A Sustainable Transport Blueprint for Canterbury

Report for the Canterbury Society and Canterbury 4 Clean Air

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Prepared by
Transport for Quality of Life
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Transport for Quality of Life develops sustainable travel solutions. It specialises in work which is at the forefront of sustainable transport practice, encompassing rigorous research and analysis; policy development; practical implementation; thorough evaluation; and dissemination of good practice, with the aim of creating a transport system that is both more sustainable environmentally and more beneficial to society.
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Executive Summary

Canterbury’s mediaeval street pattern endows it with aesthetic benefits and has a compact scale that is ideal for sustainable modes of transport such as walking or cycling. However, these same historic characteristics are also inherently unsuitable for single-occupancy cars to be the main means of transport.

The future prosperity of the city depends upon it being a place that visitors from all over the world want to see, and where highly-skilled employees are eager to live. It is thus crucial for Canterbury’s economic success that it remains attractive and compact, and that it invests in efficient, high quality public transport to link it to surrounding settlements.

It is possible to tackle congestion and at the same time to retain a compact and attractive mediaeval street pattern: that is, to both ‘get Canterbury moving’ and ‘keep Canterbury special’.

Analysis of current travel patterns suggests four priority areas for action:

- Make it attractive for people to cycle for short trips within the city. The target audience for this is people making journeys of less than three miles in the city centre. These people account for a quarter of all those who drive to work in the city.

- Provide and promote high quality bus services for trips into Canterbury city centre from main population centres within Canterbury district. A third of Canterbury city centre employees who drive to work live too far from their work to cycle, but within a distance for which improved bus services could offer an attractive alternative to driving.

- Identify locations where there is a critical mass of employees driving longer distances to work in Canterbury, and make it attractive for these people to car-share some of the time.

- Design all future development in and around Canterbury (including residential, retail, business and leisure development) so that it is easiest to access by sustainable means of transport, rather than easiest to access by car.

Research studies show half of all drivers would like to reduce their car use – either because they find it stressful and unpleasant, or because they are concerned about the health and environmental impacts of driving. These
drivers are the target market for the proposed measures to encourage cycling, travel by public transport and car-sharing.

In designing these measures, it is important to address all the reasons why people currently choose to drive rather than to cycle, use the bus or car-share: that is, lack of suitable services or facilities; lack of awareness of existing services and facilities; a social norm of driving amongst colleagues, friends and family; and habit.

The Blueprint identifies 21 key areas for action that achieve this:

1. Increase bus frequencies to every 10 minutes on key routes
2. Install ‘congestion-busting’ bus priority measures and improve on-street parking enforcement along bus routes
3. Focus future development where it can be well-served by buses
4. Peg parking charges to bus fares, so travel by bus feels cheaper
5. Provide tailored information about bus services
6. Lead from the front, with senior opinion-formers across all sectors committing to travel by bus or bike at least once a week
7. Improve the image and experience of travelling by bus
8. Extend the successful 11-16 Freedom Pass to 16-19 year olds who pledge to delay acquiring a driving licence
9. Build high quality continuous ‘signature cycle routes’ for all main radial routes
10. Tackle dangerous and intimidating junctions and barriers to cycling
11. Introduce more 20mph zones and area-wide 20mph limits
12. Install cycle parking at main employers, close to shops, and at other key destinations
13. Develop a bike loan scheme
14. Offer cycle training
15. Increase knowledge of existing cycle routes
16. Run an annual workplace cycle challenge
17. Run community-led cycle promotion activities
18. Use school cycling programmes to encourage parents to cycle too
19. Become a car-sharing demonstration city

20. Remove the hidden subsidy of free workplace car parking through a ‘charge and reward’ scheme at major employers

21. Help organisations to develop workplace travel plans

The Blueprint draws on research evidence to show how the local plan can ensure that future development is less car-dependent. This can be achieved by:

- Avoiding all development at locations close to junctions with high-speed roads (such as the A2).
- Concentrating residential development where densities of 100 dwellings per hectare can be achieved, either within the city, or at traditional compact village densities in surrounding villages that can be served by good public transport.
- Planning all new housing across the district to be within a 10 minute walk of a ‘local centre’ with a good range of local shops and facilities.
- Locating new employment-related development in the ‘knowledge economy’ at a public transport hub (for example, in Wincheap near to Canterbury East station).
- Requiring all new development to have pedestrian-friendly street layout and design: 20mph zones, ‘home zone’ street layouts, street planting, and direct routes for pedestrians and cyclists with restricted access for cars (‘filtered permeability’).
- Adopting as part of the local plan a strategy of public transport centred development, so that all major new developments are served by frequent high quality public transport.
- Gradually replacing city centre car parks with more valuable uses such as housing and civic spaces, as demand for parking space in the city centre decreases.
- Ensuring all planning permissions for new development (whether for retail, leisure, employment or housing) have strict limits on the amount of car parking, and accompanying requirements to invest in sustainable transport.
- Developing ‘smart’ travel behaviour change programmes targeted at transition points in people’s lives, such as moving house and changing
jobs, including offering information and incentives to try cycling or public transport.

The strategy recommended by the Blueprint is based on the approaches adopted by British cities such as Birmingham, Brighton, Bristol, Cambridge, Darlington, Exeter, Lancaster, London, Nottingham, Peterborough, Worcester, Shrewsbury and York, as well as continental cities such as Copenhagen, Delft, Freiburg, Strasbourg, Utrecht and Winterthur. It has been a key factor in their prosperity and wider social and cultural success. The largest evaluation to date of city-wide investment in sustainable transport (in Darlington, Peterborough and Worcester, the Sustainable Travel Towns) found that it reduced car driver trips by residents by 9% and car driver distance by residents by 5~7% in just four years. This is not the limit of what is achievable, and it is likely that by pursuing a consistent strategy of support for sustainable transport, Canterbury could achieve substantially greater reductions in traffic and congestion over the course of the next decade.

In a time of limited resources, the Blueprint’s strategy should be especially attractive because evidence from cost-benefit evaluations of sustainable transport investment suggests this type of investment offers some of the highest value-for-money scores of any transport schemes. Cities that have taken this path have also been able to attract substantial additional investment.

While the lead role for coordinating a sustainable transport strategy for Canterbury should rest with councillors and senior officers in the city and county councils, other players also have a key role – including public transport operators, citizens’ groups, the business community, the third sector, and the universities. There may be a role for a Canterbury Sustainable Transport Partnership, acting as a delivery body (and not a lobbying body or ‘talking shop’), to bring together all these players under the leadership of a senior and committed city councillor.
1. **Introduction**

1.1 Canterbury is one of Britain’s finest and most famous cities. Its mediaeval core, dating from before motor cars were ever dreamt of, not only endows Canterbury with aesthetic benefits but also has a compact scale that is ideal for sustainable modes of transport such as walking or cycling.

1.2 These same historic characteristics are also inherently unsuitable for vehicles. Since the 1960s, the very features that make Canterbury attractive have been degraded by some ultimately fruitless efforts to accommodate increased car use, with, first, the ring road, and then a series of car-based retail developments. Despite these efforts to make space for cars, the ring road is still jammed in the rush hour.

1.3 While there have been efforts to tackle traffic problems in Canterbury over recent years – such as development of park and ride sites, use of parking charges to manage demand for city centre parking, and some investment in alternatives to driving – there is still a widespread feeling that the city (both the historic core and the main approaches) suffers from more traffic than it can cope with, leading to problems of congestion, poor air quality, and a degraded environment.

1.4 On the whole, people in Canterbury do not celebrate the wisdom of the highway planners who designed the Rheims Way, and nor do they particularly feel that the Sturry Road and Wincheap retail developments make Canterbury a city to take pride in. But there is a feeling that the pedestrianised city centre makes Canterbury a better, more prosperous, more liveable city.

1.5 The future prosperity of Canterbury depends upon it being a place where high-skill businesses want to locate, because they know that it will be easy to attract a talented and highly-educated workforce. It also depends on it continuing to be a place that visitors from all over the world want to see and stay in. These people will not beat a path to Canterbury for its fast roads and large car parks. They will certainly not come if it is in a state of car-induced thrombosis. But they will come if it is a city of fine streets that offer a new delight for the eye at each turn; if it is a city of short distances with most things to hand within a few minutes walk or ride; and if it is a city with efficient, high quality public transport to link to its surrounding settlements.

1.6 Achieving this depends upon a vision that rises above the normal utilitarian scope of transport planning. Somehow, Canterbury has to find a way to combine the best of its mediaeval heritage with our best understanding of how to create delightful, healthful, efficient and environmentally sustainable transport systems in the twenty-first century.

1.7 This Sustainable Transport Blueprint aims to provide a start towards such a vision for Canterbury.
Understanding travel patterns in Canterbury

‘1 minute read’: the vital concepts for policy-makers

- A significant proportion of trips by Canterbury residents already use sustainable modes. For example, amongst people who work in Canterbury, 34% of trips to work are on foot, by bus, as a car passenger, by bike or by train. People using these sustainable modes will gain immediately from the improvements to sustainable transport outlined in this Blueprint.

- Of the people who drive to work in the city, 24% are making very short trips of up to three miles. This is a distance which could readily be cycled if Canterbury were made a bike-friendly city.

- Another 32% are commuting over three miles, but from within Canterbury district. High quality bus services could provide an attractive alternative to driving for many of these commuting trips.

- The remaining 45% of people who drive to work in the city are travelling from outside Canterbury district. For most of these people, cycling will be an unattractive option and for those who live away from main inter-urban bus routes, travel by bus will take too long. However, there is a critical mass of these ‘longer distance’ drivers in a few locations and this offers excellent potential for a large-scale car-sharing programme.

- While these percentages relate to trips to work, travel into Canterbury for shopping, leisure and further / higher education is likely to show broadly similar patterns.

- Research studies show that about half of all drivers would like to reduce their car use – either because they find it stressful and unpleasant (‘malcontented motorists’, who make up 32% of drivers), or because they are concerned about the health and environmental impacts of driving (‘aspiring environmentalists’, 19% of drivers). These drivers are the target market for a package of measures to encourage cycling, travel by public transport and car-sharing.
‘The five minute read’: Overview of travel patterns in Canterbury

2.1 During the weekday morning peak hour (8-9am), some 12,000 vehicles cross the outer cordon enclosing the built-up area of the city, travelling into or out of Canterbury¹. Most of these vehicles will contain a single person driving to work, college or university². These car commuter trips place a heavy stress on the road network, and congestion and delays during this peak period cause frustration to drivers and bus passengers (and bus operators).

2.2 It would be easy to assume that almost everyone who works in Canterbury travels to work by car, but this is far from being the case, as is shown by Figure 1. Analysis of 2001 Census data shows that of the nearly 29,000 people with a workplace in one of the five ‘city centre’ wards (Westgate, Wincheap, St Stephens, Northgate and Barton), 34% already travelled to work by a sustainable mode – that is, they walked, used the bus, travelled as a car passenger, cycled, or came by train. A further 4% of city centre workers mainly worked from home.

2.3 These figures are likely to be an underestimate of the proportion of the workforce that is currently using a sustainable mode to get to work, as travel by bus and train has increased since 2001. When 2011 Census data becomes available, it is recommended that mode shares for travel to work in Canterbury are reanalysed.

2.4 However, even from the 2001 data it is clear that a sizeable proportion of Canterbury’s workforce would gain immediately from improvements to the public transport services, cycle facilities and walking routes that they are already using.

2.5 Looking just at the people who travelled to workplaces in city centre wards by driving (59% of the workforce in these five wards in 2001), almost a quarter (24% of drivers) were driving distances of less than five km (approximately three miles). This is a distance which is almost as quick to cycle as to drive, once allowance is made for peak hour traffic delays and for finding a car parking space at the destination. It is therefore important to consider the barriers that prevent these motorists from cycling to work, at least some of the time, and to identify ways in which these barriers can be overcome. High quality bus services (both the ‘town’ end of inter-urban bus routes and ‘within town’ bus routes) could also provide a viable alternative to driving, but only if they are at ‘turn up and go’ frequencies.

2.6 Another 32% of drivers commuting into the city centre wards in 2001 were driving more than five km, but starting from within Canterbury district (for example, starting from Whitstable or Herne Bay). High quality bus services provide the most viable alternative to using a car for these trips. Here again, we need to identify the barriers that prevent these motorists from travelling by bus, at least some of the time, and identify ways of overcoming them.

¹ Jacobs (2008) Canterbury LDF VISUM Transportation Study Final Scoping Report
² Roadside interview surveys carried out in 2004 suggested that work-based journeys constituted just over half (52%) of morning peak traffic in Canterbury (Jacobs (2009) Canterbury LDF VISUM Transport Modelling Study: Brief Proposal: Additional Data Requirements), although it is not clear what length of peak period this refers to.
Figure 1: Travel mode of people who work in five central Canterbury wards (Westgate, Wincheap, St Stephens, Northgate and Barton), trip distance of drivers to these locations, and journey origin of longer-distance drivers

Source: Census 2001. Note pie chart percentages do not sum to 100% because 1% 'other' and 1% 'motorcycle, scooter or moped' are not shown.
2.7 The remaining 45% of drivers travelled from further away, outside Canterbury district. Most of these people (40% of all drivers) were driving from the five neighbouring districts: Dover (1,900 people), Thanet (1,700 people), Swale (1,400 people), Shepway (900 people) and Ashford (800 people).

2.8 Some of these drivers live in the main urban centres (Dover, Margate, Faversham, Ashford etc), which are relatively easy to serve by inter-urban bus routes. Stagecoach has seen substantial growth on these routes in recent years, and further improvements in service frequency and quality have the potential to attract more passengers.

2.9 Other longer-distance commuters live close enough to a railway station that they could commute to Canterbury by train. The best potential is probably in Faversham (where 583 people drove to jobs in central Canterbury wards from the four wards within walking distance of Faversham station in 2001, compared to 155 who travelled by train).

2.10 However, detailed analysis of the Census data shows that a significant proportion of these longer-distance drivers from surrounding districts live in rural locations where commuting by bus or train is unlikely to be attractive. This is especially noticeable for drivers from Dover and Ashford districts. For these drivers, the most effective strategy to reduce car use is to encourage car-sharing. The number of car commuters living in these five districts (and in certain wards within the districts) is enough to provide the ‘critical mass’ for an intensive car-sharing programme.

2.11 This breakdown of the travel mode, trip distance and journey origin of people working in Canterbury suggests that, in theory at least, it is possible to provide an alternative to driving for many peak hour commuting trips. Sections 3 to 5 outline a package of measures to encourage drivers in each of the groups described above to switch to cycling, bus travel, and car-sharing.

2.12 The figures above relate to travel to work, because the Census data gives us such fine-grained information about how people are making these trips. Although we do not have comparable information for other trip purposes, it is reasonable to assume that travel into Canterbury for shopping, leisure and further and higher education will show similar patterns in terms of trip distance and origins. The measures outlined in Sections 3 and 4 to encourage cycling and bus travel would therefore be expected to reduce car use for these other purposes, although by a smaller proportion than for commuting.

2.13 This Blueprint has not looked in detail at how car use for travel to school could be reduced. Trip distance, journey starting points and trip modes for travel to school would show a very different pattern to that described above for commuter travel. National data shows that there are 24 car driver trips per person per year for travel to school and college (‘education / escort education’), which is less than the...
number of trips for commuting (87 car driver trips per person per year) but still a significant contributor to peak hour traffic\(^3\).

2.14 Canterbury already has a strong programme of measures to encourage sustainable travel to school, including the Freedom Pass, the walking bus programme which is strongly supported by the Kent Messenger Group, and more recent initiatives such as Bike It. These are all important, effective, and play a valuable role in reducing car use on Canterbury’s roads.

**Are drivers willing to change modes?**

2.15 The theoretical potential to switch modes does not necessarily mean that drivers will actually switch. People choose to drive rather than to cycle, walk or take public transport for all sorts of reasons. If – as is often argued – we have a ‘love affair’ with our cars, it may be impossible to entice many motorists to try the alternatives, no matter how much they are improved. It is therefore also important to consider what proportion of motorists may be receptive to changing mode.

2.16 It is certainly true that some people have a psychological or emotional attachment to their cars which makes them reluctant to use any other mode of transport. Segmentation studies of attitudes to driving find that around 20% of motorists are in this category (these have been termed ‘die-hard drivers’), and a further 28% of motorists use cars without giving very much thought to the alternatives and see no reason to change (these have been termed ‘complacent car addicts’)\(^4\).

2.17 However, many of the people who currently drive to work (or for other purposes) are not doing this because they enjoy it, but because, rightly or wrongly, they feel that there is no alternative. The same segmentation studies of attitudes to driving find that around half of car drivers are receptive to the idea of driving less – either because they find driving stressful and unpleasant (‘malcontented motorists’; 32% of drivers), or because they are concerned about the health and environmental impacts of driving (‘aspiring environmentalists’; 19% of drivers). These second two groups of drivers should be the target market for a package of measures in Canterbury to encourage cycling, travel by public transport, and car-sharing.

2.18 The foregoing analysis suggests there is large potential for a shift from driving to cycling, bus and car-sharing for trips into Canterbury. Around half of drivers would like to be able to drive less, and a high proportion of trips being made by these drivers are ‘within scope’ for a concerted travel behaviour initiative.

2.19 Efforts have been made to improve the alternatives to driving for trips into Canterbury in recent years, notably in relation to bus travel, and – as will be seen in Section 3 – these have yielded good results. This should give confidence that it is possible to influence people’s travel choices towards more sustainable modes than driving alone. The challenge is to build upon these early successes and to step up the delivery programme of sustainable travel measures to the next level.

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\(^3\) National Travel Survey (2010) Table NTS0409.


‘1 minute read’: the vital concepts for policy-makers

- Bus patronage in Canterbury is growing fast compared to other British cities.
- This is due to more frequent services, an improvement in the quality of vehicles, some bus priority measures, better marketing, and effective use of city centre parking charges to manage demand.
- The Canterbury Quality Bus Partnership has been highly effective.
- A comprehensive package of measures to tackle all of the barriers to bus use could achieve substantial further modal shift from driving to bus travel.
- The ‘objective’ barriers to bus travel are that, relative to driving, it takes too long, journey times are unpredictable, and it costs too much. These can be tackled by more frequent services; congestion-busting priority measures; and reformed car parking charges ‘pegged’ to the cost of bus travel.
- Other barriers are lack of knowledge of suitable bus services, a social ‘norm’ of driving, and habitual car use. These can be addressed through community social marketing campaigns; high-profile support from council, business and community leaders; a programme to upgrade the quality of bus travel; and incentives for young people to stick with the bus ‘habit’ at the crucial age of 17.

‘The five minute read’: Overview of how to further increase bus use

3.1 Bus patronage in Canterbury has been growing rapidly since about 2004/05, as shown in Figure 2. The number of people boarding buses in the city centre (including the area out as far as Kingsmead and Westgate) was nearly three times more (+174%) in 2011/12, compared to 2004/05.

3.2 This growth rate is high, even relative to other cities that have made special efforts to increase bus use. For example, Peterborough increased bus use by around 30% (adjusted for population growth) over a seven year period in which

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5 Figures provided by Stagecoach for the entire year. Not directly comparable to Figure 2 which only includes data for a 6-day sample period.
great efforts were made to increase bus travel as part of the DfT-funded ‘Sustainable Travel Towns’ programme. This was substantially better than the growth rates being achieved by ‘business as usual’ elsewhere in Britain.6

Figure 2: Growth in bus ticket sales in Canterbury

Bus ticket sales data are from Kent Travel Report (2011), Table 5.2, for equivalent 6-day periods in October / November of each year within a Canterbury urban cordon. Figures do not include P&R (for which passenger numbers are not increasing).

3.3 Some special initiatives can partly explain the high growth in Canterbury.7 However, if these special factors are stripped out, underlying growth in bus use in Canterbury remains very high. Stagecoach believes underlying growth for services into the centre of Canterbury is of the order of 12% per year. Growth rates for journeys which do not come into Canterbury are much lower.

3.4 Stagecoach identifies the main factors behind the underlying increase in bus passengers in Canterbury as being:

- Increased bus frequencies on key routes into Canterbury (e.g. service frequencies on ‘Triangle’ routes between Canterbury, Whitstable and Herne Bay town centres have increased from four per hour to six per hour; there are now four ‘fast’ Folkestone-Canterbury (16/A) services per hour, compared to one ‘fast’ bus per hour in 2003; and four Margate-Canterbury (8/A) services per hour, compared to two per hour in 2003). The increase in service

7 Stagecoach estimates that improvements to the UKC service account for about an extra 400,000 passengers per annum; the concessionary fares scheme is assumed to have generated about 300,000 extra bus trips per year; and the Freedom Pass for 11-16 year olds is assumed to have generated about 250,000 extra bus trips per year. Taken together, these three measures account for about a fifth of city centre bus boardings in 2011/12. Additionally, Stagecoach believes that restrictions on students being able to bring cars onto campus, associated with car park redevelopment, have helped to stimulate bus travel.
frequency on the ‘Triangle’ routes was initially supported via ‘Kickstart’
government funding, secured with the help of Kent County Council.

• The city council’s commitment to use parking charges as a policy instrument
to influence people’s travel choices.

• An improvement in the quality of buses, with more modern low-floor vehicles
having been purchased.

• Some improvements in bus reliability brought about by bus lanes.

• Better marketing of bus services, including, for example, developing the
‘Triangle’ brand for the Canterbury-Whitstable-Herne Bay route, which has
high recognition even amongst motorists. Stagecoach is also making efforts
to promote bus travel to non-users, for example by offering free bus ‘try-out’
vouchers to people living in Whitfield, to encourage residents to try the Deal-
Whitfield-Canterbury service that was introduced in April 2012.

3.5 This success story of growing bus use marks a significant change from the
situation a decade ago. The turnaround may be attributed to a concerted effort by
Stagecoach and the city and county councils, with all parties having become
much more active than in the past. It demonstrates that determination, sustained
effort and investment in better services will change people’s travel behaviour.
The increased rate of growth began shortly after Stagecoach and the city and
county councils signed a Quality Bus Partnership to improve bus services in
Canterbury, in October 2004. This partnership is still in place, with regular
quarterly meetings, and is felt by Stagecoach to be an important forum. The bus
company takes the view that council officers in Canterbury are particularly ‘good
at it’ compared to other areas of the county where they are involved in similar
quality bus partnerships, and their Commercial Director commented that ‘Since
about 2003, we’ve taken a very proactive approach to increasing bus use’.
Stagecoach is also clear that there is the potential for continued growth.

3.6 The formula that has been adopted by the Quality Bus Partnership in Canterbury
is working, and so it makes sense to do more of the same. Canterbury now has
the opportunity to build on its recent successes, and to become nationally-leading
in showing how small cities can provide excellent public transport.

3.7 In order to do this, all of the barriers that presently deter a driver from switching to
bus travel will need to be addressed. Figure 3 shows how every individual can be
thought of as living at the centre of a set of personal and environmental factors
that profoundly influence their behaviour. When these are negative regarding
sustainable transport, they act as ‘millstones’ preventing that person changing
their car use. While some barriers are the result of external conditions, such as
lack of services, others relate to people’s perceptions. They may not be aware of
suitable bus services or they may feel influenced by perceived behavioural
‘norms’. In addition people have habitual ways of doing things that they tend to
stick to.
3.8 The aim of the package to increase bus use in Canterbury should be to transform each millstone into a ‘lifebelt’ that supports choice of a non-car mode. A suggested package of interventions to achieve this is summarised in Figure 4 and described in detail in the next section.
Bus services still infrequent on some corridors, so if you miss one the door-to-door journey takes a long time

Buses sometimes turn up late because of traffic delays, so journey time unpredictable

For some trips, driving seems cheaper than taking the bus

Some short-stay destinations (e.g. Sturry Rd and Wincheap out-of-centre retail parks) require change of buses in city centre

Non-habitual bus users do not have a bus timetable at home – so don’t know when or how often buses run into Canterbury

People find bus timetables hard to understand

Friends, family and work colleagues all drive, so there is social pressure to do the same

‘Image’ of bus use is that it is a ‘second class’ service for people who have no other choice

Commuters have ‘routines’ for driving to work, and it’s easier not to change

Progressively increase frequencies on key routes, till all ‘Canterbury villages’ and inter-urban routes have a service every 10 minutes

Install bus lanes where traffic congestion is a problem, to enable buses to jump the queues

Focus future retail development in city centre locations; seek to limit retail development at primarily car-dependent locations

Peg parking charges (in city centre and at Park and Ride sites) so that bus travel is cheaper

Develop attractive and ‘easy-to-use’ pocket timetables for main bus corridors, and distribute via community (‘social marketing’) programme with bus ‘taster’ tickets

Lead from the front: councillors, senior city council officers, C4B / CCP board and other senior Canterbury figures pledge to use the bus, and to encourage their staff to do the same

Improve quality of vehicles and bus stops

Extend successful 11-16 Freedom Pass to 16-19 year olds
‘The 10 minute read’: Details of the actions to increase bus use

3.9 For each of the main bus routes into Canterbury, the first priority is to tackle the ‘objective’ barriers to bus travel, as summarised in Figure 4. On routes and for journeys where these ‘objective’ barriers have been tackled, and the service on offer is frequent, reliable, and attractively priced relative to driving, the next priority is to tackle the barriers related to lack of information, social norm and habit. Actions 1-4 below address ‘objective’ barriers, while actions 5-8 address the second set of barriers.

Action 1: Increase bus frequencies to every 10 minutes on key routes

3.10 Services on the core ‘Triangle’ route have been running every 10 minutes since September 2010, and are commercially viable at this frequency. Stagecoach believes it is possible to achieve similar frequencies on all inter-urban routes in the medium-term, although there is not yet a commercial business case for this. However, higher frequencies could be achieved more quickly through upfront ‘Kickstart’-style public investment.

3.11 In order to have the greatest impact on traffic, it makes sense to prioritise high frequency bus services from the residential locations which generate the most trips into the city centre.

3.12 Figure 5 shows the 43 wards in the districts of Canterbury, Ashford, Dover, Shepway, Swale and Thanet which have at least 100 people commuting (by any mode) to jobs in central Canterbury. These residential locations are also likely to generate the most trips for other purposes, such as shopping, leisure and further education. The five wards which make up central Canterbury are not shown, because walking or cycling to work are likely to be better options for residents of these wards, rather than going to work by bus.

3.13 It is immediately obvious that the biggest flows of people are coming from wards within the district of Canterbury, with 17 of the ‘top 20’ places occupied by Canterbury wards. Particularly large numbers of people commute into central Canterbury from Herne and Broomfield, Chartham, Sturry, Chestfield and Swalecliffe, Reculver, Herne Bay (Heron and West Bay), Seasalter, Whitstable (Gorrell and Harbour), and Blean. Many of these areas already benefit from the 10-minute frequency services on the Triangle route, but some neighbourhoods within these wards are ‘missed’ by the upgraded Triangle service, or only served by some Triangle buses. Particular omissions are Broomfield, Beltinge, Chartham, Chestfield, Hillborough, Reculver and Seasalter. In addition, larger villages such as Bridge (in North Nailbourne ward) and Thanington (in Harbledown ward) appear to generate substantial flows of people into Canterbury and have relatively less frequent bus services. Increasing service frequency for all of these ‘near to Canterbury’ villages may offer greater potential than increasing frequency on longer ‘inter-urban’ routes between Canterbury and other East Kent towns.
Figure 5: Number of residents commuting into central Canterbury, by ward of residence

Note: ‘Central Canterbury’ = five central Canterbury wards (Westgate, Northgate, St Stephens, Wincheap and Barton). Number of people living and working in these wards not shown (as these people are more likely to switch to walking or cycling than bus travel). Graph shows all other wards with at least 100 people commuting into central Canterbury by any mode, in districts of Canterbury, Dover, Swale, Thanet, Shepway and Ashford. Source: Census 2001. Note that travel into central Canterbury for other purposes (education, shopping, leisure etc) is not included.

Action 2: Install ‘congestion-busting’ bus priority measures and improve parking enforcement

3.14 For motorists to feel confident in using buses to get to work or for other time-critical journeys, the bus service must run like clockwork. This is especially important for routes where services are less frequent (e.g. half-hourly). Stagecoach reports that 93% of its buses operate on time, and while at first sight this may appear a good figure, it in practice means that a commuter using buses to get to work might arrive late a couple of times a month. That uncertainty forces people to build leeway into their journey – for example, catching the bus before the one they really need – which in turn introduces a large time penalty for bus travel relative to travel by car.
3.15 Switzerland is famous for the fact that its buses really do run like clockwork, but there is nothing special about what is done in Swiss cities that could not be done in Canterbury. Reliability can be increased by designing the road network so that buses are not held up by traffic congestion, and by reducing delays due to boarding by switching from ‘pay-the-driver’ to cashless (e.g. smart card) ticketing.

3.16 Stagecoach report that on nearly all the occasions when their buses run late, there has been traffic congestion somewhere along the route. Congestion in Whitstable, for example, can cause knock-on delays to buses along an entire route including Herne Bay, Beltinge, Broomfield, Sturry and Canterbury.

3.17 The city and county councils have a crucial role to play in ensuring that the road network in and around Canterbury works efficiently for buses. In some locations, there is a need for bus lanes or other priority measures, such as bus gates (restricting access to buses only), or bus bypass lanes with traffic light priority. Stagecoach has identified bottlenecks that cause bus delays in Wincheap; on the Sturry Road (both westbound and eastbound) between the city centre and the park and ride site, and further east as far as Sturry; on the New and Old Dover Roads; on Longport; and on the Harbledown bypass at the approach to the London Road roundabout. Beyond these short-term priorities, there may be a case in the medium-term for reallocating road space on the inner ring road to a ‘bus only’ lane (or ‘bus and bike only’). This would enable buses entering the city from the north or east to reach the bus station more quickly.

3.18 In the past, some bus priority schemes have been considered but rejected – for example, extension of the Sturry Road bus lane was abandoned because it would have required removal of some parking spaces. This fails to recognise the strategic importance of bus priority measures and the large number of people who would benefit from more efficient bus services.

3.19 In some locations, illegal parking can also cause significant delays to bus services. Stagecoach believes more effective parking enforcement – for example in Whitstable – would improve the reliability of the Triangle service. However, there is an issue that enforcement is difficult because of abuse directed at traffic wardens by motorists. This needs to be tackled, and it will require council leadership. Fundamentally, councillors must send out a clear public message that inconsiderate and abusive driver behaviour will not be tolerated. As an immediate measure, bus drivers could be supplied with digital cameras to photograph obstructive and illegal parking (recording the situation and noting the number plate), and the police could undertake to phone motorists whose vehicles have caused an obstruction to explain the effect of their action and ask them not to do it again. Councillors should make clear that if this low-cost measure does not significantly reduce bus delays, they will support tow-away zones or legal action against motorists who behave in an inconsiderate and illegal way.
Action 3: Focus future development in locations that can be well-served by buses

3.20 There has been significant out-of-centre retail development in Canterbury in the last twenty years, most notably on the Sturry Road and in Wincheap. These types of development are extremely difficult to serve by bus, because many shoppers are only able to access them by changing buses in the city centre. Even having caught a bus to these sites, the bus stop is remote from the main entrance to each shop. The layout of these retail sites is also such that it is unattractive and difficult to move between shops on foot. The strong message is that bus users and pedestrians are unwelcome.

3.21 Two recent examples of a similar failure to plan new development so that it can be served by public transport are the Tesco store which has been built on the outskirts of Whitstable and a new health centre, also in Whitstable, which is remote from existing bus routes.

3.22 While what has been done cannot easily be undone now, it is important to learn from the impacts of previous land use planning decisions. Section 6 of this paper explores in more depth how new development (retail, business and residential) can be designed so as to enable access by sustainable modes, including buses.

Action 4: Peg parking charges to bus fares, so travel by bus feels cheaper

3.23 A return bus fare from most destinations in the district compares favourably with the cost of all-day parking in a city centre car park. This means that commuters who do not have a free parking space at their workplace are likely to see the bus as a sensible alternative to driving.

3.24 However, for families and couples travelling into Canterbury for shorter periods, for example for shopping, the cost of travel by bus is very unattractive compared to the cost of parking in a city centre car park. The scale of the disbenefit is such that most Canterbury district residents are likely to be extremely reluctant to travel into Canterbury by bus for shopping trips, unless they qualify for a concessionary pass. This pushes people towards driving even when they may not wish to, as well as being unfair to people who do not drive.

3.25 For reasons both of fairness and environmental benefit, there is a strong case for annual above-inflation increases in the car parking tariff, with the aim that after five years car park charges would be ‘pegged’ to the cost of bus travel. The city council has already demonstrated clear political will to use parking charges in public car parks to reduce traffic congestion, and a policy of ‘pegging’ car park charges to bus travel costs would be consistent with this.

3.26 The ‘pegging’ should be such that a three-hour stay in a public car park (+ petrol) would cost the same as the average fare for a return bus journey for two people from within Canterbury district. This would mean that a single person travelling

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8 For example, a return bus fare from Beltinge to Canterbury is £5.90, while petrol costs + parking in a city centre car park for three hours on a Saturday is between £5.90 and £7.10 per car (assuming average petrol consumption, 18-mile return trip, and an hourly parking charge of £1.10 - £1.50). For two people travelling together, this is an effective ‘penalty’ of £5 - £6.
into Canterbury would find it cheaper to travel by bus, and two people travelling into Canterbury would also find it cheaper to travel by bus unless they were making a very short visit (two hours or less).

3.27 In as much as higher parking charges increase passenger loadings and profitability of Stagecoach’s bus services, it would be reasonable for the city and county councils and Stagecoach to negotiate a deal via the Quality Bus Partnership, whereby a city council commitment to increase car parking charges was accompanied by a Stagecoach commitment to reduce bus fares in real terms (i.e. allowing for inflation). This should be negotiated on the basis of ‘no net loss, no net gain’. It would need to balance the fact that some existing Stagecoach passengers would pay less for their bus journey (reducing fare revenue) while new passengers would increase fare revenue. Reducing bus fares would mean that parking charges would not have to rise by as much to achieve the same effect.

3.28 An example of how parking charges and bus fares might change during a five year adjustment period is given in Table 1.

<table>
<thead>
<tr>
<th>Year</th>
<th>City centre car park hourly charge</th>
<th>Petrol cost</th>
<th>Cost of 3 hours parking + petrol</th>
<th>Return bus fare, 1 person</th>
<th>Return bus fare, 2 people</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>£1.50</td>
<td>£2.60</td>
<td>£7.10</td>
<td>£5.90</td>
<td>£11.80</td>
</tr>
<tr>
<td>2013</td>
<td>£1.70</td>
<td>£2.60</td>
<td>£7.70</td>
<td>£5.60</td>
<td>£11.20</td>
</tr>
<tr>
<td>2014</td>
<td>£1.85</td>
<td>£2.60</td>
<td>£8.15</td>
<td>£5.20</td>
<td>£10.40</td>
</tr>
<tr>
<td>2015</td>
<td>£2.00</td>
<td>£2.60</td>
<td>£8.60</td>
<td>£4.90</td>
<td>£9.80</td>
</tr>
<tr>
<td>2016</td>
<td>£2.20</td>
<td>£2.60</td>
<td><strong>£9.20</strong></td>
<td><strong>£4.60</strong></td>
<td><strong>£9.20</strong></td>
</tr>
</tbody>
</table>

Note: figures in this table are indicative, and actual figures would depend on Quality Bus Partnership agreement, such that bus operators experienced no net loss or gain in fares revenue. All figures in 2012 prices; if adjusted for annual 3% inflation, the hourly parking charge in 2016 would be approximately £2.50, and the return bus fare £5.20. Once parity between parking (+petrol) and bus travel costs was achieved in 2016, parking and bus fares would increase in line with inflation. Return bus fare used in this example is the fare between Beltinge and Canterbury; petrol costs are calculated for 18-mile return trip with average fuel consumption.

3.29 Income from parking charges is already ring-fenced so that it is reinvested in transport. Additional funds raised by pegging parking charges to bus fares in this way should be reinvested in improving bus services and other actions to enhance sustainable transport. For example, they could enable the city council to develop its own ‘Kickstart’ fund to bring forward investment in more frequent bus services, or (as discussed below) could help fund an extension of the successful 11-16 Freedom Pass to 16-19 year olds.
Action 5: Provide tailored information about bus services

3.30 For some of the journeys that Canterbury residents make by car, bus travel is already an objectively ‘sensible’ option. However, habitual car users may not be aware of this. They may not have a bus timetable at home, and some people undoubtedly find timetables difficult to understand.

3.31 Research evidence shows that offering people information about specific sustainable travel options that are relevant to their journeys can lead to a reduction in car use. This can be done through personal travel planning programmes or community social marketing programmes.

3.32 In personal travel planning programmes, all households in a particular area are offered an ‘order sheet’ which lists a variety of sustainable transport services and information they could receive, including ‘personalised’ bus timetables from the bus stop nearest to their house; pocket timetables for other routes they might use regularly; free bus ‘taster’ tickets; and the option of a home visit by a bus driver to explain how to use local bus services.

3.33 Community social marketing programmes have been trialled in several locations. They are less developed than personal travel planning but may be lower cost. The Greener Journeys consortium of bus operators (which includes Stagecoach) is currently running community social marketing programmes to promote bus use in Leicester, Sheffield and Manchester\(^9\). These programmes are trialling different techniques to encourage bus use, such as community ambassadors, on-street ‘guerrilla marketing’, and contact via established community organisations. The Greener Journeys programmes have the potential to be easily replicable by bus operators working with voluntary bodies.

3.34 Stagecoach and local third sector organisations in Canterbury could work together to promote bus use on the corridors where services have already been improved. This might involve voluntary organisations recruiting ‘green travel ambassadors’ who would deliver personalised pocket bus timetables to local residents, run green travel stalls at community fairs, and attend meetings of other organisations to explain the benefits of bus use. The bus operator and local authority would need to fund the cost of specially-designed information materials (such as pocket timetables) and free bus ‘taster’ tickets.

Action 6: Lead from the front

3.35 If friends, family and work colleagues normally drive to work (and only use the bus on unusual days when their car is off the road), there is a strong, albeit unstated, social pressure to do the same. All of us like to be ‘part of the crowd’. Middle-class men of working age feel a particular social stigma in relation to bus travel, and yet this group is a key target audience because it is responsible for a high proportion of car mileage.

\(^9\) These programmes have been designed by social enterprise Behaviour Change, and are being evaluated by Transport for Quality of Life. They will run until February 2013, and the evaluation will be complete in April/May 2013.
However, it is possible to attract higher socioeconomic groups to use buses. In London, growing bus use has been accompanied by a change in the pattern of bus users, with particular growth in bus travel amongst people in higher socioeconomic groups (‘ABs’).

This is an area where leadership from senior opinion-formers in Canterbury is greatly needed. In order to reduce traffic problems in Canterbury, everybody has to ‘do their bit’ – and that means sometimes using a bus rather than driving. There is no necessity to give up driving altogether – for some journeys it is indisputably the most sensible option – but it would be reasonable to ask most people whether they could at least use the bus (or another sustainable mode) for one of the journeys that they currently make by car each week.

We cannot expect other people to sometimes use the bus if our ‘leaders’ never do so. If Stagecoach senior staff, city and county councillors and senior officers, and key opinion-formers from the main employers in Canterbury were to very publicly commit to travel by bus on a regular basis, and to encourage their own staff to do the same, the effect on bus use and traffic would be out of all proportion to the actions of those key individuals. Their pledge would not have to be an open-ended one – it could simply be a commitment to use the bus for at least one journey a week for a six month period.

The people making this commitment should be those who are the most influential and respected in the city: the chairs of Canterbury 4 Business and Canterbury City Partnership, the dean of the cathedral, the most longstanding councillors, the city council chief executive, head teachers of the most successful schools, the editor of the Gazette and the vice-chancellors of the universities. It should be publicly acknowledged that in taking a lead, these individuals may be doing something which introduces some inconvenience in their lives, but that they are doing it because they are public-spirited, recognise the importance of everyone doing their bit, and want to show a lead.

Any one of the senior opinion-formers suggested above could take the lead in initiating this public commitment.

In parallel with this personal commitment to lead from the front, it will also be valuable if employers in Canterbury commit to help their staff reduce their car use. Some of the larger employers (e.g. the University of Kent and Christ Church University) already have travel plans for their staff. However, small and medium sized companies are less likely to be engaged in the travel plan process. Here, Canterbury 4 Business again could play an important role. A good model is offered by the Chamber of Commerce in St Albans described in Box 1.
Box 1: A Case Study in Business Leadership

Graham Lane is Vice-President of St Albans Chamber of Commerce and MD of IT company Cheeky Munkey Ltd, with 30 staff. He took a very hands-on approach to reducing car use. This involved speaking to all his staff, understanding where they travelled from and when, and looking at what options the company could offer to enable them to sometimes use a sustainable mode. For some employees, flexible working made it possible to walk or get the bus to work. For others, secure bike parking was the key. Other employees now sometimes work from home.

Graham estimates that the company’s actions have reduced the number of car trips to their workplace by about 20%. There have been no disbenefits to the company. Graham decided to take a lead in this way ‘because it is the right thing to do’.

He has also worked with his colleagues at the Chamber of Commerce to encourage other businesses in St Albans to follow Cheeky Munkey’s lead. He acknowledges that this has been ‘quite a struggle’, and that while some businesses have been receptive, for others, any form of change can feel like a distraction. However, the availability of small grants of £1000 for businesses to invest in environmental actions has been helpful in getting some businesses to think about what they can do to tackle staff travel. And by getting businesses to act to reduce traffic in St Albans, he believes the Chamber of Commerce is making the town a more attractive place to do business, and making it easier to attract businesses to base themselves there.

Action 7: Improve the image and experience of travelling by bus

3.42 The quality of the buses used in Canterbury has improved in the last decade. However, when people try travelling by bus, their experience still may be that it is a ‘second class’ service. Waiting facilities may be basic and shabby; there may be litter or graffiti on and around bus shelters; and bus windows may be grubby. Bus drivers do a stressful and difficult job, and if they feel stressed and underappreciated may not be the best ambassadors for the important service to the community that they offer.

3.43 There is no quick fix for these issues. But they are all things that the Quality Bus Partnership should continually nag away at. Over time, it is important that quality standards keep on going up.

3.44 It is important to make it easy for passengers to report problems, and to encourage practical feedback – bus operators and the city council can’t know about graffiti on bus shelters unless someone tells them.

3.45 Regular bus passengers could be invaluable ‘eyes and ears’ for Stagecoach and the city council, if it was possible to find a way to recruit their help. In particular, retired people, many of whom are regular bus users, often have strong community values and might be willing to play the role of reporting back on problems that need to be fixed, as well as acting as ‘stewards’ to take care of
their local bus stops. The Community Rail Partnership movement has proved very successful at recruiting local communities to support and enhance their local railway stations, and Prof. Paul Salveson, the founder of the Community Rail Partnership movement, has recently argued that the same principles could be applied to local bus services. Canterbury’s successful Quality Bus Partnership is at present a partnership involving the bus operator and the councils; it is time to build on this by more actively involving the local community.

3.46 It is also important that the quality of the vehicles used by Stagecoach should keep on improving. High quality new buses, in good condition and meeting the latest European emissions standards, are more likely to attract passengers. It would be open to the city or county council to buy brand new buses for some routes, and lease them to Stagecoach, to test the effect of new buses on ridership.

**Action 8: Extend successful 11-16 Freedom Pass to 16-19 year olds**

3.47 The Kent County Council-funded Freedom Pass for 11-16 year olds has proved popular, and is widely seen as a successful scheme. Kent County Council has reported that 30% of pupils applying for a Freedom Pass were previously driven to school, and that there has been a reduction in congestion as a result of the scheme.

3.48 Recent campaigns initiated by college students and parents in Canterbury have argued that the 11-16 Freedom Pass should be extended to young people aged 16-19. Extension of the pass to this group would need to be considered quite carefully. While it would clearly offer cost-savings to young people, it might have little immediate impact on overall levels of traffic if these young people were mostly travelling by bus or other non-car modes already. According to 2001 Census data, only 23% of employed 16-19 year-olds in Canterbury drove to work (compared to 56% for people of all ages).

3.49 However, there might be significant benefits in introducing a Freedom Pass for 16-19 year olds if this was linked to an agreement to defer acquisition of a driving licence. This would help embed a public transport habit amongst young adults, and encourage this age group to see travel by bus as the normal way to get around. Once they reached age 20, a proportion of the young adults who deferred obtaining a driving licence at this stage of their lives would decide that it was not necessary to obtain a car at all – they would have established, and be comfortable with, the habit of bus use rather than the habit of car use. Importantly, voluntary deferment of licence acquisition by young adults could also reap significant rewards in road safety.

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10 The website http://www.fixmytransport.com is one way for members of the public to report problems with public transport services and infrastructure to bus operators and local authorities – but this needs to be backed up by a local proactive effort to let bus users know that their feedback is welcomed.

4. Making the most of Canterbury’s potential as a cycling city

‘1 minute read’: the vital concepts for policy-makers

• Canterbury’s compactness, relative flatness, low rainfall, three main universities, and short travel-to-work distances make it the perfect cycling city. Despite this, cycling levels are not that high.

• Recent demonstration projects in 18 British towns and cities show that investment in cycle infrastructure and promotion increases cycling levels. In Lancaster and Exeter, which are similar cities to Canterbury, cycle trips increased by 28% and 45% in less than six years.

• To achieve results on this scale requires expenditure of about £1.2 million per year. This can be from a combination of Local Transport Plan capital investment, developer-funded contributions, revenue from parking receipts and special grants.

• A comprehensive package of measures to tackle all of the barriers to cycling would have a major impact.

• The ‘objective’ barriers to cycling are the lack of safe, quiet cycle routes for some journeys that people need to make; fragmented and incomplete routes in and around the city centre; lack of confidence in cycling on busier roads; lack of secure parking at the destination; and, for many adults, lack of access to a bicycle. These barriers can be tackled by construction and signing of suitable routes, cycle training schemes, a rolling programme to provide more cycle parking, and a bike loan scheme.

• Other barriers are lack of knowledge of suitable cycle routes, a social ‘norm’ of driving, and habitual car use. These can be addressed by publicising good cycle routes to people who live close to them; workplace cycle challenges; community cycling promotion activities; and use of schools-based cycling programmes to promote cycling to parents too.
‘The five minute read’: Overview of how to increase cycling

4.1 In all sorts of respects, Canterbury is the perfect cycling city. It is relatively compact, with most destinations within easy reach by bike. Much of it is quite flat (with the exception of the route north from the city centre). It is on the eastern side of Britain, with low rainfall. Its three main universities mean that there is the potential for a strong student cycling culture. And more than a third (37%) of the people who work in the city centre travel a ‘cycle-able’ distance of less than 5km (3 miles) to work, according to the 2001 Census. The city also has some good cycle routes – most notably the newly-completed Great Stour Way. Finally, it has a strong cycling advocacy group, which also provides positive role models. Despite these advantages, levels of cycling in Canterbury are not especially high.

4.2 Recent evidence from similar towns and cities elsewhere in England (the six Cycling Demonstration Towns and 12 Cycling Cities and Towns) shows that investment in cycling infrastructure and promotion is effective in increasing cycling levels. These towns invested in a combination of cycle paths, cycle parking, and promotion of cycling over a period of three to six years. All 18 towns and cities achieved increases in cycling levels, with average increases of around 24-29% over this short time period. Figure 6 shows how cycling levels increased in two cities that are quite similar to Canterbury: Exeter (where cycle trips increased by 45% in just under six years) and Lancaster (where cycle trips increased by 28% over the same period).

Figure 6: Increase in cycling trips in two Cycling Demonstration Towns similar to Canterbury
4.3 It is difficult to compare the rate of increase in cycling in Exeter and Lancaster with what has happened in Canterbury over the same period, because Exeter and Lancaster both installed a comprehensive network of 26 automatic cycle count sites at the beginning of their period as Cycling Demonstration Towns, and Canterbury currently has only four such sites. However, the qualitative impression from the Canterbury cycle count data between 2005 and 2010 is that cycling levels have probably remained fairly static in the four locations where they are being measured (Falala Way, Hanover Place, Westgate Court Avenue and New Ruttington Lane).

4.4 The recipe for increasing cycling in Exeter and Lancaster was straightforward. As with the proposals for increasing bus travel described in Section 3, the key is to ensure that all of the barriers that presently deter a driver from switching to cycling are being tackled – that is, ‘objective’ barriers such as the lack of a cycle route that feels safe and attractive; ‘knowledge’ barriers such as not knowing about the cycle routes that already exist; perceived behavioural norms (a feeling that ‘people like me don’t cycle’); and habitual ways of doing things.

4.5 The key actions to tackle these barriers are summarised in Figures 7 and 8, and described below. The intensity with which these actions are pursued is important. This is best measured by level of expenditure. Taking Lancaster as an example, expenditure was approximately £1 million per year (capital) and £230,000 per year (revenue) over the course of the Cycling Demonstration Town programme. This was a combination of contributions from developer-funded works, Local Transport Plan capital expenditure and dedicated grant from the Department of Transport / Cycling England. If investment were at a lower level, the rate of growth of cycling would also be slower.

Figure 7: Barriers to behaviour change
Figure 8: Barriers to cycling, and actions to overcome them

<table>
<thead>
<tr>
<th>Objective Barriers</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>No safe, quiet cycle route for the journeys I make</td>
<td>Build high quality continuous ‘signature routes’ for all main radial routes into the city centre</td>
</tr>
<tr>
<td>Nowhere secure and convenient to park my bike at the destination</td>
<td>Tackle dangerous and intimidating junctions and barriers to cycling</td>
</tr>
<tr>
<td>Don’t own a bike</td>
<td>Install cycle parking at main employers, close to shops, and other key destinations</td>
</tr>
<tr>
<td>Don’t feel confident / safe when I cycle</td>
<td>Develop bike loan scheme to provide a chance for people to try cycling and see if they like it (including electric bikes)</td>
</tr>
<tr>
<td>Cycling to my regular destinations would involve a steep hill</td>
<td>Offer cycle training programme for adults</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Knowledge Barriers</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not aware of reasonably good cycle routes that already exist (e.g. from Sturry)</td>
<td>Mail-drop households with new city cycle map and details of their specific route into the city centre</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social Norm</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friends, family and work colleagues all drive, so there is social pressure to do the same</td>
<td>Run workplace / university cycle challenge to encourage commuters and students to give cycling a go</td>
</tr>
<tr>
<td>Commuters have convenient ‘routines’ for driving to work, and it’s easier not to change</td>
<td>Run community-based activities to promote cycling (Dr Bike information stall in city centre, Saturday bike rides)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Habit Barrier</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Use school-based cycling programmes (e.g. Bike It) as a way of promoting cycling to parents</td>
</tr>
</tbody>
</table>
'The 10 minute read’: Details of the actions to increase cycling

4.6 The suggested actions to increase cycling are as follows:

**Action 9: Build high quality continuous ‘signature cycle routes’ for all main radial routes into the city**

4.7 The Great Stour Way is an excellent example of a good quality ‘signature cycle route’ that takes people right into the centre of Canterbury. Similarly, the Crab and Winkle Way provides a route for people living in Blean to travel into the city, via the University of Kent.

4.8 The next step is to work up detailed drawings and plans for equivalent cycle paths on the other main radial routes into Canterbury. This approach mirrors the way that Darlington, one of the Cycling Demonstration Towns, set out to increase cycling. Like Canterbury, Darlington is a compact town. Darlington officers designed, built and signed a continuous network of seven radial routes leading from the edge of the town to the town centre between 2005 and 2011.

4.9 Realistically, it will take some time to build all the routes that are needed in Canterbury, but one of the lessons from the Cycling Demonstration Towns was that local authorities who had ready ‘worked up’ plans for new cycle routes were in a position to seize the opportunity when funding unexpectedly became available – whether this was from their own local authority end of year under-spend, developer contributions related to new development, or one-off competitive grants from Government or other bodies such as Sustrans.

4.10 Wherever possible, it is worth building completely off-road routes such as the Great Stour Way. Cycle campaign group Spokes sees an opportunity to build a similar riverside cycle route eastwards from the city centre (from the junction of Mill Lane and St Radigund’s St) following along the Stour as far as Sturry. Some sections of this path already exist or are under construction, including beside the new housing development at Kingsbrook Park, and Spokes has surveyed the remainder of the route. This riverside cycle route is seen as a top priority by local authority officers. It would benefit users of Kingsmead Leisure Centre; residents in the new Kingsbrook Park; students at Parham Road Student Village; people working at Asda, Marshwood Industrial Estate and Vauxhall Road retail park and industrial estate; residents of Sturry; and, if extended a little further east, pupils of Spires Academy.

4.11 Similarly, there is a need for a high quality route from Bridge into Canterbury city centre. Spokes has suggested that this could use the route of the former Elham Valley Railway between Station Rd in Bridge and St Anselm’s School, from which there could be a link using public bridleway to the Simon Langton Boys’ School, a link on the Old Dover Road to the Langton Girls’ School, and a dedicated cycle path (segregated from traffic by a kerb) along the New Dover Road and St George’s Place into the city. This could use one of the pedestrian underpasses at St George’s roundabout to cross the inner ring road into the city centre.
4.12 These off-road routes should be designed so that they are safe and pleasant to use at all times of year, not just in the summer, to reduce the tendency for cyclists to ‘spill back’ onto other modes which are already at capacity for winter commuting trips.

4.13 As well as these very high quality off-road cycle routes, it will be necessary over time to construct some segregated cycle paths adjacent to the main roads into Canterbury for the full extent of the built-up area of the city. These cycle paths will meet the needs of residents who live within a couple of miles of the centre (for some of whom the diversion onto one of the signature cycle routes would substantially increase the length of their journey into the city), and also provide good access to local shops. For example, a cycle path is needed on the Whitstable Road and St Thomas’s Hill as far as the University of Kent and Rough Common Road.

4.14 In places, construction of cycle paths alongside highways will require removal of on-street parking or tackling other difficulties. Cycle paths adjacent to main roads should preferably be placed away from traffic lanes (e.g. separated by means of a grass strip or pavement), or divided from the carriageway by a kerb. Where road width is too narrow to provide a good segregated cycle path, shared use of a widened footway by pedestrians and cyclists to one side of the carriageway may provide a solution.

4.15 The new high quality cycle routes (both those adjacent to main roads and those away from main roads) should take cyclists right into the city centre. At present, there are some parts of the historic core where the layout of one-way streets and the pedestrian zone make it impossible to get around by bike. Particular problems identified by members of the Canterbury Society include north-south movements along the main street, and east-west movements at St Georges / Whitefriars. Other cities in Europe allow considerate cycling within their pedestrianised core, and more recently, British cities such as Darlington and Exeter have started to do this too.

Action 10: Tackle dangerous and intimidating junctions and barriers to cycling

4.16 ‘Signature’ cycle routes are very important because they enable people to relax and enjoy their cycle ride for most of the way. But this will not be enough to persuade many drivers to switch to cycling if they still have to ‘do battle’ with cars and lorries at difficult junctions or on short sections of main road in order to reach their destination.

4.17 One way of tackling this is to install advanced stop lines at every significant junction in the city. Advanced stop lines increase safety because they enable cyclists to get ahead of the traffic, where they are clearly seen by drivers. Brighton, one of the Cycling Demonstration Towns, installed 28 advanced stop lines at its busiest junctions over a 3-month period in 2007, soon after it became

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12 Sustrans (undated) Connect2 and Greenway Design Guide, appendix B, contains an excellent visual resource showing examples of good practice in the design of cycle paths on highways:
a demonstration town; thereafter, ASLs were made a required feature in all highway schemes, so that more were installed whenever highway works took place.

4.18 The Cycling Demonstration Towns also identified places where there was an unnecessary barrier to cycling that could be easily removed, and systematically tackled these. Often, this was by installing toucan (pedestrian / cycle crossings) of busy main roads. For example, Darlington installed 11 toucan crossings in locations where the cycle network crossed main roads, most notably across their inner ring road, during the period that it was a Cycling Demonstration Town. There are several locations in Canterbury where this could be done, particularly around the ring road: for example, replacing the existing pelican crossings across Lower Bridge Street at the junction with Burgate.

4.19 All highway works in Canterbury should always be checked by a cycling officer at design stage to ensure that every opportunity is taken to improve conditions for cyclists – that is, to ensure that highway engineers always ‘think bike’. This will ensure that opportunities to improve conditions for cycling at zero or little cost are not missed. In addition, a dedicated programme budget for installing toucan crossings, advanced stop lines and other small highway measures that offer a low-cost win should be identified, in the same way that there are budgets for carriageway schemes and footway schemes (neither of which in practice seem to include measures for cycling).

**Action 11: Introduce more 20mph zones and area-wide 20mph limits**

4.20 By creating a calmer, safer street environment, 20mph zones and area-wide 20mph limits can encourage people to cycle.

4.21 Lower speeds on urban roads are known to reduce vehicle collisions and cyclist and pedestrian casualties. On urban roads with low average traffic speeds, a 1mph reduction in average speeds can reduce collision frequency by about 6%. Guidance from the Department for Transport on setting local speed limits suggests that in 20mph zones (that is, areas where traffic calming measures such as speed humps and chicanes are used), average collision frequency may fall by around 60%.

4.22 Area-wide ‘signed-only’ 20mph limits (without associated traffic calming) may also achieve significant benefits. One of the largest such schemes in Britain was introduced in Portsmouth in 2008. This reduced the speed limit to 20mph on 94% of the city’s 438 km of roads. An interim evaluation of the initiative found that average speeds had fallen by 1.3mph overall. There were larger speed reductions at sites where the average ‘before’ speed was greater: for sites with ‘before’ speeds above 20mph, the reduction in speed averaged 4.6mph, and for

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13 M Taylor, D Lynam and A Baruya (2000) TRL report 421 *The effect of drivers’ speed on the frequency of road accidents*


15 Atkins (2010) *Interim evaluation of the implementation of 20mph speed limits in Portsmouth* Final report for Department for Transport and Portsmouth City Council
sites with ‘before’ speeds above 24mph the reduction in speed averaged 6.3mph. City-wide, there was a 22% reduction in the number of vehicles involved in crashes (from 288 per year to 225 per year).

4.23 A number of local authorities are now looking at the introduction of city-wide 20mph speed limits. In July 2012, following a popular and successful trial in two pilot areas, Bristol City Council voted to bring in a 20mph speed limit throughout the city. This will be funded by the government’s Local Sustainable Transport Fund and the Local Transport Plan settlement. All roads except dual carriageways, 40mph and 50mph roads will be considered for the new 20mph speed limit16. Bristol councillors can be confident of the success of the new policy because of the trial. The two pilot areas had included both residential streets and main roads (excepting only ‘strategic through routes’) and a third of the city’s households. In consultation before the trial, the main request was for it to be extended to other roads; after the trial, between 75% and 82% of residents of the pilot areas said they supported the lower limit17.

4.24 Other local authorities which are implementing 20mph limits on a large scale include Hull, Oxford, Bath, Edinburgh, Newcastle, Manchester, Liverpool, Sheffield and London Borough of Islington18.

4.25 Canterbury could start by introducing an area-wide 20mph limit in two pilot areas, each covering about 15% of the city’s households. If pilot 20mph schemes are as popular and successful in Canterbury as they have been in Bristol, they could then be rolled out to other areas.

**Action 12: Install cycle parking at main employers, close to shops, and other key destinations**

4.26 If there is nowhere convenient and secure to lock a bicycle at work, or outside shops, at stations or at other everyday destinations, people will not cycle. ‘Short stay’ cycle parking should be very prominently sited, right outside the front door of the shop, library or other destination. For workplaces and the universities, cycle parking should be secure (e.g. accessible only with a pass-key) and under cover.

4.27 Cycle campaign group Spokes identified some new cycle parking that has been installed in Canterbury recently, including at Canterbury West station, at Christ Church University main campus, and at various locations in the city centre. While some of this is well-located and of good quality, there are also instances where cycle stands have been poorly located in places that lack passing surveillance.

4.28 The experience of the Cycling Demonstration Towns suggests that it is worthwhile to install very substantial numbers of cycle stands. For example, Exeter installed over 1500 cycle parking spaces between 2008 and 2011, including approximately 500 spaces at schools; 400 at workplaces; 300 at the university; 125 at the railway station; 60 at local shopping centres; and 80 in the

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17 Bristol City Council (2012) *20mph speed limit pilot areas: monitoring report*
city centre. A further 1000 cycle parking spaces were secured by council officer negotiation as part of a new development at the university. Over the same period, Darlington installed over 800 cycle parking spaces, and Lancaster over 1100 cycle parking spaces.

4.29 In Canterbury, there are opportunities to secure cycle parking as a condition of planning permission for new developments, and Canterbury City Council makes some efforts to ensure that this is done. It would however be worthwhile to identify a dedicated budget for a rolling programme of on-street cycle parking and for retrofitting cycle stands in existing locations where it is inadequate, such as the Whitefriars shopping development. Grants for small businesses to install cycle parking should also be on offer, as part of a wider ‘Travel for Work Partnership’. For example, the Cambridge Travel for Work Partnership offers grants to businesses to cover 50% of the cost of purchasing and installing cycle stands.

**Action 13: Develop a bike loan scheme**

4.30 Baseline research carried out in the Cycling Cities and Towns found that two-thirds of adults did not have a bicycle. The figure was even higher amongst people in socioeconomic groups DE (where three-quarters did not have a bicycle).

4.31 It is likely that bicycle ownership is similarly low in Canterbury. Not having a bicycle is of course a fairly fundamental barrier to starting cycling – and there is a difficulty here, because it means that a person cannot ‘sample’ what it is like to cycle for their regular journeys (e.g. to work or university) without first going out and buying (or perhaps borrowing) a bike. In practice, this is likely to be a fairly large disincentive.

4.32 Several ways of overcoming this barrier have been tried in different towns:

- Darlington set up a bike loan scheme which offered local residents use of a bicycle for a month to help decide whether they wanted to buy a bike of their own.

- In Southwark, the local authority operates a bike loan scheme for teachers and other school-based staff that currently drive to work but are interested in trying cycling. Staff receive the use of a bicycle (plus helmet, lock, lights and panniers) for a school term, and in return commit to cycle to and from school an average of twice a week.

- Other local authorities have teamed up with universities or colleges to offer bike loan to students and staff – for example, such schemes currently operate in Worcester, Somerset, Lancaster, Nottingham and Leeds.

- In London, Transport for London promotes the use of ‘pool bikes’ by businesses, and has published a step-by-step guide explaining how a

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business can set up a pool bike scheme for its staff\textsuperscript{20}. This enables employees to use a bike instead of driving for business travel during the day (providing financial savings to the company), and also means that staff can borrow a bike to try cycling to and from work.

- In Bristol, social enterprise GoLow (a spin-off from the local Mental Health NHS Trust) offers electric bicycles to NHS staff.

4.33 Kent County Council is considering leasing a small fleet of electric bikes which could be offered via short term loan to businesses. This would provide a good first step towards the type of initiatives outlined above, with the potential for expansion.

4.34 It is also important to note that for some people, particularly older people and people who are unfit or overweight, riding a bike feels like quite simply too much effort. For some of these people, the encouragement to ‘have a go’ that is provided by a bike loan may be all that is needed – and the benefit in terms of feeling a little bit fitter, having more energy, and losing a little bit of weight may mean that, once someone has tried using a bike for a few weeks, they will be eager to continue. However, for other people, the physical effort involved in cycling may still make it an unattractive option. For this group, the possibility of borrowing an electric bike which has the effect of ‘flattening out the hills’ could be much more attractive. As an extension of their existing programmes, organisations such as the Electric Bicycle Company might potentially offer electric bikes on a lease basis that could be loaned out by doctors’ surgeries or health centres to people in this demographic.

**Action 14: Offer cycle training**

4.35 For the older generation, riding a bike was a basic life-skill that practically everybody learned. However, some younger adults have missed out on the chance to learn how to ride a bike safely and sensibly. These are the people who ride a bike on the pavement (not always in a considerate way), or who do not ride a bike at all.

4.36 If Canterbury is to become a cycling city, it is important that all its residents should have the chance to learn how to ride a bike. Cycle training in schools is important – using the new Bikeability training programme rather than the old cycling proficiency test. But it would also be valuable to offer cycle training to all learner drivers (a key group because they will be more considerate of cyclists and other road users if they have experience of cycling themselves); parents (so that that they are able to teach their children to cycle safely); and as part of a workplace travel planning service to employers. Kent County Council is considering introducing an adult cycle training programme in 2013/14, and Canterbury could be a focus for this.

Action 15: Increase knowledge of existing cycle routes

4.37 Canterbury residents who normally get around by car may not know that there are good cycling routes parallel to some main roads. Drivers coming into the city from Chartham or Thanington will not see the Great Stour Way, and drivers coming in from Sturry may not know about the off-road cycle route from Fordwich.

4.38 The strong branding of the Great Stour Way and the Crab and Winkle Way helps to raise awareness of these routes, and the same principle should be applied to other ‘signature’ cycle routes into the city.

4.39 Kent County Council is currently revising its Canterbury cycle map. This should be very widely distributed. It should be in display racks at The Beaney, GP surgeries / health centres, community centres, post offices, council information desks, shops and employment sites. In Peterborough, the Sustainable Travel Town team had a ‘distribution run’ of over 200 places which stocked sustainable travel information leaflets. Their supplies were regularly checked and topped up to make sure that it was easy for members of the public to pick up a leaflet.

4.40 A review of the signage on the cycle network would also be worthwhile. This would make sure that every junction was unambiguously signed with main destinations and time to reach them. Use of times rather than distances (e.g. ‘8 minutes’ rather than ‘1 mile’) was favoured in the Cycling Demonstration Towns, because many people do not know how quick it is to cycle a few miles.

Action 16: Run workplace cycle challenge

4.41 In most workplaces, driving to work is the social norm. Employees consciously or unconsciously tend to do the same as their colleagues, and so there is an inbuilt organisational bias towards driving. A workplace cycle challenge is a way of changing this. For a brief period of a fortnight, cycling to work becomes the normal thing to do. Once people have tried cycling, found a good route, and established an enjoyable new routine, a proportion will continue to cycle to work.

4.42 In workplace cycle challenges, people sign up their organisation to compete with others across the city to notch up the most cycle trips. In a workplace cycle challenge in Ashford in 2011, 65 organisations and 795 people took part. Most (79%) were previously non-cyclists or only cycled occasionally. Three months after the challenge, 9% of the participants who had previously driven to work had switched to cycling as their main way of getting to work, and 41% of people who were non-cyclists before the challenge were cycling at least once a week\(^\text{21}\).

4.43 Several organisations run workplace cycle challenges, or can assist a local authority in running its own challenge (for example, Challenge for Change; Get Cycling). In Cumbria, South Lakeland Action on Climate Change has run a workplace cycle challenge for the last three years, and has developed website and database technology which is available for other non-profit organisations to use. Any of these options could be explored for Canterbury.

Action 17: Run community-led cycle promotion activities

4.44 Community-led activities to promote cycling are important because people tend to be more influenced by role models within their community than by people who are seen as ‘authority figures’, such as council officers. Spokes already organises many such activities. It would be worth reviewing the activities that already take place and thinking about how Spokes’ members’ time could be best used to create a strong visible cycling ‘presence’ in the city; to provide practical information and help to people who may be thinking about cycling and wondering how to start; and to encourage more Canterbury residents to sample ‘fun’ cycling activities. Given that volunteer capacity is limited, the city council could offer grant funding to enable Spokes to run more activities and to widely advertise them.

4.45 The Bristol Cycle Festival is an example of community-led cycle promotion on an ambitious scale. Activities that would be worth considering in Canterbury (some of which are done already) are:

- Regular year-round Dr Bike cycle repair / information / advice stall in the city centre, to help people who are considering starting cycling. This should be often enough that Canterbury residents come to expect it to be there – for example, on the first Saturday of every month – and in a prime spot.

- A season of Saturday bike rides with quiet routes taking no more than two hours, themed around activities aimed at different target audiences e.g. ‘Discover secret Canterbury’, ‘Mums, Dads, kids and teddy bears ride’, ‘Cycling picnic’. Rides might be £5 to hire a bike, free if you bring your own.

- ‘Bike Trains’ (group rides to work in central Canterbury) from Chartham or Sturry.

- A ‘Love Canterbury, Love your Bike’ annual festival, with cycle rides, outdoor cycling-themed film show, a cycling-themed art competition, a participatory Bicycle Ballet, a Carnivelo cycling carnival.

Action 18: Use school cycling programmes to encourage parents to cycle too

4.46 A lot of the activity to increase cycling in the Cycling Demonstration Towns was focussed on schools – this included providing more cycle parking, cycle training in Years 5, 6 and 7, after-school cycle clubs and Bike It cycle promotion activities.

4.47 One unexpected outcome of the Cycling Demonstration Towns projects was that growth in cycling amongst adults seems to have been greater in households with children than in households without children. This may be because parents started cycling with their children. Many parents are keen to support and be involved with their children’s learning, and school cycling programmes could take advantage of this to get parents back on their bikes. For example, Bike It programmes could include ‘Mums and Dads bike rides’, parents could be offered Bikeability cycle training, and school fetes could include ‘Mums and Dads’ cycle skills competitions.
5. Stimulating more efficient car use

‘1 minute read’: the vital concepts for policy-makers

- For drivers travelling from outside Canterbury district into the city, there is a ‘critical mass’ starting from a few key locations that would enable a substantial expansion of car-sharing.
- Canterbury could seek funds and support to become a Car-Sharing Demonstration City, to take existing car-share activity to the next level.
- Car-sharing (as well as other sustainable travel options) could be incentivised by introduction of a ‘Charge and Reward’ revenue-neutral scheme at the largest workplace car parks, such as the hospital and the city council.
- The city and county councils could also develop a Travel for Work Partnership with other players such as the universities to support all Canterbury businesses in implementing workplace travel plans. This approach has been very successful in Cambridgeshire.
- The planning system could be used more assertively to ‘design in’ effective travel plans.

‘The five minute read’: Overview of how to stimulate more efficient car use

5.1 Section 2 demonstrated that around half of the people who drive to work in Canterbury are travelling distances for which bus travel is a relatively unattractive option. While some of these drivers travel from locations close to railway stations (e.g. in Faversham) and could potentially switch from driving to commuting by train, the majority do not live close to a station.

5.2 However, there are around 1000-2000 people driving into Canterbury for work from each of the districts of Dover, Thanet, Swale, Shepway and Ashford (nearly 7000 people in total), and this offers the critical mass for a substantial expansion of car-sharing.

5.3 Because these people are travelling significant distances, their travel costs are quite large. A person driving on a daily basis from a ward in Dover district, using a car with average fuel consumption, will spend about £1000 a year on petrol
alone, and about £500 on maintenance. By regularly sharing their journey with one other person, they could save about £770 a year, and by saving with two others they could save about £1030 a year. So the incentive to car-share is there.

5.4 There is already a car-share matching scheme operating in Kent, and recent funding from the government via the Local Sustainable Transport Fund was granted partly on the basis of a proposal to expand this scheme. At present, Kent Journey Share has around 4000 members across the whole of Kent, and although the scheme appears from its website to have a focus mainly elsewhere in the county, employees of East Kent NHS Trust (which includes Kent and Canterbury Hospital) have their own ‘private’ car-sharing group within Kent Journey Share.

5.5 A recent report for the RAC Foundation by Dr Sally Cairns argued that there is a need for a ‘Car-Sharing Demonstration City’ to greatly increase promotion of car-sharing, and to take car-share membership to the next level. Canterbury would be very well-suited to take up this challenge, and it is likely that funds could be secured – for example, from European Union research programmes, future ‘LSTF-type’ government programmes, or conceivably from the RAC Foundation itself – to roll-out such a demonstration programme.

5.6 Many of the actions associated with being a Car-Sharing Demonstration City would be about marketing, publicity and information. These would be more effective if they were allied with actions to tackle the problem that a substantial proportion of the car parking in Canterbury is employer-provided, and free to the user. While this can be a sensitive issue, it does need to be addressed for reasons of equity. A ‘Charge and Reward’ scheme at large workplace car parks would be fairer than the current system. The next section explains how this would work, and suggests other actions that could help reduce the traffic currently generated by high levels of workplace parking in the city centre.

5.7 Car-sharing would also become much more widespread if it was done in the context of a city-wide effort to encourage businesses and other employers to adopt and implement workplace travel plans. Some large employers in the city – notably Christ Church University and the University of Kent – are already making efforts to implement workplace travel plans, but most employers are not. To encourage much greater take-up of workplace travel planning, the city and county councils could adopt the model which has been successfully applied in Cambridgeshire, where a longstanding Travel for Work Partnership now works with 98 businesses employing 65,000 people, and has achieved substantial cuts in car use through its practical hands-on business support. This and other actions to spread good practice in workplace travel planning are discussed below.

22 Figures based on 30 mile return trip per day for a full-time worker; average fuel consumption of 44 mpg for a new petrol car (Department for Transport figures from Transport Statistics Great Britain Table ENV0103); petrol cost of 140p per litre / 637p per gallon (AA Fuel Price Report September 2012); and average running costs of about 7 pence per mile for tyres, service labour and replacement parts (AA Motoring Costs 2012). Cost of parking not included.

'The 10 minute read': Details of the actions to encourage efficient car use

5.8 The suggested actions to stimulate more efficient car use are as follows:

**Action 19: Become a Car-Sharing Demonstration City**

5.9 Making Canterbury a demonstration city for car-sharing would mean a big step up in the scale of marketing and promotional activity that is currently being undertaken through Kent Journey Share. This would require some additional funding and dedicated staff time, focussed specifically on promoting car-sharing to Canterbury.

5.10 While remaining under the Kent Journey Share ‘umbrella’, a Canterbury-focussed car-sharing scheme could have its own branding and web address (e.g. www.canterbury.liftshare.com), similar to the car-sharing scheme the county council has developed for North Farm in Tunbridge Wells.

5.11 More resources would enable intensive marketing of car-sharing to potential members within the ‘target’ districts of Dover, Thanet, Swale, Shepway and Ashford. This could include publicity such as road signs on main approach roads to Canterbury; bus back advertising and billboards; recruitment leaflets sent to all households in target districts at the same time as the annual mailing of information about council tax; and incentives to join the scheme (for example, Devon County Council offers financial incentives for people to join, such as a £100 voucher for anyone joining during January).

5.12 Some wards within the target districts appear from analysis of Census data to have particularly large numbers of people commuting into central Canterbury by car. For example, more than 200 people drive into central Canterbury for work from Aylesham alone (while only some 30 people commute into Canterbury from Aylesham as a car passenger)\(^24\). In these ‘car commuting hot spots’, there must be particularly high potential to encourage car-sharing, and it would therefore be worth experimenting with community-based social marketing activities to prompt residents to consider joining the scheme, and also to stimulate a stronger social expectation of offering to informally share car travel with a neighbour. This social marketing activity could include recruitment of local car-share ambassadors to give short presentations at community meetings, run stalls at village fairs, and arrange publicity in parish and community newsletters. There could be annual competitions with an award for the village with the greatest number of people joining the scheme.

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\(^{24}\) From the 2001 Census, the wards outside Canterbury district with over 100 residents commuting into central Canterbury by car (as the driver) are as follows: (a) in Thanet: Birchington South, Central Harbour, St Peters, Thanet Villages, Westgate-on-Sea; (b) in Dover: Aylesham, Eastry, Eythorne and Shepherdswell, Little Stour and Ashstone, Sandwich; (c) in Ashford: Downs North; (d) in Shepway: Elham and Stelling Minnis, North Downs East; (e) in Swale: Abbey, Boughton and Courtenay, St Ann’s, Watling. A few of these wards have exceptionally high numbers of people driving into central Canterbury for work – e.g. Little Stour and Ashstone 384; Boughton and Courtenay 314; and Aylesham 232.
5.13 The campaign would also need to actively recruit employers in Canterbury to support the scheme and encourage their employees to join. Some employers might wish to set up ‘private car-share groups’ for their staff, but employers could be asked to offer their employees the option of specifying that they are also interested in sharing with staff that have registered via other organisations (rather than just staff of their own organisation), so that cross-employer participation amongst SMEs is encouraged.

5.14 Once they had signed up, member employers could be encouraged to promote car-sharing to their own staff on a regular basis. For example, this could mean sending out ‘reminders’ to staff with their pay-slips that they can join the scheme and save money.

5.15 The largest employers in the city (including the city council, the universities and the hospital) could take further action in support of car-sharing by setting aside the best space in their car parks for people who are sharing. The University of the West of England has a car park specifically for sharers, where both the driver and a passenger have to operate the entry device, and this could be appropriate for some large sites.

5.16 Employees could also be required to register on the car-sharing scheme as a condition of receiving a parking permit at sites such as Christ Church University where parking availability is already restricted.

5.17 Liftshare Week, which runs nationally each October, would offer an opportunity to publicise the achievements of the car-sharing demonstration project and to stimulate more people to join up. Kent Science Park near Sittingbourne has recently reported that 15% of their total workforce now car-share, in part because of promotional activity around events such as Liftshare Week.25

Action 20: Remove the ‘hidden subsidy’ of free workplace car parking

5.18 Alongside these actions to stimulate car-sharing, there is a need to tackle the problem that many people who commute to work by car are encouraged to do so because they have a free parking space at work.

5.19 It seems unfair that some people who drive to work should have this perk, while others who walk or take the bus receive no equivalent benefit. City centre parking is a substantial real cost to businesses, equivalent to about an extra £400 to £2400 on the cost of employing one full-time member of staff for a year.26 Reducing workplace car parking would increase the resources that employers had available to invest in their business, and could create more jobs. For public sector employers, including the city council and the hospital, less money spent on providing and maintaining workplace car parks would mean more money for important front-line services that are currently under threat.

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25 Kent Science Park press release (19 October 2012). 35% increase in shared commutes for Liftshare week
26 Estimates of the cost of providing workplace parking vary. The Essential Guide to Travel Planning (DfT / National Business Travel Network 2008) puts the cost at a minimum of £400 per parking space per year. Recent figures from the University of Hertfordshire put the cost for their site in Hatfield much higher at £5-£10 per parking space per day.
5.20 The city council estimates that there are about 3,700 private non-residential parking spaces at workplaces in the CT1 postcode area. This does not include parking provided by employers in the CT2 part of the city centre, such as the University of Kent. It is likely to underestimate the total amount of workplace car parking because some sites are used by more cars than the official number suggested by marked bays.

5.21 These car parking spaces represent a substantial proportion of total car parking in the city centre. For comparison, the total number of off-street public car parking spaces in the city centre is about 2,800 (not including the park and ride sites, and not including on-street parking which tends to be used in a different way, by residents or for brief visits to local shops). Public parking spaces are, of course, charged for.

5.22 According to research commissioned by the city council, more than half (58%) of private non-residential parking spaces in CT1 are associated with just seven sites:

- Kent and Canterbury Hospital – 819 spaces (plus 284 visitor spaces)
- Canterbury City Council, Military Road – 332 spaces
- Canterbury College, New Dover Road – 230 spaces
- Becket House, New Dover Road – 228 spaces
- Christ Church University, North Holmes Road – 198 spaces
- Nutwood House (Social Services), Chaucer Road – 176 spaces
- Crown and County Court, Chaucer Road – 150 spaces

5.23 The city council is able to use its planning powers to reduce the amount of free workplace car parking. Although this does not provide an instant remedy, it will have a significant cumulative effect over time, if consistently applied. When businesses seek planning permission for new development, the council should always require that non-residential car parking is reduced and a workplace travel plan put in place. City centre organisations can also be encouraged to consider realising the value of their land assets, if they do not need the land for their own expansion, by selling off workplace car parking for new business premises or housing.

5.24 The use of the planning system to reduce parking provision at Christ Church University has been effective and is an example of good practice. Christ Church University now has a clear and fair policy on which members of staff may use its car parks, based on criteria including whether the employee has a disability, has to work unsocial hours, has to use a car for operational reasons, or lives more

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27 Canterbury Parking Strategy (2005) Appendix I: List of private non-residential parking in CT1 postcode area from 2005 Valuation Office Agency Ratings List. (Note that numbers of spaces at some sites may have changed since this research was carried out in 2005.)
than three miles from their workplace. Staff who are eligible for a parking permit have to pay an annual charge of between £52 and £472, based on their salary.\(^{28}\)

5.25 Other major employers in the city should be strongly encouraged to introduce charging for employees who use the car park. Rather than the annual charge that is currently used at Christ Church University, it would be preferable for employers to adopt a daily ‘Charge and Reward’ system. This avoids the problem with annual permits that permit-holders have no incentive to use sustainable modes of travel (and having paid for a permit, may feel that they want to make the most of it). A ‘Charge and Reward’ system can be designed so that employees who car-share are no better and no worse off than when parking was free, while staff who travel to work by a sustainable mode are better off; and only staff who drive alone to work are worse off (see Box 2). This model, which was developed by John Elliott Consultancy, has been considered (although not yet implemented) as an alternative to its current annual permit system by the University of Hertfordshire.\(^{29}\)

5.26 Some public sector employers (such as Christ Church University, the University of Kent, and the hospital) have a significant number of employees who bring their car to work because they may need it for business travel (e.g. between sites, or to visit clients) during the day. To ensure that these employees are also able to benefit from a ‘Charge and Reward’ system, employers could introduce a pool car system. There are a number of possible models for this. One option would be for the main employers in the city to collaborate to provide start-up funds for a car club which would provide pool cars for businesses during the day and cars for use by residents in the evenings and at weekends. Another option is the model developed by the ‘GoLow’ social enterprise which was originally set up by an NHS Trust in Bristol and now offers fleet management services to organisations including the NHS, other public sector bodies and private companies, using electric cars and bikes. GoLow has recently formed a partnership with Co-Wheels, a social enterprise car club, and is rolling out its successful model in 30 locations across the UK.

5.27 The measures described above should start to reduce the problems caused by too much uncontrolled workplace parking. However, within the next two years it will become clear what has been the impact of the workplace parking levy that was introduced in Nottingham this year. The councils should review this evidence, to establish whether a workplace parking levy could provide an additional means to reduce Canterbury’s traffic, and what impact this would have on the local economy.

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Box 2: A ‘Charge and Reward’ scheme

‘Charge and Reward’ is a way of making sure that large workplace car parks (for example, at the city council, the universities and county court) are used as efficiently as possible, and of thanking employees who travel to work by sustainable modes. It operates in the following way:

- All employees receive a daily reward (say £1), regardless of how they travel.
- On days that they drive by themselves, employees pay a charge on leaving the workplace car park (say £2 per day).
- Car sharers each receive the daily reward, but only one payment is deducted on leaving the workplace car park (so sharers who take turns to drive are no better and no worse off than before).
- Employees who do not use the car parks are subject to no deduction and benefit from the daily reward.

The system is administered using staff swipe cards integrated with the building access system and car park barrier system.

The scheme generates a surplus if car mode share remains above 50%. So, for the city council where 64% of employees drive alone to work, the scheme would remain in (modest) surplus until car driver mode share fell to 50%. Surpluses could be invested in sustainable transport measures.

The table below shows some examples of weekly commuter journeys and their resulting annual Charges / Rewards:

<table>
<thead>
<tr>
<th>Example Journey</th>
<th>Drive Alone all year</th>
<th>Two people car sharing all year</th>
<th>Three people car sharing all year</th>
<th>Bus User/ Walk/ Cycle all year</th>
<th>Bus 2 days and drive alone 3 days a week</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Charge)/ Reward (net)*</td>
<td>-£220</td>
<td>£0</td>
<td>+ £58.67 (each)</td>
<td>+£176</td>
<td>-£61.60</td>
</tr>
</tbody>
</table>

All rewards based on 20% personal tax charged at point of payment

The Charge and Reward Scheme was developed by John Elliott Consultancy. This example is taken from a proposal by Scott Copsey at University of Hertfordshire.

Action 21: Encourage organisations to develop workplace travel plans

5.28 The University of Kent and Canterbury Christ Church University are putting significant efforts into tackling car commuting. However, other organisations in the city are currently less active, including the city council itself. In the past, the city has run an Employers’ Travel Plan Forum, but following budgetary cuts this no longer meets.

5.29 Despite this lack of activity, there is some evidence that policies introduced at the city council to enable staff to work more flexibly, including sometimes working from home (the Work Style policy) may have significantly reduced car commuting. Automatic traffic counts at the Military Road office show that there were 1500 vehicle movements in March 2006, but only 900 vehicle movements in March
2010. This represents a reduction in daily vehicle movements per employee from 2.3 to 1.6.

5.30 National evidence shows that when an organisation puts its mind to implementing a travel plan, it will typically reduce car use for commuting by about 18\%\textsuperscript{30}. This is very similar to the reduction in car use achieved by Pfizer at its Sandwich site, which is in fact a very challenging site for sustainable travel in terms of its location. The measures implemented at Pfizer included parking ‘cash out’ (in which employees were paid a small sum each day they did not use a parking space), works buses, discounted bus and rail fares, cycle shelters, showers and lockers, a car-share database, and publicity and information to staff\textsuperscript{31}. An important underlying reason for the success of the Pfizer travel plan was that it had strong management backing, and that senior staff were prepared to lead by example by car-sharing or sometimes cycling to work.

5.31 For larger organisations, it is worthwhile to have a dedicated member of staff employed as a workplace travel planner to negotiate deals for employees with public transport operators, arrange bike loan and discount bike purchase schemes, organise special events to promote sustainable travel and so on.

5.32 For small and medium-sized organisations this will not be feasible, but there is a simple checklist of actions that company directors can take to make sure that their organisation is doing its bit. These are summarised in Box 3. Not every action will be possible or appropriate for every organisation – but every action should be carefully considered. Canterbury 4 Business should have an important and ongoing role in encouraging its members to implement the checklist measures.


\textsuperscript{31} J Elliott (2003) Pfizer’s integrated travel plan for sites at Sandwich and Walton Oaks near Reigate Submission for ACT Commuter Initiative Awards
It would be strategically worthwhile and good value-for-money for the city and county councils and other public sector bodies and transport providers to fund a modest independent ‘hands on’ staff resource to work directly with public and private sector organisations in the city to help them implement good travel plans. A model for this is the Cambridgeshire Travel for Work Partnership, which has been in existence now for over a decade. There is no charge for organisations to join the partnership, and member organisations are offered a range of travel plan services and grants. The work and achievements of the Partnership are summarised in Box 4. Kent County Council has established an initiative called New Ways 2 Work which could be developed into an equivalent to the Cambridgeshire TfW Partnership if it had a dedicated staff team at arms-length from the county council that was able to focus single-mindedly on delivery of travel planning services, and some modest additional funds.

Box 3: Twenty quick indicators of organisational commitment to cut car use

- Is there an organisational travel plan? Y/N
- If there is an organisational travel plan is it being implemented? Y/N
- Do senior managers show leadership by minimising their own car use? Y/N
- Is business mileage reimbursed at AA marginal cost (about 20p per mile)? Y/N
- Does the organisation avoid providing ‘company’ (i.e. perk) cars? Y/N
- Are recruitment/relocation policies designed to encourage locally-based workers? Y/N
- Is there an official lift-share matching scheme? Y/N
- Does the organisation incentivise lift-sharing? Y/N
- Is there a pool car/s so staff don’t need to bring cars to work for business purposes? Y/N
- Is there a policy to facilitate flexible working hours to fit public transport? Y/N
- Does the organisation support homeworking? Y/N
- Are staff expected to phone-conference rather than travel to meetings? Y/N
- Does the physical site clearly signpost ways to and from public transport? Y/N
- Does the organisation use its ‘muscle’ to get better public transport services? Y/N
- Are the nearest public transport stops convenient, pleasant & well-equipped? Y/N
- Is staff parking limited? Y/N
- Do staff pay to park on site? Y/N
- Does information for visitors/special events emphasise non-car possibilities? Y/N
- Does the website put non-car possibilities first with enough detail to use them? Y/N
- For special events are dedicated transport options arranged? Y/N
- Does the organisation operate measures that encourage walking / cycling to work? Y/N
- Does the organisation offer employees tax-efficient bike purchase through payroll? Y/N
- Is there a staff minibus/bus service? Y/N

5.33
As the local planning authority, the city council should also encourage businesses to take seriously their responsibility to tackle car commuting, by requiring planning applications for new development to include a travel plan, with firm targets for reduction in car use, and by monitoring the achievement of these targets. Planning permission should be conditional upon payment of a bond or cash deposit, which is returned in instalments to the business once agreed targets have been met, or else used by the city council to implement travel plan measures. Developers or owners of an employment site should also pay a monitoring fee to the city council, to enable it to monitor progress in implementing the travel plan, and also to provide resources to enable the city council to run workplace travel initiatives that benefit all businesses across the city. An example of good practice policy in securing travel plans through the planning process is provided by Gloucestershire County Council, which requires developers to pay a travel plan bond of £50-60 per employee for a ten year period, and issues detailed guidance to developers to ensure that the travel plans they put in place are effective.\footnote{Gloucestershire County Council (2012) \textit{Travel Plan Guide for Developers}, http://www.gloucestershire.gov.uk/CHandler.ashx?id=51717&p=0, accessed 20.10.12 and Gloucestershire County Council (February 2012) \textit{Advice Sheets and template S106 agreements: Workplace / Employment travel plans}, http://www.gloucestershire.gov.uk/article/109228/Advice-sheets-and-template-S106-agreements, accessed 20.10.12}
6. Planning and regeneration policies to create a less congested and more attractive city

‘1 minute read’: the vital concepts for policy-makers

- Any development at locations close to junctions with high-speed roads (such as the A2) will be highly car dependent. The local plan should avoid new development near access points to the A2.

- Car use is influenced by development density. Canterbury should concentrate residential development where densities of 100 dwellings per hectare can be achieved, either within the city, or at traditional compact village densities in surrounding villages that can be served by good public transport.

- Housing developments within a 10 minute walk of a ‘local centre’ result in less car use because residents can walk to their local shops and facilities (rather than driving into Canterbury). All new housing should be planned in this way.

- Businesses that need lots of highly skilled staff attract workers from a large catchment area. Such developments should be located next to excellent public transport. Wincheap industrial estate, close to Canterbury East station, would be an ideal site for a ‘knowledge economy’ hub.

- Developments with pedestrian-friendly street layout and design result in lower car use. The key characteristics are 20mph zones, ‘home zone’ design, street planting, and layouts with direct routes for pedestrians and cyclists but restricted access for cars (‘filtered permeability’).

- The local plan could adopt a strategy of Public Transport Centred Development, with all major new developments served by frequent high quality public transport.

- Moves to turn city centre car parks into housing should be supported. Copenhagen has a strategy of reducing public parking spaces (by 3% a year), and using the space instead to enhance the public life of the city.

- New development with limited car parking leads to less car use, and less traffic congestion. In contrast, development of green-field sites with extensive car parking (whether for retail, leisure, employment or housing) will lead to more car use, and more traffic congestion.

- When people move house or change jobs, they are more open to trying different ways of travelling. Smart travel measures take advantage of this, offering information and incentives to try cycling or public transport.
‘The ten minute read’: How planning and economic regeneration can reduce traffic and create a better Canterbury

6.1 One cause of the traffic which is damaging Canterbury today is some poor land use planning decisions that have been made over the last 20 years. Within the city, the out-of-centre Sturry Road retail development generates large amounts of traffic, and its location and layout makes it very difficult to serve by public transport. The similar low-density retail development in Wincheap, next to the park and ride site, has also encouraged car dependence. Housing construction across the district has included low density suburban development during the 1980s and 1990s, which has resulted in car-dependent styles of living.

6.2 These mistakes cannot now be unpicked – but they do offer an opportunity to observe what does not work, and ensure that future development of the city takes a different course. The land use planning system – both at the strategic level of the local plan, and at the day-to-day level of development control – offers an important tool for literally ‘building in’ less car-dependent lifestyles for the next 20 years and beyond. The council’s economic regeneration team also has a choice of whether to promote car-dependent development or public transport-centred development.

6.3 This section sets out some core principles based on research evidence for integrating land use planning, economic development and transport planning, so that future development achieves sustainable patterns of transport, functions more efficiently, and, most importantly, feels better than the car-dominated developments of the recent past.

6.4 The key principles that determine the car dependence of a new business, residential or retail development are its location; its density; whether local facilities and jobs are provided alongside housing; the layout and design of the new streets; whether the development is public transport-centred; whether car parking is limited; and whether ‘smart’ travel planning measures are used to encourage the new users of the development to travel sustainably.

Location of development

6.5 The way people travel to or from a new development is strongly influenced by its location. New developments which are sited close to junctions with high speed roads show much higher car mode share than new developments which are sited next to railway stations or high quality bus corridors. This is shown by a study of housing developments in Oxfordshire, summarised in Figure 9. New housing near to a motorway junction (Bicester site) had very high car use, while housing development located on a frequent bus route into the centre of Oxford and not near high-speed roads had much lower levels of car use (Kidlington).

33 For a literature review of the research evidence, see PTEG (2011) Thriving cities: integrating land use and transport planning; Campaign for Better Transport (2008) Masterplanning checklist for sustainable transport in new developments
34 C Curtis (1996) Can strategic planning contribute to a reduction in car-based travel? Transport Policy 3(1/2) pp55-65
benefits of being on a good bus route were reduced if the development was also close to major roads – the housing development that fell into this category (Botley) had higher car use than the ‘best-performing’ development at Kidlington, even though it was closer to the centre of Oxford.

**Figure 9: Effect of development location on car use**

Site descriptions:

- **Bicester** site: edge of town next to new ring road and M40 motorway junction;
- **Witney** site: between old A40 and new A40;
- **Didcot** site: 10-15 minute walk from railway station;
- **Botley** site: three miles from Oxford city centre with frequent bus services but also adjacent to A34 intersection;
- **Kidlington** site: seven miles from Oxford city centre with frequent bus services.

6.6 Subsequent work\(^{35}\) showed that all five of these estates outside Oxford city centre generated higher car use than a new estate on brownfield land within Oxford.

6.7 The lesson for Canterbury is that the local plan should *avoid* designating new sites for development (whether residential, business or retail) near existing access to the A2. It would also be problematic, in transport terms, to site new development on land close to the A2 and fund new access roads through planning agreements with developers. Providing good bus services does not offer a ‘get out clause’ that makes it acceptable to develop locations close to high-speed roads, as the Botley development shows.

6.8 Future housing and employment-related development in Canterbury should be focussed in locations which rank highly in terms of excellent access by sustainable modes of transport.

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Density of development

6.9 Once location has been determined, the travel patterns to and from a development depend on the development density. Lower density results in higher car use, because the road network becomes uninteresting and over-extended for walking and cycling and the catchment area for public transport is too thinly populated for frequent services to be viable.

6.10 For residential development, research evidence\(^\text{36}\) shows that net densities of about 100 dwellings per hectare are necessary to sustain high quality public transport services and a good choice of local facilities within walking distance. This density is typical both of ‘town infill’ and of traditional compact villages\(^\text{37}\). This should be the norm for all development locations in Canterbury district, not just the city and town centres. It is worth noting that it is still substantially lower than the densities at which development is now being encouraged in larger cities\(^\text{38}\).

6.11 Areas which are considered unsuitable for development at 100 dwellings per hectare should remain undeveloped, because over their lifetime they create too large a transport-related greenhouse gas liability. People are familiar with the idea of ‘zero carbon homes’, where this is narrowly defined to exclude transport, but we now need to build ‘zero transport carbon homes’, and lower density development makes this impossible.

6.12 The latest Land Use Change Statistics\(^\text{39}\) show that the average density of new residential development in Canterbury district was 41 dwellings per hectare in 2007-2010, and while this is a significant increase on the extremely low average densities of 22 dwellings per hectare a decade earlier, it suggests that some new development is still being permitted at unsustainably low densities.

6.13 It is worth noting that attractive ‘family’ housing (with space for every household to have a garden, and with homes of a size suitable for parents plus two or three children), can easily be achieved at densities of 100 dwellings per hectare, for example by building ‘Georgian style’ terraces. The new development of Vauban, which is on the edge of the German city of Freiburg, described in Box 5, also has net development densities of 90-100 dwellings per hectare using a very different design solution involving apartment blocks. Traditional villages around Canterbury would also have been built to this sort of density before the twentieth century. The historic core of such villages is often now seen as providing highly attractive housing.


\(^{37}\) CABE (2005) Better neighbourhoods: making higher densities work includes helpful sketches showing typical ‘urban village’ development at 75-125 dwellings per hectare; historic town infill at 80-140 dwellings per hectare; and Victorian terraces at 60-80 dwellings per hectare.

\(^{38}\) Greater London Authority (2011) London Riverside Opportunity Area planning framework consultation draft quotes examples of urban development in London in a range from 130-501 dwellings per hectare i.e. all substantially higher than the 100 dwellings per hectare suggested as a norm for Canterbury district.

\(^{39}\) CLG (2011) Land Use Change Statistics - Density Table P232
In the last few years, Canterbury has seen significant new residential development in the city centre at fairly good (although by no means exceptional) densities. It will be important to continue to identify sites within the city centre that are suitable for residential development, and also to support compact development in urban infill sites in the existing urban areas of Whitstable and Herne Bay. If the principles outlined in this Blueprint are followed it may be possible to free up for residential or mixed development other city centre sites presently used for surface car parking.

A key issue for the local plan will be to ensure that all residential development at locations away from the city centre is also built to a compact form, achieving the same densities as those currently being achieved for infill sites in the city centre. This will require a shift away from the current consensus on what type of housing development is acceptable in non-central locations. Some new developments in

For example, the development brief for Rosemary Lane Car Park suggests 20 units on a site of 2700m$^2$, which would be about 75 dwellings per hectare.
Kent – such as parts of Ingress Park at Greenhithe, and the village core at Lacuna, Kings Hill, West Malling – are starting to demonstrate how higher density housing can be developed in a way that feels appropriate outside city centre locations. The forthcoming local plan now offers an opportunity for Canterbury City Council to encourage imaginative solutions that apply insights from the high density design of the traditional Kent village, as well as drawing on European best practice and award-winning high density design solutions that have been highlighted by organisations such as CABE in their ‘Building for Life’ programme.

**Provision of local facilities and jobs alongside housing**

6.16 People who live in houses with a range of everyday shops and facilities in a nearby ‘local centre’ are likely to use those local facilities rather than travelling further afield. The closer the facilities, the more likely people are to walk to them: if the ‘local centre’ is less than one kilometre away, 82% of trips to it will be on foot or by bike; if it is 1-1.6 km away only 47% of trips will be by these modes. Ideally, all housing developments should therefore be designed with a local centre within about 800 metres, which approximately corresponds to a 10 minute walk. Key facilities within such a local centre include food shops, newsagents, post office / cash point, childcare nursery and primary school, health centre and chemist, and cafés and restaurants. An open space with a children’s play area is also important. As well as providing services, these facilities provide local jobs.

6.17 Research has shown that people who live close to local shops are somewhat more likely to take public transport to work, because they are easily able to accomplish other tasks on their way to and from work. This means that providing local facilities has a wider knock-on benefit on travel patterns.

**High-skill businesses at public transport hubs**

6.18 Although it is important to design balanced residential neighbourhoods with plenty of low and medium-skill jobs in local centres close to housing, the rule is different for high skill employment. Business premises, offices and other employment-related developments that require a lot of highly skilled employees need to draw people from a large catchment area. These types of development should therefore be located at the centres of public transport networks.

6.19 For Canterbury, this is important because there is a desire to expand the number of jobs in its ‘knowledge economy’. The Innovation Centre at the University of Kent is a non-ideal location for high skill employment, because access by public transport is difficult from many non-city centre locations (apart from those on the ‘Triangle’ route). A Science and Technology Business Park at the Little Barton Farm site would be extremely poor in terms of public transport access.

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41 Department of Environment and Department of Transport (1993) Reducing transport emissions through planning authors Ecotec Research and Consulting Ltd and Transportation Planning Associates. The neighbourhood surveys on which these figures are based are now quite old, but have not been updated.  
6.20 The regeneration area close to Canterbury East station (the Wincheap industrial estate) could be used for high skill ‘knowledge economy’ development rather than for housing and retail / leisure. The proposals for a Science and Technology Business Park at Little Barton Farm suggest 70,000 sq m of office space in a 20 hectare site. In comparison, Wincheap industrial estate is a smaller site (10 hectares), but it could be developed to higher densities because of its proximity to the city centre and Canterbury East station. Little car parking would be required (apart from space for deliveries) because employees and visitors would be able to use the adjacent Wincheap park and ride and because a good proportion would come by train. The existing 35 warehouse and industrial units on the Wincheap Estate have an area of 71,000 sq m, almost identical to the office space proposed at Little Barton. From a transport and sustainability perspective, use of the Wincheap estate for a ‘knowledge economy’ development designed to attract high skill jobs from a large catchment area would be better than its use for retail development.

Street layout and design

6.21 Research in the Netherlands has shown that people who move house to areas which are more attractive for pedestrians tend to make fewer car trips. Similarly, changes that make the street environment more pedestrian-friendly result in a existing residents driving less. The key design characteristics which Dutch researchers found encouraged more walking (and less driving) were ‘home zone’ street design; 20mph zones; and street planting. By creating lots of interest and delight in the street, we make it attractive for people to walk or to cycle. In contrast, street design that is bland, dull and uniform leads people to drive.

6.22 The layout of the road network also influences people’s choice of whether to drive, walk or cycle. If roads are laid out to a grid, with short, direct, ‘as the crow flies’ routes on foot or by bike (as, for example, is typical of the nineteenth century layout of the roads just south of Wincheap), people are more likely to walk or cycle. In contrast, housing estates laid out with culs-de-sac and curvilinear roads (such as the 1970-80s developments at Hales Place) tend to discourage walking and cycling. New housing developments should therefore always be laid out so that pedestrians and cyclists can take direct routes and not have to walk (literally) ‘round the houses’.

6.23 One common concern about permeable ‘grid’ layouts for residential roads is that they enable cars to take short cuts through residential streets. However, it is possible to provide short direct routes for pedestrians and cyclists while not

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44 Canterbury City Council and Donaldsons (undated) Wincheap Canterbury Marketing Brief and Invitation to Tender
45 Home zones are a form of street design in which space is shared between all road users, with abundant use of trees and other planting, places to sit and socialise with neighbours, and road layouts which encourage car drivers to drive very slowly. They are widespread in the Netherlands (where they are called ‘woonerven’) and Germany (where they are called ‘Wohnstrassen’).
making short direct routes available for cars too. Dutch and German cities apply the principle of ‘filtered permeability’, in which direct access is limited to certain roads for cars but maximised for walking and cycling⁴⁷.

6.24 All new development in Canterbury should aim to apply these principles.

Public transport-centred development

6.25 Homes, shops and public buildings that are built close to good quality public transport services are more likely to be accessed by bus (or train). The city of Stockholm has recognised this, and has a longstanding policy of public transport-centred development. In order to make sure that all new developments can be served by frequent, high quality public transport, Stockholm has a policy of building to high densities in ‘urban villages’ around public transport stations, rather than low density suburban development. The new developments have a careful eye for the design characteristics found in the old inner city of Stockholm, and are popular places to live and work⁴⁸. The effect of this policy can be seen in the transport mode share figures for the large new development of Hammarby Sjostad, which is three kilometres from Stockholm city centre: 52% of trips are made on public transport, 27% on foot or by bike, and just 21% by car⁴⁹.

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**Box 6: Cambridgeshire guided busway attracts car drivers**

The guided busway in Cambridgeshire opened in Summer 2011. It has two sections: a 12 mile section between St Ives and Cambridge and a four-mile section between Cambridge railway station and the village of Trumpington. Outside the city centre, buses use a specially-constructed trackway (on which they can travel at speeds of around 50mph), while within the city, the buses switch seamlessly to using the normal road network.

In its first year, the busway carried 2.5 million passengers, which was 43% above the number forecast.

Bus frequencies have increased to meet demand. Before the busway opened, there were five buses in the morning peak hour (07:30-08:30) from St Ives to Cambridge, but this rose to ten when the busway opened, and has now been increased to 17.

Almost half of busway users (48%) could have made their journey as a car driver, and a further 14% could have travelled as a car passenger. The project managers point out that the busway has a ‘rail-like demographic’ – the people using it have made a choice to do so because of its high quality, even though many of them could have driven and had a free parking space at work.

Source: Local Transport Today 12.10.2012

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⁴⁷ S Melia (2008) Neighbourhoods should be made permeable for walking and cycling – but not for cars Local Transport Today Jan 23 2008
6.26 In Canterbury, the forthcoming local plan could formally adopt a strategy of ‘Public Transport Centred Development’. This would mean that all major new development across the district would be connected to the city centre by high quality public transport. In most cases this would mean a bus service every 10 minutes, but if major new developments are planned in the district over the next decade or longer, they could be designed around new high quality guided busways similar to the scheme that has recently opened in Cambridge, described in Box 6. New developments that are too small to justify new bus services would only be built in places that already have a frequent service. A policy of Public Transport Centred Development would also require that the main entrance of all new homes, employment premises and shops be within a five minute walk of a bus stop with a frequent service.

**Effective control of car parking**

6.27 Research evidence has shown that cities with more car parking have lower levels of public transport use, and vice versa.\(^{50}\)

6.28 Copenhagen has had a policy over many decades of removing 3% of parking capacity in the city centre every year. Between 2002 and 2008, 219 parking spaces were replaced by cycle racks at an average rate of about 32 parking spaces per year.\(^{51}\) The long-term policy of removing car parking from city squares and streets has gone hand-in-hand with a transformation of Copenhagen’s city centre into a series of bustling, delightful, people-filled spaces – in the words of architect Jan Gehl who has documented the changes in Copenhagen over many years there has been an opportunity to ‘develop a public life in public spaces’, with street cafés, street theatre, markets and many other activities.\(^{52}\)

6.29 If Canterbury were to focus all its efforts on enhancing the sustainable transport options for its residents and visitors, there would be an opportunity to rethink what some of the city centre spaces currently taken up by car parks could be used for. The city council is proposing to sell Rosemary Lane car park and St Radigund’s car park for city centre housing. This would be a much more appropriate use of this valuable city centre land – and, of course, would return these spaces to their original function up until the 1960s. From a sustainable transport perspective, these land use changes should be strongly supported. The Canterbury Society could consider whether some other sites currently given over to car parking could also be put to better civic uses – either for city centre housing, or for public squares and spaces in the Copenhagen model to enhance the ‘public life’ of Canterbury.

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51 M Kondransky and G Hermann (2011) *Europe’s parking U-turn: from accommodation to regulation* Report for Institute for Transportation and Development Policy
52 J Gehl and L Gemzøe (2000) *New City Spaces* Danish Architectural Press
6.30 This gradual re-designation of city centre public car parks for better uses should not be counteracted by new private car parking created as a result of development. So it is important that Canterbury limits the amount of parking associated with new housing, employment, retail and leisure schemes. Within the city centre, policies on parking provision for new housing seem to be good. For example, the Old Tannery housing development has 0.64 parking spaces per dwelling, and the Kingsmead Development Brief states that car parking for new residential development should be kept to a minimum, with some ‘car free’ development. The planning permission granted for the expansion of Christ Church University also limited the amount of parking that was permitted.

6.31 The challenge for the council over the next few years is to apply a similar approach to retail and leisure development, to ensure that this is less car-centric and pedestrian-hostile than the sprawling car parks of the retail developments on the Sturry Road and at Wincheap. Retail and office development with large parking allocations at sites such as Altira Business Park at Beltinge will increase car-borne shopping patterns and undermine the sustainable retail regeneration of Herne Bay town centre.

**Use ‘smart’ measures to influence travel by new residents and employees**

6.32 When people move into a new house, or start work at a new workplace, they are more receptive to the idea of changing their travel patterns than they would be at other stages of their lives. For a brief period of time, established travel habits are disrupted, and different travel options are explored to see what works best.

6.33 This effect can be seen in an analysis of the British Household Panel Survey, which found that if a person stayed in the same job and house from one year to the next, there was a 14% chance that they would change the mode of transport that they used to get to work. But if they moved house, this doubled to 28%, and if they changed job, it rose to 33%. Amongst people who had moved house and changed jobs, the percentage changing commuting mode increased to 45%.

6.34 There is therefore a window of opportunity to encourage people moving into new homes or business premises to try sustainable travel options. Section 5.30 outlined how this can be used in the case of employment-related developments. Canterbury could also encourage behaviour change for people moving into new housing developments, through effective use of residential travel plans funded through Section 106 planning obligations.

6.35 Peterborough and Northamptonshire offer examples of ‘smart’ travel measures designed to influence new residents’ travel choices. Peterborough produced different versions of a ‘Passport to Travel’ booklet for different areas of the city, giving information about walking, cycling and bus routes. This was sent to all residents of new housing developments. Developers were also required to offer new residents either a three-month bus pass or a £100 cycle voucher and cycle...

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map. Northamptonshire Council has explored a similar approach and has published a Travel Centre Guide\textsuperscript{54} which sets out actions that developers should take to encourage sustainable travel by their new residents, including providing travel information packs and also setting up a physical travel centre within large developments. This could run a variety of ‘charged for’ services such as a car club, grocery ordering and delivery, bike hire and bike servicing. Travel Centres could be a requirement of Section 106 planning obligations.

\textsuperscript{54} Northamptonshire Council (2009) \textit{Northamptonshire Travel Centre Guide: your questions about travel centres answered}
7. Conclusion

7.1 Canterbury’s fine mediaeval street pattern is one of its greatest economic assets because of its appeal to visitors. But this precious asset is also a constraint – Canterbury was not designed for the motor car, and attempts over the last sixty years to redesign it to make more space for cars have not succeeded in tackling congestion.

7.2 Canterbury is not alone in this. Other cities which sought during the second half of the twentieth century to accommodate increased car use by building wider roads and more car parks have found that as fast as they have made space for more traffic, this space has filled up. Worse still, while congestion has remained as bad as ever, their local economies have often suffered from the dominance of tarmac and traffic, and their city centres have been blighted by empty shops as a result of edge-of-city low density car-oriented development.

7.3 In the last twenty years such cities have begun turning away from a ‘car-focussed’ strategy to one which prioritises civic space and sustainable transport. The outstanding example of a city which has changed course is Birmingham, where a decision in the 1990s to pave over parts of the city’s inner ring road and reclaim space previously dominated by traffic has led from urban decay to economic and civic renaissance. Bristol saw a similar revival after city councillors took the bold step, also in the 1990s, of closing part of its inner ring road that had cut through a fine Georgian square, reclaiming what is now a fine public space and at the same time setting out to make the city highly accessible by cycle and by bus.

7.4 Recently, the conflict between ‘getting Canterbury moving’ and improving the quality of its historic streets has been acute, and a matter for heated debate. The difficult reality is that it is simply not possible to provide enough space in Canterbury for single-occupancy cars to be the main means of transport without compromising the very things that make the city special – its mediaeval street pattern and compact size. This would risk making Canterbury just another dull, soulless, uninteresting town with little appeal and a declining economy. And as other cities that have pursued a car-focussed strategy have found, increased road capacity does not mean fewer traffic jams.

7.5 However, Canterbury’s compact scale is also an enormous opportunity, because it is ideally suited to walking and cycling, which are healthy and environmentally-friendly forms of transport and need far less road space per trip than single-occupancy cars. The settlement pattern around Canterbury, with much of the population concentrated in a relatively dense built-up area along the coast, also offers an excellent opportunity to provide frequent, high quality public transport to and from Canterbury. By switching from being a car-dominated city to a

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56 L Sloman (2006) Car Sick: solutions for our car-addicted culture, Chapter 10
sustainable transport city, Canterbury could succeed in tackling congestion, get the city moving again, and at the same time make its streets more attractive and its civic spaces more delightful. For local residents, these are the key issues. For policy-makers, there is an additional appeal in an approach focussed on sustainable transport, because it will reduce carbon emissions and improve air quality. For local businesses, the appeal of such a policy is that it ensures that Canterbury remains an enticing destination for visitors, and makes it easier to attract a high quality skilled workforce.

7.6 This Blueprint has set out the actions that will enable Canterbury to realise these multiple benefits. It has focussed on four key areas where an analysis of current travel patterns (as revealed by Census data) suggests that the biggest gains may be had. These four areas are: increasing cycling for short journeys; increasing bus use for medium-length journeys; using cars more efficiently for longer journeys; and ‘designing in’ less car-reliant future travel patterns through the land-use planning process.

7.7 While the Blueprint does not include a recommended set of actions to increase walking, travel by train, or travel by a combination of bike and public transport – all themes which were highlighted in comments on the Blueprint by local residents following a presentation to a public meeting – it is acknowledged that investment in these areas may also offer valuable benefits.

7.8 There are three questions which Canterbury’s decision-makers will want to consider, in deciding whether to go down the new course outlined here: will it work; is it affordable; and what is the process for putting these measures in place?

Will it work?

7.9 The indications on the first question are that a strategy of reducing dependence on cars and making it easy, attractive and affordable for people to travel by sustainable modes has been a key factor in the prosperity and vibrant city life of British cities such as York and Cambridge, as well as continental cities such as Utrecht, Copenhagen, Delft, Freiburg, Strasbourg, Winterthur and others. These cities have pursued sustainable transport strategies over many years, and as a result are some of the most attractive cities to live, work and visit in Europe. In the last decade, other UK cities have also started down the same path: not only Birmingham and Bristol, but Peterborough, Darlington, Worcester, Exeter, Lancaster, Brighton, Shrewsbury, Nottingham, and of course London, to name just some.

7.10 The research evidence suggests that the strategies which are being pursued in these cities, which form the foundation for the recommendations in this report, are effective in increasing sustainable travel and reducing car use. The largest evaluation to date of city-wide investment in sustainable transport found that the three Sustainable Travel Towns (Darlington, Peterborough and Worcester) had reduced car driver trips by residents by 9% per person, and car driver distance by 5-7%, in a short space of just four years. Cities that have specifically set out
to increase cycling have, almost without exception, succeeded. Cities that have focussed on increasing bus use are similarly able to point to their successes.

7.11 However, a word of caution is needed. The cities that have been most successful in reducing traffic by means of a sustainable transport strategy have been completely focussed in their approach. They have recognised that it is not possible to shift from being a car-dependent city to a public transport, walking and cycling-friendly city if every action to make bus travel, walking and cycling more attractive is counteracted by another action which makes car travel quicker, cheaper or easier. Some of the strategies which have been pursued in Canterbury in the past have had the effect of increasing car use. For the Sustainable Transport Blueprint to work, it has to replace these strategies, not to sit alongside them.

Is it affordable?

7.12 The second question is whether the recommendations contained in this Blueprint are affordable. This depends upon whether Canterbury decides to commit wholeheartedly to a new course. If it does so, everything else will follow. Developer funding can be channelled to sustainable transport investment; Local Transport Plan budget can be allocated in the same way; and ambitious and creative projects will attract external support. The city will be better-placed to secure substantial funding from future initiatives such as the government’s Local Sustainable Transport Fund.

7.13 Cost-benefit evaluations of sustainable transport investment (such as so-called ‘smarter choice’ measures which are designed to influence people’s travel choices) commonly show some of the highest value-for-money scores of any transport schemes. This means that money spent in the way recommended in this Blueprint will deliver greater benefit than if it were spent on conventional highway schemes.

7.14 The experience of the successful British cities cited above suggests that a strategy focussed on sustainable transport can attract substantial inward investment. To take one example, in the last few years Cambridge has attracted £3.8 million from the Department for Transport for its Cycling Towns programme; a further £370,000 from the European Interreg 2 Seas Programme to invest in cycling; £1.7 million from the Department for Transport’s Better Bus Areas Fund; as well as very substantial funding from the Department for Transport for the Cambridgeshire guided busway (which, although not all invested in Cambridge, is bringing major benefits to the city).

What is the process for putting the Blueprint measures in place?

7.15 The individual measures outlined in this Blueprint could be implemented by a variety of different partners – including bus operators, citizens’ groups, the

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57 Commission for Integrated Transport (2010) Transport challenges and opportunities: getting more from less
business community, the third sector, and the universities, as well, of course, as the city and county councils.

7.16 But if all these players act independently, the effect is likely to be less positive than if action is coordinated. To be outstanding, every orchestra needs its conductor – a single person who has the vision and leadership to bring all the many talents of Canterbury’s different players together, and who is also able to bring strong influence to bear to ensure that the right projects are prioritised and energetically pursued.

7.17 The ‘conductor’ of Canterbury’s ‘sustainable transport orchestra’ would most likely be a senior councillor within the city council who is prepared to champion the Blueprint in a consistent and energetic way. Those local authorities in Britain who have been the most dynamic in implementing sustainable transport measures have always had at least one senior councillor who has a clear view of what he or she wants to achieve and who is in a position of structural authority. Political party does not matter – and it is important to be absolutely clear that politicians from all political parties have taken up this challenge in different places. The most successful local authorities have also had a senior officer who is similarly committed. Together, the lead councillor and lead officer have often formed an irresistible team.

7.18 While the leadership role should most likely rest with the city council, supported by political and officer colleagues from the county, this is not to say that the local authorities should be responsible for ‘making everything happen’. All the different players in Canterbury should have a practical role to play, and should understand clearly how their own specific project fits into the wider scheme of things. The successful Quality Bus Partnership in Canterbury may perhaps offer a suitable model for a coordinating body – a Canterbury Sustainable Transport Partnership. However, if established, this should be seen as a delivery body, not a talking shop or lobbying forum. This means that the different players will need to set aside any differences for the time that they are involved in meetings of the partnership, and be entirely focussed on delivering practical projects that make a difference to Canterbury and its residents.

7.19 Canterbury is a fine city and a very special place to live, work, study or visit. It has the potential to be even more special if it sets out to become a city of sustainable travel in the way that this Blueprint has outlined. It is an exciting challenge, and it is the right time for Canterbury to embark upon it.