

Transport Impact Assessment (TIA)

Executive Summary

The TIA forms part of the transport evidence base for the Local Plan. The TIA informs the Local Plan by considering the impacts of development of sites in transport terms, and what mitigation (if any) is required. This considers whether sustainable transport modes can be taken up, given the type of development and its location; whether safe and suitable access to the site can be achieved for all users; and whether any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.

The key NPPF test for Local Plan is 'severe' (paragraph 115), that there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network. Broad Locations and Large sites will also be subject to significant further transport work to support Masterplanning and all sites will then be subject to significant further transport work to support planning applications in detail.

The TIA Site Assessments show that all the sites except Cross Lane, Harpenden have a reasonable prospect of achieving safe access by all modes. They further show no likely 'showstoppers' and no likely 'severe' Transport impacts.

The Hemel Garden Communities (HGC) Transport Vision and Strategy (TV&S) sets out HGC's approach for the long-term growth and transformation of Hemel Hempstead, to ensure the existing town can be developed as a successful, integrated, well-connected place with a sustainable movement network.

SADC and HCC have commissioned a 2041 forecast for St Albans District using their Countywide Model of Transport, COMET Run 7.1. Four scenarios were developed to determine the impact of the Local Plan sites, the proposed infrastructure improvements and a degree of potential mode shift towards walking, cycling and public transport and away from the private car which could reasonably occur. For scenarios 2 & 3, the transport forecasts indicate that the likely impact of development, at a Local Plan level, would not be 'severe'.

Consultants WSP were commissioned to undertake a modal shift study for the existing and future communities in St Albans district. The sustainable travel potential estimates the number of modelled car trips that can switch to sustainable modes (walking, cycling or public transport). This has been integrated into the Comet modelling forecasting work.

The Active Travel Schemes at Appendix 4 set out the keys schemes to deliver active travel which are derived from the Local Cycling and Walking Infrastructure Plan (LCWIP) and Growth and Transport Plans. Contributions from developers are expected to deliver these schemes. The scale of individual contributions and related schemes are set out on a site by site basis at appendix 1.

Appendix 6 signposts HCC guidance and HCC Developer Contributions

Appendix 7 sets out the methodology for the measurement of distances and walking times in the TIA Appendix 1.

Appendix 8 sets out the Local Plan Key Policy principles for Transport.

Introduction

The TIA forms part of the transport evidence base for the Local Plan. The TIA informs the Local Plan by considering the impacts of development of sites in transport terms, and what mitigation (if any) is required. This considers whether sustainable transport modes can be taken up, given the type of development and its location; whether safe and suitable access to the site can be achieved for all users; and whether any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree. One of the key themes running through the TIA is the enhanced role of sustainable travel and the delivery of active travel infrastructure for existing settlements and future communities. The TIA brings together various strands of transport work such as Local Transport Plan 4 (LTP4), Growth & Transport Plans (GTPs), Local Cycling & Walking Infrastructure Plan (LCWIP), the County Model of Transport (COMET), modal shift study and site requirements such as those identified by HCC and SADC in the draft Local Plan. The main transport schemes are being integrated into the Infrastructure Delivery Plan (IDP) which plays a key role in infrastructure delivery.

At settlement, district and county levels, the TIA considers the cumulative impact of development in the Local Plan with reference to the COMET model forecast. The TIA also looks at journeys to facilities and services at a settlement level, together with active travel infrastructure requirements and developer contributions towards scheme delivery. In addition, the TIA considers site specific aspects such as indicative access arrangements.

Further work on detailed transport requirements and mitigation will be undertaken in future during: (1) the Masterplanning stage – which is required for all Large sites and Broad Locations; and (2) when planning applications are brought forward (for all sites).

Transport considerations are being integrated into the Local Plan and Infrastructure Delivery Plan (IDP), including the major transport schemes in the district. Together, the initiatives from HCC and SADC provide a foundation for active travel infrastructure and approaches, promote eco-friendly modes of transportation and encourage significant changes in travel behaviour. In particular, this will make it easier for people to opt for walking and cycling for shorter journeys, offering broader community benefits.

The Transport Impact Assessment is structured into the following sections:

- Introduction
- Background
- Site Assessment - Overview

- Appendices
 - Appendix 1 – Site Assessments
 - Appendix 2 – Hemel Garden Communities
 - Appendix 3 – COMET Model
 - Appendix 4 - St Albans Modal Shift Study
 - Appendix 5 – Active Travel Schemes
 - Appendix 6 – HCC Guidance and Developer Contributions
 - Appendix 7 - Methodology for the measurement of distances and walking times
 - Appendix 8 - Local Plan Key Policy Principles for Transport

Background

By way of background, the NPPF provides the following advice for assessing sites that may be allocated for development in plans:

‘114. In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

- a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;
- b) safe and suitable access to the site can be achieved for all users;
- c) the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; and
- d) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.’

‘115. Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.’

NB: The consultation draft NPPF 2024 adds reference to a ‘vision led approach promoting sustainable transport modes’ and adds clarification that residual cumulative impacts on the road network would be severe ‘in all tested scenarios’.

In Hertfordshire, Hertfordshire County Council (HCC) is the Highways Authority, while National Highways is responsible for motorways and major A roads throughout England. The Local Plan's policies aim to build on the principles outlined in the HCC Local Transport Plan 2018-2031 (LTP4) www.hertfordshire.gov.uk/media-library/documents/about-the-council/consultations/ltp4-local-transport-plan-4-complete.pdf . These principles promote

sustainable transportation modes, encourage changes in travel behaviour, and aim to reduce the necessity for travel.

The LTP's transport user hierarchy prioritises the following:

- Finding ways to reduce travel demand and the need to travel.
- Meeting the needs of vulnerable road users, such as pedestrians and cyclists.
- Addressing the needs of passengers using public transportation.
- Catering to powered two-wheeler (mopeds and motorbikes) users.
- Meeting the needs of other motor vehicle users.

In addition to this, HCC have the [South West Herts Growth and Transport Plan](#) (2019) (GTP) and [South Central GTP \(May 2022\)](#), which support the objectives of LTP4. These plans include various transport schemes for the district. SADC and HCC also collaborated to create and adopt a Local Cycling and Walking Infrastructure Plan (LCWIP) <https://www.hertfordshire.gov.uk/about-the-council/consultations/transport-and-highways/lcwips-2022/st-albans-local-cycling-and-walking-infrastructure-plan.aspx>, and the council is working on additional transport-related evidence with HCC on an ongoing basis.

For longer distances, public transportation, such as buses and trains, will be viable alternatives to private cars. The key to boosting public transport usage is ensuring good location planning, but we can also promote its use through improved travel planning, information and awareness.

Additionally, digital connectivity plays a crucial role in reducing the need for travel. It enables residents to work, shop, and access services like GP appointments and higher education from the comfort of their homes, without the need to travel.

In terms of forecasting, HCC developed the COMET model suite which forecasts the impact of Local Plan development on the transport network. SADC and HCC commissioned the latest COMET model run in 2023-2024. In addition, HCC have commissioned the St Albans Modal Shift Study which estimates the number of modelled car trips that can switch to sustainable modes (walking, cycling or public transport).

Site Assessment – Overview

The site assessments in appendix 1 consider the transport aspects of the Local Plan development sites at an appropriate level for a Local Plan evidence document. Each site assessment contains the following: site description, distance to key services and facilities, key site transport and access related requirements, access strategy, COMET model forecast, indicative sustainable transport schemes, estimated developer contributions to these schemes and provides a conclusion on each of the assessed sites.

The Local Plan is seeking to support a modal shift which encourages some existing car trips and potential future trips from new development to switch to sustainable modes (walking, cycling or public transport). To support this intention, the assessment looks at sustainable journeys to key services and facilities and sets out an expectation that each site will make a

significant financial contribution toward delivering active travel schemes and facilitate sustainable transport.

Further work on detailed transport requirements and mitigation will take place during the Masterplanning (for Large sites and Broad Locations) and planning application processes (for all sites). The transport matters raised in the TIA must be fully addressed at the Masterplanning and planning application stages. HCC will also expect a Transport Assessment or Transport Statement as part of the planning application process and appropriate S278 and S106 developer contributions will be required to deliver transport mitigations and infrastructure.

Transport contributions for sites size 10+ homes should be secured by S106 or similar legal agreements/mechanisms. Transport contributions for sites size 9 or fewer homes could be secured by S106 or another appropriate mechanism (eg Community Infrastructure Levy).

Appendices

The appendices set out key information which supports the TIA and provides further information on matters discussed in the site assessments.

Appendix 1 sets out individual site assessments.

Appendix 2 relates to Hemel Garden Communities. It draws on an extensive evidence base which has been undertaken over an extended period of time through joint authority working. It is a dynamic area of work where some elements have been completed while other parts are still under development. It is intended that significant further progress will be made in advance of, during and beyond the Local Plan Examination.

Appendix 3 COMET - The COMET model suite was initially commissioned by Hertfordshire County Council (HCC) in February 2015. It offers a structured evidence base for assessing transport policies and strategies consistently across the county. It forecasts the cumulative impact of Local Plan development on the transport network.

Appendix 4 outlines the St Albans Modal Shift Study (2024) which estimates the number of modelled car trips that can switch to sustainable modes (walking, cycling or public transport)

Appendix 5 outlines the active transport schemes which are derived from the LCWIP and GTPs.

Appendix 6 signposts HCC guidance and Developer Contributions

Appendix 7 sets out the methodology for the measurement of distances and walking times in the TIA Appendix 1.

Appendix 8 sets out the Local Plan Key Policy principles for Transport

Appendix 1 – Site Assessments

Links to be inserted to 8 sections by parish

Appendix 2 – Hemel Garden Communities (HGC)

The Hemel Garden Communities (HGC) Programme is an ambitious proposal to transform Hemel Hempstead through the regeneration of the existing town and delivery of new housing and infrastructure. Within the St Albans District, the Hemel Garden Communities programme will deliver at least 4,300 new homes by 2041, and a total of 5,500 new homes by 2050, delivering this through a network of new garden communities to the north east and east of Hemel Hempstead. The transformation will include an extended Business Park and a regenerated and transformed town centre for Hemel Hempstead and further new housing, open space and infrastructure across the rest of the town.

Some of the key documents listed below will form part of the evidence base supporting St Albans City and District Council and Dacorum Borough Council Local Plans and the wider HGC Programme. Further information regarding the Hemel Garden Communities programme and workstreams are set out in more detail within the HGC Position Statement which will be updated for the Regulation 19 consultation¹.

HGC Spatial Vision

The Spatial Vision for Hemel Garden Communities² sets out the scope for transformation across the town, as well as providing a sustainable approach for growth, in accordance with the Town Country Planning Association (TCPA) Garden City Principles³. The Spatial Vision was agreed in 2020 following the national designation of Hemel Hempstead as a Transformational Garden Town. The Spatial Vision focuses on the creation of a greener, more connected town which builds on its existing strengths, and the heritage and culture of Hemel Hempstead and its New Town legacy. There are four key pillars within the Spatial Vision: A consolidated green network; Integrated neighbourhoods; A self-sustaining economy; and Engaged communities; which will guide the transformation of Hemel Hempstead and guides the planning policy framework.

HGC Framework Plan and Concept Framework Plan

The Hemel Garden Communities Framework Plan has been produced to provide a single, holistic spatial and infrastructure framework for the HGC Programme Area, with a detailed focus on North and East of Hemel Hempstead Growth Areas. It provides a strategic outline of infrastructure requirements for the wider town of Hemel Hempstead. The Concept Framework Plan (Figure X) identifies the main components of the planned growth of Hemel Hempstead. It shows the main connections, neighbourhoods, land uses, facilities and open spaces that are essential for achieving the policy and transformation objectives set out by the local authorities. The HGC Framework Plan and accompanying Concept Framework Plan will be published as part of the Regulation 19 consultation.

¹Hemel Garden Communities Position Statement (2023)
https://www.hemelgardencommunities.co.uk/media/b0uhqrqi/231020-hgc-position-statement-2023_dbc-reg18.pdf

² Spatial Vision (2020) - https://www.stalbans.gov.uk/sites/default/files/documents/publications/planning-building-control/planning-policy/hemel-spatial-vision_with-appendix.pdf

³ TCPA Garden City Principles - <https://www.tcpa.org.uk/garden-city-principles/>

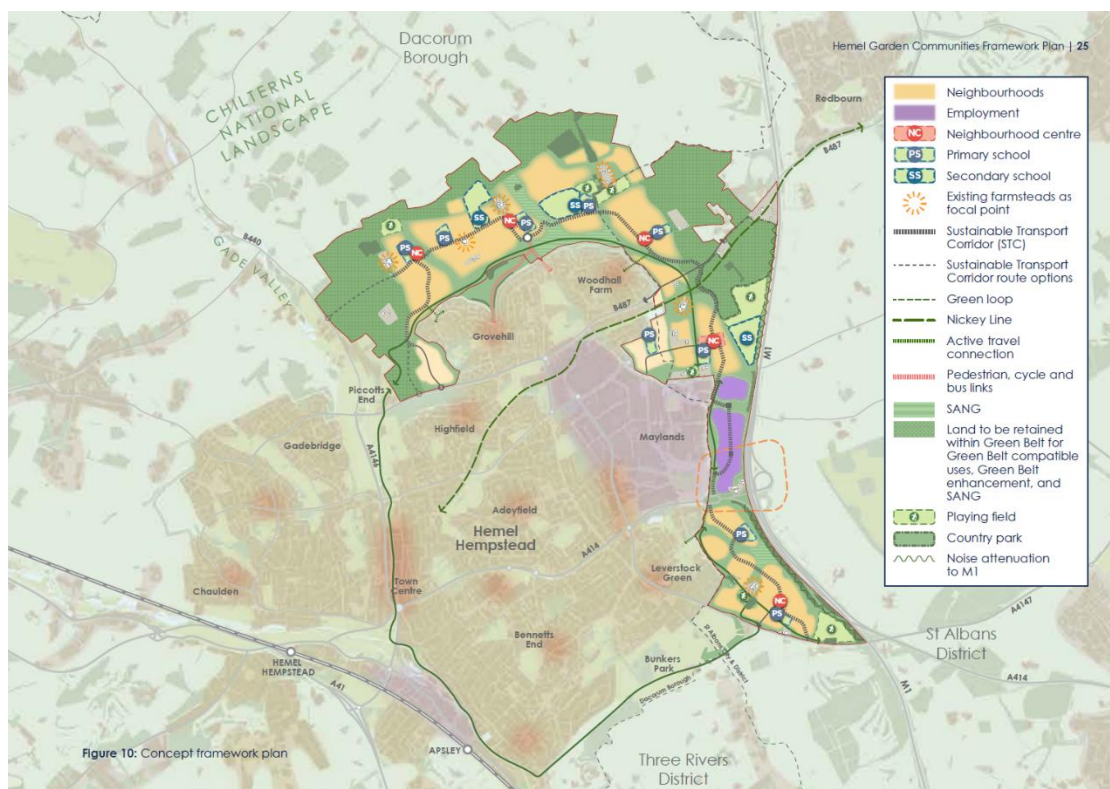


Figure X: Hemel Garden Communities Indicative Concept Framework Plan

HGC Transport & Vision Strategy

The Hemel Garden Communities (HGC) Transport Vision and Strategy (TV&S)⁴ sets out HGC's approach for the long-term growth and transformation of Hemel Hempstead, to ensure the existing town can be developed as a successful, integrated, well-connected place with a sustainable movement network. The vision recognises that whilst the transport network will need to continue to cater for vehicle trips there is a need and opportunity to improve passenger transport and walking and cycling routes to give people a real choice in how they travel, particularly for shorter trips. It sets out how the increased demands for movement of people and goods generated by the predicted growth cannot be accommodated if existing transport movement patterns and behaviour continue and outlines the case for change. The TV&S identifies a key and local network.

The HGC TV&S was endorsed by the Hertfordshire County Council Highways & Transport Panel Cabinet in May 2024 and was adopted at HCC Cabinet in June 2024.

Further transport work, including a transport implementation plan, will be undertaken before, during and after Local Plan Examination.

⁴ Hemel Garden Communities Transport Vision & Strategy (2024) - <https://democracy.hertfordshire.gov.uk/documents/s60060/04.%20Appx%20B%20HGC%20Transport%20Vision%20Strategy.pdf>

Hemel Garden Communities Transport Vision & Strategy Executive Summary (2024) - <https://democracy.hertfordshire.gov.uk/documents/s60059/03.%20Appx%20A%20HGC%20Transport%20Vision%20Strategy-Executive%20Summary.pdf>

Appendix 3 – COMET Model Forecast

The COMET model suite, initially commissioned by Hertfordshire County Council (HCC) in February 2015, offers a structured evidence base for assessing transport policies and strategies consistently across the county. This multimodal model, with variable demand modelling capability, includes the COMET Base Year (2014).

SADC and HCC have commissioned a 2041 forecast for St Albans District using their Countywide Model of Transport, COMET Run 7.1. This updated version includes planning and transport scheme assumptions from early 2024. Four scenarios have been developed to determine the impact of the Local Plan sites, the proposed infrastructure improvements and potential mode shift away from car which could occur.

These forecasts account for changes in population, housing, and employment, as well as the evolving costs associated with various modes of transportation. A range of transport modelling scenarios have been used and generated for the purpose of assessing the SADC Local Plan (as required by HCC and National Highways), this includes the following:

- 2014 Base Year
- 2041 Option 0 - All committed and consented developments and transport schemes
- 2041 Option 1 - Option 0 plus the SADC Local Plan allocations
- 2041 Option 2 - Option 1 plus the SADC Infrastructure Delivery Plan (IDP) schemes and 10% mode shift
- 2041 Option 3 - Option 1 plus the SADC IDP schemes and Opportunity to Shift Mode Tool impacts

	Option 0	Option 1	Option 2	Option 3
Completed / Consented developments (NTEM constrained except in SADC)				
SADC Local Plan development growth				
10% Modal Shift				
Opportunity to Shift Mode Tool				
SADC IDP				

COMET Run 7.1 (2024)

The impact of Local Plan development are summarised below. For scenarios 2 & 3, the transport forecasts indicate that the impact of development would not be 'severe' and

there are 'no showstoppers'. A copy of the COMET forecast report can be found at this link
XX add link XX.

A summary of highway performance in AM & PM peaks are shown below:

Table 9-1: Summary of St Albans Highway Network Performance (AM Peak Hour)

Indicator	Base 2014	Future 2041			
		Option 0	Option 1	Option 2	Option 3
		Committed Developments and Infrastructure	With Local Plan allocations added	With Local Plan Allocations and IDP plus mode shift	With Local Plan Allocations and IDP plus alternative mode shift
Total vehicle trips	58,598	69,189	74,664	72,054	71,876
Total Time Travelled (PCU.Hrs)	9,699	12,813	14,299	13,069	13,206
- Time on links (PCU.Hrs)	8,026	9,929	10,511	10,174	10,271
- Time at junctions (PCU.Hrs)	1,673	2,884	3,789	2,895	2,935
Average Speed (mph)	36.2	32.4	30.1	32.2	32.1

Table 9-2: Summary of St Albans Highway Network Performance (PM Peak Hour)

Indicator	Base 2014	Future 2041			
		Option 0	Option 1	Option 2	Option 3
		Committed Developments and Infrastructure	With Local Plan allocations added	With Local Plan Allocations and IDP plus mode shift	With Local Plan Allocations and IDP plus alternative mode shift
Total vehicle trips	58,095	65,905	71,604	69,133	68,595
Total Time Travelled (PCU.Hrs)	9,836	12,369	13,737	12,841	12,801
- Time on links (PCU.Hrs)	8,095	9,548	10,199	9,880	9,926
- Time at junctions (PCU.Hrs)	1,741	2,821	3,538	2,961	2,876
Average Speed (mph)	36.6	32.7	30.7	32.1	32.4

Impact of Future Year Growth and Committed Developments - Scenario 0

Across St Albans there is generally increases in delay on primary key roads in the area such as A414, A4147, B487, Ferrers Lane, B651 and Church Lane in Wheathampstead. There are some links which do experience a reduction in delays which is a result of either junction improvements in the area or traffic re-routing.

Impact of Local Plan without Mitigation - Scenario 1

Key links which experience increases in delay are, A414 approaching A1(M) Junction 3, Potterscrouch Lane, Ragged Hall Lane, Chequers Lane, Sandridgbury Lane, Punchbowl Lane, A414 Breakspear Way, Church Street in Wheathampstead and Ferrers Lane approaching the B651, A4147, B653 and B487.

Impact of Mitigation (IDP and 10% Modal Shift) – Scenario 2

For the majority of links in St Albans as a result of the IDP schemes and 10% mode shift there is a reduction in link delays. This indicates the proposed improvements to the network and mode shift are generating a positive impact on the highway network. There are some links where delays increase which include A1081 southbound where increases in link delay, over 2 minutes, which are occurring as a result of Valley Road and Sandridgebury Lane being closed to traffic in Option 2. There are also smaller increases in delay on The Common north of Harpenden, Ferrers Lane approach to B651 and on Colney Heath Lane and A414 Tippendell Lane and some residential roads to the west of the East Heel development.

Impact of Mitigation (IDP and Alternative Modal Shift) - Scenario 3

The locations where delay increases is broadly the same as the delay increases between Option 2 and 1. The only differences is an increase in delay at Ferrers Lane, delays at Church Street in Wheathampstead and an increase in delay on the M1 slip road at junction 8 in the AM peak.

A summary of delay at key junctions in the AM & PM peaks are shown in the tables below:

Table 9-7: Summary of Delay at Key Junctions by Scenario (AM Peak Hour)

Ref	Junction Name	Average Delay Per Vehicle (s)				
		Base	Option 0	Option 1	Option 2	Option 3
1A	Peahen	124	89	119	82	79
1B	King William IV	72	120	119	122	112
1C	Ancient Britton	135	168	195	190	191
1D	Sandpit Lane/Beechwood Avenue	67	85	137	79	83
1E	King Harry	12	29	45	42	38
2A	A1081 Luton Road/Station Road	12	14	16	15	14
2B	A1081/The Common	13	15	38	30	33
2C	A1081 Luton Road/Redbourn Road	14	20	18	15	14
3A	A414/A1081 London Colney	32	42	44	18	18
3B	A414/A405	13	12	14	15	15
3C	A414/Shenley Lane, Napsbury	12	13	12	6	7
4	A1057 Hatfield Road/Station Road	11	21	51	28	40
5A	A405/Watford Road (the Noke)	11	13	14	26	25
5B	A405/Tippendell Lane	12	16	17	18	19
6A	Harper Lane/Shenley Road	33	30	41	24	27
6B	Harper Lane/Watling Street	8	23	23	18	21
7	A414/M1 Junction 8	2	5	10	9	10
8	A414/Green Lanes	30	85	146	67	75
9A	Redbourn Road/Queensway	13	13	13	14	14
9B	Redbourn Road/Link Road	12	18	26	16	17
9C	Redbourn Road/Shenley Road	5	5	8	6	6
9D	Redbourn Road/Cherry Tree Lane	3	6	7	5	5
10	Leverstock Green Road/Bedmond Road	85	104	104	81	79
11	B653 Cory Wright Way/Marford Road	11	14	15	14	15
12A	M25 Junction 21	1	5	10	9	9
12B	M25 Junction 21a	43	38	44	38	44
12C	M25 Junction 22	11	14	18	21	24

Table 9-8: Summary of Delay at Key Junctions by Scenario (PM Peak Hour)

Ref	Junction Name	Average Delay Per Vehicle (s)				
		Base	Option 0	Option 1	Option 2	Option 3
1A	Peahen	123	57	67	55	55
1B	King William IV	44	61	57	104	82
1C	Ancient Britton	125	159	176	206	175
1D	Sandpit Lane/Beechwood Avenue	86	110	132	110	121
1E	King Harry	11	16	39	21	23
2A	A1081 Luton Road/Station Road	11	12	12	12	12
2B	A1081/The Common	22	38	44	34	32
2C	A1081 Luton Road/Redbourn Road	14	18	30	18	18
3A	A414/A1081 London Colney	23	36	37	21	21
3B	A414/A405	14	16	18	18	17
3C	A414/Shenley Lane, Napsbury	5	5	5	4	4
4	A1057 Hatfield Road/Station Road	11	60	109	65	98
5A	A405/Watford Road (the Noke)	12	12	13	11	13
5B	A405/Tippendell Lane	12	15	16	19	20
6A	Harper Lane/Shenley Road	12	16	21	16	17
6B	Harper Lane/Watling Street	11	48	48	45	46
7	A414/M1 Junction 8	2	4	4	14	16
8	A414/Green Lanes	12	77	149	24	27
9A	Redbourn Road/Queensway	14	14	15	14	14
9B	Redbourn Road/Link Road	13	19	38	20	22
9C	Redbourn Road/Shenley Road	4	8	12	12	13
9D	Redbourn Road/Cherry Tree Lane	3	6	5	5	5
10	Leverstock Green Road/Bedmond Road	47	76	139	131	133
11	B653 Cory Wright Way/Marford Road	17	70	110	77	99
12A	M25 Junction 21	2	47	60	50	54
12B	M25 Junction 21a	49	59	76	49	56
12C	M25 Junction 22	16	19	20	19	22

A summary of the local journey times in the AM & PM peaks are shown below:

Table 9-9: Summary of Journey Times by Route and Scenario (AM peak hour)

Route	Route Name	Journey Time (mins:secs)				
		Base	Option 0	Option 1	Option 2	Option 3
HPD1_NB	A1081	9:00	9:24	11:24	10:30	10:36
HPD1_SB		9:00	8:42	9:12	8:30	8:30
HPD2A_NB	B653	12:06	12:48	13:54	13:18	13:36
HPD2A_SB		12:36	14:18	16:00	16:06	16:30
HPD3_NB	B652 Westfield Road	12:42	13:12	15:48	14:48	14:54
HPD3_SB		12:36	12:42	13:18	12:42	12:48
HPD4_WB	Wheathampstead Road	4:36	4:42	4:42	4:36	4:36
HPD4_EB		4:36	4:36	4:36	4:36	4:36
HPD5_NB	Station Road/Hollybush Lane	8:48	9:00	9:12	9:00	9:06
HPD5_SB		8:00	8:06	8:18	8:06	8:12
HPD6A_NB	Grove Road	7:06	7:18	7:18	7:12	7:12
HPD6A_SB		7:00	7:06	7:06	7:00	7:00
HPD6B_EB	B487	5:00	5:54	6:24	5:24	5:30
HPD6B_WB		6:30	7:54	10:06	10:12	10:12
STA1_NB	St Albans Road	8:48	9:42	10:00	10:00	9:48
STA1_SB		9:30	10:36	10:48	11:24	11:30
STA2A_WB	Marshalswick Lane	11:12	17:12	21:30	15:36	14:36
STA2A_EB		11:24	13:06	16:12	13:00	12:48
STA2B_NB	Cotton Mill Lane	14:06	15:18	16:18	15:06	15:00
STA2B_SB		12:54	14:42	15:30	14:42	14:36
STA2_NB	Ring Road	1:18	9:18	14:36	7:24	6:12
STA2_SB		23:30	3:48	8:48	3:12	2:54
STA3_NB	A1081	10:00	13:42	14:18	13:18	13:24
STA3_SB		11:06	12:48	13:24	13:42	13:42
STA3A_NB	A1081 North	12:00	12:54	14:06	13:42	13:30
STA3A_SB		12:42	14:18	18:48	23:24	0:12
STA4_WB	A4147	8:24	10:18	12:12	11:36	11:48
STA4_EB		8:30	10:00	12:42	9:54	10:42
STA5_NB	Sandpit Lane	10:06	11:54	13:48	11:48	11:48
STA5_SB		9:54	11:00	12:54	11:06	11:00
STA6_NB	A5183 (south)	7:18	9:36	9:48	9:36	9:36
STA6_SB		7:24	9:30	10:54	11:18	10:54
STA7_NB	Colney Heath Lane	7:54	8:54	9:48	9:42	9:42
STA7_SB		7:30	8:24	8:54	8:42	8:48
STA8A_WB	A1057 (centre)	11:06	12:54	13:48	12:18	12:18
STA8A_EB		11:00	12:48	13:42	12:18	12:00
STA9_NB	A5183 (north)	7:06	7:18	7:24	7:24	7:24
STA9_SB		7:24	7:54	8:36	9:00	9:12
STA10_NB	A5183 (west)	7:30	8:00	8:24	8:42	8:48
STA10_SB		7:36	9:18	10:42	10:54	10:30
STA11_NB	Coopers Green Lane	5:24	5:54	6:24	7:54	8:00
STA11_SB		5:18	5:30	5:36	7:36	7:48

Table 9-10: Summary of Journey Times by Route and Scenario (PM peak hour)

Route	Route Name	Journey Time (mins)				
		Base	Option 0	Option 1	Option 2	Option 3
HPD1_NB	A1081	9:24	10:30	11:00	10:06	9:54
HPD1_SB		8:12	8:18	8:30	8:24	8:24
HPD2A_NB	B653	12:18	14:12	14:48	14:18	14:18
HPD2A_SB		11:48	12:12	12:36	12:24	12:30
HPD3_NB	B652 Westfield Road	12:12	12:18	12:36	12:24	12:24
HPD3_SB		11:54	12:24	13:06	12:24	12:30
HPD4_WB	Wheathampstead Road	4:36	4:42	4:48	4:42	4:42
HPD4_EB		4:36	4:36	4:36	4:36	4:36
HPD5_NB	Station Road/Hollybush Lane	8:48	8:48	8:54	8:48	8:48
HPD5_SB		7:54	7:54	8:00	7:54	7:54
HPD6A_NB	Grove Road	7:00	7:06	7:18	7:18	7:18
HPD6A_SB		7:06	7:06	7:06	7:06	7:06
HPD6B_EB	B487	6:24	8:54	11:30	8:48	9:00
HPD6B_WB		5:06	5:54	6:18	6:42	6:36
STA1_NB	St Albans Road	8:42	9:54	9:00	11:30	9:00
STA1_SB		9:12	9:12	9:18	11:30	11:30
STA2A_WB	Marshalswick Lane	8:42	9:54	10:48	10:24	9:54
STA2A_EB		11:18	12:54	14:30	12:48	12:12
STA2B_NB	Cotton Mill Lane	12:54	14:24	15:12	14:30	14:36
STA2B_SB		12:48	14:30	15:06	14:12	14:06
STA2_NB	Ring Road	22:00	1:18	3:12	1:42	1:12
STA2_SB		23:18	2:42	4:54	2:12	1:36
STA3_NB	A1081	10:12	12:48	13:42	11:42	11:48
STA3_SB		15:06	13:36	14:42	12:54	12:42
STA3A_NB	A1081 North	12:48	14:42	15:36	15:30	14:18
STA3A_SB		12:06	13:06	14:06	16:18	16:00
STA4_WB	A4147	8:48	11:12	12:42	10:18	10:24
STA4_EB		8:12	9:24	11:54	10:24	11:18
STA5_NB	Sandpit Lane	11:12	12:30	13:48	12:42	13:18
STA5_SB		9:36	10:42	11:36	10:30	10:36
STA6_NB	A5183 (south)	7:36	10:06	10:30	10:36	10:36
STA6_SB		7:18	10:54	12:36	10:48	10:54
STA7_NB	Colney Heath Lane	7:54	9:48	10:42	9:30	9:42
STA7_SB		7:30	8:30	8:48	8:18	8:18
STA8A_WB	A1057 (centre)	11:00	11:30	12:00	11:42	11:30
STA8A_EB		10:48	11:36	12:30	11:12	11:06
STA9_NB	A5183 (north)	7:30	7:30	7:30	7:36	7:30
STA9_SB		7:06	7:30	8:12	7:48	8:00
STA10_NB	A5183 (west)	7:30	8:06	8:24	8:48	8:54
STA10_SB		7:30	8:30	10:12	9:12	9:12
STA11_NB	Coopers Green Lane	5:18	5:24	5:24	7:30	7:24
STA11_SB		5:18	6:36	7:30	8:18	8:36

Appendix 4 - St Albans Modal Shift Study (2024)

With the support of SADC, consultants WSP were commissioned by HCC to undertake a modal shift study for the existing and future communities in St Albans district. A copy can be found at this link XX add link XX.

The sustainable travel opportunity estimates the number of modelled car trips that can switch to sustainable modes (walking, cycling or public transport).

Routes for walking, cycling and public transport were compared to the existing driving journey using high and lower mode shift scenarios:

- The high mode shift scenario aims to align to targets set out in the Department for Transport's (DfT's) document Gear Change (cycling and walking vision), i.e. two miles for walking, five miles for cycling and a maximum public transport journey time of 2.4x the driving alternative.
- The lower mode shift scenario is more conservative and aims for a 15–20 minute neighbourhood – one mile for walking, three miles for cycling and a maximum public transport journey time of 1.5x the driving alternative.

The aim of this project was to estimate sustainable travel opportunity, propensity and potential for:

- Task 1 - the existing communities in St Albans district.
- Task 2 - the specified new developments in St Albans district.

Sustainable travel potential is the combination of opportunity and propensity, indicating the realistic mode shift potential for the new development zones. The different elements are set out below. Based on assumed growth but existing active travel and public transport networks and services, and expected socio-demographics and travel behaviours.

- **Sustainable travel opportunity** is the proportion of car trips that could be switched to walking, cycling or public transport based on distance and time criteria.
- **Sustainable travel propensity** is the likelihood of using a mode based on the projected socio-demographics and lifestyles of the new development residents.
- **Sustainable travel potential** is the combination of opportunity and propensity, indicating the realistic mode shift potential for the new development zones. Based on assumed growth but existing active travel and public transport networks and services, and expected socio-demographics and travel behaviour.

Key findings for existing communities:

- Up to 33% of existing car trips in St Albans district have the potential to switch to sustainable modes based on existing active and public transport networks / services, and the current socio-demographics / travel behaviour of residents).
- Cycling provides the highest opportunity for mode shift (up to 37% across St Albans district) and is also likely to provide the highest potential for mode shift (once propensities are taken account of) - up to 17% of existing car trips across St Albans district have the potential to switch to cycling.

- Walking has a slightly lower opportunity for mode shift than cycling (up to 35% across St Albans district), but similar potential for mode shift - up to 17% of existing car trips across the district have the potential to switch to walking.
- Public transport has the lowest opportunity (up to 6%) and potential for mode shift - up to 3% of existing car trips in St Albans district have the potential to switch to public transport.

Key findings for new developments:

- Up to 27% of modelled car trips across the assessed St Albans district development zones have the potential to switch to sustainable modes (based on existing active and public transport networks / services, and the likely socio-demographics / travel behaviour of new residents).
- Cycling provides the highest opportunity for mode shift (up to 40% across the development zones) and the highest potential for mode shift - up to 16% of existing car trips across the development zones have the potential to switch to cycling.
- Walking has a lower opportunity for mode shift than cycling (up to 27% across the development zones) and potential for mode shift - up to 11% of existing car trips across the development zones have the potential to switch to walking.
- Public transport has the lowest opportunity and potential for mode shift - less than 1% of existing car trips across the development zones have the potential to switch to public transport. However, this is a worst-case scenario as it is intended that the new developments will provide contributions towards additional public transport provision.

It is important to bear in mind that the work above is based on assumed growth but existing active travel and public transport networks and services, and expected socio-demographics and travel behaviours. Therefore, given the significant scale of new active travel network improvements that will be delivered through the new Local Plan in particular (and to a limited degree public transport network improvements), the real-world propensity to move to active travel is likely to be significantly greater.

Appendix 5 – List of Active Travel Schemes

LCWIP SCHEME 1 A1081 - LCWIP segments (includes links to North West Harpenden (NWH) and North St Albans (NSA))	Cost (LCWIP/GTP)
Luton Road (A1081)	£4,873,100
Harpenden High Street (A1081)	£1,033,000
St. Albans - Harpenden Link (A1081)	£10,143,450
St. Peters Street (A1081)	£1,062,200
London Road (A1081)	£8,664,400
Greyed out area - (Hatfield Road - Griffiths Way)	£800,000
TOTAL	£26,576,150
LCWIP SCHEME 2 Hemel Garden Community circular route segments	Cost (LCWIP)
Redbourn Road (A5183)	£6,830,000
St. Albans - Hemel Hempstead Link (A4147)	£6,080,000
Bluehouse Hill	£1,640,000
Nickey Line (HGC - Redbourn)	£2,000,000
TOTAL	£16,550,000
LCWIP SCHEME 3 Link to North East Harpenden (NEH)	Cost (LCWIP)
Coldharbour Lane	£105,000
Station Road	£2,095,450
Westfield Road	£2,414,750
TOTAL	£4,615,200

LCWIP SCHEME 4 & GTP Link to East St Albans (ESA)	Cost (LCWIP)
Alban Way Ref - SCH GTP: SM 157; PR154; PR155; PR156; PR158	£2,000,000
Sandpit Lane	£6,983,050
Hatfield Road (West)	£7,342,850
Coopers Green Lane	£448,000
	£16,773,900
LCWIP SCHEME 5 Harpenden Station	Cost (LCWIP)
Harpenden Rail Station Link	£786,800
TOTAL	£786,800
LCWIP SCHEME 6 St Albans City Station	Cost (LCWIP)
St. Albans Station Links	£5,030,350
TOTAL	£5,030,350
LCWIP SCHEME 7 London Colney	Cost (LCWIP)
Shenley Lane	£3,755,000
London Colney High Street	£2,875,450
TOTAL	£6,630,450
LCWIP SCHEME 8 Redbourn – Harpenden Link	Cost (LCWIP)
Nickey Line (Redbourn - Harpenden)	£2,000,000
TOTAL	£2,000,000

LCWIP SCHEME 9 Other Harpenden	Cost (LCWIP)
Southdown Road	£2,162,950
Bowers Way & Links	£680,800
Manland Way	£770,000
Sauncey Avenue & Lyndhurst Drive	£325,000
Common Lane	£711,000
Carlton Road Ped & Cycle Bridge	£2,000,000
Carlton Road	£522,350
Sun Lane	£1,475,000
Aldwickbury Crescent	£837,600
TOTAL	£9,484,700
LCWIP SCHEME 10 & GTP St Albans Green Ring & spokes	Cost (LCWIP)
Griffiths Way & Doggets Lane	£1,001,250
Ladies Grove	£255,000
Batchwood Drive	£3,204,000
Verulam Road & Links	£1,362,500
Clarence Road & Links	£795,800
Beech Road	£1,653,650
Marshal's Drive	£80,000
Alban Way Ref - SCH GTP: SM 157; PR154; PR155; PR156; PR158	£2,500,000
TOTAL	£10,852,200

LCWIP SCHEME 11 & GTP Strategic Rail freight Interchange & A414	Cost (LCWIP)
North Orbital Road - Centre (A414)	£3,484,200
A414 cycling - SC GTP - SM 181 (London Colney - Hatfield)	£1,000,000
A414 cycling - SW GTP - PR22 (HGC - Park Street)	£1,000,000
A414 cycling - SC GTP - SM207 (Park Street - London Colney)	£1,000,000
TOTAL	£6,484,200

Appendix 6 – HCC Requirements & Developer Contributions

The indicative contributions refer to the HCC Guide to Developer Infrastructure Contributions 2021. www.hertfordshire.gov.uk/media-library/documents/environment-and-planning/planning/developer-infrastructure-contributions-guide/guide-to-developer-infrastructure-contributions.pdf

The estimated contributions are based on the HCC Guide Technical Appendix 1 Transport www.hertfordshire.gov.uk/media-library/documents/environment-and-planning/planning/developer-infrastructure-contributions-guide/technical-appendix-1-transport.pdf which identifies a contribution per dwelling based on forecasted residential development proportion required to meet Active Travel funding gap (cost per dwelling) of £6,826 as at 2021; which equates to approximately £8,270 in 2024 prices (based on CPI) and is indexed annually .

The County Council requires contributions to be subject to indexation to account for inflation and ensure their value is retained. Historically a number of different indices have been used. To provide clarity and simplicity, the following indices will be used by the county council:

- Building Cost Information Service, BCIS (all non-highways/ transport infrastructure);
- SPON'S Index (Highways and transportation);
- Confederation of Passenger Transport Index, CPT (Passenger Transport i.e. bus services); and
- Retail Price Index, RPI (travel plans).

Indexation should be applied from the date at which the costs are set not at the point of committee or S106 agreement. Each agreement will detail specifically how indexation should be applied.

The HCC technical appendix also sets out guidance for Transport Assessment and Transport Statements which are normally required as part of a planning application. Measures necessary to mitigate against the impact of new developments should be identified through Transport Assessments (TAs) or via site specific negotiations. The thresholds at which a Transport Statement (TS) or a more comprehensive TA should form part of a planning application are set out in Chapter 7 of Section 1 of the highways design guide 'Roads in Hertfordshire'. <https://www.hertfordshire.gov.uk/services/highways-roads-and-pavements/business-and-developer-information/development-management/highways-development-management.aspx#highwaydesignguide> For a residential development, more than 80 units usually require a TA, and for a B1 office development the figure is a gross floor area of 2,500 square metres.

Smaller developments do not always require a TS or TA, but the cumulative impacts of such developments can be very significant and may well exceed those of larger developments in total. It is therefore justified to consider seeking a planning contribution, or relevant conditions, for all developments whatever their size, to ensure that accessibility by sustainable modes is maximised in line with the Hertfordshire LTP Policies and objectives, and other supporting material considerations, such as adopted Local Plans.

Furthermore, the HCC guidance advises that the immediate and specific impacts of larger developments are established via a TA and mitigated via S278 obligation, or funded via CIL/S106 agreement in the conventional way. This is the first strand of possible transport contributions. The active travel funding is required in addition to the first strand contributions.

Appendix 7 – TIA Methodology for Measuring the Approximate Distances to Services and Facilities and the Estimated Walking Times

1. Measurements were taken using a walkable route from the centre of a site towards a school entrance, the edge of a local/town/district/city/out-of-centre boundary, a bus stop, or a railway station entrance.
2. To assist in finding the quickest accessible routes when taking measurements, Google Maps was referred to in the first instance before manually double checking the distance on our GIS System (Cadcorp).
3. If the walking route used was via a footpath, it will have been a made footpath as unmade footpaths were avoided.
4. If the nearest state secondary school to a site happened to be a single sex school, then an additional measurement was recorded to the nearest co-education state secondary school.
5. If the nearest convenience store was closer to the site than the nearest local/town/district/city/out-of-centre boundary, then this measurement was also recorded.
6. If the nearest bus stop to a site was a less frequent service bus stop, then this was recorded in addition to the distance to a peak hourly day service bus stop.
7. To convert the estimated distances into approximate walking times, a walking speed of 20 minutes per mile or 12.5 minutes per kilometre was applied to the distances. This speed is a generally recognised standard approach to walking speed and is identified as an easy walking pace on website:
<https://www.verywellfit.com/convert-miles-to-kilometers-and-walking-time-3876685#toc-how-long-it-takes-to-walk-a-mile> The walking times were rounded up to the nearest whole minute.

Appendix 8 - St Albans draft Local Plan – Key Policy Principles for Transport [Reg 18 text to be updated]

The Local Plan provides the overarching policy framework and addresses Transport and movement in a comprehensive and interlinked way. The key policies relating to Transport and movement are set out below, it includes Strategic Policy SP8 - Transport Strategy.

Strategic Policy SP1: A Spatial Strategy for St Albans District

Strategic Policy SP2 – Responding to the Climate Emergency

LG1 – Broad Locations

Strategic Policy SP8 - Transport Strategy

TRA2 – Major Transport Schemes

TRA4 – Parking

UIN1 – Broadband

Strategic Policy SP14 - Delivery of Infrastructure

Strategic Policy SP8 - Transport Strategy

The Council will prioritise the use of active and sustainable transport modes and deliver accessibility improvements to the transport and highways network by:

- a) Align with the Hertfordshire County Council Local Transport Plan (LTP) and other evidence and supporting documents, as relevant;
- b) Supporting development in locations which enable active and/or sustainable transport journeys, including to key destinations; where this is not possible ensuring that sustainable and active transport infrastructure is delivered at the earliest reasonable opportunity;
- c) Supporting reductions in car journeys for existing and new settlements; including in relation to education sites and school journey planning initiatives;
- d) Requiring all high trip generating uses generating trips in excess of the thresholds set in Hertfordshire County Council's Travel Plan Guidance to prepare, submit and implement Travel Plans to embed sustainable and active travel at an early stage;
- e) Working in partnership with stakeholders including Hertfordshire County Council, neighbouring authorities, National Highways and service providers to ensure that a range of sustainable and active transport options are available to all existing and future users of the transport network;
- f) Requiring new development to assess future air quality impacts from transport, where necessary, including funding contributions to wider schemes that will mitigate the impact of the scheme being proposed where appropriate;

- g) Protecting, adding to and improving existing rights of way, walking and cycling networks and equestrian access and, should diversion be unavoidable, require replacement routes to the satisfaction of the Council and the highway authority;
- h) Supporting inter-settlement connectivity for active modes (e.g. Alban Way, Nickey Line, Ayot Greenway and Upper Lea Valley Walk) and identification and delivery of new routes;
- i) Seeking Masterplans at Broad Locations and the earliest reasonable opportunity to implement sustainable travel infrastructure on Broad Locations in order that sustainable travel patterns become embedded at an early stage;
- j) Supporting a network of mobility hubs at suitable locations such as railway stations and co-located in city, town and district centres where appropriate. The scale and nature of proposals must be appropriate to the size and function of the centre or station and proposals should contribute towards the vitality of a centre. A mobility hub should support sustainable travel and can include: a local bus service, car club facilities, bike repair service, e-bike charging, bike share facilities, ride hailing & ride sharing stop, real time and digital travel information, wifi and phone charging, parcel delivery storage lockers and public realm improvements. Mobility hubs should be supported by online presence and digital functionality.