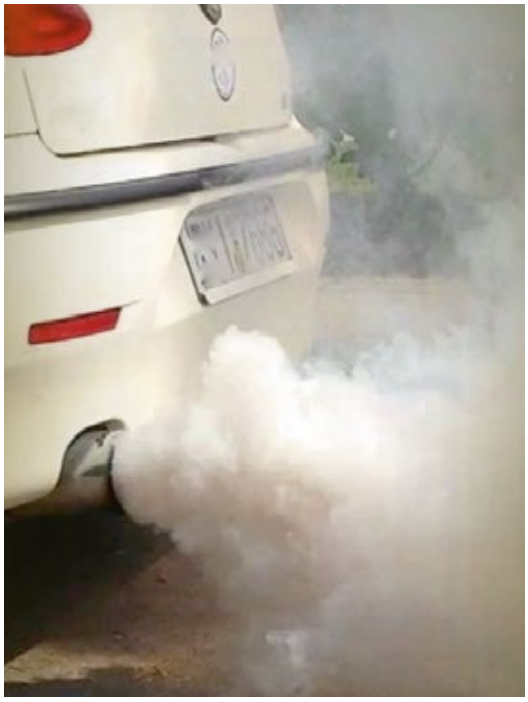
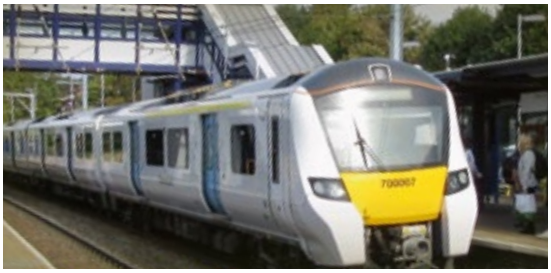
University of Hertfordshire UH

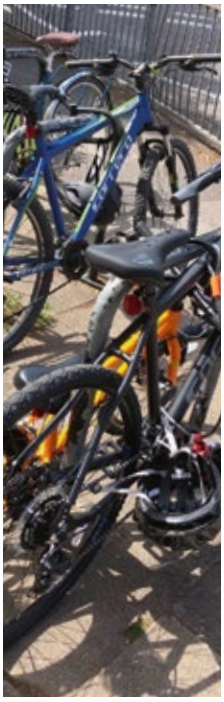
Transport in Harpenden

A report for the Harpenden Society by the University of Hertfordshire Smart Mobility Unit

September 2023







Introduction

Harpenden's transport problems

Harpenden, like many towns in Hertfordshire and similar counties, has traffic problems. In particular it faces congestion from car traffic during peak hours and at the beginning and end of the school day but even at other times there are queues on roads around the town centre.

The Harpenden Society has commissioned the University of Hertfordshire Smart Mobility Unit to review the transport and traffic issues facing the town and to suggest some ways forward. The unit is bringing to bear its experience from research on transport outside cities, which has included two sets of policy roundtables reviewing transport outside cities.

As a starting point, traffic levels in Hertfordshire as a whole are among the highest in Britain, at 6.6 billion vehicle miles in 2021, around 55,230 miles per head[1]. It is unsurprising therefore that prosperous places like Harpenden see relatively high traffic levels and consequent congestion. While levels in 2021-2 were below pre Covid levels, official maps show Harpenden as one of the county's congestion hotspots[2]. Car ownership in Hertfordshire is 1.38 per household (against the England average of 1.16).

It is important to note that the problems of transport and traffic in Harpenden (and places like it) have a wide range of impacts; congestion and delays are just the most noticeable issues. Motor vehicles produce pollution, from their exhausts but also from their brakes and tyres. The pollutants - especially particulates and nitrogen oxides - harm human health in a variety of ways; the latest scientific research links pollution from motor vehicles to health issues in unborn babies as well as to asthma, heart conditions and dementia. There are internationally set (World Health Organisation) standards for air quality with limits to these pollutants which aim to reduce these health impacts. In Harpenden, the air quality in some streets breaches these limits. For example, air quality in Church Green in the town centre breaches three WHO limits and is in the 67th percentile nationally. Annual average of small particulates (PM2.5) is 10.76mcg/m3,

1 https://roadtraffic.dft.gov.uk/local-authorities

2 https://www.hertfordshire.gov.uk/media-library/documents/highways/transport-planning/transport-and-accident-data/ttdr/hertfordshire-traffic-and-transport-data-report-2022.pdf, see figure 3.3.1

twice the WHO limit is 5mcg/m3, and exposure at this level can cause strokes, asthma and cancer. Large particulates (PM10) at this point average 17.33mcg/m3, whereas the WHO limit is 15mcg/m3. Nitrogen dioxide (NO2) average is 19.76mcg/m3, almost twice the WHO limit of 10mcg/m3, again with various heath impacts[3].

Secondly, there are crashes, deaths and injuries on the roads with excess motor traffic. No statistics relating to Harpenden are available, but across Hertfordshire as a whole in 2019 25 people died in road crashes and 395 were seriously injured[4]. Some deaths have been reported and there are some places in the area where local residents have raised concerns about road safety[5]. As well as this, the danger posed by road traffic puts people off walking and cycling; this adds to car trips and congestion.

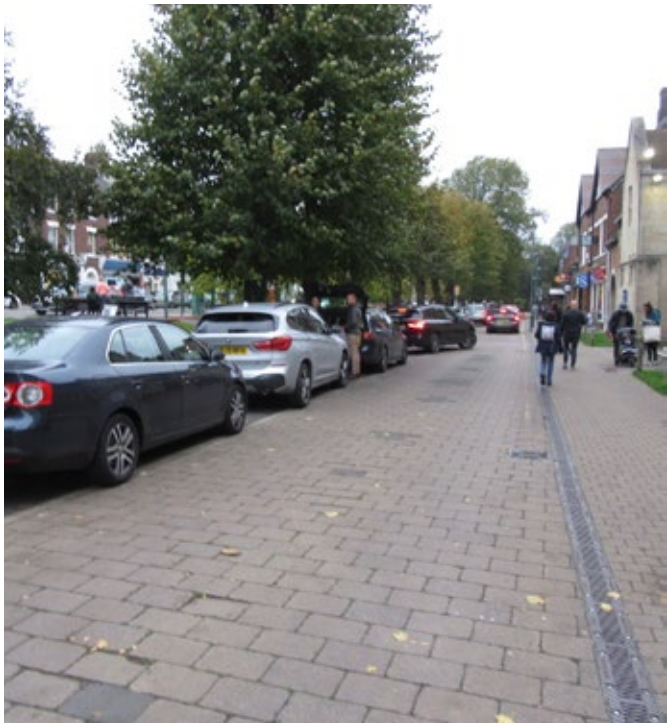
There is an overarching concern: climate change. Transport contributes about 27% to UK carbon emissions; it is the highest emitting sector now, and reducing these emissions is essential to meet UK targets for tackling climate change. The overall target is to reduce emissions to "net zero" by 2050, but there are interim carbon budgets as stepping stones towards the 2050 budget and the Committee on Climate Change, which oversees these budgets, is saying that the UK is not on track to meet them.

Harpenden has relatively high levels of carbon emissions from car driving; for example, in Harpenden South, car driving accounts for 1620 kg of CO2 equivalent per person per year, against an average in England of 962. In similar areas, it is 1300. So Harpenden ranks as among the worst areas in England for carbon emissions per head from car use[6].

However, emission levels from commuting across the St Albans district are relatively low, due to the prevalence of commuting by rail. Pre-Covid, under half (49.19%) of commuters in the St Albans District commuted to work on their own in a car, while rail commuting accounted for 18.3%. Just under 6% were lift sharing, and around 13% were working from home[7].There have been changes since Covid across Hertfordshire – walking has increased and car use as a percentage of journeys has fallen, while working from home has also increased significantly.

Nonetheless, the picture is of continuing high traffic levels and car use in Harpenden. There are a number of reasons for this.

First, there are national trends. The cost of motoring has until recently risen at levels below inflation, so driving and



owning a car has become relatively cheaper. By contrast, bus and rail fares have increased above inflation, making public transport relatively expensive. This has been a policy decision; Governments have frozen taxation of fuel at successive Budgets, whereas there has been a policy of above inflation increases in rail fares to reduce taxpayer funding.

Second, public transport services, especially buses, do not offer a choice for many of the journeys people in Harpenden currently make, and services have been reduced. In fact, according to a BBC survey, Hertfordshire saw the biggest cut in vehicle mileage on bus services in England of 56.5% from 2016-7 to 2021-2[8]. Since Covid, Arriva, the main bus operator in Harpenden, has reduced its services in response to falling patronage and a shortage of drivers. Centrebus has recently withdrawn the 366 route from Luton via Harpenden to South Hatfield (apart from some school journeys), citing low passenger numbers. Some of this has come about because public funding for bus services in Hertfordshire has been reduced in recent years, from £8.1m in 2010-11 to £1.8m in 2018-9, mirroring reductions in funding nationally. Traffic congestion also makes bus services less efficient and profitable to run.

Third, active travel has not been promoted. There is in fact a fair amount of walking around Harpenden (though exact figures are difficult to come by) but there is at

3 Source: Address Pollution: https://addresspollution.org/ results for 1a Church Street Harpenden
4 https://www.hertfordshire.gov.uk/media-library/documents/highways/transport-and-accident-data/hertfordshire-road-casualty-facts-2020.docx-1.pdf
5 For example: https://www.hertsad.co.uk/news/23087232.wheathampstead-locals-write-mp-harpenden-road-crashes/; https://www.heart.co.uk/fourcounties/news/local/harpenden-high-street-shut-after-injury-collision/
6 Place-based carbon calculator, LSOA Harpenden South, https://www.carbon.place/#8/51.482/-0.151
7 https://www.mobilityways.com/map/
8 https://www.bbc.co.uk/news/uk-england-beds-bucks-herts-64704709

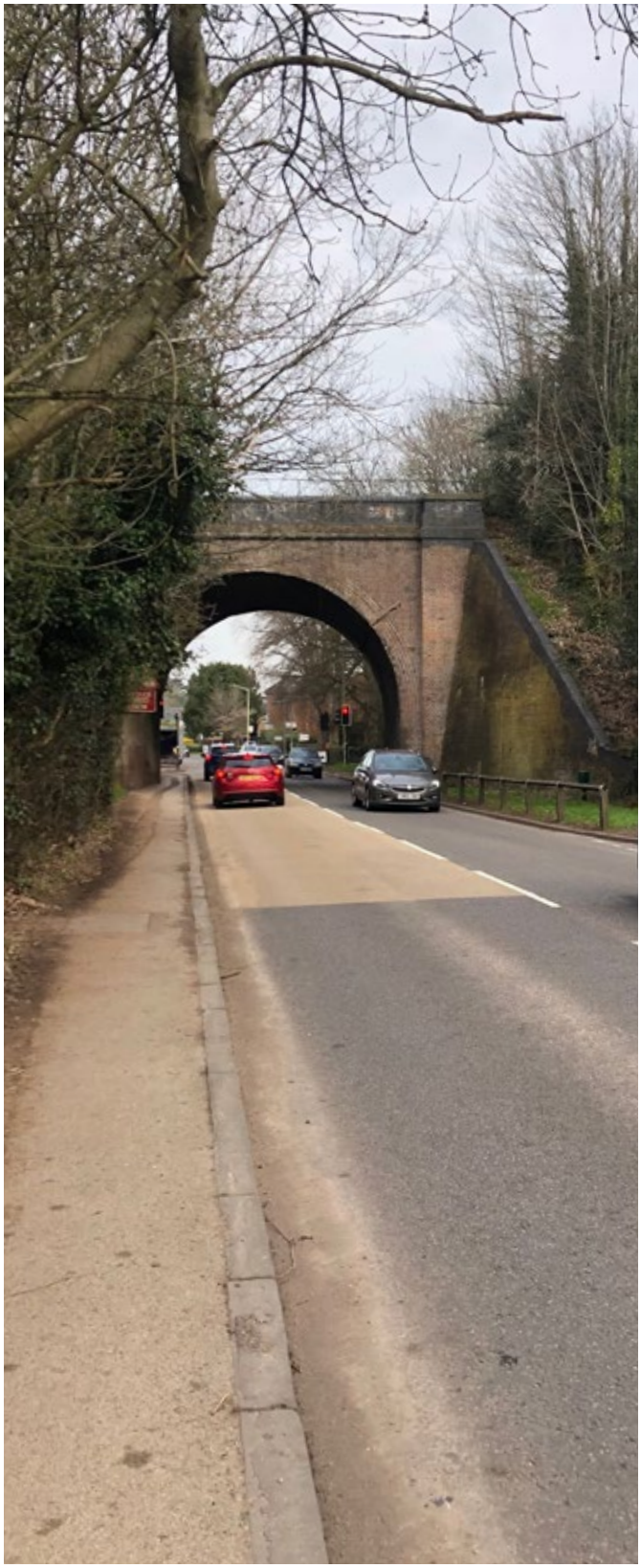
present no agreed strategy for making walking attractive for short journeys. Measures such as pedestrian crossings, wider and well-maintained pavements, priority at junctions and across side roads would encourage more walking. Cycling could also be attractive for shorter journeys but there is very limited infrastructure for cyclists in Harpenden at present, apart from limited parking spaces for cyclists at the station and in the town centre, and the Nickey and Lea Valley lines, the former railways towards Hemel Hempstead and Wheathampstead. Across Hertfordshire as a whole, short journeys (under 3 miles) are 50% on foot, 30% by car (and a further 15.6% as car passenger); only 2.1% are cycled[9]. 76% of journeys under a mile are walked, 14.4% are made by car drivers and 7.1% by car passengers; only 1.5% of these journeys are cycled.

Fourth, historically the planning of new developments in and around Harpenden has favoured car access. Much new employment and housing is based around the car. Major employers and business parks nearby, in Luton, Hemel Hempstead and Stevenage, have a lot of parking available. There has been an emphasis on cheap and available car parking in the centre of Harpenden.

All this means that it is unsurprising that Harpenden has high levels of traffic and congestion.

There is a risk that this will get worse. In particular, there are major housing developments planned in the town, which are likely to add to traffic on the surrounding road network. We have already commented on the NW Harpenden development (see annex) and concluded that "the development … appears to include significant levels of car parking, and limited alternatives to car use; it also has limited onsite facilities that those in the development can walk to. It is therefore likely… that in practice many of the journeys by residents on the development will be by car, adding to the levels of traffic and pressures of traffic congestion in the rest of Harpenden". We also noted that alternative options used in other developments in the UK and in other countries were not being looked at here.

A second major development of 220 homes is being proposed by Taylor Wimpey on the south-east edge of Harpenden at Pipers Farm. Transport issues are not mentioned much in the outline from the developers, but the site is said to be close to schools, though this is denied by residents.



9 https://www.hertfordshire.gov.uk/media-library/documents/highways/transport-planning/transport-and-accident-data/ttdr/hertfordshire-traffic-and-transport-data-report-2022.pdf, figure 4.2.5

Ways forward

Traffic congestion in Harpenden is not inevitable, and for the reasons mentioned above there are good reasons for seeking to address it. There has been limited work done on ways to address transport issues outside cities; the SMU has been seeking to redress this through a series of roundtables and other research projects. From this work, we can suggest some starting points and options that could be taken forward.

We should also say that traffic and car use are already changing. The Hertfordshire survey referenced earlier identifies the huge growth in working from home, and a modest reduction in car use and growth in walking since Covid. There are also some existing controls on car use, notably residents' parking schemes which limit parking in much of Harpenden during the week.

More widely, there are some changes already coming. Some of these are from national Government policy; the Government has a target of phasing out the sale of new petrol and diesel cars and vans from 2030, and also has an ambition for 50% of all journeys in towns and cities in England to be cycled or walked by 2030. Businesses are increasingly having to consider their carbon footprint and are looking at their employee travel. In pursuit of these measures, Hertfordshire County Council, like other councils, has had some Government funding for bus service improvements and for active travel and will be getting funding to increase electric vehicle charging points.

All this means that there are opportunities to tackle transport and traffic issues in Harpenden. Given that the starting point is of high levels of car use and car dependency in the town, we should be clear that we are not suggesting that people in the town should be expected to "give up" their cars. We are however suggesting ways in which some types of car use can be reduced, and some journeys done differently. There are also choices for the town and the people in it on priorities for the use of roadspace.

Changing commuting

We have already referred to the work by Mobilityways on commuting emission levels. The Mobilityways project grew out of Liftshare and now advises employers and business parks on routes to zero emission commuting. The starting point for this is a travel survey identifying where employees live – this enables Mobilityways to look at alternatives to single-occupancy car commuting. This might involve active travel routes and changes to bus services to serve areas or streets with groups of employees (with appropriate fares offers), but it also involves promoting car sharing. Car sharing for journeys to work has been applied by some major employers over some years, sometimes supplemented with guaranteed taxi rides home if car shares fail and priority parking for car sharers in workplace car parking.

Other travel plan initiatives already exist around Harpenden – Go Travel Solutions[10] run a "SmartGo" incentives package for employers and business parks to reward employees travelling sustainably. This is already operating in Stevenage and at the Maylands Business Park in Hemel Hempstead[11]. We note below the existence of bespoke employee transport services, provided by Zeelo, as part of these initiatives.

It would be possible to build on these existing initiatives and seek to map car commuting into and out of Harpenden, and then work with employers and employees to reduce and provide alternatives to single-occupancy car commuting.

As already noted, commuting is already changing, with increases in working from home or remotely. The Greenhouse Gas Protocol Scope 3[12] asks companies to look at the emissions from staff travel, so there is increasing interest from employers in taking action in this area.

Recommendation: liaison with Mobilityways, SmartGo and others to look at current and potential provision for measures to reduce single-occupancy car commuting into and out of Harpenden.

10 https://go-travel-solutions.com/
11 https://www.smartgo.co.uk/stevenage; https://www.smartgo.co.uk/maylands
12 https://ghgprotocol.org/corporate-value-chain-scope-3-standard

School travel

School travel can be a major contributor to car traffic and congestion. In Harpenden there are already examples of good practice. In particular the new Katherine Warington school has an award-winning travel plan and actively encourages students to travel sustainably. It has a number of school buses and also public bus services which it promotes; it also promotes "park and stride", encouraging parents to drop children off 10-15 minutes away from the school to avoid congestion at the school itself. Only families with medical or other needs are given permits to allow access to the school itself. The result of all of this is that numbers coming by car are relatively low, though current exact mode shares are not publicly available.

Because the other Harpenden secondary schools are well regarded, places there are much in demand and their catchment areas are tightening. In transport terms, this means that the length of journeys is reducing and there is the opportunity for more journeys to the schools to be made by non-car modes. The secondary schools all discourage car use and parking close to the schools.

However, many students in Harpenden go to school in St Albans, especially St Albans Girls School and Verulam School which are single sex state schools, and the St Albans School and St Albans High School which are fee-paying private schools. Other fee-paying schools further away also attract pupils from Harpenden. There are school buses for many of these schools, but it would be worth reviewing these and wider school travel policies to see if there are opportunities to reduce car travel to these schools.

Primary schools present more problems and opportunities. Some seem not to have a travel plan, though Harpenden Academy is an exception here. Although some will be within walking distance of pupils' homes, the issues with active travel and perceptions of safety will lead to car use, even for quite short journeys.

There are opportunities to address this. For primary schools, "walking buses" – which were in fact pioneered in St Albans – could be tried out as a way of reducing short distance car use[13] All schools could be encouraged to have a travel plan to set targets to reduce car use and to promote alternatives such as "park and stride". Areas around schools could be designated as "school streets"[14] where car access is limited during school start and finish times. To make the case for such measures, there could be pollution monitoring around schools with results in terms of cleaner air displayed outside[15].

If more is done to make cycling convenient and safe (see below), schools could be involved in this and cycling actively promoted, especially for secondary schools. There are schools in the UK with high levels of cycling, and not all of these are in cities. Kesgrave High School in Ipswich has over 50% of children cycling to school and 86% of students walk or cycle in total [16] - the school is in

13 Walking buses are groups of children with hi-vis jackets accompanied to schools by parents and trained volunteers, with defined pick-up points along the route. https://www.hertfordshire.gov.uk/about-the-council/volunteering/schools-and-youth-work/walking-buses/walking-buses.aspx

14 http://schoolstreets.org.uk/

15 See for example https://www.aeroqual.com/sectors/community-air-quality-monitoring/air-pollution-monitoring-in-schools; https://www.sei.org/projects-and-tools/projects/samhe/

16 https://www.ipswichstar.co.uk/news/23167961.kesgrave-school-bucking-trend-sustainable-travel/

an area where good cycle routes and paths were part of the development when it was built. Closer to Harpenden, some schools in Stevenage also report very high levels of cycling.

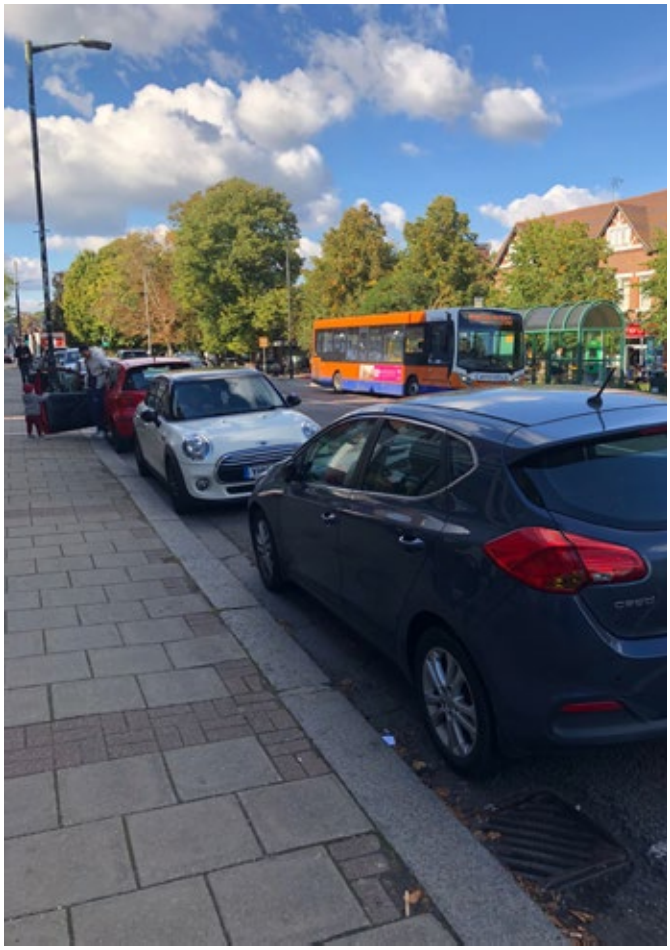
Recommendation: all schools in Harpenden should develop and implement travel plans, following Katherine Warington School's example. Introduce "walking buses" to primary schools. Look at options for "school streets" around the schools, linked to "park and stride" measures. Help schools measure air quality in their areas and publicise the results.

Car clubs

Car clubs are short-term car rental services that offer members access to a locally parked car or van without owning one. They are now becoming widespread in parts of London and some other cities as an alternative to private car ownership. They are seen as a way of encouraging a reduction in private car ownership and surveys suggest they reduce car mileage and increase the use of alternatives[17].

Car clubs are now being actively promoted by transport authorities in cities as ways of reducing the numbers of cars parked on streets and reducing car use while still giving access to cars. They are now starting to spread to smaller towns and more rural areas; the car rental firms who now own and run car clubs are finding ways to integrate them into their mainstream rental business. Enterprise in particular has been pro-active in developing car clubs in different locations, and there are now car club vehicles in St Albans, Welwyn Garden City, Hatfield and Luton. Some of these are linked to council offices, providing an alternative to private car use for officers, but the vehicles are available to car club members generally. Another operator, Co-Wheels, has a base in Houghton Regis.

It would be possible to explore car clubs for Harpenden. The advantage would be that they can offer an alternative to ownership for some households, especially those with multiple cars at present, many of which are likely to get little use but cost money to licence, insure and service. Bases for car clubs could be established at the station or in the town centre; however, a broader offer would be available if parking spaces on residential streets were dedicated to car club vehicles, as happens in areas like Walthamstow in London. This would however mean giving up parking spaces for residents.



Recommendation: the options for and possible use levels for car club vehicles in Harpenden should be explored with operators and others.

Public transport

As noted above, Harpenden has public transport services, but these do not offer a good alternative for many of the car journeys in Harpenden. The rail line is well used, and there are a number of bus services, though as noted above these have been reducing. The Harpenden Town Council sponsors the Harpenden Hopper, a community run hail and ride service linking the town centre with residential areas poorly served by the commercial bus companies. This service is about reducing loneliness and isolation, as well as providing an alternative to car use.

The current public transport offer is not very attractive for many journeys compared to cars, in terms of availability, frequency, journey time and cost. Most bus routes run irregularly – even the Harpenden Hopper runs just 5

17 https://www.como.org.uk/shared-cars/overview-and-benefits#benefits

journeys a day, and apart from the 321 there are no evening services and limited Sunday services. Many parts of Harpenden are not served by buses, apart from the Hopper and school buses, so accessing them requires a walk, whereas cars are available outside houses. Bus journey times are also longer than cars, because the buses are caught up in traffic congestion and have to take time getting passengers on board and paying for tickets if they don't have discount cards. Bus costs have also been higher than car use, but this has now changed for the moment with a maximum fare of £2 per journey, subsidised by the Government.

The rail offer is in principle much more attractive and is widely used for commuting, education and leisure journeys. However, the cost of rail travel has been increasing and service quality has been variable. A key issue in Harpenden has been access to the station. There is some station car parking (674 spaces) and also cycle parking (548 spaces). Access to the station and car park is constrained by road space on Station Road. Other stations have "station travel plans" that aim to support access to and from stations as well as improve station facilities[18]. In some cases a more structured approach has been taken to linking stations to the towns they serve, by improving walking routes, rerouting bus services and promoting cycling[19]. Based on practice elsewhere there could be improvements to the walking routes between the station and Harpenden Town Centre, as well as to surrounding residential areas. This may however require giving pedestrians more priority over cars (see below).

There are new kinds of public transport services being developed in Hertfordshire, notably Demand Responsive Transport or DRT. DRT is a flexible service, a cross between a bus and a taxi, which will pick people up or drop them off on demand. Watford has had a DRT service for some time, run by Arriva as "ArrivaClick"[20]. North Hertfordshire now has "HertsLynx"[21], which is run under contract to Hertfordshire County Council by the bus company Uno and a software operator, Padam. HertsLynx covers a wide area of North Herts, centred on Buntingford and going out to Stevenage, Hitchin, Baldock, Royston and Bishops Stortford. Passengers can book on an app or website or by phone (the operators see the phone option as important to avoid excluding people who are not online or are without access to smart phones). The fares are similar to buses, currently capped at £2 per journey, and concessionary travel applies on it.

The HertsLynx service has been successful – in particular it is being used by students at Buntingford college, many of whom were previously driven there by their parents, and by rail commuters who previously drove to Stevenage[22]. Hertfordshire County Council is now adding other services to the HertsLynx platform – the Hertfordshire dial-a-ride service and its vehicles are now using it, enabling more journeys to be run and increasing vehicle utilisation. There are discussions about adding further services including community transport to it. Further expansion is planned including in Dacorum. A new Friday and Saturday evening service has already been instituted.

There are other kinds of DRT service available. In particular there are companies that work directly with employers and other travel generators to provide them with transport services for their employees and users. In such cases, the employer contracts with the company to provide services that transport a given number of staff or users to their premises by a given time. The companies then contract with transport operators, ranging from coach and bus firms to taxi operators, to provide the required transport. This "aggregator" model is used in Hertfordshire – a company called Zeelo[23] provides services on Hatfield Business Park for Ocado, who say that it has helped with staff recruitment and retention. This links to the changing commuting ideas above, and in fact Zeelo are partners with Mobilityways in delivering travel plans at workplaces.

The HertsLynx expansions noted above are part of a much wider "Bus Service Improvement Plan"[24], which Hertfordshire drew up at the request of the Government; it was successful in getting some funding and is starting to implement parts of this plan, including extra bus services on some key corridors. The plan also includes some bus priority and also reduced fares and better information.

Harpenden is not at present set to gain from the first phases of the improvement plan, except in terms of new saver cards and some better bus stop information. The plan does identify gaps in the current network including Harpenden-Welwyn Garden City and Harpenden- Hemel Hempstead and more general east-west gaps between Hemel Hempstead, Harpenden and Stevenage, but these are not at present part of the first new services planned.

There is an argument that many of those in Harpenden will be unlikely to use buses – however, the success of the HertsLynx in attracting people who previously drove or were driven by car suggests that for some types of journeys people might use public transport rather than the car.

18 See for example https://www.scotrail.co.uk/plan-your-journey/travel-connections/station-travel-plans
19 https://bettertransport.org.uk/wp-content/uploads/legacy-files/research-files/13.11.04.fixing-the-link.pdf
20 ~~www.watford.gov.uk/arrivaclick~~
21 https://www.intalink.org.uk/hertslynx
22 https://www.transportxtra.com/publications/transit/news/71473/hertslynx-case-study--drt-serving-local-communities
23 https://zeelo.co/uk
24 https://images.intalink.org.uk/downloads/BusServiceImprovement_Hertfordshire_Oct21.pdf

In addition, the Padam platform could take on other services – in particular, it would be worth seeing if the Harpenden Hopper service could be integrated into it, benefiting from the app, website and call centre that Padam operates.

Another issue to be considered is giving buses priority over other road users. As noted above, bus journey times are increased by buses being caught up in traffic congestion; this makes them less attractive to car users but also adds to operating costs by requiring more vehicles and drivers to operate the timetables. There are bus priority measures elsewhere in Hertfordshire – in fact the 321 route benefits from several on the Watford-Garston corridor. Bus priority need not mean bus lanes – it can include priority at traffic lights (as at Watford Junction station), or small sections of bus-only roads that bypass general traffic.

There is also the option of park and ride services. These operate in many British towns and cities and are very successful in some cases. Harpenden has seen a park and ride service in the past at Christmas, using Rothamsted, but is smaller than most places with year-round park & ride, so any such service, if it is to attract sufficient usage, would probably have to be linked to other measures, including bus priority. There would also be the issues of where to site car parks and how to integrate the services with existing bus services. However, it would be worth looking at the possibilities.

In general, therefore, there are opportunities to improve the public transport offer in and around Harpenden, and there is some evidence that doing so can reduce car use. However, some improvements would require giving public transport or those accessing it more priority on the roads over other road traffic, and we return to this issue below.

Recommendations:

- **A station travel plan should be drawn up for Harpenden station, and options to improve non-car access, especially more attractive walking and cycling routes, should be considered.**
- **Options for extending the HertsLynx services to Harpenden should be looked at and discussed with Hertfordshire County Council officers and with the current providers. In particular the costs and benefits of linking the Harpenden Hopper to the platform should be considered.**
- **There should be discussions on the Bus Service Improvement Plan and the ways in which the gaps around Harpenden that it identified can be addressed.**
- **There should be consideration of bus priority measures in and around Harpenden to speed up bus services on key corridors, and the costs and benefits of these.**
- **Opportunities for park & ride services for Harpenden should be investigated.**

Active travel

As noted above, there is a fair amount of active travel already in Harpenden, especially in terms of walking. There is limited cycling, and limited provision for cycling in the town.

There are opportunities to change this. As noted in relation to public transport, there could be better access to the station on foot and by bike. There could also be improvements to walking routes and crossing points around the town, and we have noted the opportunities for reduced car use and increased active travel for school journeys, including the introduction of "school streets".

In relation to cycling, there are barriers to change, but also major opportunities. In particular, researchers have identified that the coming of electric bikes has the potential to increase the attractiveness of cycling and make it available for a much wider group of the population[25]. There are very few statistics on the growth in e-bikes, but the increased availability and reduced costs are driving an increase in ownership[26].

This raises two major opportunities. The first is enlarging the availability of e-bikes through a bike hire scheme. This already exists in Watford[27] and Borehamwood[28] and there are discussions on similar schemes elsewhere in the county. An e-bike hire scheme could make e-bikes available to more of the population for particular journeys and could provide a direct and fast alternative for shorter car journeys.

Secondly, there is a discussion to be had on giving bicycles priority on the roads in and around Harpenden. All the research suggests that people are put off cycling by the danger of other traffic on the roads and that segregated cycle lanes reduce this barrier. There are now national design guidelines on cycle provision[29] to ensure schemes meet high standards.

In fact, there is already a plan for improving cycling and walking in Harpenden. This is the Local Cycling and Walking Investment Plan for St Albans district[30], published and consulted on early in 2023. This has detailed maps of proposed routes in Harpenden and projects to make them a reality. They include measures to join up the existing railway paths, improve junctions, provide new or improved pedestrian crossings, create some segregated cycleways and implement traffic calming in some residential areas. LCWIPs are a requirement from the Department for Transport and aim (according to its Cycling and Walking Investment Strategy) to "make walking and cycling the natural choices for shorter journeys or as part of longer journeys". The Government has set up a new body, Active Travel England, to take forward this ambition, and Hertfordshire has gained some funding from this body to progress some of the measures in the LCWIP strategies. At present, the projects being funded do not include measures in Harpenden. The final version of the LCWIP for St Albans District has now been confirmed and provides the basis for local discussion about practical measures to encourage walking and cycling in Harpenden.

The other opportunity that e-bike technology offers is use of e-cargo bikes. These are configured in various ways and enable the transport and delivery of goods, including relatively large and heavy loads. As with other measures discussed here, e-cargo bike services are concentrated at present in cities, but there are examples in smaller towns. For example, in the Pennine towns of Hebden Bridge and Todmorden, there is a "Cargodale" service[31] which will deliver goods from traders to people's doors (sometimes involving steep hills and narrow roads). Such a delivery service in Harpenden could reduce van traffic and shopping trips.

Recommendations:

- **The current relatively high levels of walking for short journeys in Harpenden should be celebrated and opportunities identified to support and increase it.**
- **The Local Cycling and Walking Investment Plan for St Albans District should be the basis for discussion on ways to improve walking and cycling infrastructure in Harpenden, and a plan with priority interventions should be agreed between relevant parties in the town.**
- **Opportunities for an e-bike hire scheme and for an e-cargo bike delivery service should be discussed with relevant commercial groups and with local authorities and businesses in Harpenden.**

25 https://www.creds.ac.uk/publications/e-bike-carbon-savings-how-much-and-where/
26 https://theelectricfuture.co.uk/blogs/news/the-rise-of-electric-bikes-in-the-uk-electric-future#:~:text=The%20popularity%20of%20e%2Dbikes,with%20over%20160%2C000%20units%20sold.
27 https://beryl.cc/scheme/watford
28 https://beryl.cc/scheme/hertsmere
29 https://www.gov.uk/government/publications/cycle-infrastructure-design-ltn-120
30 https://www.hertfordshire.gov.uk/media-library/documents/about-the-council/consultations/highways/st-albans-district-lcwip-final-report.pdf ; executive summary at https://www.hertfordshire.gov.uk/media-library/documents/about-the-council/consultations/highways/st-albans-lcwip-executive-summary.pdf
31 https://www.cargodale.co.uk/

Street space and parking

Many of the points discussed above involve choices on how road space is used. Some options for bus priority, cycle routes and wider footways or new/improved road crossings for pedestrians may reduce road space for cars or add slightly to car journey times. However, they may also, by improving alternatives to cars, reduce overall traffic levels. If designed well, such changes to streets can make places more attractive.

This is a particular issue in Harpenden Town Centre. This currently has a lot of traffic congestion and cars dominate the streets in the area. There has been discussion about car access to Bowers Parade: car access to the lower part of this was restricted during Covid, but these restrictions were subsequently lifted. It is argued that car access to the shops in this area is essential and brings trade to them that might go elsewhere, and the parking spaces provided there are essential. We would make two observations on this:

- The general literature suggests that retailers in general over-estimate, sometimes by a wide margin, the proportion of their trade that comes from car users. By contrast, improving the pedestrian experience can increase footfall and trade, as shown in the report on the "Pedestrian Pound"[32]. This includes a number of examples from a very wide range of places where the walking environment has been enhanced. Overall footfall increased in the case study areas between 20% and 35%, against a decline in footfall across the UK of 22% 2007-2017[33].

- The parking spaces provided in this area are relatively few and there is limited evidence that other nearby car parks are so full that parking displaced from here could not be accommodated elsewhere. In fact, the existence of these few parking spaces is likely from experience elsewhere to give rise to extra congestion and pollution as drivers hover or circulate in the hope of securing a space once vacated.

It is of course important that traders in this area can have deliveries and collections and that people with disabilities can access shops. These needs can be accommodated by allowing times for deliveries, say before 11 and after 4.30, and barriers can be raised to allow for disabled access.

Another option for improving streetscapes and encouraging active travel is to reduce speed limits to 20 mph[34]. There has been discussion about 20 mph zones or a more general 20 mph limit in St Albans District, though it is not Hertfordshire County Council policy. Many places have adopted 20 mph as a general default limit including many smaller towns and villages. There is some evidence that such limits, even without traffic calming etc, can bring down average speeds and increase actual and perceived road safety.

Another aspect of traffic policy is parking. As noted earlier, Harpenden already has residents parking schemes (controlled parking zones) and there are also some parking restrictions around schools. Controlled Parking Zones could be expanded, especially around schools and near the town centre, so as to manage parking pressures, provided there is good enforcement, as happens in the large number of CPZs in St Albans. Better enforcement of existing parking restrictions would also be worthwhile in terms of managing roads and roadspace.

Some measures that would support active travel or public transport could involve removal of parking spaces; in addition, the provision of car clubs can involve dedicated spaces for car club vehicles, and these can be reallocated from general parking. Other places have seen parking spaces removed and bike hangars installed providing secure bike parking. There are also already places around St Albans District where parking spaces are reserved for on-street electric car charging, and demand for these is likely to grow with the increase in electric cars. There is a new parking strategy for St Albans City and District[35], which is to be reviewed annually; this suggests support for school streets and other measures highlighted earlier.

32 https://www.livingstreets.org.uk/media/3890/pedestrian-pound-2018.pdf
33 https://www.livingstreets.org.uk/media/3895/pedestrian-pound-briefing-for-mps.pdf
34 https://www.20splenty.org/
35 https://stalbans.moderngov.co.uk/documents/s50063445/Appendix%201%20-%20Parking%20Strategy%202023%20-%202028.pdf

It should be noted, to avoid doubt, that measures that expand road capacity through new road layouts, for example by removing or downgrading crossings or roundabouts, are unlikely to reduce congestion and increase the free flow of traffic. There is a well-known phenomenon of induced traffic, where any increase in road capacity is used up by increased demand. This is particularly likely to be the case in an area like Harpenden with high levels of car ownership and therefore levels of suppressed demand.

Recommendations:

- **There should be a further review of car access to parts of the town centre, especially Bowers Parade/ Lower High Street, with options for changing the current position set out and discussed with customers and retailers as well as the wider community. Surveys of modes of access to this area, including people walking in from car parks nearby and congestion from drivers "hovering" to secure a space, should be used to inform decisions on this.**
- **Options for 20 mph limits in parts or all of the town should be considered.**
- **A parking strategy for Harpenden, including provision for EV charging spaces, car clubs and bike parking, should be developed.**

Mobility hubs

We should also note that there is a lot of discussion of bringing together different transport services and mobility offers, using stations and town centres as "mobility hubs". The sub-national transport body England's Economic Heartland which covers Harpenden has recently published guidance on these[36]. If further work does create car clubs, bike hire schemes, e-cargo bike deliveries or combinations of these and new public transport offers, it would be worth considering whether one or more mobility hubs can be created in Harpenden to bring these options together and offer a range of different transport services in one place. This is the subject of separate research being done by the SMU at present.

New developments

We have already noted the likelihood of new housing development, especially if planned with plentiful car parking and car access, adding to congestion in Harpenden. The Neighbourhood Plan does include some site allocation in the town and also supports some increases in density and height of developments. We noted in our comments on the Luton Road proposal that there are opportunities to create new developments that are less car dependent and referred to the Transport for New Homes checklist[37]. New developments could also contribute to the infrastructure to support active travel and public transport referred to above, and we note in the Annex examples where this has been done.

Recommendations:

- **The Transport for New Homes checklist could be used as the basis for assessing car dependency of new housing developments.**
- **As required in the Neighbourhood Plan, transport assessments should be prepared for all major developments, and these should have clear targets and measures for high levels of sustainable travel.**
- **Once decisions are reached on desired active travel and public transport developments in Harpenden, new housing developments should be required to contribute to these, and the transport assessments should reflect this.**

36 https://eeh-prod-media.s3.amazonaws.com/documents/Item_7_Annex_1_EEH_Mobility_Hubs_Strategic_Transport_Leadership_Board_03_March_2023_.pdf
37 https://www.transportfornewhomes.org.uk/the-project/checklist-for-new-housing-developments/

Next steps

This report has suggested various ways forward for transport and traffic in Harpenden. It is suggested that, if after due consideration some of these are found worth following up, a **Harpenden transport partnership or forum be set up**, with membership from Hertfordshire County Council, St Albans District Council, Harpenden Town Council, business groups and transport operators, as well as groups in the town and district with an interest in transport. The Harpenden Society could as a disinterested party spearhead the formation of such a partnership or forum.

To avoid debate on transport being dominated by particular interests, any strategy or measures produced for Harpenden should be subject to consultation, including through new online methods run by groups such as Commonplace[38].

Conclusions

Harpenden has high levels of car ownership and car use and this produces congestion, sometimes severe, on the roads around the town. This is not inevitable. There are opportunities to reduce single-occupancy car use and give people more choice in how they get around, and some of these are already happening in Harpenden and elsewhere in Hertfordshire, and in similar small towns around the UK. Some of these are relatively easy to implement, others will involve choices on priority for use of space on the roads. These choices are ones that need to be made by the Harpenden community; our role has been to set out some options for tacking traffic and transport in Harpenden and possible ways forward. We hope this report is helpful in doing this.

38 https://www.commonplace.is/

Annex: note on the NW Harpenden development, April 2023

The University of Hertfordshire Smart Mobility Unit (SMU) has been asked by the Harpenden Society to prepare a report on current transport patterns and issues in Harpenden, and suggest some options for ways to reduce congestion, car dependence and carbon emissions from road transport in the town, drawing on the SMU's research and evidence-gathering.

As part of this project, the Unit has been asked specifically to look the proposed North West Harpenden development and given the deadline for comments on this, we have prepared this note on the proposals, in advance of our main report.

The NW Harpenden development

Legal and General is proposing a development of 550 homes in a site adjacent to the Luton Road, known as North West Harpenden. We have looked at the published plans for the development and its likely impact on transport in the wider area.

In doing this, we have looked at the checklist from Transport for New Homes, https://www.transportfornewhomes.org.uk/the-project/checklist-for-new-housing-developments/ and at good practice in other developments.

We have not looked at the general issue of the need for housing in Harpenden or the non—transport aspects of the proposed development, since this is out of the scope of our study.

NW Harpenden and transport

In looking at the transport aspects of the proposed development, we would make the following points:

First, **context**. There is already an issue with volumes of road traffic in Harpenden, and the congestion that this produces, and this is indeed the reason why the University has been commissioned to produce this report. If the NW Harpenden development goes ahead it will need to show how it will avoid adding to this wider problem in Harpenden.

There is a broader context too: the need to reduce carbon emissions from road transport. There is a consensus that this will require reductions in vehicle mileage as well as the moves towards zero emission vehicles. Hertfordshire County Council and St Albans District Council have declared a climate emergency. Any new housing development needs to be judged on whether it reduces carbon emissions, including from transport; it will not be enough to demonstrate that other aspects of the development will produce limited emissions or that any emissions will be incremental or insignificant.

Second, **parking**: the developer is proposing to meet current St Albans District Council parking standards. The most recent available are set out in Appendix 1 of planning document ED25E, https://www.stalbans.gov.uk/sites/default/files/attachments/ED25E%20%20Appendix%202.%20%20Paragraph%20Numbering_tcm15-67795.pdf, which was part of the previous draft local plan. For everywhere other than the Harpenden town centre (and the centre of St Albans and adjoining areas), the standards proposed were:

- 1-bedroom dwellings (including studios): 1.5 spaces (either 1.5 unallocated, or 1 allocated and 0.5 unallocated)
- 2-bedroom dwellings: either 2 spaces (either 2 unallocated or 1 allocated and 1 unallocated) or 2.5 spaces (2 allocated and 0.5 unallocated)
- 3-bedroom dwellings 2.5 spaces (2 allocated and 0.5 unallocated)
- 4-bedroom dwelling: 3.5 spaces (3 allocated and 0.5 unallocated)

It is unclear what adopting these or previous standards will mean in practice, though it suggests at least 1100 parking spaces overall.

The provision of this level of car parking will enable and support significant levels of car use; it will also compete with other land uses, for example green space and potentially the housing itself.

There are alternatives to providing parking at this level. Some parking spaces can be reserved for car club vehicles rather than for individually owned cars, and we cover this further below. However, more radical approaches are possible. The University runs an annual study tour to Freiburg in Germany and in the Reiselfeld development there we came across two innovative ways of getting around requirement for parking spaces.

The first innovation saw space allocated for a shared garage/parking space but used as green space (including community garden/allotments) on the proviso that should it be required for future car parking it can be developed. In practice this hasn't happened in 10 years.

The second innovation is to de-couple the building cost from the parking space cost, so that people can just buy the property but if they want parking (or additional parking) they pay an extra amount. This helps reduce the demand for parking and starts to send out the message that property purchase doesn't automatically give parking space rights.

Third, **alternatives to car use**: the promoters' documentation is almost silent on public transport, though it cites walking times to the railway station in Harpenden. There is a bus route on the Luton Road adjacent to the site, but this is only mentioned in the context of provision of bus stop shelters. In any case, there is no bus priority on that road and so buses are delayed by the general congestion there. Options such as providing a bus-only road through the site, which would allow buses to bypass the Luton Road congestion, appear not to have been considered (see "Bus Services and new residential developments", https://www.stagecoachgroup.com/~/media/Files/S/Stagecoach-Group/Attachments/pdf/bus-services-and-new-residential-developments.pdf, for options).

The promoters do talk about cycle routes, including one proposed along the Luton Road, to which they will contribute. This is referred to in the Local Cycling and Waking Investment Plan (LCWIP), https://www.hertfordshire.gov.uk/media-library/documents/about-the-council/consultations/highways/st-albans-district-lcwip-final-report.pdf which refers to a segregated cycle route along the Luton Road, with a possible shuttle system under the Nickey Line Bridge to facilitate a continuous cycle route. The status of the plans for this cycle route are currently unclear.

The promoters also propose a "quiet way" cycle route; however, in practice this appears to have significant traffic and travel generators such as schools along it; it is not clear whether segregated facilities are proposed here. The provision of cycle parking on site is also unclear.

Fourth, **best practice**: the development as currently planned does not seem to incorporate aspects of best practice that can be found in other new developments. These include:

- An e-car club, with reserved spaces: some new developments now have a car club provided, giving residents the option of access to cars without having to own and park one
- An e-bike hire scheme; these already exist in parts of Hertfordshire and, given the emphasis on retirement homes in this development, would be relevant here, since there is some evidence that older people find e-bikes easy to use and this can prolong independent mobility
- A mobility hub, with travel options and also onsite services such as parcel collection and delivery, cafés and workspaces/community spaces (the provision in the proposed community hub is unclear)
- Sustainable travel discounts and incentives.

We note that in the New Lubbesthorpe development in Leicestershire the landowner, Drummond Estates, has employed travel planners who have introduced these kinds of measures, as well as new bus routes, and as a result single occupancy car commuting is at 39% in 2022, down from 60% a year earlier, see https://www.go-travel-solutions.com/news-events/22-news-views/99-new-lubbesthorpe-survey-findings-2022.

In conclusion, the development therefore appears to include significant levels of car parking, and limited alternatives to car use; it also has limited onsite facilities that those in the development can walk to. It is therefore likely, using the Transport for New Homes checklist, that in practice many of the journeys by residents on the development will be by car, adding to the levels of traffic and pressures of traffic congestion in the rest of Harpenden. Those in the retirement area, if they reach the point where for health reasons they are unable to drive, will find their mobility options reduced. As noted, there are options used in other new housing developments that could reduce car dependence. More radical options (e.g. a bus-only route through the site, providing an alternative to congestion on the Luton Road) appear not to have been considered.

A more climate friendly development plan for Harpenden would involve increased density in the existing residential areas and potentially the provision of higher density development around the railway station, rather than lower density car-based development on green field sites.

Our main report will explore new mobility options for Harpenden as a whole.

Smart Mobility Unit, 13.4.23