



MARKIDES  
ASSOCIATES

# Transport Strategy

## Stage 2 Report

SHAPING  
GUILDFORD'S  
FUTURE

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## Executive Summary

Guildford Borough Council (GBC) have embarked on an ambitious programme to regenerate Guildford Town Centre. The Council's primary objective is to bring vitality to the town (through the introduction of a greater employment, leisure and retail offer) and to minimise any further incursion into the Green Belt by enabling the development of a high number of new homes on existing brownfield land. It aims to achieve this by "rolling the town centre" down to the river, one of the town's key (but neglected) assets.

Leonard Design Architects (LDA) have prepared the Shaping Guildford's Future masterplan that enables the Council to achieve that ambition. A consultant team have been supporting this work, including Markides Associates (MA) who have provided the transport planning input. A stage 1 report was issued by MA in 2021 and since then more detailed work has been undertaken which has informed this stage 2 report.

There have been previous attempts by the Council to find a solution to the traffic problems of town centre congestion and traffic dominance which literally chokes the town. To a certain extent those earlier efforts had been dependent on some kind of a 'bypass' to the town. MA do not believe that this would be the answer. For a start, the doctrine of *'the more roads you build the more traffic is created'* has not only gained more acceptance amongst transport planners and politicians, but it has also been repeatedly shown to be true. Furthermore,

the pressing threat of Climate Change means that we should focus on the re-use of existing (rather than the building of new) infrastructure, in order to reduce carbon emissions.

MA are therefore recommending a completely different approach; one that is founded on the principle of sustainable movement. There is some cynicism towards such an approach but many other places in the UK and particularly in Northern Europe, have shown that with patience, leadership and commitment, such an approach bears fruit. In our work we have therefore recommended a prioritisation of some key objectives, as follows:

- Climate Change
- Healthier Citizens
- Placemaking
- Managing (let's call it "taming") the car

Why have we chosen such an approach?

For a start, climate change is no longer a distant threat but very much a present danger to the whole world. This has been recognised by the government, but also by GBC who have formally declared a climate emergency and set a goal for the borough to reach net zero emissions by 2030.

What does healthier citizens mean and why is it important? Evidence shows that transport has a key role to play in health, including encouraging active travel, reducing stress (congestion and commute times), air and noise pollution and the land available for nature and green spaces which affect wellbeing.

Placemaking is also a critical consideration when designing towns. For a long time, the conventional wisdom used to be that creating a strong economy came first and that a higher quality of life would follow. The reverse is now true: creating a better place and a higher quality of life is the first step to attracting new residents and jobs (and thereby growing the economy).

As for managing/taming the car, this does not mean ignoring the requirements for car movement because many of us will still need a car for a number of journeys. It simply means not giving the car the number one priority and allowing it to subjugate all other considerations.

In order to strike the right balance between these different priorities it was important that we had the evidence which would allow us to develop the correct measures for the town. Evidence and the collection of data is very important particularly when it comes to the subject of transport, which is an emotive subject, with people having different views based on their own experiences. It was therefore important that we "cut through" all of that by collecting accurate data.

As a consequence, the first step during stage 2 has been the collection of a large dataset from both traffic surveys and mobile phone records. This data has been extensively analysed and given us valuable information about travel patterns in the town.

## Spaghetti Junction in Birmingham



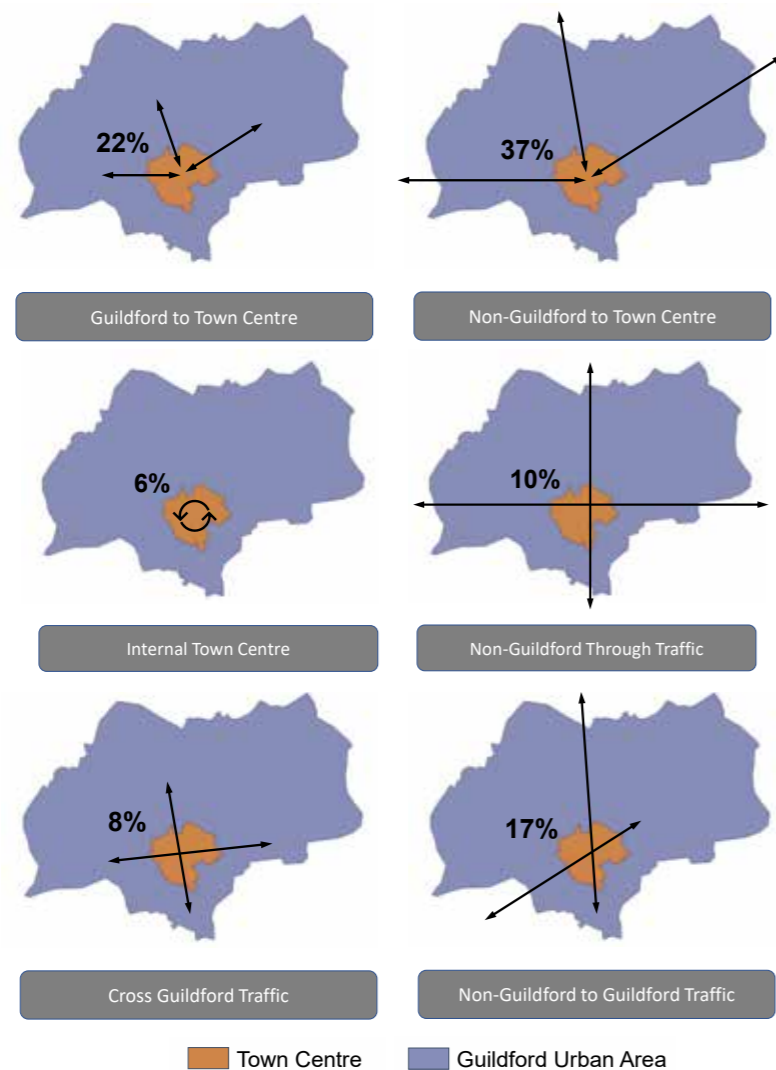
Map data ©2019 Google

For example, we have been able to look at the differences in travel behaviour to the town centre from each area of Guildford, highlighting issues (such as the severance caused by the A3, particularly in north-west Guildford).

Another aspect of connectivity is something that was also identified by the data. One third of all trips are from a walkable distance whilst 50% of trips are from an easily cyclable distance. This very much suggests that if

pedestrian and cycle facilities were to be improved then many existing car trips could convert to more sustainable modes.

However, one of the most important results of this data collection concerns the question of 'how much through traffic there is in the town'? The graphics below show the different movements, and it is clear that what could be termed *truly* through traffic (i.e. the traffic that has no business in the town and simply uses its roads to go elsewhere) is a mere 10%.



*For a long time the conventional wisdom used to be that creating a strong economy came first and that a higher quality of life would follow. The reverse is now true: creating a better place is the first step to attracting new residents and jobs (thereby growing the economy).*

Armed with this valuable data we have been able to put forward a comprehensive set of measures whose aim is to achieve as high a shift from the car to sustainable travel as possible, whilst at the same time "managing/taming" the remaining traffic in order to, on the one hand ensure safety, whilst on the other hand upgrade the physical environment. The proposed measures include:

- Active travel improvements (cycleways, footways, 20mph zones)
- Upgrading of the bus offer
- Improved Park & Ride facilities
- Provision of Park & Walk facilities
- Rationalisation of the town centre parking provision (including better information and an upgrade to the existing facilities)
- The possible introduction of road user charging and/or Workplace Parking Levy, which help by reducing car use and providing much-needed funding to ensure that Guildford's transport system is of a high quality

A study by Kuss and Nicholas (2022) in the journal 'Case Studies on Transport Policy' suggested that various car reduction strategies could, in time, each achieve a modal shift of anything between 10-40%. The list of measures included the example of a congestion charge scheme, which could deliver a 12-33% reduction in car use, or parking controls (11-19% reduction).

Subsequently our work moved on to consider, through the use of a validated traffic model, the effects of the remaining traffic, and how we could improve the core town centre environment. The existing gyratory is a major barrier to this.

The gyratory system is a growing problem that needs to be addressed. It suffers from poor air quality, high accident rates, considerable traffic congestion and very poor public realm. It is an unwelcoming place to be in and has historically been designed to prioritise the movement of cars over any other function. Given its location in the heart of the town centre, this priority is wrong. Instead, it should be a place designed with the principles of becoming a healthier and people focused environment.



Our efforts to address this and transform the current gyratory system led us to testing different options with the dual objective of:

- Providing an upgraded physical environment and meeting the goals of the Shaping Guildford's Future masterplan (i.e. opening up the riverfront, more bus and cycleways, wider footpaths and more greenery);
- Maintaining traffic circulation

By assessing the merits of each option against the objectives of opening up the riverfront, building a pedestrian focused environment, and creating better placemaking, this has led us to shortlist three options:

- Option Y
- Option Little C
- Option Big C

We have concluded that what we have termed option Y will give the best results in terms of meeting the stated objectives and maintaining sufficient traffic circulation. Option Y as well as all other options are described in greater detail later in this report.

Further analysis of the evidence base, as well as more detail on the various strategy elements proposed, can be found in the numerous additional technical notes produced by MA and submitted alongside this report.

In conclusion, we believe that the suggested strategy will lead to a much higher-quality physical environment in the town which will in turn lead to higher levels of economic growth, less carbon emissions, greater road safety and fundamentally healthier citizens. Through this strategy we will simultaneously be able to "tame" the traffic so that it can still flow safely.

We emphasise that for the strategy to be successful it will be necessary for:

- The town as a whole (leadership and populace) to be committed to the principle of a sustainable future.
- Significant funding to be provided.
- A vision and a phased programme of action to be established as this will require implementation over the long term.
- GBC and Surrey County Council (SCC) to work closely together. A lot of the suggested measures in this strategy are the responsibility of SCC as Highway Authority. It is therefore imperative that the two authorities work closely together at both leadership and officer level.



# Chapter 1

## The Vision

### Shaping Guildford's Future

A Strategic Spatial Masterplan is being prepared for the town as part of the Shaping Guildford's Future project. This plan sets out how the areas around Bedford Wharf, Town Wharf, Woodbridge Meadows and Millmead could be comprehensively re-developed to re-connect the town with the river, address flooding issues, introduce new homes and other uses, and create more and better streets and spaces for people to enjoy.

The Council's ambition for Guildford is to breathe new life into the town by opening up the riverside to introduce new homes, employment and other uses. This would avoid building in the Green Belt. The key objective is to create sustainable development in a quality environment which would lead to economic regeneration as well as healthier citizens. A fundamental plank to such a strategy is the correct management of the town's transport network.

### The Traffic Problem

One of the most significant challenges to realising the Council's ambition is to address the current dominance of traffic between the historic centre and the River Wey. Since the closure of its wharves, the town has turned its back to the river and a four-lane gyratory was built straddling the river to accommodate increasing levels of traffic.

Blank walls, service yards and car parks are dominating the street scene as buildings were designed to face away from these busy roads and from the noise and air pollution the traffic generates. This created a barrier that prevents Guildford from developing its riverfront as a vibrant quarter and leisure destination.

*In 2020 Guildford was the 6th most congested urban area in the UK*

*(Source: Inrix)*

Conditions for pedestrians and cyclists along these roads are very poor. This prevents people from making healthier and cheaper choices to walk or cycle for shorter journeys to or through the town centre thus further adding to the problems of road safety, congestion and pollution.

It has been clear from the outset of this study that a major transformation of the gyratory and its approach roads would be essential for Guildford to realise its full potential and to reposition itself as a vibrant, people-focused place to live, work and visit.

It is not a new idea; over the years several attempts have been made to tackle the town's traffic and safety issues. Many such schemes involved the construction of new roads, tunnels and bridges to accommodate existing and expected growing levels of traffic. These have all proved undeliverable.

The Assets

The Obstacles



The Gyratory System

The gyratory system at the heart of Guildford Town Centre sits as the focal point for the town. It functions as a strategic connecting point between the south, west and north areas of Guildford, as well as facilitating long distance journeys from nearby villages to and from the A3. It acts as two of the town's core river crossings, with other opportunities to cross the river few and far between.

The gyratory divides the rail station from the historic High Street. The busy Friary Shopping Centre fronts onto the gyratory and a national cycle route intersects with it. The gyratory essentially dominates the landscape of the town centre and provides a key movement function for pedestrians and traffic.

However, pedestrians have been neglected by a traffic dominated gyratory that was historically designed to favour cars over people. It has a poor accident record, particularly involving pedestrians, contributing to one of the worst accident rates in Surrey according to the Department for Transport (DfT). There have been previous fatalities as a result of road traffic collisions in 2015 and 2016, as well as 4 serious accidents in the last 5 years.

The gyratory is also very congested. In 2020, Inrix reported that Guildford was the sixth most congested town in the UK.

This contributes negatively to air quality in the town centre and has required GBC to introduce an Air Quality Management Area (AQMA) covering the gyratory and its approach roads. The gyratory exceeds safe limits for NO2 at several locations.

Compounding these problems is also that of very poor public realm. This is exemplified by scarce greenery as well as by the lack of active frontages. There are lots of blank walls along the gyratory itself as well as on its different approaches (e.g. Onslow Street which gives access to a service yard).

Therefore, for the reasons of poor air quality, high accident rates and considerable traffic congestion the gyratory can be considered an unwelcoming place to be on a human scale. Its role and importance as a place, rather than being purely a functional piece of infrastructure has for a long time been overlooked. From a placemaking perspective, the environment is extremely poor due to a multitude of factors.

Tackling all of these problems should be a key objective of Shaping Guildford's Future. The main way to achieve it is through a 'decide and provide' approach of building a better place, with the design principles of a healthier and people focused environment taking the lead. Traffic can then be managed down over time with the introduction of a sustainable transport strategy that encourages greater active travel and bus use.

**The Climate Emergency**

On 4th December 2018 GBC passed a motion declaring a climate emergency. In that motion GBC acknowledged “human activity has resulted in global climate change that threatens our future”. in the DfT’s ‘Decarbonising Transport’ report it is stated that “transport is the largest contributor to UK domestic greenhouse gas emissions, responsible for 27% in 2019”, and that “we must deliver a step change in the breadth and scale of our ambition on transport emissions to reach net zero”.

Looking at transport emissions in more detail, 55% of all transport related greenhouse gas emissions in 2019 were generated by cars and taxis. Heavy good vehicles contributed to 16% of these emissions whilst lighter goods vehicles equated to a further 16%. More sustainable modes such as buses

only contributed 2.5% of the total transport emissions, with active travel contributing a negligible amount (*Decarbonising Transport, DfT, 2021*).

In addition, it is important to recognise that transport infrastructure, buildings and vehicles create a significant amount of carbon emissions over the lifecycle of the assets. In building new roads, bridges or buildings carbon is generated that will need to be reduced or offset in a net zero future. This is one of the main reasons why many authorities are now working on the principle of re-using existing assets.

SCC’s Local Transport Plan 4 (2022-2032) has responded to this need in setting out a vision to reach net zero carbon emission by 2050. They principally intend to reach this goal by developing a series of policies that seek to achieve the following:

**Figure 1** Principles of SCC Local Transport Plan 4



Shaping Guildford’s Future needs to align itself to the ambitions of achieving a net zero future and follow these principles as set out in LTP4. This can be achieved by changing the way people in Guildford travel, challenging the current status quo of car dominance, and providing genuine sustainable travel alternatives.

Implementing a strategy of offering good walking and cycling routes, as well as more frequent and reliable electric buses, whilst reducing the number of car journeys, we can positively reduce transport related emissions and at the same time facilitate further growth in the number of homes and jobs.

Electric vehicles (EV) can also help with this, but they are not the answer in isolation. They will not respond to the problems of congestion or accident rates and will still lead to air pollution and carbon emissions (albeit at a much reduced rate to a traditional internal combustion engine vehicle). The emissions, including indirect emissions, generated by an EV per kilometre total 53gCO<sub>2</sub>. This compares to 192gCO<sub>2</sub> for an average petrol car (*Greenhouse Gas Reporting, DfBEIS, 2019*).

**The Health Benefits of a Sustainable Strategy**

Poor air quality and “long-term exposure to man-made air pollution in the UK has an annual effect equivalent to 28,000 to 36,000 deaths” (*Health Matters, Public Health England, 2018*). “Physical inactivity costs the NHS up to £1bn per annum, with further indirect costs calculated at £8.2bn” (*Gear Change, DfT, 2020*). These are just two factors that demonstrate the importance that active travel and reducing transport emissions can have on people’s health.

Given the problems Guildford has, particularly surrounding the gyratory system, in terms of accidents, congestion and air pollution, there is considerable scope for improvement. This is why a central pillar of the Shaping Guildford’s Future transport strategy should be a focus on improving the health of residents, workers and visitors in Guildford.

Investing in active travel in particular presents huge opportunities for Guildford’s population and the economy. By encouraging residents to undertake 20 minutes of walking or cycling per day, the risks of developing depression reduce by 31% and the productivity of workers increases. Up to a 40% increase in shopping footfall can be realised by designing well-planned improvements to the walking environment (*Gear Change, DfT, 2020*). Employees are less likely to be absent from work as a result of commuting on foot or by bike and people are more likely to be happier (*Active Mode Appraisal, DfT, 2020*). All of these benefits add weight to the Shaping Guildford’s Future economic business case.



As well as encouraging more active travel and bus use, health benefits can also be achieved by better placemaking and designing streets that encourage social interaction, sitting and resting, as well as making people feel more relaxed and safer.

ten criteria approach to street design. It is recommended that this approach is followed in the design of a new alternative to the gyratory system, as well as improving the offering of Guildford’s inner town centre street network.

Starting in London and spreading elsewhere, the ‘Healthy Streets’ approach is a tool that has successfully led to better health outcomes for citizens and more attractive places to spend time in, by following a

The 10 Healthy Streets Indicators presented in Figure 2 focus on the human experience needed on all streets, everywhere, for everyone.

Figure 2 Healthy Streets Approach



**An Alternative Approach**

The strategy that lies at the heart of the Shaping Guildford Future Plan is primarily to provide an upgraded physical environment whilst simultaneously attempting to “tame” the traffic.

Such an approach would allow for dramatic changes to the road network, open opportunities to remove traffic lanes along some streets and fully exclude vehicles from others. Footways could be widened, bus priority measures would be implemented and new crossings, cycle paths and greenery introduced to create a safer, healthier and more attractive environment for cyclists and pedestrians. This would set the scene for new development to come forward that positively addresses and engages with the street, thus further enhancing the quality of the place.

This alternative approach is supported by national and local policies that seek to promote sustainable modes of travel as a means to reduce carbon emissions and other pollutants and promote a more healthy and active lifestyle.

Critical to the success of this alternative approach is that the accessibility of the town centre, as a place to live, work and visit, is not compromised. Credible alternative means of travel, that are convenient and affordable, need to be available. This requires a thorough understanding of when and why people currently travel to and through the town centre so that appropriate alternatives can be put in place. And to ensure sufficient

space is set aside to accommodate those journeys where the use of the car is the only reasonable alternative.

Without adopting this new approach, it would become increasingly challenging for the town centre to handle the 10,000 plus new homes which are planned to be delivered through the Local Plan. Any further town centre redevelopment of the likes proposed in this study could not be achieved by trying to follow the old approach of catering for car dependency. This growth can be alternatively realised through the adoption of a sustainable led transport strategy, that puts improving the health and wellbeing of its citizens, reducing carbon emissions and promoting sustainable transport at its heart.

**This Document**

This document details that strategy, providing a summary of the measures required to change the way Guildford’s residents and workers travel, and how its road system should be managed in the future.

To do that this report provides a high-level summary of the findings from the traffic data analysis undertaken as part of the Shaping Guildford’s Future study to provide context. It sets out how the strategy enables the proposed masterplan, as well as the scope for transforming the gyratory following a reduction in traffic. It provides a summary of measures required to achieve this traffic reduction for each mode of travel and concludes by setting out the next steps required to deliver the plan.



# Chapter 2

## How We Travel

### Travel Survey

To help our understanding of how residents, workers, and visitors of Guildford travel around the town, a comprehensive survey of mobile phone data (from 2019) has been collected and thoroughly analysed. This has allowed us to gain a better appreciation of all the pre-existing issues and given us confidence to develop measures that will help change the town and the way people travel in it for the better.

The mobile phone data provides a breakdown of trips to, from and through Guildford. This includes information on the origin and destination, mode of travel, journey purpose and time of travel of each trip. This has allowed us to analyse overall patterns in these different elements, as well as understand more about through traffic in the town centre.

Overall, the obvious key conclusion from the data is that there is significant potential to transform the culture of travel in Guildford away from a car dominated town to something more balanced. A high percentage of trips to the town centre are within a walking and cycling distance, yet road vehicle modes dominate.

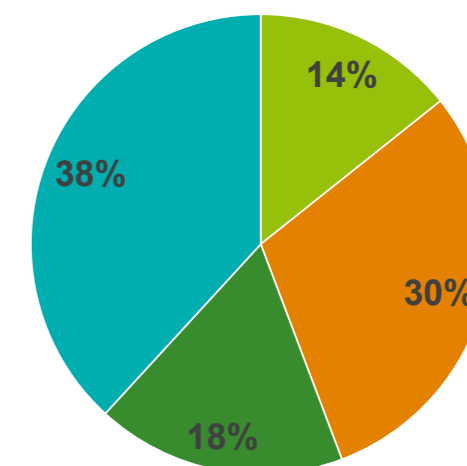
### Distance Travelled

A significant share of trips are shorter than 4km for all time periods, highlighting that a large number of people travelling to the town centre are from a walkable (light green on the diagram) or cyclable (orange) distance. 4km represents an average 15 minute cycle distance.

This demonstrates that whilst a notable number of trips are made from longer distances, there is real scope to encourage large volumes of town centre users who don't travel far, to take a trip on foot, by bike or bus.

Figure 3 Distance Travelled

#### Weekday AM



■ <1.2km ■ 1.2 to 4km ■ 4 to 10km ■ >10km

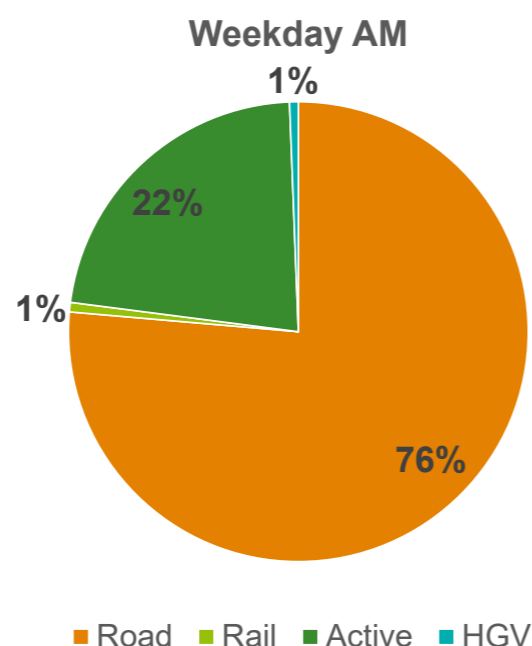
**Modal Split**

Most trips are made by road (orange) for all the time periods analysed, with the vast majority of those likely to be by car/van.

When comparing this data with the distances travelled, it is interesting to note that many of those people who travel for a total distance of 4km or less, decide to drive rather than walk or cycle.

In the morning peak the trips from a distance of up to 4km represent 34% of all trips, yet only 22% of trips are made by active modes.

**Figure 4** Mode of Travel



**Journey Purpose**

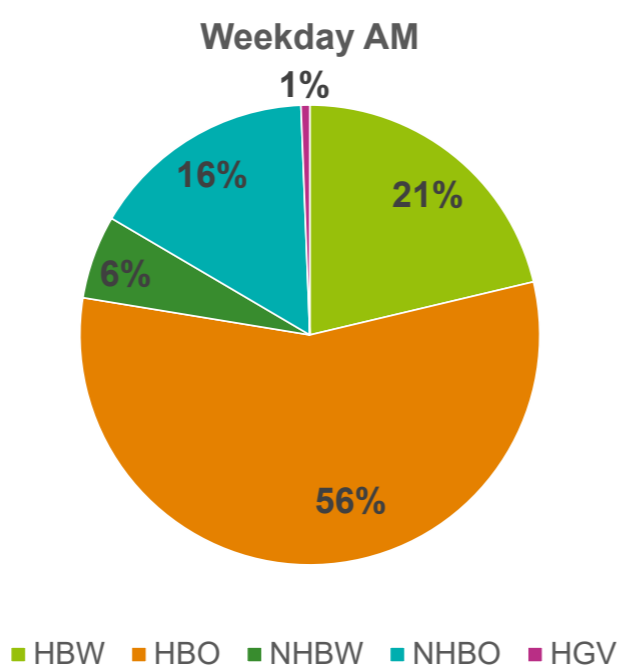
The purpose of trips to the town centre have been separated into the following categories:

- Home Based Work (HBW)
- Home Based Other (HBO)
- Non-Home-Based Work (NHBW)
- Non-Home based Other (NHBO)
- Heavy Goods Vehicle (HGV)

Most trips are of 'Home Based Other' purpose for all time periods, which include things like school drop-offs, health visits, leisure trips or retail related.

This data also provides an insight into the proportion of travel by commuters, or 'Home Based Work'. In the morning peak, only 21% of all movements in Guildford are those travelling to/from work.

**Figure 5** Purpose of Travel



**Destination and Through Traffic**

Using the mobile data, we have been able to categorise how much of the road traffic in the town centre has come from Guildford itself or further afield, as well as what proportions of that traffic has a purpose in the town centre (i.e. destination traffic) or is using it to simply pass through enroute elsewhere (i.e. through traffic).

A zonal based assessment of road based trips to and through Guildford Town Centre, shown in Figure 6, demonstrates that there is a 65%/35% split between destination traffic and through traffic respectively during the AM peak.

The majority of traffic in the town centre is related to its activities rather than being through traffic. This varies across the different time periods, with approximately 65-74% of all traffic destined for the town centre itself. Of the 26-35% traffic which is through traffic, only 11% are non-Guildford to non-Guildford trips on average.

On the key road corridors into Guildford, through traffic makes up a much higher proportion of traffic on the southern links than any others, i.e. Portsmouth Road and Shalford Road.

Through traffic is much lower on Walnut Tree Close than any other corridor, and henceforth this route would be more appropriate to focus active travel improvements on.

Guildford Park Road has a significant proportion of cross Guildford traffic across all time periods. This route would therefore be ideal for targeting cycling or bus improvements, that could offer an alternative to these shorter distance trips.

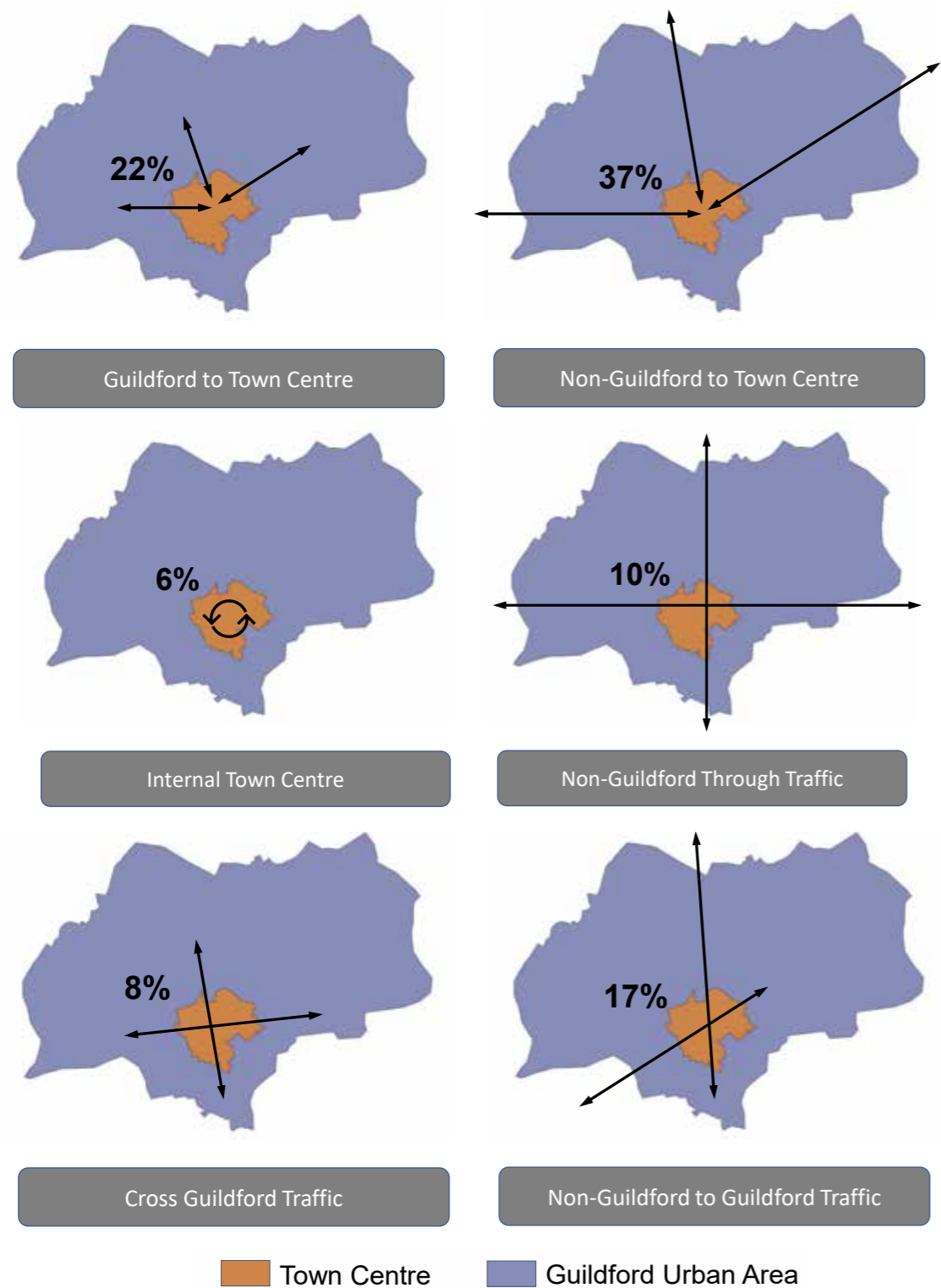
Farnham Road carries a high proportion of town centre destined traffic. This either points to a lack of alternative options to travel by other means, or a lack of capturing the traffic before it reaches the gyratory. Farnham Road car park and a review of park and ride access from the A31 are key to addressing this.

All of the 'Internal Town Centre', 'Guildford to Town Centre' and most of the 'Cross Guildford Traffic' trips are within walkable or cycle distance. There is therefore an opportunity to influence travel choices of a great proportion of the 36% of drivers to active travel.

A further 37% approaching the town centre from outside of Guildford could be significantly reduced with an enhanced park and ride system, capturing traffic trips before they reach the town centre. Some of these trips (depending on their origin) could also be captured by improved bus services.

Whilst the remaining 27% are unlikely to change mode, the 10% of trips starting and ending outside of Guildford could re-route wider away from the town centre if they were to be dissuaded, e.g. through road charging.

Figure 6 Town Centre Destination and Through Traffic (AM Peak)



### Travel Behaviour Change Potential

A benchmarking exercise using Census data puts Guildford mid-table in terms of car mode share with plenty of room to improve sustainable travel use. Cycling in particular makes up a very low percentage of journeys in Guildford compared to other towns and cities. Walking as a share of all journeys is already a little higher than some comparator locations. Albeit the combined active travel mode share is lower than Bath, York, Cambridge, and Oxford.

Bus mode share in Guildford (8%) is also much lower compared to nearly every other urban area. Peterborough has more than double the mode share for buses and Oxford has a mode share that is four times higher. This suggests significant scope for growth in bus travel across Guildford.

On a town wide scale, the mobile data for both the journeys within a walking catchment (up to 1.2km or 15 minutes in length) and the cycling catchment (between 1.2km to 4km in length or a 15 minute cycle ride) show there is room for improvement in the active travel share.

Figure 7 Mode Share of All Trips to Town / City Centre (Census 2011)

Mode	Car	Train	Bus	Cycling	Walking	Other
Aylesbury	65%	2%	8%	2%	21%	2%
Peterborough	63%	4%	17%	5%	11%	1%
Woking	60%	17%	4%	3%	15%	1%
Guildford	61%	12%	8%	2%	16%	1%
Bath	48%	8%	12%	4%	26%	2%
York	39%	6%	14%	12%	28%	2%
Oxford	28%	6%	31%	20%	14%	2%
Cambridge	40%	5%	13%	28%	12%	2%

# Chapter 3

## The Masterplan

### The Shaping Guildford's Future Masterplan

The core aim for this work and any future town centre transport strategy is the sustainable delivery of new homes and jobs for Guildford. Therefore, this strategy needs to first and foremost facilitate the Shaping Guildford's Future masterplan proposals.

The masterplan covers a wide range of development zones across the town centre area.

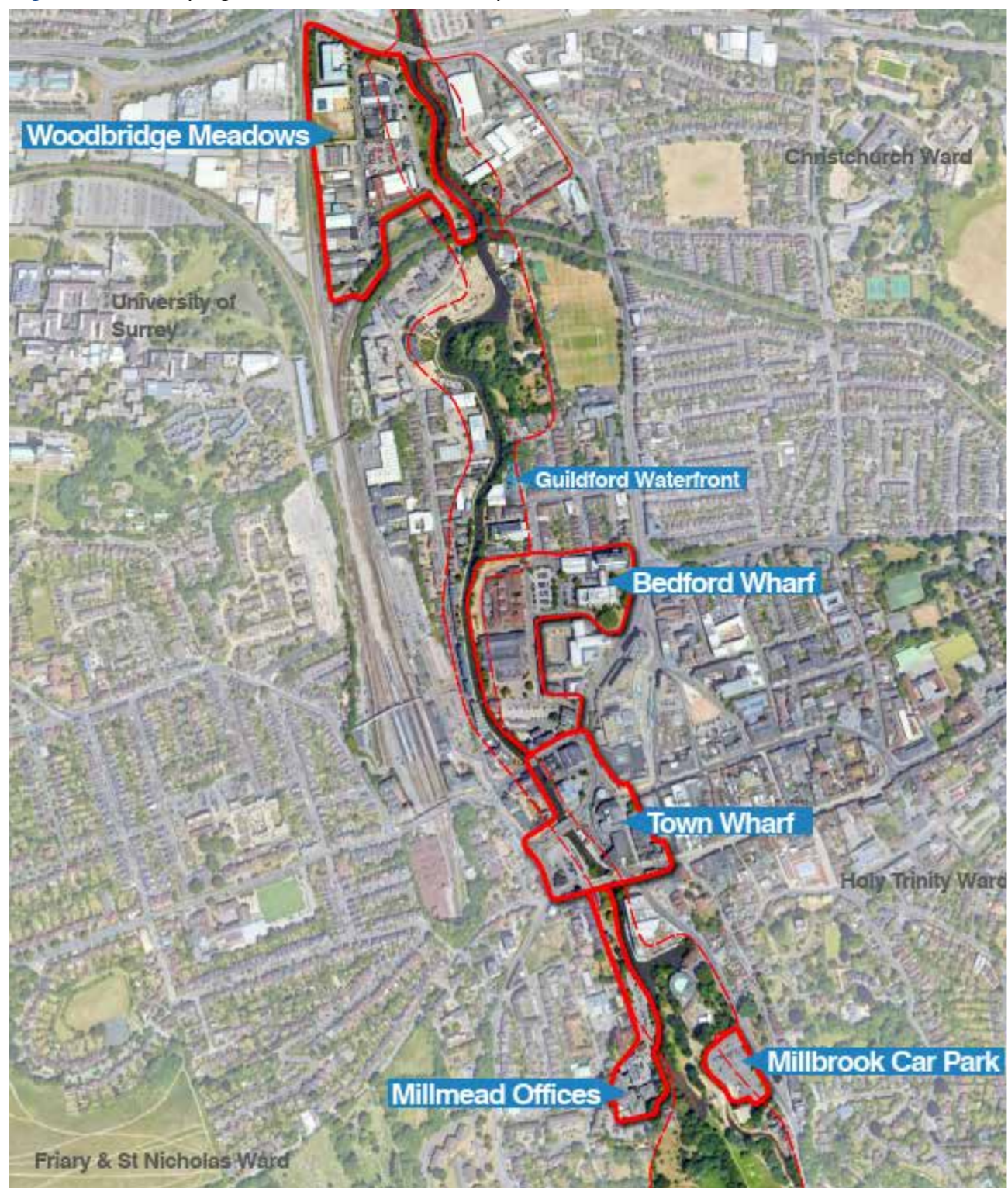
In delivering this masterplan, not only will it allow for sustainable development in Guildford outside of the greenbelt, but it could help to transform the town centre's public spaces and transport network. It would provide an enabler to completely overhaul the unpleasant gyratory system, introduce many more walking and cycling routes, and achieve new people focussed urban realm.

Delivering 2,600 new homes and many new jobs in an already congested town centre environment requires a change of approach to managing travel across Guildford. This growth, on top of the committed local plan developments would put severe pressure on the existing road network and gyratory system if no restrictions on car travel were put in place. This would also further deteriorate the quality of life for users of Guildford Town Centre and contribute to further increases in carbon emissions.

One of the most effective ways to suppress this vehicle demand from the new development parcels is to limit the amount of new parking allocated to the new homes.



Figure 8 The Shaping Guildford's Future Masterplan



## Development Zones

### Millbrook car park and Millmead

The site runs South along the riverfront from Town Bridge, includes Millmead car park and the Guildford Borough Council offices. It also includes Millbrook car park on the Eastern side of the river.

### Town Wharf

The area includes the gyratory, the three bridges (Onslow Bridge, Friary Bridge and Town Bridge), Friary Court and Portsmouth Road car park. It is bounded by Bridge Street in the North, includes the buildings along Friary Street on the East, up to St Mary's Wharf and Town Bridge to the South and up to Portsmouth Road in the West.

### Bedford Wharf

The area includes Bedford Road and Mary Road surface car parks, the Odeon, Crown and Magistrates courts and the constabulary headquarters. It is bounded by the residential blocks on Mary and Margaret Roads to the North, Onslow Street and Bedford Road Multi-Storey car park to the East, the rear of the commercial units on Bridge Street to the South and the river to the West.

### Woodbridge Meadows

The site is bounded by the A25 to the North, river to the East and railway viaduct to the South and West. There is also a Thames Water borehole site to the South.



## Parking in New Developments

GBC's 'Draft Parking Supplementary Planning Document 2022' allows for generous parking standards in Guildford Town Centre and the surrounding urban areas, although these are set out as a maximum requirement.

Interestingly, this policy does encourage car-free developments where lower car use is expected in areas close to Guildford Town Centre, or urban district centres with frequent public transport and accessible active travel routes. For residential and non-residential developments in urban areas, low-car and car-free sites may be acceptable when a coherent package of sustainable transport measures is provided.

By ensuring any new development is car free or as close to this as possible, it will suppress any new car based travel demand and encourage sustainable travel. In order for this to work, a comprehensive travel plan strategy and investment in alternative sustainable transport options are required.

### Our Recommendations

For all the development zones located within the town centre, car-free residential development should be appropriately delivered whilst complying with policy requirements. Disabled drivers, visitors, and deliveries should still be accommodated via a ratio of up to 0.1 spaces per unit. A car club network should be part of the site wide transport strategy to help facilitate car free development.

Any new commercial developments in the town centre should utilise existing public car parks, either through the Park & Ride or Park & Walk networks.

Development zones located outside of the town centre should also be considered low-car, given the proposed sustainable transport improvements that would encourage a shift away from single-occupancy car travel. Therefore, for residential uses a parking ratio of up to 0.25 spaces per unit should be adopted, supported by appropriate car club provision. It is recommended that as a minimum 1 car club space per 100 residential units is provided.

EVCP infrastructure should be provided in new developments with at least one charge point per dwelling and enabling infrastructure in every space without a charge point.

To encourage modal shift and allow for reduced car parking cycle parking should be provided in line with the forthcoming GBC minimum cycle parking standards i.e. minimum 1 space per bedroom, with at least 20% of the spaces provided as accessible (Sheffield stands or similar). Of these, at least 5% should be provided for non-standard cycles to accommodate people with mobility impairments.

The recommended car-free / low-car strategy will allow for significant reduction of additional car parking numbers that will support the overall Town Centre traffic reduction objective and be in line with the sustainable transport strategy.

## The North Street Development Proposals

Parallel to the Shaping Guildford's Future Masterplan proposals GBC are also working with a development team to bring forward the North Street Regeneration project.

This project will help regenerate the town centre, redeveloping the currently abandoned brownfield land between Commercial Road and Leapale Road, to deliver a residential led development providing approximately five hundred new homes. Two crucial aspects in these proposals of relevance to Shaping Guildford's Future are the redevelopment of the town centre bus station and the pedestrianisation of North Street.

### New Bus Station

The proposals for the bus station comprise a new exit/egress, a new canopy, new glazed screening, new seating, lighting and signage, new public realm to the south, and a widened Commercial Road footpath.

The new access means buses will enter and leave via Commercial/Woodbridge Road. As a result of these new access arrangements, there will be a reduction in buses from the north using the gyratory, and therefore buses will both avoid traffic and contribute to a reduction in traffic on the gyratory. In contrast to the benefit of less buses using the gyratory from the north because of the new access arrangements, buses from the south and west will now need to do a U-turn at York Road roundabout to access the bus station.

The proposals for the new bus station also include reducing the total number of bays. Our proposals for the new gyratory design involve removing a lane of general traffic in each direction along Onslow Street, therefore, we suggest that this additional space could be used to accommodate the reprovision of any bays lost to the redevelopment, if required.

### Pedestrianisation of North Street

The new access arrangements for the bus station will enable the pedestrianisation of North Street from the taxi rank in the west to the Leapale Road junction in the east. This section of the street will be fully pedestrianised from 10AM to 11PM with only taxis, refuse vehicles and servicing access allowed out of hours. These proposals will turn a currently car dominated environment into one that encourages walking, with cyclists also able to access North Street during pedestrianised times.

In our proposals for active travel, presented later in the report, we highlight a need for two-way cycle use along North Street. Therefore, to achieve this a contra-flow cycle lane would likely be needed along the road. This would require further consideration to introduce a solution that would provide a safe environment for pedestrians and cyclists.

### Gyratory Design

In order to bring to life the masterplan and deliver the transformative vision to people’s travel and livelihoods that has been presented so far, revolutionary changes to the town centre gyratory system are necessary.

The existing gyratory system suffers from poor air quality, high accident rates and considerable traffic congestion creating unwelcoming environment neglecting pedestrians and cyclists.

The design optioneering exercise for the future town centre road arrangement has focused on which options best meet the masterplan objectives, rather than purely being a traditional traffic capacity-led decision. The focus of this project after all, is delivering new homes, improving the health and well-being of Guildford’s residents, and creating a better town centre environment for people to enjoy and spend time in.

Nevertheless, the capacity of the future town centre road network, and the replacement of the existing gyratory, needs to take into account the levels of traffic reduction required in order for the network to operate optimally, without significant congestion preventing the timely expedition of goods and people. This reduction will likely be achieved through a combination of significant measures to promote walking, cycling and bus use, as well as changes to parking stock, and possible road charging mechanisms, as discussed in Chapter 4.

Several preliminary design options have been considered to replace the existing Guildford gyratory system. Options G and H were subsequently dropped, as they failed to achieve the core masterplan objective of connecting the town to the riverfront via a traffic free route. The remaining three options are presented below.

Each design option assumes that the pedestrian underpass system will be removed with good quality pedestrian crossings introduced at the ground level and all movement pedestrian crossings provided at junctions.

#### Option Little C

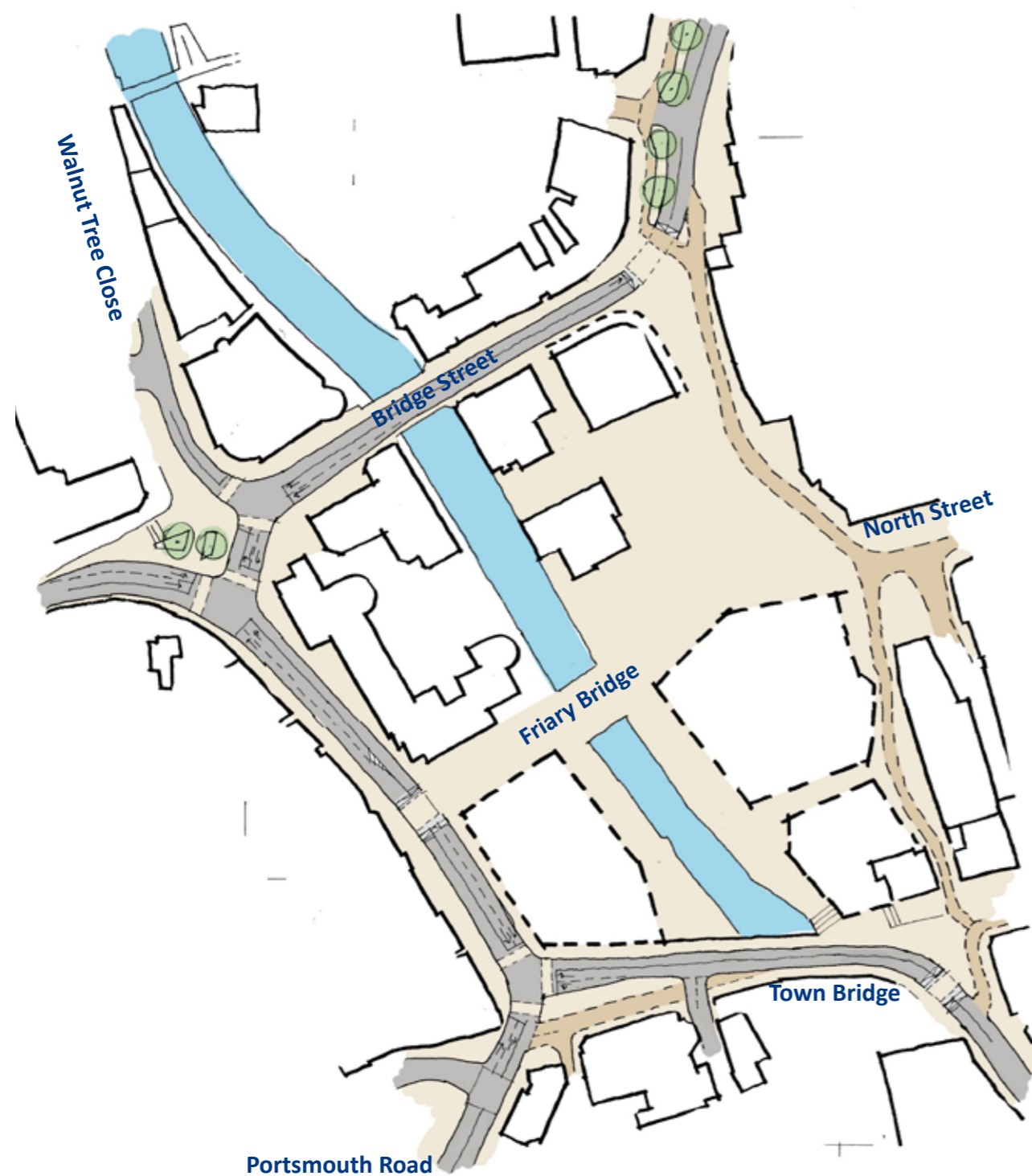
Option Little C removes the gyratory system and introduces two-way movements, one lane each way, via Onslow Street (Friary Bridge), with the remaining space re-allocated to bus lane and segregated cycle track. High quality, single phase pedestrian crossings at the end of Bridge Street and North Street provide good connections to the riverfront and train station. The section of Millbrook between Onslow Street and High Street is removed with traffic routed through the new or existing Town Bridge, with western end of High Street realigned northwards to a new wider junction with Portsmouth Road, avoiding the land constraints outside the St Nicolas Parish Church.

Figure 9 Preliminary Sketch of Option Little C





Figure 10 Preliminary Sketch of Option Big C



This allows for the town centre to be connected to the river and for Bridge Street to be pedestrianised, with no access for vehicles, providing an improved pedestrian and cycle link between Guildford Station and the town centre. Vehicular access to the train station via Walnut Tree Close is retained. This option however routes traffic through Town Bridge, and is likely to require some additional land take and the demolition of a number of properties. We are currently working with Arup to determine whether it can be delivered without requiring a new Town Bridge.

**Option Big C**

Option Big C takes the traffic over Bridge Street (Onslow Bridge) and via Town Bridge, either on a realigned or widened structure, with the western end of High Street realigned northwards to a new wider junction with Portsmouth Road, avoiding the land constraints outside the St Nicolas Parish Church. This allows for the town centre to be connected to the river and for Onslow Street (Friary Bridge) to be pedestrianised, with no access for vehicles. Vehicular access to the train station via Walnut Tree Close is retained. This option however routes traffic through Town Bridge, and is likely to require some additional land take and the demolition of a number of properties.

Although this option benefits from improved pedestrian and cycle environment on a pedestrianised Friary Bridge it offers very limited scope for pedestrian and cycle improvements along the Park Street north of the bridge towards the station and Farnham Road.

**Option Y**

In Option Y the gyratory is broken up and Bridge Street pedestrianised, with no access for vehicles, providing an improved pedestrian and cycle link between Guildford Station and the town centre. Vehicular access to the train station via Walnut Tree Close is retained. Town Bridge remains pedestrianised, with limited bus access. Two-way traffic crosses the river at Friary Bridge, with one lane in each direction, and the remaining space re-allocated to bus lane and segregated cycle track. High quality, single phase pedestrian crossings at the end of Bridge Street and North Street provide good connections to the riverfront and train station. Millbrook is closed to traffic, with Shalford Road terminating at Millbrook car park aside from limited access. This offers an opportunity to introduce improved pedestrian and cycle environment between Millbrook car park and the town centre supporting our Park and Walk strategy.

With the closure of Millbrook a delivery and servicing access strategy for High Street and neighbouring streets would need to be developed. One option could be to allow access westbound from the northern end of High Street, with vehicles egressing via Town Bridge, as described in 'Gyratory Design Options Assessment' (MA, June 2022). Access hours should also remain to be time restricted.

Figure 11 Preliminary Sketch of Option Y

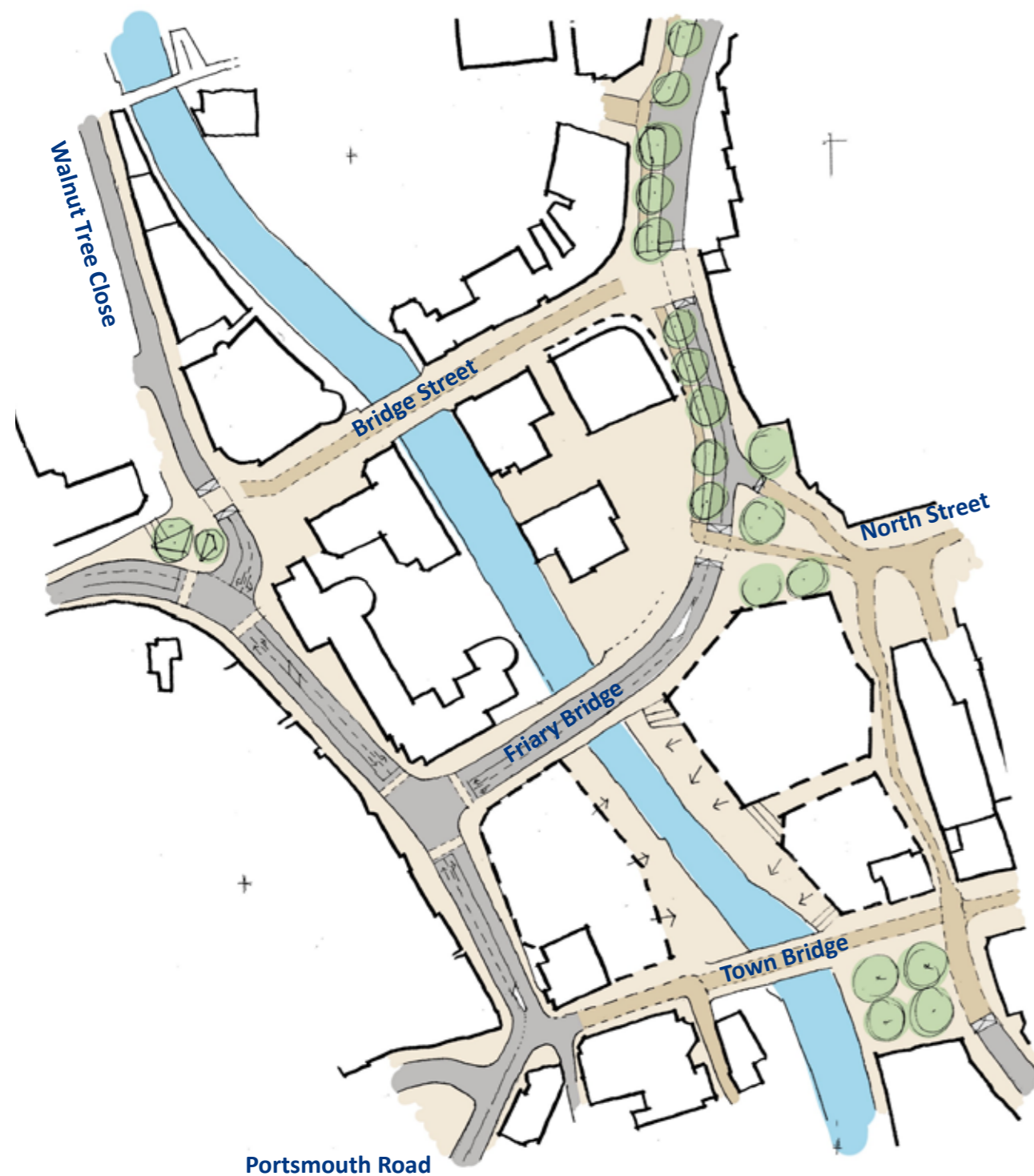


Figure 12 Review of Gyratory Options Against Key Masterplan Objectives

	Option Little C	Option Big C	Option Y
Section between North St and High St opened up to the riverfront (traffic free)	Green	Green	Green
Section between Bridge St and North St opened up to the riverfront (traffic free)	Orange	Green	Orange
Bridge Street pedestrianised (pedestrians and cyclists only)	Green	Red	Green
Existing Town Bridge remains pedestrianised	Red	Red	Green
Good pedestrian crossings provided	Orange	Orange	Green
Available space for segregated cycle links	Orange	Red	Green
No additional land take required*	Red	Red	Green

\*to be confirmed by Arup after highway designs drawn

**Masterplan Objectives**

Reviewing each of the options against the core criteria of the masterplan, option Y meets more of the requirements than any other arrangement. It offers a traffic free section of the riverfront, the pedestrianisation of Bridge Street, requires no structural changes or land take, and can deliver improvements for both pedestrian and cyclist infrastructure.

**Existing Congestion**

Existing traffic congestion on the gyratory means that it currently operates at approximately 97% of its maximum capacity, with some queuing at peak times. It is expected to operate above capacity in the future with the anticipated population growth.

This demonstrates that if nothing were to be done to change the current status quo of traffic dominance and the existing gyratory design, then traffic congestion problems in the town centre will only get worse as more developments are delivered in the future. The best way to address this is to bring about a change in strategy focusing on sustainable modes and a shift away from car dependency.

Figure 13 Modelling Results Summary

	AM Peak Traffic Reduction			
Option Little C	20%	30%	40%	50%
Option Big C	20%	30%	40%	50%
Option Y	20%	30%	40%	50%

**Modelling Methodology**

As part of the strategy of following a ‘decide and provide’ approach to the town centre environment, instead of using the old ‘predict and provide’ traffic capacity dominated methodology, local traffic modelling has been used first of all to understand the levels of traffic reduction which may be required to deliver each of the options in turn.

The modelling results presented are for the AM peak hour (07:45 to 08:45), which represent the highest traffic flows from the analysed scenarios. Each design option has been assessed against a traffic capacity reduction of 20, 30, 40 and 50% to the baseline traffic.

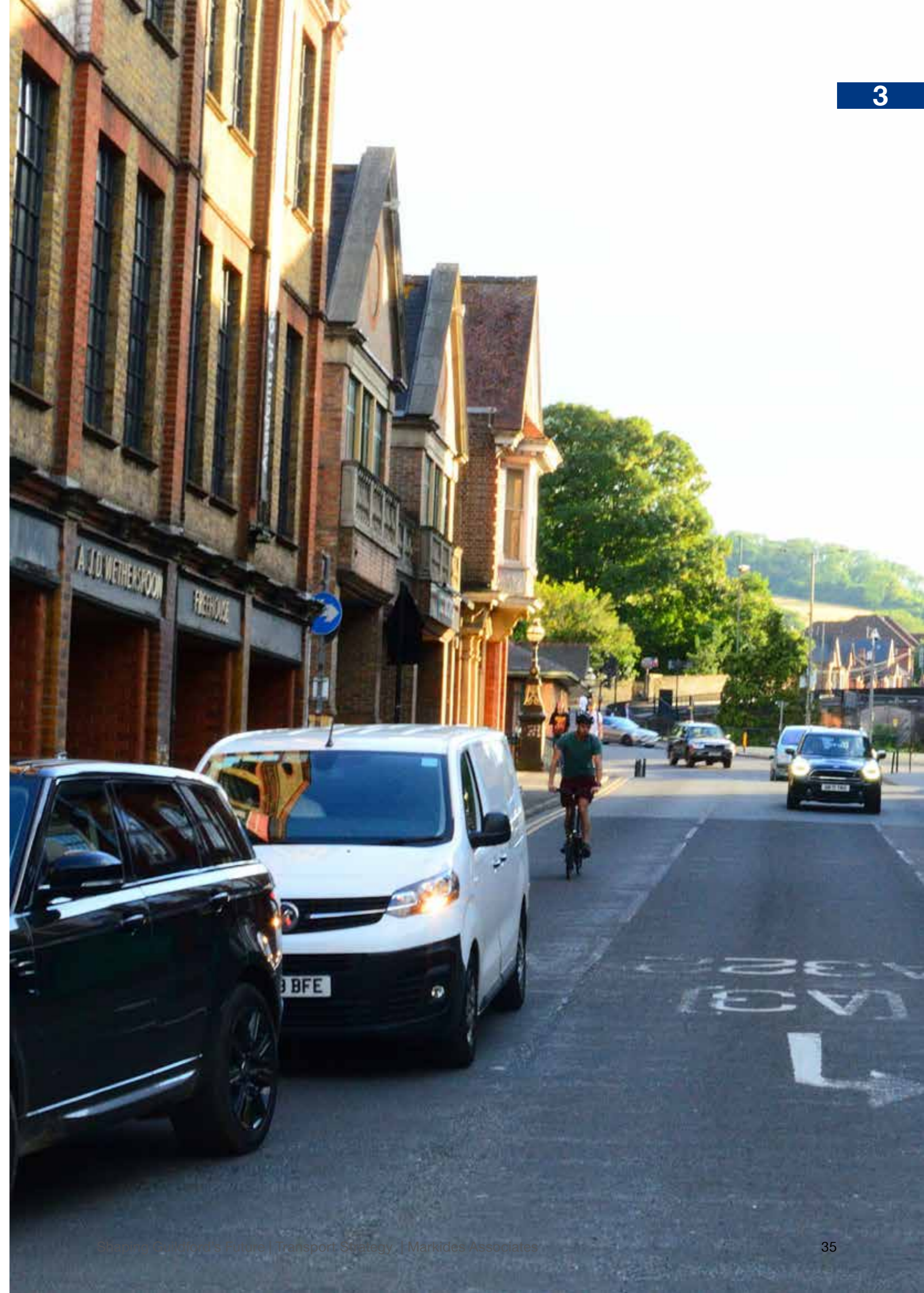
When considering the levels of traffic reduction which might be feasible, even with a bold sustainable transport strategy and significant investment in infrastructure to bring about a cultural shift away from car dominance, more than a 50% reduction would seem extremely difficult to ever achieve. A 30-40% reduction would be challenging, although a lot more achievable over time with the right investment in other modes and a comprehensive approach to managing town centre traffic.

**Traffic Impact**

It is evident that all options cause a degree of traffic capacity reduction and therefore need a reduction in town centre traffic levels to become workable, either through a modal shift, greater park and ride use, or curtailing more journeys before they reach the gyratory as part of the ‘park and walk’ strategy.

Option Y requires the lowest reduction in traffic levels at an approximate reduction of 30%. This will require significant intervention across Guildford to achieve this level of traffic reduction, but it is possible to deliver and has been done successfully in places such as York and Oxford.

Overall, option Y would therefore be our recommendation, on the basis that the local access issues created by shutting Millbrook, could be appropriately managed to the satisfaction of the local communities.





# Chapter 4

## Changing the Way We Travel

### Introduction to Modal Shift Measures

In order to deliver any of the gyratory options appraised and provide an enhanced sense of place across the town centre, with a healthier environment for people, traffic levels would need to drop in the order of 30% or more. This is dependent on which gyratory option is taken forward.

This means, following a ‘decide and provide’ approach to managing traffic levels in the town, that a significant far-reaching programme of measures is required to encourage active travel and bus use. Whilst also introducing measures that discourages car use, particularly by those that choose to drive to and/or through the town centre gyratory.

The following chapter sets out our recommended approach to changing the way Guildford’s population and visitors travel into and through the town centre, covering a comprehensive spectrum of ideas. Some of these are ‘pull’ factors positively enticing people to choose an alternative mode of travel (e.g. building a new cycle lane or providing more frequent buses). The rest are ‘push’ factors attempting to deter the level of car dependency that exists currently and encourage people to think before they defer to their cars (e.g. road charging or less convenient parking).

It is appreciated and expected that some car travel is essential. Whether that is for accessibility reasons or for delivering/picking up bulkier items. But the vast majority of existing travel is not considered to fall in this category. Whilst this strategy is not ‘anti car’, it is instead realistic in what is required to achieve the desirable town centre this project wants to deliver.

This work has been split by mode of travel and policy umbrella to give a targeted set of proposals. The different strands are:

- Active Travel (Walking / Cycling / E-Scooters)
- Buses
- Parking
- Park and Ride
- Workplace Parking Levy
- Road Charging

Whilst this chapter presents a summary of the recommended measures to be introduced, much further detail and analysis has been carried out. This can be found in the accompanying technical notes.



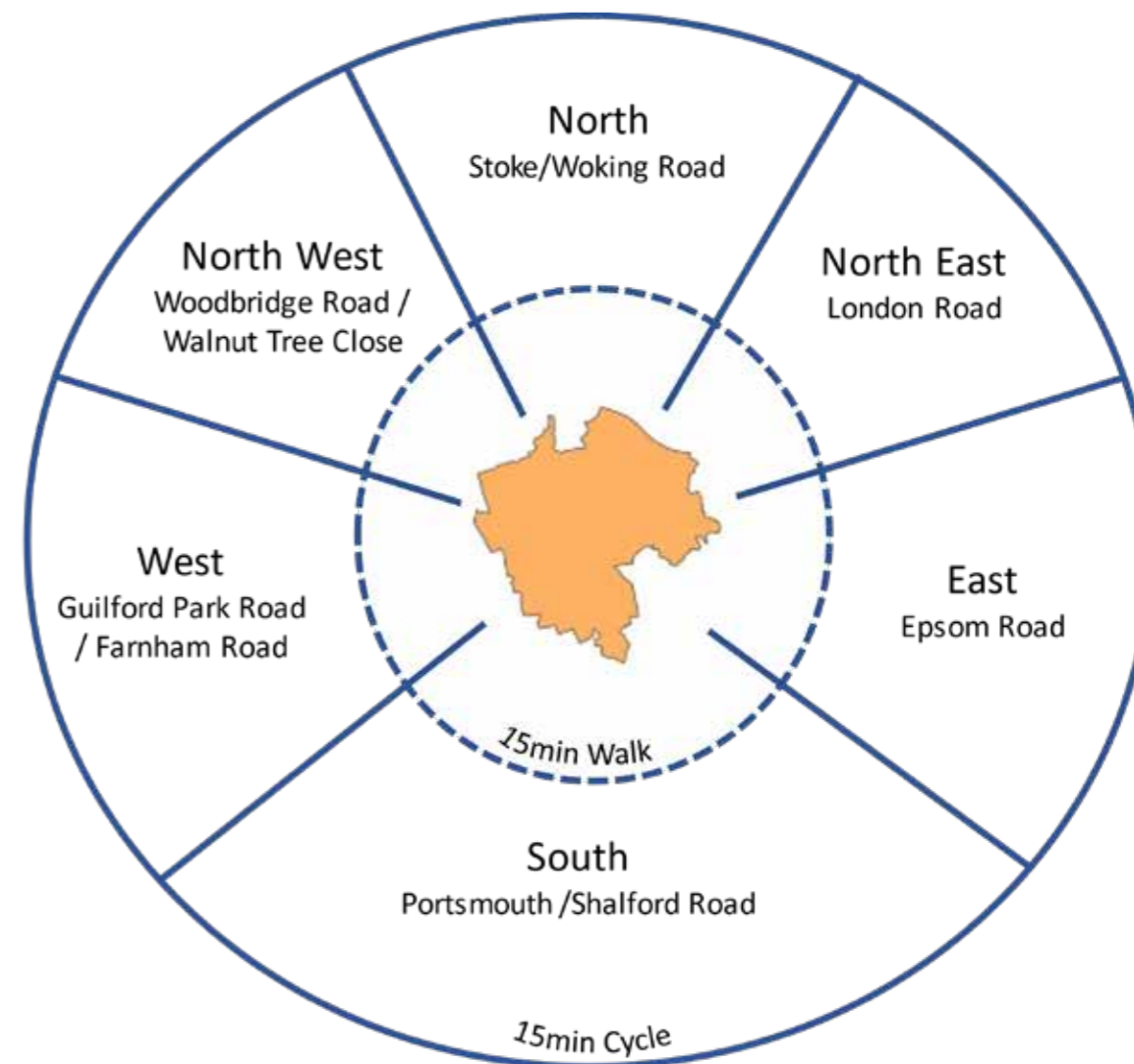
**The Different Sectors of Guildford**

Any solutions to encouraging more sustainable travel in Guildford will have a different level of effectiveness dependent on local geographies and demographics. On this basis, the various measures set out will impact different parts of the town and wider district, to different degrees.

Therefore, in order to ensure that the proposals take account of regional differences, the town has been split up into ‘sectors’ for the purposes of this analysis as shown in the sector breakdown diagram.

In addition, all journeys into the town centre have been split into those considered within a ‘walking catchment’ i.e. up to a 15minute walk or 1.2km from the town centre, and a ‘cycling catchment’, i.e. up to a 15minute cycle ride or 4km away from the town centre. The data has been split like this to understand how the levels of active travel change as the distances travelled increase. This is a further breakdown to the analysis presented in Chapter 2.

**Figure 14** Sector Breakdown





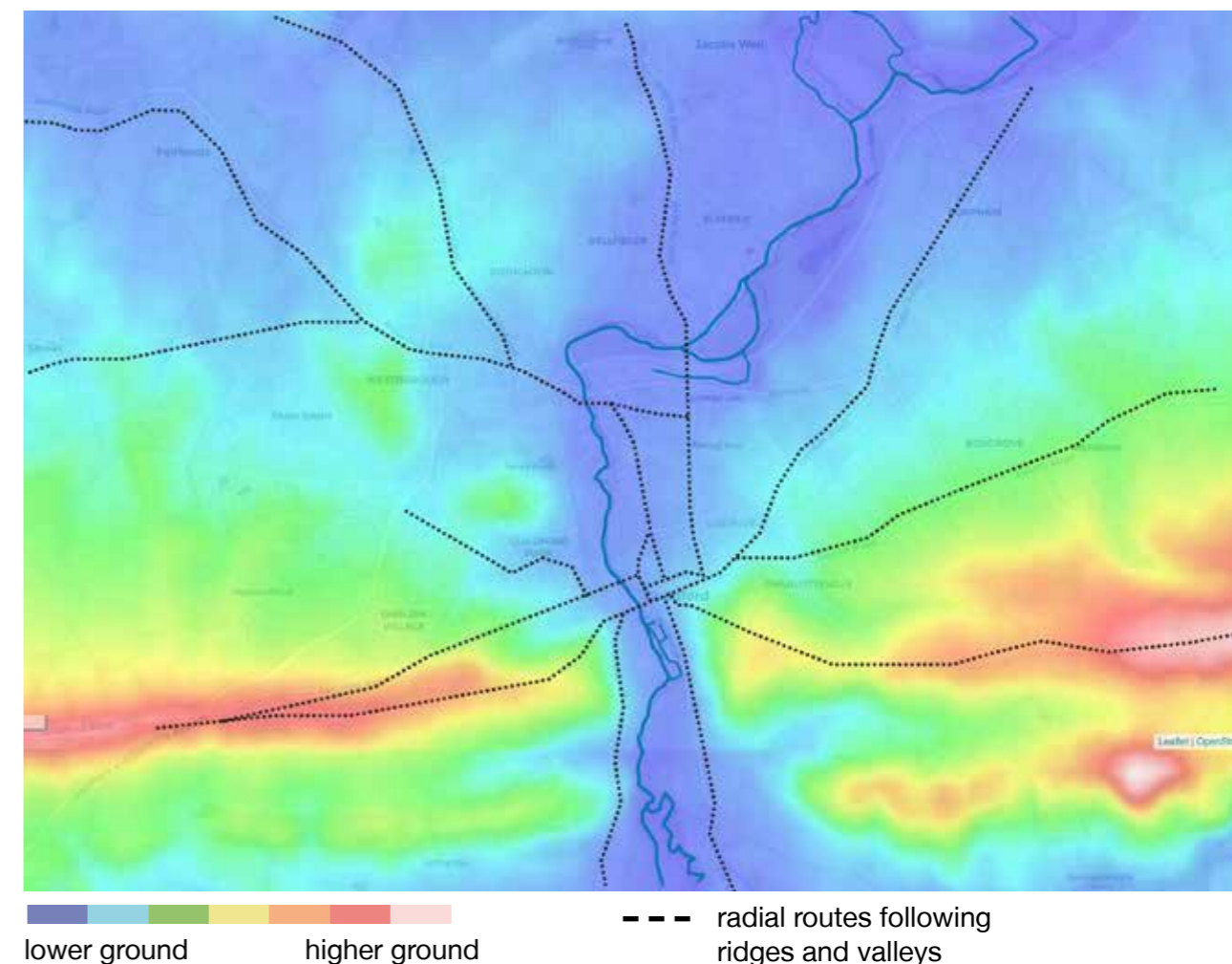
### Active Travel

Active Travel is the collective term for travel on foot, by bicycle, or via scooter. This type of travel, as previously set out in Chapter 2, has a considerably lower share as a proportion of all travel in Guildford compared to the other towns and cities we analysed, including Oxford, York or Cambridge.

This is despite almost all of the Guildford Urban Area and the nearby village of Shalford - approximately 85,000 people - being within a 4km radius of the town centre. Most key attractors, such as major employers, the university and hospital are also within a 4km distance of each other. This is considered an easy cycling distance that could be covered in around 15 minutes (taking account of topography and waiting times at junctions). Of these 85,000 people, an estimated 22,000 people live within a 1.2km radius, or 15 minute walk, from the town centre. The mobile data analysis undertaken points to clear potential to dramatically increase the mode split of active travel on short (<4km) trips to and through the town.

However, there are significant barriers to walking and cycling in Guildford that need to be recognised and – where possible – addressed if a significant uptake of cycling in particular is to occur.

Figure 15 Topography of Guildford



One such constraint is topography. Guildford is a ‘gap town’ located where the River Wey cuts through the North Downs. Cyclists are particularly sensitive to topography with hilliness often cited as a key reason not to choose to cycle.

The use of e-bikes, or e-scooters, will make topography less of a barrier. However, an e-bike is more expensive than a traditional bicycle and will be out of reach for some people. Good cycle network planning will therefore need to carefully consider topography and seek to avoid streets with steep gradients where possible.

Figure 16 Poor Quality Pedestrian and Cycle Facilities



Man-made barriers also pose a problem for active travel. The railway lines and the A3 are further significant barriers to movement that can be seen to divide the town into a number of sectors. These man-made barriers can only be crossed in specific locations where bridges, tunnels or underpasses are provided. These structures are often narrow, poorly lit and poorly maintained, with the needs of cyclists rarely considered in the design.

Improvements to walking and cycling routes from the northwest could significantly increase the number of people using the shops and facilities in Guildford Town Centre, thus help support the local economy and reduce car travel to destinations further afield. This will require a redesign of an existing footbridge over the A3 and A25.

In particular, the barriers between the town centre and the northwest sector are numerous (rail, road and river) and the quality of crossing facilities is extremely poor. It is likely that the severity of these barriers greatly reduces the appeal of the town centre as a destination.

Figure 17 Pedestrian Bridge from Northwest of Guildford over the A3



**Active Travel Network Planning**

The unique topography and morphology of Guildford means there are relatively few routes available for trips into Guildford Town Centre. The most direct and convenient routes are the same for both vehicles as pedestrians and cyclists.

High volumes of traffic along a route is proven to be a major deterrent in choosing to cycle. It also negatively affects the walking experience. Yet, alternative routes for active travel modes away from the main vehicle movements often involve lengthy, or hilly detours which will deter walking and cycling. Therefore, to achieve a mode shift to active travel and provide a credible alternative to use of the car, safe, continuous cycle and pedestrian routes will need to be created closely aligned with Guildford's main road network.

To make cycling feel safe and convenient, measures will need to be introduced to protect cyclists from high volumes of fast moving (>20mph) traffic. This may be achieved by the following:

- Introducing protected tracks (i.e. segregated by kerbs or bollards) alongside the main carriageway.
- Reducing the volume and speed of motorised vehicles along the route to make cycling on the carriageway acceptable.
- Designating alternative routes for pedestrians and cyclists, parallel to the main road corridor.
- Introducing 'modal filters' that act as a virtual gate, allowing only certain modes of transport to pass through, normally restricted to buses and cyclists.

**Figure 18** Active Travel Desire Lines

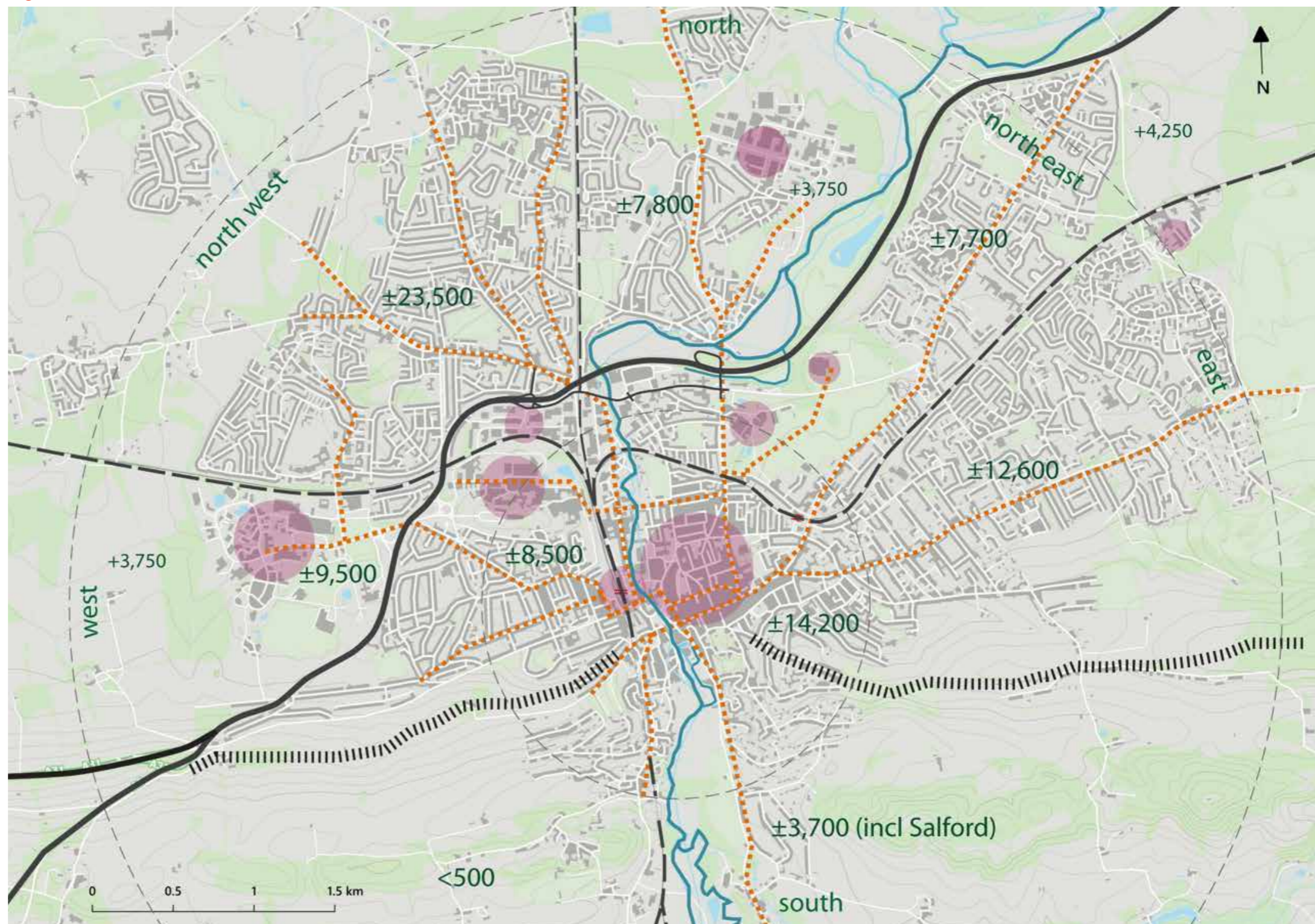




Figure 19 Examples of Cycle Provision



Bi-directional protected track



Light protected track with "wands"



On street cycle lane (not protected)



Contraflow cycle path



Camera controlled modal filter allowing access for buses and taxis



One-way (stepped) protected track (right) and on street cycle lane (left)

### Measures to Improve the Active Travel Network

The strategy to improving the active travel network includes two key aspects:

- Introduction of high-quality cycle facilities to increase a mode shift to cycling for trips that may be considered beyond a comfortable walking distance - i.e. trips over 1.2km.
- Improvement to conditions for walking to increase the mode shift for trips within easy walking distance (<1.2km)

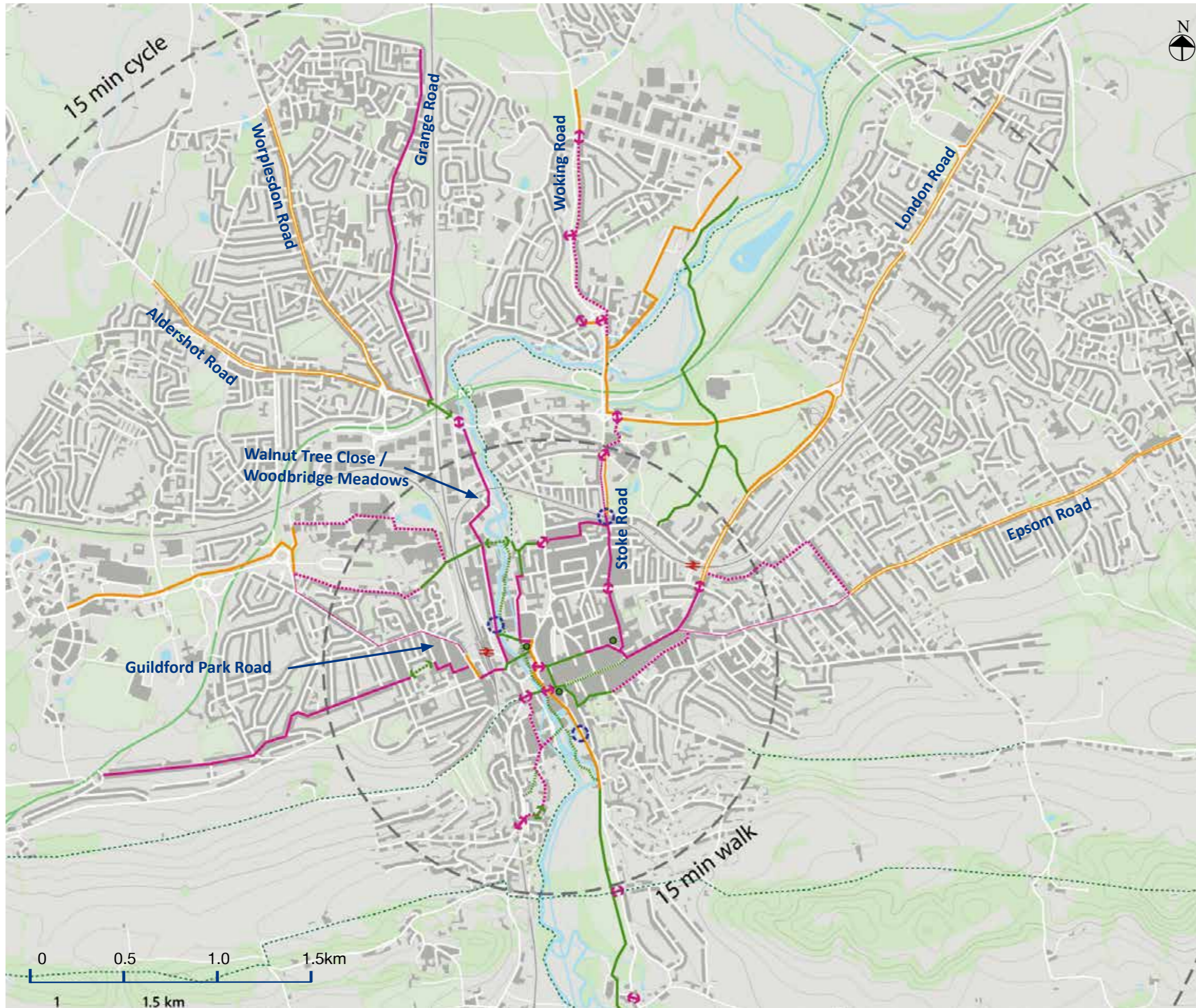
Improvements to conditions for walking are not solely highway related. As well as the need for sufficient pavement widths and safe and convenient crossing facilities, pedestrians are strongly affected by the quality of the environment. Key issues in Guildford are the dominance of traffic and poor quality of the built environment in large parts of the town centre. These are intrinsically linked with wider proposals to redevelop key sites and re-design the gyratory as envisaged in the Shaping Guildford's Future Plan.

A high-level design approach is set out in Figure 20.

The proposed cycling interventions build on the initiatives included in Guildford Cycle Route Assessment (*Transport Initiatives & Urban Movement, May 2020*) and go beyond the measures that were considered in the report. It also supports the Sustainable Movement Corridor policy that is already being implemented by GBC.

Our proposals include a mixture of segregated tracks, low traffic streets and active travel only paths. The network mostly follows the main road corridors. Where they divert away from the main corridors, they have been classified as 'parallel routes'. These have only been used as a last resort, as they compromise convenience and legibility of the network.

Our more detailed Active Travel Technical Note (*MA, June 2022*) breaks down these improvements further, reviewing each key road corridor in Guildford and the measures that could be introduced to improve active travel.



**Figure 20** Active Travel Network

- Segregated tracks adjacent main roads
- Bi-directional track along main road
- On-street cycling on strategic routes / desire lines (traffic calmed / 20mph streets / cycle lanes)
- - - On street cycling on quieter streets that run parallel to the strategic route (close to desire lines)
- Active travel only tracks and pedestrianised streets
- - - Recreational paths (active travel only)
- - - Pedestrian only paths
- ⊙ Modal filter
- ↔ Road crossing improvements
- ↔ New link (bridge / tunnel or at surface level across private land)

**Active Travel Network Within the Town Centre**

The design of the active travel network in the town centre needs to:

- Provide safe and convenient provisions for east-west and north-south movements.
- Identify locations for secure cycle parking, including long-term covered facilities.
- Seek to enhance the pedestrian environment through the reduction of traffic dominance and the creation of pedestrian-priority streets and spaces.

These objectives are strongly interlinked with other elements of the Shaping Guildford's Future Plan, particularly the options for the re-designed gyratory and a review of vehicular access arrangements throughout the town centre.

The three main east-west routes to be incorporated in a town centre master plan are:

- TC1 - Guildford College / Stoke Park to Walnut Tree Close, the university and employment sites west of the river. This route is proposed to follow existing low traffic streets linking to a new pedestrian and cycle bridge across the river near Dapdune Wharf river in line with Yorkies Bridge.

- TC2 - North Street to railway station and Walnut Tree Close. This requires a contra-flow cycle lane on the one-way section of North Street (TC2a) and a new crossing over Onslow Street linking to a proposed bi-directional cycle track along Onslow Street (TC2b). This would provide ongoing connections to Walnut Tree Bridge and Friary Bridge or alternatively Onslow Bridge (subject to the preferred gyratory design). Friary Bridge (or Onslow Bridge) is to be closed to all traffic, except cyclists and pedestrians (TC2c). Widen pavements and introduce a 20mph speed limit on Farnham Road Bridge (TC2d).
- TC3 - Sydenham Rd / Castle Street to Millmead via Old Town Bridge. Sydenham Rd and Castle Street would form an alternative route to the use of the High Street. Although the High Street forms part of a national cycle route, the cobbles make it uncomfortable for cyclists. Castle Street is currently a narrow one-way street without space for the provision of a contra-flow cycle lane. The proposal is to close this route (TC3a), as well as the bottom of the High Street (TC3b), for general traffic and make it a pedestrian and cycle street only.

**Figure 21** Active Travel Network in the Town Centre



- Bi-directional track along main road
- On-street cycling on strategic routes / desire lines (traffic calmed / 20mph streets / cycle lanes)
- - - On street cycling on quieter streets that run parallel to the strategic route (close to desire lines)
- Active travel only tracks and pedestrianised streets
- - - Recreational paths (active travel only)
- - - Pedestrian only paths
- ⊙ Modal filter
- ↔ Road crossing improvements
- ↔ New link (bridge / tunnel or at surface level across private land)
- Cycle hub (parking, charging, hire)

The two main north-south routes to be provided include:

- TC4 - Shalford Road to Bedford Wharf via Friary Street / Millbrook. One of the key aspirations of the Shaping Guildford's Future Plan is to link the town centre to the riverfront by the removal of traffic from Millbrook and redevelopment of the Friary Court building to introduce new buildings with riverside terraces set directly on the river Wey. If this were to be delivered, a cycle route following the alignment of the existing Friary Street needs to be incorporated (TC4a). This would avoid conflicts between cyclists and outdoor terraces.
- TC5 - An enhanced riverside path linking the Shalford Road car park to Millbrook via a new bridge at the Yvonne Arnaud Theatre is proposed as set out in Route 5 (TC5a). An enhanced riverside path in the town centre would form an intrinsic part of the "Shaping Guildford's Future" redevelopment proposals (TC5b). A new link across Bridge Street to Bedford Wharf by breaking through existing buildings may be considered (TC5c). Alternatively, the pedestrian route could follow Onslow Street on a widened path alongside the proposed bi-directional cycle track (TC2b). The redevelopment of Bedford Wharf is to include a riverside route for pedestrians and a cycle route through the centre to link with the new river crossing at Dauphine Wharf (TC1a).



### Cycle / E-Scooter Parking

New cycle hubs, providing cycle parking, electric bike charging, cycle and scooter hire should be located near Bedford Wharf, towards the eastern end of North Street and the western end of the High Street. Options to incorporate such a facility within existing parking structures or within vacant units should be reviewed. These hubs should act as longer term parking options for commuters and long-stay visitors in the town centre.

Cycle stands for short term parking also need to be provided throughout the town centre.

**Buses**

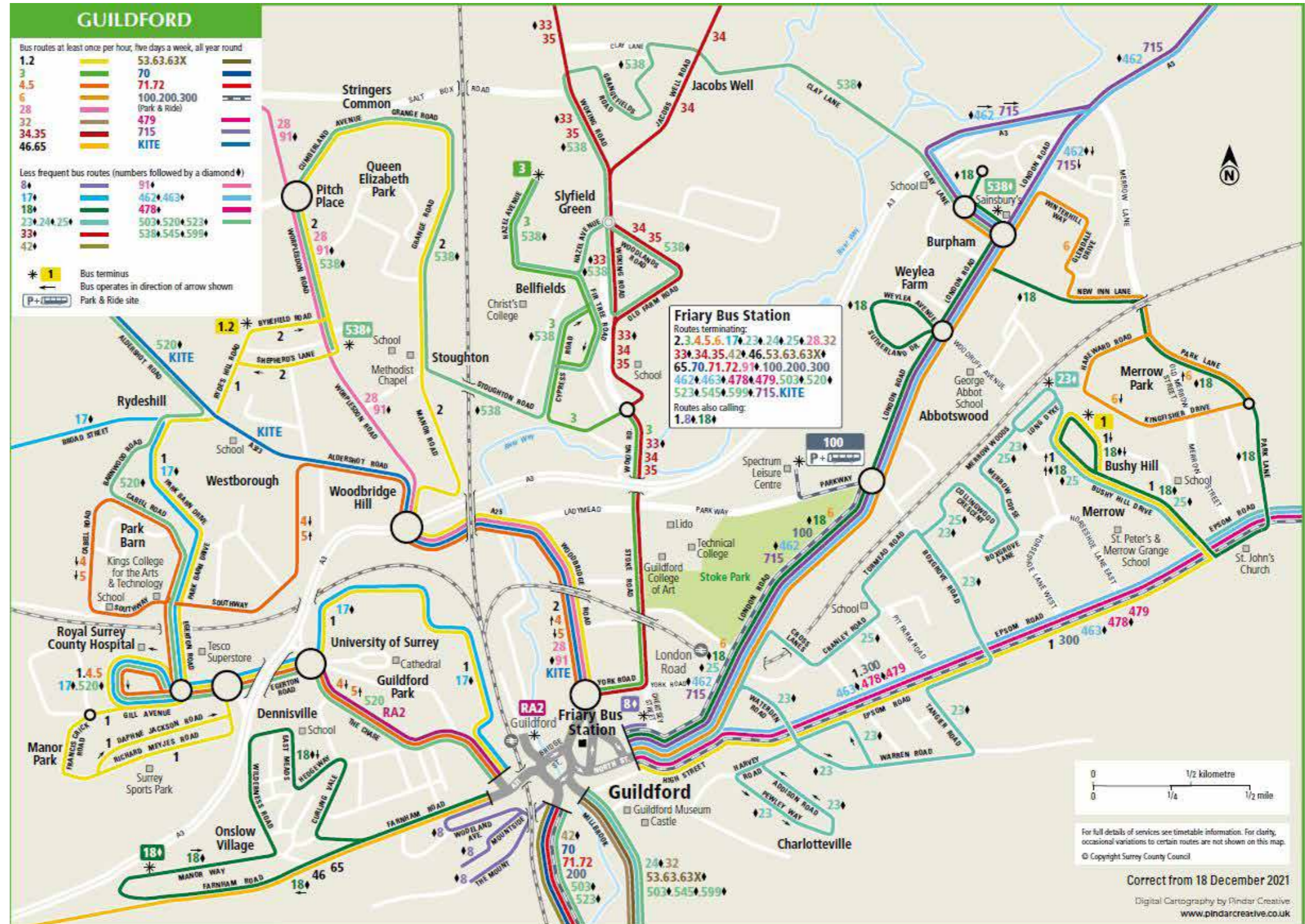
Buses in Guildford are already an important part of the transport network, with the current system accounting for 8% of all commuting trips into the town centre (as of 2011). However, this is a lower proportion than Peterborough (17%), Bath (12%), York (14%), Oxford (31%) or Cambridge (13%). So clearly more can be done to encourage people to travel by bus, which in turn would reduce car use.

However, like across the UK, the pandemic and its medium term aftermath has decimated bus services and led to a decline in frequencies and reliability. If buses are to become a major spoke of this transport strategy, significant investment is required to reverse this trend and grow bus demand again. This will partly be spearheaded by central government funding through its 'Bus Back Better' policy.

The journey time reliability of buses, access to buses (i.e. living within a 400m walk of a good bus stop), frequent services and passenger information are all critical aspects to be improved.

There are currently 40 bus services in operation (excluding park and ride services) covering the Guildford area, of which 22 have a frequency of at least 1 bus per hour.

**Figure 22** Guildford Bus Services





### Current Bus Stops and Bus Frequencies

Current access to bus stops in Guildford is good. There is an extensive spread of stops which means that nearly all of the urban area falls within a 300m catchment of a stop. However, these stops are serviced to varying levels, with some having frequent bus services stopping and others less than once an hour.

Figure 23 visually shows the bus stops in Guildford that have what we consider a medium frequency (3 buses an hour) or high frequency (6 buses an hour). As well as the catchment area of these stops to demonstrate how much of Guildford is within a 300m catchment (or 400m walk) of more frequent bus services.

The majority of key corridors into Guildford are well serviced by medium frequency routes, with the exception of Farnham Road. The University, Research Park and Slyfield Industrial Estate also lack medium frequency services. However, only a small area in the north-west of Guildford has access to high-frequency 'turn up and go' services. This means that the majority of Guildford needs to plan their journeys out to a timetable, which will suppress demand.

Figure 23 Medium and High Frequency Bus Stops

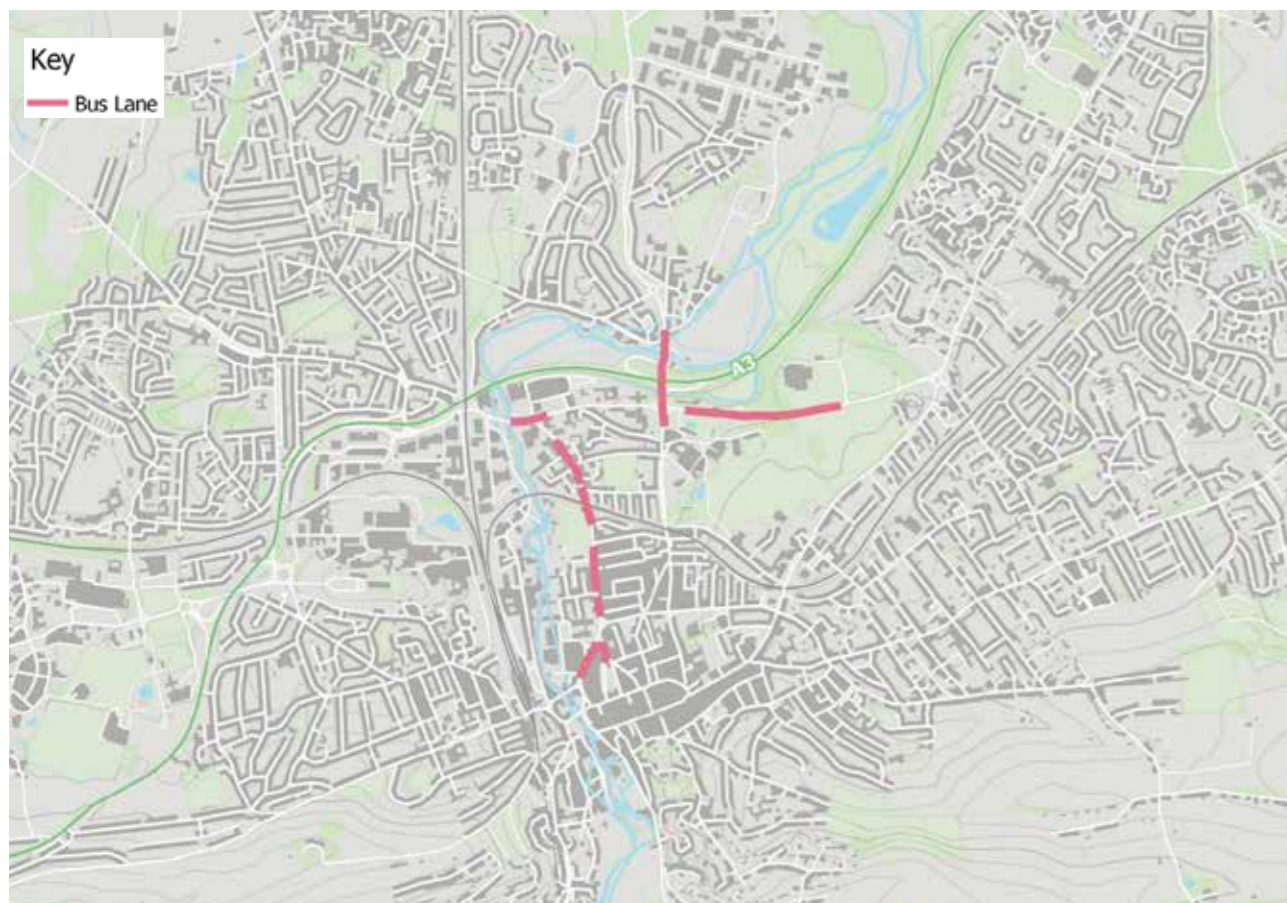


**Existing Reliability Issues, Journey Times and Fares**

Current journey times into the town centre by bus from the wider urban area average out at around 15-20 minutes. However, the reliability of buses in Guildford is a problem in certain areas. A review of traffic data has found locations of heavy congestion in the peak periods, which buses are not sufficiently protected from. This includes Farnham Road and London Road in the morning rush hour; and the A25 at Dennis Roundabout and Stoke Road in the PM peak.

Bus fares in Guildford are more expensive than other towns or cities. A single journey to the town centre from Burpham costs £2.90 or a return is £4.60. A journey could cost even more if a change of bus at the bus station is needed to complete an onward journey to e.g. the hospital. This compares negatively with the cost of buses in London, which have a flat fare of £1.65 per journey. London also has a ‘hopper’ fare meaning the fare remains at £1.65 per journey regardless of how many times you change bus.

**Figure 24** Bus Lane Provision



**SCC Bus Service Improvement Plan (BSIP)**

SCC have already committed to a number of improvements to bus services across the county as detailed in their Bus Service Improvement Plan (BSIP). This is a document that has been drawn up by in delivery of the government’s ‘Bus Back Better’ policy.

As part of the BSIP, a number of key performance targets have been developed for the Guildford area as shown in table below, including an increase in passenger numbers of 7% by 2024/25 compared to 2018/19 levels. This aligns well with the needs of Shaping Guildford’s Future to encourage increases in bus travel.

In order to meet these targets, SCC have set out the following range of measures:

- **Bus Frequency** – 75% of new capital and revenue investment to be invested in category 1 bus services, enhancing these routes to operate at least every 30

minutes across the daytime, and hourly in the evenings and Sundays. This should include a number of Guildford bus routes.

- **Fares and Ticketing** – Options for discounted travel schemes to be reviewed including: free travel for young carers; young persons half fare scheme; and discounted travel for people starting work from unemployment.
- **Bus Priority Measures** – £9 million in funding for bus priority schemes has been allocated. This funding will be targeted at category 1 services and includes funding for junction improvements, bus lanes and traffic signal bus priority in Guildford amongst other areas.
- **Electric / Zero Emissions Buses** – £32.3m of capital funding to accelerate the introduction of more zero emission buses into Surrey between 2022 and 2024, as well as £6.3m to electrify the community transport fleet in the county
- **Real Time Passenger Information** – £1.4m for more real time passenger information

**Figure 25** BISP Targets

	2018/19	2019/20	Target for 2024/25
<b>Average Speeds</b>	-	12.73mph	<b>+5%</b>
<b>Passenger Numbers</b>	7.97m	7.24m	<b>8.53m</b>
<b>Average Passenger Satisfaction</b>	60%	56%	<b>66%</b>
	Nov 2019	June 2021	Target for 2024/25
<b>Reliability (% of services arriving within time target)</b>	78.5%	87.2%	<b>90.2%</b>

**Further Measures Recommended**

The commitments within the BSIP by SCC will certainly help to achieve their targets for increased bus use, but we believe there is more that can and should be done to realise the full potential of bus travel in Guildford. We have therefore set out a list of additional recommended measures to go further and faster in enticing people from their cars and onto a bus.

**Bus Frequency Provision**

There is a need to improve the bus frequencies and access to stops in certain locations, such as Farnham Road, in order to encourage greater modal shift. Although Farnham Road is a particular area of weakness, bus frequency could be improved on the majority of corridors into the town centre (bar possibly Woodbridge Road).

The average frequency across all of the 9 key bus corridors/routes is currently 5 buses per hour. Therefore, looking at Guildford’s bus service frequency at a macro level, the town is not providing what we consider a ‘high level’ frequency bus services.

Looking at the town from a sectoral viewpoint, it is recommended that the focus is on the east and west directions. These sectors have higher populations than the south, and the topography is hillier which means that there is more potential for an increase in bus use.

**Bus Reliability**

There is a need to improve the protection of buses in Guildford in order to increase the reliability of the network and make this form of public transport more appealing. The key corridors of Farnham Road, London Road, and Woking Road all experience high levels of traffic with limited or no bus lane provision.

One location that could be redesigned to accommodate a bus lane is on the A25 westbound approach to Dennis Roundabout, which is a proposal that should be taken forward for further consideration.

Another option is modal filters. A modal filter on Stoke Road would reduce traffic along this route and therefore would reduce congestion, avoiding the need to provide a bus lane.

Differential bus priority should be considered at all traffic signal junctions along these routes where bus lanes are not an option, e.g. the A25 / Stoke Road junction.

**Bus Fares**

Current bus fares in Guildford are considerably higher than those in London. In order to encourage an increase in bus use the possibility of cheaper fares should be explored. With the possible introduction of road charging and/or a Workplace Parking Levy there is the potential to subsidise bus fares through the revenue generated from these schemes. In doing this, buses will become a more attractive alternative to the car and usage may therefore increase.

The adoption of a London style hopper fare could address the issue of cross-town journeys, where currently a change at the bus station is needed. A hopper fare like the one in operation on TfL services would allow this interchange to take place for free if this takes place within an hour of the start of the journey, and therefore will encourage greater bus usage facilitating a less complex and cheaper network.

**Other**

Better connectivity to the train station by bus would help facilitate a higher train usage in the town and avoid people driving to the town centre and parking to use the train station. Currently, due to no cross-town services, people travelling by bus from the east that are wanting to use the train station, must walk from the bus station. A service connecting this sector of the town to the train station would likely decrease the amount of people driving into the town centre to use the train station.

The current operation of bus routes in Guildford means that in order to travel from the east of Guildford to the West or vice versa, an interchange is needed at the bus station. The introduction of services providing through routes in the town, connecting the east to the west would resolve this and reduce the need to change at the bus station. Furthermore, these buses would not necessarily need to stop at the bus station, perhaps stopping on Onslow Street instead, utilising the increased road space as a result of the new gyratory design.

Current data on the number of buses, reliability, and patronage by service is limited due to data being commercially sensitive. There is a need for a system that records and monitors these elements in order to better understand current patterns. If such data is already available to SCC, this should be made available to GBC planners unredacted.

It is also recommended that funding into bus information technology is allocated to provide things such as tracking/estimated time of arrival and timetables on digital apps and at bus stops. In doing this, using the bus network in Guildford becomes more navigable and accessible to the public and therefore there is more likely to be a modal shift from motorised vehicles. It is likely the £1.4m allocated to this across the county in the SCC BSIP will not be enough to address this need and further funding would likely be needed.



## Parking

### Town Centre Car Parks

The Council operates a total of 23 car parks within Guildford, which currently provide 4,641 standard and 76 accessible parking bays.

The overall stress level for off street parking is at 72% on a weekday and 71% at the weekend. This indicates there is spare capacity and room to accommodate future car park changes. These figures are

from 2022 and do therefore include some reductions in demand compared to pre-Covid. It is possible demand could therefore increase slightly in the future.

In addition to this, GBC manages on street parking in Guildford on behalf of SCC with a total of 599 on-street spaces operated in the central core of the town centre.

Figure 26 Council Operated Car Parks (Standard Bays)



Figure 27 Park and Ride Sites



### Park and Ride Sites

There are also some 1,884 park and ride spaces in 4 facilities. Park and rides are operated by SCC with bus services being operated commercially. Three of the four sites are currently closed or operating at a reduced capacity. It is expected these will gradually return to use in time, although demand for them is suppressed due to the long term societal changes after the pandemic (e.g. more people working from home).

### Parking Strategy

The parking strategy should complement the overall town centre strategy of encouraging more people out of their cars and to travel by more sustainable modes. Changes to the town’s parking strategy are a ‘push’ factor that help ensure the positive active travel and bus measures bring results. This means that the parking strategy should:

- Seek to reduce town centre traffic;
- Encourage park and ride and use of active travel modes;
- Encourage park and walk, with motorists parking at the edge of the centre and walking to their destination;
- Help improve the town centre’s air quality.

These aims need to be achieved while providing sufficient parking to enable the town centre to continue to thrive and to maintain where possible a strong net income stream from parking that can help fund other transport measures.

The basic longer-term principles of the town centre parking strategy should be:

- Focusing shopper/short-term parking in key edge of centre high-quality premium parking areas, while reducing other town centre car parking stock over time;
- Encouraging all car park users to use other modes, in particular for those shorter journeys within the Guildford urban area, where there is more travel choice;
- Slowly reducing long-term use of these car parks, encouraging these users to move to sustainable modes or park and ride;
- Encouraging no or low car parking in new development in the town centre.

The town centre car parks have been categorised in terms of:

- The core long-term larger ‘park and walk’ car parks on the edge of the centre (Bedford Road, Millbrook, Farnham Road, G Live, York Road) - the quality of these and the walking routes from them to the town centre require varying degrees of improvement. Consideration should be given to increasing the capacity of the Millbrook car park.
- Two other larger centrally located car parks (Castle and Leapale) should be retained for now but could be considered for redevelopment in future, as their location attracts traffic to the core central area of the town.
- Other smaller mainly surface car parks should be considered for redevelopment, or re-purposing (cycle parking, greening, etc.) over time.

### Recommended Town Centre Parking Stock Strategy

A gradual decrease in town centre spaces is the recommended strategy over time.

Alongside this decrease in available town centre spaces, we envisage park and ride capacity to increase, whether this be by a new park and ride facility, or an increase in the capacity of existing ones. It is anticipated that this increase in park and ride coverage will compensate for the loss of town centre spaces, as long stay car park users shift to park and ride.

Figure 28 Short Term Town Centre Car Park Reductions

Car Park	Parking Bays	Reason For Change
Portsmouth Road Surface	98	SGF Masterplan (Town Wharf)
Bedford Road Surface	68	SGF Masterplan (Bedford Wharf)
Mary Road Surface	107	SGF Masterplan (Bedford Wharf)
Commercial Road Surface	52	North Street Development (Outside of SGF)
Old Police Station Surface	62	North Street Development (Outside of SGF)
Bright Hill Surface	63	Other Development (Outside of SGF)
Robin Hood Surface	23	Other Development (Outside of SGF)
Guildford Park Surface	222	Other Development (Outside of SGF)
North Street Surface	49	North Street Development (Outside of SGF)
Millmead / Bury Road	27	SGF Masterplan (Flood Defences / Park)
<b>Total</b>	<b>771</b>	

In addition to this, improvements to the walking and cycling routes on the key corridors into the town centre should facilitate an overall decrease in car use and an increase in modal shift to active modes. As a result, less town centre parking will be required and supply should be sufficient to meet demand, whilst also achieving the goal of improving the town centre’s air quality.

The masterplan has currently been designed in such a way that will allow for the retention of any car parking which will be redeveloped as a direct result of SGF. We are of the view that there should be a gradual reduction in parking stock. Allowing these car parks to be redeveloped (and not re-provided) will gradually lower the parking stock, which in turn will incentivise other modes of travel. Without reducing the supply of town centre parking, it cannot be expected that significant numbers of people will stop driving. Any loss in revenue from the reduction in parking numbers can be made up by higher parking charges for long stay and/or other means, such as WPL.

The reductions in the short term parking supply created by redevelopments in the town centre can be accommodated by better utilisation of some of the existing car parks (e.g. Farnham Road), with weekday occupancy increasing to 86% of all spaces across the town centre. In the medium and long term provision could be lowered further by the closure of some inner town centre car parks (e.g. Castle MSCP) whilst still meeting demand if the levels of modal shift for the gyratory are realised and more long-stay parking is shifted to park and ride sites.

### Town Centre Parking Revenue

The revenue generated by car parking for GBC is an important consideration in this strategy but should not be used as a basis for preventing future reductions in parking stock. Whilst a gradual reduction in the overall parking supply will eventually lead to a likely reduction in revenue, there are a number of factors to consider where costs could be recovered:

- In the short term there is unlikely to be any loss in revenue despite the proposed closure of 733 bays. There is currently a surplus of parking in the town centre which is not fully utilised at present. After closing these spaces, based on current demand, the levels of occupancy will average 85% across all car parks.
- In the medium to longer term, as the quality of the town centre parking stock is improved and it becomes a scarcer resource, with viable alternative options to driving and better park & ride services are in place, it would be justified to raise the costs of the remaining town centre parking.

- In addition, future revenue generation measures such as a workplace parking levy and/or road charging could help to offset a loss of town centre parking revenue.
- Extra income in the form of council tax and business rates can be generated by developing new property on top of the existing town centre car parks. Surface only car parks could be decked or converted into multi-storey car parks in order to make more efficient use of available land and free up room for revenue generating development.
- Growth in park and ride revenue by transferring longer stay parking from the town centre would also help to offset lost revenue in the town centre.
- There is the possibility of revenue that could be generated through EV charging stations provision.

### Park and Walk Approach

‘Park and Walk’ refers to the approach whereby the majority of town centre parking needs are captured before someone has driven to the gyratory, with drivers then walking a short distance into town to complete their journey.

We believe the core long-term larger park and walk car parks should be Bedford Road, Millbrook, Farnham Road, G Live and York Road. The quality of these and the walking routes from them to the town centre require varying degrees of improvement.

Figure 29 Pedestrian Routes to Key Car Parks



Consideration should be given to increasing the capacity of the Millbrook car park to offset loss of spaces elsewhere and reduce the levels of traffic driving through the gyratory to reach the town centre.

The figure above shows the pedestrian routes to the town centre from the park and walk sites and the time taken to walk from each car park. As part of the ‘drive to not through’ strategy, it is important that improvements to the pedestrian links from the key car parks to

the town centre are considered. In doing this, people are less likely to be attracted to car parks in the heart of the town centre, thereby reducing gyratory traffic.

Improvements to the pedestrian routes to the town centre from the key edge of centre car parks, should result in a reduction of cross gyratory car trips which will also help to remove pressure at the new gyratory design.



### Park and Ride Strategy

The table in Figure 30 summarises the broad recommendations for potential changes to individual park and ride sites in Guildford. The public transport strategy should focus on seeking to improve bus journey times to the centre. Given the proposals for an increase in revenue for transport through measures such as a workplace parking levy, consideration should be given to reducing the cost of park and ride for travellers. This could be used to lower bus fares, charging for parking instead of the bus, or price reductions for additional passengers (i.e. car sharing)..

Figure 30 Park and Ride Strategy Options

Park and Ride	Description
Onslow	Possible new slip road off the A3 directly into the site.
Artington	Possible increase in capacity, particularly if through traffic is restricted on the Shalford Road.
Spectrum	Potentially replaced by the new Gosden Hill Site.
Merrow	Potential to increase capacity in the long term.

### Complimentary Proposals

**Town centre parking standards:** Our recommendation is to adopt a car-free strategy in the town centre, and low-car outside of the town centre area for new residential developments. Car-free developments should include parking provision for disabled drivers, visitors, and deliveries only. A car club could be part of the site wide transport strategy.

**Car park VMS guidance:** There is an existing dated system which SCC is considering renewing. This is welcomed, and ideally the system should include both park and ride and the core town centre car parks.

**Pricing:** Over time, as the core town centre car parks become higher quality and a more premium and scarcer product, it is likely that the prices in these car parks will be raised. This should enable the Council to continue to have a reasonable revenue stream from parking despite the loss of some spaces. In addition to this, there will be a decrease in maintenance costs due to a reduced amount of car parks in operation.

**On-street parking:** On-street parking should be prioritised for very short stay and disabled use. It is also recognised that some on-street parking may be lost due to townscape improvement schemes or walking and cycling infrastructure improvements may require some reduction. In addition, some on street bays should be considered for conversion to cycle parking and/or greening schemes.

**Electric Vehicle Charging:** This should be rolled out to support a reduction in vehicle emissions. SCC are developing a 'concession scheme' with an EV provider which will enable this and allow for the provision of charging locations across both economically viable and less viable locations. Any additional revenue generated could help offset the loss of revenue from any future car park changes.

## Workplace Parking Levy

A Workplace Parking Levy (WPL) is a licensing scheme for active workplace parking spaces. It charges employers and education providers for the number of spaces they provide that are occupied by employees, students, or other relevant persons. A WPL is a charge on workplace parking spaces used for commuting - one of the main causes of peak-period congestion and pollution in urban areas.

The principle of the scheme is to place a modest charge upon the use of commuter parking places, to encourage employers to manage and potentially reduce the amount of free workplace parking spaces they provide and promote the use of sustainable modes of transport. It also provides the town with a source of revenue for funding a step change in the provision of public transport infrastructure and services.

A WPL can only be introduced by a highway or a unitary authority and is governed by legislation in the Transport Act 2000, and the Workplace Parking Levy (England) Regulations 2009. Any scheme requires the consent of the Secretary of State for transport.

The Nottingham WPL scheme is the most well known in the UK and commenced full operation in 2012. It is understood that a number of other cities are actively considering a WPL, including Leicester, Reading, Edinburgh, Glasgow, Cambridge, and Bristol. TfL encourages its application in London.

## Nottingham Example

In Nottingham the revenue has been used to fund the extension of the Nottingham Express Transit tram network, bus services and other transport measures. There are approximately 25,000 spaces to which the levy applies at 500 workplaces out of a total of nearly 3,000 workplaces in the city.

The scheme had a number of exemptions and/or discounts including businesses with 10 or fewer parking places, blue badge holder parking places, fleet and delivery vehicles and occasional business visitors. The current charge is £428 per annum per parking space and the scheme now raises approximately £10 million per annum.

The key effects of WPL on travel demand and mode choice were as follows:

- The largest effect is due to the public transport improvements paid for by the levy and in Nottingham there was an approximately 9% decline in traffic and an increase in the use of the tram and the bus network.
- If the employee pays the levy, they have a financial disincentive to drive to work, however, the levy is relatively low in cost, and it is not thought that this has a major effect. However, some 80% of the largest employers do pass the levy charge onto their employees.
- In Nottingham there was a reduction of approximately 25% of parking spaces in the initial implementation, as a result of WPL.

- Reducing car parking provision and demand can help lead to redevelopment in the longer term, particularly on brownfield sites or increases in density which given that these are within the urban area helps to encourage the use of sustainable modes.

There is no evidence of any significant negative economic impact in Nottingham.

## WPL in Guildford

Any Guildford scheme would likely include all of the urban area of Guildford, given that commuting by car to the urban area, not just the town centre is a problem, and schemes funded by the WPL will benefit all of the urban area. It is typical to exclude businesses with 10 or fewer parking spaces to reduce any impact on smaller businesses.

Assuming approximately a quarter of the Nottingham revenue would apply in Guildford the net revenue from a WPL could be in the region of £2-3 million per annum. The time scale for introduction of a WPL scheme is likely to be approximately three to five years.

Early indications are that the costs of implementation of a scheme could range between £0.5 and £1.25 million (*Birmingham City Council, 2019*) and the operational costs could be approximately 10% of the revenue.

There are a number of ways to phase in a scheme with full consultation with businesses and to ensure that the overall levy cost is reasonable in relation to business cost.

A WPL scheme in Guildford has the potential to be one of the most significant measures that can enable the growth in the use of sustainable travel in the coming decade. It will represent a very important funding stream which can be 'ring-fenced' for Guildford's transport investment, with the potential to:

- Subsidise bus or park and ride services, and perhaps even reduce the cost of these to users – there is often a critical lack of revenue support for these services which are essential to Guildford's sustainable future.
- Implement bus, walking and cycling infrastructure improvements.
- Provide other incentives, for example, a discount on e-bikes for residents.
- Other behaviour change measures.



## Road User Charging

Road User Charging (RUC) is a policy aimed primarily at making the costs that motorists pay more closely reflect the costs to others from externalities, such as air pollution, noise and safety and can also be used to pay for road infrastructure costs (e.g. toll roads). RUC can also be used to create Low Emission or Clean Air Zones, and there are several successful UK and international examples of such schemes. Road user charges are not taxes, and non-compliance with a ‘charge’ can be pursued as a debt or a ‘civil’ offence like parking infringements.

RUC can be introduced flexibly, with charging at a point (toll) over an area (cordon) or by distance. A range of options also exists for implementation, which can include varying the amounts charged and exemptions or reduced fees for particular vehicles or groups of people. Charges can vary by time of day, vehicle class, or a combination of vehicle type and assessment of emission standards.

There is currently pressure from some stakeholders for the introduction of a national scheme of RUC to provide a perceived funding solution for roads as the current income from motoring taxes is set to diminish in the next two or three decades as the result of a move to low emission vehicles.

There is existing legislation for RUC introduction and any traffic order would need to be implemented by Surrey County Council as highway authority – such implementation could take up to 4 years. Appropriate technology and systems are available and have been used on other schemes.

Typically, RUC schemes deliver reduced traffic volumes and journey times, better travel reliability lower emissions/better air quality and offer opportunities to reallocate road space and revenue towards sustainable modes. Such schemes are one of the most effective measures to reduce traffic volumes. Of course, such benefits accrue through payment by travellers of the charge, and there are issues such as diversionary effects and equity to consider.

It would be generally fair to say that the idea of RUCs is not very popular with the general public, many of whom consider that they pay vehicle excise duty and fuel duty etc. instead. However, people’s views tend to become less negative when they have actual personal experience of a RUC scheme themselves. When there is a clear and relatively severe problem then acceptability increases, especially if either the measure is specifically directed at the problem or that any nett monies raised are used to fund a specific solution.

For the purposes of reducing traffic in the core town centre only, it has been assumed that an area-based charge would be too complex and/or costly and that a more appropriate scheme would be a simple point toll such as introduced in Durham.

In the case of Guildford, traffic volumes across Bridge Street (one-way) between 7AM and 7PM on a weekday are approximately 20,000 vehicles, with a similar volume using Friary Bridge one-way in the reverse direction.

If a toll was placed on both bridges, this would be a simple charging system focused clearly on the use of the gyratory by traffic and would be almost the only measure likely to be really effective in encouraging traffic to ‘drive to, and not through’ Guildford Town Centre. This would incentivise people destined for the town to park at their nearest car park rather than drive across the river to a different one. There are relatively few diversion routes and provided a charge was set at a proportionate level, diversions are likely to be manageable, but this would need to be tested.

Such a RUC system could reduce town centre traffic by between 10 and 30%, while still allowing appropriate access, and could also raise revenue of some £10m (£2 daily charge) to £25m (£5 daily charge). Operating costs are likely to reduce nett revenues by some 20-40%.

A charge is likely to be very effective in advancing the transport strategy for the town centre masterplan, and a simple scheme across the river could be introduced under existing legal powers and with existing technology. Using a simple and proportionate ‘point charge’ may also not conflict with any other RUC scheme introduced more widely, such as a national scheme to replace fuel duty.

# Chapter 5

## Managing the Road Network

### Traffic Management

By implementing the measures outlined in the previous chapter as part of a comprehensive new transport strategy, Guildford would deliver really significant changes to the way people travel and dramatically reduce car usage.

However, regardless of how effective these measures are, there will always be enough people that choose to drive and fill up whatever traffic capacity is left behind in the town centre, be it the same capacity as existing, 30% lower, or higher.

Therefore, there will be a requirement to consider how to best manage the remaining traffic to minimise congestion where possible and prioritise expedient access for those vehicle types that need to access the town centre the most. Namely freight, taxis, and disabled car users with mobility needs.



### Freight

Guildford’s continued success relies on a safe, reliable, sustainable and efficient delivery of goods and servicing. Light and heavy goods vehicles account for around 15% of motorised vehicles travelling into and through Guildford Town Centre. During the AM peak, freight traffic accounts for around 25% in the town centre. Maintaining easy access for these goods and services is vital for the many businesses in the town centre.

One such measure that is already employed in Guildford is for freight to have access to certain bus lanes, as is the case on Onslow Street. Further expansion of this practice or the introduction of new freight priority lanes should be considered. It should also be considered whether certain goods vehicles should have access through any modal filters that may be built at certain times of day.

Figure 31 Cargo Bike



### Alternative Modes for Freight

However, it should not be taken as a given that all freight needs to arrive at its final destination by van or lorry. E-cargo bikes are a versatile way of transporting items with zero emissions. They are large, electrically assisted bicycles, tricycles or quadricycles with a purpose-built cargo carrying capacity. The electric motor provides pedal assistance allowing further travel with less effort. They are a great move forward in sustainable deliveries, especially in towns and cities that have plans to significantly reduce carbon emissions. They can get through congested environments with ease and cover up to 50 miles on a single charge. E-cargo bikes can directly replace traditional van trips.

Facilitation and promotion of e-cargo bikes, that can be used on the town’s cycle network is therefore an excellent way of achieving the central goals of reducing traffic, carbon emissions and creating a healthier environment; whilst also facilitating the speedy movement of freight uninterrupted by traffic congestion.

Several freight consolidation models should also be considered as a means of reducing traffic levels and putting freight on a more sustainable footing:

### Micro-Consolidation / Last Mile

The focus of this model is providers of last mile solutions such as micro consolidation depots, mobile consolidation options served by cycle logistics and electric vans. These are a proven and effective way of reducing the number of freight delivery vehicles. The biggest barrier to implementation is finding suitable premises and their subsequent cost. Consolidation centres should be serviced by zero emission vehicles to ensure air quality benefits are maximised. The site locations will need to have a supply of charging points and within accessible reach of the geographical area it is intending to serve. One option of such a site in Guildford could be near Woodbridge Meadows and the A25.

### Preferred Suppliers

A preferred supplier approach focuses on multi-tenanted buildings, using planning conditions to enforce the use of preferred suppliers for business supplies and personal deliveries. It adopts a preferred list of suppliers to serve a geographical area.

Using preferred suppliers and micro-consolidation centres for multi-tenanted office buildings should be considered. This could be rolled out as a planning condition to large scale developments as well as be retrospectively applied to existing (appropriate) developments.



### Active Traffic Management

Active Traffic Management (ATM) is the term used to describe a strategy of appropriately managing traffic levels across a road network to achieve desired outcomes. In this case, it is recommended that Guildford pursue a wider town ATM strategy to appropriately manage traffic levels on approach to the centre. This would 'meter' or 'smooth' traffic on approach to the centre as it progresses along the key radial routes, such as Woodbridge Road or London Road.

Such a strategy could effectively prevent instances of temporary large-scale congestion that typically occurs at peak times, with large queues centred in the busy pedestrian areas of Bridge Street and Onslow Street. Instead, traffic would be slowed on approach to the town, creating multiple shorter balanced queues in locations where it is more appropriate for them.

Critical to the success of this ATM strategy, is ensuring that buses and cyclists are not impacted by any queuing on approach to the town centre. A way of avoiding this is by intentionally queuing general traffic on routes where bus lanes are present. For this reason, Woodbridge Road would be a good location for this.

It should also be noted that this strategy should be implemented alongside the various other elements of this report. ATM will work much more effectively when overall traffic is reduced, it is not a panacea for all traffic issues in the centre.

### Taxis

Taxis play an important role as a transportation alternative. They are used as a substitute for private vehicles by passengers who use the service for convenience reasons or because they do not want to own a car.

Whilst some taxi journeys could be carried out by more sustainable transport options, taxis do provide an important service in many instances. They are also used to help facilitate multi-modal trips and plug the gaps where public transport is not available. Taxis also play an important role in the transportation of disabled people with mobility issues that prevent them from using other forms of public transport.

Therefore, like with freight, careful consideration needs to be placed on ensuring taxis can efficiently travel across the town, with minimal impact from congestion where possible. One strand of this strategy should therefore be allowing taxis to access bus lanes and benefit from other forms of bus priority where appropriate. Additionally, it should be noted that any improvements implemented to the bus lane provision or bus priority will also benefit taxi services.

The other significant issue that will affect taxis is the location of the taxi ranks. Taxi ranks are a vital part of the transport network and help ensure that taxi services can meet passenger demands. Therefore, their location within the masterplan area should be carefully considered.

With the proposed changes to the highway network around the gyratory, the taxi rank located at the bottom of North Street would require relocating. The future position of the taxi rank would be dependent on the selected gyratory option, but it is envisaged that appropriate provision could be made available on Onslow Street.

### Technology

New and emerging technologies provide challenges and opportunities for Guildford town centre’s movement strategy. The design of an accessible and attractive town centre will change the way Guildford’s citizens and visitors move around and enjoy the renewed experience of sustainable urban living in the 21st century.

The proposed changes to the ways in which we move into, and around, Guildford town centre will have direct impacts on the town’s regeneration. How successful the transition to sustainable living is, will largely depend on how fully we embrace the adoption of new digital technologies and new modes of transport.

Our movement strategy foresees the new digital and non-fossil fuel-based technologies coming together to provide the foundation for the revival of the town centre. The technological solutions range from the application of Big Data - to manage traffic flows and congestion - to the utilisation of micro vehicles, e-scooters and human powered cargo bikes, as well as the many emerging ideas for safer mobility in between. Each technology makes its own demands on place, land use, road space and utilities. Further study of these emerging technologies will be necessary to prepare baseline data enabling the production of the integrated transport infrastructure masterplan.

### Smart Cities & 5G

New technologies and services, in particular in the areas of transport, energy and ICT, are required to enable a town or city to attain high levels of sustainable development. ‘Smart cities’ describe places that incorporate a range of digital technologies, especially those that collect and use data to help manage movement patterns and congestion control, monitoring pollution levels and real-time information on public transport or parking availability. These technologies will play an important part in creating the regenerated town centre imagined. The fastest enabling digital technology is 5G.

Through its low latency, high capacity and reliability, 5G technology has the potential to play a leading role in the control of transportation and movement systems in Guildford town centre.

### Developments in Urban Mobility

The need to reduce emissions from transport is a significant driver of change in mobility and transport. Low emission technologies are the future of powered transport.

Electric vehicles (EVs) are close to the “tipping point” of rapid mass adoption thanks to the falling cost of batteries. The key issue facing the transition to EVs is not only the general availability of charging points in sufficient numbers but also the highest speed charge capability and a nationwide distribution. A pro-active approach to working with SCC Highways, GBC and the private sector will be required to define the supply and timely delivery of charging stations.

Electric delivery vehicles are an ideal solution for home deliveries and the growing number of neighbourhoods served. The innovative design means they’re more efficient and respectful of the environment. We can expect

to see the electric delivery vehicles fast becoming the ‘last mile’ delivery solution of choice.

Hydrogen fuelled vehicles are also being used in a small number of new cars: debate continues over the relative merits of the competing technologies in terms of range, emissions and costs. Hydrogen is vaunted as the future fuel for HGVs but the logistics of production and supply have yet to be fully tackled in the urban context.

E-bikes and e-scooters have the potential to transform urban mobility. Going forwards we will see a huge increase in the number of electric micro vehicles on our roads. E-bikes and e-scooters are set to transform urban mobility, although challenges remain. Efficient and safe E-mobility networks require early consideration and will need incorporation at the concept design stages of the integrated infrastructure masterplan.

Figure 32 E-bikes and e-scooters



# Chapter 6

## Strategy Targets

### Modal Shift Targets

In developing the transport strategy and associated targets for encouraging modal shift away from car use we have recommended a holistic approach, that has the potential to significantly change the way that people travel in and around Guildford.

To account for the topographical and existing travel behavioural differences between different areas of Guildford, the modal shift potential has been determined by sector, as described in Chapter 4 of this report.

Each sector of town has a different potential when it comes to the number of road journeys that have a potential to be shifted to active travel, as well as to the scope for possible active travel improvements. Based on the assessment undertaken as part of the study (*'Active Travel in Guildford' MA, June 2022*) we have identified an active travel mode share target for each sector.

An increase in bus usage has the potential to reduce car reliance, mainly for the trips to the town centre, and within the urban area. Based on the SCC strategy of increasing bus usage by 7% between 2018/19 and 2024/25 and taking into account local characteristics it was assumed that traffic reduction between 3 and 8% would be achievable. This would result in an overall 5% traffic reduction. This is considered a reasonable and achievable

target considering the realistic levels of available funding, but it should be highlighted that there is an even greater modal shift potential for buses if further measures are implemented.

A reduction in car use associated with the Park and Walk strategy has been calculated based on the number of vehicles currently driving across the town centre gyratory to get to their preferred town centre car park. It was assumed that 75% of those trips that needlessly cross the gyratory could potentially be encouraged to use an alternative car park on their approach route instead. This strategy could result in a 5% reduction in town centre traffic overall, and up to a 12% reduction in vehicles approaching from the west, i.e. Farnham Road and Guildford Park Road, if they choose to park in the Farnham Road car park.

Park and Ride reduction targets take into account the current long stay parking numbers (4 hours and more) in the town centre car parks, assuming that they have the potential to use Park & Ride sites instead. This strand has the potential to reduce town centre traffic by 4% overall.

It is assumed that the closure of Millbrook to general traffic would result in some town centre through traffic finding an alternative route. This is assumed to account for a 3% reduction in the southern corridor traffic.

A WPL has the potential to reduce the number of car commuters by 8 to 25% (according to the Lund University study). An average reduction of 16.5% has therefore been applied to car commuters travelling to the town centre, representing an approximate 2% reduction in overall car trips.

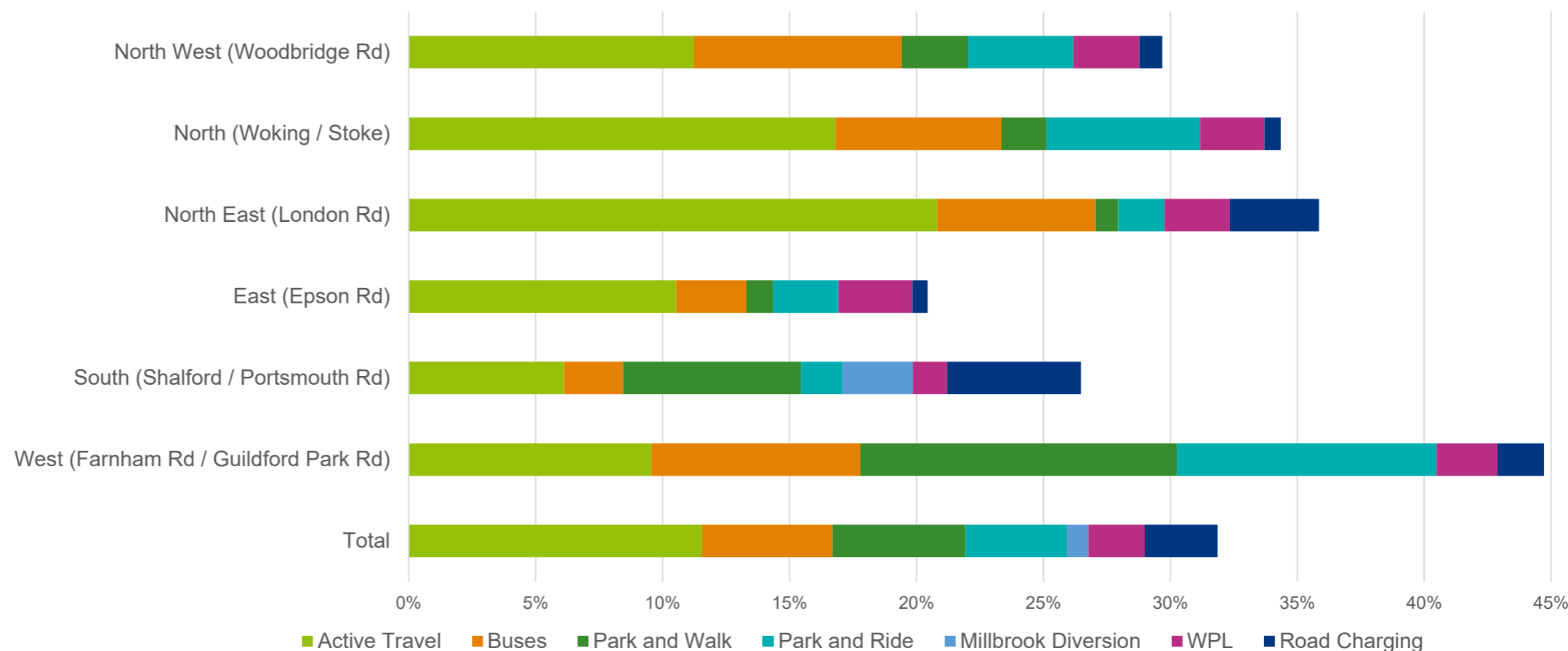
It has been assumed that a Road User Charging scheme has the potential to reduce out-of-town to out-of-town journey numbers by 20% and out-of-town to urban area journeys by 5%. This is a very conservative assumption, as our goal is to not be overly reliant in it. Previous studies show it could deliver traffic reduction of up to 10-40%.

Figure 33 illustrates how all the above measures, when implemented collectively, have the potential to result in at least a 32% reduction in traffic in the town centre.

The highest level of change could be unlocked by the implementation of active travel measures such as improved walking and cycling routes and the provision of cycle parking. These ‘pull’ measures, however, would only realise their full modal shift potential when implemented with complementing ‘push’ measures, such as reduced parking, WPL, or road charging.

From a geographical perspective the sectors with the highest modal shift potential are the west (Farnham Road and Guildford Park Road) with the highest potential for use of ‘Park and Ride’ and ‘Park and Walk’, and the north (Woking Road / Stoke Road) with very high potential for a shift to active travel.

Figure 33 Mode Shift as % of Corridor Trips



Sector	Active Travel	Buses	Park and Walk	Park and Ride	Millbrook Diversion	WPL	Road Charging	Total
North West (Woodbridge Rd)	11%	8%	3%	4%	0%	3%	1%	30%
North (Woking Rd / Stoke Rd)	17%	7%	2%	6%	0%	3%	1%	34%
North East (London Rd)	21%	6%	1%	2%	0%	3%	4%	36%
East (Epson Rd)	11%	3%	1%	3%	0%	3%	1%	20%
South (Millbrook / Portsmouth Rd)	6%	2%	7%	2%	3%	1%	5%	26%
West (Farnham Rd / Guildford Park Rd)	10%	8%	12%	10%	0%	2%	2%	45%
<b>Total</b>	<b>12%</b>	<b>5%</b>	<b>5%</b>	<b>4%</b>	<b>1%</b>	<b>2%</b>	<b>3%</b>	<b>32%</b>

Figure 34 Transport Strategy Summary

**Road Charging**

- Reduced traffic volumes and journey times
- Potential funding stream
- Possible cross-river charge



**Active Travel**

- Reallocated road space for walking and cycling
- High-quality cycle provision
- Dealing with barriers to active travel



**Buses**

- Improved frequency and access to bus stops
- Improved service reliability
- Real Time Passenger Information



**Workplace Parking Levy**

- Scheme to include the whole urban area
- Revenue stream to fund sustainable transport



**Park and Walk**

- Improved walking routes from the key car parks to the town centre
- Redevelopment or re-purposing of the remaining car parks
- Improved VMS guidance system



**Traffic Diversion**

- Potential closure of Millbrook
- Reduced number of through town centre journeys
- Encourages peak traffic spreading and modal shift



**Park and Ride**

- Increased P&R capacity
- Improved access to Onslow P&R
- Improved bus connections to the town centre
- Revised pricing strategy to make P&R use more attractive



# Chapter 7

## Conclusions and Next Steps

### Key Conclusions

There is no doubt that Guildford is at a crossroads. The emerging masterplan aims to bring new life and vitality to the town. At the same time the town needs to reverse the chronic effects of traffic which have resulted in a shameful accident record, significant air pollution and a town centre that is unattractive and characterised by utilitarian streets, blank walls facing some of the most important road corridors and generally a low-quality public realm.

In addition to delivering housing and employment, the proposed masterplan aims to correct the big divide between the town centre and what is probably the town's greatest asset - the River Wey.

The proposed transport strategy aims to add further strength to the masterplan by moving away from the notion that another highway can solve the town's traffic issues. Instead, the strategy proposes the "taming" of traffic whilst simultaneously promoting all other modes of transport. Its objective is to create sustainable mobility which, together with an improved urban environment, will result in a healthier town and healthier citizens. This would be completely aligned with both central and local government policies, and could make it an exemplar amongst all other European cities.

Central to this approach is the breaking up of the gyratory which currently dominates the town and subjugated the town's life to the requirements of the car. Our proposals replace the one-way traffic around the gyratory with two-way movement whilst giving more space and priority to pedestrians, cyclists, buses as well as a greener environment. Of the numerous options reviewed, we believe 'option Y' provides the biggest benefits for the town and responds positively to the project's key objectives.

Our work so far has shown that with a strategy focused on improving the options of active travel and buses, whilst encouraging parking to shift further outside of the town centre, as well as introducing charging mechanisms such as road charging or a workplace parking levy, we can achieve a reduction in car use in the order of 30%, or possibly more.

Further analysis of the evidence base, as well as more detail on the various strategy elements proposed, can be found in the numerous additional technical notes produced by MA and submitted alongside this report.

## CONCLUSIONS AND NEXT STEPS

### The Role of Surrey County Council (SCC)

However, this cannot be delivered by GBC alone. It will require the support of a number of key stakeholders and statutory bodies, with SCC being critical to the transport proposals. As Highway Authority, SCC have the jurisdiction over Guildford's road network and are ultimately responsible for any changes made to it. Therefore, GBC will be reliant on SCC to either implement the proposals on their behalf after reviewing and agreeing to this strategy or SCC will need to provide GBC with the means to carry out the strategy itself (e.g. devolve powers for highways in Guildford under some form of legal agreement). The only exception to this is town centre car parking, which GBC already hold responsibility for managing.

### Phasing and Next Steps

Following the intended project programme, subject to the Council's support of stage 2, it is proposed that further transport elements would be required as part of stage 3 of this project. As well as inputting into the development of the Strategic Outline Business Case, the key next phase of work from a transport perspective is significant further traffic modelling of the strategy. As part of agreeing the proposals with SCC, both demand and strategic modelling will likely be required to understand the wider redistribution of traffic and impact of modal shift on the proposed town centre road layout.

Further discussions will also be held with relevant departments in SCC to understand how this strategy could be phased in, with certain elements possible to be trialled in the short term. Introducing some 'quick-wins' and trialling certain elements could be a good way to build wider public support for the sustainable transport strategy.

### Quick Wins

One example for a trial could be to remove a traffic lane on Bridge Street, providing a wider space for pedestrians/cyclists to improve their comfort and safety, or possibly even enable cafes/bars to spill out onto the existing pavement with outdoor seating.

Many of the cycling proposals should be introduced quickly to help provide a good alternative to car travel before the more deterrent style factors (e.g. road charging) were to be introduced and careful thought should be taken over this.

### Final Recommendations

Finally, there is no doubt that such a strategy can only be successful if there is a long-term commitment as well as funding to the proposed strategy. In this respect, it will be important for the town to "be on board" i.e. Members and populace to work together so that a healthier (in every sense) town centre can be achieved.





**Shaping Guildford's Future | Transport**  
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