



**Hemel
Garden
Communities**

Hemel Garden Communities

2050 TRANSPORT VISION & STRATEGY



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CONTENTS

EXECUTIVE SUMMARY

1	INTRODUCTION	1
1.1	PURPOSE	1
1.2	STRUCTURE OF THE TV&S	3
1.3	A VISION-LED APPROACH	4
1.4	WHY IS MODE SHIFT IMPORTANT?	8
2	TRANSPORT VISION, STRATEGIC THEMES & DESIRED OUTCOMES	13
2.0	TRANSPORT VISION	13
2.1	STRATEGIC THEMES	16
3	HEMEL HEMPSTEAD: NOW AND IN THE FUTURE	20
3.1	OVERVIEW	20
3.2	POLICY CONTEXT	21
3.3	DEMOGRAPHIC CONTEXT	24
3.4	TRANSPORT CONTEXT	26
3.5	SUMMARY & CASE FOR CHANGE	30
4	REALISING THE VISION: THE HEMEL GARDEN COMMUNITIES 2050 TRANSPORT STRATEGY	33
4.1	INTRODUCTION	33
4.2	STRATEGIC THEMES	33
5	DELIVERING THE VISION & STRATEGY	70
5.1	WHAT NEXT?	70
5.2	PLANNING SUPPORT	70
5.3	WIDER WORKSTREAMS AND PROJECTS	73

TABLES

Table 1-1 - Supporting Documents	3
Table 4-1 - Key Network Typologies	43
Table 4-2 - Local Network Typologies	52

FIGURES

Figure 1-1 - HGC Programme Area Map	2
Figure 1-2 - Policies and Document Context for Hemel Garden Communities Programme	6
Figure 1-3 - Territorial UK Greenhouse Gas Emissions by NC Sector, 1990-2021 (MtCO ₂ e)	9
Figure 1-4 - Projected Total Vehicle Miles By Scenario (DfT - National Road Traffic Projections, 2022)	11
Figure 2-1 - HGC Programme Area with Associated Sustainable Mode Targets by 2050	14
Figure 2-2 - Existing Mode Share Split in Hemel Hempstead (Census, 2021)	15
Figure 3-1 - Hemel Hempstead's Population (Census 2011, Census 2021)	24
Figure 3-2 - Challenges and Opportunities for Hemel Hempstead	28
Figure 3-3 - Method Used to Travel to Work for Hemel Hempstead Residents, Census 2021, with 2011 Census Data in Brackets	29
Figure 4-1 - The Transport User Hierarchy based on Hertfordshire County Council's Local Transport Plan 4	34
Figure 4-2 - The Key Network	38
Figure 4-3 - A vision for Station Road Hemel Hempstead, Suggesting Good Walking & Wheeling Routes and Cycle Lanes. Image by DK-CM	39
Figure 4-4 - Indicative Route Outline of Sustainable Transport Corridor, July 2023	40
Figure 4-5 - Local Network(s) that Complement the Key Network	45
Figure 4-6 - The Local Network	46
Figure 4-7 - A Vision for the New Hemel Garden Communities Neighbourhoods, Self-Sustaining and Characterful, with High Quality Transport and Routes for Pedestrians and Cyclists. Image by DK-CM	47
Figure 4-8 - The Green Network Map (HGC Spatial Vision, 2021)	49

Figure 4-9 - Nickey Line Route	50
Figure 4-10 - Key & Local Network(s) Map	56
Figure 4-11 - Key Changes in Technology and Attitudes Bring Numerous Opportunities to Help Meet Transport Objectives	60
Figure 4-12 - Typical Traveller Archetypes	62
Figure 4-13 - Artist Impression of a Mobility Hub	63
Figure 4-14 - The Queen's Square, Adeyfield, Hemel Hempstead (2022)	64
Figure 4-15 - South Woodford Community, London Borough of Redbridge (2022)	65
Figure 4-16 - Hierarchy of Charging Options, HCC Electric Vehicle Charging Strategy	66

EXECUTIVE SUMMARY

What is Hemel Garden Communities (HGC)?

The Hemel Garden Communities (HGC) Programme is an ambitious proposal which will transform and grow Hemel Hempstead and create attractive, sustainable new neighbourhoods to its north and east by 2050.

The HGC 2050 Transport Vision and Strategy (referred to as 'TV&S') has been prepared on behalf of a partnership that comprises Dacorum Borough Council (DBC), St Albans City and District Council (SADC) and Hertfordshire County Council (HCC), Hertfordshire Local Enterprise Partnership (Herts LEP), and the Hertfordshire Innovation Quarter (Herts IQ) as part of the HGC Programme (referred as 'the Partners') and wider stakeholders. This TV&S covers the whole HGC programme area (brown dotted line in Figure 1); the town of Hemel Hempstead, within the borough of Dacorum, as well as proposed growth areas straddling both Dacorum and St Albans District to the north and east of the town. Wider movement routes beyond have been considered in this document's formulation and are outlined as the Transport Vision & Strategy area of influence. (Shown by the grey dotted line in Figure 1).

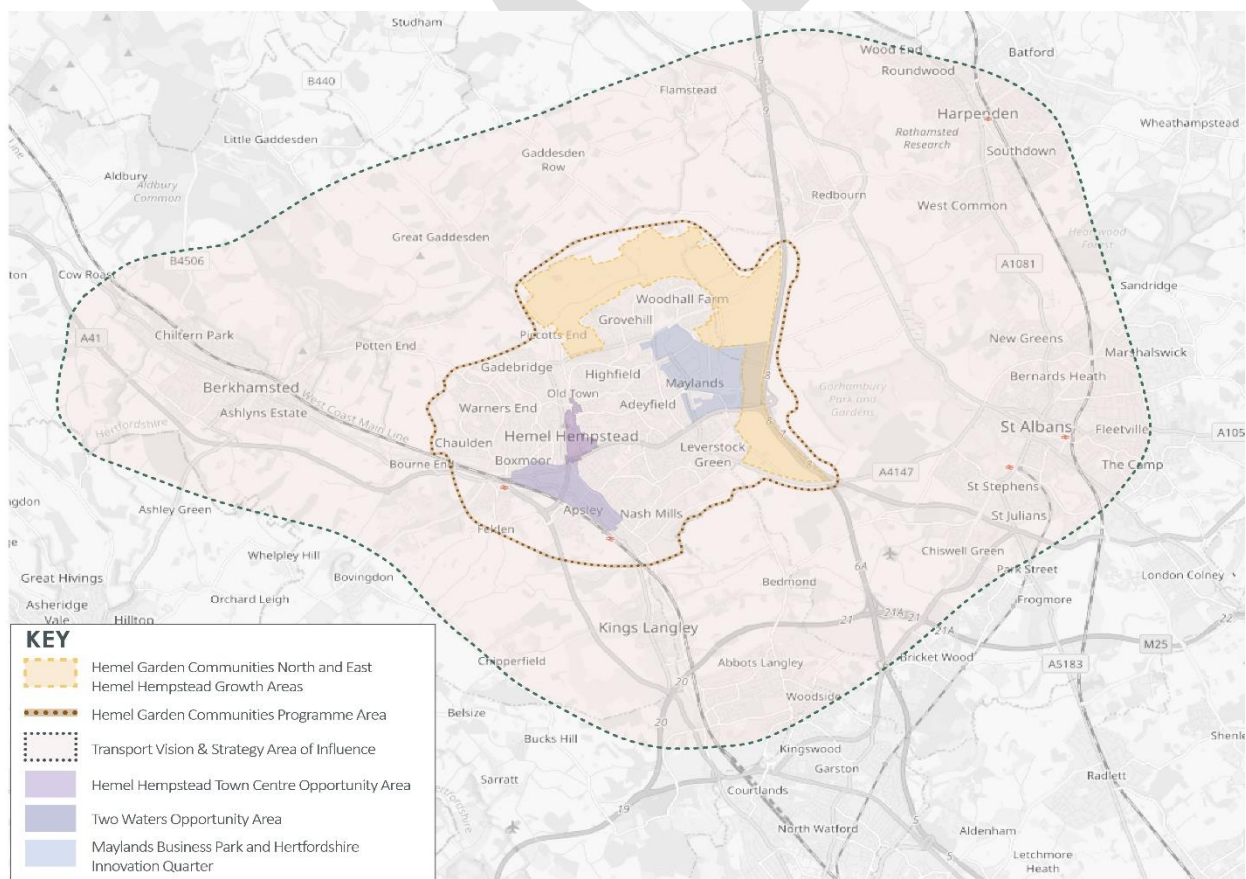


Figure 1 - Hemel Garden Communities Programme Area and TV&S Wider Influence Area

What is this vision and Strategy for?

Hemel Hempstead is a focus for significant residential and employment growth up to 2050, with the likely population predicted to increase by around 50%. With this level of growth there is a need to reconsider how people move around the town and look at the potential for shifting journeys to more sustainable modes (such as walking, cycling, and using the bus) as well as new and innovative forms of transport. Despite Hemel Hempstead's hilly terrain, the shortness of so many car trips, combined with the potential for existing and emerging electric technologies means that achieving substantial mode shift from cars is realistic, as long as attractive alternatives are provided.

Government statistics (2021)¹ show that the transport sector produces around 26% of Greenhouse Gases and that road transport (passenger cars in particular) are the most significant source of emissions in this sector. Putting carbon emissions to one side, the Government's 2022 National Road Traffic Projections show that mode shift is also vital to ensure that congestion can be kept within manageable levels.

The 2022 Hertfordshire County Travel Survey (HCTS) showed that over 35% of all trips made by car, at county level, are under 3 miles long, and over 50% are under 5 miles long. The 2021 Census also revealed that around 60% of Hemel Hempstead residents work in the town^{2, 3}, showing there are a large number of local work journeys due to the close proximity of the Maylands Business Park. Therefore, there is clear potential for the transfer of many of these trips to more sustainable modes.

While mode shift on the scale needed will be no easy task, the data collected demonstrates it should be achievable in Hemel Hempstead and the imperative to achieve it is unavoidable.

The Transport Vision & Strategy is part of the evidence base supporting the Dacorum Borough Council and St Albans City and District Local Plans; Hertfordshire County Council's Growth and Transport Plan, and the wider HGC Programme.

Why this overall approach?

The TV&S sets out an approach to grow the town 'in a highly sustainable way' that supports the emerging Local Plans for both Dacorum Borough Council and St Albans City and District Council.

Achieving travel demand reduction and modal shift is also central to Hertfordshire County Council's Local Transport Plan 4 (LTP4), where Policy 1 establishes the Transport User Hierarchy, shown in Figure 2 below, that should apply both to the scheme design process and the formulation of transport strategy.

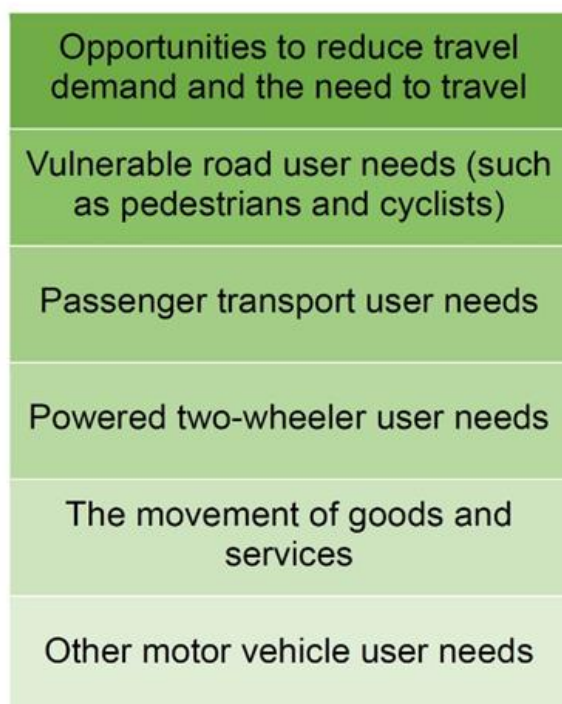
¹ 2021 UK Greenhouse Gas Emissions, Final Figures. Department for Business, Energy & Industrial Strategy: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1134664/greenhouse-gas-emissions-statistical-release-2021.pdf

² Travel to work data, ONS, Census 2021

<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/traveltoworkenglandandwales/census2021>

³ Calculated by combining the number of residents that stated they travel <10km to their workplace and/or work mainly from home, Census 2021.

CONSIDER FIRST



CONSIDER LAST

Figure 2 - The Transport User Hierarchy based on Hertfordshire County Council’s Local Transport Plan 4

The Transport Vision & Strategy is informed and sits within a wider framework of documents at national, regional, and local scale. The Transport Vision & Strategy is part of the evidence base supporting the Dacorum Borough Council and St Albans City and District Local Plans and the HGC Programme.

Strategic priorities are set out in documents, including the Hertfordshire Growth and Transport Plans, Hertfordshire County Council’s Local Transport Plan 4 (2018-2031) and the emerging Local Plans. This TV&S addresses local journey priorities and is informed by the strategic documents that sit above it.

A future implementation plan will be developed as part of the Local Plans evidence and will feed into the Local Authorities Infrastructure Delivery Plans.

As part of the HGC Programme, in 2021, HGC published the ^{4[OBJ]}, an overarching spatial approach for the HGC Programme Area. The *Spatial Vision* promotes healthy lifestyles and respond to the climate crisis – and sets out the ambition that the Programme Area will be home to inclusive, integrated neighbourhoods connected by a green movement network.

⁴ HGC Spatial Vision (2021) <https://www.hemelgardencommunities.co.uk/media/3hknvayj/hemel-garden-communities-spatial-vision.pdf>

The Hemel Garden Communities' *Framework Plan* is a spatial framework for the HGC Programme Area, with a detailed focus on North and East of Hemel Hempstead Growth Areas. The TV&S and future Implementation Plan will be integrated with the Framework Plan, alongside wider town focussed workstreams, to develop a single holistic framework for transformation.

Hertfordshire County Council's *Local Transport Plan 4 (2018-2031)*, *HGC Spatial Vision*, and the *HGC Framework Plan* are supported by the Town and Country Planning Association (TCPA) transport guidance help set the vision for the TV&S. Figure 3 shows the interrelationship with these documents and other relevant plans.

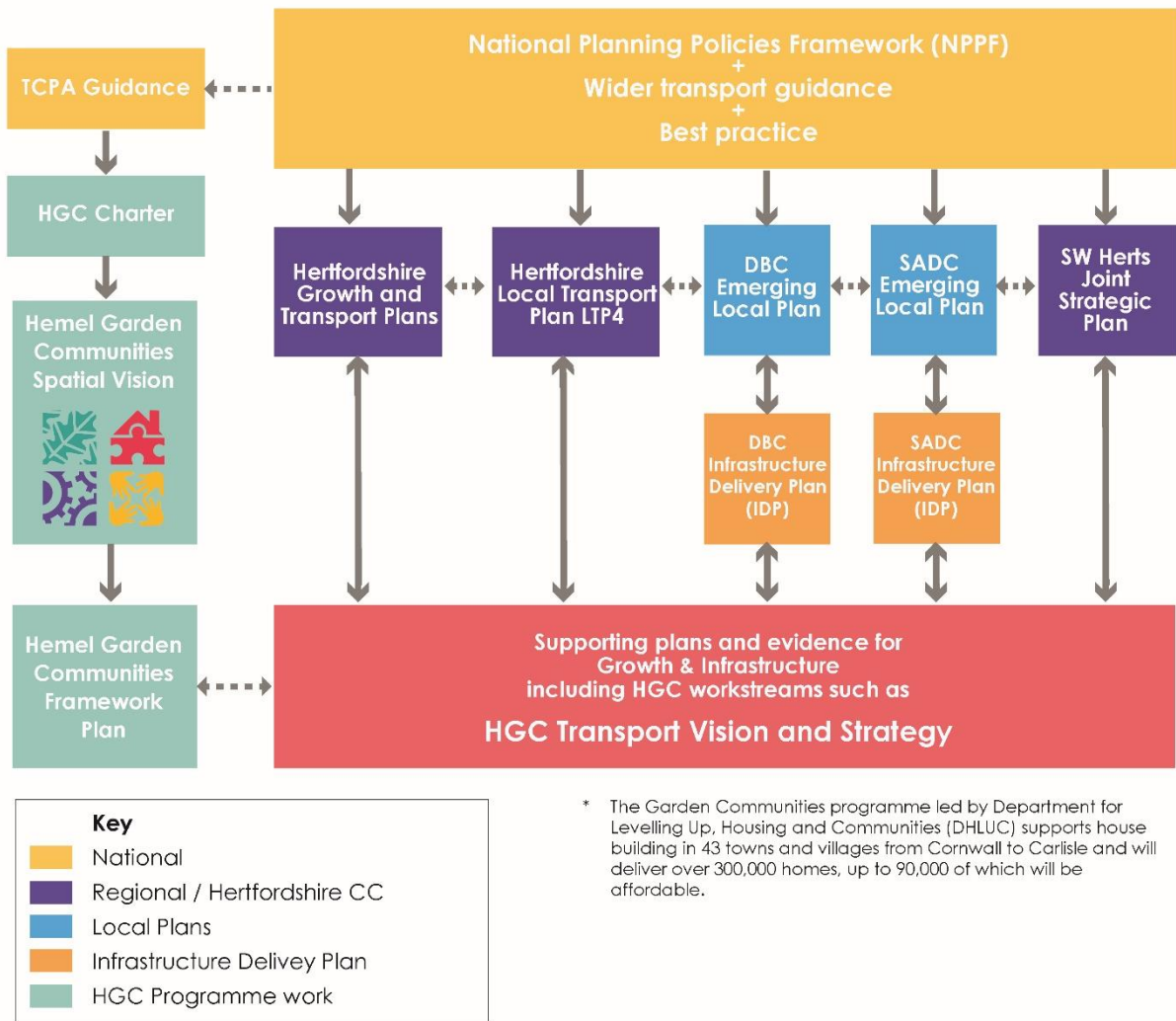


Figure 3 - The Interrelationship of the TV&S with Other Plans and Guidance Documents

Since 2021⁵, there has been a noticeable move away from the traditional ‘Predict and Provide’ approach to transport planning, towards what is known as a ‘Decide and Provide’ or ‘Vision and Validate’ approach. This new approach is summarised below, and this TV&S document focuses on steps ii and iii:

- i. Establish an over-arching vision for the future of the region (*HGC Spatial Vision*).
- ii. Establish the role that transport must play in achieving that vision (*HGC Transport Vision*).
- iii. Develop an initial set of plausible transport-related investment proposals (*HGC Transport Strategy*).
- iv. Stress-test/validate these proposals against assumed future conditions/scenarios.
- v. Recommend a confirmed transport investment package.

What is the vision?

By 2050, Hemel Hempstead will be a place where walking, cycling and public transport are the natural choice for local journeys, for residents and visitors alike. A place where at least 40% of all person trips⁶ from/to/within Hemel Hempstead, and 60% of all person trips from/to/within new Hemel Garden Communities neighbourhoods, will be undertaken by sustainable modes of travel. An innovative place, fit for the future, where high-quality transport networks prioritise local journeys and support decarbonisation. Well-connected neighbourhoods and employment areas will strengthen the local economy and promote sustainable growth and investment.

HGC Transport Vision

The Transport Vision is intentionally aspirational and will be subject to initial testing to give confidence that it is achievable. The process used in this report involves reviewing existing transport patterns in the light of anticipated growth, to develop an understanding of what it will take to bridge the gap between present existing transport patterns and those the Vision seeks.

What is the strategy?

To achieve the aspirational mode shift goals for 2050 and the wider Transport Vision, the Transport Strategy is made up of three Strategic Themes with clear output focussed Desired Outcomes intended to help steer decision-making around funding programmes to achieve each of the Strategic Themes.

Achieving these Desired Outcomes will require systematic and integrated application and delivery of transformative infrastructure interventions and wider supporting measures, which together will influence and sustain behavioural change.

⁵ In 2021, the local authority consortium that owns and runs TRICS, the industry standard database for assessing trip generation, produced a ‘Guidance Note on the practical implementation of the Decide & Provide approach’ that placed D&P firmly at the forefront of contemporary practice.

⁶ Person trips are defined as those that involve the movement of people (residents and visitors to the site) rather than the movement of goods. The element of logistics development within HGC is by definition a vehicle based activity and not capable to transfer to an alternative mode. Hence, this element is excluded from the mode share target, however, for the avoidance of doubt the journey to the site by its workforce is considered to be a person trip which will be included in the mode share assessment.

Theme 1: A well connected place that puts people first

Both existing and new neighbourhoods will prioritise local journeys, facilitated by people-focused streets and traffic-free routes. This will ensure it is quicker and more convenient to walk, cycle and use public transport than use the car for the vast majority of local journeys. While access will be possible to every house by car, the design of the streets will mean that cars will be understood as guests in the streetscape.

This first theme (“*A well connected place that puts people first*”) primarily sets out the strategic infrastructure needs of Hemel Hempstead, outlining the Key Network and the Local Network. The Key Network will primarily serve a movement function and is formed of 7 key routes:

- Route 1: A414 / Station Road (Hemel Hempstead Rail Station – Herts IQ);
- Route 2: Adey field (Leighton Buzzard Road – Heart of Maylands);
- Route 3: Queensway (Leighton Buzzard Road – Maylands Ave);
- Route 4: Link Road / Redbourn Road (Leighton Buzzard Road – Redbourn Road);
- Route 5: New North and East Hemel Sustainable Transport Corridor (Leighton Buzzard Road – A4147);
- Route 6: Leighton Buzzard Road / Two Waters Road / A4251 (Link Road – Apsley); and
- Route 7: Redbourn Road / Maylands Avenue (Link Road – A414).

The Local Network supplements the Key Network and is formed of three subsequent networks:

- Local Active Travel Network (Cycling, Wheeling, Walking and micro-mobility);
- Local Passenger Transport Network (Public Transport including bus and HERT routes); and
- The Green Network (Continuous, traffic-free, or low-traffic routes designed to support active travel such as the Nickey Line and Grand Union Canal).

Whilst the Key Network will primarily serve a movement function, the Local Network(s) – in particular the active travel and The Green Network components – will facilitate movements between local destinations.

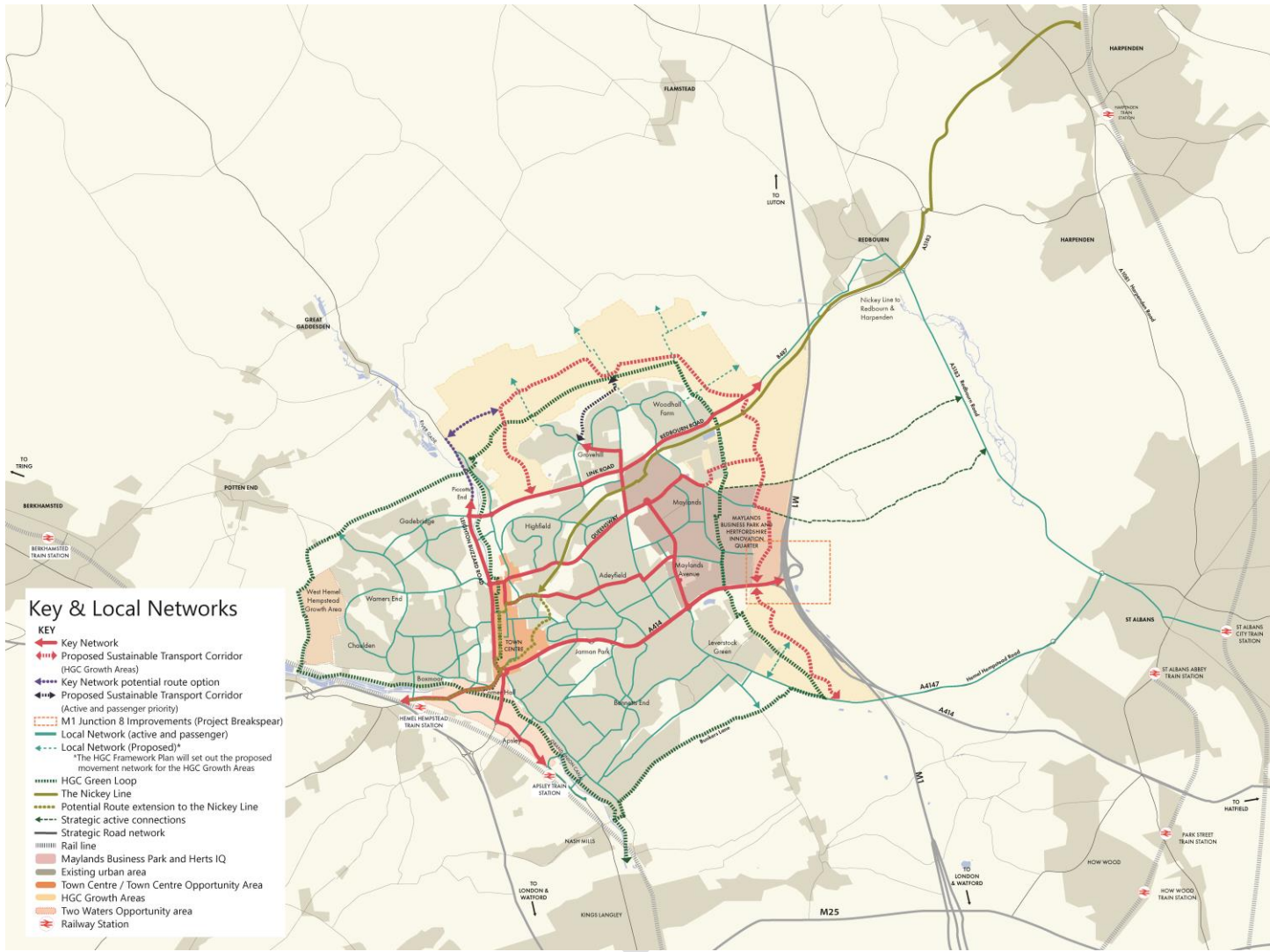


Figure 4 - HGC Key and Local Networks Plan

DRAFT

Theme 2: A place that enables sustainable travel

Where new residents and businesses are coming to Hemel Hempstead it will be vital that they find walking, cycling and public transport attractive to use from Day One. This requires early investment in the high-quality services and supporting infrastructure needed to make sustainable mode choice inviting. Residents will need to be engaged and informed on new transport measures and supporting initiatives that will become options for their journeys and help form sustainable and healthy travel habits.

Theme 2 sets out ways to promote behaviour change which includes:

- Promotion of Active travel;
- Bikeability training;
- Maintenance for Active Travel; and
- Promotion of Sustainable travel.

Theme 3: A network fit for the future

For Hemel Hempstead to meet its growth aspirations, there is a clear need to embrace change and maximise the value of new mobility services, technologies, and systems. Hemel Hempstead needs to ensure its transport networks are integrated, resilient, and adaptable so that beneficial new opportunities can be grasped as they arise.

Theme 3 sets out the opportunities and an overview of the likely ever changing landscape facing Hemel Hempstead in the run up to 2050, which includes innovation related to:

- Future Mobility Trends;
- Mobility Hubs;
- Parking;
- Freight; and
- Emerging Technologies.

Delivering the Vision and Strategy

In order to progress the TV&S, collaboration across the HGC Partners and wider stakeholders will be key to the following three areas of work:

1) Planning Support

To steer and shape key areas of work related to the delivery of Local Plans:

- a) A Phasing and Implementation Plan;
- b) Infrastructure Delivery Plans for the Authorities and longer-term aspects for Hemel Garden Communities, and
- c) Funding Strategy.

2) Wider Workstreams and Projects

Partnership and collaborative working will also be key to taking forward the wider workstreams and projects under immediate, short-term, medium-term, and long-term timescales to help prioritise their delivery.

3) Delivery, Monitoring & Evaluation Strategy

To monitor and identify the best approach for achieving the delivery of infrastructure and supporting workstreams and identify how this will be appropriately monitored and evaluated towards meeting the sustainable mode targets.



1

INTRODUCTION

1 INTRODUCTION

1.1 PURPOSE

- 1.1.1. The Hemel Garden Communities 2050 Transport Vision and Strategy (TV&S) forms part of a transformational garden town programme covering Hemel Hempstead and wider routes. The Hemel Garden Communities (HGC) programme was awarded Garden Town status by the Government through a successful bid in 2019.
- 1.1.2. This document sets out the TV&S for the long-term growth and transformation of Hemel Hempstead to ensure the existing town, can be developed as a successful, integrated, well-connected town with a sustainable movement network. The Transport Vision & Strategy is part of the evidence base supporting the Dacorum Borough Council and St Albans City and District Local Plans; Hertfordshire County Council's Growth and Transport Plan, and the wider HGC Programme.
- 1.1.3. The TV&S has been prepared on behalf of a partnership that comprises Dacorum Borough Council (DBC), St Albans City and District Council (SADC) and Hertfordshire County Council (HCC), Hertfordshire Local Enterprise Partnership (Herts LEP), and the Hertfordshire Innovation Quarter (Herts IQ) as part of the HGC Programme (referred as 'the Partners'). Wider stakeholders including National Highways and The Crown Estate have helped shape the TV&S. Hemel Hempstead is growing and will continue to experience substantial planned growth up to 2050, resulting in a significant increase in population and demand for movement around the town. The majority of the growth will be on land to the north and east of Hemel Hempstead, which will accommodate up to 11,000 homes and 10,000 jobs.
- 1.1.4. Approximately 5,500 of these homes are within DBC, and around 5,500 within the SADC,'s administrative area(s). Additionally, around 9,242 further homes will be brought forward in Hemel Hempstead within the Dacorum district, with 5,092 on strategic sites in the town and a further 4,150 homes are likely on other (windfall) sites within the plan period (up to 2040⁷). In total, the TV&S will need to support residential growth of around 20,000 homes, and employment growth of around 10,000 jobs, up to 2050.
- 1.1.5. As shown in Figure 1-1 this TV&S covers the whole town of Hemel Hempstead, within the borough of Dacorum, as well as proposed growth areas straddling both Dacorum and St Albans District to the north and east of the town and wider movement routes beyond. The strategic themes enshrined within this document are intended to influence opportunities for travel between Hemel Hempstead and neighbouring areas such as Redbourn, Harpenden, St Albans, as well as Kings Langley and Berkhamsted.

⁷ Figures are cited from Dacorum Borough Council's 2023 Regulation 18 consultation and are subject to review follow consultation feedback and development of the DBC Regulation 19.

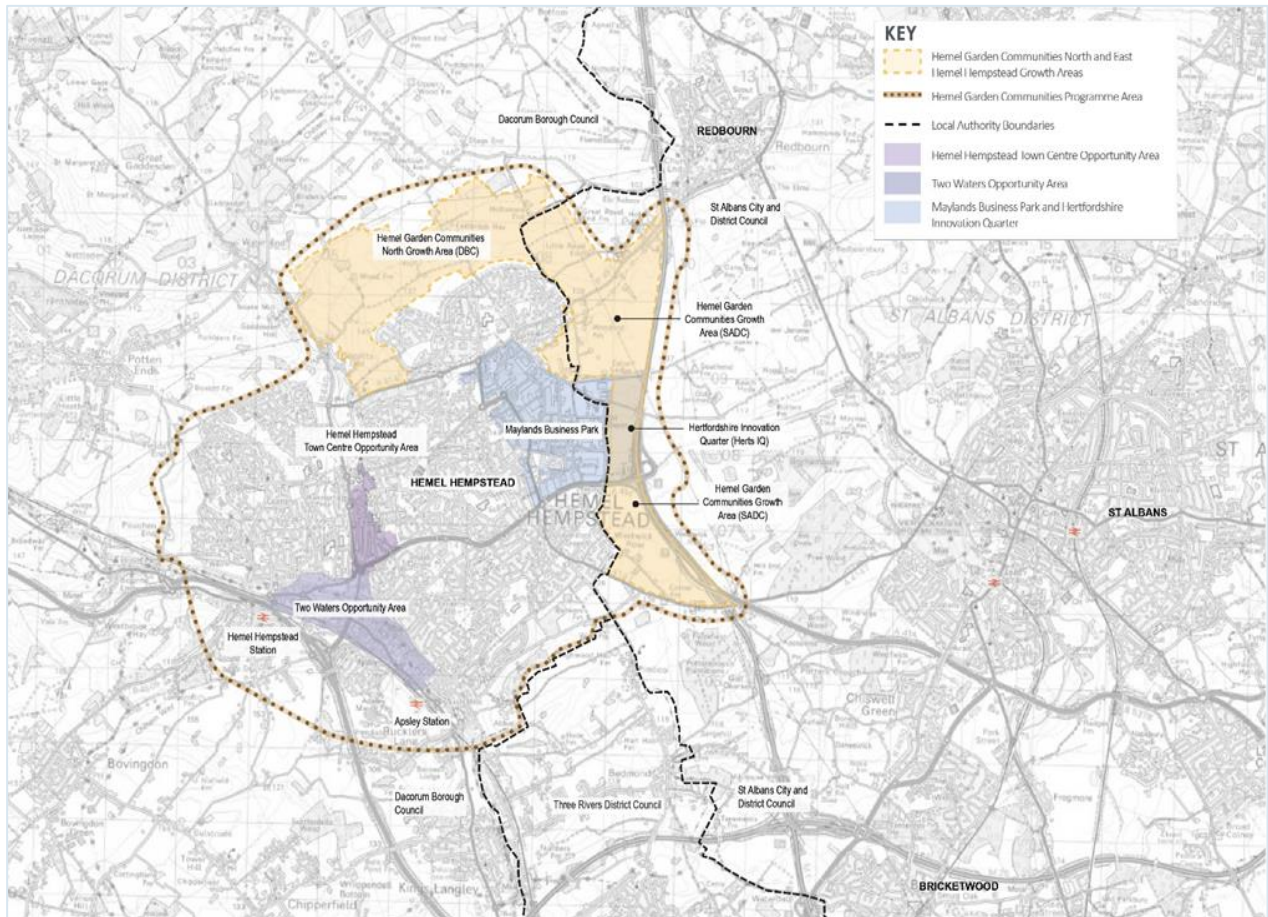


Figure 1-1 - HGC Programme Area Map

- 1.1.6. The TV&S will facilitate significant change in how people and goods move around Hemel Hempstead and the wider growth area covered by the HGC programme. This, in turn, is needed so that established key policy priorities (relating amongst other things to the economy, the environment, public health, social cohesion) are met, and that the HGC Programme Area, as a whole, becomes a greener, safer, healthier, more successful, and more sustainable place. The Climate Emergencies declared in 2019 by each of the Councils underscore the need for, and urgency of, change.
- 1.1.7. Specifically, the TV&S seeks to achieve the greatest possible shift from private car travel towards more sustainable modes - principally walking, cycling and public transport. Modal share refers to the proportion of trips made by different transportation modes, such as walking, cycling, public transport, and private vehicles such as cars.
- 1.1.8. For trips where motorised vehicles are still needed, and this will remain the case for many journeys, the TV&S promotes a shift to shared use and non-fossil-fuelled vehicles. Though mode shift on the scale needed will be no easy task, the imperative to achieve it is unavoidable.
- 1.1.9. The TV&S will support Hemel Hempstead by galvanising its position within the region - supporting high-growth, high-value, knowledge-intensive jobs in digital technology and science sectors through supporting strategic connectivity and embracing digital, energy and transport innovation. Hemel Garden Communities will be a testbed for new ideas and their roll-out.

1.2 STRUCTURE OF THE TV&S

1.2.1. Following this introductory section, the remainder of the TV&S is set out as follows:

- Chapter 2 - Vision, Strategic Themes & Desired Outcomes (pages 12-20);
- Chapter 3 - Hemel Hempstead: Now and in the Future (pages 20-35);
- Chapter 4 - Realising the Vision: The Hemel Garden Communities 2050 Transport Strategy (pages 36-73); and
- Chapter 5 - Delivery the Vision & Strategy (pages 74-82).

1.2.2. This document is intended to provide a technical summary to inform relevant stakeholders of the outcomes of the assessment process and direct further study where necessary. Further details regarding the process and details of the earlier assessment work are presented in the following documents which are also included as appendices, see Table 1-1.

Table 1-1 - Supporting Documents

Document	Purpose and Summary
Baselining and Monitoring Framework Technical Note (Appendix A)	Presents an outline methodology for establishing baseline travel patterns in Hemel Hempstead, and subsequently for monitoring their activities so as to measure progress against the 2050 mode share target.
Future Movements Technical Note (Appendix B)	Presents the methodology for, and results of, estimating the volume, distribution and travel mode share of movements associated with planned growth across the TV&S area across 2050. Informed the identification of the Key and Local Networks, to ensure they reflect local travel demand.
Key Network Technical Note (Appendix C)	Presents the methodology for, and results of, an analysis undertaken to design and review the key active and passenger transport network. Informs the Key Network described in the TV&S.
Growth Area corridor (Sustainable Transport Corridor) Technical Note (Appendix D)	Defines a position on the Growth Area corridor proposed through the north and east of Hemel Hempstead, exploring whether it provides strategic benefit and aligns with the vision and objectives of the TV&S.
Local Networks Technical Note (Appendix E)	Building on the Key Network Technical Note, presents the methodology for, and results of, an analysis undertaken to design and review the Local Networks.
Case Studies (Appendix F)	Presents a series of national and international case studies/ exemplar schemes of Garden Villages and the associated lessons learned to be applied to Hemel Garden Communities.
Policy Context (Appendix G)	Presents the documents reviewed as part of the policy context. These include National, Regional, Local policies and best practice documents.

1.2.3. Where a supporting document is of particular relevance, this is signposted as a source of further information within the relevant section.

- 1.2.4. It should be noted that Appendix C and E presents early conceptual work for a number of potential routing options that could direct additional study where appropriate. At this stage of the process, this work is considered indicative and inconclusive without further feasibility study.

1.3 A VISION-LED APPROACH

- 1.3.1. In November 2018, a Hemel Garden Communities bid prepared by the three authorities alongside Herts LEP and The Crown Estate was submitted to the Department for Levelling Up, Housing and Communities (DLUHC⁸).
- 1.3.2. The Garden Communities bid prospectus required applicants to reflect Town and Country Planning Association (TCPA) Garden City Principles and be of sufficient scale to be largely self-sustaining. They could comprise of a new discrete settlement or be a transformational development of an existing settlement. They also asked for the proposal to demonstrate a strategic fit with ambitious proposals creating a variety of new jobs and timely delivery of infrastructure. The prospectus also asked for a proposal that was locally led with support from the relevant local authorities and continued local community engagement.
- 1.3.3. The bid was successful, and Hemel Hempstead was awarded 'Garden Town' status in March 2019 to develop the Hemel Garden Communities programme; this included the transformation of the existing town, as well as the new growth areas to the north and east of Hemel Hempstead.

HGC SPATIAL VISION

- 1.3.4. Growth in the form of large-scale development delivered across the UK over the last 50 years is often sub-optimal, both in design and construction, lacking basic day-to-day facilities on-site or usable walking, cycling, or passenger transport infrastructure. The result is that much of what is being built becomes car-dominated, adding to carbon emissions and air pollution, whilst contributing towards a future of poor health for the residents that live there through inactivity^{9,10,11}. These are outcomes that can be avoided in Hemel Hempstead through a combination of forward funded and growth-led capacity investment, providing a catalyst not only for 'good growth' that has high levels of sustainable mode share, but also encouraging mode shift to lower-carbon travel options across existing communities and the wider sub-region.
- 1.3.5. In response to these historical issues and with the success of the HGC bid, HGC adopted a 'vision-led' approach to transport, movement, and infrastructure planning through the HGC Spatial Vision.
- 1.3.6. HGC published its Spatial Vision¹² in 2021. It is a high-level document that explains how HGC will look and feel once the development and transformation is complete. The Spatial Vision statement consists of an overarching vision, two crossover themes, and four thematic pillars:

⁸ At the time of the bid, DLUHC was known as the Ministry for Housing, Communities and Local Government (MHCLG)

⁹ [UCL \(2020\), A Housing Design Audit for England](#)

¹⁰ [Transport for New Homes \(2018\), Transport for New Homes](#)

¹¹ [Transport for New Homes \(2020\), Garden Villages and Garden Towns: Visions and Reality](#)

¹² HGC Spatial Vision (2021) <https://www.hemelgardencommunities.co.uk/media/3hknvayj/hemel-garden-communities-spatial-vision.pdf>

“In the heart of the Golden Triangle between Oxford, Cambridge and London, Hemel Garden Communities will create new neighbourhoods and transform existing ones and the wider area, building on the best of its heritage and culture to become a greener, more connected New Town”.

The vision is organised into four thematic pillars, all of which reinforce the aspirations to **promote healthy lifestyles** and **respond to the climate crisis**.

*“Hemel Garden Communities will be home to inclusive, **integrated neighbourhoods** connected by a **green network**, and thoughtfully designed places with **engaged communities**, all underpinned by digital connectivity, a **self-sustaining economy** and pioneering green technology driven by Hertfordshire Innovation Quarter (**the four thematic pillars**).”*

HGC Spatial Vision, 2021

- 1.3.7. The Transport Vision & Strategy is informed and sits within a wider framework of documents at national, regional, and local scale as set out in Figure 1-2 (see below). The Transport Vision & Strategy is part of the evidence base supporting the Dacorum Borough Council and St Albans City and District Local Plans and the HGC Programme.
- 1.3.8. Strategic priorities are set out in documents, including the Hertfordshire Growth and Transport Plans, Hertfordshire County Council’s Local Transport Plan 4 (2018-2031) and the emerging Local Plans. This TV&S addresses local journey priorities and is informed by the strategic documents that sit above it.
- 1.3.9. A future implementation plan will be developed as part of the Local Plans Evidence and will feed into the Local Authorities Infrastructure Delivery Plans.
- 1.3.10. As part of the HGC Programme, in 2021, HGC published the *HGC Spatial Vision* an overarching spatial approach for the HGC Programme Area. The *Spatial Vision* promotes healthy lifestyles and respond to the climate crisis - and sets out the ambition that the Programme Area will be home to inclusive, integrated neighbourhoods connected by a green movement network. The *HGC Spatial Vision* approach seeks to make active and sustainable travel accessible to everyone and connect local centres and key destinations to the countryside, the Chiltern Hills, and wider destinations across Hertfordshire, transforming lifestyles through greater engagement with nature, reducing energy demand and making a significant contribution to achieving net zero carbon.
- 1.3.11. The Hemel Garden Communities’ *Framework Plan* is a spatial framework for the HGC Programme Area, with a detailed focus on North and East of Hemel Hempstead Growth Areas. The TV&S and future Implementation Plan will be integrated with the Framework Plan, alongside wider town focussed workstreams, to develop a single holistic framework for transformation.

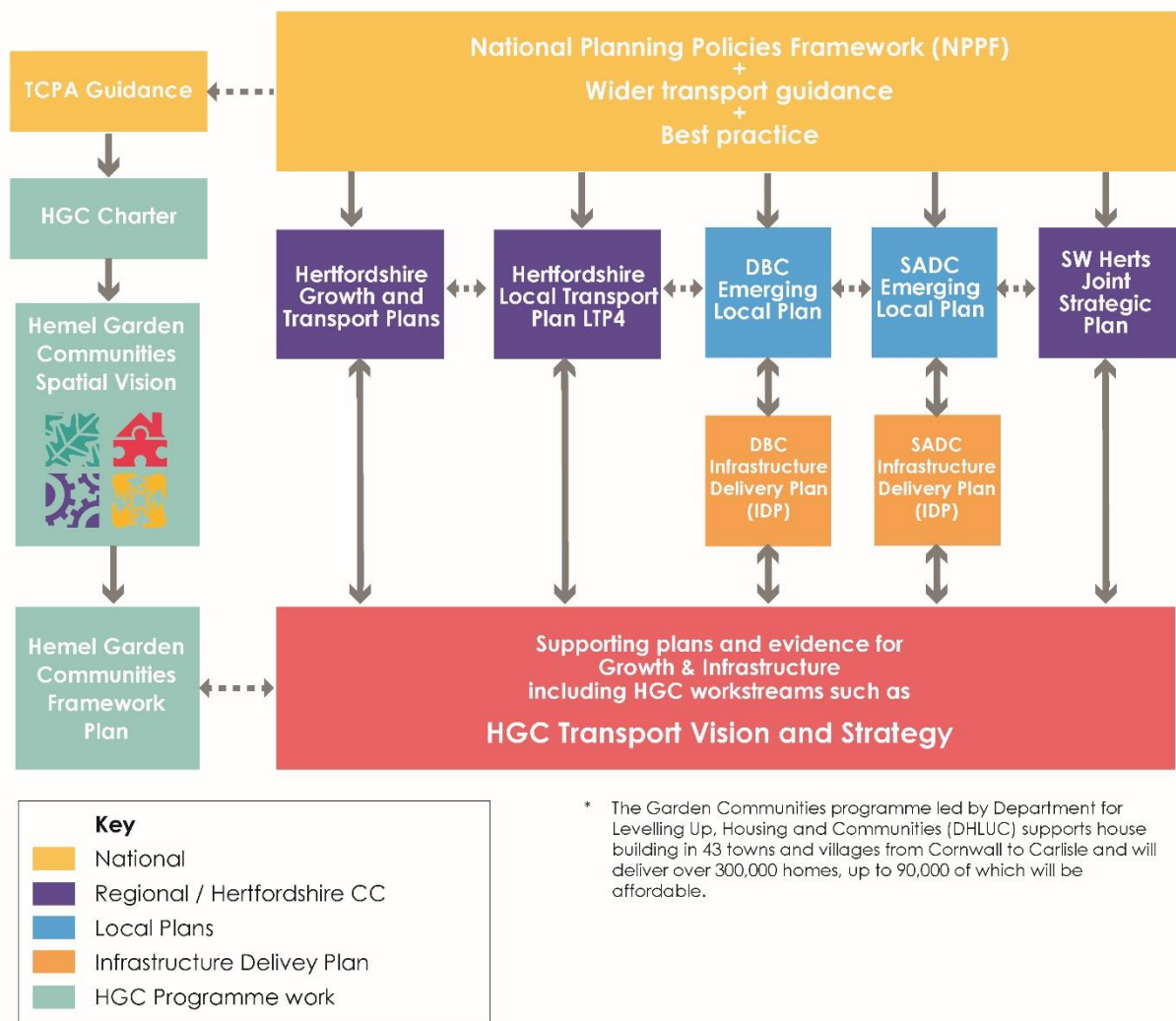


Figure 1-2 - Policies and Document Context for Hemel Garden Communities Programme

VISION AND VALIDATE

- 1.3.12. To achieve this, the TV&S and associated evidence base seek to first establish a sustainable modal share aspiration for trips, and then test different possible sustainable transport interventions to measure their prospective contribution towards achieving it.
- 1.3.13. This approach moves away from the more conventional ‘predict and provide’ (P&P) model that has historically dominated town and transport planning within the UK. P&P relies on data and highway-based modelling approaches and tends to hypothesise a ‘worst case’ in terms of mode share. This in turn predicts high vehicle demand with unacceptable highway impacts and leads to an approach reliant on the delivery of additional highway capacity to meet this extra demand. This would be particularly unacceptable in the context of Hemel Hempstead, which is constrained by congested road networks, proximity to - and severance from - the trunk road network, high volumes of through-trips and a relatively high private vehicle mode share. In these instances, where highway-focused ‘mitigation’ strategies are proposed, to unlock additional highway capacity, there is risk of attracting greater numbers of car trips, with associated disbenefits.

- 1.3.14. A new approach to planning is gaining traction within the UK known as ‘decide and provide’ (D&P) or ‘vision and validate’¹³ (V&V). By contrast, the V&V approach to transport in planning decides on a preferred vision of the future and then provides the means to work towards that whilst also accommodating uncertainty about the future.
- 1.3.15. The V&V approach offers the opportunity for more sustainable, integrated transport infrastructure and land use planning with more meaningful application of the modal hierarchy¹⁴, (in line with HCC’s Local Transport Plan) making sustainable modes, such as cycling, walking, wheeling, and public transport central to achieving the vision for the site or development rather than a cursory or residual consideration (as has sometimes, historically, been the case)¹⁵.
- 1.3.16. The V&V approach involves two important elements: being vision-led; and accommodating uncertainty. The steps, which align with the approach set out in *Futures Toolkit*¹⁶ can be summarised as follows:
- Determine a preferred future - a vision with associated outcomes that is desirable and likely achievable;
 - Develop a series of plausible future scenarios that helps expose the uncertain context ahead within which efforts to achieve the preferred future will play out;
 - Establish and prioritise options for helping move towards the preferred future;
 - Test how those options perform in each of the plausible scenarios - are they effective in all scenarios (resilience) or are they ineffective (or less effective) in some scenarios (risk)?; and
 - Compose a strategy for vision realisation that accounts for, with the selected options included, the uncertainty that has been explored.
- 1.3.17. The WSP Opportunity to Shift modes and Propensity Tool is a data-driven tool that helps assess the opportunity and propensity for mode shift in transportation by analysing factors influencing travel behaviour and preferences. The tool provides an initial step to validate the HGC Transport Vision and associated mode share targets. Further validation steps will be required as more detailed masterplans emerge for the sites and growth areas.

TCPA GUIDANCE

- 1.3.18. The Town and Country Planning Association’s (TCPA) guidance for new sustainable communities includes Guide 13 on Sustainable Transport. This states that new Garden Communities should embrace a visionary mindset and deliver an exceptional place and that, to achieve this, a number of key actions must be taken. One of these actions is to set mode share and accessibility targets for the settlement, and make sure that the networks and service levels proposed can deliver them.

¹³ Also referred to as ‘decide and provide’ (D&P)

¹⁴ Manual for Streets, 2007, DfT:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1072722/Essex_Manual_for_Streets_Redacted.pdf

¹⁵ TRIC Decide and Provide Guidance Summary, 2022, Basford Powers:

http://www.trics.org/img/trics_dp_guidance_summary.pdf

¹⁶ The Futures Toolkit, Tools for Futures Thinking and Foresight Across UK Government, 2017, GO-Science:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/674209/futures-toolkit-edition-1.pdf

- 1.3.19. As for what a suitable mode share target might be, Guide 3, on Design & Planning states that a Garden City's design must enable at least 50% of trips originating in the Garden City to be made by non-car means, with a goal to increase this over time to at least 60%

1.4 WHY IS MODE SHIFT IMPORTANT?

- 1.4.1. Transport modal shift has the potential to provide numerous benefits to Hemel Hempstead and the wider area including earlier climate resilience, public health improvements and economic benefits. Firstly, relevant supporting data is identified to understand more about why mode shift is important.

SUPPORTING DATA

- 1.4.2. The 2021 Census found approximately 60% of residents live and work in Hemel Hempstead^{17, 18}. While at a County level, the 2022 Hertfordshire County Travel Survey (HCTS) showed that over 35% of all trips by car drivers are under 3 miles long, and over half are under 5 miles long. The median trip length for car drivers and passengers alike is 4 miles. Therefore, although the HCTS showed that 64% of all trips are currently made by car (either as driver or passenger), in accordance with targets set within DfT's Gear Change Strategy, the potential for transfer of many of these trips to more sustainable modes is clear¹⁹.
- 1.4.3. While Hemel Hempstead's terrain is quite undulating in places, the shortness of so many car trips, combined with the potential for existing and emerging technologies (e.g. buses and e-bikes / e-scooters) means that achieving substantial modal shift away from private cars is realistic, so long as attractive alternatives are provided and appropriately supported.

CLIMATE RESILIENCE

- 1.4.4. The latest available final government statistics on Greenhouse Gas Emissions (GHtGs) (for 2021, published in February 2023²⁰) show that Transport produces more GHtGs than any other sector, around 26% of the total, and that "road transport is the most significant source of emissions in this sector, in particular passenger cars" (see Figure 1-3 below.)

¹⁷ Travel to work data, ONS, Census 2021

<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/traveltoworkenglandandwales/census2021>

¹⁸ Calculated by combining the number of residents that stated they travel <10km to their workplace and/or work mainly from home, Census 2021.

¹⁹ DfT's Gear Change Strategy sets a clear goal that 50% of all journeys in towns and cities should be cycled or walked by 2030; stating that journeys under 5 miles have clear potential to be otherwise undertaken by active travel modes.

²⁰ 2021 UK Greenhouse Gas Emissions, Final Figures. Department for Business, Energy & Industrial Strategy: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1134664/greenhouse-gas-emissions-statistical-release-2021.pdf

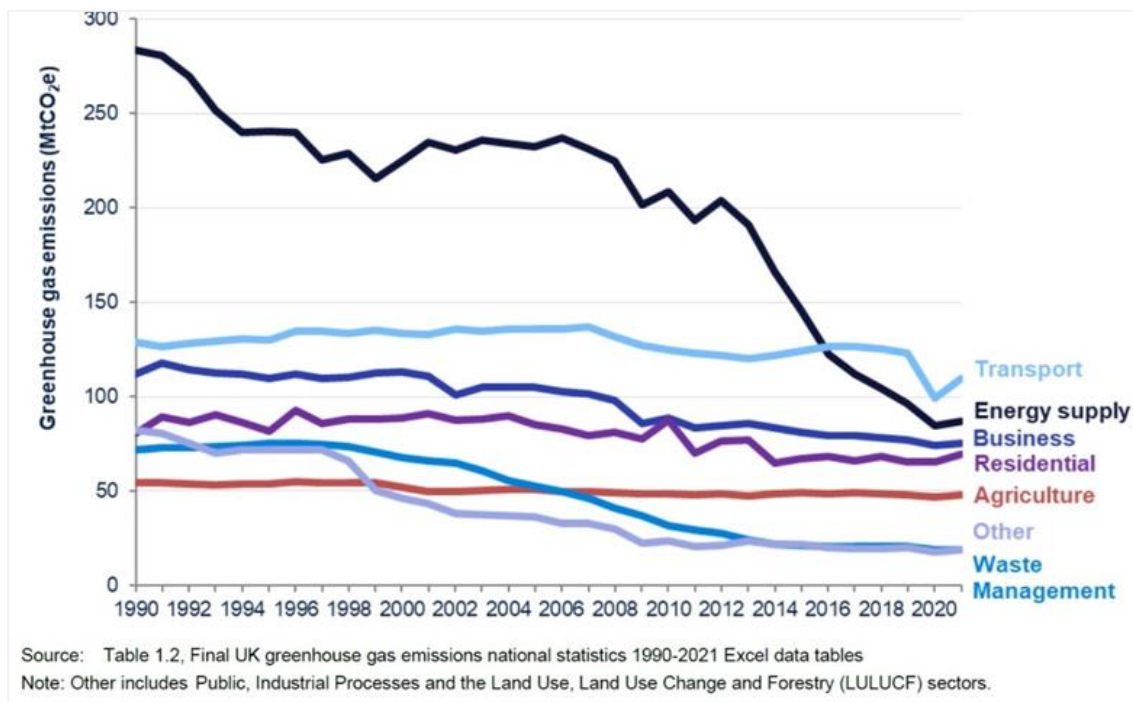


Figure 1-3 - Territorial UK Greenhouse Gas Emissions by NC Sector, 1990-2021 (MtCO₂e)

- 1.4.5. Through both the Transport Decarbonisation Plan and Net Zero Strategy²¹, the UK Government has acknowledged the role that reducing traffic growth can play in lowering transport emissions. To achieve this, modal shift, or reduction in use of private cars to alternative active travel and sustainable transport modes is vital - as cars and taxis currently contribute to over 55% of all UK transport emissions²².

PUBLIC HEALTH AND ECONOMY BENEFITS

- 1.4.6. The need to significantly reduce private car use is critical for multiple reasons - the most pertinent relates to air pollution which is the greatest environmental risk to public health in the UK. The annual mortality rate from human made air pollution in the UK is between 28,000 - 36,000 deaths per year from respiratory illnesses²³.
- 1.4.7. As well as threats to public health, the use of private cars also results in serious issues of congestion in the UK. Congestion is a prominent issue, with the average UK driver losing 80 hours per year due to congestion, a figure which has been increasing each year since 2020²⁴.

²¹ BEIS. (2021). Net Zero Strategy: Build Back Greener. London: Department for Business Energy & Industrial Strategy.

²² DfT. (2021). Decarbonising Transport: A Better, Greener Britain. London: Department for Transport

²³ Office for Health Improvement & Disparities. (2022). Air pollution: applying All Our Health: <https://www.gov.uk/government/publications/air-pollution-applying-all-our-health/air-pollution-applying-all-our-health#:~:text=In%20the%20UK%2C%20air%20pollution,and%2036%2C000%20deaths%20every%20year>

²⁴ Climate Change Committee, 2023, Understanding the Requirements and Barriers for Modal Shift: <https://www.theccc.org.uk/publication/understanding-the-requirements-and-barriers-for-modal-shift-wsp/>

- 1.4.8. UK policies, both on a national and local level, stress the importance of shifting away from private car use and emphasise a need to promote alternative modes. For example, the Department for Transport's (DfT) *Gear Change Strategy* is an active travel strategy that sets out the UK's objectives to increase walking and cycling and stresses the importance of modal shift away from the private car. The *Gear Change Strategy* states that 50% of all journeys in towns and cities should be cycled or walked by 2030. The strategy notes that 58% of car journeys in 2018 were under 5 miles and therefore have the potential to be shifted to active travel²⁵. Additionally, the *National Bus Strategy: Bus Back Better* details the importance of facilitating modal shift, particularly in congested urban areas, by making the bus a strong alternative to the private car²⁶. *The Future of Mobility: Urban Strategy* also highlights a range of solutions to challenge the modal dominance of the private car²⁷.
- 1.4.9. Achieving meaningful modal shift requires a combination of measures aiming to reduce private car use and measures that offer people viable alternatives, supported by effective communication and engagement activities. The Climate Change Committee (CCC) has previously analysed the reduction in car miles due to modal shift, assuming a 9% reduction, relative to baseline growth forecasts, due to factors such as home working and modal shift by 2035 increasing to 17% by 2050²⁸. However, these assumptions did not explicitly consider how demand for alternate modes would change, or how price would impact modal shift.
- 1.4.10. The DfT's annual *National Road Traffic Projections (2022)* presents a number of plausible scenarios to reflect the inherent uncertainty in the factors affecting road traffic demand²⁹ including long term projection data of road traffic, congestion and emissions in England and Wales from 2025 to 2060³⁰. The report highlights that traffic levels in England and Wales are projected to grow in all future scenarios, but with large variation around the size and trend of that growth.
- 1.4.11. From 2025, traffic is projected to grow between 8% and 54% by 2060, depending on the scenario used and economy types, with "Behaviour Change" being most impactful in restraining growth in vehicles miles travelled (see Figure 1-4).

²⁵ DfT, 2020, *Gear Change - A bold vision for cycling and walking*:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/904146/gear-change-a-bold-vision-for-cycling-and-walking.pdf

²⁶ DfT, 2021, *National Bus Strategy: Bus Back Better*:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/980227/DfT-Bus-Back-Better-national-bus-strategy-for-England.pdf

²⁷ DfT, 2019, *Future of Mobility: Urban Strategy – Moving Britain Ahead*:
<https://assets.publishing.service.gov.uk/media/5dcd8417ed915d071ca239e9/future-of-mobility-strategy.pdf>

²⁸ Climate Change Committee, 2020, *The Sixth Carbon Budget*. London: <https://www.theccc.org.uk/publication/sixth-carbon-budget/>

²⁹ These scenarios are described in the TAG Uncertainty Toolkit, 2023, found here:
<https://www.gov.uk/government/publications/tag-uncertainty-toolkit>

³⁰ DfT, 2022, *National Road Traffic Projections 2022*: <https://www.gov.uk/government/publications/national-road-traffic-projections>

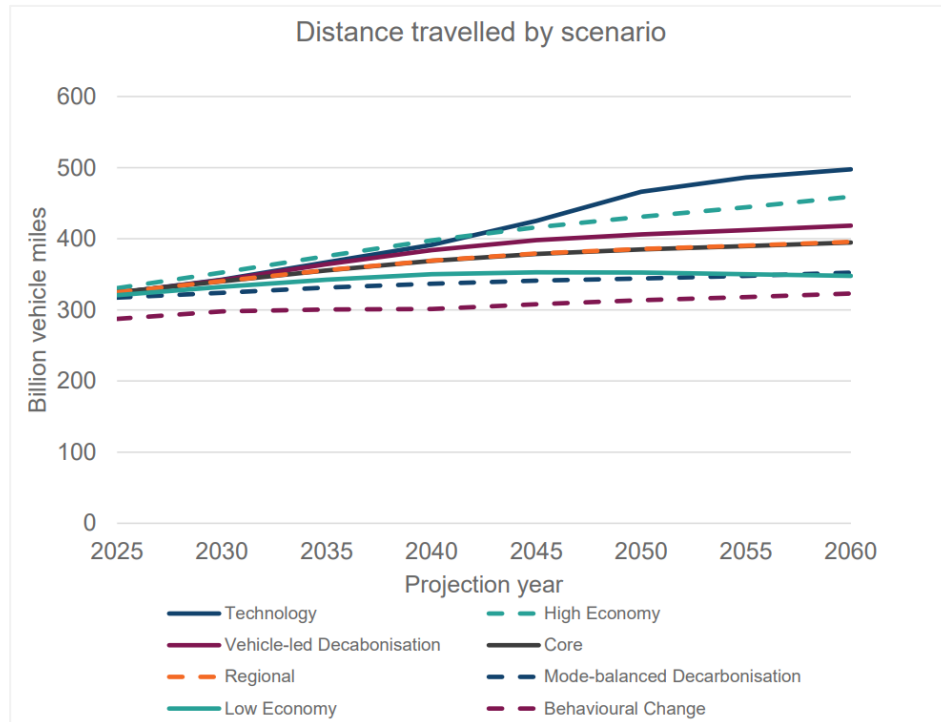


Figure 1-4 - Projected Total Vehicle Miles By Scenario (DfT - National Road Traffic Projections, 2022)

- 1.4.12. By 2060, the DfT’s projections show a stark range of results in terms of total billion vehicle miles (BVM) travelled depending on which approach (scenario) taken with the minimum being approximately 323 BVM in the “Behavioural Change” scenario and the highest being approximately 498 BVM in the “Technology” scenario. This suggests that if left to market forces to enable the widespread uptake of new, more sustainable, technologies (the “Technology” scenario) then it is expected to see a high level of growth observed throughout England and Wales as demand continues to grow at an alarming rate.
- 1.4.13. Furthermore, while electrifying the fleet will bring some benefits to localised air quality, it will not, in itself, reduce road transport emissions sufficiently to meet decarbonisation targets; and-it will do very little to address many of the other negative effects of motorised transport, including congestion, deaths and injuries, and the inactivity and social isolation responsible for increasingly poor physical and mental health³¹. In contrast the scenario with the highest potential to regulate travel demand, and its associated disbenefits, is the “Behaviour Change “scenario.
- 1.4.14. In summary, the HGC Spatial Vision aims to reduce the current dependence on private vehicles and promote both active and sustainable transportation alternatives in order to create a more environmentally friendly and liveable community. This in line with wider UK Government policy on promoting sustainable growth whilst also trying to limit demand for transport to reduce impact(s) on the existing network. Supporting data outlined also suggests that significant mode shift towards sustainable transport is not only necessary and beneficial, but also achievable. The following Chapter introduces the Transport Vision for HGC and the Strategy aiming to make it reality.

³¹ Hill, G. et al, 2019. The role of electric vehicles in near-term mitigation pathways and achieving the UK’s carbon budget, Applied Energy 251, www.elsevier.com/locate/apenergy.



2

TRANSPORT VISION, STRATEGIC THEMES & DESIRED OUTCOMES

2 TRANSPORT VISION, STRATEGIC THEMES & DESIRED OUTCOMES

2.0 TRANSPORT VISION

2.0.1. The HGC 2050 Transport Vision sets the 'direction of travel' for the long-term and the scale of the ambition for the town's transport system. The Transport Strategy identifies the key initiatives required to support Hemel Hempstead, recognising that major transport projects and changing behaviours can take a generation to achieve and deliver.

2.0.2. The HGC 2050 Transport Vision is:

By 2050, Hemel Hempstead will be a place where walking, cycling and public transport are the natural choice for local journeys, for residents and visitors alike. A place where at least 40% of all person trips³² from/to/within Hemel Hempstead, and 60% of all person trips from/to/within new Hemel Garden Communities neighbourhoods, will be undertaken by sustainable modes of travel. An innovative place, fit for the future, where high-quality transport networks prioritise local journeys and support decarbonisation. Well-connected neighbourhoods and employment areas will strengthen the local economy and promote sustainable growth and investment.

HGC 2050 Transport Vision

2.0.3. The HGC 2050 Transport Vision includes two ambitious modal split goals for transport, as outlined below:

- *By 2050, at least 40% of all person trips originating from / to / within Hemel Hempstead will be undertaken by sustainable modes of travel; and*
- *By 2050, 60% of all person trips originating from / to / within the new Hemel Garden Communities will be by sustainable modes of travel.*

³² Person trips are defined as those that involve the movement of people (residents and visitors to the site) rather than the movement of goods. The element of logistics development within HGC is by definition a vehicle based activity and not capable to transfer to an alternative mode. Hence, this element is excluded from the mode share target, however, for the avoidance of doubt the journey to the site by its workforce is considered to be a person trip which will be included in the mode share assessment.

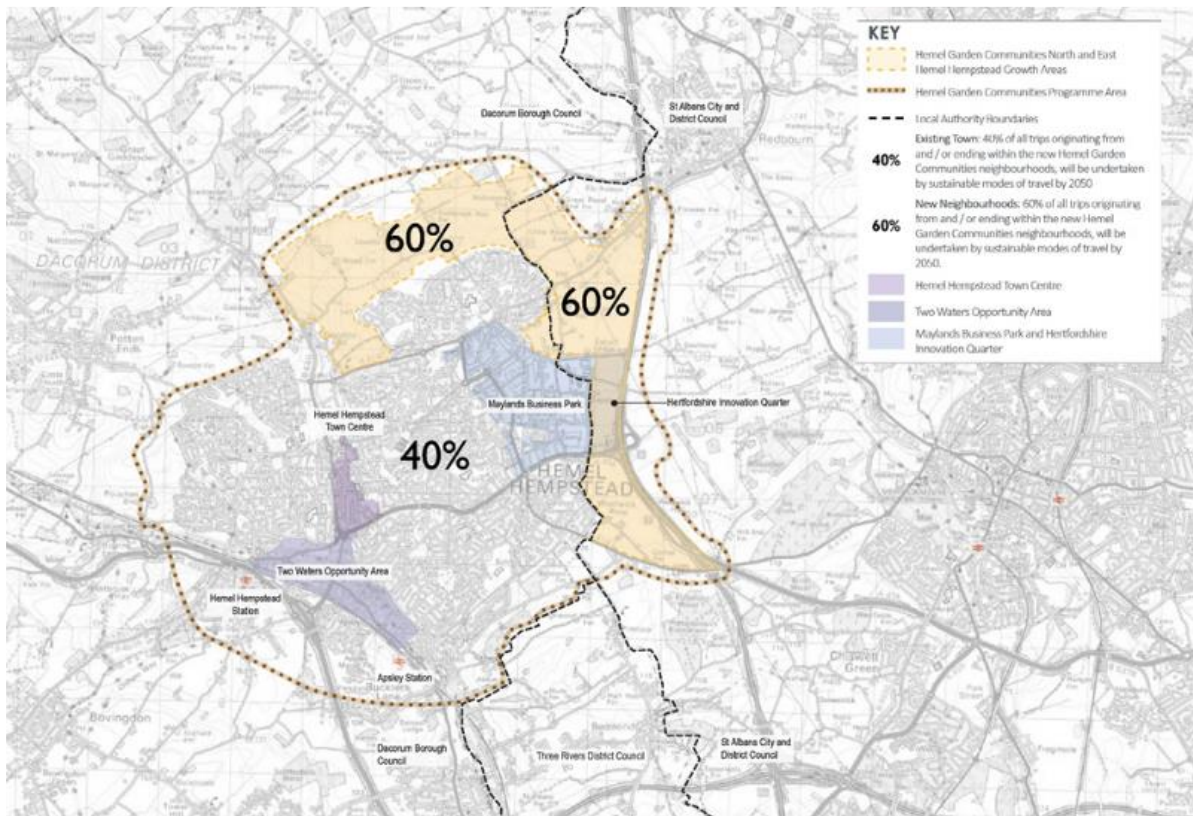


Figure 2-1 - HGC Programme Area with Associated Sustainable Mode Targets by 2050

- 2.0.4. The geographical coverage of these modal split goals is shown in Figure 2-1. The logic behind presenting two modal split goals, as opposed to one, is to allow for more ambitious spatial planning to be realised within the new HGC growth areas which do not have pre-ingrained travel patterns and behaviours.
- 2.0.5. The goals recognise that uptake of active and sustainable travel modes within the existing urban areas of Hemel Hempstead may be more difficult to realise as the town is largely constrained by pre-existing infrastructure related severance and behavioural patterns, which may take significant retrofitting of the existing transport network to change. In summary, the existing areas of Hemel Hempstead will be expected to deliver a sustainable mode share of at least 40% by 2050; whereas the new HGC communities must deliver a sustainable mode share of 60% to achieve the ambition set out in the Transport Vision and be seen to be working towards TPCA Garden City design guidance.
- 2.0.6. These modal shift targets represent the minimum expectation and are intended to be surpassed if the opportunity to achieve a greater sustainable modal share is deemed possible. Progress will be monitored through regular HGC travel surveys, conducted over pre-defined interim periods, in the run up to 2050; with additional validation expected through the decennial UK Census. For further detail regarding the monitoring strategy please refer to *Appendix A*.

SCALE OF THE CHALLENGE

- 2.0.7. Figure 2-2 below sets out the existing mode share split for journeys and demonstrates achieving the Transport Vision will likely require a significant mode shift. Based on the 2021 Census data, currently approximately 18%³³ of work journeys are carried out by active or sustainable modes of transport. This implies that approximately 22% of journeys to work in existing neighbourhoods, would require a shift to active or sustainable modes to achieve the 40% sustainable mode share by 2050. Further baselining and modelling is being developed to assess the HGC growth areas and associated 60% mode share target.
- 2.0.8. It should be noted that the 2021 Census was impacted by the Covid-19 pandemic and as such travel patterns have likely changed since then, although levels of homeworking are known to be higher than pre-pandemic. In addition, the 2011 Census has not been used for baselining as the population of Hemel Hempstead has grown by 10% since this Census was conducted so is no longer deemed representative of the area. Therefore, whilst the 2021 data does suffer from some limitations it is still considered the best source for baseline modal splits at this point in time. This will be refreshed and reviewed as further information comes forward, including comprehensive baselining work as part of the monitoring and evaluation strategy.

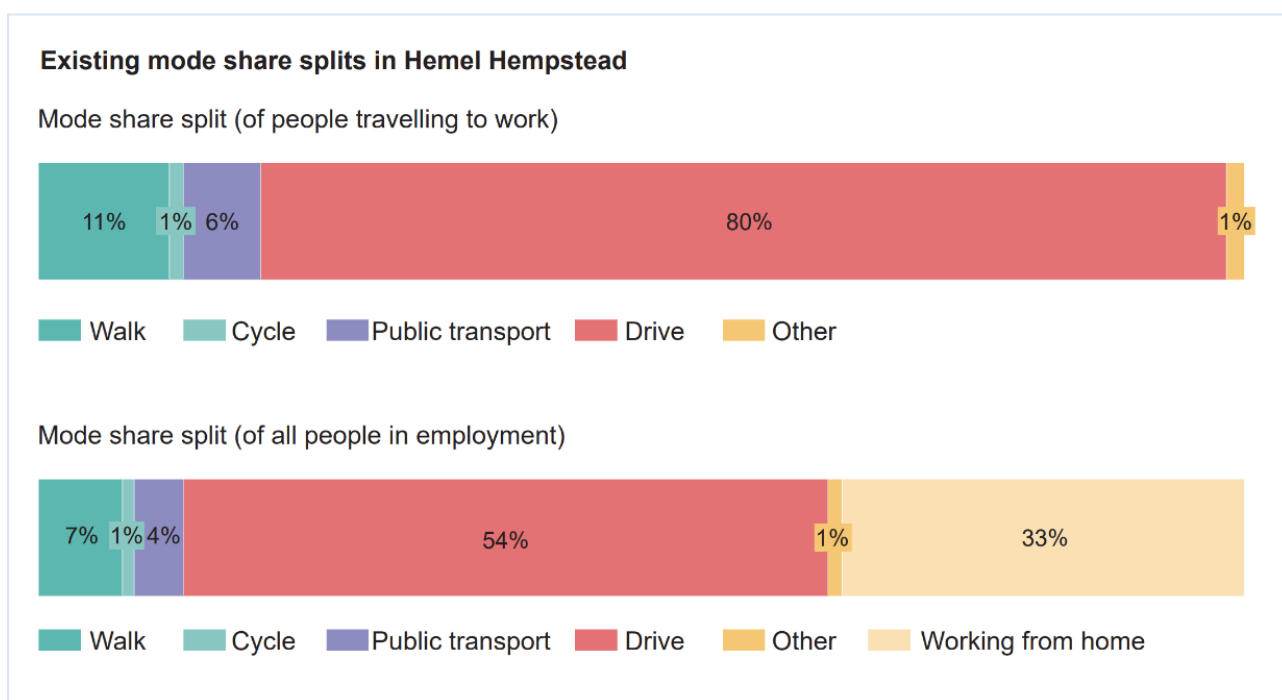


Figure 2-2 - Existing Mode Share Split in Hemel Hempstead (Census, 2021)

- 2.0.9. In August 2023, HGC commissioned an *Opportunity to Shift Modes study* to establish an objective method for validating the mode shift potential and to further understand the attainability and practicality of the specified mode shift targets³⁴.

³³ Census journey to work data taken from a Census carried out across England and Wales in 2021 by the Office of National Statistics.

³⁴ The Opportunity to Shift Modes Study has not been used to formulate the TV&S but has been developed subsequently as a sense check of the likely achievability of the modal split targets. Work to date has indicated that the characteristics of Hemel Hempstead lead to the potential and opportunity for some significant mode shifts.

- 2.0.10. Significant intervention is needed to further promote modal shift on to active and sustainable modes to work towards the realisation of modal share goals within the Transport Vision. It cannot be understated that achieving the Transport Vision is likely to require people to move around using modes of transport that might be significantly different from what they currently use. Even if opportunities for effective highway capacity enhancements were to exist in Hemel Hempstead, such enhancements would not address issues regarding the negative impacts of road traffic, including air pollution, carbon emissions, road safety, and wider public health. Heavy traffic flows and congestion would further impede bus journey times and make walking and cycling environments less attractive.
- 2.0.11. In addition, the Transport Vision also stresses the need for Hemel Hempstead to continue to be of key strategic employment destination. Maylands Business Park is a key employer in the local and regional area and vital to the long-term stability of the town's economy. Moreover, the Hertfordshire Enviro-Tech Enterprise Zone, known as the Hertfordshire Innovation Quarter (Herts IQ), presents huge potential for employment and associated innovation. HGC must represent a key enabler of sustainable growth and help attract investment to ensure the town is a well-connected, innovative place, fit for the future. Localised freight movements need to become more efficient to strengthen the local economy, whilst minimising the associated traditional disbenefits of freight movements within an urban landscape.

2.1 STRATEGIC THEMES

- 2.1.1. To achieve the aspirational mode shift goals for 2050 and the wider Transport Vision, the HGC Transport Strategy is made up of three Strategic Themes with clear output focussed Desired Outcomes.
- 2.1.2. The consideration at a strategic level, and in turn realisation, of the Desired Outcomes are intended to help steer decision-making around funding programmes to achieve each of the Strategic Themes. The realisation of these Themes then provides the delivery foundations of the HGC Transport Vision.
- 2.1.3. Achieving these Desired Outcomes will require systematic and integrated application and delivery of transformative infrastructure interventions and wider supporting measures, which together will influence and sustain behavioural change.
- 2.1.4. It is important to note the Desired Outcomes often inter-relate, often with relevance to more than one Strategic Theme.

THEME 1: A WELL CONNECTED PLACE THAT PUTS PEOPLE FIRST

- 2.1.5. Both existing and new neighbourhoods will prioritise local journeys, facilitated by people-focused streets and traffic-free routes. This will ensure it is quicker and more convenient to walk, cycle and scoot than use the car for the vast majority of local journeys. The streets will be laid out to put people first, with traffic and deliveries carefully managed so that streets are inviting places for community life. Access by cars, delivery vehicles and taxis will be possible to every home and business, but they will no longer dominate. It will purposefully plan for a different future, where reduced private ownership and shared modes are efficient, safe, and cheaper. While access will be possible to every house by car, the design of the streets will mean that cars will be understood as guests in the streetscape.
- 2.1.6. Theme 1 Desired Outcomes are:

- New neighbourhoods made up of co-located land use types, delivered at a scale of density that reduces the need to travel, whilst prioritising movements made by active and sustainable transport modes;
- More people walking, cycling, and using emerging micro-mobility³⁵ options more regularly, and for greater total distances, when making every day journeys minimising the need for motorised travel;
- Improved transport networks that put people first to improve safety, air quality and health of people who live, work, and visit Hemel Hempstead through providing more sustainable travel choices and reducing transport related air pollution;
- Enhanced sense of place by reducing car dominance and creating more active, social, and greener streets that encourage more social interaction and localised commercial and economic activity; and
- People focussed streets and travel links designed to cater for different users' needs, including people with mobility impairments, to maximise inclusivity.

THEME 2: A PLACE THAT ENABLES SUSTAINABLE TRAVEL

2.1.7. Where new residents and businesses are coming to Hemel Hempstead it will be vital that they find walking, cycling and public transport attractive to use from Day One. This requires early investment in the high-quality services and supporting infrastructure needed to make sustainable mode choice inviting. Existing residents and businesses will benefit from good provision of walking, cycling and public transport services. Residents and businesses will need to be engaged and informed on new transport measures and supporting initiatives that will become options for their journeys and help form sustainable and healthy travel habits. In both cases, travel planning will be a key tool deployed to promote behaviour change. It will also be an important component of planning the construction of the new developments, particularly new businesses, and schools to minimise any disruption this work will cause.

2.1.8. Theme 2 Desired Outcomes are:

- Stakeholders proactively identifying and removing barriers for people making journeys by sustainable modes;
- The emergence of a cultural change in how people view and interact with the active travel and sustainable transport network(s);
- Greater awareness amongst residents and visitors of Hemel Hempstead in the role they can play in promoting sustainable growth through their individual travel choices;
- The adoption of new and / or increasing existing 'wanted' behaviours amongst residents and visitors resulting in people walking and / or cycling more regularly for greater distances;
- Developments that maximise the scope and attractiveness of walking, cycling and micro-mobility options to new and existing key destinations in Hemel Hempstead and surrounding towns by

³⁵ Micro-mobility is a term used to refer to transportation of people and/or goods using small, lightweight vehicles that run at comparatively slower speeds, powered by an electric motor or the efforts of the riders/drivers – including scooters, bikes, skateboards, hoverboards, and Segways (TCPA, Practical Guides for Creating Successful New Communities, Guide 13: Sustainable Transport, 2020).

minimising journey distances, severance, through optimising interactions with motorised traffic and creating attractive and safe routes;

- Developments that maximise the scope and attractiveness of local bus services to new and existing key destinations in Hemel Hempstead and surrounding towns by reducing journey times, simplifying fare and timetable complexity, and improving service reliability; and
- The delivery of Demand Responsive Transit (DRT) to broader range of accessible destinations.

THEME 3: A NETWORK FIT FOR THE FUTURE

2.1.9. For Hemel Hempstead to meet its growth aspirations, there is a clear need to embrace change and maximise the value of new mobility services, technologies, and systems. Hemel Hempstead needs to ensure its transport networks are integrated, resilient, and adaptable so that beneficial new opportunities can be grasped as they arise. The transport network needs to not only meet the existing accessibility needs of its businesses and local residents today but the needs of those that will live, work, learn, and visit the area, for generations to come.

2.1.10. Theme 3 Desired Outcomes are:

- Attractive well-connected new places that act as drivers for growth and investment, including revitalising the town centre, local centres and expanded business park;
- Being ready to embrace emerging technologies and have the capability to meet future transport needs;
- Enhanced interchange facilities that enable more convenient changing between different modes of transport when making local journeys by improving the quality of facilities and co-location of services;
- Improved passenger transport networks including through an accessible, reliable, and affordable east-west transit system (HERT) which connects people easily to where they live, work and visit;
- The establishment of high-quality shared mobility services (such as bike and car share schemes) and well-planned developments that maximise the scope and attractiveness of such travel options by increasing their visibility and presence within the town;
- Hemel Hempstead's business parks and industrial estates will be well-connected to the transport network via a variety of different travel modes to maximise access and promote growth;
- A future ready transport network that helps accelerate the decarbonisation of all motorised modes of travel by delivering the appropriate infrastructure to enable this change (e.g. EV charging points, public hire services, promoting low carbon alternatives such as e-Cargo bikes where appropriate) helping Hemel Hempstead meet its climate emergency obligations;
- On- and off-street car parking designed flexibly with future non-car uses in mind; and
- A co-ordinated approach to rationalising and consolidating freight movements and deliveries to homes, communities and businesses in the local area using the most appropriate routes and modes, maximising opportunities to promote greener, more sustainable options where possible.



3

HEMEL HEMPSTEAD: NOW AND IN THE FUTURE

3 HEMEL HEMPSTEAD: NOW AND IN THE FUTURE

3.1 OVERVIEW

- 3.1.1. Hemel Hempstead is a town located within the Dacorum district of Hertfordshire in southeast of England, 22 miles north-west of London.
- 3.1.2. The town is relatively compact, with a population of 96,000 people³⁶ with most homes currently located within 3km of the town centre, and the vast majority within 5km of major employment area Maylands Business Park. Yet the town has a clear distinction between the neighbourhoods where people live and the relatively concentrated places where they work. Hemel Hempstead is a strong self-sustaining economy with over 60% of residents living and working in the town and a relatively low proportion of residents working in London and other areas. This reflects the diverse offer of employment in Maylands Business Park, the town centre, smaller employment parks, retail parks and local centres.
- 3.1.3. Maylands Business Park is the main employment site in the town and Borough; it is also the largest in South West Hertfordshire and of great sub-regional importance. It is home to a large number of local, national, and international businesses including Bunce field Oil Terminal. Situated on the eastern side of the town, next to M1 Junction 8, it is home to some 700 businesses providing around 20,000 jobs in a wide range of office, industrial and warehousing uses. Maylands is currently undergoing significant development and renewal, with planning permission having been granted for new employment development at Prologis Park phase 2 in Maylands Gateway and Spencer's Park.
- 3.1.4. At peak times, the limited number of destinations in the town - Maylands, Jarman Park, the town centre, the railway station, and Apsley - concentrates trips and creates traffic congestion on the highway network.
- 3.1.5. Analysis of Census data shows that Hemel Hempstead is a rapidly growing town, having already seen its local population increase from 87,000 in 2011 to 96,000 in 2021, representing a 10% increase over this period. This means the population of Hemel Hempstead is rising faster than the national average experienced for England between 2011 to 2021 which stands at 6.5%.
- 3.1.6. Further growth is anticipated through Dacorum's Local Plan (2024-2040) which identifies the Town Centre Opportunity Area and Two Waters Opportunity Area for new homes, as well as the new HGC growth areas. This will deliver a minimum of 11,742 homes up to 2040 in Hemel Hempstead and will result in transformative changes for Hemel Hempstead. The St Albans' Emerging Local Plan (up to 2041) identifies up to 4,750 homes and land for up to 8,000 jobs East of Hemel Hempstead (in St Albans district), as part of the HGC Programme.
- 3.1.7. Beyond the Local Plans periods, there is an opportunity for further homes to be delivered around Hemel Hempstead, in both St Albans and Dacorum administrative areas (subject to a future Local Plans review). This takes the long-term development potential in total, from present day to 2050, around Hemel Hempstead to over 20,000 additional homes.

³⁶ According to the Census carried out across England and Wales in 2021 by the Office of National Statistics

- 3.1.8. With this growth comes the potential for radical change in the way that the town operates across many aspects, from the services that people want to access and how they access them, to the work that people do and the places they live. The locations of these growth allocations are expected to alter some of the current ‘centres of gravity’ for travel demand in Hemel Hempstead and its surrounding areas.
- 3.1.9. The rest of this chapter is divided into the following sections:
- Policy Context;
 - Demographic Context;
 - Transport Context; and
 - Summary & Case for Change.

3.2 POLICY CONTEXT

- 3.2.1. This section sets out a review of relevant design guidance as well as national, regional, and local policy to identify policy direction and opportunities relevant to Hemel Garden Communities. Further details on documents reviewed can be found in *Appendix G*.

BEST PRACTICE DESIGN GUIDANCE

- 3.2.2. Hemel Garden Communities will need to consider best practice guidance to plan and deliver an exemplar scheme. The *Transport for New Homes Garden Villages and Garden Towns: Visions and Reality* document reviewed 20 garden village proposals and highlights the stark differences between the plan for and realisation of many garden community schemes. The document outlines the need for developments to ‘design new places with layouts for pedestrians and cyclists, and public transport routes, stops and stations. The document highlights the shortcomings of transport assessments that focus on upgrades to the road network that fail to recognise the future may not be about driving - supporting ‘vision and validate’.
- 3.2.3. The Town and Country Planning Association (TCPA) has produced several guides to provide steps for successfully making garden communities a reality. *Garden Cities Guide 13* outlines three core aims (promote active travel/ establish excellent public transport from the outset/ reduce the use of private cars) and 10 garden city principles to follow (below). The guide sets the standard for garden city design to enable ‘at least 50% of trips originating in the Garden City to be made by non-car means, with a goal to increase this over time to at least 60%’.
- 3.2.4. CoMoUK is a charity dedicated to promoting shared transport in the UK. The *New Developments and Shared Transport* design document focuses on implementing shared transport, such as car clubs and mobility hubs, with shared assets in new developments. In particular, it emphasises re-framing planning policy around place rather than cars by avoiding a one-to-one conversion to Electric Vehicles (EVs), limiting parking provision and rethinking the driveway.
- 3.2.5. The Campaign for Better Transport’s *Renewing the Transport System* (2020) document proposes using the Covid-19 pandemic as an opportunity for a fundamental shift in the transport system through improved public transport, zero emission road and rail vehicles manufactured in the UK, improvements in walking and cycling infrastructure, and changed revenue models with a refocusing on government funding rather than private franchising, particularly in the bus network.

National Policy

- 3.2.6. Key national policy documents such as DfT's *Decarbonising Transport: A Better, Green Britain* highlight the need to reduce overall travel demand while making travel more sustainable through 'place-based' solutions. The document recognises the need to move away from predicting future demand to provide capacity (predict and provide) to focusing on provide transport solutions that will deliver outcomes communities want to achieve.
- 3.2.7. The Government's 2019 *Future of Mobility: Urban Strategy* focuses on emerging transport technologies and new business models enabled by improved data and connectivity, creating an opportunity to support the UK's ambitions for decarbonisation and net zero. The government also published *Future of Mobility: Rural Strategy* in 2023.
- 3.2.8. Meanwhile, the Government's 2021 *Build Back Better: Our Plan for Growth* highlights the need to improve transport connectivity while achieving net zero targets by making transport more sustainable and harnessing the benefits of digital connectivity.
- 3.2.9. The *National Planning Policy Framework* (NPPF, December 2023) includes a chapter on promoting sustainable transport, in which it is set out that planning policy should consider transport issues from the earliest stages of development and support the appropriate mix of transport modes to support the needs of people in the local area. This includes giving priority to pedestrian and cycle movements, addressing the needs of people with disabilities, ensuring places are safe, secure, and attractive, allowing for the efficient delivery of goods and access for emergency vehicles, and designing to enable charging of zero emission vehicles.
- 3.2.10. The DfT's 2022 policy paper and the National Highway's *Strategic Road Network Initial Report* (2023) sets out the ways in which National Highways should engage with developers, public bodies, and communities to assist in the delivery of sustainable development in relation to the strategic road network (SRN). The document is designed to be read in conjunction with the NPPF and other central government policy documents. It outlines the principles of sustainable development, which includes the need to facilitate a reduction in travel by private vehicle, the prioritisation of active travel and public transport modes, and the efficient use of the capacity of the overall transport network to improve health and wellbeing and support government policy that aims to reduce the negative environmental impacts of development.

Regional Context

- 3.2.11. England's Economic Heartland's (EEH) *Transport Strategy: Connecting People, Transforming Journeys* (2021), provides the region and government with an evidence-based, vision-led framework focused on enabling economic growth in a way that delivers a net zero transport system by as early as 2040. Work has begun on refreshing EEH's freight strategy and establishing a freight forum with Transport East and Transport for the South East.
- 3.2.12. Hertfordshire County Council's *Local Transport Plan 4* (2018-2031) sets out a new transport vision for Hertfordshire and accelerates the transition towards a less car-centric, more balanced approach which caters for all forms of transport and seeks to encourage a switch from the private car to sustainable transport wherever possible. The document also highlights several regionally strategic corridors in which sustainable transport is a priority. LTP5 is currently under development.

- 3.2.13. The Policies and Activities section of Hertfordshire's LTP is entitled: *Achieving travel demand reduction and modal shift: A Transport User Hierarchy*. This both underlines the centrality of mode shift and introduces a key policy tool for helping to achieve it. The Transport User Hierarchy is Policy 1 in LTP4 and is introduced as setting the scene for the rest of the policy framework that follows.
- 3.2.14. A suite of *Hertfordshire Growth and Transport Plans (2019)* support the *LTP4* with localised, spatial strategies to support growth and development in key areas via infrastructure and accompanying projects. It focuses on different sub-areas within Hertfordshire. The *South West Growth and Transport Plan (SWGTP)* covers Dacorum, Watford and Three Rivers. The *South Central Growth and Transport Plan (SCGTP)* covers St Albans City.

Local Context

- 3.2.15. Both Dacorum Borough Council and St Albans City and District Council are preparing new Local Plans which sets out the respective Council's strategy for future growth and prioritises tackling the climate emergency, delivery of more housing including social housing, jobs, schools, GP surgeries, public transport, cycle paths, play areas and parks.
- 3.2.16. The SADC Regulation 18 published in July 2023, sets out the level of growth expected to come forward up to 2041, including the northeast and east Hemel Hempstead Growth areas (New Hemel Garden Communities). These are site allocations H1, H2, H3, H4.
- 3.2.17. The SADC Regulation 18 policies set out requirements for the HGC site allocations, as well as overarching HGC policies which include the policies 'Support for Transformation of Hemel Hempstead' and 'Hemel Garden Communities Place Principles'.
- 3.2.18. The Regulation 18 for Dacorum Borough Council Local Plan consultation, published in late October 2023, sets out the Council's proposed changes to the Emerging Strategy for Growth, reflecting on the key issues raised by the community in response to the Council's published Emerging Strategy for Growth (Regulation 18) in November 2020.
- 3.2.19. To accompany Local Plan Regulation 18 consultations, the HGC Position Statement¹ has been published, which captures the work carried out to date on the HGC Programme Area.

Policy Context: Key Implications

- This TV&S is in line with a national policy push towards active and sustainable transport. Promoting active and sustainable modes, in line with Gear Change and LTN 1/20, will help to meet the government's goal of achieving Net Zero;
- There is a strong policy direction that advocates for a significant change in the way communities plan their transportation systems. The traditional model is being replaced by a more people and place-centred model;
- Some of the key themes repeated across several best practice design documents centre around the need to integrate genuinely feasible alternative travel modes to the private car into the design of the community from the start and to focus on place rather than cars;
- At all levels of policy, planning documents are calling for the need to improve connectivity and access to services and opportunities, boost economic growth, and ensure all activity is undertaken sustainably; and
- More specifically, policy documents call for improved walking and cycle infrastructure to encourage active travel, healthy lifestyles, investment in the public transport network, and using

shared mobility to shift away from private car usage, while digital connectivity should be harnessed to reduce the need to travel.

3.3 DEMOGRAPHIC CONTEXT

- 3.3.1. Hemel Hempstead has a diverse socio-economic profile characterised by a mix of residential neighbourhoods, commercial areas, and industrial zones, contributing to a varied local economy.

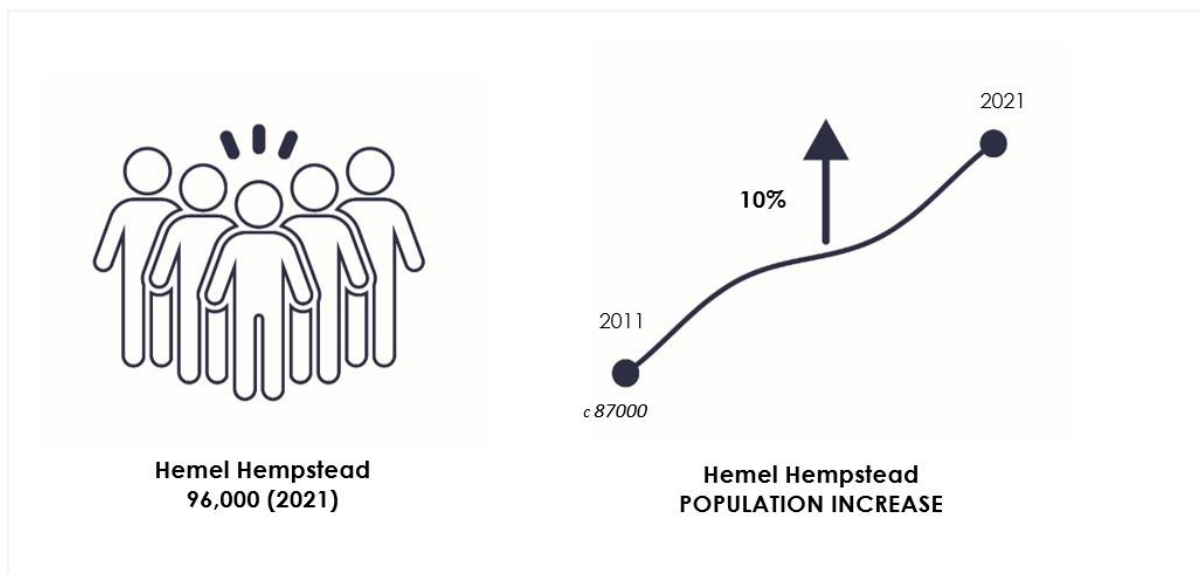


Figure 3-1 - Hemel Hempstead's Population (Census 2011, Census 2021)

Demographics

- 3.3.2. According to the 2021 Census, Hemel Hempstead has an aging population, with older demographics increasing in comparison to those in younger age groups. There has been an increase of 18% of people aged 65 years and over. The number of people aged 50 to 64 years rose by just over 3,300 people (an increase of 12.2%) between 2011 and 2021, while the number of residents aged between 20 and 24 years fell by around 800 (10.3% decrease).
- 3.3.3. Despite these changes the latest census data shows that the average (median) age has remained 40 years (2011 to 2021), which is a similar average age to England as a whole (40 years). At a District level, the Office of National Statistics (ONS) predicts that by 2043, 23.3% of Dacorum's resident population will be aged 65 and above. This will represent an increase of +5.9% when compared to ONS data collected in 2021 (17.4% of population aged 65 or over).
- 3.3.4. 2021 census data, highlights a resilient employment landscape, with a 62.4% employment rate in Dacorum, surpassing the national average of 57.4%. The data underscores the town's economic strength and in various sectors, including technology, manufacturing, retail, and services.

- 3.3.5. Experian Mosaic is a database of each postcode in the UK, segmented into 15 persona groups and 66 sub-groups of households. The data to create these household types is based upon millions of datapoints on people's spending habits and lifestyles. When reviewing Experian Mosaic data, there are significant differences in the distribution of personas between Dacorum, Hemel Hempstead and the national average for England. *Aspiring Homemakers* are more prevalent in Hemel Hempstead (21%) than the national average (10%). Dacorum maintains a larger percentage of *Family Basics* (12%), with an even larger percentage in Hemel Hempstead (17%), implying that it might offer more family-friendly facilities and services, relative to England (8%).
- 3.3.6. The proportion of *Rental Hubs* in Hemel Hempstead, 14%, is higher than that of Dacorum (and the England average, 8%) and is likely explained by the large volume of young people in the area, particularly the areas close to Hemel Hempstead Town Centre, who are more likely to be renting a residential property as opposed to having a mortgage.

Deprivation and Health Inequalities

- 3.3.7. According to Census 2021 data there are distinct areas within Hemel Hempstead which have relatively high levels of deprivation. Highfield has the highest overall deprivation levels (61% of households are deprived) in at least one dimension at the time of the 2021 census. Grovehill has the second highest level of overall deprivation (60% of households deprived). Adey field West and Hemel Hempstead Town are also in the top five deprived areas in Hemel Hempstead.
- 3.3.8. These wards suffer from greater levels of deprivation than the county average for Hertfordshire (46.3%) and the national average for England (48.3%). These wards also exhibit significantly worse public health outcomes compared to England and Hertfordshire.
- 3.3.9. These areas are close or adjacent to proposed Hemel Garden Communities neighbourhoods, so there is an opportunity for health benefits to be achieved by delivering improved walking and cycling routes within these existing neighbourhoods as part of the Garden Communities development programme.
- 3.3.10. In terms of health conditions, it is important to highlight that:
- The number of residents considered overweight or obese is an emerging issue. At a district level within Dacorum, 61.3% of adults are classed as overweight or obese (national average: 63.8%), and 31.4% of children in Year 6 (aged 10 to 11 years) are classed as overweight, comparative to the national average of 37.7%³⁷; and
 - In Dacorum, health conditions such as diabetes (10.6%), cardiovascular conditions (7.8%), high blood pressure (21.6%), respiratory conditions (17.5%) also represent notable health risks that could be reduced by being more physically active. (ONS, 2023).
- 3.3.11. In terms of physical activity³⁸, in 2021/22, 70.8% of adults in Dacorum are physically active; this is more than Hertfordshire (68.0%) and England (67.3%)³⁹. However, comparative to 2019/20 this is a 4.4% decrease in percentage of physically active adults.

³⁷ ONS Census 2021, accessed on 03/10/23 at

<https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/subnationalindicatorsexplorer/2022-01-06>

³⁸ As stated by the Office for Health Improvement and Disparities (OHID) physical activity helps to prevent and manage over 20 chronic conditions and diseases, including some cancers, heart disease, type 2 diabetes, and depression. It is recommended that all adults get 150 minutes of physical activity per week (Sport England, 2019).

³⁹ Local Authority Health Profile, Dacorum. (Office for Health Improvement and Disparities OHID, 2023) Accessed via on October 24th 2023: <https://fingertips.phe.org.uk/profile/health-profiles/data#page/1/qid/1938132696/ati/501/iid/90366/age/1/sex/1/cat/-1/ctp/-1/yrr/3/cid/4/tbm/1>

- 3.3.12. The relationship between deprivation and poor health indicates that resources directed at improving the health and wellbeing of residents in areas with poorer public health outcomes, particularly through measures which increase levels of everyday walking and cycling, could help to reduce observed inequalities. These challenges are key to the development of the TV&S focused on active travel and encouraging access to transport for all.

Demographic Context: Key Implications

- Hemel Hempstead has a rising population, low levels of unemployment, with further new jobs projected as part of its planned growth. However, the town also faces socio-economic challenges;
- Deprived areas without access to private cars could benefit significantly from high quality sustainable and active travel links, connecting to employment and educational opportunities, that might not otherwise be within a reasonable travel distance;
- There is a strong link between physical inactivity levels, access to active travel opportunities, and the urban environment, which can contribute to the choices which are made and the positive travel behaviours of individuals. Increased levels of physical activity through walking and cycling could help address health inequalities and address obesity concerns;
- It is likely that an ageing population, and increasing absolute numbers of older people, will mean that the transport system needs to be more accessible, and more inclusive, than it is today; and
- Hemel Hempstead faces the challenge of catering to diverse transportation needs, encompassing a growing population, families, elderly residents, socio-economic challenges, and a demand for accessible transportation options. Meeting these complex travel requirements is crucial for ensuring mobility and convenience for all members of the community. The TV&S and resulting interventions help address and prioritise these socio-economic challenges.

3.4 TRANSPORT CONTEXT

- 3.4.1. Hemel Hempstead, strategically located within 40km of London (A top 5 world city), has excellent connectivity through the West Coast Mainline, the strategic road network (M25, and M1). It is also in proximity to three international airports—Luton, Heathrow, and Stansted.
- 3.4.2. Hemel Hempstead is the largest settlement within Dacorum district and the 2nd largest settlement (by population) in Hertfordshire. Lying in the Gade Valley, at the edge of the Chiltern Hills, it has expanded rapidly as a new town since the 1950s, to accommodate some of the population overspill from London. The much older, Old Town centre retains many historic buildings. The town's good transport links and proximity to London have made it an appealing residential base for commuters working in the capital.

Public Transport

- 3.4.3. Hertfordshire residents make fewer bus journeys on average than residents in England or the East of England. Across the East of England each resident makes on average around 29.2 bus journeys each year; in Hertfordshire the number is around 25.8 (HCC BSIP, 2020). Hertfordshire's *Bus Service Improvement Plan* (BSIP) includes a stated aspiration to increase the average bus journey usage in Hertfordshire to match the usage with the rest of East England. HCC aim to achieve this by 2025/26, before then raising to 50 bus journeys on average in the following 10 years. It recognises that some bus services in Hemel Hempstead, fall well below the national average for punctuality. On street interventions such as bus priority could help remove late running caused by traffic congestion or poor road priority (BSIP for HCC, 2022).

3.4.4. Whilst the town benefits from two rail stations in relatively close proximity (<2.5km), that offer regular services to London Euston and Milton Keynes, both are largely disconnected from the town centre; creating a key severance issue for sustainable and active travel modes. Hemel Hempstead's main station is located approximately 2km southwest of the town centre, representing a 25-minute walk or 8 minute cycle. Apsley station is located around 2.4km from the town centre in the southern corner of Hemel Hempstead, representing a 33-minute walk or 8 minute cycle; this station typically caters for residents south of the A414 (St Albans Road) and east of Two Waters Road. Both stations are also significantly disconnected to the key employment areas of Maylands Business Park, located in the north east of the town, representing a walking distance of approximately 4.8km from either station. Although bus services do link the two rail stations to Maylands, this is not regarded as a high-quality service given the lack of door-to-door provision and/ or requirement to interchange in the town centre.

Walking and Cycling

3.4.5. In Dacorum, 14% of adults walk for travel at least three days per week, which is below the national average of 15.1%, and St Albans City and District Council (SADC) rate of 21.7%⁴⁰. Both rates of cycling in Dacorum (0.8%) and SADC (1.4%) are lower than the national average % of adults cycling for travel at least three days per week (2.3%)⁴¹. DBC is in the process of developing a Local Cycling Walking and Infrastructure Plan (LCWIP) which will aim to identify routes to promote and enhance active travel. SADC have adopted their LCWIP in 2023.

Road Network and Highways

3.4.6. The A41, A414 and M1, all key strategic transport corridors, run through or adjacent to Hemel Hempstead and create a considerable volume of inter-urban motor traffic. The A414 is largely a dual carriageway road catering for a mixture of shorter and longer distance journeys, running through the middle of Hemel Hempstead (via the Plough 'Magic' Roundabout). The central reservation and lack of regular crossing points mean the A414 (St Albans Road) causes a significant severance issue for active travel modes effectively splitting the town in half.

3.4.7. Hertfordshire County Council's *Southwest Growth and Transport Plan 2019* (GTP) identified Hemel Hempstead as having the key issues of highway congestion and limited accessibility for non-car modes. The GTP 2019 identified specific issues including:

- Congestion on Breakspear Way;
- Severance caused by the A414 not being pedestrian or cycle friendly;
- Congestion caused by rat running to avoid the A41, near Apsley, creating poor air quality;
- Congestion on roads around Hemel Hempstead station; and
- Poor east-west connectivity especially between Hemel Hempstead rail station, the town centre, and Maylands Business Park.

⁴⁰ Wider Determinants of Health 2019/2020 - Percentage of adults walking for travel at least three days per week - Officer for Health Improvements and Disparities (OHID, 2023) Accessed 24/10/2023: <https://fingertips.phe.org.uk/profile/wider-determinants/data#page/1/qid/1938133043/pat/6/par/E12000006/ati/401/are/E07000096/yrr/1/cid/4/tbm/1>

⁴¹ Wider Determinants of Health 2019/2020 - Percentage of adults cycling for travel at least three days per week - Officer for Health Improvements and Disparities (OHID, 2023) Accessed 24/10/2023: <https://fingertips.phe.org.uk/profile/wider-determinants/data#page/1/qid/1938133043/pat/6/par/E12000006/ati/401/are/E07000096/yrr/1/cid/4/tbm/1>

3.4.8. Further challenges and opportunities are described in Figure 3-2 below.

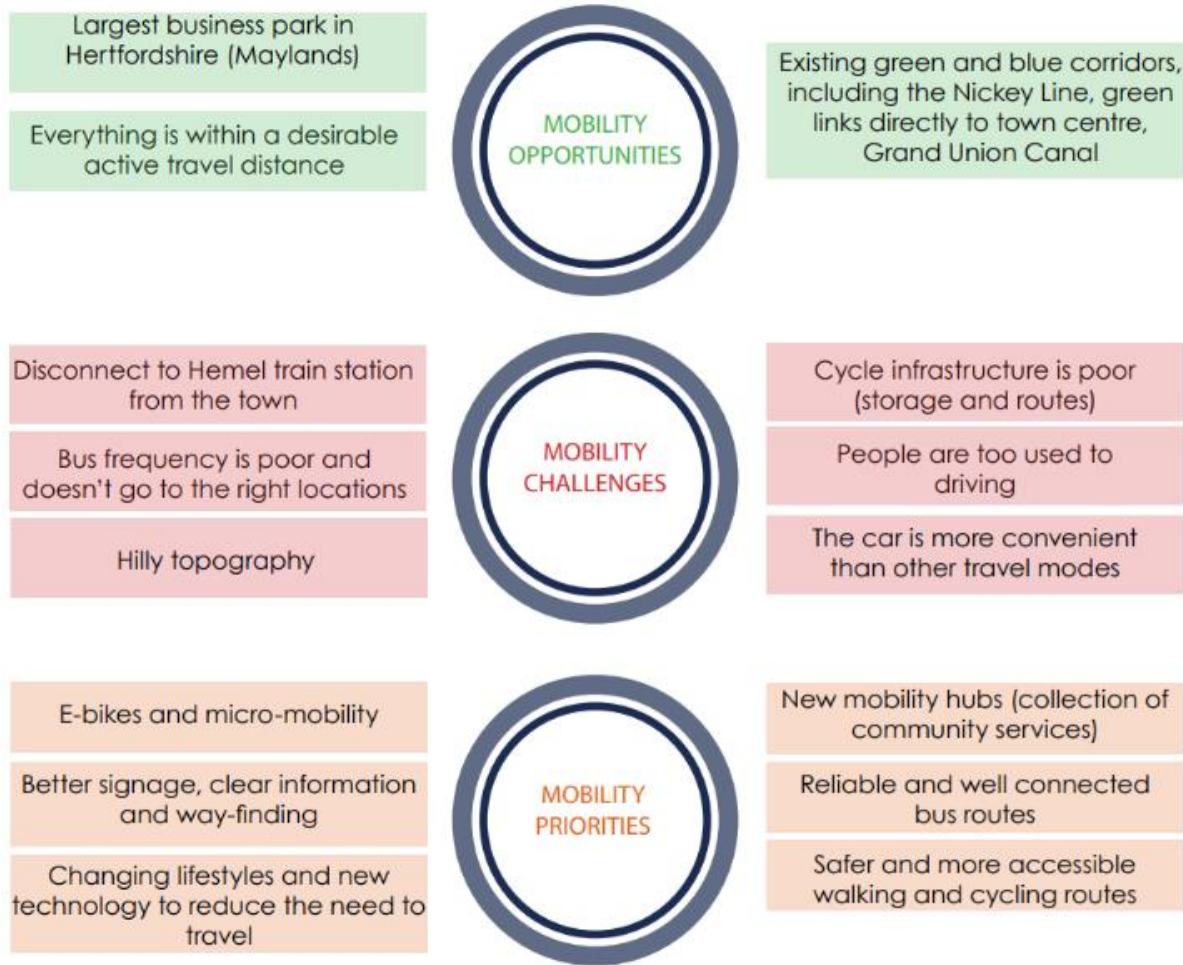


Figure 3-2 - Challenges and Opportunities for Hemel Hempstead

CAR OWNERSHIP

- 3.4.9. HCC's County Travel Survey (2022) analyses results at a district level. It shows that Dacorum has the second highest level of car ownership in Hertfordshire, with 90.4% of residents owning a vehicle. On average, Dacorum has the highest number of cars per household (1.47 cars). The County Travel Survey indicates that 33% of people travel within Dacorum for work, 22% travel to London and 10% travel to Watford District (with other destinations including St Albans and neighbouring locations). 80% of journeys to work use a car or van, 14% use a train, 2% cycle and only 4% walk. To get to a place of education, 30% walk, 27% use a car, 8% use the bus, 3% scooter and 3% bike. Overall, to travel in urban Dacorum, 65% of people use a car, 33% walk, 3% use the bus and 2% of people cycle.
- 3.4.10. 48% of people, who identified as the driver of the car, are travelling less than 5 miles, with 7% under 1 mile, 16.1% travelling 1 to 2 miles and 11% travelling 2-3 miles. This is similar for people who are travelling in a car as a passenger. These are exactly the type of journeys that could be shifted to more sustainable modes; the DfT's *Gear Change strategy* sets out ambitions to see a future where half of all journeys under distances of 5 miles in towns and cities are cycled or walked by 2030.

Road Safety

- 3.4.11. Hemel Hempstead has relatively high pedestrian and cycle collision levels compared to the rest of Dacorum, where between 2017 and 2021, 5 fatalities involving either a pedestrian or cyclist occurred, as well as sixty serious collisions (DfT 2017 - 2021). In the 2022 County Travel Survey, 25% of respondents in Dacorum highlighted provision of cycle infrastructure and cycle safety as one of the key transport issues in the district. Similarly, 31% of Dacorum respondents highlighted personal safety as a key concern.

Journey to Work (Census 2021⁴²)

- 3.4.12. When considering all of those in employment, Dacorum has a larger proportion of people currently working from home (39%) than Hemel Hempstead (33%). Hemel Hempstead also has a larger proportion of those in employment travelling to work by car with 54% compared to 48% seen across the Dacorum area. 12% of those in employment travel to work using sustainable modes with 7% walking, 4% using public transport and 1% cycling. Figure 3-3 below sets out the mode share data for Hemel Hempstead using data from the 2021 Census data, with the 2011 Census percentage points shown in brackets for comparison⁴³. It should be noted that the 2021 census was undertaken during ongoing Covid pandemic restrictions so the travel to work data may not be representative of normal conditions.

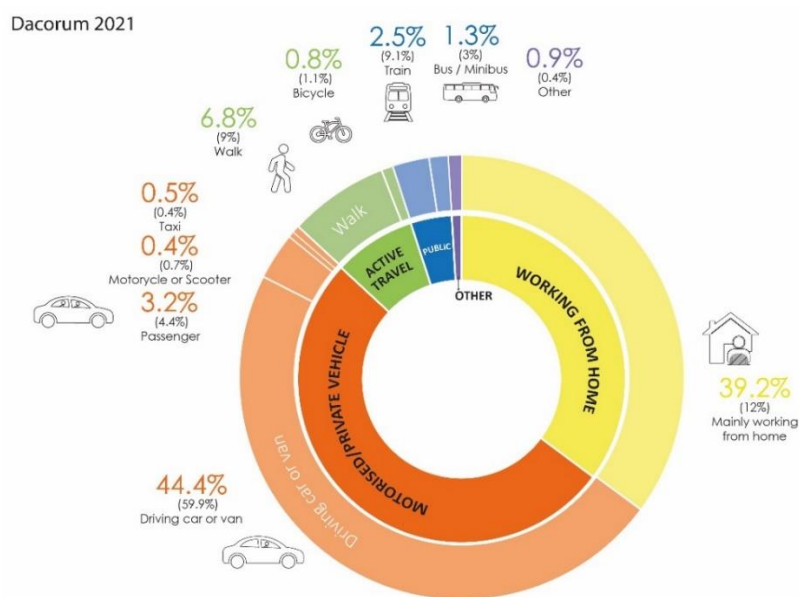


Figure 3-3 - Method Used to Travel to Work for Hemel Hempstead Residents, Census 2021, with 2011 Census Data in Brackets

- 3.4.13. In addition to the above, the census found:

⁴² The 2021 Census was conducted on March 21, 2021. On this date, England was in a national lockdown which began on January 06, 2021. Therefore, travel to work (and travel in general) was heavily restricted on the day of the Census, and for several weeks prior

⁴³ Travel to work data, ONS, Census 2021
<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/traveltoworkenglandandwales/census2021>

- The area travelling by car or motor vehicle to travel to work the most is Grovehill (62.0%);
- The areas with the most active travel modes (highest walking and cycling rates) to work are Highfield (12.3%), followed by Adeyfield West & Hemel Hempstead Town (11.3%);
- Leverstock Green has the highest percentage of car ownership (52.2% of households have 2 or more cars or vans); and
- Highfield has the lowest car ownership or 'no cars', with 25% of households not owning a vehicle.

Transport Context: Key Implications

- Hemel Hempstead experiences significant congestion along its key road network, which also suffers from limited accessibility for non-car modes;
- There is high car ownership and low existing levels of cycling;
- Lack of established cycling culture means there could be more opposition to active travel schemes and take longer to generate a critical mass for change. However, there is a high volume of short internal private car trips which could be undertaken by other modes than private cars;
- Challenging topography could limit uptake of cycling; although greater E-bike uptake and public hire schemes could help mitigate this and enable greater use of active mode infrastructure;
- Current low levels of bus patronage within Hertfordshire could limit the willingness of bus operators to significantly increase service frequency and routes. There is also a lack of high-quality bus services connecting with other key settlements which increases reliance on private cars;
- Rail stations at Hemel Hempstead and Apsley provide good links to nearby key settlements such as London and Milton Keynes, although stations are largely disconnected from the main town centre and other key employment sites due to their respective locations on the edge of town;
- Greater active and sustainable travel options could help address current deprivation inequalities;
- High existing car dependency could result in opposition to change and road space reallocation. Electrification of vehicles could address air quality impacts and improve the environment and wellbeing in the town; and
- Changing lifestyles and new technologies have seen a decline in people commuting during peak times and greater working from home.

3.5 SUMMARY & CASE FOR CHANGE

- 3.5.1. This chapter has provided an overview of the current and predicted future challenges and opportunities facing Hemel Hempstead up to 2050.
- 3.5.2. It is clear that without coordinated intervention the challenges faced today are likely to be exacerbated in the near future as the demand for transport increases given the projected growth in population and proposed new development within Hemel Hempstead. This has the potential to further increase congestion and ultimately overwhelm the transport network, with associated disbenefits for the people, natural environment, and economy of Hemel Garden Communities.
- 3.5.3. Furthermore, new unforeseen challenges are likely to emerge as travel trends and technologies change over time. Though some of these changes remain uncertain, intervention is needed in order to ensure that Hemel Hempstead is well prepared and can provide a multi-faceted and resilient transport system that will cater for the needs of a growing population in the years to come.

- 3.5.4. Changing social trends and rapid changes in the technology mean that it is difficult to make robust predictions about how people will travel in 10, 20 or 30 years. There are many factors that will affect total demand for travel in and around Hemel Hempstead. However, it is likely that demand will grow exponentially during the Local Plan period and continue increasing to 2050, mostly driven by population and employment growth. It is likely that traffic congestion in and around Hemel Hempstead will continue to be an issue.
- 3.5.5. Despite these challenges, this growth poses solutions and opportunities. The planned developments and associated investment, gives Hemel Hempstead a once in a generation opportunity to strive for a better, more considered, approach to spatial planning. This includes the opportunity to deliver new transport infrastructure and systems needed for a more sustainable future, for both current and future generations.
- 3.5.6. There is a clear policy direction supporting a fundamental shift in the way communities are planned from the traditional “predict and provide” model to a more people and place-focused “vision and validate” model, which advocates modal shift as a key component of a more sustainable future. Several best practice design documents centre around the critical need to integrate genuinely feasible and sustainable alternatives to travelling by the private car into the design of new developments from the start. Best practice also emphasises the importance of creating high-quality places for people, rather than accommodating historic traffic and parking levels.
- 3.5.7. Within this context, The Transport Vision is intentionally aspirational and forward thinking in promoting Hemel Hempstead as a testbed for new ideas and innovative thinking.
- 3.5.8. It recognises that the proposed new growth areas cannot be expected to deliver sustainable mobility outcomes in isolation and instead a town-wide approach must be adopted. This is because:
- Enabling high levels of sustainable and active travel to, from and between new development sites will be difficult if the immediate surroundings are still operating as predominantly car dependent places;
 - Genuinely impactful new infrastructure and connections will need to be part of a comprehensive and coherent network across the town, encompassing both existing and new communities as it cannot be delivered in isolation;
 - New neighbourhoods need to be appropriately permeable and fully integrated with the rest of the town to promote community cohesion and help to overcome socio-economic disparities; and
 - People in existing communities need to have the same opportunity to travel safely, directly, and sustainably to the employment and other opportunities delivered through HGC, ensuring inclusive economic growth across the town.
- 3.5.9. The Vision, and associated Strategic Themes, therefore acknowledge the importance of connecting new and existing communities in achieving an integrated, more connected new town, as described in the *HGC Spatial Vision*⁴⁴. This includes the importance of well-connected employment locations, and how this is essential for delivering sustainable growth.
- 3.5.10. The following chapter: “Realising The Vision: The Hemel Garden Communities 2050 Transport Strategy” details how the Vision will be implemented.

⁴⁴ HGC Spatial Vision (2021) <https://www.hemelgardencommunities.co.uk/media/3hknvayj/hemel-garden-communities-spatial-vision.pdf>



4

REALISING THE VISION: THE HEMEL GARDEN COMMUNITIES 2050 TRANSPORT STRATEGY

4 REALISING THE VISION: THE HEMEL GARDEN COMMUNITIES 2050 TRANSPORT STRATEGY

4.1 INTRODUCTION

- 4.1.1. The HGC 2050 Transport Strategy flows directly from the Transport Vision. It is based on the Strategic Themes and how they represent the HGC programme area. The Themes are descriptive in nature and should guide decision-making at a strategic level. They should act as a catalyst for delivering the necessary measures and associated behaviour change that will ultimately lead to the realisation of Transport Vision.
- 4.1.2. A rapidly growing population, more employment and housing, and economic regeneration and prosperity will lead to more journeys being made in Hemel Hempstead in the future than today and as set out in Chapter 2, the 'business as usual' for transport will not work and will lead to further transport related disbenefits.
- 4.1.3. Achieving the Transport Vision and the required mode share goals for travel across Hemel Hempstead by 2050 will require the delivery of a comprehensive active and sustainable movement network, and a clear approach to promoting its usage through behaviour change measures, building on the issues and opportunities identified in the preceding chapter. The Transport Strategy must also be future-proofed, to be resilient to the inherent uncertainty when attempting to project a pre-defined Vision upon a future geographical reality such as 2050 Hemel Hempstead.
- 4.1.4. This section sets out the overarching strategic themes that will govern such a network, as well as setting out how these networks will be categorised by mode, types of user, and a hierarchy of importance.

4.2 STRATEGIC THEMES

- 4.2.1. The Strategy is underpinned by three key themes. These are:

- Theme 1: A well connected place that puts people first;
- Theme 2: A place that enables sustainable travel; and
- Theme 3: A network fit for the future

THEME 1: A WELL-CONNECTED PLACE THAT PUTS PEOPLE FIRST

Implementing the User Hierarchy

- 4.2.2. The HGC Transport Vision states that by 2050 at least 40% of all trips originating from and/or ending within Hemel Hempstead, and 60% of all trips from or to the new Hemel Garden Communities neighbourhoods, will be undertaken by active and sustainable modes of travel - this will be enabled by transport improvements which apply the following the user hierarchy (see Figure 4-1) in accordance with Hertfordshire's Local Transport Plan (LTP4) Policies, designed to minimise the need to travel (e.g. by localising services), and making active and sustainable modes the natural choices for everyday trips.

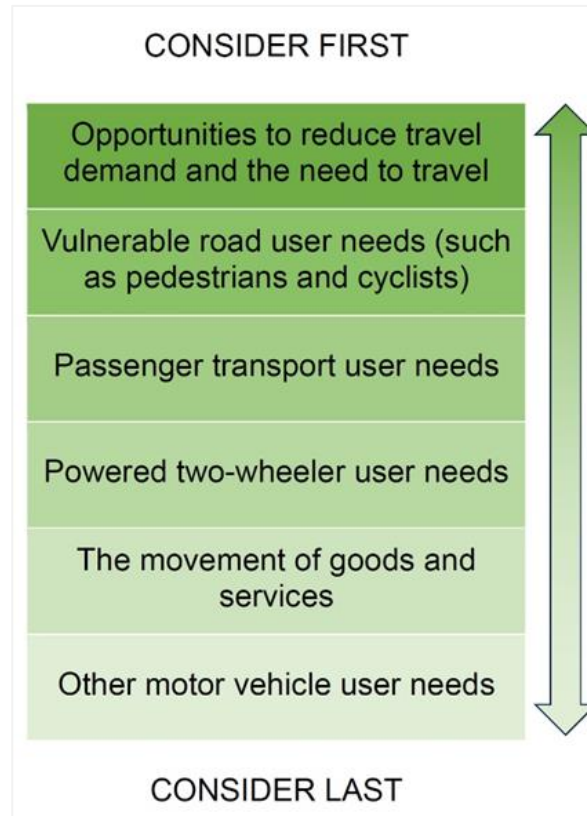


Figure 4-1 - The Transport User Hierarchy based on Hertfordshire County Council’s Local Transport Plan 4

- 4.2.3. The movement of goods and services has been added to the LTP4 list, and inserted as shown, to guide the TV&S and ensure that consideration is also given to the movement of freight and all forms of ‘white van’ traffic. This addition is consistent with LTP4, which states that, “Depending on the location, and in certain circumstances, there may be an additional subset of considerations for classes of motor vehicles, such as drivers with impaired mobility, emergency service and refuse vehicles, taxis, freight and deliveries”.
- 4.2.4. New neighbourhoods will be designed to include facilities that reduce the need to travel, including high speed internet connections to allow flexibility in work locations and local facilities. Active and sustainable mode connections will be designed from the start so that they become prioritised by users due to their convenience, making them the default choices for people in most situations. To achieve this outcome, the active travel network will need to be designed in accordance with the five key design principles presented in Local Transport Note 1/20:
- Coherent;
 - Direct;
 - Safe;
 - Comfortable; and
 - Attractive.
- 4.2.5. The aim is for active travel options to become the most efficient method for completing ‘everyday’ (short and local) journeys - both for new and existing residents of Hemel Hempstead.

- 4.2.6. Passenger (public) transport will be convenient and of high quality, with priority given to bus routes along key corridors ensuring rapid journey times to key destinations, particularly where journey lengths reduce the opportunity to use active modes.
- 4.2.7. All locations will continue to be accessible by private car, but motorised vehicle access will no longer be prioritised as it has been in the past.

Neighbourhoods that Prioritise Local Journeys

- 4.2.8. New developments need to work as a coherent single community, with no barriers between existing and new neighbourhoods. New facilities to be provided within developments, such as schools, healthcare, retail, and leisure, will not only serve the needs of new residents, but will be in locations that also benefit existing neighbourhoods. Improvements to the transport network need to be prioritised along corridors that facilitate the most journeys. Neighbourhood connections need to be based on the transport user hierarchy (Figure 4-1), with the most direct routes being provided by active and sustainable modes. Existing infrastructure assets (notably highway networks may need to be redesigned in some places in order to support these modes to encourage shift to more active and sustainable journey choices and reduce car-dependency.
- 4.2.9. Dacorum has one of the highest car ownership rates in the county, however, over 60% of trips made by residents in the district are under 5 miles. This indicates that whilst car ownership is above county average, the majority of trips are done at a local level, indicating potential for modal shift to sustainable modes. This trip pattern supports the transport user hierarchy and will be reinforced through the town's growth. Journeys within Hemel Hempstead and to the nearby areas including St Albans, Redbourn, Harpenden and Berkhamsted will be prioritised. Longer distance ('out of area') journeys by passenger transport, will also be catered for by providing high quality active and sustainable routes to the key mobility hubs associated with the railway stations and the proposed cross county HERT rapid transit system.
- 4.2.10. A Mobility Hub is a place where you can easily switch between different types of transportation, such as buses and bicycles. These hubs are designed to make it more convenient for people to use alternatives to their cars. Mobility hubs of varying size will seamlessly join-up active and passenger transport options, with complementary facilities available including opportunities for retail, work, and leisure activities where appropriate. They can also provide an opportunity to pick up parcels to reduce the impact from freight deliveries on local communities.
- 4.2.11. Mobility hubs will generally be sited closer to key destinations than parking for private motorised vehicles. Areas facilitating accessible pick-up and drop-off, and spaces for people whose more complex mobility needs dictate that they need parking close to their destination will still be provided. These measures will provide the push and pull factors required to achieve the mode shift which is essential for both creating the improvement in the quality of the built environment (the 'place') and enabling growth across Hemel Hempstead.

People Focussed Networks

- 4.2.12. A network of people-focused streets and traffic-free routes will ensure it is quicker to walk, cycle and scoot than use the car. The streets will be for people first, with traffic and deliveries carefully managed so that streets are seen as a key setting for community life. While the new neighbourhoods will not design out the car it will purposefully be planned for a different future where reduced private ownership and shared modes are an efficient, safe, and cheaper alternative. While access will be possible by car, the design of the streets will mean that cars will move slowly and be understood as guests in the streetscape. The streets will be designed such that parking spaces, car parks and car courts can be repurposed as community spaces as car ownership falls in the future.
- 4.2.13. Specific focus is applied to ensure all key locations are accessible through a choice of modes will help achieve the goals of this plan. This will include considerations such as:
- How active travel modes can mix safely with motor traffic or be segregated from other modes where appropriate to ensure that people walking and using higher-speed travel options, like e-bikes, do not come into conflict;
 - Reviewing passenger transport services to check ensure they provide access to key destinations particularly from areas where communities have lower levels of access to private cars, and for whom active travel may not be a viable option;
 - Recognising the importance of personal vehicle (including taxi and private hire) access as the only viable travel choice for some journeys, such as longer distance trips to more rural areas, transporting goods and materials (including some shopping), or for those with mobility impairments;
 - Designing places that focus on people and their movement needs first, rather than just the movement of cars and other motorised traffic, to improve accessibility, personal wellbeing, and the physical health of all Hemel Hempstead residents; and
 - Optimally harnessing emerging and future technologies that may alter the ways local journeys around Hemel Hempstead are planned, pay for, and completed.
- 4.2.14. Designing flexibility into the movement networks for the future Hemel Hempstead is central to the success of this strategy. As an example, some form of passenger transport service is likely to always be a key component to urban transport, but the network needs to be flexible enough to allow for changes in how vehicles work, such as the implementation of the Hertfordshire Essex Rapid Transit (HERT) system and vehicles with driverless technology, while ensuring it remains accessible for everyone. Similarly, active travel networks will need to be sufficiently extensive and have appropriate widths to allow for future changes, particularly those occurring around e-bikes, cargo bikes, and powered mobility scooters and wheelchairs.

Transforming the Network

- 4.2.15. In order to achieve the transformation of the network, significant investment is needed to improve the strategic movement networks across Hemel Hempstead and provide the necessary infrastructure to enable people to travel sustainably.

- 4.2.16. Networks will be designed for people first, while dedicated traffic-free links will make walking, cycling and shared transport the natural choice for most trips - whether this may be going to work or school; or meeting friends at the weekend. It will be more direct, quicker, and cheaper to travel by active and sustainable modes - linked by Mobility as a Service (MaaS)⁴⁵ - and therefore there will be less need to own a car.
- 4.2.17. The strategy proposes a series of interconnected networks throughout Hemel Hempstead, each providing for specific trip purposes and journey lengths. These are presented as:
- The Key Network; and
 - The Supporting Local Network(s).
- 4.2.18. The Key and Local networks shown below are derived from a variety of evidence bases, which are contained within Appendix C and E and seek to show locations where improvements should be focussed. However, the extent to which each route can or should be improved will be the subject of further studies, including modelling, as set out later in this document. These further studies will consider a number of factors but in particular the deliverability of route improvements, the impacts of such improvements on local communities and the effectiveness of the improvements in achieving the targeted modal share. The routes within the growth area are indicative at this stage and will be subject to detailed masterplanning work.
- 4.2.19. The purpose of each network is discussed in more detail in the following sub sections.

Key Network

- 4.2.20. The Key Active and Passenger Transport Network for 2050 (hereafter termed as 'The Key Network') is presented in Figure 4-2 overleaf.

⁴⁵ Mobility as a Service (MaaS) integrates various forms of transport and transport-related services into a single, comprehensive, and on-demand digital mobility platform.

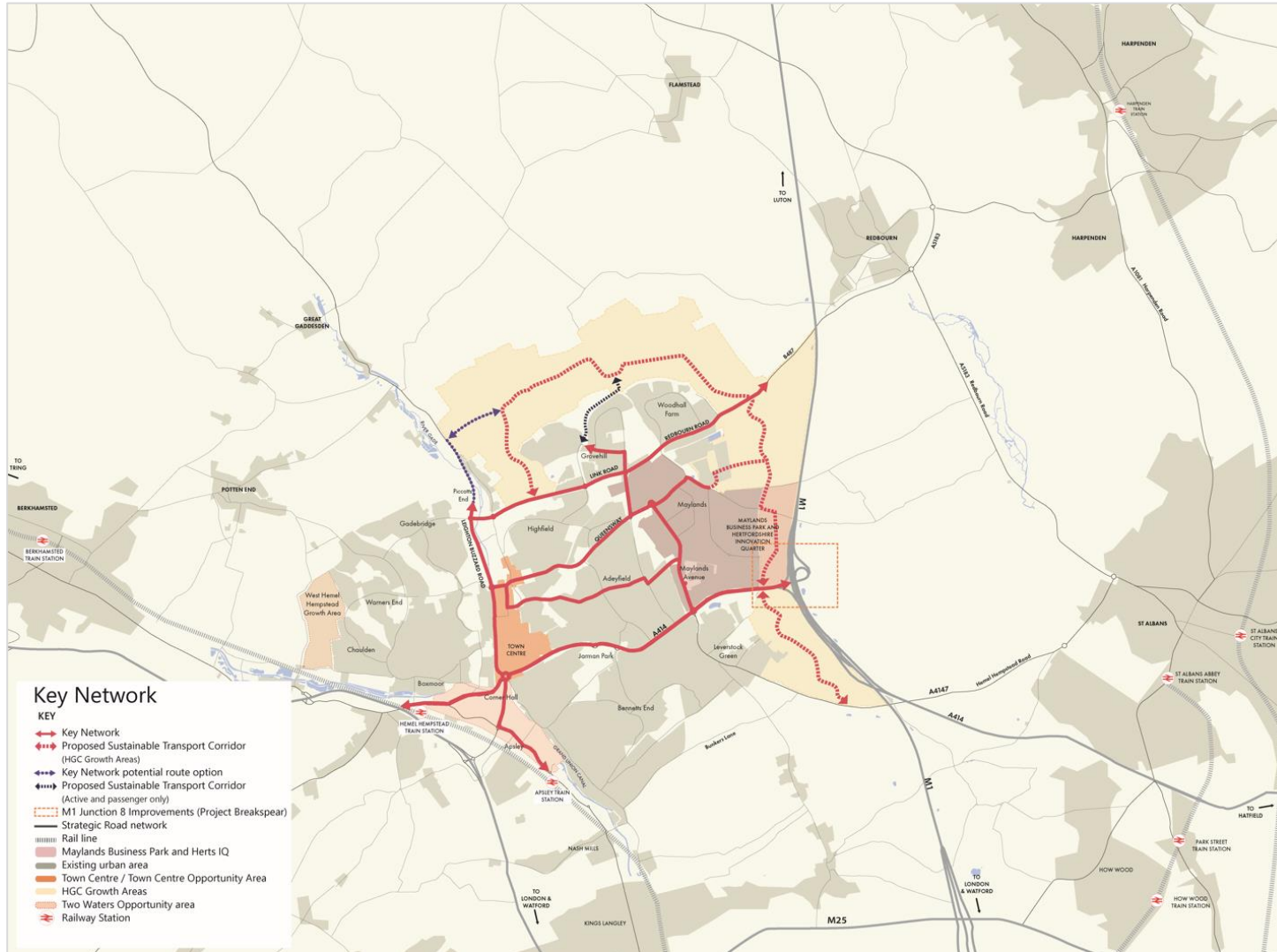


Figure 4-2 - The Key Network

4.2.21. The Key Network reflects the main desire lines for travel and therefore represents those routes with the anticipated highest future volume movements around Hemel Hempstead. The analysis undertaken to support the TV&S identifies corridors that should be considered for inclusion within the Key Network. These are set out in further detail in *Appendix C* and include:

- Route 1: A414 / Station Road (Hemel Hempstead Rail Station - Herts IQ);
- Route 2: Adeyfield (Leighton Buzzard Road - Heart of Maylands);
- Route 3: Queensway (Leighton Buzzard Road - Maylands Ave);
- Route 4: Link Road / Redbourn Road (Leighton Buzzard Road - Redbourn Road);
- Route 5: New North and East Hemel Sustainable Transport Corridor (Leighton Buzzard Road - A4147);
- Route 6: Leighton Buzzard Road / Two Waters Road / A4251 (Link Road - Apsley); and
- Route 7: Redbourn Road / Maylands Avenue (Link Road - A414).

4.2.22. The Key Network routes represent direct corridors between residential areas and the primary local destinations of the Town Centre, Maylands Business Park, and Hemel Hempstead Station. The A414 corridor (see Figure 4-3) is also recognised as a critical movement route that extends beyond the immediate boundary of Hemel Hempstead providing key interurban connections outside Hemel Hempstead via the M1 and A41.



Figure 4-3 - A vision for Station Road Hemel Hempstead, Suggesting Good Walking & Wheeling Routes, and Cycle Lanes. Image by DK-CM

Sustainable Transport Corridor

- 4.2.23. The Sustainable Transport Corridor (STC) refers to the proposed movement corridor which could run through the future extent of the Hemel Garden Communities (HGC) Development Area of North and East Hemel, prioritising active travel and public transport provision. The STC route can be considered as two distinct sections (see Figure 4-4). The northern section is from Leighton Buzzard Rd to B487 Redbourn Rd, and the eastern section is from B487 Redbourn Road to A414 Breakspear Way (and then on to A4147 Hemel Hempstead Rd). The STC, will be further developed through the emerging HGC Framework Masterplan. For further information please refer to Appendix D.

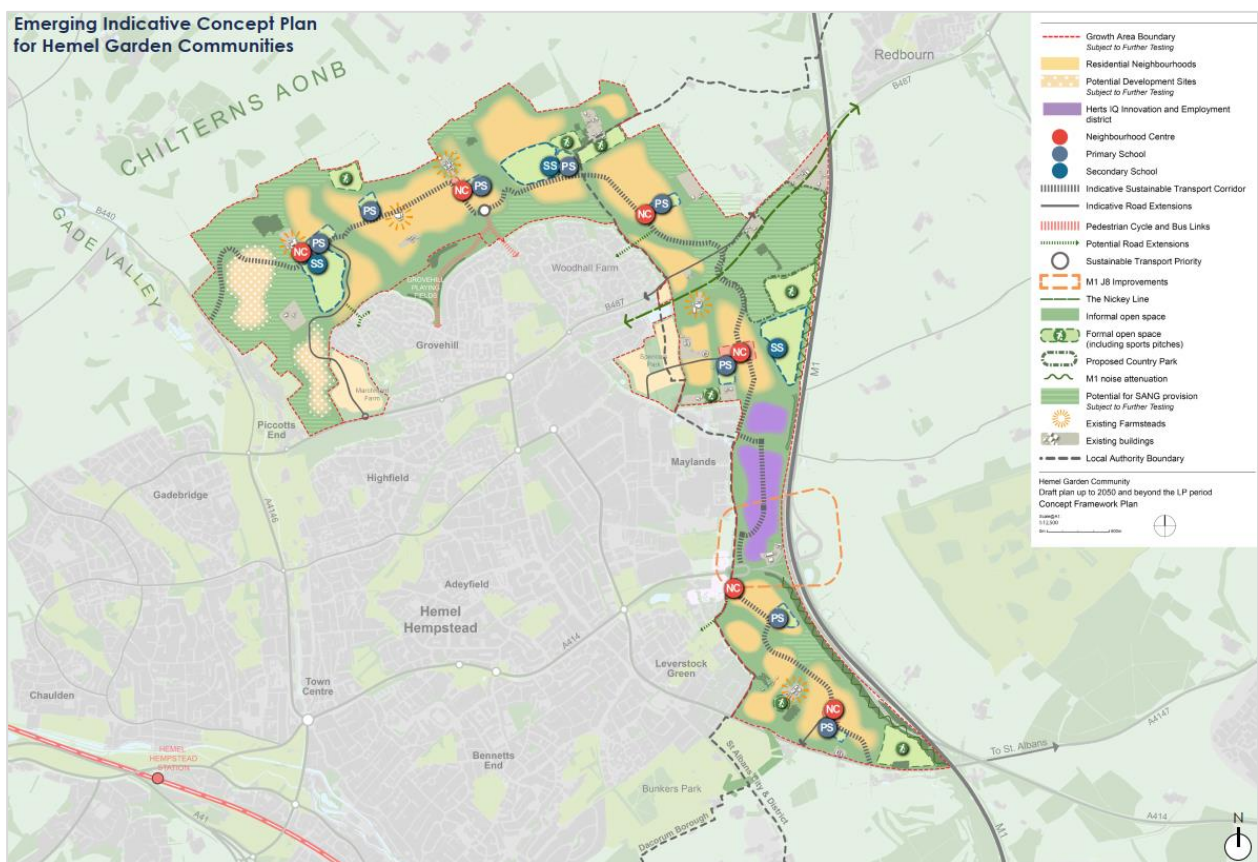


Figure 4-4 - Indicative Route Outline of Sustainable Transport Corridor, July 2023

Hertfordshire Essex Rapid Transit (HERT)

- 4.2.24. The Hertfordshire Essex Rapid Transit (HERT) is a proposal for a new, sustainable passenger transport network. Rapid transit systems are more convenient and reliable than a traditional bus, stopping at strategic locations and given priority along roads and at junctions. The HERT will form an east-west transport corridor that runs from Watford and Hemel Hempstead in the west to Harlow (Essex) in the east. The key settlements that will be served by the HERT are connected by the A414 east-west transport corridor (Route 1 in the Key Network), the A405 North Orbital Road and Abbey Rail Line between St Albans and Watford. These transport corridors provide vital local, regional and strategic connections and will significantly benefit both the immediate HGC area and wider regional network.

4.2.25. The HERT will make travel easier to access current and future job opportunities and will provide businesses with greater access to skilled people by:

- Supporting the significant long-term planned growth in the county with better connections between new and existing communities and jobs;
- Providing a more attractive alternative for motor vehicle users; and
- Ensuring that the region is at the forefront of new mass rapid transit technologies to stimulate economic growth.

4.2.26. The Hemel Hempstead - Gilston section is the main east-west section that will serve the main settlements between Hemel Hempstead and the new Gilston Garden Town near Harlow. It will also improve connections to Luton Airport via interchange in St Albans. This section follows the A414 through Hemel Hempstead, which is identified as Route 1 in the Key Network, listed above. It is likely that sections of HERT will be delivered in phases, as funding becomes available and in line with planned development. Prior to the implementation of HERT it may be that elements of bus priority can be introduced along the A414 corridor within Hemel Hempstead that provide short term gains for bus services whilst not prejudicing the future implementation of HERT.

Project Breakspear

4.2.27. Project Breakspear is a significant project looking at improving access to the HGC growth area(s), Maylands Business Park and Hertfordshire Innovation Quarter, in order to support the growth coming forward in this area. It consists of a number of elements including upgrades to the existing Breakspear Way / Green Lane Roundabout (Phoenix Gateway) to support the growth coming forward in this area. To reinforce HCC's LTP4 Policy 1 (User Hierarchy), Project Breakspear will prioritise active and sustainable modes of travel. This will consist of a number of elements including the replacement of the existing Breakspear Way / Green Lane Roundabout (Phoenix Gateway) with traffic signals, improving connectivity between the northern and southern parts of the development by providing a new high-quality walking and cycle bridge over the A414, a mobility hub, and a proposed spine road and sustainable transport corridor as part of the land East of Hemel Hempstead, and Herts IQ developments. One of the key goals of Project Breakspear is to be mitigate the perceived severance created by the A414 corridor. This will be achieved through enhancements in crossings and active travel infrastructure, aiming to enhance neighbourhood connectivity on both sides of the corridor and make sustainable modes of transportation more appealing. Furthermore, these improvements will be designed to accommodate future advancements in technology, including micromobility and smaller autonomous vehicles, to facilitate both logistics and the movement of people.

4.2.28. Once the development area is developed, a later stage may require modifications to M1 Junction 8 with a new bridge over the M1, providing Maylands and the planned growth area with direct access to the M1 southbound, without the need to pass through the A414 Breakspear junction. Further work will be required to establish the need, business case, funding, phasing, and deliverability.





Key Network Typologies






4.2.29. The following network typologies⁴⁶ have been developed to outline expectations regarding the level of provision recommended for each of the Key Network corridors. These typologies are summarised

⁴⁶ Junctions have not been covered in the typologies or detailed review further in this note, this level of detail is not required at this stage of network development. All junctions on the corridors will need to be suitable for continuing the active and sustainable movements with the matching level of priority to the link designs.

in Table 4-1, and further detail is contained within Appendix C. These typologies set out the expected standard of infrastructure but recognise in some locations where there are specific local circumstances or constraints there may need to be some modifications to the level of infrastructure provided.

Table 4-1 - Key Network Typologies

Priority	Description	Example
<p>Active Travel - fully segregated, providing the highest level of provision for these modes</p> 	<ul style="list-style-type: none"> ■ Ensure the differing needs of cyclists and pedestrians are met through separated routes where space allows; ■ Highest quality segregated cycle and walking routes with cycle parking and bike-hire facilities close by; ■ Dedicated space as a priority for cyclists on a continuous basis - including through junctions; ■ Well-lit, safe, welcoming, and wide footpaths for pedestrians; ■ Safe and convenient crossing facilities for pedestrians and cyclists, including priority for pedestrians with immediate/minimal stop time to allow for continuous journeys; ■ Clear route planning signage and directions including time/distance to local key destinations and communities for cyclists and pedestrians; and ■ Passive surveillance to ensure pedestrian & cyclist safety 	
<p>Passenger Transport - comprehensive bus priority measures focused on maintaining fast and reliable journeys for buses</p> 	<ul style="list-style-type: none"> ■ High degree of priority for buses, focused on achieving shorter and more reliable journey times than general traffic. This will be achieved through: <ul style="list-style-type: none"> ● Bus lanes / dedicated busways wherever space is sufficient. Expected to be targeted at locations where traffic is queueing - typically on approaches to junctions; ● Priority at signalised junctions; and ● Modal filters to prioritise access for bus services. ■ Clear, well-lit, safe spaces at interchange points (Mobility hubs) that support interchange with other sustainable modes for local trips; ■ Real time information along routes, wherever possible; ■ Sheltered places to sit/rest and wait for bus services to arrive; ■ Wayfinding maps and signage for people arriving by bus; ■ Scope to deter through access for car trips and prioritise access for bus services; and ■ Scope to include active travel in running lane where general traffic volumes are low (e.g., provided through access restrictions such as bus gates) 	

Priority	Description	Example
<p>Multi-Modal Route - where both passenger transport and active travel measures can be accommodated</p> 	<ul style="list-style-type: none"> ■ Provision for all travel modes (passenger transport, active travel, walking, general traffic) - in a safe and clearly allocated manner, maximising the potential for interchange between modes; ■ Segregated active travel (as described in the Active Travel typology); ■ Passenger transport prioritised over car travel (as described in the Passenger Transport typology); and ■ Scope to deter through access for car trips. 	
<p>Mass Rapid Transit (MRT) - corridor providing continuous segregation for passenger transport, e.g., Herts Essex Rapid Transit (HERT)</p> 	<ul style="list-style-type: none"> ■ High level of continuous segregation for bus and MRT services through junctions and in running lanes; ■ Significant portion of road space allocated to MRT services; ■ Safe and convenient crossing points for pedestrians and cyclists; and ■ Dedicated, high quality bus stops with mobility-hub features such as level access/boarding facilities, high-quality passenger waiting facilities, ticket machines and real-time information displays. 	 

Local Network(s)

4.2.30. The Key Network will be accompanied by supporting Local Networks, prioritised according to the transport user hierarchy. When these Local Networks are combined with the Key Network, they will provide a credible suite of alternatives to private car use for most people's journeys around Hemel Hempstead to a wide range of local destinations. These supporting networks are presented as:

- The Local Active Travel Network;
- The Local Passenger Transport Network; and
- The Green Network.

4.2.31. The relationship between these networks is illustrated in Figure 4-5. Further information is set out in *Appendix E*, the Local Network Assessment.

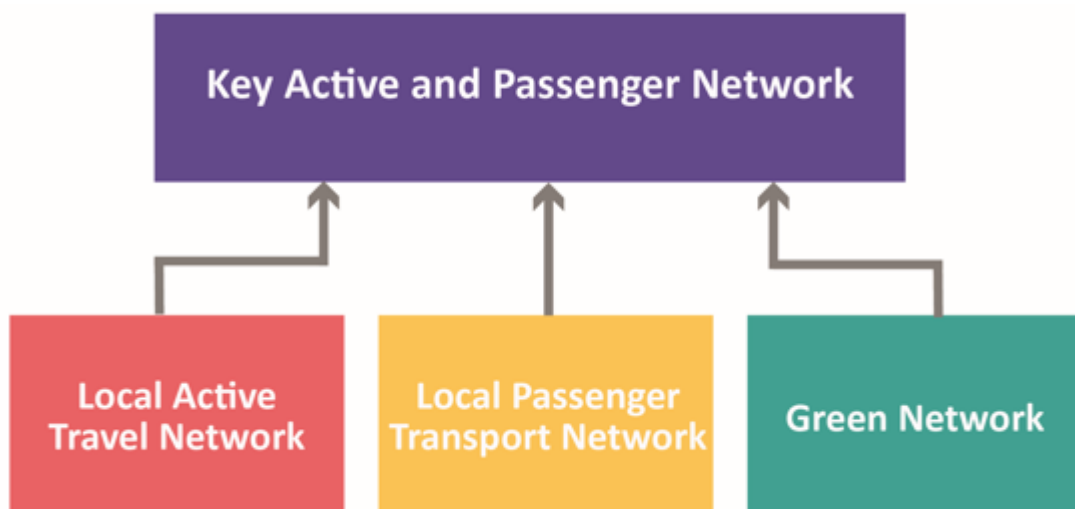


Figure 4-5 - Local Network(s) that Complement the Key Network

4.2.32. Each of the Local Network types will have dedicated routes into the new Growth Area developments to the north and east of Hemel Hempstead. Directly linking the new and existing communities by walking, cycling and passenger transport modes will allow residents to take full advantage of new facilities on offer, as well as existing facilities and jobs in the wider Hemel Hempstead area. The routes are illustrated in Figure 4-6 below.

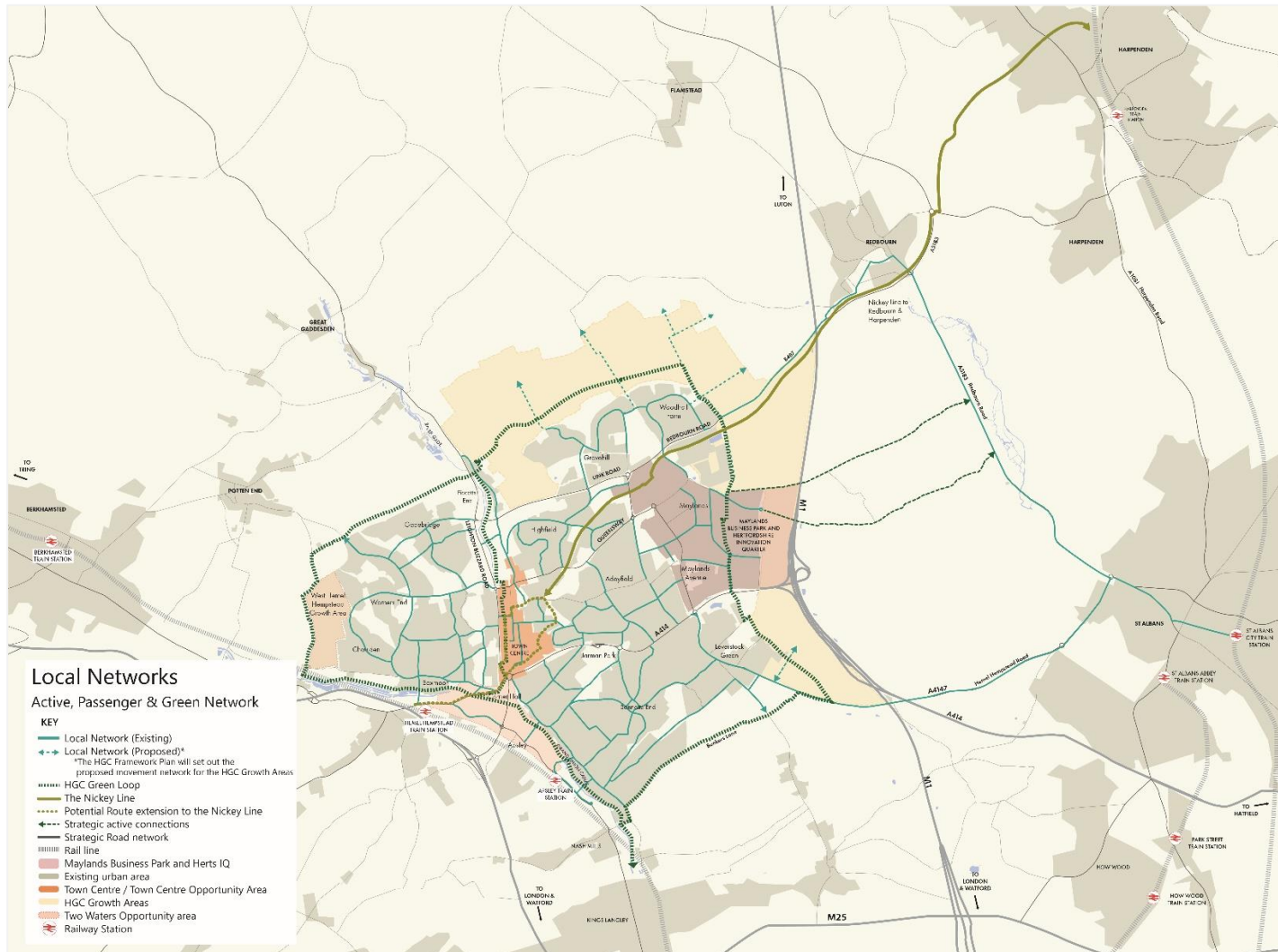


Figure 4-6 - The Local Network

Local Active Travel Network

- 4.2.33. The Local Active Travel Network will be comprehensive and fully connected, removing impediments to walking, cycling and micro-mobility use. This network will link all neighbourhoods and important destinations, making it the most direct mode choice for most short local journeys; this will include creating or improving short connections to create permeable neighbourhoods (see Figure 4-7).



Figure 4-7 - A Vision for the New Hemel Garden Communities Neighbourhoods, Self-Sustaining and Characterful, with High Quality Transport and Routes for Pedestrians and Cyclists. Image by DK-CM

- 4.2.34. The network will be designed to be suitable for all users, regardless of skill and ability, at all times of the year, providing well lit, paved surfaces suitable for riding in winter (subject to local constraints). It will be designed following the principles of LTN 1/20 to accommodate all types of cycle, including cargo bikes, trailers (for carrying goods or children), and adaptive bikes (including tricycles and hand cycles). The network will be designed to maximise opportunities for all trips, including last mile deliveries. E-bike uptake and enabling schemes such as e-bike hire should also help overcome barriers caused by adverse gradients and enable longer journeys.

Local Passenger Transport Network

- 4.2.35. The Local Passenger Transport Network will build on the Key Network by identifying in local routes where passenger transport can be prioritised over general traffic, helping maintain fast and reliable journey times. It will accommodate both local bus services and connect to the Hertfordshire Essex Rapid Transit (HERT), through new mobility hubs to enable passenger transport travel beyond the immediate Hemel Hempstead area, for example to key destinations such as St Albans City.
- 4.2.36. This network will also support inbound journeys to Hemel Hempstead by people using passenger transport (e.g. bus / arriving by HERT/rail and then using Local Networks) as an alternative to motorised car use - helping to alleviate congestion on the town's roads.

The Green Network

- 4.2.37. A fundamental element of the Local Network is the provision of continuous, traffic-free, or low-traffic routes designed to support active travel, referred to as the Green Network. These routes, as shown in Figure 4-8, support Pillar 1 of the *HGC Spatial Vision* - 'A Green Network'. These are typically more suited to leisure users, making use of green and blue infrastructure corridors (such as the Nickey Line and Grand Union Canal), but also the HGC Green Loop which is made up of a combination of Greenways and Quietways including quiet country lanes where traffic is very low and could be further limited or managed so they become largely traffic-free spaces.
- 4.2.38. The emerging *HGC Green Infrastructure Strategy* (Spring 2024) is an environmental framework for creating a greener, more connected Hemel Hempstead. The Strategy sets out a high-level framework for guiding delivery of a "Green Network" for Hemel Hempstead - an ambitious vision to establish green routes, travel and places that will support healthy lifestyles, biodiversity, climate resilience environmental sustainability and the wellbeing of local communities. The approach was informed by, and responds to, Natural England's guidance on developing green infrastructure strategies using the Green Infrastructure Framework Principles and Standards. The strategy has several commonalities with the TV&S, these crossovers were identified throughout engagement process and development of strategy.

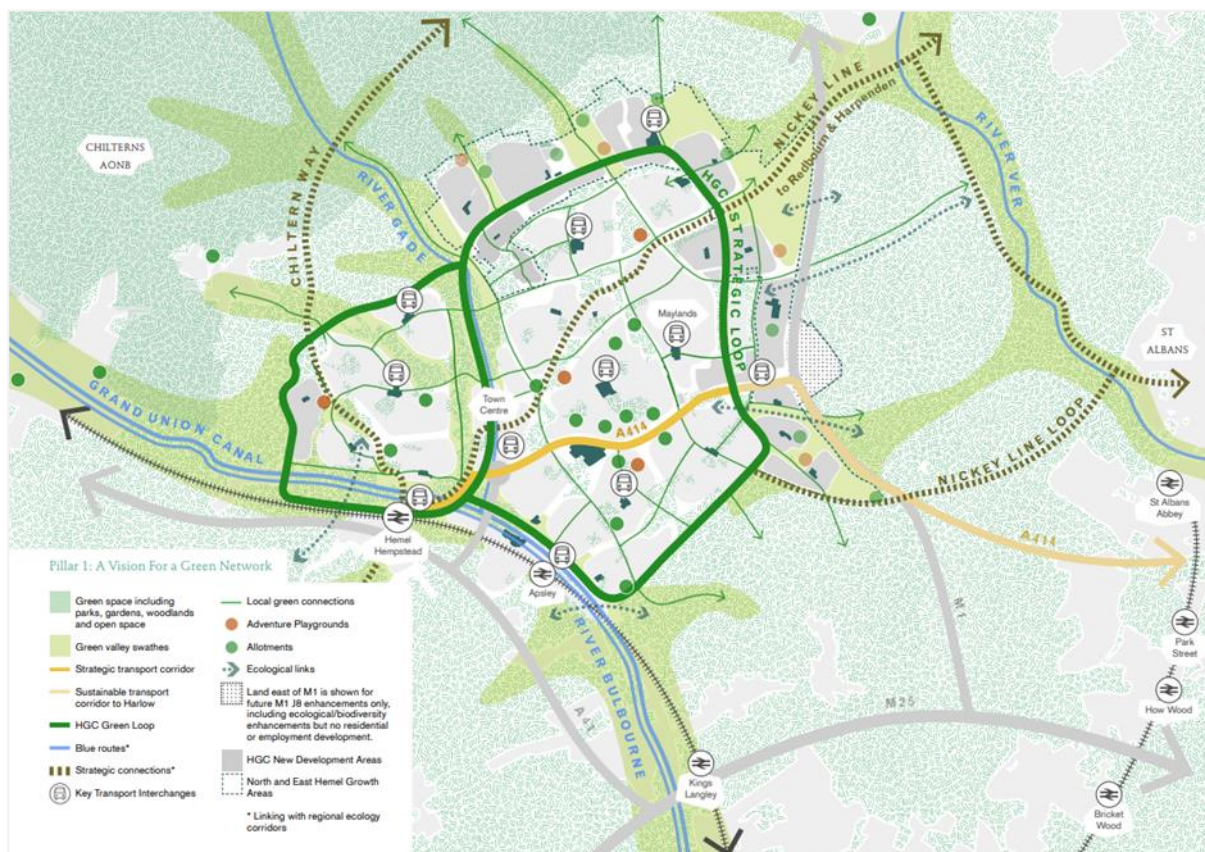


Figure 4-8 - The Green Network Map (HGC Spatial Vision, 2021)

- 4.2.39. The *Spatial Vision* for HGC includes specific proposals for a circular green network, referred to as 'The HGC Green Loop'. This is a key example of how proposals can complement and enhance the active travel networks, linking together existing Quietways and Public Rights of Way along green corridors and low-traffic roads. This leads to the formation of a coherent Green Network which connects more peripheral connections areas of the town and functions primarily as a leisure and recreational route.
- 4.2.40. The traffic free sections of the Green Network will be off-road and largely routed via existing Rights of Way through green spaces and parks. This will make them ideal for leisure and recreation cycling during the day. While they will be usable for commuter trips during the day, they may not be preferred routes at night or in the winter for some people, which is why there will be alternative all-season routes as part of the Key and Local Active Travel Network.

Nickey Line

4.2.41. The Nickey Line refers to a seven mile long former railway branch line that once linked Hemel Hempstead, Redbourn and Harpenden, officially known as the Harpenden and Hemel Hempstead Railway. Although it was closed to rail services in 1979 it was later bought by Dacorum Borough Council and St Albans City and District Council in their respective administrative areas and opened as an active travel route in 1985. As referenced within the *HGC Spatial Vision* the Nickey Line now forms a pleasant green corridor, a footpath and cycleway, forming part of the National Cycle Network (Route 57), providing attractive countryside and woodland walks, as well as a traffic free route to school or work. The route is approximately seven miles long (see Figure 4-9). The route has seen a range of improvements over recent decades and continues to be upgraded, including resurfacing of the route and creation of new steps and access points to promote year round usage. Work remains ongoing to further understand how the route can be improved further to increase the number of people using it for active travel purposes and enhance its strategic importance to HGC; this includes:

- The HGC Nickey Line Strategy and Feasibility Study (Hemel Hempstead to Harpenden);
- The HCC Nickey Line Cycle Connectivity and Accesses Study; and
- Sustrans Nickey Line Feasibility Study (Redbourn to Harpenden).

4.2.42. Further detail on these studies is provided within Chapter 5 of this document.

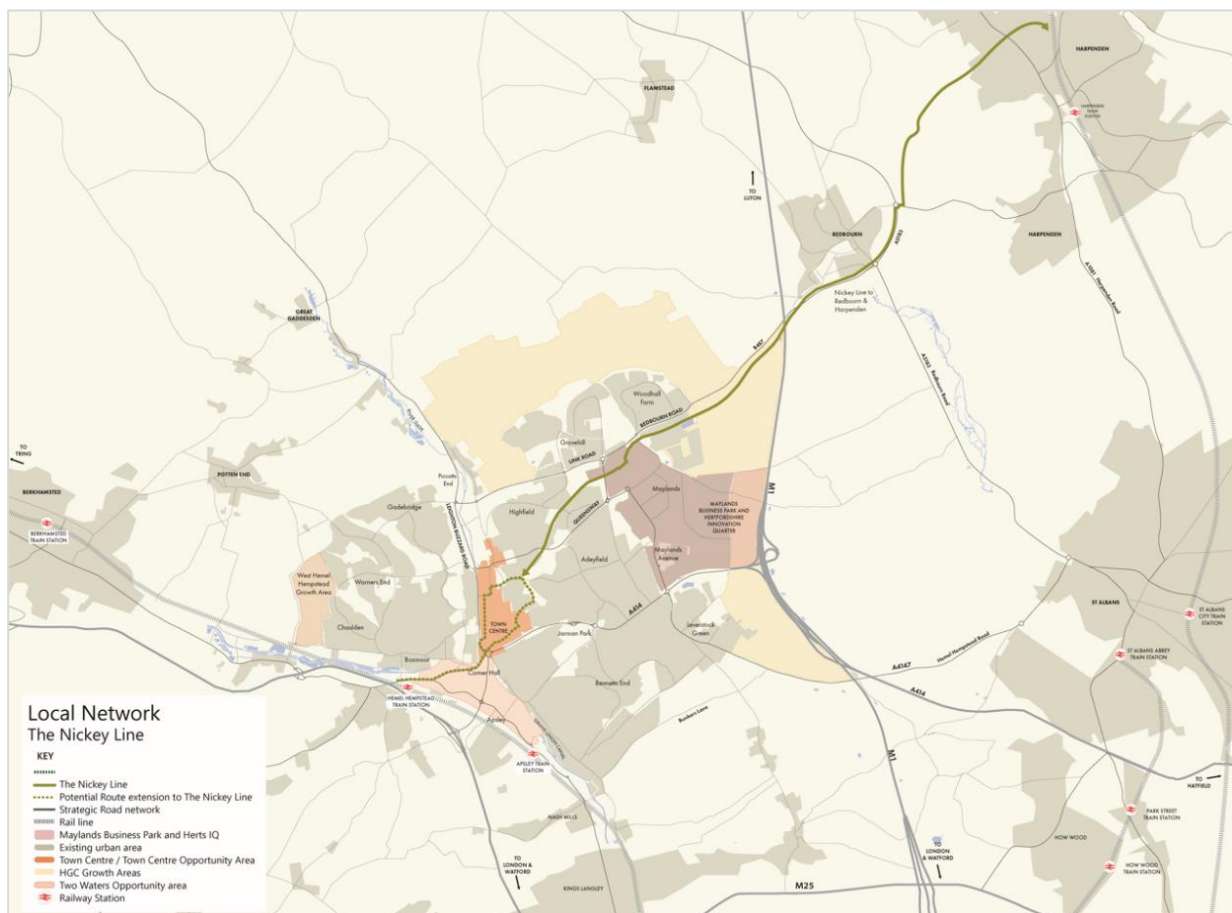






Figure 4-9 - Nickey Line Route



Local Network Typologies



- 4.2.43. The following network typologies⁴⁷ have been developed to outline expectations regarding the level of provision recommended for each of the Local Network(s). These typologies are summarised in Table 4-2, further detail is contained within *Appendix E*.

⁴⁷ Junctions have not been covered in the typologies or detailed review further in this note, this level of detail is not required at this stage of network development. All junctions on the corridors will need to be suitable for continuing the active and sustainable movements with the matching level of priority to the link designs.

Table 4-2 - Local Network Typologies

Typology	Description	Example
<p>Local Active Travel - light segregation, including measures such as wands</p> 	<ul style="list-style-type: none"> ■ Provide light levels of segregation for active travel users where space allows, designed to increase the feelings of safety for users, particularly those who may be less likely to cycle, such as younger or older people; ■ Measures can include wands, stepped kerbs, planters, etc; ■ Supported through cycle parking and bike-hire facilities close by; ■ Cycle lanes to be kept clear of parked cars and loading at all times; ■ Well-lit, safe, welcoming and wide footpaths for pedestrians; ■ Safe and convenient crossing facilities for pedestrians and cyclists, including priority for pedestrians and cyclists with immediate/minimal stop time to allow for continuous journeys; ■ Clear route planning signage and directions including time/distance to local key destinations and communities for cyclists and pedestrians; and ■ Passive surveillance to ensure pedestrian & cyclist safety. 	
<p>Residential Cycle Streets - utilising street design to encourage active modes</p> 	<ul style="list-style-type: none"> ■ Primarily targeting residential areas with low traffic volumes and speeds; ■ Low traffic speeds (20mph); ■ Well-lit, safe, welcoming footpaths for pedestrians, clear of parked cars; ■ Range of measures to encourage active travel (cycling): <ul style="list-style-type: none"> • Advisory cycle lanes; • Cyclist priority indicated through road markings; and • Removal of centre lines (designed to reduce traffic speeds) ■ Maintain and enhance residential place character through reduction in car volumes and speeds. 	

Typology	Description	Example
<p>Local Passenger Transport - enabling reliable passenger transport journey times.</p> 	<ul style="list-style-type: none"> ■ Priority for buses over general traffic where space allows. (which may be in limited locations due to nature of network, but should still be delivered where feasible): <ul style="list-style-type: none"> ● Bus lanes / dedicated busways on approach to junctions where space is sufficient, and queues are likely; ● Priority at signalised junctions; ● Bus-only movements at junctions; and ● In-lane stops to minimise dwell time. ■ Clear, well-lit, safe spaces and high-quality public realm at bus interchanges that support interchange with walking for local trips; ■ Real time information along routes, wherever possible; ■ Sheltered places to sit/rest and wait for bus services to arrive; ■ Wayfinding maps and signage for people arriving by bus; ■ Integrated with active travel to avoid delays to either mode, such as the use of bus stop islands; ■ Where active travel is sharing the carriageway, the lane should be at least 4m wide to enable buses to pass cyclists with sufficient room. If this space is not available lanes should be no wider than 3.1m to discourage unsafe overtaking. (Lane widths between 3.2m and 3.9m should always be avoided); and ■ Running lanes to be kept clear of parked cars and loading during peak hours. 	

Typology	Description	Example
<p>Green Network - quiet lanes with very low vehicle levels, and low vehicle speeds, and traffic free, including closed roads, canal towpaths and converted railway lines</p> 	<ul style="list-style-type: none"> ■ This includes Quietways which are lightly trafficked low speed roads; along with Greenways which refer to fully (or almost fully) off-road and traffic free routes; ■ The character of each route will vary, and should be sympathetic to the place which it is running through, likely meaning routes will not have lighting or paved surfaces in places, so as not to disrupt the natural environment; ■ Minimal physical interventions on existing country lanes, likely to only require bollards to limit traffic, with occasional seating (areas to dwell); ■ Use of local and recycled materials to acknowledge the character of Hemel and the surrounding area; ■ Clear route planning signage and directions including time/distance to local key destinations and communities for cyclists and pedestrians; ■ Mixed use between all active modes; and ■ To include places to dwell/rest such as benches, and where appropriate, space for pop-up business, public art, and interactive historic/nature trails that foster a sense of place and celebrate the local environment and culture; 	 <p>The Nickey Line, 2023</p>

Summary

- 4.2.44. Whilst the Key Network will primarily serve a movement function, the Local Network(s) - in particular the active travel and green network components - will facilitate movements between local destinations and also serve more of a place function; this means they will not only cater for functional trips (such as commuting) but also catering for slower paced, leisure orientated trips that make the most of the town's green and blue infrastructure and offer the opportunity to pause and dwell.
- 4.2.45. A stylised representation of the four interconnected networks is shown in Figure 4-10 overleaf.

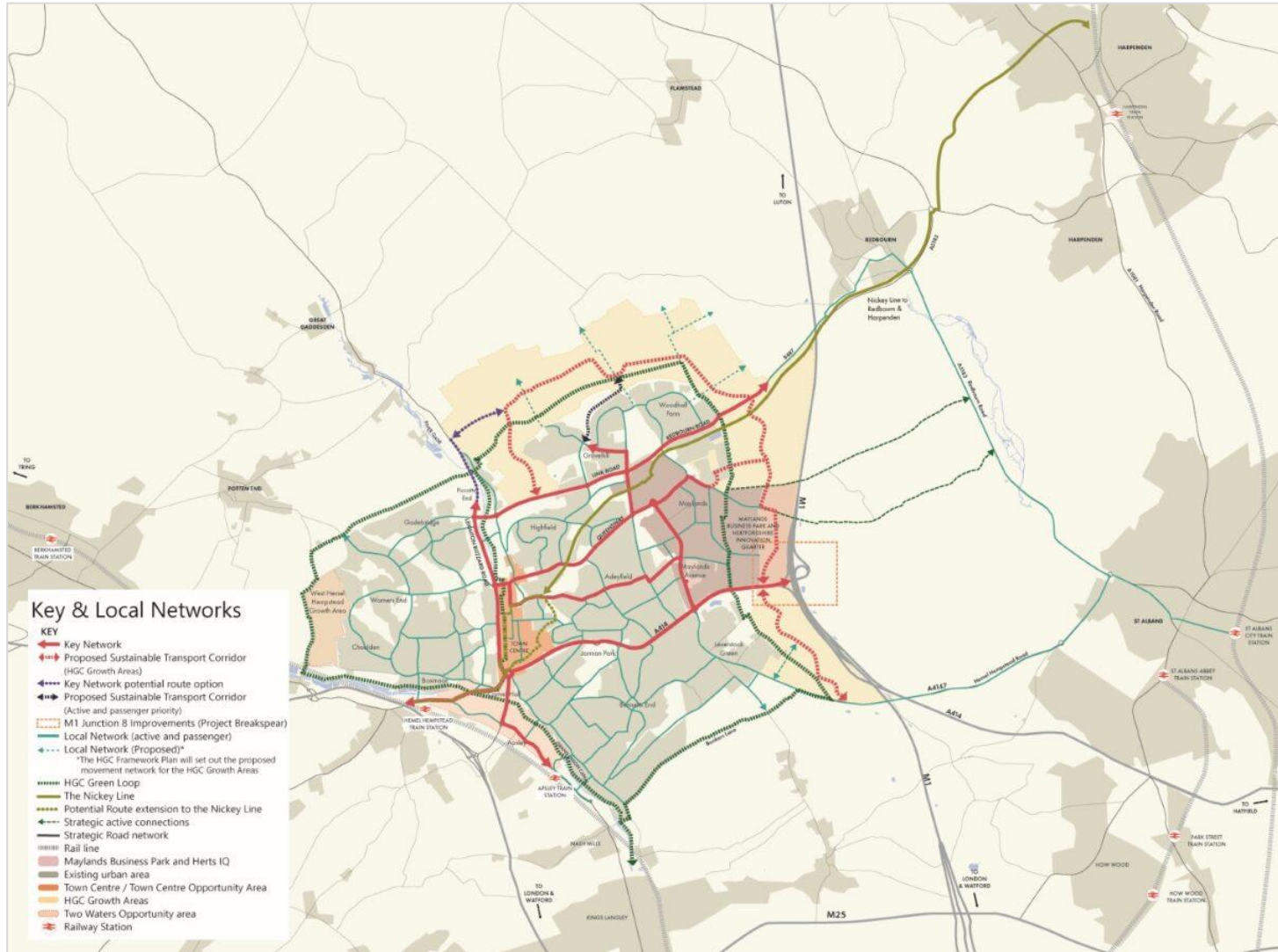


Figure 4-10 - Key & Local Network(s) Map

THEME 2: A PLACE THAT ENABLES SUSTAINABLE TRAVEL

- 4.2.46. In order to realise the modal shift targets and the wider Transport Vision there is a need to look beyond simply providing the infrastructure. The Strategy takes account of this by recognising the need to promote a cultural change in how people view and interact with the network.
- 4.2.47. Strategic planning of the built and natural environment will enable and encourage physical activity and active lifestyles. New neighbourhoods will be designed to reduce the need for travel by car and prioritise active and sustainable travel modes, but this needs to be reinforced by wider behaviour change initiatives that raise awareness and promote the importance of positive travel behaviour.

Behaviour Change

- 4.2.48. Changing the way people travel plays a central role in helping to meet carbon reduction targets and to tackling public health and other related issues.
- 4.2.49. Behaviour change is the practice of encouraging an alteration in people's actions. In terms of travel this might entail people:
- Adopting new / maintaining or increasing existing 'wanted' behaviours, such as walking and / or cycling regularly; and
 - Refraining from adopting new / stopping or reducing existing 'unwanted' behaviours, such as using a private car for short local journeys where walking, wheeling, cycling or public transport could be used instead.
- 4.2.50. There are complex reasons behind people's travel choices, influenced by interrelated factors such as attitudes, habits and structural factors. The traditional approach to behaviour change focussed largely on communication, education and raising awareness, but most people will not take up new behaviours just because they know they should. Some people instead change their behaviour in response to changes in their environment, their understanding of the world around them, and their perceptions of themselves within that wider environment.

What This Means for Hemel Garden Communities

- 4.2.51. Engaging with residents and commuters to show the benefits of sustainable travel, supporting them with effective education and training, is an essential component of the strategy to promote positive behaviour change across Hemel Hempstead.
- 4.2.52. Understanding and, in turn, addressing concerns people may have about the active and passenger transport network(s) such as how to improve bus provision; how to cycle more safely, discovering alternative travel routes or finding other people to travel with, aims to help people change the way they see their travel choices and discover the advantages of travelling more actively whilst reducing reliance on the private car.
- 4.2.53. Existing residents will need to be engaged and informed on new transport measures that will become options for their journeys; and equally, where new residents and businesses are coming to Hemel Hempstead it will be vital to instil the desired transport behaviour from day one, which will require schemes and services to be in place at this point. In both cases travel planning will be a key tool deployed to assist this process. It will also be an important component of planning the construction of the new developments, minimising any disruption this work will cause.

Promotion of Active Travel

- 4.2.54. To maximise the impact of new infrastructure and encourage people to give walking and cycling a try, marketing and communications play a pivotal role. Strategic marketing and communications plans will be developed for each project, as well as a county-wide Active Travel marketing programme to promote awareness, uptake and reinforce positive “wanted” travel behaviours.

Cycle Training - Bike ability

- 4.2.55. HCC deliver a successful cycle training programme at schools and for adults. The Active Travel Strategy for Hertfordshire (ATSH) states a clear aim to expand this programme and launch a bike maintenance skills scheme aimed at secondary schools across the region.

Maintenance for Active Travel Strategy

- 4.2.56. The ATSH details how the most common road and footpath maintenance issues are dealt with for all user groups - including for those walking or cycling, and those with limited mobility or disability.
- 4.2.57. HCC will ensure that current policies and guidelines for construction of highways and footways, in new developments, follow Government guidance about accessibility.

Promotion of Sustainable Travel

- 4.2.58. There are strong synergies between passenger transport use and active travel. Almost all bus or rail trips involve a walking or cycling stage. Through appropriate design, walking, cycling and public transport should be better integrated. By increasing the use of public transport, people will generally be travelling actively more often. Public transport is also statistically the safest form of transport.
- 4.2.59. The Intalink Enhanced Partnership has developed a Bus Strategy and HCC has a Rail Strategy, with both documents recognising that infrastructure improvements are required to enhance access to the bus and rail network by those choosing to walk or cycle as part of their journey.
- 4.2.60. HCC have developed a *Bus Service Improvement Plan (BSIP)* for Hertfordshire, as required by the national bus strategy (Bus Back Better, DfT March 2021) which sets out bus strategy for the region, with a stated aim to work closely with local bus operators and local communities to deliver a step-change in regional service provision and increase bus patronage. Hemel Hempstead was identified as one of the five main towns most in need of a “turn up and go” service frequency. This would see buses operate at an average of every 15-minutes or better throughout a core period of the day (a minimum period being 07:00 to 19:00) across at least the mid-week period. This strongly aligns with the objectives set out within the BSIP which focussed on a strategic core network of services operating across the county⁴⁸.

Summary

- 4.2.61. Whilst the first theme (“*A well connected place that puts people first*”) primarily sets out the strategic infrastructure needs of Hemel Hempstead, there remains a critical need to recognise and encourage a cultural change in how people perceive, and interact with, the movement network(s) to achieve the modal shift targets unpinning the Transport Vision.
- 4.2.62. The wider Transport Vision will not be fully achieved by simply providing the necessary infrastructure, it is vital to promote behavioural change amongst the people of Hemel Hempstead to maximise awareness and to encourage the uptake of active and sustainable travel modes. A critical

⁴⁸ Bus Services Improvement Plan (BSIP) For Hertfordshire County Council, 2022:
<https://images.intalink.org.uk/downloads/BSIP-OCT22-HCC%20Final.pdf>

part of this strategy involves making people aware of their perceived impact, their potential contribution, and the choices of mode available to them.

THEME 3: A NETWORK FIT FOR THE FUTURE

Overview

- 4.2.63. There are currently a number of significant global trends which have the potential to impact on how, when and why movement will need to occur. Technological advances, climate change, digital connectivity, and a growing and ageing population will have significant transport impacts right across the town.
- 4.2.64. Globally, the developed world is close to a significant change in transportation, facilitated by an on-going digital revolution, enabling unprecedented levels of connectivity, autonomous vehicles across all modes, clean propulsion, and new models of sharing (amongst many other things), altering the traditional models of transport access, ownership, and use. While Hemel Hempstead can expect that private car usage will still remain an essential part of the transportation landscape in the near future, this is likely to change significantly over the coming decades, with automation of driving tasks becoming a reality and fossil fuels being phased out, both nationally and globally.
- 4.2.65. Transport is a derived demand, serving people and commerce through the provision of access to activities such as social interactions, employment opportunities, educational attainment, healthcare needs, leisure activities, tourism, markets, and distribution. Digital connectivity is increasingly helping individuals and organisations to reduce the need to travel, and while this trend is likely to continue, it is not considered to be a model applicable to all, and certainly not all the time.
- 4.2.66. Better transport connectivity will unlock resources for growth and act as a catalyst for productivity improvements through economies of scale and enhanced specialisation. This will promote enterprise, attract inward investment, and ultimately increase value and choice for consumers. It should also be noted that increasingly digital access can meet the needs of some activities that traditionally required conventional transport (air, road, and rail) meaning that ‘virtual’ access is an important part of future considerations.

Future Mobility

- 4.2.67. As outlined by the DfT in the 2019 publication of the *‘Future of Mobility - Urban Strategy’*, the transport revolution is being enabled largely by six key changes, see Figure 4-11 overleaf. These include:
- **Cleaner Transport** - Rapidly falling battery prices, improvements in energy density and electric motors and alternative fuels development have the potential to significantly reduce emissions;
 - **Data & Connectivity** - Increasing availability of data and improved connectivity are allowing travellers to make more informed journey choices, providing real-time information to operators and fuelling machine learning advances;
 - **New Business Models** - The emergence of new digitally enabled models of transport provision;
 - **Automation** - Improved sensing technology, computing power and software engineering are leading to increasing levels of automation in transport;
 - **New Modes** - Technology is enabling new ways of transporting people and goods; and
 - **Changing Attitudes** - Rising customer expectations are driving passenger transport and delivery services that are increasingly affordable, convenient and personalised.

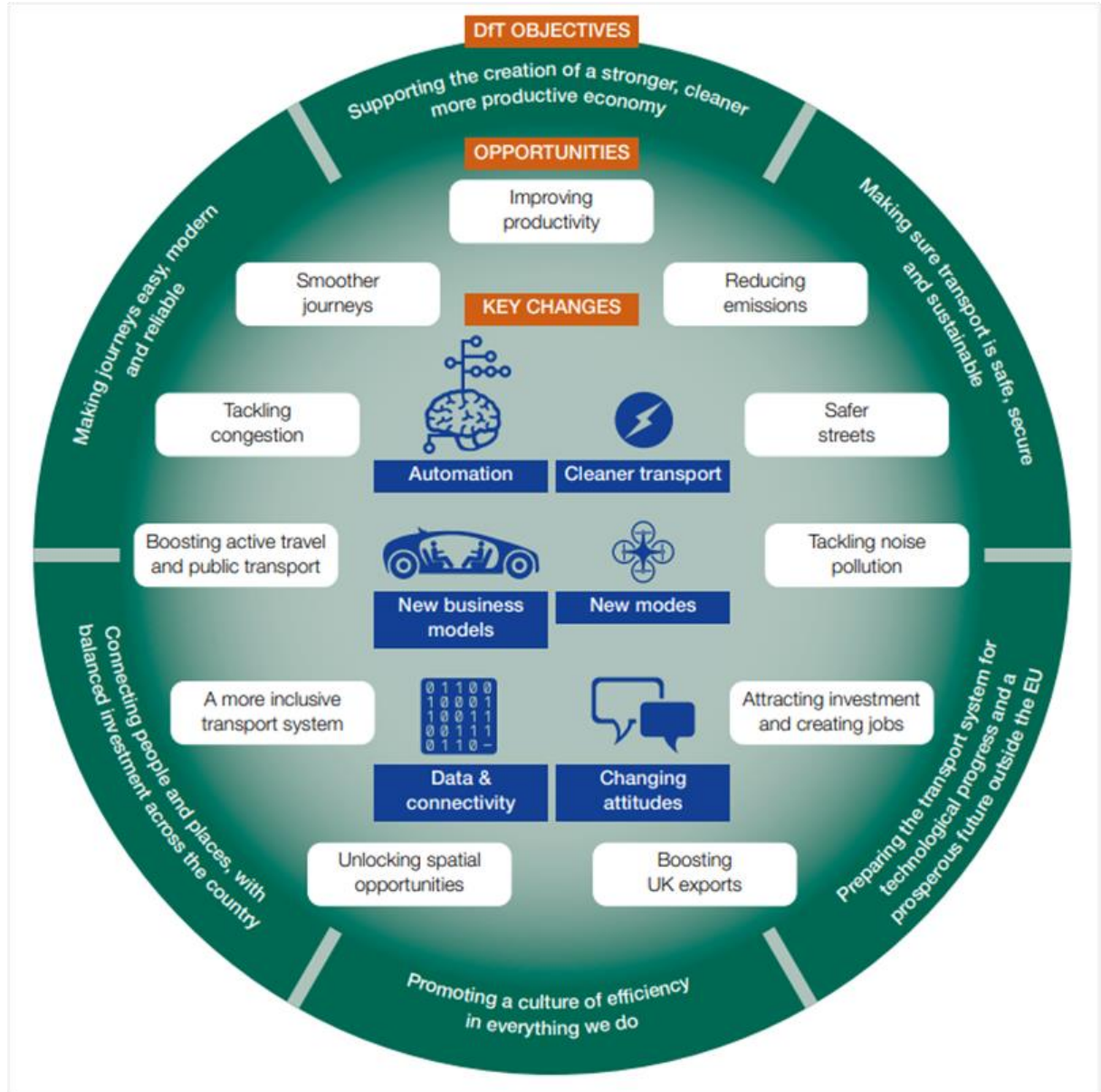


Figure 4-11 - Key Changes in Technology and Attitudes Bring Numerous Opportunities to Help Meet Transport Objectives

- 4.2.68. In addition, a seventh key change has also been identified by consultants WSP which should be considered in the TV&S: “Aggregation of Mobility”. This can be summarised as the physical and digital aggregation of established, and new modes, services, and infrastructure as part of an integrated mobility network. This includes the emergence of Mobility as a Service (MaaS)⁴⁹ and mobility hub⁵⁰ methodology.

Putting Future Mobility into a Local Context

- 4.2.69. Future Mobility encompasses a wide range of schemes, including those related to electric vehicles, parking and kerbside management, travel behaviour change and emerging digital technologies.
- 4.2.70. There is not an easily defined single ‘package’ that will work everywhere. It will be the local application, and onward growth, of specific and tailored solutions that will bring genuine benefit to Hemel Hempstead’s places and routes of the future. Some stakeholders have the power to generate widespread multi-national change, while others hold much more local influence as enablers and agents of change on the ground. Each needs the other if they want to maximise popularity, commercial returns, and wider benefits.
- 4.2.71. At this point in time, many of these technologies are very much in their infancy and only just emerging. However, in recognition of the need to accelerate the decarbonisation of the transport sector, the Government announced in October 2023 that the sale of new petrol and diesel cars and vans would be banned from 2035. It is anticipated that in this decade, vehicle manufacturing companies will substantially increase their production and sales of electric vehicles; zero emission buses will be rolled out within cities across the globe; and electric vehicle battery pack prices will continue to fall. New legislation is likely to be required in order to facilitate truly autonomous vehicles across the highway network, while the potential for shared use models to replace traditional bus and taxi business models could have significant impacts on travel patterns.
- 4.2.72. For Hemel Hempstead, the move toward future mobility creates a number of possibilities. Each of the seven key changes, outlined above, has a number of potential outcomes that could influence the development of strategy and investment in the transport network.
- 4.2.73. In both wider Dacorum and in Hemel Hempstead, the number of older people as a proportion of the total population is due to increase significantly over the next 25 years. Developing transport facilities which support active ageing and independence through social, health, and community services will be important to enable inclusive, healthy and active lifestyles and behaviours through later life stages. Furthermore, the extensive new development planned as part of HGC is likely to bring new residents with differing demographics and travel behaviours.
- 4.2.74. To envision these lifestyle trends, and some of their potential impacts on travel demand in the future, the archetypes displayed in Figure 4-12 overleaf consider a range of travellers in and around Hemel Hempstead today and their likely behaviours now and in the future. While indicative, and not exhaustive, their purpose is to spark ideas and inform a vision for a future place.

⁴⁹ Mobility as a Service (MaaS) integrates various forms of transport and transport-related services into a single, comprehensive, and on-demand digital mobility platform.

⁵⁰ Mobility hubs bring together shared transport with public transport and active travel in spaces designed to improve the public realm for all.

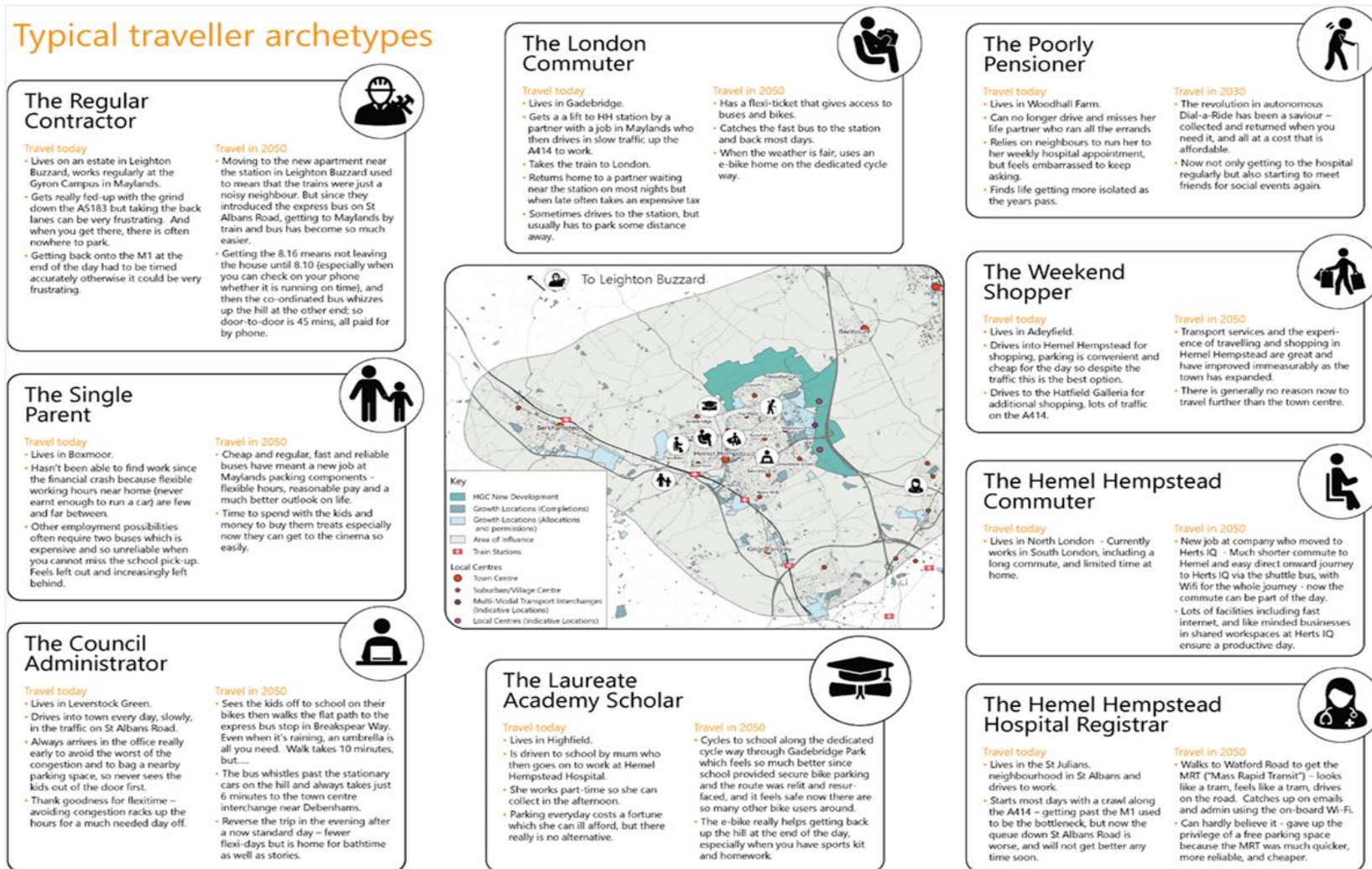


Figure 4-12 - Typical Traveller Archetypes

Mobility Hubs

- 4.2.75. Mobility hubs⁵¹ are an emerging concept which is being used to create space(s) designed specifically to house public, shared and active travel modes of transport alongside enhanced facilities and information features to both attract and benefit the traveller.
- 4.2.76. Mobility hubs of varying size will seamlessly join-up active and passenger transport options across Hemel Hempstead, with complementary facilities available including opportunities for retail, work, and leisure activities where appropriate. They also offer an opportunity to provide parcel lockers as a means of reducing the impact of LGVs⁵² and HGVs⁵³ deliveries in local areas.



Figure 4-13 - Artist Impression of a Mobility Hub

- 4.2.77. All locations will continue to be accessible by private car, but motorised vehicle access will no longer be prioritised as it has been in the past. Mobility hubs will generally be sited closer to key destinations than parking for private motorised vehicles. Areas facilitating accessible pick-up and drop-off, and spaces for people whose more complex mobility needs dictate that they need parking close to their destination will still be provided. These measures will provide the push and pull factors required to achieve the mode shift which is essential for both creating the improvement in the quality of the built environment (the 'place') and enabling growth across Hemel Hempstead.
- 4.2.78. The HGC mobility hubs will be delivered at three levels:

⁵¹ Also referred to as "Transport Hubs", "Movement Hubs", "Travel Hubs", "Mobility Stations"

⁵² LGVs – Light Goods Vehicles representing a maximum gross weight of 3.5 tonnes or less (Driver and Vehicle Standards Agency).

⁵³ HGVs – Heavy Goods Vehicles representing a gross weight of 3.5 tonnes or more (Driver and Vehicle Standards Agency).

Metro Mobility Hubs

- 4.2.79. These will represent the largest mobility hubs in the network, strategically placed in locations where significant transport interchange will take place, for example at Hemel Hempstead Rail Station and potential stops on the HERT rapid transit network. The facilities will provide and be tailored to support medium and longer distance journeys (including those leaving the Hemel Hempstead area).

Local Mobility Hubs

- 4.2.80. Local mobility hubs will still have the opportunity to provide a wide range of services but will be targeting different locations to the Metro mobility hub(s). The Local mobility hub(s) will be placed in new and existing local centres, designed to complement the existing range of services the local centres in Hemel Hempstead provide, enhancing them by increasing the sustainable and active travel facilities. Helping to encourage people away from private car use in these locations, which are currently dominated by car parking spaces, make using the car for short journeys from an individual's home to the local centre the easiest option. Adeyfield local centre (The Queens Square, shown in Figure 4-14 below) is a prime example of a suitable location for a Local mobility hub. This is a historic and successful local centre, which is currently dominated by an abundance of car parking, but with a lack of facilities to support active and sustainable modes. A well-designed mobility hub along with other complementary schemes could result in significant improvements to the urban realm, along with an increased sense of place and purpose.



Figure 4-14 - The Queen's Square, Adeyfield, Hemel Hempstead (2022)

Micro Mobility Hubs

- 4.2.81. The smallest scale of mobility hub, Micro mobility hub(s), will further complement the network, ensuring no residential or business location is too far from an easily identifiable interchange location.
- 4.2.82. An example of an existing UK based mobility hub which could form a template for HGC Micro mobility hub(s) is located in the London Borough of Redbridge (see Figure 4-15). Delivered in 2021, and the first CoMoUK accredited Mobility Hub, the suburban mini hub includes seating for a community café, cycle parking, planting, a car club bay, EV charging, and space to include micro-mobility.



Figure 4-15 - South Woodford Community, London Borough of Redbridge (2022)

Parking

- 4.2.83. Where parking is cheap and convenient at both ends of a journey it often makes travel by private car the default mode choice. Through promoting active and sustainable modes of travel, reducing the availability of parking, adjusting parking standards in new developments, and increasing charges at paid for locations this trend can be changed.
- 4.2.84. There is a balance between discouraging car ownership through reduced parking standards whilst not having uncontrolled overspill on-street car parking due to inadequate provision. This can result in the detrimental impact of a cluttered streetscape, poor public realm, and poor street operation. Therefore, distinct parking strategies will be developed for the residential and commercial areas including the HGC growth areas, which take account of localised characteristics such as accessibility.
- 4.2.85. In the growth areas, there is the potential to look at innovative ways of providing parking provision such as Parking Barns providing centralised parking locations rather than parking on driveways immediately outside residential properties.
- 4.2.86. Wider parking enforcement measures such as controlled parking zones should be investigated to further strengthen this package. A further benefit of reduced on-street parking (including footway parking) is the additional space opened up to improve the environment and greening, such as street trees, community gardens / parklets and Sustainable Drainage Systems (SuDS).

Electric Vehicles

- 4.2.87. The government is looking to ban the sale of new petrol and diesel cars and vans by 2035 at the latest. Predictions for the uptake of electric vehicles vary, but it is likely that electric vehicles will account for the majority of new car sales from the late 2020s. Many of HGC's residents may want to replace their petrol or diesel fuelled car or van with an electric vehicle in the short to medium term; whilst by 2050 it must be assumed the vast majority of cars or vans in use will be electric powered, and so it is imperative that the charging network keeps pace with demand.
- 4.2.88. National legislation now requires all new homes and buildings to have charge point provision. Charging should be enabled on private drives / garages where available or through access to

alternative charging facilities in consolidated parking locations (e.g. parking barns or local car parks) rather than on-street, making this shift in vehicle power easier to accommodate than it would be through infrastructure for all on-street locations. The *HCC Electric Vehicle Charging Strategy* considers how EV charging infrastructure needs to be considered within the local policy context (particularly the user hierarchy in LTP4) and sets out the opportunities and challenges presented by EV charging⁵⁴. It sets out a hierarchy of different charging options to guide priorities when assessing charging options for particular areas (see Figure 4-16).

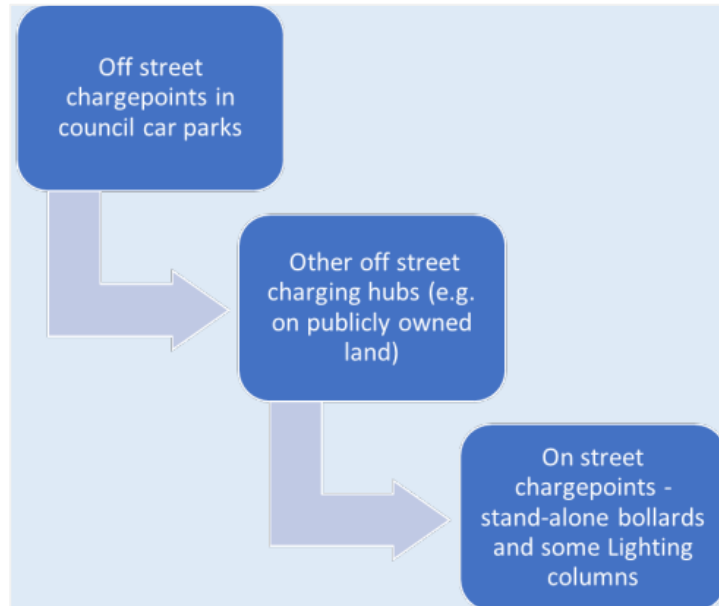


Figure 4-16 - Hierarchy of Charging Options, HCC Electric Vehicle Charging Strategy

Freight

- 4.2.89. To help reduce the volume of miles travelled on the network by HGVs and LGVs, intelligent kerbside management should be introduced, or trialled, in busy locations such as the town centre and neighbourhood centres. Residential pick-up and drop-off can be minimised through the use of facilities at mobility hubs, such as click-and-collect points, and locations where freight consolidation could occur and be transferred to smaller e-cargo bikes (as an example) for local delivery, which will be supported by the Key and Local Active Travel Network infrastructure fully supporting accessibility by cargo bikes. Stakeholder engagement is a key part of developing the approach to freight and any intervention needs to consider wider impact on both Hemel Hempstead and regional freight movements.

⁵⁴ HCC Electric Vehicle Charging Strategy, 2023: <https://www.hertfordshire.gov.uk/doc/roads/electric-vehicle-charging-strategy.pdf>

- 4.2.90. The National Planning Policy Framework (NPPF) recognises the importance of providing adequate overnight lorry parking facilities (paragraph 113). Local and national studies have also identified a critical shortfall in HGV parking in and around the M1 corridor. This in part reflects local problems experienced by the Maylands Business Park with regards to heavy freight movement and associated pressure for overnight lorry parking. As a result, in addition to work already underway through the Local Plans, the suitability of a HGV freight parking strategy with the stated intention to investigate the viability of additional lorry parking, to meet local and wider demand and to provide on-site facilities and access arrangements will be explored. Any proposal will help address National Highways' wider ambition to increase provision for lorry parking on the strategic road network. It will aim to provide improved rest facilities in support of highway safety and dedicated parking to reduce unauthorised parking and associated public nuisance.

Emerging Technologies

- 4.2.91. Emerging technologies and socially innovative shared mobility solutions have potentially significant implications for providing future transport services to change current travel behaviours and HGC will seek to take the lead to exploit these opportunities as they arise.
- 4.2.92. All measures and schemes planned for Hemel Hempstead will need to remain flexible to allow them to maximise the benefits of emerging technologies, often allowing these to be led by the market. For example, integrated ticketing has yet to become widespread across the UK, but it reflects the Government's aspiration for local bus services. Once realised, effective Mobility as a Service (MaaS) offerings, such as those in the process of being piloted in the SOLENT region, will likely be replicated across the UK providing a level of digital journey planning integration that can be a key driver in enabling both modal and wider travel behaviour change. Complementary measures, capable of accommodating these technologies, such as effective shared mobility service(s), have the potential to reduce the need and expense for personal vehicle ownership by providing an accessible alternative at strategically located parking bays.
- 4.2.93. Both traditional cargo bikes, and emerging e-cargo bikes, also have the potential to be used for personal use to reduce the number of private car trips, or indeed replace the need for a private car entirely, for some users. It is important therefore that schemes and infrastructure are designed in a way to cater for these emerging activities and travel behaviours.
- 4.2.94. In addition, digital technology is reducing the need for travel through increasing the option for people to work from home. Local co-working spaces can further reduce the need to travel by recognising that people may still prefer to retain some level work environment outside of their residential dwelling but might not necessarily need to be at their formal place of work every day.

Summary

- 4.2.95. As outlined above, this section has provided an overview of the likely ever changing landscape facing Hemel Hempstead in the run up to 2050. A key challenge for Hemel Hempstead will be meeting its future needs and continuing to grow in a rapidly changing, globalised world. There is a clear need to embrace change, ensure that people have the right skills and opportunities for the future, and provide access for all, including both people to places and businesses to markets, to fully realise the opportunities presented for everyone.

4.2.96. In order to realise the ambitious targets set out in HGC Transport Vision it is vitally important that the network is “Fit for the Future” and able to cope with the needs of both present and future generations; it must be resilient to the dynamic challenges it will likely face. There remains much uncertainty in the run up to 2050 and it is therefore important to maintain flexibility and be able to take account of unforeseen changes to how people will move around the network whilst maintaining the stated desire to achieve, and ultimately deliver, the Transport Vision for Hemel Garden Communities.



5

DELIVERING THE VISION & STRATEGY

5 DELIVERING THE VISION & STRATEGY

5.1 WHAT NEXT?

- 5.1.1. The TV&S will support both the Dacorum Borough Council and the St Albans City and District Local Plans up to 2040/41 and it will also set the transport strategy for growth and transformation up to 2050, as part of the HGC programme.
- 5.1.2. To progress the TV&S, the HGC Programme Team will be collaborating with the Local Plans teams, Hertfordshire County Council Highways, and Growth and Infrastructure teams, and HGC's partners. There will also be regular meetings and continued partnership working, with key stakeholders and senior transport experts to help deliver the strategy and wider workstreams and projects.
- 5.1.3. Key stakeholders include, but are not limited to, site promoters/landowners, National Highways, Active Travel England (ATE), Public Health England, Homes England, Department for Levelling Up Homes and Communities (DLUHC) and England's Economic Heartland, providers of bus and rail services in the area. The three key areas of work to be developed, and are set out in the following pages are:
- 1) Planning Support;
 - 2) Wider workstreams and projects; and
 - 3) Delivery, Monitoring and Evaluation Strategy.

5.2 PLANNING SUPPORT

- 5.2.1. The HGC Programme Team will support the Local Plans teams to identify where the remaining gaps in provision are likely to be and to prioritise initiatives to support the current community in Hemel Hempstead. The HGC Programme Team will continue to progress with partnership working to collaborate and support work related to the delivery of Local Plans, which includes:
- Phasing and Implementation Plan;
 - Infrastructure Delivery Plans for the authorities and longer-term aspects for Hemel Garden Communities, and
 - Funding Strategy.

Phasing and Implementation Plan

- 5.2.2. An Implementation Plan with phasing interventions and costs will be developed through the Local Plans process to support the Regulation 19 stage. Initially, the work will consist of a review and refresh of previous phasing work. This will involve updating existing information, stakeholder engagement including with developers, identification of gaps and emerging trends and scenario planning. This process ensures the development plans reflect current and future needs and support effective infrastructure development in the area. This work will inform the emerging Infrastructure Delivery Plans (IDPs) for Local Plans and HGC, as well as the HGC programme.

Infrastructure Delivery Plans (IDPs)

- 5.2.3. The Local Authorities are currently developing their Local Plans which are accompanied by Infrastructure Delivery Plans (IDPs). Transport mitigation packages that primarily support the growth allocations will be progressed through the Local Plans process, as part of this wider IDP work. The expectation is that the IDP consultants leading that work, on behalf of the LPAs, will engage with the Highway Authority and will work with site promoters. Their aim will be to ensure that site promoters develop a package of transport mitigation, for inclusion in the Local Plans, that is aligned to the longer term HGC Transport Vision and in line with LTP4 and any emerging Local Plans Policy requirements as well as being Community Infrastructure Levy (CIL) compliant. The HGC IDP will then identify gaps beyond the Local Plans' IDPs to support the transport strategy for growth up to 2050.

Funding Strategy

- 5.2.4. It is important to recognise that the schemes identified within this TV&S would be subject to securing funding. HGC, the Local Authorities, the Highway Authority, and key stakeholders, will collaborate closely with developers and funders to identify and secure funding to deliver transport interventions and Hemel Hempstead's wider transformation. This is crucial in achieving the TV&S. Funding routes to be explored could include:

A) Developer Contributions

- 5.2.5. 'Developer contributions' is a collective term mainly used to refer to the CIL and Planning Obligations (commonly referred to as Section 106 obligations/agreements) or any successor policy, levy or tariff that may be put in place to ensure development proposals contribute to infrastructure needs and effectively mitigate their impacts. These are planning tools that can be used to secure financial and non-financial contributions (including affordable housing), or other works in kind, to provide infrastructure to support development and mitigate the impacts of development. Developers will be expected to provide measures directly via Section 278⁵⁵ agreements to mitigate the impact of their development for which they are solely responsible for, as well as contributions towards wider transport measures required across the town.
- 5.2.6. The HGC Team have the following expectations of developers, for the HGC Programme Area, which includes the existing town and the proposed planned neighbourhoods to the north and east of Hemel Hempstead:
- New development should incorporate the movement hierarchy as a first principle. Development should seamlessly incorporate sustainable travel opportunities and infrastructure;
 - Applications for new developments or changes to existing developments will be expected to consider its interaction with the wider transport context and may be required to participate in, and contribute to, wider collaborative proposals to facilitate overall sustainable travel delivery;
 - Travel Plans will be required for all development within the HGC Programme area, in accordance with the requirements of the National Planning Policy Framework (NPPF), County or District Policies or HGC guidance;
 - Develop a detailed, funded programme for delivery of transport initiatives in this strategy; and

⁵⁵ An agreement between the Council and developer which describes proposed modifications to the existing highway network to facilitate or service a proposed development.

- Developers should liaise with Hertfordshire County Council, the Highways authority, to agree funding proposals.

B) Central Government Funding

- 5.2.7. The Department for Transport (DfT) allocates funding through various budgets, these tend to be mode-specific, such as the Active Travel Fund (to support walking and cycling measures), Bus Service Improvement Plan (BSIP, to support buses), Local EV Infrastructure (LEVI, to support the roll out of electric vehicle charging infrastructure) and the Major Road Network Fund (to support improvements on the key highway network). The HGC Team will look to secure government funding through these schemes where and when appropriate and available.
- 5.2.8. Further funding opportunities through, Homes England and other infrastructure funding will be monitored and will look to be secured where and when appropriate and available. This could include the Brownfield, Infrastructure and Land Fund (BILF). The BILF presents a funding opportunity to unlock strategic housing sites including housing-led, mixed-use opportunities. The project will be required to contract before 31 March 2026.

C) Local Authority Funding

- 5.2.9. Whilst Hertfordshire County Council will not fund schemes to mitigate new development, there is an Integrated Transport Programme which develops and implements small scaler improvement measures to address existing issues (e.g. This had been used in the past to enable the installation of the new crossing across Breakspear Way). Funding requests to support larger scale schemes would however need to go through the Integrated Plan bidding process and be subject to political approval.

D) Hertfordshire (Herts LEP) Local Enterprise Partnership and Hertfordshire Innovation Quarter Funding

- 5.2.10. The Herts LEP works in partnership with local stakeholders and central government and attracts major investment into the county. Herts IQ is the county's only enterprise zone, created to promote environmental technologies and clean growth. Both Herts LEP and Herts IQ are actively promoting sustainable transport solutions that improve connectivity and reduce congestion, through sustainable transport measures and green travel corridors. The LEP's initiatives include public transportation enhancements, cycling infrastructure, and support for low-emission vehicles. To date the new Buncefield Lane Quietway and Breakspear Way Crossing is part funded by Hertfordshire County Council and Hertfordshire LEP investment from the government's Local Growth Fund. There is an opportunity to leverage Hertfordshire LEP⁵⁶ and Herts IQ funding to support their sustainable development initiatives, enhancing connectivity and environmental sustainability in the region.

⁵⁶ Government Funding for local enterprise partnerships (LEPs) is set to end in April 2024

E) Alternative Funding Mechanisms

- 5.2.11. There is an opportunity to explore alternative funding mechanisms. An example could be workplace parking levies. This mechanism has been used as a means to support sustainable urban development and reduce congestion while generating revenue for transport improvements. A levy for parking is an annual charge levied against commercial property for car parking. The levy amount may be calculated based on the total number of parking spaces associated with a property or the total areas used for parking. Nottingham City Council Workplace Parking Levy was implemented in 2012 and the funding has helped fund the city tramline amongst other transport improvement projects.

5.3 WIDER WORKSTREAMS AND PROJECTS

- 5.3.1. Partnership and collaborative working will also be key to taking forward the wider workstreams and projects. There will also be a variety of new stakeholders to engage with to support the delivery of these wider workstreams and projects.
- 5.3.2. **A) Workstreams:** There are a variety of transport related workstreams planned to help support the delivery of the strategy, these are set out under immediate, short-term, and medium-term timescales to help prioritise their delivery.
- 5.3.3. **B) Projects:** Emerging studies and strategies will identify a variety of projects required to either deliver the infrastructure or support its use, including physical projects on the ground such as improvements to the Nickey Line and activities such as cycle proficiency courses to support active travel behaviour change.
- 5.3.4. The following section sets out some key workstreams and projects that should be progressed to enable the delivery of the TV&S. They have been listed to help develop understanding related to key priorities and to support the transformation on the ground. The delivery windows are indicative only and aim to provide insight into the predicted phased delivery of specific workstreams, however, development activities will continue to progress concurrently.

Immediate (over the next 1 year)

- **Modal Share Study** - The WSP Opportunity to Shift modes and Propensity Tool is a data-driven tool that helps assess the opportunity and propensity for mode shift in transportation by analysing factors influencing travel behaviour and preferences. The tool, and complementary *Modal Share Study*, provides an initial step to validate the Transport Vision and associated mode share targets and provide guidance on the most appropriate types of transport interventions in different geographical areas. There is the potential for further sensitivity tests as more detailed masterplans emerge for the sites and growth areas. (In Progress);
- **Local Cycling Walking Infrastructure Plans (LCWIPs)** - Dacorum Borough Council are currently developing their LCWIP which will set a comprehensive framework for developing safe and accessible cycling and walking networks within local communities. (In Progress, expected 2024). SADC have adopted their LCWIP. (Complete);
- **HGC Nickey Line Strategy and Feasibility Study (Hemel Hempstead to Harpenden)** - This work sets an overall vision and strategy for the entirety of the Nickey Line from Hemel Hempstead, to Redbourn, to Harpenden and also covers a feasibility study for proposed routes connecting the Nickey Line to Hemel Hempstead Town Centre and Train Station. Work to date has been carried out by Systra. Phase 1 is the vision report which provides an in-depth analysis of the Nickey Line in terms of its past, present, and future. It presents a variety of improvement

types including improved wayfinding opportunities, play along the line, history, and heritage trails. (Phase 2 is explained below in 1-2 years);

- **HCC Nickey Line Cycle Connectivity and Accesses Study** - Hertfordshire County Council are conducting a Project Validation report which covers the half of the Nickey Line east of the M1 motorway. The report aims to address accessibility improvements within the highway of the Nickey Line's access points and safety improvements at the Nickey Line's road crossing points. These improvements should make the Nickey Line suitable for a wider range of potential users and offer a route that is more attractive and therefore more likely to be used, including for utility, and commuting journeys; and
- **Sustrans Nickey Line Feasibility Study (Redbourn to Harpenden)** - Sustrans have been working alongside Hertfordshire County Council to investigate and review options for developing and improving access to the Nickey Line. The report is now complete (Sept 2023) and looks at potential new walking and cycling routes to better connect Redbourn and Harpenden and then through to Hemel Hempstead. The report considers several different alignments using the disused railway, existing roads, rights of way, and new paths following natural boundaries such as field edges. All the options involve the use of private land in some capacity and conversations will need to be had with landowners before any alignment can be pursued. The study identifies design choices and further work needed to take these and other parts of the routes forward (In Progress).

Short-Term Workstreams (1-2 years)

- The **HGC Framework Plan** is a spatial framework for the HGC Programme Area, with a detailed focus on North and East of Hemel Hempstead Growth Areas. The TV&S and future Implementation Plan will be integrated with the Framework Plan, alongside wider town focussed workstreams, to develop a single holistic framework for transformation. Part of this will include the development of strategic design codes for the development and growth areas. (In Progress);
- **The HGC Health and Wellbeing Strategy** - This strategy aims to create environments that support and encourage active healthy lifestyles, including access to green spaces, sports and play facilities, and community engagement to improve the overall health and quality of life for residents. (In Progress);
- **Maylands Business Park Plus Masterplan** with expansion of Herts IQ - Work is underway to create an opportunity plan and 20-year masterplan for Maylands Business Park Plus. This includes the land East of Hemel Hempstead in the HGC Growth Area. (In Progress);
- **Behaviour Change Strategy** - This strategy seeks to encourage sustainable transportation choices by influencing individuals' habits and preferences, reducing environmental impacts and congestion. (Emerging);
- Hemel Hempstead **Jarman Park** is an Active Travel funded scheme to deliver a series of improvements including a new signalised toucan crossing over the A414 St Albans Road to improve walking and cycling access to Jarman retail and leisure park. (In Progress);

- **Boundary Way & Buncefield Way** this is another Active Travel funded scheme to deliver a ‘Dutch style’ roundabout, with dedicated space for cyclists around the entire junction, separated from the carriageway, widened footways with pedestrian crossings on all arms and the establishment of a new north- south Quietway. (In Progress)
- **Herts Essex Rapid Transit (HERT)** is a proposed high-quality rapid transit system connecting Hertfordshire and Essex, designed to enhance public transportation and reduce congestion. This mass rapid transit system would connect Watford and Hemel Hempstead in the west, to St Albans and to Harlow in the East. Short term work is underway to identify a preferred route and develop a prospectus and further progress the business case;
- **HGC Nickey Line Strategy and Feasibility Study (Hemel Hempstead to Harpenden)** Phase 2 of this work includes route feasibility testing. Two routes have been identified to connect the Nickey Line at its existing point in Hemel Hempstead, to the town centre and to Hemel Hempstead railway station. These routes will be tested and analysed in more detail as part of this phase; and
- **Project Breakspear** - Progression of modelling work to determine trigger points and phasing of infrastructure.

Medium (2-5 years)

- **Hemel Hempstead Bike Hire Scheme** - A town-wide bike hire scheme offers residents and visitors convenient access to bicycles for short-term rentals, promoting eco-friendly transportation and healthy urban mobility. (In Progress);
- Schemes emerging via the **Local Cycling Walking Infrastructure Plans (LCWIPs)**
- **Mobility Hub Feasibility Study** - Feasibility study to identify locations, what they could be comprise of, costings and how they can be delivered (via delivery models etc.). (Not Started);
- **Parking and Movement Strategy** - The parking and movement strategy for Hemel Hempstead could look to optimise traffic flow, reduce congestion, and enhance parking infrastructure to ensure efficient and convenient mobility throughout the town that includes Electric Vehicle infrastructure rollout plan. (Not Started);
- **HGC Green Loop Feasibility study** - The Green Loop feasibility study would explore the potential for a figure-eight-shaped network of cycleways and walking greenways, aiming to connect and enhance urban and natural spaces for sustainable transportation and recreational opportunities. (Not Started) Work has already begun on improvements to the Grand Union Canal Path, which forms part of the HGC Green Loop (Resurfacing complete August 2023);
- **Freight strategy** - A localised freight strategy should consider a co-ordinated approach to rationalising and consolidating freight movements and deliveries to homes and maximising opportunities to promote greener, more sustainable options where possible. (Not started);
- **Carbon report** - A strategic plan aimed at reducing carbon emissions and promoting sustainable transportation options to combat climate change and improve air quality. (Not Started);
- **Herts Essex Rapid Transit (HERT)** - ongoing development of the project in the medium term along with the potential to start implementing some of the earlier phases of the system such as localised priority measures for buses through the BSIP programme that could ultimately be used by the HERT system; and

- **Project Breakspear** - Further design and development work to enable implementation of earlier phases.

Long-Term (5+ years)

- **Plough Roundabout** - Improvements to safety for cyclists and pedestrians, and priority across the junction. (Emerging);
- **Herts Essex Rapid Transit (HERT)** - ongoing development and delivery of the rapid transit system; and
- **Project Breakspear** - Implementation in line with agreed funding and phasing strategy.

5.4 DELIVERY, MONITORING AND EVALUATION STRATEGY

- 5.4.1. A delivery, monitoring and evaluation strategy will be developed in conjunction with key stakeholders, which will support delivery and implementation of the TV&S. The strategy would establish the baseline position and assess progress towards meeting sustainable mode share targets and agree funding for the monitoring and evaluation throughout the programme lifecycle. This should be closely linked to delivery and phasing. The intention is that the monitoring will be done via a combination of digital travel diary surveys for local residents and additional surveys to quantify the proportion and mode share of trips ending in HGC which are made from outside the HGC growth area. A robust monitoring and evaluation strategy is essential for ensuring the success of this TV&S and should be in place from the start of development. The strategy would set out the approach for developers and site promoters and consider mechanisms to ensure delivery such as landowner/site promoter agreements.
- 5.4.2. Monitoring needs baseline evidence to differentiate between the different development sites in a consistent way and to ensure a collective phased approach to meeting the targets. The governance and mechanisms surrounding this should be explored and could include a Transport Review Group (This format is currently being used by Harlow Gilston Garden Town).
- 5.4.3. There are opportunities to utilise wider Hertfordshire County Council processes and Local authorities work, such as the triennial *County Travel Survey* (Published in 2022, next due in 2025), to assess the mode share across Hemel Hempstead and provide the latest data on journeys. Additionally, the *Modal Share Study*, (Opportunity to shift modes) and its accompanying model, offer prospects for future modelling updates as new information becomes available.
- 5.4.4. This TV&S document will be reviewed and updated regularly, to reflect the latest data, changing circumstances, evolving goals and as development sites come forward.

