services. The EEH First Mile-Last Mile (FMLM) model shows how different groups of residents could respond to various interventions. So for example people with

positive attitudes to new technology (always first to have latest gadgets) are more likely to be earlier adopters of innovative or new forms of personal travel, especially those that are digitally enabled.

The FMLM study then goes on to summarise what sort of travel interventions those different 'persona' types are more likely to respond to. As set out in Table 7.2 above, the highest proportion of 'Personas' in the more densely populated areas of Luton are in the 'urban cohesion' category, whereas in the less densely populated areas the greatest proportion 'aspiring homemakers'. Table 7.3 below therefore summarises how residents in these different areas are likely to respond to various modes of travel, including new and innovative forms of travel.

Walk	Cycle (owned)	Cycle (shared)	Personal mobility device (owned)	Personal mobility device (shared)	Car (owned)	Car (shared)	Bus	Taxi PHV	Ride-hailing
Luton (overall)									
Most dense 1									
2nd most dense 2									
3rd most dense 3									
Least dense 4									

Table 7.3: likely response to various modes of travel

Whilst the advantages and disadvantages of some of these more traditional modes of travel (walking, cycling, car driving, buses and taxis/private hire vehicles) are readily understandable, some of the newer and more innovative forms of travel such as personal mobility devices, ride-hailing (which covers a range of modes, from Uber to Demand Responsive buses), and the concepts of shared mobility, further background to which is covered in chapter 3 of the FMLM study, as supporting document to the EEH Transport Strategy.

In June 2020, in response to its approach to phased recovery from the Covid 19 pandemic, the Government also opened up the opportunity for all Councils to introduce electric scooter rental schemes, consulting local transport authorities on the legal requirements of these new forms of travel. The FMLM assessment has shown that shared personal mobility devices (e.g. cycles and scooters) are likely to be successful in Luton and, based on the outcome of trials elsewhere in England together with changes in the law to legalise use of scooters on the highway, the Council will consider their introduction in the town during the life of this LTP4.

7.2.6 Mobility hubs

The primary purpose of FMLM is to improve accessibility and connectivity for the proportionately shorter links between transport interchanges and the origin and/or destination of journeys. This clearly requires the integration of FMLM modes and mass transit (bus, coach, rail and in certain places, light rail). However, mobility networks are strengthened by the aggregation of more modes into single locations, where transport interchanges are served by a range of FMLM modes.

Mobility is further strengthened through the aggregation of modes with a wider range of traveller facilities and key economic or utility activities; this fast developing approach to improving interchange is termed a 'mobility hub'. This approach increases integration between modes providing more options for users and catering for a greater range of onward journey needs. Hubs integrate traditional and new modes as well as integrating first mile/last mile with 'middle mile' services and a range of user facilities.

Mobility hubs further enhance integration and accessibility by incorporating or being located close to a range of land uses. This approach simplifies and reduces journeys in terms of frequency and length by enabling more purposes to be catered for in each journey within a single location.

Essentially, mobility hubs are the next generation of local interchanges, often building on existing and established locations and networks, including major mass transit services, supplemented by new modes including first mile/last mile options. Building in supporting economic and utility activities will reduce local vehicle kilometres travelled through the combination of functions at a single location and simplification of journeys. These hubs, with the mixture of mobility and land use functions, can also provide a catalyst for reinvigoration of local areas and communities.

Mobility hubs are modular in concept with different components brought together, suited to the specific location. This enables the concept to be specific to different spatial typographies

including major city centres, town centres, villages, campus-style developments, parkway locations and international gateways. In most cases, the number of modes, user facilities and land uses would decrease with the reduction in accessibility of the location, with city centre hubs providing more and village hubs providing the least, however, the modular elements

at each site will need location-specific consideration.

The Dutch are leading much of the thinking around mobility hubs across Europe¹. Mobihubs are

“a transport hub on neighbourhood level, where different sustainable and shared transport modes connect with each other. A mobihub can have multiple functions but some are essential. To install a mobihub for example, it is necessary to have at least some car sharing parking spots and bicycle storage. Furthermore the hub should be near a public transport stop and easily accessible for everyone. So it's important to take into account mobility issues such as wheelchair friendliness and the safety aspects (for instance making sure it's neat and well lit). It is designed to enable and promote multimodal transport on a local level and can be tailored for different neighbourhoods.”

In addition, there are a number of conditions for the development of successful and high-quality hubs:

- Proximity to neighbourhood functions which could include cafes, flexible workspace, and public realm/open space
- Quality facilities
- Hubs are integral to wider plans for shared mobility in the authority area
- Each hub has a unique name
- The hubs have clear and visible branding.

Guidance published in November 2019 by CoMoUK sets out the five components of mobility hubs as shown in the following diagram.

Source: CoMoUK Mobility Hubs Guidance

Components of mobility hubs

Mobility hubs can be seen as an interface between the transport network and spatial structure of an area. Mobility hubs include a range of different components, This diagram illustrates some of the most commonly used components:

A1: Mobility components: Public Transport

A2: Mobility components: Non - public transport

B: Mobility related components

C: Non-mobility & Urban realm improvement

C: NON-MOBILITY & URBAN REALM IMPROVEMENT

- Package delivery lockers
- Mini fitness or play area
- Café and Co-working space
- Outdoor water fountain

A1: MOBILITY COMPONENTS - PUBLIC TRANSPORT MODES & OTHER PICK UP / DROP OFF:

- Bus
- Tram
- Rail
- Demand responsive mini-buses (all one points)
- Ride hailing, (shared) taxis

A2: MOBILITY COMPONENT: SHARED MOBILITY

- Car share: back to base, one way, electric.
- Bike share: back to base, one way, electric.
- Cargo bike share, cargo bike logistics store
- Other future micro-mobility options e.g. e-scooters, moped share
- Ride sharing



B: MOBILITY RELATED COMPONENTS

- EV car charging
- Bike parking, (Standard, covered, restricted access, EV charging)
- Bike repair, pumps
- Digital pillar, (transport info, ticketing, way finding, walk distances, local services)
- Child car seats, bike seats & trailers
- Community concierge parcel last mile delivery

C: NON-MOBILITY & URBAN REALM IMPROVEMENT

- Improved public realm, safer crossings, step free access, road repairs, adjustments for disabilities.
- Waiting area space, covered, seating, planting, artwork, kiosks for coffee etc.
- Wi-Fi, phone charging

Branded pillar

Mobility hubs require a prominent sign or pillar with a common brand to make them visible to the public. The inclusion of a digital elements in a pillar can provide:

- Access to a local transport website for information on services
- A way finding option for local walking and cycling trips
- Registration and ticketing
- A journey planning service for multi-modal trips
- Customer services.

Mobility hubs can developed in a range of contexts; they are a tool to enhance housing developments, business parks, hospital sites, transport interchanges or electric vehicle charging hubs.

There is no "one-size fits all"; tailor-made solutions need to be created for each location. Mobility hubs need to be adapted to the setting both in terms of the type of components and their scale; for example a city centre rail hub may offer more space to public transport and bike share bikes whereas a hub in a transport corridor may focus on providing a smaller number of vehicles but greater choice of flexible travel options.

In November 2020, CoMoUK published guidance on an accreditation process for setting quality standards the implementation of mobility hubs in these different locations. The following Table provides information on the different elements of a Mobility Hub is provided in the following Table; as a minimum all essential elements need to be met, but in order to meet Silver or Gold standards at least 3 or 5 desirable elements respectively need to be included in town centres or strategic transport corridors and at least 2 or 3 desirable features in other suburban locations.

Based on the above, the Councils approach will be to develop:

- strategic mobility hubs at key interchanges such as Luton Station and Luton Airport Parkway Station, as well as the proposed Park and Ride sites incorporated into strategic development sites at Butterfield and on land south of Stockwood Park.
- when strategic development sites on the periphery of Luton come forward
- as part of Central Bedfordshire’s Local Plan, then Leagrave Station will also have a role to play as a strategic mobility hub in providing access to rail services to development both north of Houghton Regis and Luton.
- neighbourhood hubs central to community facilities for example in the Whipperley Ring area of Farley Hill, Hockwell Ring, St. Dominic’s Square in Lewsey, and Futures House in Marsh Farm.

Context & considerations	A1 - Mobility components: Public transport	A2 - Mobility components: Non public transport	B - Mobility related components	C - Non-mobility & Urban realm improvement
<p>Large interchanges / City hubs</p> <p>(Larger multi-purpose or a network of smaller mobility hubs).</p> <p>High passenger numbers for starting / ending journeys / transferring between modes.</p> <p>Potential to convert private car and taxi trips to sustainable modes by raising the profile and improving links. Space may be limited meaning there may be a need to focus on priority sustainable, efficient modes and links to last mile modes.</p>	<ul style="list-style-type: none"> • National & regional rail • Tram • Local bus • Taxi 	<ul style="list-style-type: none"> • Car club bay • electric & conventional • Bike share • electric & conventional 	<ul style="list-style-type: none"> • Large scale cycle parking • Digital pillar, (transport into ticketing, way finding, walk distances, local services). • EV charging bays 	<ul style="list-style-type: none"> • Covered waiting area • Improved public realm, safer crossing, road or pavement repairs • Parklet or community art • Kiosk for refreshments
<p>Transport corridor, smaller interchanges / Linking hubs</p> <p>Focus on services which link residents in surrounding areas to core network services.</p> <p>An opportunity to offer greater choice to people for first and last trips.</p>	<ul style="list-style-type: none"> • Regional rail or tram • Local bus • DRT feeder service 	<ul style="list-style-type: none"> • Back to base car club bay with choice of van / estate car • Bike share • - electric & conventional • E-cargo bike • share / trailers 	<ul style="list-style-type: none"> • Secure cycle parking for connecting travellers • Digital pillar, (transport info ticketing, way finding, walk distances, local services). • Freight logistics hub • EV charging bays 	<ul style="list-style-type: none"> • Covered waiting area • Safer crossing & street repairs • Package delivery lockers • Wi-Fi/phone charging • Play equipment • Kiosk for refreshments
<p>Business park / new housing development hubs</p> <p>High density of users. A need to offer commuting links and back to base solutions.</p>	<ul style="list-style-type: none"> • Regional rail or tram • Local bus • DRT feeder service 	<ul style="list-style-type: none"> • Back to base car club bay with choice of van / estate car • One-way, shuttle or back to base bike share • E-cargo bike • share / trailers 	<ul style="list-style-type: none"> • Secure cycle parking • Digital pillar, (transport info ticketing, way finding, walk distances, local services). 	<ul style="list-style-type: none"> • Covered waiting area • Improved public realm • Art / planting / play equipment • Package delivery lockers

Table 7.4: Facilities at strategic, major corridor and local mobility hubs

	Choice of sustainable modes	Visibility and Accessibility	Ease of switch modes	Safety	Practical Facilities	Visual, social and community appeal
Large Interchange/ Town Centre Hub	<u>Essential</u> <ul style="list-style-type: none"> • 2 or more high quality public transport options • 1 high quality shared mobility option • Scale of cycle parking appropriate for location <u>Desirable</u> <ul style="list-style-type: none"> • Space to increase range and scale of services • Public transport • On demand buses, taxi/ private hire • Shared mobility (e.g. car club bays, Bike share) • Infrastructure (e.g. EV charging bays/cycle parking) • Plans for network of hubs 	<u>Essential</u> <ul style="list-style-type: none"> • Clear signage with network branded totem • Information on facilities at hub site and local community • Located in prominent, well-lit location • Safer crossing, pavement repairs • Disabled access, no blockages • Safe cycle routes <u>Desirable</u> <ul style="list-style-type: none"> • Consideration for people with hidden disabilities 	<u>Essential</u> <ul style="list-style-type: none"> • Co-located or within way-marked 2 min walk • Real time transport information • Easily accessible transport timetable • Simple ticket purchase options • Staff support <u>Desirable</u> <ul style="list-style-type: none"> • Digital pillar(transport info, ticketing, wayfinding, walk distances, local services) • Immediate co-location • MaaS digital integration • Local tourism information 	<u>Essential</u> <ul style="list-style-type: none"> • Street lighting • No hidden areas around the hub • Staffing in core hours <u>Desirable</u> <ul style="list-style-type: none"> • Staffing 24/7 • CCTV 	<u>Essential</u> <ul style="list-style-type: none"> • Indoor heated shelter • Toilets <u>Desirable</u> <ul style="list-style-type: none"> • Wi-Fi / phone charging • Kiosk for refreshments • Water fountain • Bike pump/repair stand • Package delivery lockers • Freight consolidation 	<u>Essential</u> <ul style="list-style-type: none"> • Modern clean infrastructure • Community consultation <u>Desirable</u> <ul style="list-style-type: none"> • Visual (e.g. greenery/parklet/statue / art) • Environmental measures to reduce impacts & increase biodiversity • Social (e.g. notice board, play area, exercise equipment) • Community (e.g. retail or café with seating, edible garden, community art, shared books) • Potential for human interaction • Shared workspace
Corridor Hub	Same as for Large Interchange/ Town Centre Hub but only need 1 high quality public transport option	Same as for Large Interchange/ Town Centre Hub	Same as for Large Interchange/ Town Centre Hub but staff support moved to 'Desirable'	Same as for Large Interchange/ Town Centre Hub but core hours staffing can be by intercom	Same as for Large Interchange/ Town Centre Hub but only need covered shelter and toilets moved to 'Desirable'	Same as for Large Interchange/ Town Centre Hub
Business Park/ new housing	Same as for Large Interchange/ Town Centre Hub but add: <ul style="list-style-type: none"> • Shared fleet for business use • Back-to-base car/van with dedicated bay • E cargo bike share 	Same as for Large Interchange/ Town Centre Hub	Same as for Large Interchange/ Town Centre Hub but staff support moved to 'Desirable'	Same as for Large Interchange/ Town Centre Hub but core hours staffing can be by intercom	Same as for Large Interchange/ Town Centre Hub but only need covered shelter and toilets moved to 'Desirable'	Same as for Large Interchange/ Town Centre Hub
Suburban Hub	Same as for Large Interchange/ Town Centre Hub but add: <ul style="list-style-type: none"> • Back-to-base car club 	Same as for Large Interchange/ Town Centre Hub	Same as for Large Interchange/ Town Centre Hub but staff support moved to 'Desirable'	Same as for Large Interchange/ Town Centre Hub but core hours staffing can be by intercom	Same as for Large Interchange/ Town Centre Hub but only need covered shelter and toilets not required	Same as for Large Interchange/ Town Centre Hub

7.2.7 Changing trends in mobility

The availability of superfast Broadband in recent years, combined with the increased use of Apps using mobile technology, makes it easier to book and pay for travel. Mobility-as-a-Service (MaaS) is a generic term that describes a shift away from personally owned modes of transport towards mobility solutions that are consumed as a service. At the core of MaaS is a system that delivers multi-modal transport choices through seamless integrated journey planning information, ticketing and payment systems. This is enabled by combining transport services from public and private transport providers through a unified gateway that creates and manages the trip, which users can pay for with a single account. Users can pay per trip or a monthly fee for a limited distance.

A range of applications are being developed mainly by private sector companies that can be used to encourage modal shift, which can include applications such as “dock-less” cycle share schemes, demand responsive public transport such as Uber. The common thread of all such applications is their use of Mobile Networks

for booking and payment of journeys. Such applications are starting to increase the volume of often continuously monitored and complex information, together with the analytical methods applied to such data which require advanced techniques and technologies in order to derive meaningful information and insights in real time.

However it is also important for the Council to disseminate information about conditions on the transport network. In 2019 the Hertfordshire and Bedfordshire Air Quality Partnership commissioned Ricardo to provide a text messaging service to residents (particularly those suffering with breathing difficulties such as asthma and COPD) about air quality in the town. The Council also provides information on roadworks to local residents through fixed and variable message signs and letters to the local community. Traffic signals around the town are also a source of considerable information but more can be done, such as:

- introducing an Urban Traffic Management and Control (UTMC) system to manage the traffic on the road network in the most efficient way, which provides information on



travel conditions on the highway network. Linking signal settings at adjacent junctions can further enhance UTMC so that groups of vehicles travel at optimal speeds, avoiding heavy acceleration and braking, avoiding 'wear and tear' on both vehicles and the road surface, which is one of the causes of 'particulate matter'.

- developing a UTMC control centre that will receive information from a variety of sources about travel conditions on the public transport and highway networks in and around the conurbation. This information will be used to adjust the traffic signal timings at junctions along key corridors to allow traffic to move more freely where congestion occurs.
- co-ordinating information for the travelling public about journey times and routes, ensuring that information is disseminated by a variety of means at all stages of a journey (e.g. radio, internet and mobile phone messages, together with bus real time passenger information and static/variable message signs for road users).



Funding and implementation of strategic projects



8.1 Background

A full list of those interventions to be implemented each year is set out in the Work Programme for Integrated Transport, Highway Maintenance and Street Lighting, which is reviewed annually and reported to the Council's Executive in late January/early February each year. Many of those interventions delivered at a local neighbourhood level are funded principally through the Government's Integrated Transport and Highway Maintenance grant payments that are received each year.

This chapter focusses on those more strategic and conurbation-wide transport projects that are essential to support the decarbonisation of transport in the town. The main priorities at the strategic/conurbation-wide level are to improve connectivity between Luton and Dunstable/Houghton Regis and between the north and east of Luton and the town centre. The Council has previously submitted bids for a government contribution from transport-related funds, and will continue to do so in future.

This includes infrastructure necessary to support the delivery of planned developments in particular the Strategic Allocation sites identified in the Council's adopted Local Plan and emerging proposals, together with those sites on the periphery of Luton identified in the development plans of neighbouring authorities in Central Bedfordshire and North Hertfordshire. We will also continue to negotiate with developers for an appropriate Section 106 agreement to implement traffic schemes to mitigate the effects of their development and to provide the infrastructure necessary to ensure that their development is well-served by sustainable transport.

The timing of the implementation of some of these strategic transport schemes will depend on timescales of planned development of the area. For example, in mid-2019 Central Bedfordshire Council formally published proposals for the M1-A6 link, the planning application for which was approved in March February 2020.

The implementation of travel plans for major development sites in or adjacent to Luton, combined with other schemes and initiatives to encourage greater use of public transport, walking and cycling, will both reduce carbon emissions and improve the environment. Recent studies into Sustainable Travel Towns and other Active Travel initiatives in partnership with Sustrans have shown that travel planning initiatives can reduce car use by about 10%, and increase walking, cycling and public transport use. We will work in partnership with local bus and train operators, and Luton's Public Health team and other partners to deliver a range of initiatives.

8.2 Decarbonising Transport

Given the compact nature of Luton and the relatively short length of many journeys to work as set out in Chapter 2, one of the greatest opportunities for decarbonising transport is to encourage more walking and cycling, which benefits not only the environment but also the health and wellbeing of our communities. For those vehicles that remain on the road network, the greater use of zero or low-emission vehicles will also contribute to reducing carbon dioxide and improving air quality. As the uptake of electric cars and vans in Luton increases, it will be essential to provide more publically available charging points, particularly in the town centre and surrounding communities where there are limited opportunities for off-road parking. Progress also needs to be made in decarbonising bus-based public transport and movement of goods. The remainder of this section sets out the issues and costs associated with decarbonising existing travel.

Encouraging more walking and cycling for local trips

The Council is developing a Local Cycling and Walking Infrastructure Plan (LCWIP) that complements the Local Transport Plan. The LCWIP proposes an additional link on its core network connecting Sustrans National Cycle Routes NCN6 and NCN606 in a corridor just west of and parallel to the M1 motorway, together with around 20 cycling schemes on its secondary cycle

network to key destinations including the Luton & Dunstable Hospital, Luton's three railway stations, Luton town and neighbourhood shops, other key employment sites, the main leisure facilities and libraries. It also improves walking routes to the town centre from the surrounding residential areas and in particular improves crossings of the ring road around the town centre, which in many places is a significant barrier to cycle and pedestrian movements into the town centre from surrounding communities. The total estimated value of these walking and cycling improvements is about £32m.

In order to encourage more walking and cycling, it is necessary to not only improve the cycling and walking network, but also to provide secure cycle parking at key destinations. We will work with the train operator Govia Thameslink Railway, employers and the Luton & Dunstable Hospital to improve secure cycle parking and, in the case of key employers and the hospital, to provide changing rooms and showers.

One of the reasons that people are discouraged from cycling and walking is because of personal safety concerns. We will therefore seek to improve lighting along these routes, and also alongside roads, converting street lighting to more energy efficient street lighting.

For some journeys, such as travel to school, those personal concerns relate to safety concerns around schools. We will therefore introduce Traffic Exclusion Zones around all schools, starting with 3 schools in 2021-22 at a cost of around £100,000. However given there are around 90 schools in Luton, for such measures to contribute to achieving net zero carbon emissions in the town in the next 20 years, additional funding is required to accelerate this programme.

In accordance with the Council's priorities for managing the transport network set out in section 7.2.1 of the Transport Strategy, then if infrastructure or supporting interventions to encourage more sustainable travel are insufficient in reducing reliance on the car, then we will gradually introduce disincentives of private vehicle use or restrictions on use of certain classes of

vehicles. A Controlled Parking Zone has been operating in and around the town centre since 1997, and the Council already manages and enforces parking and loading/unloading in this area. However, given the relatively short distances of travel to work in the town, in 2019 the Council undertook a feasibility study into introducing a Workplace Parking Levy (WPL) in Luton.

Improving provision of electric charging points

Over the last three years the number of electric cars and vans in Luton has increased by 360% compared to about a 290% increase in Great Britain. There are only 53 charging points available for public use in Luton, and, based on the number of grants awarded by OLEV, there were 159 domestic chargepoints in Luton.

The rest of the town does not have publicly accessible charging points, which may contribute to the low uptake levels. As part of a local consultation on electric vehicles in 2018-19, a number of residents expressed concern about the lack of charging infrastructure in Luton especially on streets where off street parking is unavailable. We are therefore exploring the opportunities for suitable charging infrastructure in these areas.

The main areas of Luton where dwellings do not have off-street parking are in much of the Bury Park, Saints, Dallow, High Town and South Wards adjacent to the town centre. These Wards also represent those where the proportion of car ownership tends to be lower; interrogating the ProjectView database shows that in 2011 only an eighth of the total cars/vans licenced in Luton were owned by households in these five 'inner' Wards. Taking car/van licencing trends between 2011 and 2018, and extrapolating these to 2040, and assuming the proportion for the 'inner wards' and the Luton total remains the same, means that by 2040, there could be about 16000 vehicles licenced in these 'inner wards'. Assuming these would all be EV's, could require up to 8000 on-street charging points to be installed by 2040, equivalent to 400 charging points a year.

Decarbonising bus services

The Luton Town Centre Air Quality Action Plan includes an action to convert all buses entering the town centre AQMA to zero or low emission vehicles. Currently almost 70% of the 137 buses that operate services in or to from the town centre are Euro5/6 diesel engine buses (the NO₂ limits for which are 2ug/m³). The Confederation for Passenger Transport, which represents the views of many bus operators, has an aim of all new buses being zero- emission by 2025. In addition to seeking Government funding, a Section 106 contribution will be sought for improving nearby bus services from all major development sites.

In February 2020, the Government announced both a pilot of an electric bus town and £5billion of funding for operators to purchase electric buses over the next five years. There are a total of 137 buses operating services either within Luton or interurban services with one end of their journey in the town.

The total cost of converting these to electric buses is anticipated to cost around £45m, together with £1m for the supply and installation of charging units at the depots where these buses are garaged. In addition it will be necessary to increase power supply at the Arriva bus depot in Dunstable Road and the Centrebus depot at Bilton Way, at a cost of around £2m.

Decarbonising the Council's fleet

In Autumn 2018 the Council commissioned the Energy Savings Trust to undertake a review of its fleet and vehicles used by staff. The main results of that study were:

- Only 30% of Luton's fleet comply with minimum requirements of Euro4 (petrol) and Euro6/VI (diesel), with Luton's commercial vehicle fleet being the most utilised and non-compliant.
- A total of 1171 staff use their cars (known as 'grey fleet') to travel almost a million miles a year, producing almost 300 tonnes of CO₂.
- Improving the energy efficiency of 'grey fleet' has the potential for savings more than £118,000 by introducing a travel hierarchy,

better management of mileage, and greater use of car club and rental cars/vans.

The Council's commercial vehicle fleet comprises about 300 vehicles with high levels of usage, of which almost half (130) are vans used by the Building and Technical Services (BTS) team who maintain all buildings in the Council's estate including Council offices, schools, community centres and Council accommodation. The cost of installing charge points at the Council depot would be about £400,000, although this excludes charge points for the BTS vans that are kept at the driver's home and would require additional home charging units. Whilst the annual fuel and maintenance savings of converting the fleet to electric vehicles are about £10,000- £15,000 per vehicle, the cost of converting the Council's entire fleet to electric operation is likely to be substantial. The cost of purchasing electric vans to replace the BTS fleet is around £7.5m. Given the cost of replacing the Council's commercial fleet to electric vehicles is prohibitively expensive at the moment, our Transport Manager is currently considering the use of alternative fuels such as hydrogenated vegetable oils or gas-to liquid conversions as interim measures to reduce carbon emissions.

8.3 Strategic infrastructure to support planned developments

The adopted Luton Local Plan provides for around 17000 new jobs by 2031 and 8500 new homes over the same period. The overall requirement however is 17,800 homes during this period and as a result, under the 'Duty to Co-operate', both Central Bedfordshire Council and North Hertfordshire

District Council are required to meet some of Luton's shortfall in dwellings at sites north of Houghton Regis/Luton and East of Luton.

There are currently three proposals for new urban extensions on the borough boundary which will also have an impact on Luton's transport network together with the other six strategic sites in Luton identified within the town. The sites are North Houghton Regis and North of Luton in the Central Bedfordshire emerging Local Plan and Land East of Luton in the emerging North Hertfordshire Plan.

Sites in Luton include Century Park employment site, Butterfield Technology Park, Newlands Park, Power Court and Napier Park/Bartlett Square off Kimpton Road.

The remainder of this section summarises the key infrastructure relating to these development sites. Detailed development of these schemes, including all of the necessary Statutory highway and planning procedures (including a full Environmental Assessment) will be undertaken as each of these individual schemes (and, where relevant, any related planned development) are progressed.

Developments adjacent to and on the periphery of Luton, in transport terms should be self-contained and not add significantly to journeys by car. The focus on sustainable travel will in part be about improving the connectivity of these sites into the cycling and walking networks in the town. In line with recent Government Policy changes, these major schemes will incorporate appropriate cycling/ walking measures and also those to address the needs of public transport users. This will include consideration of bus priority measures such as enforced bus lanes, signal and junction priority, bus feeder lanes and/or bus gates.

The remainder of this section summarises the main transport infrastructure that is required to support the various planned development sites in and around Luton.

Sustainable Urban Extensions north of Houghton Regis and Luton

The layout of these development sites need to integrate with existing walking and cycling networks both within the towns and extending out into the countryside beyond. The proposed developments in Houghton Regis will also provide opportunities to improve bus services to connect to the Luton Dunstable Busway either at Skimpot Road or Chaul End Lane, and similarly, bus services will be provided to serve the north of Luton development. We will work in partnership with Central Bedfordshire Council and the developer through the planning

process, which are expected to deliver a range of interventions to maximise the opportunities for sustainable travel from these sites, including improved connectivity to Leagrave railway station in a pivotal location between these two development sites.

Improving Luton railway station

Luton railway station is located on the north eastern side of the town centre and lies on the edge of the 'Station Gateway, part of the Creative Quarter strategic allocation site identified in the Luton Local Plan. The station was identified in a 2010 study as one of the ten worst rail stations in England, with very poor access to station platforms for mobility impaired passengers; the general fabric of the station has continued to deteriorate since then despite significant improvements of its surrounding areas. The Council has secured 'Access for All' funding from the DfT to provide lifts and stairs to all platforms, although there is further potential for wider improvements of the station building and its surrounding area at a total cost of around £55m.

Park and Ride

Two of the strategic development sites in the Luton Local Plan, Butterfield and land south of Stockwood Park (respectively on the east and south periphery of the town), include a requirement for Park & Ride sites to be provided as part of the development of those sites.

In 2016 Luton Borough Council appointed consultants ITP to undertake a feasibility study of the potential demand for the two Park and Ride sites and to identify bus priority measures on the routes between those sites and the town centre shown in **Figure 8.1**.

The ITP study indicated daily demand of 290 cars at the Butterfield P&R site and 320 cars on the land south of Stockwood Park. Taking account of forecast growth they proposed that initially 400 spaces are provided at each site. The cost of providing the park and ride facilities at each site has been estimated at £2m per site, with the cost of operating services to the town centre covered by parking revenue. The bus route uses the

northern section of Vauxhall Way; the dualling of which could accommodate priority lanes for buses and car sharing. Each service is expected to result in up to a 2 minute journey time improvement to the town centre. Initial work based on the comparative annual demand of each site with the

Hoole Road site at Chester (near the M56) shows a Benefit Cost Ratio of around 1.02. However the provision of First Mile - Last Mile travel options (see section 7.2.6) at these Park and Ride sites will improve the financial case.

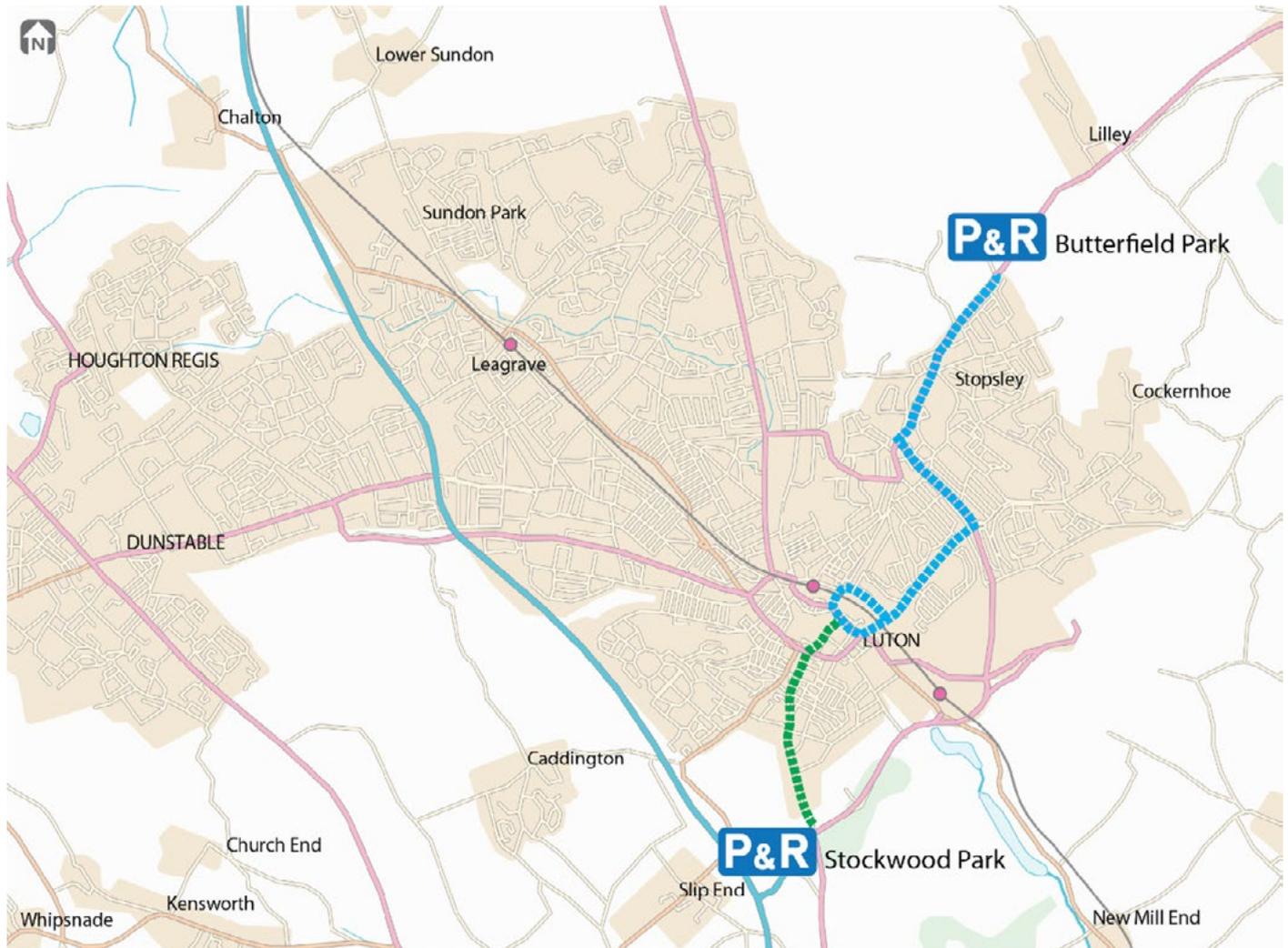


Figure 8.1 Park & Ride sites and proposed bus priority measures

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Direct Airport to Rail Transport system

The shuttle bus between Luton Airport Parkway Station and the airport terminal will be replaced by a direct fixed link transit between Luton Airport Parkway Station and the airport terminal in late 2021. A planning application for the proposed system was submitted to the Council in February 2017 and approved in July 2018. The transit system provider and civil engineering contractor have been appointed and construction is due to be completed this year, with the system being operational in late 2021.

Highway improvements in the south and east of Luton

Between August 2017 and August 2018, consultants Arup undertook a study of existing transport conditions in the east and south of the town, covering an area between the Hertfordshire boundary and the east side of the town centre.

Many of the strategic development sites in Luton are located in this area, as indicated in Figure 4.1. The East Luton study report indicated that junction and other capacity improvements would be required principally in two corridors, the Gipsy Lane/Windmill Road corridor and the Vauxhall Way/Hitchin Road corridor.

The Council will continue to seek contributions from developments in the Gipsy Lane/Windmill Road corridor. The improvement of junctions in the Vauxhall Way corridor commenced in early 2020, following community consultation the previous autumn on the concept designs for the four junctions along its length, along with the on-line dualling of Vauxhall Way including a footway/cycleway along its entire length that forms the spine of improved pedestrian and cycle infrastructure in the east of Luton. Following signalisation of the Vauxhall Way/Hitchin Road/Stopsley Way junction which includes improved crossing facilities for pedestrians and cyclists, the intention is to continue southward down Vauxhall Way, next improving the Crawley Green Road junction and dualling the section between these junctions. The latest cost estimate of these further improvements in the Vauxhall Way corridor is £27.7m, and the Council is seeking a contribution towards these costs through Government funding of schemes on the Major Road Network.

Access to the Century Park employment site

The Luton Local Plan incorporates proposals for employment land north-east of Luton airport. The Council has worked in partnership with both LLAL (who own the site) and London Luton Airport Operations Limited (LLAOL) to develop the site and access to it. In March 2019 the Council approved a Planning Application for the Century Park Access Road (CPAR), construction of phase 1 of which is reliant on the acquisition of the Eden Farms site which is anticipated will be completed in early Spring 2021. CPAR phase 2 is dependent on the detailed design of the Century Park site progressing and the Council will continue to work with both LLAL and LLAOL to develop the site. The total cost of both phases is around £185m, but with significant benefits (£358.9m) anticipated mainly comprising the Gross Value Added given the scale of employment on the site.

Luton Northern Bypass

Central Bedfordshire Council have been progressing a new Local Plan which proposes growth to the north of Luton. The long-standing ambition for a northern bypass has taken a step forward when in March 2020 the Council approved a planning application for that scheme. Luton has expressed its concern about the impact of the scheme given the lack of a proposal to continue the link to the A505. However, as the road is likely to be built it is imperative that the authorities work together to identify interventions to mitigate the impacts in particular on the New Bedford Road corridor into Luton, at the time of writing the strategic housing allocation is still subject of consideration through Central Bedfordshire's Local Plan Inquiry. Given that the A505 is part of the DfT's Major Road Network, Luton Council is collaborating with Central Bedfordshire Council, Hertfordshire County Council and North Hertfordshire District Council in a study of the section of the A505 between Leighton Linlade and Royston that is examining the opportunity for further travel improvements in this corridor. Should proposals for the A6-A505 section of Luton Northern Bypass come forward in the future they will need to take into consideration environmental concerns and if necessary mitigate any impacts.

LTP Part 2

Transport Policies



Background



This part of the Local Transport Plan sets out the Council's Policies arranged around two public health based themes; supporting a healthy environment (Chapter 10) and safer and inclusive communities (Chapter 11). Each of the sections in the next two chapters are based around the following structure:

- background context, in particular the current situation and any Statutory Duties enshrined in UK law,
- our local policy, together with examples of how this will be applied, and
- the desired outcomes, including any monitoring indicators to demonstrate progress in achieving this (see Appendix 3).

To deliver interventions that meet these policies we will continue to build on our current partnership working arrangements to ensure close co-operation with key partner agencies, such as:

- with Bedfordshire Police for safety and security related policy areas
- to improve more sustainable access to local services working with Sustrans, public transport operators, and commercial organisations
- with Central Bedfordshire, Hertfordshire County and North Hertfordshire District Councils to ensure a consistent approach on scheme design and implementation

We will also build on our experience of partnership working to provide greater input to the efforts of local community groups, helping them to deliver their local priorities by providing them with support and resources to tackle their local issues and improve their local areas.

The Council is also required by EU Directive (2001/42/EC) to undertake an environmental assessment of all plans and strategies that are likely to have significant environmental implications. The Department for Transport's guidance sets out the relationship between the various stages of the LTP and the Strategic Environmental Assessment (SEA) of that Plan. The independent SEA undertaken by Small Fish

should therefore be read in conjunction with these policies.

In order to demonstrate how sustainable transport-related initiatives can contribute to achieving a healthier environment in Luton, Chapter 10 refers to policies that will both reduce carbon emissions consistent with the user needs priorities in section 7.2.1 of the Transport Strategy including:

- infrastructure to encourage alternatives to private vehicle use,
- "softer" measures to promote increased use of sustainable travel, and providing information about travel conditions on the network, and
- Managing demand for travel by motor vehicles.

Chapter 11 is based around the themes of safer and more inclusive communities. Road safety continues to be a concern nationally and locally, in spite of considerable progress having been made in reducing Road Traffic Collisions. The main thrust will be to get vehicles to move at speeds appropriate to road conditions in the local area. Lower traffic speeds significantly reduce casualties, especially amongst vulnerable groups in particular pedestrians, cyclists and motorcyclists should also improve how safe the streets feel. As this type of measure addresses actual as well as perceived road safety, it will be an important element of road safety policies over the period of this plan.

These impact on a range of wider policy areas, especially health, and the relative levels of road safety are important factors in people's choice of mode of transport. Walkers and cyclists are more vulnerable to injury than vehicle occupants if they are involved in collisions and the perception that roads are more dangerous than they actually are is a significant barrier to getting more people to use more sustainable modes of travel. This perception may be to do with the numbers of non-injury collisions, which are not taken into account because there is no Duty to report them and there is no accurate database. Personal security, or crime and the fear of crime, when walking, cycling or using public transport, is a major concern for many



people, particularly at night, and especially certain groups in our community such as women and those from ethnic minorities.

Evidence from the Social Exclusion Unit (2003) has also shown that improving local networks, accessibility and walking and cycling trips could contribute to tackling issues of poverty. This is because the poorest fifth of households who own cars are likely to spend up to 25% of their income on the cost of motoring. Furthermore, the importance of high levels of accessibility to key services and products has wider implications for delivering improvements in general health conditions such as coronary vascular disease, obesity and diabetes. This is considered in Section 11.4 on access to services. To a degree the 2003 evidence base report has been supplemented by Government's bi-annual Social Attitudes survey, although these do not go into the same degree of detail in relation to differences of age, gender etc.

Improving accessibility so that people can get to where they need to is a critical social need. Access to services and employment is an essential component of a properly functioning society, enabling people to realise their aspirations or ambitions by gaining access to work, training or education, and ensuring that people are able to lead healthy lifestyles through access to healthcare, healthy food and leisure activities.

From an equality of opportunity perspective, many people find it easier than others to get access to services, mainly those with a car compared to those without, and this can lead to social exclusion for members of non-car owning households. Furthermore, accessibility is more of an issue for some groups of people such as the old, the young and the unemployed.



**Supporting
a healthy
environment**

10

10.1 Shared mobility

Mobility-as-a-Service (MaaS) is a generic term that describes a shift away from personally owned modes of transport towards mobility solutions that are consumed as a service, and often shared with other users. A range of applications are being developed mainly by private sector companies that can be used to encourage modal shift, such as “dock-less” cycle share schemes, demand responsive public transport and Uber.

The common thread of all such applications is their use of Mobile Networks for booking and payment of journeys. The Luton area is well placed to benefit from improved digital connectivity because almost 93% of properties have access to superfast broadband which operates at speeds >100 MB/sec.

Whilst not a panacea to transport challenges, MaaS can support our aims and goals in many delivery areas by helping to:

- Improve access to jobs and employment
- Reduce congestion, air pollution and CO₂
- Reduce the cost of travel to citizens
- Improve the utilisation of existing assets
- Stimulate active and low impact travel choices
- Reduce the cost of home-school transport and home-hospital transport
- Encourage competition and create employment
- Address political sensitivities around reduction in bus subsidy

Policy 1: Shared mobility and Mobility as a Service

We will work with developers and other partners to gradually introduce and actively promote a range of initiatives to encourage ‘shared transport’, including:

- Bike and electric scooter share schemes;
- Demand Responsive public transport;
- Car sharing as part of employee and school travel plans;
- Car clubs in residential areas.

However in the light of the Covid19 pandemic, for shared mobility to establish itself as part of the transport mix in the short to medium term, any operators will need to demonstrate to the Council’s satisfaction that they have adequate measures in place to ensure high levels of cleanliness and personal protection of users. Further information on potential applications within the town are considered in the remainder of this chapter.

10.2 Alternatives to private vehicle use: walking and cycling

The Government recognises the importance of Active Travel and integrating physical activity, specifically walking and cycling into resident’s everyday lives, with benefits which are more likely to be long term and sustainable. The DfT’s Cycling and Walking Investment Strategy published in April 2017 aimed to double levels of cycling between 2013 and 2025 and to reverse the decline in walking. At the same time they also published technical guidance for producing Local Cycling and Walking Infrastructure Plans (LCWIPs) which, whilst there is no mandatory requirement to produce, these set out a strategic approach to identifying cycling and walking network improvements in order to increase the number of trips made on foot or by cycle.

On 28th July 2020, the Prime Minister announced the Government's bolder vision 'Gear Change', to encourage more people to cycle or walk for local trips. This was supported by new design standards for cycle routes which identified that for all roads with a speed limit of 20 or 30 mph, the standard should be for physically segregated cycle tracks.

Luton's draft LCWIP sets out a dedicated programme of network and junction improvements for both cyclists and pedestrians. It also takes account of the new design standards, but recognises the challenge will be how to achieve physically segregated routes in those older areas of Luton where streets are often narrow. As part of our continual review of travel movement, throughout the life of this LTP4, to improve the safety of cycling in Luton we will seek to provide additional one-way systems with the appropriate traffic calming measures.

Active travel initiatives are often more accessible and cost effective than other exercise and leisure pursuits; a significant factor given Luton's socio-economic population mix. Provision of a high quality walking and cycling network will contribute to improved personal safety of vulnerable people such as women and young people, to community cohesion, improved health and wellbeing and

to sustainable communities. Recent studies into sustainable Travel towns and other Active Travel initiatives in partnership with Sustrans has shown that the improvement of walking and cycling infrastructure together with supporting initiatives can increase active travel and reduce health inequalities. Research undertaken by NICE has indicated that providing safer routes to nearby parks, recreation sites and other local community facilities can encourage a more active lifestyle, particularly for children and young adults.

As set out in Appendix 7 of the Luton Local Plan, developers of new housing, employment and commercial sites will be expected to undertake a transport appraisal and, in particular for Strategic Allocation sites and schools, prepare a Travel Plan that demonstrates measures will be put in place to maximise the opportunities for sustainable travel,

in particular walking and cycling, helping to reduce the tendency for people to make relatively short journeys by car.

As shown in Figure 10.1 overleaf, the National Cycle Network (NCN) Route 6 runs through the conurbation close to the River Lea and, combined with the route alongside the Busway, provides a "spine" from which to expand the core cycle and walking network, taking advantage of the unique position of Luton town centre as a focus of sustainable travel networks both within Luton and the wider conurbation. Following improvement to the surfacing and signing of the access track alongside the Luton Dunstable Busway in 2015-16, that now forms part of the newly designated NCN Route 606. The Propensity to Cycle Tool indicates that the area between NCN606 and the New Bedford Road/Old Bedford Road corridor and Luton town centre is the area where there is greatest opportunity to increase cycling. The Council is also planning to implement a further strategic cycle route connecting route NCN606 at the Stanton Road stop on the busway with NCN6 on Kestrel Way just west of the M1.

As set out in Luton's draft LCWIP, we are also planning to upgrade existing cycle routes and to implement new routes, which are also shown in **Figure 10.1** overleaf, which connect the strategic network to the town centre, rail stations and other key local facilities. Within these local communities we have introduced many 20mph zones (see Figure 11.1) which aims to improve pedestrian and cyclist safety, especially by reducing road traffic casualties. Where 20mph zones have already been implemented, it is the premise that pedestrians and cyclists will generally not need dedicated routes as they will be relatively safe travelling on any such roads given the low traffic speeds. However as set out in the Council's Road Safety Plan for the next 5 years, it is planned that the speed limit on all roads in residential areas will be restricted to 20mph.

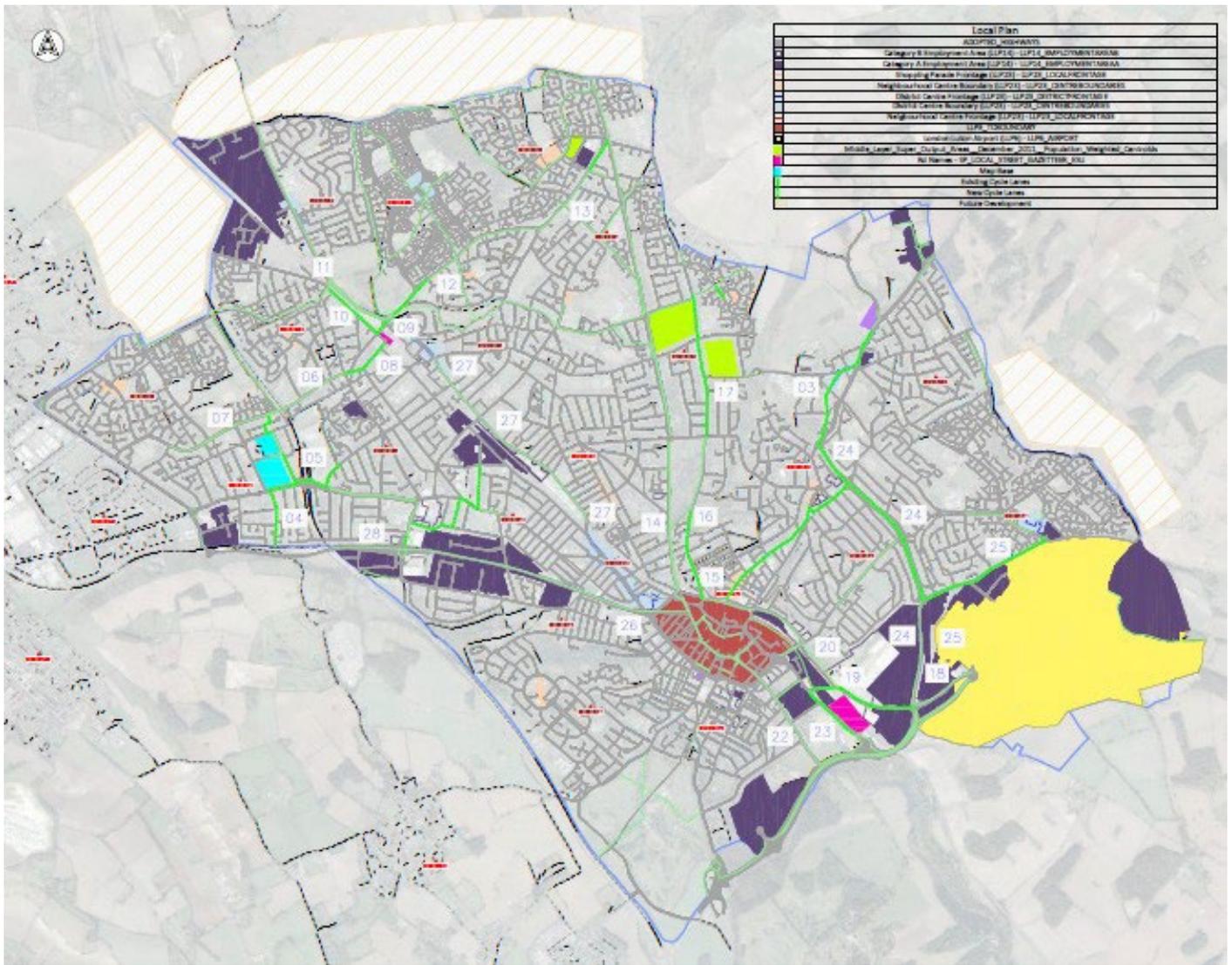


Figure 10.1 Existing and proposed cycle routes in and around Luton

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Policy 2: Walking and Cycling

We will continue to implement a high quality, direct, convenient and safe cycle and pedestrian network of both on- and off-road routes, with priority in areas where:

- Access to key local services by bicycle is above average for Luton in terms of distance but where safe routes are needed to take advantage of this;
- The terrain is relatively flat and cycleable;
- Efforts are being focused on reducing congestion through modal shift for peak time journeys to work and school, including towards more walking and cycling;
- Evidence states that low levels of physical activity are leading to levels of child obesity that exceed the national average;
- There are high levels of deprivation, especially health deprivation; or
- High levels of housing or employment growth are being planned.

The Council will implement this policy by continuing to develop and implement initiatives in partnership with key partners including:

Evaluating pedestrian and cycle routes for safety, security, ease and attractiveness of use, and target programmes for improvement to give continuous routes;

- Working with developers to fund improvements to the walking and cycling networks between their sites and Luton Town Centre and/or neighbourhood centres;
- improving walking and cycling networks connecting residential areas with key employment areas and rail stations;
- integrating cycling and walking into other traffic and transport schemes wherever possible, to improve safety and provide greater priority for these modes;
- implementing other improvements that aid

safe walking and cycling as opportunities

- arise, facilitating better access to work, further education, shops and other local community facilities;
- providing a high quality walking and cycling network that will contribute to improved personal safety of vulnerable people such as women and young people, to community
- cohesion, improved health and wellbeing and to sustainable communities;
- providing appropriate crossing facilities to meet the needs of all users, in particular disabled and mobility impaired people; and
- continuing to develop an exercise-based GP referral system, which will include encouragement to walk and cycle more.

The inclusion of footway/ pathway maintenance interventions will take into account whether or not it is part of the strategic walking and cycling network. In particular, core walking and strategic cycling routes into the town centre will be included under our maintenance and street lighting programmes to ensure they are of the highest quality and do not deter residents from choosing to travel this way. We will free these routes from unappealing street furniture and excessive signage to make them more pleasant for users.

To complement the routes we will work with various partners to provide high quality facilities for cyclists at destinations. In particular we will:

- continue with our programme to install cycle parking in the town's parks, at further education colleges, and in employment areas;
- continue the programme of installing secure cycle parking facilities at all the Borough's schools
- work with the rail industry to provide adequate and secure cycle parking facilities at each of Luton's three stations;
- use the planning process to ensure plans for major developments include facilities for secure cycle storage and infrastructure for cycle use.

We will also investigate the potential to introduce a Cycle share scheme in Luton; these comprise either fixed 'docking stations' similar to that operated in London and Milton Keynes or a 'dockless' system where bikes are just left on-street. Having considered these alternatives, the Councils preference is for a 'docking' system. A study by Beate Kubitz (<https://static1.squarespace.com/static/57535cc1b09f95345f7e8fa7/t/5c0fa3ae758d46ceef9d856e/1544528833961Cardiff+City+Bike+Share%3A+Narrative%2C+network+and+nextbike+Beate+Kubitz+2018.pdf>) that compares a scheme in Cardiff with those in Milton Keynes and Glasgow, together with some commentary on the Mobike scheme that was withdrawn in Manchester, concluded that the success of the Cardiff scheme was in particular due to:

- siting of docking stations based on evidence from cycling and commuting patterns;
- scheme infrastructure is highly visible;
- excellent and consistent media communication based around sound narrative;
- a high proportion (2/3) of scheme members/registrations are University students;
- registration only rentals form 56% of rentals (rest are casual users);and
- bikes and docking stations are provided by Nextbike but maintenance and re-distribution of cycles is carried out by Pedal Power (a local charity).

With regard to Public Rights of Way (such as public footpaths and bridleways), the National Parks and Access to the Countryside Act 1949 imposed a Duty on county councils to produce a definitive map and an accompanying definitive statement describing these. However section 27(1) of that Act permitted the exclusion of mapping rights of way in areas such as Luton that were "fully developed". However, under Section 53 of the Wildlife and Countryside Act 1981 the Council has a Duty to keep the definitive map and statement under review, and section 55(3) of that Act subsequently imposed a Duty upon the Council to prepare a definitive map and statement for rights of way within these 'Excluded Areas'.

The Council also has a Duty under the Countryside and Rights of Way Act 2000 to produce a Rights of Way Improvement Plan (RoWIP). Our first RoWIP was published in mid-2008 after extensive consultation in 2007/8 with key stakeholders and local residents. It is based around five key themes of existing network improvements, better promotion, improving health and wellbeing, improved safety and security, and integrating rights of way with greenspace in and around the area. These themes are retained in the latest RoWIP, which was updated in 2015/16, but focusses in particular on the role of Public Health "prescription" of active travel, progressing mapping Rights of Way in the Excluded Area (all of the town with the exception of areas to the north and east), and sets out the broad principles associated with Rights of Way and Green Infrastructure in any development to the north of the town.

Whilst there are less than 15km of Public Footpaths and Bridleways in and around Luton they are vital, in combination with other paths, both for gaining access from Luton to the surrounding countryside and improving access between surrounding villages and the town and vice versa. In this context we will seek to improve connectivity between other areas of Luton and the surrounding countryside. However, improving connectivity between Luton and the surrounding countryside would require sensitive treatment in the vicinity of historic assets such as Drays Ditches.

The key outcome relating to the application of these policies is to increase cycling and walking activity in the town, in particular as an alternative for short journeys to work. However the range of impacts anticipated from this work also includes roads becoming less congested at peak times, improved air quality, a healthier population and improved social cohesion. The Department for Transport collates information on walking and cycling activity through its National Travel Survey and the Sports England's Active Lives survey.

10.3 Alternatives to private vehicle use: public transport

The introduction of the Luton Dunstable Busway in September 2013 brought about growth in bus patronage after an 18% decline over the previous decade, along with improvements in bus punctuality.

Policy 3: Public Rights of Way

We will encourage the use of the Public Rights of Way network by:

- Wherever practicable improving existing Rights of Way that pass through the planned urban extensions and integrating them into the local walking and cycle networks;
- Ensuring that designated wildlife/conservation sites and the open countryside are accessible by a range of transport modes, unless there are over-riding conservation reasons why access should be discouraged. This will be by means of creating green corridors and bridges where appropriate to link the walking and cycle network in the town with the surrounding countryside;
- Reviewing the need for and effectiveness of gates, stiles and other barriers on existing routes to see if they can be removed, and avoid the use of these on new routes, wherever practicable.

Local bus journeys in Luton are provided commercially, resulting in the Council having no direct control over routes, time and cost. Notwithstanding that, the Council will consider, as part of its Bus Service Improvement Plan,

to undertaking a review of frequencies and punctuality, the need for bus shelters at the busiest stops, along with real-time information for all services that provides accurate, digital information at bus stops to keep travellers informed.

The adopted Luton Local Plan (2011-2031) includes proposals for Park & Ride (P&R) on two strategic employment sites in Luton, one at Butterfield Park and the other on land south of Stockwood Park.

Further information on these proposals, along with a plan showing the location of these two sites and the proposed route between them and Luton town centre is included in section 8.3 of the Transport Strategy. The development of P&R site proposals is, in part, a response to the fact that most of the smaller public off-street car parks in the High Town area, together with the Bute Street and Old Courthouse car parks in the town centre, are planned to be re-developed but are designed to reduce traffic flow and vehicle congestion in the town centre, promoting better air quality and improving health and wellbeing.

As part of the network review, consideration will be given to the introduction of Demand Responsive Transport (DRT) both to serve major employment sites such as the airport and the Luton & Dunstable hospital and, where necessary, to complement existing services. Most DRT services operate using an 'App' which the passenger indicates where they want picking up and setting down; this triggers a text to the operating system that matches the route to a particular bus. A confirmatory text is sent to the passenger 30 minutes before the journey start and a reminder is generated two minutes before pick-up time.

In October 2018 Via Van, a joint venture between Via (experts in on-demand shared transit) and Mercedes-Benz Vans, launched the fourth of its shared ride service in Milton Keynes, following on from services introduced in Amsterdam and London together with its partnership with Berlin's public transit authority (BVG). The service uses Via's sophisticated algorithm allowing passengers to seamlessly book through the Via Van app, which also dynamically routes vehicles resulting in more efficient routing.

Policy 4: Improving Public Transport

We will undertake a review of the public transport network, building upon the Luton Dunstable Busway as a key spine including:

- Identify locations through the Local Plan review and in conjunction with neighbouring Councils for strategic Mobility Hubs (including Park and Ride services) where key radial routes cross the fringe of the expanded conurbation, with bus priority routes through the urban extensions and on into the town centres
- Require new developments to facilitate good access to public transport, including where appropriate through Busway extensions
- Create local mobility hubs focussed around community facilities in suburban areas
- Facilitate better interchange between rail services and local bus services;
- Develop a range of ticketing initiatives to facilitate better integration between bus services and with trains, including multi bus operator smartcard ticketing.

Initially, Via Van operated in four areas of Milton Keynes, but in April 2019 a service was introduced covering the area between Caldecotte and Magna Park on the south east periphery. For two trips/day on these services it costs £85 for a monthly pass and £25 for a weekly one. Since launching in October 2018, these routes have carried more than 100,000 rides in Milton Keynes, and in London the number of trips recently passed the seven-million mark. The services are run on a commercial basis with no or little cost to the Council.

The key outcome relating to the application of this policy is to increase public transport use in Luton. The Department for Transport collates information on bus patronage and bus punctuality, and the Office of Road and Rail collates information on passenger numbers at rail stations.

10.4 Promoting travel alternatives

Fundamental to managing congestion at peak times and greenhouse gas emissions is investment in sustainable transport infrastructure to encourage more people to walk, cycle or use public transport for their local journeys. The benefits associated with creating additional capacity of the sustainable travel network can be further maximised through the development of “smarter choices” initiatives to influence people’s behaviour in making more sustainable travel choices through active promotion and marketing.

However the DfT’s approach to Travel Demand Management recognises that behaviour change alone is insufficient to balance the supply of and demand for using transport networks, and that measures are required to influence people to reduce their travel either by working at or closer to home, re-timing their trips, re-routing (using less busy parts of the network) or moving to less busy modes.

Recent research has shown that an increase in active travel of approximately 90 minutes per week can significantly reduce levels of absenteeism at work. The Luton Economic Recovery Plan approved by the Council in October 2020 includes measures to work with employers to adopt Travel Plans.

Further details of these and other Travel Plans are included in our Sustainable Travel Plan. The Council will work with employers in the town to encourage them to develop workplace travel plans to promote safe, sustainable and healthy travel alternatives to the private car for staff, and provide them with initiatives, facilities and travel information to encourage modal shift.

We will use the development travel plan process to secure funding of travel plan initiatives for new developments, such as hospitals, shops, homes, schools, and leisure facilities. In particular, we will encourage developers in residential areas to fund and implement “car clubs”. To ensure the successful delivery and implementation of development travel plans we will also develop an effective travel plan monitoring and enforcement regime.

The provision of office space hubs within existing and new residential areas may also encourage more flexible working arrangements for employees. In promoting the wider use of workplace travel plans, the Council will also work with local employers to promote more flexible working arrangements such as home-working and flexible working hours, together with video conferencing to encourage reduction in business travel. The Council's support for improved Broadband provision in the town will be key to facilitating this greater flexibility.

Between 2011 and 2015 the Council received around £3m in revenue and £2m in capital funding to promote sustainable travel. Around £1m was spent on personal and workplace travel planning initiatives, the outcome of which concluded that the greatest benefits accrued through Workplace engagement. A study undertaken by ParHill Research has indicated that Business Engagement can have a Benefit Cost Ratio of at least 22.

In 2017, along with Central Bedfordshire and Bedford Borough Councils, we successfully bid for 'Access Funding' to undertake a project to promote both active and sustainable travel to and around the main train stations in Bedfordshire, including all three Luton stations. The four-year Sustainable Travel Access to Rail Stations (STARS) project aims to increase cycling activity and reverse the decline in walking activity through:

- Marketing and Communication plans to raise the profile of Active Travel and engage with organisations across the borough.
- Delivering behaviour change through planned events and face-to-face initiatives with local organisations and the community, including the continuation of the Bikeability cycle training scheme, Bike-it in schools and a Bicycle Recycling Centre.
- Delivering signage and route improvements to the three stations in Luton.

The Council will implement this Policy by continuing to develop and implement initiatives in partnership with key partners including:

- Our sustainable travel advisors and road safety officers, who will continue working to promote sustainable travel to businesses and schools by influencing attitudes and promoting behavioural change through a range of initiatives;
- Introducing engineering measures under the Safer Routes to Schools initiative (e.g. traffic calming, 20 mph zones and pedestrian crossings);
- Encouraging pedestrian and cycle training to give both children and adults the skills and confidence to walk and cycle safely and well; and
- continuing to develop an exercise-based GP referral system, which will include encouragement to walk and cycle more

Policy 5: Smarter Choices

Our main focus for managing congestion and reducing greenhouse gas emissions will be through:

- the intensive application of Smarter Choices measures to encourage modal shift away from single occupancy car use and towards sustainable transport choices, particularly through the workplace or school travel planning processes.
- promote the use of bus services, walking and cycling between people's homes, the town centre, other key employment areas and local hubs/community facilities, with the highest priority being afforded to promoting sustainable travel between Luton and Dunstable/Houghton Regis.

We will also continue to organise local events to coincide with National Campaigns such as Cycling week, walk to school week etc. The ParHill Research has indicated that such campaigns can have a Benefit Cost Ratio of around 1.7.

The key outcome relating to the application of this policy is to increase active travel and public transport use in the town, complementing those policies in sections 10.2 and 10.3 above.

10.5 Promoting low emission transport

The Government’s Road to Zero Strategy published in July 2018 included a vision that by 2050 almost every car and van in the UK will be an Ultra-Low Emission Vehicle (ULEV). They subsequently announced in February 2020 that production of all petrol and hybrid cars would end by 2035. Increasing the number of ULEVs or Electric Vehicles (EV’s) has a very important role to play in reducing the carbon and poor air quality. Most of the Council’s fleet is now Euro 6, which represents the lowest emission standard for motor vehicles. In recent years the main bus operators have invested in modern buses, with almost 70% of vehicles being Euro5 or 6.

Whilst many of the actions in the Town Centre AQAP are to do with promoting and encouraging energy efficiency and sustainable travel, it includes some actions to promote infrastructure to encourage greater uptake, including providing charging points at town centre taxi ranks, car parks and on-street forelectric vehicles, with free/ reduced parking during charging period.

10.5.1 Electric and Ultra-Low Emission Vehicles

There are currently 300 EV’s registered in Luton, a rise from 96 in Q3 of 2016(360%) over the last three years compared to about a 290% increase in Great Britain over the same period (from 78958 to 227820), as shown in **Figure 10.2**. The Council has

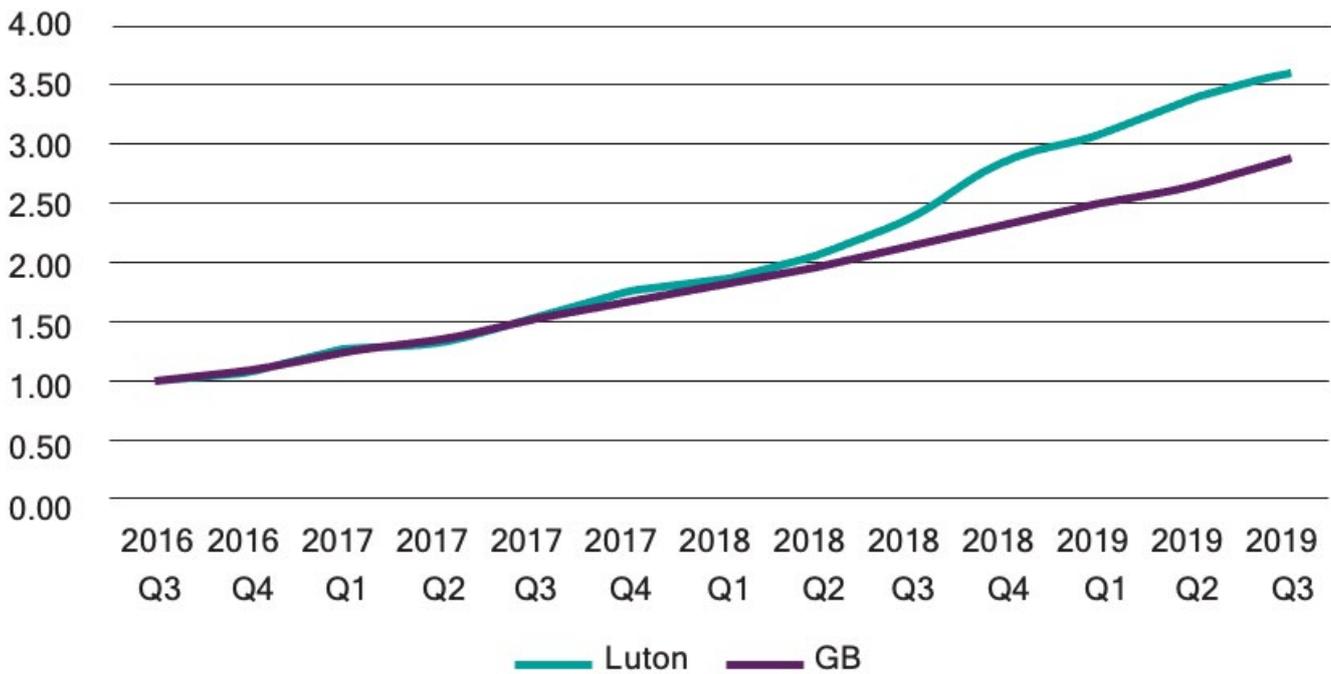


Figure 10.2 Growth over last 3 years in electric car/van ownership in Luton compared to Great Britain

already begun investing in electric charging points to encourage the take-up of electric vehicles; the number of charging points was doubled in 2018-19 following the Council's successful bid for grant from the Government's Office for Low Emission Vehicles (OLEV). Luton currently has 15 double charging points located on its highway network (see Figure 10.3 below) along with

charging points at taxi ranks to enable fleet to be upgraded. This investment will continue, with some emphasis on providing Planning policy will encourage developers to include electric charging infrastructure in new developments, especially within the current AQMAs.

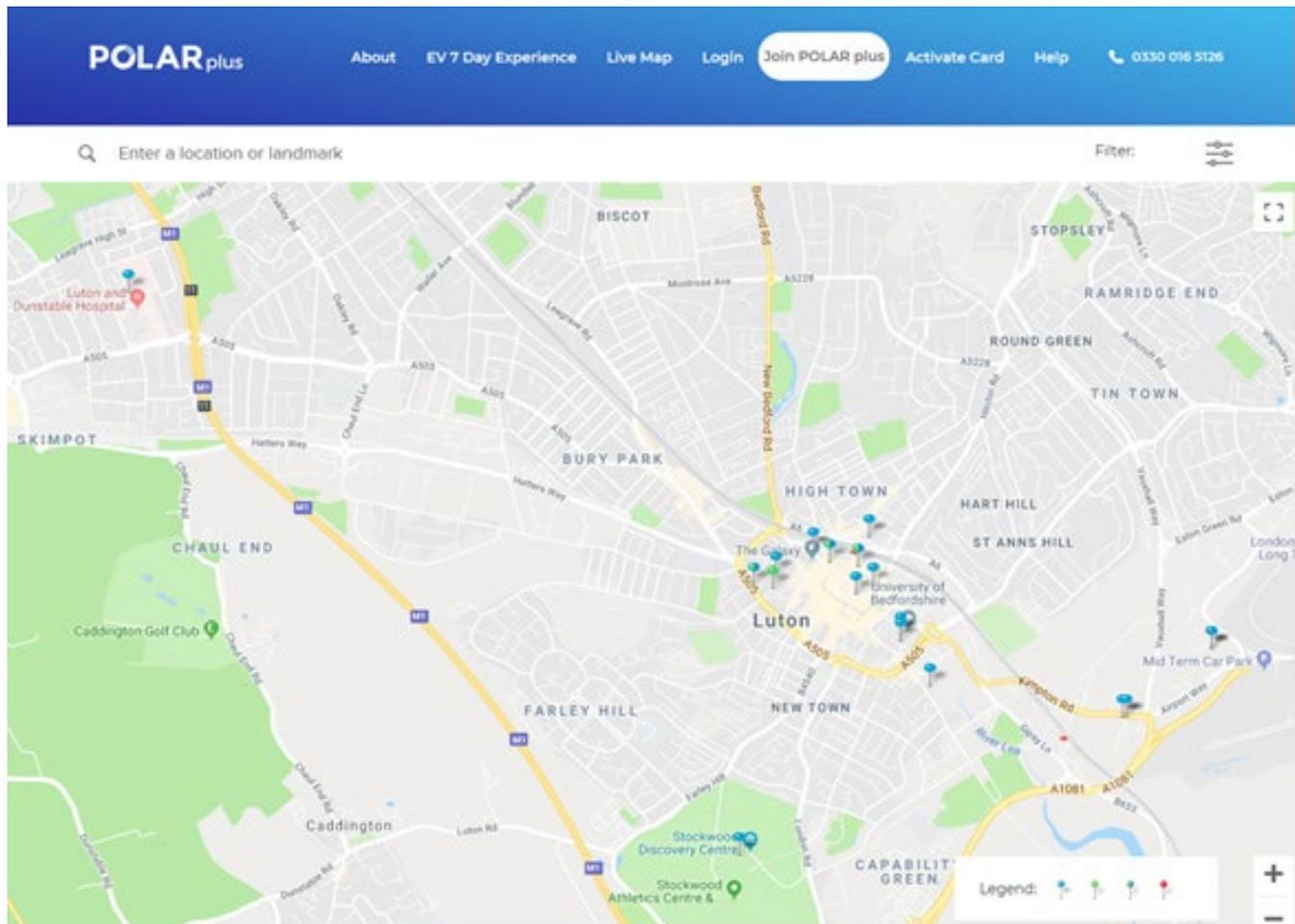


Figure 10.3 Location of existing car charging points in Luton

Source: polar-network.com

While there is a concentration of charging points in the town centre, the rest of the wards do not have publicly accessible charging points which may contribute to the low uptake levels. As part of a local consultation on electric vehicles in 2018-19, a number of residents expressed concern about the lack of charging infrastructure in Luton especially on streets where off street parking is unavailable. We are therefore exploring the opportunities for suitable charging infrastructure in these areas.

We have therefore developed a policy that requires all new residential and strategic developments to provide a certain percentage of charging infrastructure, together with passive provision to increase the number of charging points in the future.

Policy 6: Ultra Low Emission and Electric Vehicles

In order to promote and encourage use of Ultra Low Emission and Electric Vehicles we will:

- Increase the provision of electric charging points across the borough
- Set a requirement for developers to provide one chargepoint per residential parking space and one chargepoint for every ten spaces in non-residential building with more than 20 car parking spaces, with passive provision to provide chargepoints at remaining spaces.

As part of the Council's efforts to promote sustainable and low emission transport options, a series of electric vehicle pop-up information

events will be coordinated to create a place where people can find out more about electric vehicles and have a look at some of the models available first hand. These sorts of events have been run in several London boroughs as part of the Mayor's Air Quality Fund objectives, and have proven successful in spreading greater awareness and understanding of electric vehicles amongst local residents and businesses.

10.5.2 Car Clubs

Luton Council will continue to promote its Town Centre Car Club by offering staff and residents use of electric or ultra-low emission pool cars. It is planned to expand the club through working with new developments.

One car club car can replace 16 privately owned vehicles, and hence will help to manage congestion. In addition to car club members being less likely to own a car, they are also more likely to use public transport, and walk and cycle. Train travel amongst car club members is more than double the average across the UK, with bus use around a third higher than average. Car club members are also around three times more likely than the average person across the UK to be a regular cyclist. In Edinburgh, Bristol and other cities, car clubs are promoted as part of a portfolio of mobility options that includes public transport, walking, cycling and increasingly cycle sharing schemes.

We will use the development travel plan process to secure funding of travel plan initiatives for new developments. In particular, we will encourage developers in residential areas to fund and implement "car clubs". To ensure the successful delivery and implementation of development travel plans we will also develop an effective travel plan monitoring and enforcement regime. The Par Hill Research concludes that the Benefit Cost Ratio of car clubs is in excess of 13. The NICE evidence (P33,L6-11) considers that such interventions are only successful if the penetration of the technologies is large enough.

10.5.3 Other initiatives to encourage more fuel efficient driving

Notwithstanding the need to cater for increased use of electric vehicles, there will still be a need to decarbonise those car journeys that remain. Our strategy therefore recognises that we must not only look at ways to reduce demand for travel and encourage a modal shift to more sustainable modes of transport, but must also look at ways of making driving and the Council's own internal transport activities more sustainable. As part of LSTF between 2011 and 2015, there was an initiative to provide driver training for employees

or residents who felt they had no alternative but to drive. The Bar Hill Research indicates that eco-driver training has a Benefit Cost Ratio of around 6. Whilst NICE (P33,L29-32) considered the studies were poor quality, they also concluded that information and training might help improve fuel consumption (e.g. by reducing rapid acceleration and braking and selecting the correct gear) and reducing time spent idling when picking up passengers or goods.

Policy 7: Improving Energy Efficiency

For those car journeys that remain, we will look to:

- encourage people to drive in a more carbon efficient manner through eco-driving and promote low carbon vehicle and alternative fuel use through the provision of infrastructure for low emission vehicles, such as electric vehicle recharging points and preferential parking.

We will also lead by example, examining opportunities to both save money and reduce carbon emissions of our corporate transport and energy use, including transport energy requirements including the use of low-energy traffic signals and street traffic lights.

Policies 6 and 7 above will be implemented by:

- Encouraging the use of low carbon buses as part of Bus Quality Partnerships;
- Continuing to specify the Councils' own fleet of vehicles as low emission ones;
- Providing electric vehicle charging points throughout Luton and in new developments, recognising that in some areas of the town we need to address the conflict between low energy lighting and providing vehicle charging via lamp columns;
- Reducing parking charges and providing preferential parking spaces for more low CO2 vehicles; and
- Promoting no-idling particularly in areas where there greater concentrations of vulnerable people (e.g. in the vicinity of schools, hospitals and day care centres).

The key outcome relating to the application of these policies is to improve air quality by catering for the increasing number of Electric Vehicles in the town. Information on the number of electric cars and vans registered in Luton is collated by the Department for Transport.

10.6 Network management and highway improvements

Under the Traffic Management Act (2004), the Council has a Duty to keep all traffic, including pedestrians, moving. Congestion causes frustration and delay, and has a significant impact upon the local economy and well-being of the community. It is detrimental to the overall operation of the transport network, leading to the potential for higher accident rates, compromising public transport reliability and operations, and impeding walking and cycling. Taken together, these effects make sustainable transport modes less attractive and encourage more people to travel by car, further increasing congestion and leading to a vicious circle that deters people from making more sustainable transport choices.

The East Luton corridor between the M1 motorway and London Luton Airport has already benefitted from the dualling of New Airport Way up to the airport and the grade-separation of M1 Junction 10a. Similarly the corridor between Luton and Dunstable/ Houghton Regis has benefitted from both the investment in the Luton Dunstable Busway and the A5-M1 Link and the Woodside Link. However there are still some congested junctions in the Luton- Dunstable corridor.

Managing congestion is an important part of creating an efficient transport network and supporting the local economy. The connectivity of the transport system as a whole is critical in enabling people to get to work and delivery of goods. Good connectivity enables people to reach the jobs that are right for them. However, connectivity can subsequently have an impact on travel behaviour by encouraging more travel or travel over longer distances, such as accessing work opportunities further away.

Roadworks can be a frequent source of congestion within the Luton-Dunstable area. In order to

minimise congestion, the Council maintains a database of all streetworks and since Autumn 2013 we have operated a Permit scheme in order to manage co-ordination of roadworks. More recently the Council has defined a 'resilient network' set out in **Figure 10.4**, which provides alternative routes in key corridors in the event of an incident or flooding.



Figure 10.4 Luton's resilient network

Congestion currently occurs at various locations throughout Luton, particularly during the morning and evening peak periods. The road network is operating close to its capacity during much of the day and this means that relatively small incidents can quickly result in significant delays and congestion.

Improving signal timings, minor road widening and changes to lane markings can result in a 12-20% increase in junction capacity. More serious problems such as incidents on the M1 can bring many local roads to a standstill due to diverted motorway traffic.

NICE evidence (P31,L27) indicates stop-start traffic emits higher levels of pollutants than free-flow traffic. The recently completed study of improving the capacity of signal installations both in the Town Centre and the rest of Luton is key to the opportunities this might provide. The provision of improved information to the travelling public (see section 7.6 above) may also assist in smoothing traffic flows, in particular on the approaches to the town centre.

Policy 8: Congestion Priorities

In managing congestion, priority will be given to:

- delivering measures along those corridors where the highest levels of congestion occur, including routes between Luton town centre and residential areas in the north and east of the town.
- spending/measures linked to their economic impacts, so that those measures offering the greatest economic benefits are implemented.

In order to manage congestion effectively, we will look to deliver Smarter Choices to encourage a modal shift to sustainable modes of transport, improve passenger transport services, manage the network in such a way as to improve its operational efficiency and, if necessary, consider increasing network capacity. More detail of each of these methods can be found in sections 10.2-10.4 above.

However, there are limited opportunities for improving congested junctions in other areas of the town and therefore measures to reduce the

number of vehicles commuting into the town is vital, pedestrianised areas, park and ride and greener sustainable transport and improved and pleasant walking and cycling routes are all viable alternatives.

Policy 9: Highway Improvements

We will take the following approach to implementing highway improvements:

- investigate and deliver transport network management and efficiency improvements on congested roads in the priority travel corridor, including taking account of expected modal shift, before providing new highway infrastructure
- where additional highway improvements are required to manage congestion and improve journey times, we will undertake those network capacity improvements, including junction improvements within the existing highway boundary where possible and
- only then will new road building be undertaken where their impact benefits the road network as a whole and where it facilitates growth and improves access to strategic employment sites.

The key outcome relating to the application of these policies is to manage congestion on the highway network in the town, although this can be achieved in part through the application of policies in sections 10.1-10.3 above to increase sustainable travel for shorter journeys, together with measures to manage travel demand (see section 10.7 below). Information on traffic speeds on the network as well as traffic flows on main roads in the town are collated by the Department for Transport.

10.7 Demand management

Given there will be a need to cater for non-local journeys into the town centre, the Council recognises that the availability and cost of car parking at destinations are often key determinants in the decision to travel by car rather than walking/cycling for short journeys and using public transport for longer journeys into the town centre. To that end, restricting the number of total parking spaces or limiting the availability of long-stay parking can have a significant effect on traffic volumes, providing that these measures are complemented by the provision of adequate alternative transport options. The Council is also aware of the need to ensure that the quality of all public car parking provision is adequate in terms of the pleasantness of its environment, personal safety and security.

The Council is currently reviewing its approach to parking and enforcement. Notwithstanding this, the overarching objectives, as set out in the Council's Parking and Enforcement Plan published in 2013, are to:

- manage parking provision to encourage and facilitate walking, cycling and public transport use and minimise reliance on, and discourage unnecessary use of, private cars;
- manage parking provision to enable journeys to be made by car when travel by alternative modes is not feasible;
- enforce parking regulations in order to achieve wider transportation objectives; and
- ensure that policies are fully incorporated into the decision-making processes associated with highways proposals and planning applications, and in all complementary strategies.

Policy 10: Parking

The Council's approach to managing off-street public car parking will therefore be

1. Car parks closest to The Mall Shopping Centre will be priced to cater mainly for demand by short stay users, with all-day parking only available at a substantial premium.
2. Car parks peripheral to the town centre will be priced to facilitate long stay commuter car parking
3. The Council will seek to maintain and enhance the environment, personal safety and security at all public car parks whether privately or publicly owned.
4. To use the pricing of on-street parking bays in the town centre as a mechanism to encourage all but the short stay visitor parking to use off-street car parks.

Where there is a strong local demand, for example in residential and employment areas surrounding the town centre, the Council will consider introducing further permit parking schemes, with the object of managing the available space in favour of local residents, local businesses and their customers and visitors. All such schemes should be designed to be at least self-financing.

Luton has Special Parking Area status, enabling the Council to take action against most parking offences, including parking on yellow lines and stopping on School Keep Clear markings. The Council also introduced bus lane enforcement in 2011 and in 2019 introduced 'Red Routes' on various roads in the town centre and on Airport Way, where inconsiderate parking continued to cause congestion. We will continue to review

the opportunities for other enforcement powers available to the Highway Authorities under the Traffic Management Act 2004.

In 2017 the Council undertook separate reviews of parking in and around the Controlled Parking

Zones, around schools, and parking on footways and verges. The last of these reviews proposed a number of actions to reduce inconsiderate parking and Members have agreed to trial parking on footways except in designated areas in five areas.

We will continue to enforce School Keep Clear markings to help maintain the safety of children. However parking outside schools is still a problem and considered to be one of the contributory factors to congestion throughout Luton. The study on parking around schools examined the potential of introducing Traffic Exclusion Zones (TEZ's) around schools. Following the success of a short term trial in June 2019, the Council will embark on a phased programme of introducing up to three TEZ's per year, applying the following criteria:

- Support from school staff and parents
- School's use of Modeshift STARS
- Positive support of Ward Councillors
- Suitability of the existing road layout
- Nearby alternative parking and safe walking routes to the school
- Availability of suitable 'Park and Stride' locations
- i.e. alternative locations where parents can park away from the school and walk e.g. supermarket/leisure centre car park
- Usage of the surrounding streets including public transport requirements

- High levels of congestion at school gates
- Presence of an active Sustrans Schools Officer
- High percentage of children currently travelling to school by car (30%+)
- 70-80% of pupils live within 1 mile of the school
- The vicinity of other traffic generators including business, leisure facilities, health centres
- The quality of the routes for students to walk or cycle to school

10.8 Freight

In Luton, most large industrial premises have long since moved to “out of centre” estates and offices, and large retailers increasingly favour such locations as well. In theory, this should take some of the pressure off busy roads and residential areas, but in practice it raises issues about access for employees and visitors, particularly those without cars. **Figure 10.5** below shows the main generators of road freight in the Luton-Dunstable area.

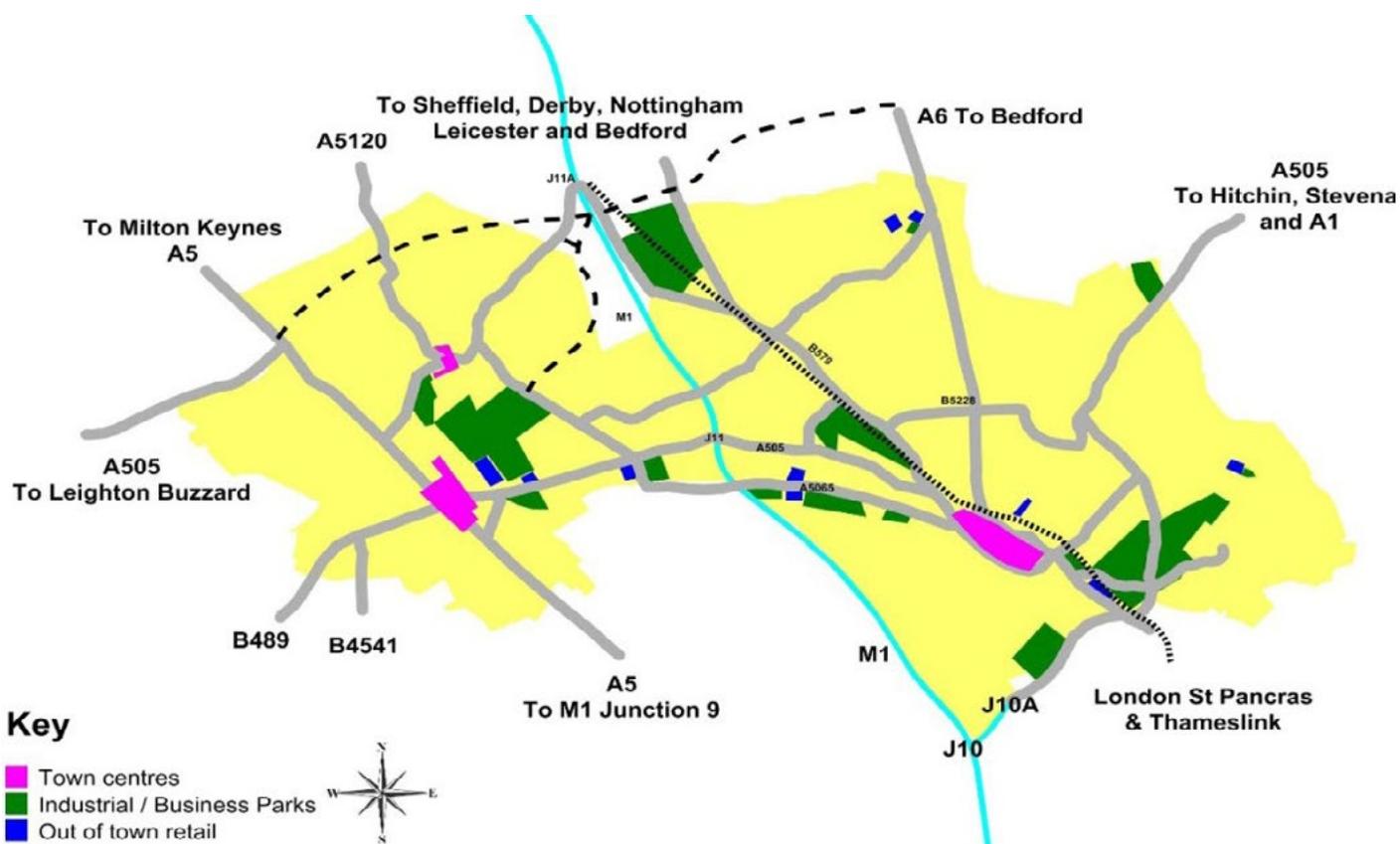


Figure 10.5 Main Generators of Road Freight

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Central Bedfordshire Council's emerging Local Plan includes proposals to extend the employment areas in the vicinity of M1 Junction 11a and Sundon Park Road, including a Rail Freight Interchange at Sundon. If approved, these proposals will further expand the employment opportunities in the northwest of the town, with good access to the strategic road and rail networks.

As a result of freight activity, there are Heavy Goods Vehicles (HGVs) on many parts of the road network. HGVs are large and take up more road space than cars and light vans, further limiting road network capacity and impeding traffic flows. HGVs also tend to produce more noise and vibration than smaller vehicles and can be especially problematic on hills, such as Stockingstone Road. HGVs account for 6% of Annual Average Daily Traffic Flow in Luton and HGV

Policy 11: Freight

In order to improve the quality of the environment in the town the Council will develop initiatives at the local level to mitigate the adverse impacts of the movement of freight, in particular:

- Identify strategic routes to guide lorries away from residential areas
- Improve signage
- Put lorry bans in place where appropriate
- Explore the opportunities to make 'Last Mile' deliveries more sustainably

flows are highest along the M1 (24%) and adjacent sections of the A505 Dunstable Road (8%).

In summer 2018 the Department for Transport launched a 'call for evidence' to understand the potential for making 'last-mile' deliveries more sustainable, recognising that the move towards internet shopping had resulted in an increase in van deliveries. The Council will work with

England's Economic Heartland and their partner freight organisations to develop a Freight Quality Partnership through which we can deliver measures to address freight issues in the Borough, including:

- Establish Strategic Lorry Routes and produce a map of these for freight operators and businesses that includes information about waiting, access and height restrictions;

Work with freight operators to ensure local compliance with a Freight Operator Recognition Scheme;

- Improve existing and provide more signing to guide lorries to destinations such as key employment sites and town/district centres;
- Explore sustainable alternatives for freight distribution; and
- Rationalise local delivery times and restrictions to minimise traffic impacts.

The key outcome relating to the application of this policy is to reduce the number of Heavy Goods Vehicles (in particular larger articulated lorries) and Light Goods Vehicles, on the highway network in Luton. The Department for Transport collates information on the number of HGV's and LGV's on the main road network as part of its traffic monitoring.

10.9 Improving air quality

As stated in section 6.1.3, following the Government requirement to achieve net-zero greenhouse gas emissions (of which Carbon Dioxide is the most abundant) by 2050, the Department for Transport set out its intention

to publish its plan for Decarbonising Transport later this Autumn. Luton has already declared a Climate Emergency based on a study undertaken by Anthesis and set a target to achieve net zero CO₂ by 2040.

Whilst the main focus of mitigating the climate change and environmental impacts of transport is to reduce greenhouse gas emissions, in recent years there has been increased research into the wider impacts of poor air quality on health. Air pollution exacerbates respiratory problems, and can have a negative effect on the quality of life of local people. In 2009 Asthma UK reported that 42% of asthma sufferers said that fumes from traffic stopped them walking and shopping in congested areas.

In addition, European evidence has shown that high concentrations of particulate matter decrease life expectancy of every European by, on average, almost one year. This could potentially have a bigger impact in more deprived areas of Luton where there are low levels of life expectancy.

The Council has a Statutory Duty as set out in Part IV of the Environment Act (1995) to regularly review and assess air quality, and to determine whether or not the Government's air quality objectives are likely to be achieved. Where an exceedance is considered likely the local authority must declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives. There are currently three declared AQMA's in Luton, the first two of which relate to the M1 Motorway which passes through Luton, and a third along Telford Way and Dunstable Road/Stuart Street on the periphery of Luton town centre.

Policy 12: Improving Air Quality

In order to ensure that no new Air Quality Management Areas are declared in Luton, we will require an Air Quality Assessment for all development proposals that:

- result in increased congestion, or a change
- in traffic volumes and/or speeds;
- significantly alter the traffic composition in an area, such as bus stations, lorry parks and new road layouts;
- include new car, coach or lorry parks;
- adversely affect sensitive areas or areas nearing air quality threshold limits;
- would be close to known sources of air pollution and which would include Relevant Receptors, e.g. housing, schools, hospitals.

This Policy will principally be implemented through our development management process as and when planning applications are received. We will also apply the principles set out in Appendix 2 based on the scale of development, as set out in our adopted Local Plan.

In order to better understand air pollution levels across the Borough and facilitate the application of the above policy, we will be reviewing our existing air quality monitoring data and agree an appropriate extended monitoring regime to establish baseline air pollution levels. We will also use this monitoring data to inform the development of future transport schemes and initiatives and to monitor their performance in air quality terms.

Where AQMAs are declared as a result of traffic sources from a Motorway or trunk road, we will work closely with Highways England to develop and implement an appropriate AQAP for reducing emissions within those AQMAs.

The key outcome relating to the application this policy is to improve air quality in the three AQMAs in Luton. There are two real-time air quality highway monitoring sites in the town plus two at the airport, together with 51 Diffusion Tubes that measure Nitrogen Dioxide. The results of these monitoring sites are reported in the Annual Status Report which the Council has a Duty to publish.

urban areas such as Luton generally expect some traffic noise, but there can be occasions when it can be excessive.

10.10 Noise nuisance and light pollution

Luton is the third least tranquil place in the UK, and the planned growth could make it worse due to potential for increased noise and light pollution. The main sources of noise and light pollution and nuisance are transport and streetlights. People in



Figure 10.6 Roads requiring a Noise Action Plan

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Similarly Highways England, Network Rail and London Luton Airport Operations Limited are required to respectively produce plans for the M1, the Midland Main Line, and the Airport.

Policy 13 Noise and Light Pollution and Nuisance

Measures to reduce the adverse impacts of noise and light will be implemented with a view to:

- Reducing noise and vibration from traffic, with priority being given to those areas where these impacts are excessive and adversely impact on the greatest number of people;
- Reducing light pollution and nuisance at night where it is possible and safe to do so by designing new and replacement lighting schemes to minimise these impacts.

Reducing noise from transport should have a positive impact by reducing the number of people exposed to high levels of noise from road and rail networks. We will implement this policy by:

- Reducing the adverse impact of noise and vibration from transport by using low noise road surfacing, particularly along main roads that are lined with residential properties;
- Re-routing freight traffic away from the worst affected residential areas, where possible;
- Using dense planting schemes between roads and residential properties to attenuate noise and act as a visual barrier from the noise source. Studies have shown that these can have a perceived reduction in noise of 5dB- 10dB.
- This may also have the additional benefit of reducing the visual intrusion of traffic;
- Use of noise barriers and visual barriers where practical;
- Using redesigned street lights to reduce upwards light spillage;
- Turning off street lights in the early hours of the morning where, in consultation with Bedfordshire Police, it is considered that this will not have an unacceptable adverse impact on personal security, crime or road safety;

- Carrying out noise and vibration impact and light pollution and nuisance assessments of new transport schemes, and implementing resulting recommendations to minimize any negative impacts;
- Working with Network Rail and the train operating companies, Highways England, freight operators and London Luton Airport with a view to reducing transport noise and vibration and light pollution and nuisance from the use of railways, the Strategic Road Network such as the M1, and aircraft.

There is also a measureable link between traffic noise and speed; studies have shown that reducing speeds by 6 mph in an urban area would cut noise levels by up to 40%. Section 11.1.2 contains further information on engineering and other measures to reduce speed in the urban area. Reducing speeds on urban motorways from 70-60mph could cut noise by up to 50%. There is also a relationship between noise and quality of life resulting from improved urban design (see section 11.2); buildings designed so that habitable areas are located away from the source of the noise can reduce exposure to noise.

10.11 The Natural, Built and Historic Environment

The National Planning Policy Framework (NPPF) set outs the planning policy context for improving and enhancing the natural, built and historic environment in and around Luton. The 2019 NPPF update states that planning policies and decisions should provide measurable net gains for biodiversity. In addition, LPAs have a duty to have regard for biodiversity in the exercise of their functions under Section 40 of the NERC Act, 2006. An evidence based approach to biodiversity net gain can help demonstrate compliance with this duty.

Luton has a diverse natural and built environment surrounded by the Chilterns AONB, which is a significant asset for the area providing an attractive backdrop to the town as well as opportunities for sustainable leisure and tourism.

Cowslip Meadow between Barton Road and Riddy Lane has recently been designated as a Site of Special Scientific Interest (SSSI), and there are 24 other County Wildlife Sites (CWS) within Luton, all of which provide wildlife havens and protect and conserve local biodiversity. There are also several sites of national biodiversity importance immediately adjacent to the Luton periphery, in particular Galley & Warden Hills SSSI, Smithcombe, Sharpenhoe & Sundon Hills SSSI and Barton Hills National Nature Reserve.

In the built environment, there is a need to improve its quality in order to facilitate

Policy 14 Protecting and Enhancing the Natural, Historic and Built Environment

We will give a high priority to conserving and enhancing Luton's natural, built and historic environment, and greatest priority to the conservation and enhancement of the Chilterns AONB, when making transport

decisions. When designing and implementing transport improvements we will assess these and other environmental impacts as required, in order to ensure that they maintain the integrity of our historical townscape, cultural heritage and biodiversity assets and their settings, and protect and enhance our local landscape, biodiversity and their habitats.

regeneration in parts of Luton, and improvements to the public realm are discussed further in Chapter 7. Luton hosts a number of heritage assets, such as Conservation Areas, listed buildings, and Scheduled Monuments.

Heritage assets may be particularly vulnerable to damage as a result of increased pressure from development and regeneration within the Borough, but regeneration is also likely to provide opportunities to enhance these historic built assets.

Appropriate planning and implementation of transport interventions can play a key role in mitigating environmental problems and in minimising the impact that new transport schemes have on the wider environment. They can also be beneficial in improving air quality.

This will be implemented by:

- Ensuring that transport schemes avoid damage to sensitive and important nature conservation areas where possible, and compensate for any unavoidable effects by the creation and where feasible, net gain of new habitats and linkages for biodiversity;
- Minimising the impacts of transport on protected landscapes, particularly the quiet enjoyment of the Chilterns AONB;
- Avoiding damage to sensitive and important areas of archaeological interest and heritage conservation (including listed buildings), where possible;
- Ensuring that new transport infrastructure is designed to minimise the possible impact
- of storm water run-off on water courses, and implement Sustainable Drainage Systems in order to reduce flood risk as well as minimising diffuse pollution and maintaining natural flow regimes;
- Promoting sustainable design and construction practices, including the minimisation of construction waste and use of local materials and recycled highway materials, especially in regeneration areas.

Chapter 3 of the Environmental Report that supports this LTP4 sets out the specific environmental indicators and provides 'Baseline' information on the quality of the environment that will continue to be monitored.



**Safer and
inclusive
communities**

11

11.1 Road safety

The Government's 'Road Safety Statement 2019– a lifetime of Road Safety' sets out its integrated approach by applying the principles of safer people, safer vehicles and safer roads. The Council's Road Safety Plan 2020-25 has adopted this 'Safe System' approach.

Engineering measures will focus on safer road environments, managing speed and improving the safety of vulnerable road users including motorcyclists. This approach is consistent with key recommendations from the National Institute of Health and Clinical Excellence (NICE) public health guidance note 29 which are to maintain road safety partnerships and to introduce engineering measures and lower speed limits in order to reduce speeds in residential areas or other areas of high pedestrian and cycling activity.

Policies and actions to improve road safety aim to not only reduce casualties but also to improve the perception of safety in order to widen travel choice where safety concerns would otherwise act as a barrier to the use of sustainable transport.

Engineering measures have played, and will continue to play, a role in reducing Road Traffic Collisions in Luton. However, whilst good progress has been made in reducing the number of casualties, in particular the number of people Killed or Seriously Injured, it will be a challenge to maintain the level of progress we have made using these measures, and issues still remain with regard to vulnerable road users. Therefore the emphasis on the approach to road safety will change under this LTP, focussing more on altering road user attitudes and behaviours about safety and achieving casualty reduction through education and enforcement. We will continue to be a part of the Bedfordshire Road Safety Partnership.

The main thrust will be to get vehicles to move at speeds appropriate to road conditions in the local area. Lower traffic speeds significantly reduce casualties, especially amongst vulnerable groups such as pedestrians, and should also improve

how safe the streets feel. As this type of measure addresses actual as well as perceived road safety, it will be an important element of road safety policies over the period of this plan. This process will be informed by implementing key recommendations from the NICE public health guidance note 31.

All schemes will be subject to a safety audit undertaken in accordance with the Council's Safety Audit Policy and vulnerable road user audits that together provide a methodical process to check the safety of new road schemes and other schemes that may affect the highway.

11.1.1 Road Safety Education

Under the Road Traffic Act 1988, the Council has a Duty to 'prepare and carry out a programme of measures designed to promote road safety'.

Most Road Traffic Collisions involve some aspect of road user error. Evidence suggests that road safety education is an important element of improving road user behaviour, particularly by targeting interventions to make people better informed and to promote more responsible behaviours. Certain key road user groups stand out in the evidence as being at higher risk, particularly the more vulnerable groups.

We will continue to focus on promoting road safety education, training, and publicity to influence road users' attitudes and behaviours, including raising the awareness of motorists about the vulnerability of motorcyclists, cyclists and pedestrians. We will continue to implement a lifelong learning approach to raise awareness within the community of the road safety responsibilities of all of us. This will be based on the success of the programme of Education, Training and Publicity for schools, and facilitated by using the new national public health guidance issued by NICE which supports a systematic approach to preventing unintentional injuries in children under 15 in the design of roads, external environments and education and protective equipment.

Policy 15: Road Safety Education

We will use education, training and publicity to:

- improve road safety by reducing casualties, with priority given to targeting high risk groups and vulnerable road users both by improving their own road user behaviour and also increasing drivers' awareness of them;
- improve the perception of safety in order to widen travel choice, especially where safety concerns act as a barrier to the use of sustainable transport modes.

This policy will be implemented by focusing on:

- Pedestrian priority given to those people most likely to be involved in an accident, which includes children and young males between 16 and 44 living in the more deprived areas of the town;
- The promotion of driver and rider training schemes, especially for young drivers and riders (16-30 year olds). The priority will be to support the integration of eco-driving with safe driving and riding practices to reduce fuel consumption and emissions at the same time as improving safety;
- Making high-risk vulnerable road users aware of the dangers associated with the increasing number of electric vehicles as they produce less noise;
- Improving the awareness of commuters and occupational drivers of the consequences of their driving practices;
- Supporting high quality and high profile national and regional publicity campaigns, focusing on improving the safety of vulnerable road users.

In supporting and raising the profile of training for drivers and riders we will work in partnership with various agencies including Bedfordshire Police, the Driving Standards Agency and local approved driving instructors. In considering the needs of vulnerable road users we will work in partnership with local user fora such as the Luton Cycling Forum, the Disability Resource Centre, and local Sight-Loss organisations.

11.1.2 Road Safety Engineering

Under the Highways Act 1980 and the Road Traffic Act 1988, the Council has a Duty to keep roads safe, monitor road traffic collisions, and introduce safety schemes, together with a Duty to maintain highways to an acceptable standard.

In the past the evidence showed that collisions often clustered around particular locations, such as busy junctions. Considerable success has been achieved in reducing casualties by targeting accident cluster sites, to the extent that few clusters of collisions now occur and accidents tend to be more dispersed, especially along certain busy routes.

Although dispersed, there does tend to be evidence that accidents, at least the more serious ones and involving children, are more densely distributed in the south western/ central areas of Luton, perhaps coinciding with levels of deprivation.

Most main roads in Luton are already subject to 30 mph speed limits and a strategic review of speed limits has been carried out that has resulted in a number of extensions of 30 mph limits along certain main roads. In addition, the number of 20 mph speed limits and zones on minor roads in residential areas, outside schools and around town/ district centres has increased in recent years and will continue to increase in the future. The aim is to retain and maintain a network of 30 mph and a few 40 mph roads, but as set out in the Council's Road Safety Plan 2020-25, most residential roads will have 20 mph speed limits as the default limit.

In residential areas priority engineering measures have included introducing 20 mph zones to:

- Address the increasingly dispersed nature of accidents;
- Significantly reduce casualty severity;
- Create safer and more pleasant neighbourhoods;
- Enable people to choose to walk or cycle in greater safety; Potentially support regeneration initiatives when integrated into public realm and streetscape improvements.



Figure 11.1 Existing 20mph zones in Luton

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The main thrust of road safety engineering will be to get vehicles to move at speeds appropriate to road conditions in the local area. Lower traffic speeds significantly reduce casualties, especially amongst vulnerable groups such as pedestrians, and should also improve how safe the streets feel. As this type of measure addresses actual as well as perceived road safety, it will be an important element of road safety policies over the period of this plan.

Policy 16: Improving the Safety of the Local Community

The focus of road safety engineering measures will be on ensuring appropriate and compliant speeds on minor residential streets, roads around schools, and roads in areas of social and commercial activity that comprise parts of 20mph zones. This will be delivered as part of the Integrated Transport programme. This will facilitate the safe and efficient movement of people and goods whilst protecting and enhancing the quality of life within communities. The priorities for 20mph zones will be those areas with at least some of the following characteristics:

- Relatively high number of collisions, especially involving vulnerable road users;
- Traffic speeds;
- High levels of unnecessary through traffic;
- Parking problems;
- High use of local facilities;
- High levels of social deprivation.

This policy will be implemented by focusing on:

- speed management measures to ensure appropriate vehicle speeds;
- discouraging the use of local roads for through journeys;
- implementing 20mph zones in a way that will make them largely self-enforcing through the use of traffic calming (including gateway features at changes of speed limits and vehicle

activated signs), innovative use of materials, and improvements to the road layout;

- Where possible, use minimal engineering measures, preferably integrated with wider streetscape improvements and other community wide actions to create a more pleasant environment;
- Supporting residents of inner areas of the town which have lower car ownership, such as High Town and Biscot, who are dependent on walking or cycling to access key services and facilities in the town or district centres, or who would prefer to walk or cycle rather than drive
- Develop Core Walking Routes to the town centre and district centres, with Safety (both road and personal) will be a key element in the delivery of these Core Walking Routes.

As referred to earlier most accident cluster sites have now been treated, and the focus for potential accident reduction measures has shifted to the treatment of routes particularly the three priority congestion corridors of Hitchin Road, New Bedford Road and Luton to Dunstable. So, although the Council will continue to work to identify and treat cluster sites, it is likely that these will generally be dealt with as part of route treatment programmes. We will seek to ensure that road safety interventions along routes are integrated with any other programmes of work along the same routes.

We will carry out education, training and publicity where route accident investigation work shows that there is a driver behaviour problem rather than an engineering problem.

Policy 17: Targeted Accident Reduction Measures

Targeted accident reduction measures will continue to be implemented. This will need in particular to reduce the severity of Road Traffic Collisions as well as reduce the risk presented to vulnerable road users. The prioritisation of interventions will therefore be determined by:

- The total number of injury accidents;
- The number of Killed or Seriously Injured accidents;
- The number of children injured;
- The number of pedestrians and cyclists injured;
- The number of motorcyclists injured.

This policy will be implemented by focusing on prioritising engineering measures:

- to improve safety on our A and B class roads, as most accidents occur on these roads. Whilst the actual measures used will largely depend on the nature of the accident problem, this will include installation of average speed cameras and the use of mobile speed indicating devices;
- to support the general safety of school children through the continuing implementation of the Safer Routes to School initiative; and
- to ensure such measures are implemented and maintained in the more deprived areas, including High Town, Biscot and Dallow around the town centre, and Northwell on the northern outskirts

11.1.3 Safety and Maintenance

Whilst making improvements to the road environment and promoting responsible attitudes and behaviour will be important, the role played by the condition of the transport network should not be neglected, especially as the annual NHT survey consistently shows that highway condition is important to people. The Council's Highway Maintenance Plan is an important consideration in this matter.

Policy 18: Highway Maintenance and Safety

In terms of highway maintenance the Council needs to be fully aware of highway defects, which could have potentially serious consequences, so our main policy consideration of routine maintenance will always be safety, so

- safety inspections will take priority over other inspection-related demands as set out in the Council highway maintenance plan, with dangerous defects always taking priority for treatment;
- we will use a risk-based approach to support other non-safety maintenance objectives, with the frequency of inspection and intervention levels prioritised according to their potential consequences and wider policy considerations (e.g. a slight tripping hazard on a quiet footway presents a much lower risk than the same defect on a main walking route).

This policy will be implemented using the following types of interventions:

- Ensure good skid resistance on bends, on the approaches to junctions and pedestrian crossings, along on- and off-road strategic cycle routes,
- and in the vicinity of schools where there is an increased chance of children running into the road. This will be especially important on main roads;
- Treat pot holes and similar hazards on all routes, including strategic cycle routes; and
- Reduce tripping hazards on Core Walking Routes and in the vicinity of hospitals, GP surgeries, retirement homes and sheltered housing to reduce the risk to the elderly, to people with disabilities and to other vulnerable pedestrians.

The key outcome relating to the application of these policies is to reduce the number of Road Traffic Collisions and Personal Injury Accidents on the highway network in the town, although this can be achieved in part through the application of policies in sections 10.1-10.4. Information on the number of Road Traffic Collisions and Personal Injury Accidents on the highway network is collated by the Department for Transport.

11.2 Improving the quality of the public realm

A large part of the built environment is the highway, so its condition and state of repair can influence how people feel about their area. The Council has a Duty under the Highways Act 1980 to maintain the public highway and public rights of way, and also to improve the local environment.

As set out in section 7.2.4 of the Transport Strategy, there is a strong link between encouraging sustainable travel and the quality of public realm in local communities to create an urban setting that is safer, more inclusive and less environmentally damaging based on a future vision that reflects best practice in the Government's 'Manual for Streets' in particular to encourage more walking and cycling, as well as longer term visions based around car-free orientated

and energy efficient travel that maximise the opportunity for travel by sustainable modes.

The Council has also developed a Streetscape design guide, the principles of which are set out in Policy 18 below.

Policy 19: Improving the Quality of the Public Realm

We will adopt a more proactive role in using transport to improve the environmental quality of local neighbourhoods, especially in areas of high deprivation. We will turn many local roads back into streets that people can enjoy and that contribute positively to the appearance and feel of a local area which in turn can have positive impacts on the local economy. The priorities will be to improve the quality of life in the town centre and district centres and in areas of high deprivation. We will improve the quality of the public realm, mainly by implementing our Integrated Transport programme, but also through:

- Ensuring when designing and implementing transport improvements that they contribute to the quality of the built environment by improving the public realm and street scene. This will require seeking transport solutions that contribute to a sense of place;
- Using our regular highway maintenance safety and service inspection regimes to identify street furniture that is surplus to requirements and removing it, or that is in such a state of disrepair that it detracts from the visual appearance of the area and replacing it;
- Enabling communities to get more involved in taking care of their local area.

This policy will be implemented by:

- Improving the public realm in the town centre by giving greater priority to pedestrian infrastructure and better management of on-street car parking;
- Ensuring continual improvement in the street scene throughout Luton as schemes are implemented through simple, logical, zoned and consistent layouts;
- Keeping places tidy and minimising litter, including by undertaking community action days to address a range of problems;
- Improving the quality of design and accessibility through the use of specified palettes of materials appropriate to the area;
- Ensuring that signage, street furniture and structural materials used in highway projects are in keeping with the character of the local area, contribute to the sense of place and that street clutter is minimised and signage consolidated, particularly in the town centre and in those areas where 20mph zones have been implemented;
- Complementing and strengthening the objective in the Council's Vision for a clean, tidy and green environment through a significant increase in the number of street trees.

The Council has a team of Highway Inspectors who inspect the condition of the network and arrange for any defects to be repaired. The highway network is a substantial asset, so consideration of its on-going value is a primary factor in deciding the Council's highway maintenance programme and, as a result, the condition of both principal and non-principal roads has been improving in recent years.

Policy 20: Highway Maintenance and the Public Realm

Our maintenance of the highway will contribute to the public realm and the local environment by bringing street conditions up to an acceptable standard of repair and appearance, including where this is most needed to improve the quality of life for residents.

This policy will be implemented by:

- Working with partner agencies and the community to integrate routine highway repairs with other community wide actions, especially in areas of high deprivation;
- Increasing community involvement in identifying the required street repairs;
- Carrying out reviews of the prioritisation hierarchy of the maintenance of highway infrastructure, including footways and cycleways;
- Co-ordinating scheduled highway maintenance works with other improvements to reduce the disruption to the local community;
- Reducing and consolidating signage when carrying out maintenance and highway schemes;
- Delivering structural maintenance schemes that improve the condition of the highway assets. Priority will need to be informed by condition as well as the aims of the policies in this LTP.

11.3 Personal security and crime

Evidence shows that crime and feelings of personal safety vary across Luton. There are some areas of Luton where crime is an issue, although recently there have been reductions in reported crime and anti-social behaviour on public transport. However, only two of the three rail stations currently have secure stations accreditation, so we will seek to work with the station operator to get the remaining station accredited as soon as possible.

The policy area of personal security and crime focuses on reducing levels of crime and anti-social behaviour, and working with people to build public confidence and improve perceptions of safety.

It also complements road safety, especially if we are to increase the use of modes of transport other than the private car, as people are more likely to choose a mode of transport that they perceive to be safe. It is this perception of what is safe or unsafe that needs to be changed.

The focus of community safety is based on effective partnership working to tackle the most deep-seated crime and anti-social behaviour problems affecting the people of Luton or their property. As the nature of crime and anti-social behaviour changes in the town, we will address this by paying careful attention to the root causes, and ensuing crime patterns, and re-directing our priorities accordingly. The current emphasis on reducing crime in Luton is concentrated on those wards where crime or fear of crime is a particular issue, which includes Biscot, Dallow, High Town and South wards. The sharing of up to date information amongst various agencies about hotspots of activity and persistent offenders is key to the success of any initiatives as, by paying attention to the root causes and ensuing crime patterns, the Council and its partners can re-direct their priorities accordingly. By doing this we can build public confidence and reduce re-offending.

The wards of particular concern include South, Dallow, Northwell, High Town, Biscot, Leagrave and Sundon Park, as crime deprivation is high in these areas. Ensuring good quality and working street lighting throughout the Borough is important.

Our current street lighting maintenance plan is prioritised to take into account such areas of crime concern, and future street lighting replacement schemes will continue to focus on crime reduction.

As recognised in the Design Council's guidance 'Designing out crime', measures such as improved lighting, secure public car parks and CCTV, together with improvements to the layout of new developments, can all contribute to reducing levels of crime and will be targeted in priority areas.

Policy 21: Transport and Crime

Transport improvements and maintenance should promote feelings of greater personal security and public confidence. The focus will be on reducing crime and anti-social behaviour against people or property particularly

- In areas of high deprivation;
- In areas with higher levels of crime and antisocial behaviour;
- With people who have greater concerns about personal safety after dark.

We will implement this Policy by focussing our efforts:

- to reduce thefts from motor vehicles in locations where this is more prevalent. The reduction of on-street non-residential car parking through the accompanying shift to off-street car parking, including Park and Ride, will help to reduce thefts from motor vehicles.
- to improve lighting at vehicle theft hot-spot locations;

- considering the implementation of residential car parking arrangements in 20mph zones whereby the cars are not parked parallel to the kerb; and
- work with car park operators to support all off-street car parks gaining safer parking accreditation.

We will improve safety at transport interchanges through a range of measures, including:

- Working with the rail industry to ensure that all three of Luton’s train stations gain secure stations accreditation;
- Improving cycle and pedestrian access between Marsh Road and platform 1 (north-east) of Leagrave railway station;
- Improving lighting at key bus stops and around train stations;
- Introducing Real Time Passenger Information at bus stops so that people know when the next bus will be arriving.

We will also continue to work with Luton’s Community Safety Partnership, drawing on its knowledge, skills and experience to develop a range of initiatives to reduce crime and the fear of crime.

The key outcome relating to the application of this policy is to reduce the number of incidents of crime and anti-social behaviour, although working with people to build public confidence and improve perceptions of safety should also encourage them to walk, cycle or use public transport for shorter journeys.

11.4 Accessibility and equality of opportunity

Luton’s residents have good accessibility to a range of services by walking, cycling and public transport, and of course by car, as shown in Table 11.1 below.

Accessibility to services ¹ by mode	Most dense wards ²	2nd most dense ³	3rd most dense ⁴	Least dense wards ⁵
Public transport/ walk	<14 mins	14-16 mins	16-19 mins	19-24 mins
Cycle	<11 mins	11-13 mins	11-13 mins	13-16 mins
Car	9-10 mins	9-10 mins	10-11 mins	11-12 mins

Table 11.1: accessibility by mode

Notes:

1. Primary & secondary schools, further education, GP surgery, hospital, food store, town centre, employment sites
2. Biscot, Bury Park, Challney, Dallow, Lewsey and Saints wards
3. Farley, High Town, Leagrave, Limbury, Northwell, Round Green, South and Sundon Park wards
4. Barnfield, Bramingham and Icknield wards
5. Crawley, Stopsley and Wigmore wards

Of the non-car modes, cycling in particular substantially improves access to a number of local services, such as areas of employment.

This is because a good distance can be covered in quite a short time. Reassuringly, given the health deprivation in the town, access to a GP is good, although the hospital is less accessible. However, there are issues; notably, access to further education by walking and public transport is not especially good. Furthermore, there are

some issues for at-risk groups in the town, such as their access to food stores with a range of fresh healthy food. Although in percentage terms access to employment areas for those claiming job-seekers allowance is quite good compared to neighbouring Central Bedfordshire, there are more claimants in Luton and so the actual number with poor access is relatively high.

In 2010 the Government published research into the relationship between health/ climate change and transport that identifies the barriers to use of different transport modes. However the most comprehensive assessment is the Department for Transport Evidence base review on mobility undertaken in 2006, which considers the equality of opportunity to transport by race, gender, disability, and age, and what interventions could overcome these. That research also shows that people from ethnic, low income and single-parent households are least likely to have access to a car, and also that, even if the household has a car, it is often not always available for use by the whole household, particularly affecting women and children. That research identified working adults (particularly women), together with disabled and elderly people, as experiencing barriers to public transport use.

Enabling and ensuring the availability of public transport is vital in promoting social inclusion, especially where service provision is declining, such as the closure of local post offices. The loss of local services can have dramatic impacts on accessibility, with alternatives being effectively inaccessible without a car.

These people without access to a car view this as a 'vicious circle', in which being unable to afford a car means they could not access jobs, education, health, and social/leisure opportunities. This can lead to social isolation, loss of confidence, feelings of insecurity and lack of independence. Vulnerability to exclusion increases with age and impairment, so that the oldest people and those with more severe disabilities most likely to be disadvantaged.

A key aim is to improve access to employment opportunities and other local services /social networks by a range of transport modes.

Community centres and doctors/dentists surgeries are generally well located to serve their local surrounding community. However, in reality some GP's/dentists or schools may either be full or people choose not to attend their nearest ones. A lot of school children are being bussed out from the central area because there are not enough primary places close to the centre of town. Under these circumstances, access is still an issue, and the need is to ensure that people, especially the vulnerable, get access to key services. We also need to consider the changing face of primary care services, which means that many services will be out in the community and there may be more specialist (serious) cases that, for example, require travel across town to the Luton and Dunstable hospital.

Geographical barriers to services is defined as the ease of access to a range of basic services such as a primary school and a high level of deprivation is typically because of the poor availability of key services and the difficulty of accessing them without a car. Only one of Luton's 121 LSOAs (ranked 3,007 out of the 32,844) is in the 10% most deprived nationally (where 1 is the most deprived), and only 10 are in the 20% most deprived. This is therefore not a major issue in general for Luton.

Alternative means of making service provision such as community service hubs and the use of on-line services, and changes to opening times of GP and dental surgeries, will also assist in addressing accessibility problems.

Policy 22: Access to Services and Amenities

We will focus efforts on the availability, affordability, acceptability and accessibility of sustainable transport modes in order to target:

- Those communities that are most in need, being those which have a relatively high number of households without a car or van and poor access to local services, especially employment and further education;
- Areas of high health deprivation;
- Those services that are least accessible overall to Luton residents, such as the Luton and Dunstable hospital;
- Locations where there are the highest numbers of job seekers with poor accessibility to employment.

To improve the availability of transport or accessibility of services we will:

- Use a multi-agency approach to improve passenger transport accessibility by continuing to work with key partners, such as transport providers. However, we will also work with
- key service providers in order to seek ways of making their services more accessible,
- particularly the National Health Service, further education colleges, and employment centres; Work with communities to facilitate the further development of community led and operated schemes, helping the community develop their own solutions to meet their own particular needs. This could include more innovative projects such as social car sharing initiatives;
- Make better use of the Council's own vehicle fleet to help those without a car have better access to the hospital and other key facilities;
- Investigate the use of taxis in improving accessibility for vulnerable people or in areas of poor accessibility to services;
- Encourage new developments in locations that are accessible to key services or ensure that key service provision is included as part of the developments;
- Require developers to provide or contribute towards transport provision.

The Evidence Base report also found that cycling and, to a lesser extent, walking significantly improve accessibility to local community facilities. There will be a focus on identifying and delivering the most appropriate solutions to address the needs of the targeted communities and so engagement with them too will be critical. We will work to improve the availability of passenger transport in areas of poor accessibility, though improving transport may not always be the best thing to do. Where this is the case we will work with others to help support and facilitate improvements to local service availability.

However, a key area of work will be ensuring there is independent support for communities to help

them to develop their own local transport projects to meet local needs. This is likely to manifest as support for innovative and viable transport solutions, such as social car schemes.

The location of new development has a big impact on the ability of residents to access services. Land use planning should aim to maintain or increase accessibility to services for communities by providing new local service centres or facilities or provide an increased level of public transport service. Land use planning should also aim to ensure that new developments are located on sites with good access for those without a car, for example near public transport nodes. The amount of new development identified in and around Luton will provide the various councils with the opportunity to integrate the demands of accessibility into all transport, housing and business development proposals.

The most basic requirements in terms of accessibility by those people experiencing mobility problems, as well as a bus being available, is that to use it they need to:

- be able to get on and off the bus with ease;
- be able to afford the fare;
- know about and understand the system, especially timetables.

Luton has an increasingly elderly population as a proportion of the total population, and this proportion is expected to increase over the duration of our Transport Strategy. As such it will be important to ensure that elderly people, and those with other mobility impairment, are able to access and make full use of public transport and the transport network with ease.

Luton Council's own vehicle fleet is very accessible for people with mobility problems, but this is not the case with public transport generally in the town. The condition of footways has been getting better and all of Luton's controlled pedestrian crossings are now fully accessible for disabled people.

Policy 23: Use of the Transport Network by Mobility Impaired People

Key priorities will be:

- Ensuring that all bus services are fully accessible, be they commercial services or the council's own fleet of vehicles;
- Ensuring people, especially those with mobility problems, are able to use the footway network to access passenger transport services. The further provision of dropped kerbs will be essential, as will improving bus stops by providing raised kerbs to enable "level boarding". The priorities will be dropped kerbs and raised bus stops:
 1. Along all routes served by Luton Dunstable Busway services;
 2. Near nursing or residential homes or sheltered housing;
 3. Near GP surgeries;
 4. Serving local facilities and services;
 5. Serving key bus corridors;
 6. Serving the town's three rail stations;
- Working with Network Rail and train operators to ensure Luton and Legrave stations become fully accessible.
- Continuing to support Government initiatives on concessionary fares for older people and for those with disabilities;
- Ensuring that high quality information about bus services is made available to users, including at the roadside, through electronic media and in printed form.
- We will in particular continue to roll out the provision of Real Time Passenger Information, especially at the bus stops themselves;

Safety, or at least concerns over safety, can be a barrier for many people wanting to access and use public transport. Level boarding at bus stops and the use of smartcard technology for 'special needs' passengers will assist mobility impaired people, and the provision of shelters equipped with Real Time Passenger Information, and lighting and CCTV will contribute to improve personal safety of vulnerable people such as women and elderly people.

The needs of people with disabilities will routinely be considered as part of all transport improvement schemes. These include the consideration of street furniture along the footway, ensuring adequate seating and removing clutter that may act as an obstacle and consideration of raised and dropped kerbs at appropriate points to enable crossing of the road. As explained in other policies, the Council will focus improvements to footways on the Core Walking Routes and around services most used by people with mobility problems.

The Council has worked, and will continue to work, closely with its partners to meet the requirements of the Disability Discrimination Act Legislation for accessible facilities, vehicles and equality of access to services. However, there is more that can be done to improve accessibility ahead of legislated deadlines. We will work with transport operators to ensure all buses and bus boarding points in Luton are fully accessible and comply with the Disability Discrimination Act.

In 2004, Luton Council entered into a voluntary Bus Quality Partnership with Arriva to improve the provision of bus services in the town. With the start of busway services in Autumn 2013, the partnership was extended to also include Centrebus and Grant Palmer. Under the Partnerships, in return for the Council investing in bus priority measures and stop improvements, the operators will invest in more low-floor vehicles and better driver training/customer care. We will also work with Passenger Focus to ensure that effective complaints procedures are in place.

Fundamental to accessibility to rail stations is



the provision of obstacle-free, accessible routes to and between platforms. This generally includes the provision of lifts or ramps, as well as associated works and refurbishment along the defined routes to the stations. Luton Airport Parkway station is already fully step-free, whilst the provision of an eastern entrance to Leagrave station has also improved accessibility there. The planned work on Luton central station to install lifts and stairs to all platforms will also make this step-free, which will enable wheelchair and mobility scooter users to access all platforms. It is anticipated this work will be completed by 2024.

Concessionary fares were introduced in April 2006 for people with disabilities and for those aged over 60. They have helped to remove cost as a barrier to bus use for many and this has increased passenger transport patronage and has benefited those who are able to use bus services. Joint ticketing arrangements will take advantage of developments in smart card ticketing with a priority for the provision of integrated ticketing between operators. We will also help to support other joint bus and rail ticketing initiatives to develop a range of ticketing options to facilitate better integration between bus and rail services, including multi bus operator ticketing and integrated bus-rail tickets.

Information on timetables is critical for bus use. We will work with the bus operators to ensure a range of passenger information is available at all stages of a journey, including better integration of bus services with train timetables. We will deliver new formats that make timetable information more easily understood by service users and innovative arrangements with bus operators to ensure their regular update. In particular, we will install Real Time Passenger Information facilities based around interactive displays which can be used with a smartcard programmed to suit the individual requirements of people with special needs.

The key outcome relating to the application of this policy is to improve accessibility to a range of goods and services in the town. The Department for Transport annually collates information on the percentage of households within 15 minutes by walking/public transport or cycle of key services (GP's, hospital, schools, further education and employment).

Appendices

Appendix 1

Further information on Experian's 'Mosaic' Persona profiles

As set out in our Transport Priorities (chapter 7 of the Transport Strategy), our approach to encouraging sustainable travel as one stage of a journey is based on different 'Persona' groups developed using Experian's 'Mosaic' profiles. Table 1 below includes a brief summary of each Persona.

PERSONA TYPE	DESCRIPTION
Aspiring Homemakers	Younger households in full-time employment settling down in housing priced within their means.
City Prosperity	High status city dwellers living in high value properties in central locations and pursuing careers with high rewards.
Country Living	Well-off home owners in senior managerial positions (including self-employed) living in rural locations enjoying the benefits of country life.
Domestic Success	Thriving families who are busy bringing up children and following careers, living in 3 or 4 bedroom suburban homes (owned with mortgage) that invest in new technology.
Family Basics	Parents aged 25-40 with families but limited resources who have to budget to make ends meet.
Modest Traditions	Mature aged homeowners with adult children living in value suburban homes and enjoying stable lifestyles.
Municipal Challenge	Urban renters of social housing on low income facing an array of challenges.
Prestige Positions	Established families living in large high value detached homes living upmarket lifestyles with high assets and investments.
Rental Hubs	Educated young people (aged 18-35) privately renting in urban neighbourhoods.
Rural Reality	Householders living in inexpensive homes in village communities.
Senior Security	Elderly (singles and couples) homeowners enjoying a comfortable retirement (e.g. additional pensions above state); low mileage drivers.
Suburban Stability	Mature families (some adult children at home) with settled lives owning mid-range suburban 3 bedroom houses and have lived at same address for years.
Transient Renters	Single people and sharers privately renting low cost homes for the short term.
Urban Cohesion	Residents living with extended families in settled urban multi-cultural communities with a strong sense of identity.
Vintage Value	Elderly people living alone on low income, reliant on support to meet financial or practical needs.

Table 2 on the next two pages provides more details of the characteristics of the top seven of these Persona types in Luton (urban cohesion, rental hubs, aspiring homemakers, family basics, transient renters, senior security and suburban stability), and the rest of this Appendix then provides full profiles of each these seven Persona types in Luton.

Luton Mosaic Group, Table 2: Seven Largest Mosaic Groups by Luton Households

Group/Type	Group/Type Name	Group/Type Description	Luton Households	Luton HH%	National HH%	Household Income
E	Suburban Stability	<p>Older families, some adult children at home, suburban mid-range homes, 3 bedrooms, have lived at same address some years, research on Internet, GCSE, A levels & apprenticeships</p> <p>Low levels of dependency of state support, non-smokers and moderatedrinkers, generally in good health</p> <p>Channel Preference: In person, online, email</p>	<p>6,311</p> <p>Stopsley, Sundon Park, Wigmore</p>	7.8	8.4	£40-£49K
F	Senior Security	<p>Elderly singles and couples, homeowners, comfortable homes, additional pensions above state, don't like new technology, low mileagedrivers.</p> <p>Elderly population with financial security, older population who stay active, generally in good health for age</p> <p>Channel Preference: Landline & post</p>	<p>5,569</p> <p>Icknield & Stopsley</p>	6.85	8.46	£15-29K
I	Urban Cohesion	<p>Urban Cohesion, settled extended families, city suburbs, multicultural, own homes, sense of community, younger generation love technology,vocational qualifications.</p> <p>Diverse neighbourhoods, moderate household incomes, families with school age and older children, older people per and post retirement, a number of larger families who share their home with elderly parents andother family members.</p> <p>Channel Preference: Post, Face to face, Smartphones.</p>	<p>18,436</p> <p>Biscot,Challney, Dallow,Farley, Leagrave, Saints</p>	22.70	4.79	£30k-£39k
H	Aspiring Homemakers	<p>Younger households, full-time employment, private suburbs, affordablehousing costs, starter salaries, buy and sell on eBay, GCSE, A level & apprenticeships.</p> <p>Younger families & couples, home owners, users of smart phones andsocial networking.</p> <p>Channel Preference: Smartphones, Email, Internet.</p>	<p>8,870</p> <p>Lewsey, Round Green,Wigmore</p>	10.91	8.79	£40-£49k

Group/Type	Group/Type Name	Group/Type Description	Luton Households	Luton HH%	National HH%	Household Income
J	Rental Hubs	<p>Aged 18-35, private renting, singles and sharers, urban locations, young neighbourhoods, high use of smartphones, degree level or higher qualifications</p> <p>Students, early career and administrative roles, high population turnover, younger age group, more likely to not have family ties, active on social networking sites.</p> <p>Channel Preference: Smartphones, Email, Internet.</p>	10,195	12.50	6.96	£20k-£29k
L	Transient Renters	<p>Private renters, low length of residence, low cost housing, singles and sharers, older terraces, few landline telephones, lack of qualifications.</p> <p>Younger people living alone or house sharing, lower skilled jobs, high population churn, high use of mobile phones.</p> <p>Channel Preference: Smartphones, Face to face, Phone, Internet</p>	7,884	9.70	6.45	£20k-£29k
M	Family Basics	<p>Families with children, aged 25 to 40, limited resources, some own low cost homes, some rent from social landlords, squeezed budgets, GCSE, A level qualifications.</p> <p>Often need income support, often read red top newspapers, group least likely to recycle, this group are more likely to be in poor health.</p> <p>Channel Preference: Smartphones, SMS, landline</p>	6,602	8.12	7.22	£15k-£29k

Mosaic Group Summary

These are the likely demographic characteristics of the Urban Cohesion Mosaic group. These characteristics are measured by Experian's Mosaic modelling.

Urban Cohesion



18,436 households in Luton

Major locations in Luton: Biscot, Challney, Dallow, Farley, Legrave and Saints

Key Features:

- Settled extended families
- City suburbs
- Multicultural
- Own 3 bedroom homes
- Sense of community
- Younger generation love technology
- Vocational qualifications
- Preferred communication, mobile and SMS
- Diverse neighbourhoods
- Moderate household incomes
- Families with school age and older children, older people per and postretirement
- A number of larger families who share their home with elderly parents and other family members



Urban Cohesion Demographics

Gender

Slightly more males

Age

Average age 50-60 years old

Number of children

Large families with many children

Household composition

Family's with other relations. It is common for these households to have older relations living with them and married children often living with parents

Qualifications:

Most likely to be vocational qualifications

Family life-stage

Mature family with children, older single

Ethnic background

Ethnically diverse areas with large Asian populations

Engagement and communications Attitude to new technology

Love technology, always first with gadgets

Contacting organisations preference

Post

Offers and promotions preference

SMS and mobile

Internet usage

Moderate internet usage

Technology owned (or access)

Smart TV, tablet, laptop



Email access

Regular use of email

Facebook access

Regular use of Facebook

Twitter access

Regular use of Twitter

Internet surfing

Moderate internet surfing

Watching content on smartphone, tablet, laptop or PC

Regular use of watching on smartphone etc

Newspapers

The Independent, Guardian, Daily Express, Daily Telegraph, Times, Daily Mirror

General/Home lives

Supermarkets visited most often

Local shops, M & S, Lidl, Sainsbury's, Iceland

Organisations belong to

Strong likelihood of belonging to religious organisations

General finance

Household income

Below average incomes

Small or home office

Above average

Benefit claimants (adults)

Above average take-up of job seekers allowance, income support and tax credits



General property

Property type

Terraced housing & converted flats

Tenure

Owner occupied & private rented

Number of bedrooms

2-3 bedrooms

Health

Health status

Largely in good health

Activity limited

Average Smoking

Above average for heavy smoking

Alcohol consumption

Below average Taking care of self Average health

Feelings about weight

Below average for feeling over weight

Sports participation

Average

Exercise

Slightly above the average for not taking any exercise

Education

Student population

Above average

Mosaic Group Summary

Rental Hubs



These are the likely demographic characteristics of the Rental Hubs Mosaic group. These characteristics are measured by Experian's Mosaic modelling.

10,195 households in Luton

Location in Luton: Farley, High Town, South

Key Features

- Aged 18-35
- Private renting
- Singles and sharers
- Urban locations
- Young neighbourhoods
- High use of smartphones
- Degree level or higher qualifications

Attitudes & Preferences

- Preferred communication, mobile and SMS
- Students, early career and administrative roles
- High population turnover
- Younger age group, more likely to not have family ties
- Active on social networking sites



Rental Hubs Demographics Gender

Slightly more males

Age

Median age 25-35 year olds

Number of children

Low number of children

Household composition

Households largely made up of singles and house sharers

Qualifications

Degree level and higher

Family life-stage

Young singles, mature singles, house sharers and young families without children

Ethnic background

Ethnically diverse

Engagement and communications

Attitude to new technology

Love technology, always first with gadgets

Contacting organisations preference

Email & online

Offers and promotions preference

SMS and mobile

Internet usage

Regular internet users

Technology owned (or access)

Smart TV, smart phone

Email access

Regular use of email



Facebook access

Regular use of Facebook

Twitter access

Regular use of Twitter

Internet surfing

Daily internet surfing

Watching content on smartphone, tablet, laptop or PC

Watch content on smartphone daily

Newspapers

The Independent, Guardian, Times, Daily Mirror

General/Home lives

Supermarkets visited most often

Lidl, Sainsbury's

Organisations belong to

Average membership of sports/ hobbies and charity organisation

General finance Household income

Average and above average incomes, £20-£40k

Small or home office

Average

Benefit claimants (adults)

Average take up of benefits

General property

Property type

Flats

Tenure

Private renters

Number of bedrooms

1-2 bedrooms

Health

Health status

Largely in good health



Activity limited

Below average levels of disability

Smoking

Above average for light smoking

Alcohol consumption

Below average Taking care of self
Above average for health activities

Feelings about weight

Below average for feeling over weight

Sports participation

Regular sports participation

Exercise

Above average levels of exercise

Education

Student population

Above average

Mosaic Group Summary

Aspiring Homemakers



These are the likely demographic characteristics of the Aspiring Home-makers Mosaicgroup. These characteristics are measured by Experian's Mosaic modelling.

8,870 households in Luton

Major Locations Luton: Lewsey, Round Green and Wigmore

Key Features

- Younger households
- Full-time employment
- Private suburbs
- Affordable housing costs
- Starter salaries
- Buy and sell on eBay
- GCSE, A level & apprenticeships

Attitudes & Preferences

- Younger families & couples
- Home owners
- Users of smart phones and social networking



Aspiring Homemakers

Demographics Gender

Equal balance of sexes

Age

Average age 26-40 year olds

Number of children

1-3 children

Household composition

Family and Pseudo families

Qualifications

GCSE, A level & apprenticeships

Family life-stage

Young families with and without children

Ethnic background

Not ethnically diverse

Engagement and communications

Attitude to new technology

Love technology, always first with gadgets

Contacting organisations preference

Email and Online

Offers and promotions preference

SMS and email

Internet usage

Average internet users

Technology owned (or access)

Smart TV, smart phone, laptop, tablet



Email access

Regular use of email

Facebook access

Regular use of Facebook

Twitter access

Regular use of Twitter

Internet surfing

Daily internet surfing

Watching content on smartphone, tablet, laptop or PC

Regularly watch content on smartphone

Newspapers

The Sun

General/Home lives

Supermarkets visited most often

Aldi, Asda & Tesco

Organisations belong to

Average membership of sports/ hobbies clubs

General finance Household income

Average and above average incomes, £30-£70k

Small or home office

Average

Benefit claimants (adults)

Below average take up of benefits

General property

Property type

Semi- detached & terraced

Tenure

Home owners



Number of bedrooms

2-3 bedrooms

Health

Health status

Largely in good health

Activity limited

Below average levels of disability

Smoking

Above average for light smoking

Alcohol consumption

Moderate drinkers

Taking care of self

Average for health activities

Feelings about weight

Average for feeling over weight

Sports participation

Regular sports participation

Exercise

Average levels of exercise

Education

Student population

Low student population

Mosaic Group Summary

Family Basics



These are the likely demographic characteristics of the Family Basics Mosaic group. These characteristics are measured by Experian's Mosaic modelling.

6,602 households in Luton

Major locations in Luton: Farley, Leagrave, Lewsey, Northwell

Key Features

- Families with children
- Aged 25 to 40
- Limited resources
- Some own low cost homes
- Some rent from social landlords
- Squeezed budgets
- GCSE, A level qualifications

Attitudes & Preferences

- Often need income support
- Often read red top newspapers
- Group least likely to recycle
- This group are more likely to be in poor health



Family Basics Demographics

Gender

Slightly more females than males

Age

Average age 18-40 year olds

Number of children

1-4 children

Household composition

Family & other adults & Pseudo families

Qualifications

GCSE & A level

Family life-stage

Young and mature families with children

Ethnic background

Not ethnically diverse

Engagement and communications

Attitude to new technology

Love technology, always first with gadgets

Contacting organisations preference

Phone

Offers and promotions preference

SMS and mobile

Internet usage

Regular internet users

Technology owned (or access)

Smart phone, tablet



Email access

Higher than average numbers of people who don't have email

Facebook access

Regular use of Facebook

Twitter access

Regular use of Twitter

Internet surfing

Regular internet surfing

Watching content on smartphone, tablet, laptop or PC

Regularly watch content on smartphone

Newspapers

Daily Star, Daily Mirror and Sun

General/Home lives

Supermarkets visited most often

Aldi, Asda & Iceland

Organisations belong to

Low membership of organisations

General finance Household income

Below average levels of income

Small or home office

Below average

Benefit claimants (adults)

Above average take up of benefits

General property

Property type

Terraced



Tenure

Private Renters

Number of bedrooms

1-2 bedrooms

Health

Health status

Above average levels of people in poor health

Activity limited

Average levels of disability

Smoking

Above average for heavy smoking

Alcohol consumption

Moderate drinkers

Taking care of self

Below average for health activities

Feelings about weight

Slightly above average for feeling over weight

Sports participation

Average levels of sports participation

Exercise

Average levels of exercise

Education

Student population

Low student population

Mosaic Group Summary

Transient Renters



These are the likely demographic characteristics of the Transient Renters Mosaic group. These characteristics are measured by Experian's Mosaic modelling.

10,195 households in Luton

Location in Luton: Farley, High Town and South

Key Features

- Private renters
- Low length of residence
- Low cost housing
- Singles and sharers
- Older terraces
- Few landline telephones
- Lack of qualifications

Attitudes & Preferences

- Younger people living alone or house sharing
- Lower skilled jobs
- High population churn
- High use of mobile phones



Transient Renters Demographics

Gender

Equal balance of sexes

Age

Average age 18-35 year olds

Number of children

Low numbers of children

Household composition

House-sharers

Qualifications

Often without qualifications

Family life-stage

Young singles/home-sharers, young household with children

Ethnic background

Ethnically diverse with above average numbers of Asian Pakistani

Engagement and communications

Attitude to new technology

Love technology, always first with gadgets

Contacting organisations preference

Shop/branch and phone

Offers and promotions preference

SMS and mobile

Internet usage

Regular internet users

Technology owned (or access)

Smart phone

Email access

Higher than average numbers of people who don't have email

Facebook access

Regular use of Facebook



Twitter access

Regular use of Twitter

Internet surfing

Regular internet surfing

Watching content on smartphone, tablet, laptop or PC

Regularly watch content on smartphone

Newspapers

Daily Star, Daily Mirror and Sun

General/Home lives

Supermarkets visited most often

Aldi, Asda & Iceland

Organisations belong to

Low membership of organisations

General finance

Household income

Below levels of income

Small or home office

Below average

Benefit claimants (adults)

Above average take up of benefits

General property

Property type

Terraced

Tenure

Private Renters

Number of bedrooms

1-2 bedrooms

Health

Health status

Above average levels of people in poor health

Activity limited

Average levels of disability



Smoking

Above average for heavy smoking

Alcohol consumption

Moderate drinkers

Taking care of self

Below average for health activities

Feelings about weight

Slightly below average for feeling over weight

Sports participation

Average levels of sports participation

Exercise

Average levels of exercise

Education

Student population

Low student population

Mosaic Group Summary

Senior Security



These are the likely demographic characteristics of the Senior Security Mosaic group. These characteristics are measured by Experian's Mosaic modelling.

Major Locations in Luton: Icknield and Stopsley 5,569 households in Luton

Key Features

- Elderly singles and couples
- Homeowners
- Comfortable homes
- Additional pensions above state
- Don't like new technology
- Low mileage drivers Attitudes & Preferences
- Elderly population with financial security
- Older population who stay active
- Generally in good health for age



Senior Security Demographics Gender

More females than males

Age

Average age 65+

Number of children

Grown up children

Household composition

Family & older singles

Qualifications

Apprenticeships

Family life-stage

Elderly households

Ethnic background

Not ethnically diverse

Engagement and communications

Attitude to new technology

Lower take up of new technology

Contacting organisations preference

Post

Offers and promotions preference

Post and landline

Internet usage

Lower internet use

Technology owned (or access)

PC with lower take-up of smart phones, tablets and laptops

Email access

Higher than average numbers of people who don't have email



Facebook access

Below average use of Facebook

Twitter access

Low use of Twitter

Internet surfing

Lower than average internet surfing

Watching content on smartphone, tablet, laptop or PC

Don't regularly watch content on smartphone

Newspapers

Daily Mail, Daily Express and Daily Telegraph

General/Home lives

Supermarkets visited most often

M & S, Morrisons and Waitrose

Organisations belong to

High membership of organisations, religious organisations in particular

General finance

Household income

Pension income

Small or home office

Below average

Benefit claimants (adults)

State pension

General property

Property type

Semi-detached and bungalows



Tenure

High levels of home ownership

Number of bedrooms

Average of 3 bedrooms

Health

Health status

Average health levels

Activity limited

Average levels of disability

Smoking

Low levels of smoking

Alcohol consumption

Above average levels of alcohol consumption

Taking care of self

Have a healthy diet

Feelings about weight

Below average for feeling over weight

Sports participation

Average levels of sports participation

Exercise

Below average levels of exercise

Education

Student population

Low student population

Mosaic Group Summary

Suburban Stability



These are the likely demographic characteristics of the Suburban Stability Mosaic group. These characteristics are measured by Experian's Mosaic modelling.

6,311 households in Luton

Major locations in Luton: Stopsley, Sundon Park, Wigmore

Key Features

- Older families
- Some adult children at home
- Suburban mid-range homes
- 3 bedrooms
- Have lived at same address some years
- Research on Internet
- GCSE, A levels & apprenticeships

Attitudes & Preferences

- Low levels of dependency of state support
- Non smokers and moderate drinkers
- Generally in good health



Suburban Stability Demographics

Gender

Equal numbers of males and females

Age

Average age 46-65 years old

Number of children

1-2 children & grown up children

Household composition

Family and other adults

Qualifications

GCSE, A levels & apprenticeships

Family life-stage

Older singles, mature families with and without children

Ethnic background

Not ethnically diverse

Engagement and communications

Attitude to new technology

Average take-up of new technology

Contacting organisations preference

No strong areas of preference for contact

Offers and promotions preference

No strong areas of preference for contact

Internet usage

Average internet use

Technology owned (or access)

Average take-up of smart phones, tablets and laptops

Email access

Average numbers of people who don't have email

Facebook access

Average use of Facebook



Twitter access

Below average use of Twitter

Internet surfing

Average internet surfing

Watching content on smartphone, tablet, laptop or PC

Average levels of watching content on smartphone

Newspapers

Daily Mail and Daily Express

General/Home lives

Supermarkets visited most often

Aldi, Morrisons and Netto

Organisations belong to

Average levels of membership of organisations

General finance Household income

Average incomes £30-£50k per annum

Small or home office

Average

Benefit claimants (adults)

Below average levels of benefit claimants

General property

Property type

Semi-detached and bungalows

Tenure

High levels of home ownership

Number of bedrooms

Average of 3 bedrooms

Health

Health status

Average health levels



Activity limited

Below average levels of disability

Smoking

Low levels of smoking

Alcohol consumption

Average levels of alcohol consumption

Taking care of self

Average levels of having a healthy diet

Feelings about weight

Average for feeling over weight

Sports participation

Average levels of sports participation

Exercise

Average levels of exercise

Education

Student population

Low student population

Air Quality Assessment Protocol for Determining the Impact of Vehicle Emissions Arising From Development

The purpose of any air quality assessment is to quantify changes in pollutant concentrations and/or exposure to poor air quality at relevant receptors resulting from the proposed development. Impacts must be assessed in the context of relevant national and international objectives and targets and any local planning or other policies.

Assessment where Exposure may arise

Exposure may be identified where residential accommodation is proposed and there is likely to be exposure to concentrations above EU Limit Values.

Where no modelling data exists and relevant accommodation is proposed next to roads with an AADT (annual average daily traffic flow) of greater than 10,000, the developer may be required to undertake monitoring for a limited period to ascertain pollutant levels. On agreement with the local authority about the relevant parameters, a developer may refer to the Defra UK Ambient Air Quality Interactive Maps¹.

The Council, in considering policies on exposure, may give weight to the following mitigation measures:

- Can the residential building envelope be pushed back beyond the pollutant exceedence zone?
- Can the scheme be designed to place residential units at the rear of the development or on higher floors?
- Can vegetative barriers, including appropriate tree species, offer some degree of separation from the road?
- Can design of built forms avoid the creation of canyons, allowing a greater degree of pollutant dispersal?

Mechanical ventilation should not automatically be seen as providing effective mitigation against exposure and should be scrutinised carefully, not only in terms of the acceptability of providing living conditions in what could be described as a hermetically sealed unit, but also in terms of the increase in energy requirements and maintenance that is incurred and the attendant secondary noise effects that can arise.

The assessment must take into account the cumulative air quality impacts of committed developments and schemes (i.e. proposals that have been granted planning permission at the time the assessment is undertaken). This ensures that 'with development' and 'without development' scenarios are represented as accurately as possible.

The assessment should involve the completion of an air quality modelling study, although from time to time specific pollutant monitoring may also be required. Modelling can be carried out once the information to be used has been agreed with the Local Authority.

¹ <http://uk-air.defra.gov.uk/data/gis-mapping>

Typically, this would include:

- Traffic data used for the assessment including the trip rates associated with the development, the frequency of the trips, the length and route of the trips and the nature and types of vehicles being used.
- Emission data source;
- Meteorological data source and representation of area;
- Baseline pollutant concentration including any monitoring undertaken;
- Background pollutant concentration;
- Choice of base year;
- Basis for NO_x: NO₂ calculations
- Modelling should be carried out using a recognised local scale dispersion model to be agreed with the Local Authority prior to commencement of work. The study normally comprises four simple steps:
 1. Assessment of the existing air quality situation in the study area for the baseline year and agreement of specific receptor points with the Local Authority prior to commencement. The model should be validated against council (or other) monitoring data which can usually be supplied on request.
 2. Prediction of future air quality without the proposed development in place.
 3. Prediction of future road transport emissions and air quality with the proposed development in place.
 4. An assessment of the effect(s) the proposed development will have on road transport emissions air quality including the proposed mitigation measures.

The assessment will also need to include:

- The relevant details of the proposed development
- Details of the relevant air quality standards and objectives
- Details of the agreed assessment method
- An assessment where appropriate of construction related air quality impacts
- Details of the modelling software and its validation
- Results of the modelling exercise including uncertainties, errors, adjustments and verification
- A sensitivity test which assumes that there will be no reduction in traffic related emission factors from the baseline year
- Summary of the assessment results and air quality impacts arising
- Mitigation measures to be taken to protect air quality

For development schemes that have the potential for major detrimental impact on air quality, an assessment procedure is specified to evaluate the likely change in relevant concentrations and emissions arising from the scheme. As part of the assessment procedure the following formula can be used to quantify the pollution impact of a development and monetised using the pollutant damage costs (per tonne) specified by the Defra Inter-Governmental Department on Costs and Benefits (IGCB)².

Road Transport Emission Increase = Σ [Estimated trip rate for 5 years x Emission rate per 10 km per vehicle type x Damage costs]

By establishing the damage costs arising from development scheme emission changes it is possible to assess the scale and kind of any additional mitigation or compensation that is required to make the scheme acceptable. A trip length of 10 km Has been used which is derived from the DfT National Travel Surveys³ estimation of average trip length.

A table of the damage costs per tonne of air quality pollutants is provided in Annex 2 and Annex 3 summarises Emission factors for different types of vehicle. An example of the Emissions Assessment Calculation is provided in Annex 4.

A suite of mitigation/compensation measures for major developments is provided in the table below:

Indicative measures for Mitigation and/or Compensation Required for Major Developments

- On-street EV recharging
- Contribution to low emission vehicle refuelling infrastructure
- Car clubs
- Low emission bus/mini-bus service provision
- Low emission waste collection services
- Bike/e-bike hire schemes
- Renewable fuel & energy generation projects
- Incentives for the take-up of low emission vehicle technologies and fuels
- Contributions to subsidised public transport for staff or residents
- Air Quality Monitoring programmes

² <http://www.defra.gov.uk/environment/quality/air/air-quality/economic/damage/>

³ Extrapolated from The National Travel Survey :2011,Statistical Release, 13th December 2012 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/35738/nts2011-01.pdf

Annex 2 - IGCB Air Quality Damage Costs per Tonne, 2010 prices

Sensitivities

	Central Estimate(1)	Low CentralRange (2)	High Central Range (2)
NO _x	£955	£744	£1,085
SO _x	£1,633	£1,320	£1,856
Ammonia	£1,972	£1,538	£2,241
PM Domestic	£28,140	£22,033	£31,978
PM Agriculture	£9,703	£7,598	£11,027
PM Waste	£20,862	£16,335	£23,708
PM Industry	£25,229	£19,753	£28,669
PM ESI	£2,426	£1,900	£2,757
PM Transport Average	£48,517	£37,987	£55,133
PM Transport Central London	£221,726	£173,601	£251,961
PM Transport Inner London	£228,033	£178,540	£259,129
PM Transport Outer London	£148,949	£116,621	£169,261
PM Transport Inner Conurbation	£117,899	£92,309	£133,975
PM Transport Outer Conurbation	£73,261	£57,362	£83,252
PM Transport Urban Big	£87,332	£68,377	£99,241
PM Transport Urban Large	£70,351	£55,081	£79,944
PM Transport Urban Medium	£55,310	£43,305	£62,853
PM Transport Urban Small	£34,932	£27,351	£39,696
PM Rural	£15,041	£11,776	£17,091

Annex 3 – Vehicle Emission Factors

Light Duty Diesel Vehicle Emission Factors per Euro Standard

Vehicle category	NOx Emission factor, g /veh-km	
	Diesel cars	Diesel LGVs
Euro 1	1.24	1.70
Euro 2	1.28	1.70
Euro 3	1.16	1.43
Euro 4	0.90	1.16
Euro 5	0.65	0.83
Euro 6	0.29	0.37

Heavy Duty Vehicle Emission Factors per Euro Standard (based on 2010 UK fleet)

Vehicle category	NOx Emission factor, g /veh-km		
	Buses and coaches	Rigid HGV	Articulated HGV
Pre Euro	23.3	16.4	26.8
Euro 1	16.6	11.5	19.5
Euro II	18.5	12.7	21.4
Euro III	19.1	11.0	17.9
Euro IV	10.1	6.7	11.1
Euro V EGR	6.1	4.0	6.6
Euro V SCR	15.6	11.8	19.0
Euro VI	2.5	2.3	3.0

Note – emissions at speed of 11 kph

Annex 4

Example Emissions Assessment Calculation

The calculation utilises the current Emissions Factor Toolkit (EFT)* to determine the transport related emissions from a development proposal. If the proposal is to include alternative fuels or technology i.e. LPG, EV etc, then there are “advanced options” within the EFT to accommodate this.

*<http://laqm.defra.gov.uk/review-and-assessment/tools/emissions.html#eft>

A screen shot of the input and output pages are shown below:

Input Screen

SourceID	Road Type	Traffic Flow	%HDV	Speed(kph)	No of Hours	Link Length (km)
Emissions calc	Urban (not London)	2.7	0	50	24	10

Output Screen

Source_Name	Pollutant_Name	All Vehicle (Annual Emissions (kg/yr except CO2 tonnes/yr))	All LDV (Annual Emissions (kg/yr except CO2 tonnes/yr))	All HDV (Annual Emissions (kg/yr except CO2 tonnes/yr))
Emissions calc	NOx	3.255	3.255	3.255
Emissions calc	PM10	0.380	0.380	0.380

The output is in kg of specified pollutant per year and requires converting to tonnes per year. This is then multiplied by the IGCB damage costs for the specified pollutant.

The following example demonstrates the calculation based on a development with 10 domestic properties¹⁴.

EFT Input:		
		10 household (urban not London) (NOx and PM ₁₀)X
		27 (trip/traffic ratio for 10 houses)
	X	cars only (0% HGV)
	X	50kph (avg. speed)
	X	10km (NTS UK avg.)
EFT Output = 32.55kg/annum (NOX) & 3.795kg/annum (PM₁₀)		
	=	0.0325tonnes/annum (NOX) & 0.003795tonnes/annum (PM ₁₀)
	X	£955/tonne (NOx) + £48,517/tonne (PM ₁₀)
	=	£31.08 = £184.15
	X	5 (years)
	=	£155.42 = £920.76
Total	=	£1,076
Notes:		

1. Trip Rates are sourced from the Transport Assessments and local authority where available.
2. Trip Length uses the National Travel Survey¹⁵ - (UK average = 10km).
3. The IGCB damage costs are the central estimates (currently NOx = £955/tonne & PM₁₀ transport average £48,517).

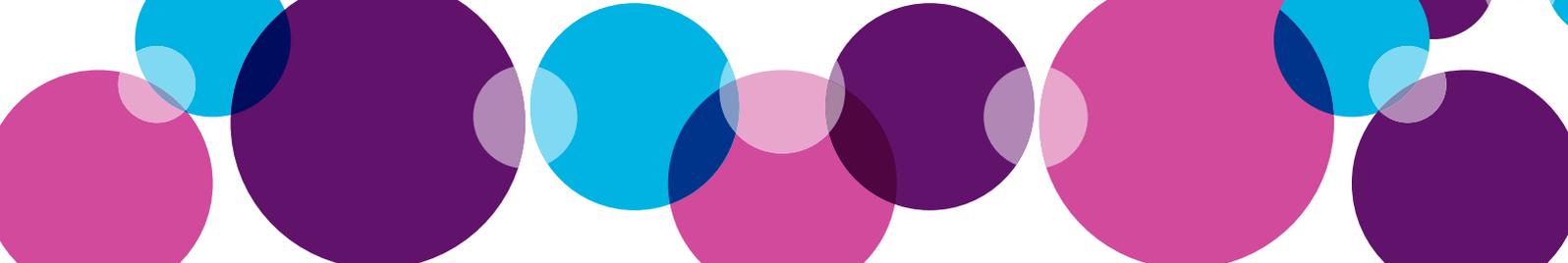
¹⁴ Sussex Air Quality Partnership "Air Quality and Emission Mitigation Guidance for Sussex Authorities 2013"

¹⁵ <https://www.gov.uk/transport-statistics-notes-and-guidance-national-travel-survey>

Appendix 3

Summary of LTP Monitoring Statistics

Walking and cycling:	DfT's National Travel Survey and the Sport England's Active Lives survey.
Public Transport-bus:	DfT statistics on bus patronage and bus punctuality
Public Transport-rail:	Office of Road and Rail statistics on station passengers
No. of electric cars/vans:	DfT statistics
Traffic speeds:	DfT statistics
Traffic flows:	DfT statistics
Town centre parking:	VMS system off-street parking occupancy
Air Quality:	LBC Annual Status Report contains information based on 2 real-time highway sites and 51 NO2 Diffusion Tubes
Carbon emissions:	Government statistics (currently published by BEIS)
Road Traffic Collisions:	DfT statistics on Personal Injury Accidents on highway
Crime/anti-social behav'r:	LBC
Accessibility:	DfT statistics on journey time to access various services (Primary/sec'dy school, college, GP, hospital, food shop, town centre, employment)
Deprivation:	Government statistics published every 2-3 years Journey to work: Government statistics as part of 10 year National Census



Thank you for reading