Maidstone Integrated Transport Strategy 2011 – 2031

MAIDSTONE
Borough Council

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Introduction

1.1 The Integrated Transport Strategy (ITS) assesses the principal existing and future challenges affecting the transport network, including taking account of jobs and housing growth, and recognises that the populations of the urban area and dispersed villages bring different challenges and solutions. It sets out a vision and objectives, and identifies a detailed programme of interventions to support the measures and interventions set out in the Maidstone Borough Local Plan for all modes of transport consistent with national and local planning policies including the Kent County Council Local Transport Plan 3 (LTP3) 2011-2016.

1.2 The ITS has been updated to take into account the comments and suggestions received on the draft strategy as part of the public consultation held during February and March 2016. It has also been updated to summarise the findings of the most recent modelling undertaken using the Maidstone VISUM strategic highway network model.

1.3 The ITS comprises five main sections:

- Transport challenges
- Policy context
- Vision and objectives,
- Strategic priorities
- Action plans

1.4 The ITS is inter-alia, an integral component of the Local Plan evidence base and is a key Local Plan document. Both documents need to be aligned. As with the Local Plan itself, to ensure an up-to-date ITS is maintained, a review of the ITS will commence by 2022.

Transport challenges

1.5 Maidstone's transport network has come under increasing strain in recent years, principally on account of the growing demand for travel generally. A deliverable transport strategy should seek to address these challenges and should have an emphasis on the promotion of sustainable transport in line with national and local priorities. It should contain, a balanced package of appropriate highway and sustainable transport interventions that provide mitigation in support of the allocated housing and employment growth envisaged by the Local Plan.

1.6 Sustainable modes should be encouraged where feasible and the benefits of shifting trips from single occupancy car use to sustainable modes are manifold and recognised and promoted by the Government. Examples of these include improved air quality, a healthier population, attractive, safe and secure public spaces, and reduced environmental impacts.

1.7 Challenges are identified for highways, including congestion caused by increased car usage, and public transport provision, which is inadequate and under-used. Impediments to increased walking and cycling are identified, and the role of parking is seen as essential to provide the context for transport policies.

Policy context

1.8 The policy context for the ITS is provided by Department for Transport and Kent County Council policies that include LTP3 2011-2016 as well as local Borough Council policies such as as the adopted Maidstone Borough-wide Local Plan 2000 and the submitted Maidstone Borough Local Plan and other initiatives. Increasingly, joint initiatives with neighbouring authorities on issues like air quality, countryside and rail access and neighbourhood plans will influence transport policy.

Vision and objectives

1.9 The transport vision for the borough is 'Realising Maidstone's sustainable future; connecting communities and supporting a growing economy' and this leads to the formulation of five objectives for the Strategy:

- Enhancing and encouraging sustainable travel choices
- Enhancement of strategic transport links to, from and within Maidstone town.
- Ensure the transport system supports the growth projected by Maidstone's Local Plan.
- Reducing the air quality impacts of transport.
- Ensure the transport network considers the needs of all users, providing equal accessibility by removing barriers to use.

Strategic priorities

1.10 To achieve the strategic objectives, the ITS seeks to:

- Reduce demand for travel
- Change travel behaviour
- Promote modal shift
- Improve network efficiency

1.11 Examples from best-practice experience elsewhere are identified, indicating what has been achieved in local authorities throughout the country.

Action plans

1.12 Action plans for each mode of travel are summarised initially, and further more detailed treatment of interventions describes the range of policy actions which may be implemented. A separate Walking and Cycling Strategy has been the result of joint work with Kent County Council (KCC), and priority highways improvement schemes are identified which are subject to ongoing negotiation with developers and the highway authority.

1.13 The ITS identifies targets to monitor the progress of actions so that it is a ''living strategy' which is flexible and able to adapt to changing circumstances. It will form the basis of continuing discussions and negotiations with the full range of stakeholders involved in the provision of transport throughout the borough.

2 . Scope of the Draft Integrated Transport Strategy

2.1 The ITS covers the area of Maidstone Borough which includes the urban area of Maidstone; Rural Service Centres and villages. It provides the overview and justification for the detailed transport infrastructure requirements and interventions set out in the submitted Maidstone Borough Local Plan and which are also identified in the Infrastructure Delivery Plan (IDP).

2.2 Maidstone Borough faces a number of transport challenges and the ITS is needed to provide a framework for transport planning and decision making in the Borough which places an emphasis on addressing these issues through long term sustainable development of the transport network. This should ensure that future development can be accommodated without significant detriment to existing conditions whilst seeking to enhance economic, social and environmental well-being.

2.3 The ITS assesses the principal existing and future challenges affecting the transport network, including taking account of jobs and housing growth, and recognises that the populations of the urban area and dispersed villages bring different challenges and solutions. The ITS provides a framework and programme of schemes and interventions to support the Maidstone Borough Local Plan, taking account of the committed and predicted levels of growth in homes and jobs and detailing the transport infrastructure and services necessary to support and deliver this growth. It considers all modes of transport used for trips on main routes and the rail network. It sets out a vision and identifies a detailed programme of interventions consistent with national and local transport and planning policies to help achieve the vision by 2031.

Transport Challenges

3.1 Maidstone is a dynamic borough, set within both an urban and a rural context, which has a vital role to play in the significant growth expected in the South East over the next two decades. The borough currently has a population of 155,143[1], which is evenly split between the County Town and its rural hinterland, including the five Rural Service Centres (RSCs) of Harrietsham, Headcorn, Lenham, Marden and Staplehurst. Whilst the town's main function is as a centre for business, retail and administration; the rural economy is characterised by pockets of manufacturing, horticulture and farming. The Maidstone Borough Local Plan seeks to meet in full the identified objectively assessed need of 18,560 dwellings and the creation of almost 14,500 jobs in the plan period from 2011 -2031.

3.2 Maidstone's transport network has come under increasing strain in recent years, principally on account of the configuration of its road and rail networks and the growing demand for travel generally. In order for the borough to have an emphasis on sustainable transport access in line with national priorities and to accommodate the level of housing and employment growth envisaged by the Local Plan, a comprehensive and deliverable transport strategy must be in place to address these challenges.

3.3 The geography of the borough means that sustainable modes are a more feasible option in some locations and for some journeys than for others. The benefits of shifting trips from single occupancy car use to sustainable modes are manifold and recognised and promoted by Central Government. Examples of these include improved air quality; a healthier population and attractive, safe and secure public spaces.

3.4 Specific issues for action are identified for each mode below.

Highways

Overview

3.5 Maidstone has an extensive highway network which provides direct links both within the borough and to neighbouring areas including Ashford, the Medway Towns, Tunbridge Wells and London. Four north-south and east-west 'A' roads pass through the town centre and numerous 'B' roads run in concentric rings around the town, providing local links to the rural parts of the borough. Maidstone also enjoys good connections to the motorway network, including direct access to four junctions of the M20, (junctions 5, 6, 7 & 8).

3.6 In peak periods, parts of the road network operate at or near capacity[2] and, especially to the south of the borough, people find it difficult to access the services they need due to the lack of transport options available to

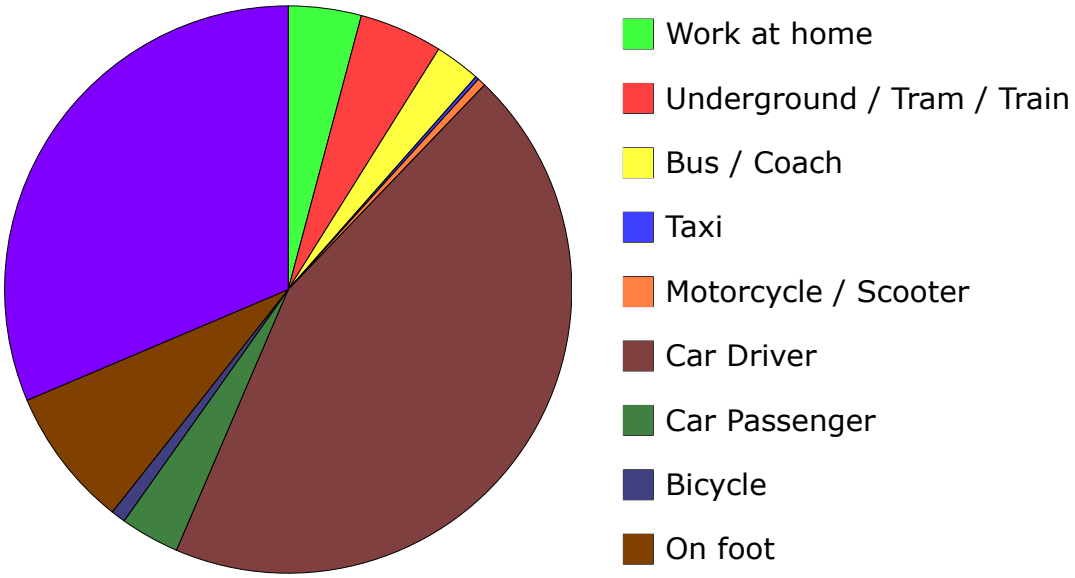
1 Usual resident population as per 2011 Census

2 A20 / Coldharbour Lane junction; A249 / Bearsted Road junction; Bearsted Road / New Cut Road junction; Dual Carriageway between A249 and New Cut Road junctions; A20 Ashford Road / Willington Street; A229/A274 Wheatsheaf junction; A274 / Wallis Avenue junction; A26 Fountain Lane junction

them. Congestion is caused by road traffic outgrowing capacity. The amount of road traffic is a consequence of the reliance placed on the private car and population and job growth (and their relative locations).

3.7 In terms of the reliance placed on the private car, a summary of Journey to Work Census data is shown below:

Mode	**Count**	**%**
Work at home	4,705	4.2%
Underground / Tram	120	0.1%
Train	5,257	4.6%
Bus / Coach	2,945	2.6%
Taxi	222	0.2%
Motorcycle / Scooter	538	0.5%
Car Driver	50,131	44.3%
Car Passenger	3,819	3.4%
Bicycle	935	0.8%
On Foot	9,023	8.0%
Other	395	0.3%
Not in Work	35,141	31.0%



Other / not in work

Table 3.1

3.8 In terms of growth in the period from 2011-2031, the Maidstone Borough Local Plan provides for 18,560 new homes together with employment growth of almost 14,500 jobs within the borough. The impact on the transport network of these developments needs careful and considered management ensuring the transport systems in place are appropriate, and additional mitigation measures are implemented where required.

3.9 The implications of growth and the ITS on the borough's highway network have been tested by using the Maidstone VISUM strategic highway network model to assess alternative transport infrastructure scenarios and their impacts in terms of travel time and distance. The VISUM model is a strategic highways model in which increases in walking and cycling are reflected in an estimation of the number of car trips which may be removed from the road network due to changes in modal share across these areas. Although VISUM can model bus service changes, in assessing the attractiveness of these services it does not take into account bus capacity issues, nor can it model bus priority measures.

3.10 As a strategic model VISUM is unsuited to assessing individual junction capacity, or to assess the impacts of proposed infrastructure improvements at those junctions and more detailed modelling is required for such junctions. Therefore, to provide the necessary detailed assessment of impact on specific junctions, the Council has commissioned a series of detailed junction capacity assessments within the urban area and at the Rural Service Centres and in addition, transport assessments submitted alongside planning applications, which have assessed cumulative impact of proposals and identified appropriate and justified mitigation measures as required have also been taken-into account.

3.11 It should also be noted that the impact of junction improvements outside the Maidstone urban area cordon for the VISUM model are not included in the above scenarios.

3.12 Furthermore, M20 Junctions 5 to 8 are not modelled in detail within the VISUM model. Localised junction modelling is being undertaken during summer 2016 to assess the capacity of these junctions and potential impacts on the Strategic Road Network (SRN).

3.13 Through the development of the Local Plan a number of VISUM modelling scenarios and transport interventions have been evolved and tested (see Chapter 10).

3.14 Congestion presents a cost to the economy in terms of lost time and environmental degradation and associated health costs resulting from poor air quality and inactivity. However it is widely acknowledged across the industry

that this problem cannot be solved by simply providing more road capacity as in the absence of alternative choices and demand restricting measures, traffic is expected to outgrow capacity.[3]

3.15 High traffic levels and congestion are also associated with poor air quality. Maidstone Borough Council operates two automatic monitoring stations, one situated at a roadside site, and one at a rural background location. The station at Miller House adjacent at the junction of Mote Road/Knightrider Street and Upper and Lower Stone Street has recently been relocated from the A229 Bridges Gyratory area and measures NO_2 and PM_{10} and is next to a main road, within the Air Quality Management Area. The rural background site in Detling is outside the AQMA and also measures NO_2 and $PM_{10.}$ Maidstone Borough Council also monitors annual mean NO_2 concentrations through some 54 passive diffusion tubes located across the borough. The most recent 2014 data shows the Bridge Gyratory town centre automatic monitoring site exceeding the annual objectives for NO_2 but not the hourly NO_2 objective. The 2014 results from the passive diffusion tubes also show fifteen sites exceeding the annual mean objective of 40µg/$m^{3.}$ There are three sites in Upper Stone Street exceeding 60µg/m^3, which is an indication of a potential exceedence of the 1-hour mean NO_2 objective. The Maidstone urban area is designated as an Air Quality Management Area. Both the Air Quality Management Area and Air Quality Action Plan will be reviewed in 2016.

3.16 There are points on the highways network where there are safety issues and a poor record of crashes/collisions. Plans identifying collisions involving pedestrians and/or cyclists in Maidstone town and the borough as a whole are included in the separate Walking and Cycling Strategy.

The Issues:

- Maidstone has very high levels of car ownership and usage. 84% of households in the borough have at least 1 car, compared with 80% across Kent and 74% in England
- Low average vehicle occupancy figures
- Heavy reliance on a small number of key junctions; in particular the singular river crossing point in Maidstone's town centre where the A20, A26 and A229 all meet
- Congestion on the network, particularly at peak periods
- Accident blackspots
- Poor air quality in particular areas
- The vulnerability of the M20 Motorway during cross-Channel disruption ("Operation Stack")

3 Goodwin, P (2004) The Economic Costs of Road Traffic Congestion. A Discussion Paper Published by the Rail Freight Group. ESRC Transport Studies Unit, University College London

- High-demand schools with very large catchment areas resulting in high car use for the 'school-run'

Walking

Overview

3.17 The benefits of walking are numerous, but often under-appreciated – increased physical activity, improved health, livelier town centres, a more vibrant economy are just some of the varied benefits active lifestyles can bring. Above all a shift to walking has the potential of addressing (peak hour) congestion in the borough.

3.18 The 2011 Census shows that 15% of trips to work in Maidstone are 2km or less in distance, and yet walking as a mode share is less than 8%, which offers great potential for increasing walking, provided the infrastructure and environment is right. Similarly, walking trips to school at peak times offer opportunities to reduce car travel.

The Issues:

- Relatively low levels of walking trips to work and school
- Busy roads act as barriers around the town centre, segregating the residential areas from the core (known as severance). The current gyratory system to cross the River Medway is complicated for pedestrians to navigate, acting as a barrier for walking trips. Furthermore, the subways provided are unpleasant and poorly maintained.
- Provision of safe, convenient, pleasant pedestrian routes is not universally available given the dominance of the car in most of the built up parts of the borough.

Cycling

Overview

3.19 Undertaking a four mile commute to and from work by bicycle rather than by car reduces congestion, brings numerous health benefits and saves half a tonne of Carbon Dioxide a year http://bikeweek.org.uk/save-cash-burn-calories-cut-carbon/.

3.20 The borough currently has a number of cycle routes that link the town centre to the suburban areas including National Cycle Network route (NCR17) which provides an 11 mile commuter link between Maidstone and the Medway towns; however connections within the town and further afield are incomplete and limited and there is a lack of cycle parking at key destinations.

The Issues:

- Low cycle mode share - 0.8% of Maidstone residents cycle to work according to the Office for National Statistics

- Limited and disjointed cycle routes into the town centre, with very few off-road options
- Limited cycle parking at key locations
- Provision of safe cycle routes to schools, colleges, employment and retail areas.

Public Transport

Overview

3.21 Experience across the UK has shown that bus services of sufficient quality and frequency have the potential to capture a significant proportion of short- and medium-distance trips and to make a strong contribution to the alleviation of peak-time congestion in urban areas. Maidstone has a well-established bus network provided principally by Arriva, together with a number of smaller independent operators. The network is centred on Maidstone town centre and combines high frequency routes serving the suburban estates and longer distance services providing connections to many of the outlying villages and neighbouring towns.

3.22 Three railway lines cross Maidstone Borough, serving a total of 14 stations. The operator of the vast majority of rail services in the area is the South Eastern Franchise holder, Southeastern. The franchise was let by the Department for Transport in 2006 for an initial six year period, which has subsequently been extended to 2018. The principal rail route serving Maidstone town is the London Victoria to Ashford International line (also referred to as the Maidstone East Line), which includes stations at Maidstone East, Bearsted, Hollingbourne, Harrietsham and Lenham, with an average journey time to London of an hour. Headcorn, Staplehurst and Marden have frequent services to London with similar journey times. There is a limited three morning and three return evening limited-stop service on the Medway Valley Line that connects with HS1 to St Pancras International. Thameslink Services are due to be extended to serve Maidstone East from 2018 with a daytime frequency of two trains per hour currently planned.

<u>The Issues:</u>

- Maidstone has three town centre rail stations, but poor inter-urban connections, especially compared with nearby towns in Kent.
- The town's rail stations and bus station are not generally well connected to each other, making for a poor interchange experience.
- Very few bus priority measures – such as bus lanes – exist within the borough, providing no advantage for bus journeys.
- Lack of payment options. Most buses only accept cash payment, and in some cases it is not possible to buy a return before 9am.

- Lack of live departure board information at most bus stops, and limited use of effective smartphone applications including ticket purchasing.
- Service frequencies beyond the urban core are not convenient for most users.
- The town's main bus interchange located at The Mall Chequers Shopping Centre is neither fit for purpose nor user-friendly. It is not well lit or ventilated and is threatening in character being essentially a tunnel under the Centre linking King Street and Romney Place.

Parking

Overview

3.23 The provision of an adequate supply of well-located and reasonably priced car parking is essential to support the borough's retail economy, to provide a means of access to areas where alternative travel modes are limited or unavailable, and to ensure that mobility impaired persons are able to access key education, employment and leisure opportunities. The supply of car parking also drives demand for limited road space and can therefore contribute to traffic congestion and poor air quality, as well as making more sustainable modes of travel less attractive. Therefore it is crucial that an over-provision of parking is avoided, particularly in and around Maidstone town centre.

<u>The Issues:</u>

- Only a very small portion of parking available in Maidstone is under direct council control. As a consequence, it is difficult to apply a uniform parking policy when the vast majority of spaces are under private ownership.
- Parking is relatively cheap and plentiful compared with similar sized towns elsewhere.
- Lots of the town's parking consists of small allocations of spaces (50 or less), meaning that they fill up quickly and create additional circulatory traffic of vehicles searching for alternative spaces.

4.1 This section briefly outlines the current policy context within which the ITS has been developed and identifies how it can contribute to the delivery of their key objectives.

National Policy Context

4.2 The Department for Transport (DfT)'s stated vision is for: "A transport system that is an engine for economic growth, but one that is also greener and safer and improves quality of life in our communities." [4]

4.3 The DfT is working towards delivering a number of priorities in line with this vision, which includes the following; "Encourage sustainable local travel: - Encourage sustainable local travel and economic growth by making public transport (including light rail) and cycling and walking more attractive and effective, promoting lower carbon transport and tackling local road congestion."

4.4 This vision has been carried forward into the Government's National Planning Policy Framework (NPPF) published in 2012, which replaced the previous suite of Planning Policy Statements, Planning Policy Guidance notes and certain Circular Guidance. The NPPF emphasises the importance of rebalancing the transport system in favour of sustainable transport modes, whilst encouraging local authorities to plan proactively for the transport infrastructure necessary to support the growth of ports, airports and other major generators of travel demand.

4.5 The NPPF recommends that Transport Assessments and Travel Plans should accompany applications for developments that generate significant amounts of movement, although it recognises that the opportunities to maximise sustainable transport solutions will vary from urban to rural areas.

4.6 This advice is reinforced in the National Planning Practice Guidance published in 2014, which gives more detailed guidance on how to approach the assessment of the transport implications in the preparation of new local plans.

How the ITS contributes:

- Implementing strategies to rebalance the transport system in favour of sustainable transport modes
- Clear transport requirements to be considered to support growth

4 http://www.civilservice.gov.uk/networks/ges/assistant/what-we-do/dft (accessed 16th Oct 2015)

Kent County Council

Vision for Kent 2012-2022 **(5)**

4.7 The Vision for Kent is a countywide strategy for the social, economic and environmental wellbeing of Kent's communities. It has been written around three major ambitions, which are to:-

1. Grow the economy by supporting businesses to be successful, including improvements to the transport network and the provision of high-speed broadband;
2. Tackle disadvantage by fostering aspiration rather than dependency, including the provision of comprehensive, reliable and affordable public transport services providing access to education and employment opportunities; and
3. Put the citizen in control by involving people in making decisions and working with them to design services that meet their needs and suit them, including the continued provision of KCC's Member Highway Fund and support for community bus and rail schemes.

How the ITS contributes:

- Implementing strategies to rebalance the transport system in favour of sustainable transport modes
- Clear transport requirements to be considered to support growth

Growth without Gridlock: a Transport Delivery Plan for Kent[6]

4.8 Growth without Gridlock outlines KCC's high level vision for the transport network needed in Kent to support planned growth in housing and employment over the next 20 years. It responds to the economic and regeneration pressures outlined in the County Council's Framework for Regeneration and identifies how transport interventions can contribute to their alleviation. The strategy requests greater transport funding and delivery powers for local transport authorities and calls upon the Government to progress those schemes of regional and national importance, including a Lower Thames Crossing, a long-term solution to Operation Stack and a scheme of Foreign Lorry Road User Charging.

How the ITS contributes:

- Implementing strategies to address congestion on the network
- Supporting the need for to find a long term solution to Operation Stack

Local Transport Plan (LTP3) for Kent 2011-2016[7]

5 Kent Forum (2012), Vision for Kent 2012-2022
6 KCC (2010), Growth without Gridlock – A Transport Delivery Plan for Kent
7 KCC (2011), Local Transport Plan for Kent 2011-16

4.9 KCC's strategic approach for Kent's third Local Transport Plan (LTP3), covering the period 2011 to 2016, was to develop five LTP3 themes aligned to the previous government's national transport goals. These themes are:-

a. Growth Without Gridlock
b. A Safer and Healthier County
c. Supporting Independence
d. Tackling a Changing Climate
e. Enjoying Life in Kent

4.10 The LTP3 makes specific reference to Maidstone (Chapter 8 – The Implementation Plan for Growth without Gridlock): "The Maidstone Transport Strategy, and hence the County Council's Integrated Transport Programme for 2011 – 2016, will be driven by the desire to preserve and enhance the accessibility of Maidstone town centre by sustainable means. The proposed level of development will be underlined by a package containing a number of traffic measures including the enhanced provision and priority of bus services through the Maidstone Quality Bus Partnership involving the County and Borough Councils along with the town's principal bus operator."

How the ITS contributes:

- Implementing strategies to address congestion on the network, improve safety, improve air quality and encourage sustainable transport; all of which can contribute to better, healthier, lifestyles for the borough's population.

Active Travel Strategy

4.11 In conjunction with stakeholders across the County, KCC has been developing an Active Travel Strategy for the promotion of physically active means of transport as part of its 'vision for making cycling and walking the preferred option for residents taking short journeys or as part of longer journeys that include public transport'[8]

4.12 The draft strategy defines Active Travel as walking or cycling as a means of transport in order to get to a particular destination such as work, the shops or to visit friends. It does not cover walking and cycling done purely for pleasure, for health reasons, or simply walking the dog. Active Travel can apply to a complete journey or part of a journey.

4.13 The draft strategy seeks to demonstrate how KCC will build on the existing network of cycle and walking routes in the County to maximise their use and to promote increased walking and cycling in a population with a growing reliance on cars. The aim is to promote a range of infrastructure and behaviour change projects via an implementation plan that will be finalised once the Strategy has been adopted.

4.14 How the ITS contributes:

- Implementing strategies to encourage sustainable transport, including the Active Travel modes of walking and cycling

8 KCC (2016), Active Travel Strategy Consultation Draft. May 2016

Maidstone Borough Council

Maidstone Borough-wide Local Plan 2000[9]

4.15 This is the adopted Local Plan for Maidstone. The saved policies within it contain inter-alia, policy T2, which seeks to secure measures to aid bus and hackney carriage access on identified bus and hackney carriage corridors (the main radial routes into Maidstone Town Centre). Such measures to include dedicated bus lanes, bus priority at junctions, priority within traffic management schemes and enhanced waiting and access facilities and information systems for passengers including people with disabilities.

Maidstone Sustainable Community Strategy 2009-2020 [10]

4.16 MBC's Sustainable Community Strategy (SCS) sets the overall strategic direction and long-term vision for Maidstone in a way which respects the need for sustainable development. The SCS acknowledges that congestion in the borough has become an increasing problem and that the overriding aim of an integrated transport strategy must be to provide genuine transport choice to the area's residents, businesses and visitors. These driving principles are reflected in the three priorities for Maidstone outlined in the SCS:-

- For Maidstone to have a growing economy;
- For Maidstone to be a decent place to live; and
- Corporate and customer excellence.

Strategic Plan 2015-2020

4.17 The Strategic Plan updates the Sustainable Community Strategy and restates "Our Vision" as "That our residents live in decent houses, enjoy good health and a pleasant environment with a successful economy that is supported by reliable transport networks": and "Our Mission" as "Putting People First". This leads to two priorities as follows:

- PRIORITY 1 - Keeping Maidstone Borough an attractive place for all
- PRIORITY 2 - Securing a successful economy for Maidstone Borough

How the ITS contributes:

- All the actions of the ITS support the priorities outlined above through improvements to the transport network

Maidstone Borough Local Plan and Infrastructure Delivery Plan

4.18 The Local Plan was submitted for examination on 20 May 2016. It outlines and contains proposals for detailed junction mitigation measures and other sustainable transport interventions in support of the allocated development sites included in the Local Plan. The Infrastructure Delivery Plan (IDP) submitted as

9 Maidstone Borough-wide Local Plan 2000 saved policies
10 Maidstone Sustainable Community Strategy 2009-2020

part of the evidence base for the Local Plan sets out the funding sources and delivery timescales for the transport and highway interventions outlined in the Local Plan.

How the ITS contributes:

- All the actions of the ITS support the allocated sites in the Local Plan through the proposed improvements to the transport network through specific highway or sustainable transport interventions.

Other Plans and Policies

4.19 The ITS is also aligned to a number of other local plans and policies including:

KCC's Countryside and Coastal Access Improvement Plan[11]

4.20 The Countryside and Coastal Access Improvement Plan sets a number of objectives especially for sustainable transport:

Priority walking objectives include:

- Make promoted routes as accessible as possible and promote them to a wide audience.
- Ensure new developments encourage and provide for walking and cycling, including links to the wider countryside.
- Widen the audience for walking, including under-represented groups.
- Officers will proactively seek opportunities to improve the accessibility of the network, following consultation with local landowners and parishes.

Priority cycling objectives include:

- Support increasing cycling for everyday journeys, including seeking improvements to routes serving transport hubs, large employers and schools, and connecting cycling networks.
- Deliver a continued increase of traffic-free routes and a better connected network to support the development of tourism, family and recreational cycling.

Priority equestrian objectives include:

- Continue to improve equestrian infrastructure and develop new routes in target areas identified by riders.

Rail Action Plan for Kent KCC (2011), Rail Action Plan for Kent [12]

11 KCC (2007), Countryside and Coastal Access Improvement Plan 2013-2017
12 KCC (2011), Rail Action Plan for Kent

4.21 The Rail Action Plan for Kent (RAPK) formed the basis of KCC's response to the DfT's consultation on the new Integrated Kent Franchise (IKF) in 2014.

MBC's Air Quality Action Plan[13]

4.22 Initially the Council considered declaring AQMAs at the Fountain Lane/Tonbridge Road junction, the Well Road/Boxley Road junction and at the Loose Road/Sutton Road junction in Maidstone town based on the potential exceedances. Following extensive consultation, the Council decided to declare an urban area wide AQMA. The Council adopted the Maidstone Air Quality Action Plan in December 2010 setting out the measures it intends to put in place in pursuit of the objectives. The Borough Council regularly reviews and assesses air quality in the borough to determine whether or not the air quality objectives are likely to be achieved. It is anticipated that both the AQMA and the Air Quality Action Plan will be reviewed in 2016.

Low Emissions Strategy

4.23 The Borough Council has also commenced preparation of a Low Emissions Strategy (LES). It has been subject to initial public consultation.[14] The responses to the consultation and the next steps to be taken in its preparation and adoption are currently being considered.

4.24 Air quality is a key issue in the Maidstone urban area and by promoting the use of sustainable transport modes the ITS will contribute towards reducing pollution and emissions. Similarly the future LES is likely to propose the possible introduction of emission control standards for public transport vehicles and taxis and the promotion of low emission vehicles and infrastructure and identify the increasing potential for electrically powered vehicles for possible inclusion in Council policy.

Neighbourhood Plans

4.25 Neighbourhood Plans are developed by parish councils and neighbourhood forums working in partnership with MBC. These set out planning policies for development and the use of land in a local area. Once adopted, a neighbourhood plan becomes part of the development plan for the area. This means that the plan has weight when decisions are made on planning applications. Transport matters can form part of these plans.

Transport Strategies for Adjoining Authorities

4.26 A number of adjoining authorities have prepared transport strategies to address existing transport issues and support future development. Some of the proposals identified in these strategies potentially affect Maidstone Borough.

4.27 The Tunbridge Wells Transport Strategy [15] identifies the following in its Implementation Plan:

13 MBC (2010), Maidstone Town Air Quality Action Plan
14 MBC (2015) Low Emissions Strategy
15 TWBC (2015), Tunbridge Wells Borough Development Plan - Transport Strategy 2015-2016.

- Work with all operators and KCC to improve the timing and interaction of buses with train services, including Service 5 at Staplehurst Station;
- Lobby for improved service frequency on the Medway Valley Line.

4.28 The Swale Transportation Strategy[16] is currently in draft but identifies existing peak period congestion at M20 Junction 5, for which a short term improvement has been identified but a more comprehensive solution will be required in the longer term. This will affect traffic flows on the A249 corridor linking with M20 Junction 7.

4.29 The Ashford Cycling Strategy[17] contributes to the objectives of the older Transport Strategy for Ashford [18] i.e. to achieve a significant shift away from car use by maximising use of public transport, walking and cycling. Both documents are focused on the town of Ashford itself, but the Cycling Strategy states that the extension of cycle routes into rural areas will be considered in future revisions of the Strategy. The Borough Council will support the development of cross-boundary transport proposals as part of its duty to cooperate.

4.30 The Tonbridge and Malling Cycling Strategy 2014-2019[19] identifies a number of cycle route improvements which would improve access to Maidstone. These include a link from Aylesford; the filling in gaps on the A20 London Road to form a continuous route from West Malling; and a link from Kings Hill via Canon Lane, Teston Lane and North Pole Road.

4.31 One of the key transport objectives in the Medway Local Transport Plan 2011 - 2026 [20] is to improve public transport and a number of the actions require partnership working with neighbouring authorities as well as operators. These include the development of sub-regional bus services and improved ticketing and fares initiatives, such as investigating the introduction of Smartcard technology.

4.32 Another of Medway's Local Transport Plan objectives is encouraging active travel and improving health. Paragraph 5.21 of the Medway Cycling Action Plan [21] states that Medway Council will work with KCC to develop routes that cross local authority boundaries, such as along the Medway Valley to Maidstone.

16 KCC (2014), Swale Transportation Strategy Draft 2014-2031.
17 ABC (2010), Ashford Cycling Strategy 2011-2016
18 KCC/Ashford's Future (2006), The Transport Strategy for Ashford
19 KCC (2014), Tonbridge and Malling Cycling Strategy 2014-2019
20 Medway Council (2011), Local Transport Plan 2011 - 2016
21 Medway Council (2016), Medway's Cycling Action Plan 2016/18

5.1 In the context of the transport challenges for Maidstone Borough and national and local transport policies, the following vision has been developed.

5.2 In brief the vision is *Realising Maidstone's sustainable future; connecting communities and supporting a growing economy*.

By 2031, Maidstone town and its surrounding area will be well known for its efficient, sustainable and accessible transport system which will support a thriving and attractive county town, and provide efficient and effective links with the surrounding villages, countryside and beyond. More and more people will walk, cycle and use public transport and this will help reduce car traffic on radial routes from the town and support the continued growth of the area while protecting its distinctive character and environment.

New routes will be developed for walking, cycling and public transport which will link up communities, employment, services and facilities and alternatives to the private car will be promoted. Information about sustainable transport options will be readily available and new technology will make this easy to access.

New and improved high quality bus routes will link Maidstone town centre with community and local transport hubs which will become the location for local enterprise centres where services will be supplemented with high speed broadband. Enhanced railway services will link the borough with the capital and surrounding urban areas, offering a wide range of employment, commercial and leisure opportunities for residents, businesses and visitors.

Strategic Objectives

5.3 In order to achieve this vision, five key objectives have been developed which may be summarised as:

Objective 1: Enhancing and encouraging sustainable travel choices including:

A. The development, maintenance and enhancement of walking and cycling provision, through network improvements and encouraging uptake amongst the population;
B. The development, maintenance and enhancement of public transport provision, including Park and Ride, encouraging uptake amongst the population;
C. Promotion and education regarding walking, cycling and public transport travel options;
D. Ensuring that the provision of parking is fair and proportionate, considering the needs of all users, whilst also encouraging sustainable travel choices; and
E. Place sustainable travel options at the heart of all new developments within Maidstone, to ensure a fully integrated network that puts pedestrians, cyclists and public transport users at the centre of any transport proposals.

Objective 2: The enhancement of strategic transport links to, from and within Maidstone town.

Objective 3: Ensure the transport system supports the growth projected by the Maidstone Borough Local Plan.

Objective 4: Reducing the air quality impacts of transport.

Objective 5: Ensure the transport network considers the needs of all users, providing equal accessibility by removing barriers to use.

6.1 In order to achieve these objectives, it will be necessary to focus on a number of key inter-related strategic priorities which will lead to specific interventions in all modes of transport.

Reduce demand for travel

6.2 In order to allow an improved transport network to accommodate existing and proposed development, and play its part in seeking to reduce the air quality impacts, a key priority for the strategy is to reduce the need to travel where possible, especially by private vehicle. The creation of sustainable communities, where people can live, work and access facilities without needing to travel long distances, is an overarching aim of the strategy and this will be pursued through the Maidstone Borough Local Plan and land use planning policies.

6.3 Significant advances in technology mean that the opportunities to work from home are increasing so that people may not need to travel to a workplace on a regular basis in the future with benefits in reducing congestion. This may be encouraged by the provision of superfast broadband, especially to rural communities and this should be a priority for partnerships between public agencies, providers and local businesses. This provision may be supplemented by the establishment of local enterprise hubs which offer the opportunity for local small businesses to support each other and provide complementary activities and services.

Changing travel behaviour

6.4 The objective of enhancing and encouraging sustainable travel choices will assist in changing travel behaviour. The inexorable increase in car usage leading to congestion and the further deterioration in environmental conditions are not sustainable and require changes in behaviour by individuals and institutions. A holistic approach is needed to promote alternatives to private car usage and the encouragement of walking, cycling and the use of public transport.

6.5 'Door to Door: A strategy for improving sustainable transport integration' [22] was published by the DfT in March 2013. It seeks to promote the use of sustainable transport for the entire 'door-to-door' journey, with the aim of making it as convenient and straightforward to make a door-to-door journey by public transport, by cycle or on foot or by a combination of these different means as by private transport.

6.6 This ITS is in accordance with this strategy in that appropriate interventions are set-out that seek overall to improve the sustainable journey experience, through e.g. improved information about journey options to enable proper planning, improved and integrated connections at all stages of the journey, a convenient and affordable ticketing framework for an entire journey and safe and comfortable transport facilities to encourage users.

22 DfT 2013 Door-to-Door: A strategy for improving sustainable transport integration

Promote modal shift

6.7 The implications of changing behaviour are that people shift from using the private car for the majority of journeys towards using more sustainable modes of transport where possible and appropriate. The private car continues to be the primary means of transport in the rural areas but relatively minor shifts in mode can make a significant difference in terms of congestion particularly with regard to trips to the urban area for work and leisure.

6.8 Experience elsewhere has demonstrated that significant changes to behaviour can be achieved where bus and rail services are enhanced by additional routes, real time information and new and improved interchange facilities.

6.9 In Poole, the number of journeys by bus has almost doubled from 5.3 million in 2004/2005 to 10.2 million in 2014/2015[23]. The key to this success has been the Quality Bus Partnership comprising the major operators and the authorities of Poole, Bournemouth and Dorset. The authorities have, with Department for Transport funding, invested in infrastructure (high quality shelters, real-time passenger information and bus priority) whilst the bus operators have increased frequencies and invested £2.7 million in new low floor buses with luxury seating, CCTV and smartcard ticketing. These improvements have attracted new passengers for whom the bus is a mode of choice, and has led to a flourishing commercial bus network.

6.10 Similar changes to travel behaviour have been seen in Brighton & Hove, where a package of measures including flexible multi-trip ticketing, network simplification/branding, extensive bus priority, increased frequencies on busy routes and improvements to passenger facilities saw bus patronage increase from 30.2 million journeys in 2001 to 41.1million in 2009/10.

6.11 Darlington, Peterborough and Worcester were designated by the Department for Transport as Sustainable Travel Towns where a programme of measures was implemented between 2004 and 2009, intended to reduce car use. These are medium-sized (all with populations of 140,000 or smaller) free-standing towns, comparable with Maidstone. Detailed before/after travel surveys of over 4,000 residents in each town gave the following key results.[24]

- Car driver trips fell by 9% per person, and car driver distance by 5-7%, compared with a fall of about 1% in medium-sized urban areas nationally during the same period;

- Bus trips per person grew by between10% and 22% in the three towns, compared with a national fall of 0.5% in medium-sized towns;

23 Eurotransport Magazine, Volume 13, Issue 5 (2015), Increasing bus patronage through partnership working and RTPI

24 Sloman, L. et al (2010), The Effects of Smarter Choice Programmes in the Sustainable Travel Towns: Summary Report for Department for Transport.

- Cycling trips per person grew by between 26% and 30% in the three towns, compared to a decline elsewhere; and
- Walking trips per person grew by between 10% and 13% in the three towns compared to a national decline.

6.12 During the same period, six Cycling Demonstration Towns were also designated (Aylesbury, Brighton & Hove, Darlington, Derby, Exeter and Lancaster with Morecambe). Evaluation indicated a 27% increase in cycling across all six towns between 2005 and 2009, with the proportion of adults undertaking any cycling increasing by 14%. In schools involved in the 'Bike It' programme, the proportion of pupils cycling to school on a regular basis increased by 126%.[25]

Improve network efficiency

6.13 In order to achieve the objectives of enhancing strategic transport links to, from and within Maidstone town and ensuring the transport system supports the growth projected by the Maidstone Borough Local Plan, improvements should also be made to the existing transport network, including major new investment on links where appropriate. The strategy incorporates a programme of road and junction improvements.

25 DfT/Cycling for England 2010: 'Lift Off for Cycling' Headline results

7.1 Key to improving transport conditions in Maidstone Borough is the full involvement of all the stakeholders in providing and utilising transport modes and services. As well as the highway authority (KCC) and the Borough Council, key players are the bus operators, the rail company, interest groups promoting walking and cycling, Parish Councils and community groups.

Roles and Responsibilities

Highways England

7.2 Motorways and trunk roads in England are the responsibility of Highways England (formerly the Highways Agency). The M20 Motorway passes through the borough connecting the Channel Ports to the M25 London Orbital Motorway and beyond. There are four motorway junctions (5-8) on the M20 within the borough. The M2 Motorway also passes through the north of the borough area and three junctions (3-5) are situated just outside the borough boundary but are readily accessible from within the borough.

Kent County Council

7.3 Kent County Council (KCC) is the local highway authority for Kent and is responsible for the management and maintenance of all adopted roads in the county other than motorways and trunk roads. KCC is also the local transport authority for Kent and actively promotes alternatives to car-based travel to improve the accessibility, sustainability and efficiency of the highway network.

7.4 KCC's third Local Transport Plan (LTP3) covers the period 2011 to 2016 and further Local Transport Plans will be produced over the period of the ITS. It is the intention that the Local Transport Plan will assist the implementation of the Integrated Transport Strategy.

Maidstone Borough Council

7.5 The Borough Council also has delegated responsibility for Civil Parking Enforcement under the Traffic Management Act 2004, Park and Ride services, street cleaning, the licensing of taxis and private hire vehicles, the provision of bus shelters and the monitoring of air quality and implementation of an Air Quality Action Plan.

Bus Operators

7.6 Approximately 80% of bus services in Kent are operated on a wholly commercial basis by local operators and neither the Borough Council nor the County Council plays a direct role in their provision. However, MBC and KCC have signed a Quality Bus Partnership Agreement with the borough's principal commercial bus operator, Arriva, which commits all parties to invest jointly in local bus services and supporting infrastructure. The remaining 20% of services are classified as 'socially necessary' and are procured by KCC to provide access to essential services.

7.7 Discussions with the significant bus operators in Maidstone are identifying future service enhancements, new routes and operating improvements which will increase the attractiveness of bus travel in both the urban and rural areas.

The strategy anticipates the rail service improvements which are planned for Maidstone, including Thameslink, and the introduction of policies in the submitted Maidstone Borough Local Plan to promote walking and cycling and alternatives to the use of the private car.

Rail Operator

7.8 Maidstone's rail services are operated as part of the Integrated Kent Franchise, which is specified and led by the Department for Transport (DfT). The franchise is currently held by Southeastern, and this was recently extended until 2018. The process for awarding a new franchise from 2018 onwards commences in late 2016.

Funding Sources

7.9 A key challenge for the ITS will be to ensure that its actions are achievable within the funding that is likely to be available over time. Anticipated funding sources include:

- **Funding from development** – the ITS supports committed and planned growth and so funding from development will be critically important to help deliver the strategy. Section 106 funding will be used to deliver site specific infrastructure and to improve and mitigate the impacts of growth proposals. In the medium to longer term, the Community Infrastructure Levy (CIL) will be used to fund the key infrastructure related to growth.

- **Single Local Growth Fund (SLGF)** – established in 2015/16, transport funding for the SLGF has been top sliced from central government Local Transport Plan funding for small schemes and for local major scheme funding. Local Enterprise Partnerships are required to submit bids for SLGF funding for schemes across all areas related to growth, including education and skills, community infrastructure and drainage, in addition to transport.

- **Local Transport Plan (LTP) funding** – KCC receives LTP funding for small scale transport improvements. However, the level of funding has reduced as money has been top sliced into the SLGF. For 2015/16 to 2017/18, the available Integrated Transport block funding will total £6.8 million per annum for the entire county.

Prioritisation and Delivery

7.10 The Maidstone Borough Local Plan seeks to deliver 18,560 homes and a quantum of employment and retail development in the period 2011 to 2031. The ITS seeks to support the Local Plan with appropriate interventions to mitigate the planned growth. The impact of the growth has been modelled using VISUM, which as indicated previously provides a strategic level overview, supported by detailed junction capacity modelling and specific modelling in transport assessments accompanying planning applications within which the cumulative impact of planned growth has been assessed.

7.11 This modelling has identified key mitigation and interventions, be it junction capacity improvements or improvements to public transport and its infrastructure. This mitigation is clearly set out in this ITS, the Maidstone Borough Local Plan and the IDP. Current work on junction improvements serves to evidence that with some 9,000 homes delivered or in the pipeline, the impacts can and will be mitigated. The Borough Council and KCC are already working together and delivering schemes.

7.12 Coupled with some 3,790 units planned for broad locations in the borough at the end of the plan period, and potentially 1,600 units as 'windfalls', this leaves a total of approximately 4,250 remaining units requiring infrastructure in the short to medium term. Further junction capacity modelling work has been undertaken in respect of the broad locations to demonstrate again, that appropriate mitigation can be provided to offset the impact of planned development in the latter part of the plan period to 2031.

7.13 It will be necessary to ensure an up-to-date ITS is maintained, therefore, a review will commence by 2022 alongside that of the Local Plan.

8.1 The ITS leads to action plans for all modes of transport which will be reviewed and rolled forward on a regular basis. It is important that the interventions are aligned with the sequence of development proposed in the Maidstone Borough Local Plan.

8.2 The Action Plans to achieve the strategic objectives and priorities are set out below.

8.3 The proposed delivery of the necessary transport infrastructure to support the Local Plan in line with this strategy is indicated in the Infrastructure Delivery Plan (IDP). The IDP also indicates the sources of funding which will include S106, CIL when it is introduced, and other funding sources such as the LEP Growth Fund.

8.4 S106 funds are triggered at various stages of the development process and are largely controlled by the proposed developers' construction schedules, within the time constraints of the planning permission granted. Specific infrastructure provision may be financed in advance of development from other sources and the ITS identifies local highways, walking and cycling provision and public transport actions which may attract funds from various sources.

8.5 The chart below outlines the actions to be taken in order to deliver the objectives of this strategy. These actions have been categorised by mode, but an integrated approach is required to tackle Maidstone's transport issues with success reliant on the actions being implemented in conjunction with each other.

8.6 Actions will be phased so that they will be implemented over the short, medium or long term. These actions will be crucial to ensuring that Maidstone functions effectively both as the County Town of Kent and as a regionally important transport hub.

8.7 The ITS actions are summarised below, followed by full details of each action:

Number	Area	Action Description
H1	Highways	Targeted implementation of highway improvements at key strategic locations to relieve congestion and to aid public transport.
H2	Highways	Maintain and develop Maidstone's Intelligent Transport Systems and the proactive sharing of real time traffic and transport information with road users to manage congestion.
H3	Highways	Facilitate and promote the expansion of the County Hall Car-Club service to meet any identified increase in demand on an annual basis.
H4	Highways	Actively promote and encourage car sharing initiatives
H5	Highways	Ensure road safety education continues to be provided for across the borough.

Number	Area	Action Description
H6	Highways	Installation of additional electric charging points and the promotion of electric car use.

Number	Area	Action Description
P1	Parking	Introduce and adhere to Parking Standards.
P2	Parking	Optimise long stay parking charges to extract maximum value from parking charges, whilst controlling demand through a 50% increase in long-stay charges by 2031.
P3	Parking	Maintain the current level of parking space provision in the town centre.
P4	Parking	Improve parking enforcement on highways to reduce the impact of obstruction on bus reliability

Number	Area	Action Description
UL/Zero Emissions 1	Ultra-Low and Zero Emissions Vehicles	Encourage the provision of suitable infrastructure for Ultra-low and Zero emissions vehicles throughout the borough

Number	Area	Action Description
PT1	Public Transport	Provide bus priority measures on strategic routes linking the town centre to residential developments and key local amenities.
PT2	Public Transport	Facilitate an improvement of bus services to ensure a good frequency of service is provided on all radial routes to the town centre within the Maidstone Urban Area.
PT3	Public Transport	Increase the proportion of school children using the bus to get to school.
PT4	Public Transport	Continue to engage with and facilitate Statutory Quality Bus Partnership schemes in Maidstone.

Number	Area	Action Description
PT5	Public Transport	Improve rail station access for pedestrians, cyclists and the mobility impaired.
PT6	Public Transport	Improve the frequency and quality of bus services between Maidstone town centre, M20 Junction 7 and Sittingbourne/Faversham
PT7	Public Transport	Provision of a North West Maidstone Bus Loop
PT8	Public Transport	Promote the provision of high quality bus services from the Rural Service Centres and investigate using rail stations for interchange facilities
PT9	Public Transport	Lobby Government and Train Operating Companies (TOCs) for improved rail services to Maidstone including the restoration of direct services to London Bridge and Cannon Street
PT10	Public Transport	Investigate the potential for further rail halts at Tovil, Teston and Allington
PT11	Public Transport	Improve bus facilities at Maidstone East and Maidstone West train stations to maximise interchange capabilities.
PT12	Public Transport	Improve interchange facilities at Staplehurst rail station
PT13	Public Transport	Work towards an improved bus station in Maidstone town centre.
PT14	Public Transport	Better information and marketing of public transport options including

Number	Area	Action Description
W1	Walking	Provision of accessible pedestrian routes for all users.
W2	Walking	Improve pedestrian accessibility across the River Medway in Maidstone town centre.
W3	Walking	Implement public realm improvement schemes within the town centre, such that pedestrian access is the primary mode within the central core of Maidstone.

Number	Area	Action Description
W4	Walking	Identify priority areas for implementation of safety improvements to reduce road traffic collisions involving pedestrians and cyclists.
W5	Walking	Actively encourage and promote walk-to-school initiatives.
W6	Walking	Improve street signage with better pedestrian wayfinding and a reduction in footway clutter.

Number	Area	Action Description
C1	Cycling	Maintain and further develop a strategic cycle network, connecting the town centre to key facilities and residential areas.
C2	Cycling	Maintain and further develop cycle routes in rural settlements connecting local amenities and transport hubs (rail stations and bus stops where new and improved cycle parking can be provided in conjunction with Action C6) to housing
C3	Cycling	MBC and KCC to work with partners to ensure the regular maintenance of all cycle tracks within the borough.
C4	Cycling	(a) All Year 6 children will have access to Level 1 and 2 Bikeability training, and children in Year 7-9 will have access to Level 3 training. (b) Adult cycle training will continue to be offered, through initiatives including workplace travel planning.
C5	Cycling	Support the Maidstone Cycle Campaign Forum as a group to promote the cycling cause in the borough; in order to ensure the Walking and Cycling Strategy and the Integrated Transport Strategy provide a coherent strategy for the promotion of Active Travel in the borough.
C6	Cycling	Improve cycle security and parking at all key transport hubs and public amenities (including schools, healthcare facilities and retail locations).

Number	Area	Action Description
C7	Cycling	Encourage employers to incorporate cycling into Workplace Travel Plans.
C8	Cycling	Promote cycling in schools through School Travel Plans.
C9	Cycling	Ensure all cycle routes are fully advertised and signposted within the borough.
C10	Cycling	Revise and update the "Explore Maidstone Walking and Cycling Map" to extend coverage to the wider borough and indicate destinations in neighbouring local authorities. Map to be available both electronically and in paper format.
C11	Cycling	Standardise and clarify the requirements of planning applications with respect to the provision of walking and cycling facilities, to promote the use of these active travel modes.
C12	Cycling	MBC, KCC and the Maidstone Cycle Campaign Forum to identify opportunities to establish local cycling events.
C13	Cycling	MBC and KCC to identify locations throughout the cycle network where new automatic cycle counters should be installed to enable a detailed analysis of usage. Installation to proceed as resources allow, but each new cycle infrastructure proposal will be assessed to see if an additional counter should be added to augment the data gathering process.

Highways

8.8 The Actions:

Action H1: Targeted implementation of highway improvements at key strategic locations to relieve congestion

8.9 Through the identification and enhancement of key strategic junctions, congestion on the road network can be reduced. Regardless of development a number of the town's junctions are subject to high levels of congestion in the morning and evening peaks.

8.10 The key junctions and proposed interventions are set out in the table below. The funding sources are also referenced in the Infrastructure Delivery Plan and Maidstone Borough Council together with Kent County Council and

Highways England will work together to secure the early delivery of these improvements within the next three years, primarily through S106 agreements and potential Growth Fund applications. The Borough Council and KCC are also actively exploring whether existing LGF1 funding can be used to 'pump-prime' and bring forward any of the planned intervention and mitigation schemes.

Area	Junction	Aim	Intervention	IDP Reference
Maidstone Town Centre	Town Centre Bridges Gyratory A229/A20/A26	Capacity improvements.	New northbound link to bypass the gyratory.	LEP Local Growth Fund and MBC Contribution (New Homes Bonus)
Maidstone Urban Area – M20 Junction 7 Strategic Area	A249 Bearsted Road roundabout and Bearsted Road/New Cut Junction	Capacity improvements.	Signalisation of New Cut roundabout. Provision of a new signal pedestrian crossing and combined foot/cycle	Provided under 13/1163.
	Dual carriageway between A249 and New Cut Junctions	Capacity improvements.	Additional carriageway/revised junction arrangements.	Provided in connection with Newnham Court.
	M20/Junction7	Capacity improvements	Signalisation of roundabout, widening of coast bound off-slip and creation of new signal controlled pedestrian route through junction.	Provided under 13/1163.
	M2 Junction 5 Improvement	Capacity improvements.		13/1163 - £44.7k
Maidstone Urban Area – South East Maidstone Strategic Area	A229/A274 Wheatsheaf junction	Capacity improvements.	Works to improve capacity at the junction	14/503167 - Proportion of £108k also split between Loose Rd/Boughton Lane & approaches to TC.

Area	Junction	Aim	Intervention	IDP Reference
	A229/Armstrong Road	Capacity improvements.	Works on the approaches to the Town Centre between the Wheatsheaf junction and the bridge gyratory traffic signal junctions.	14/503167 - Proportion of £108k also split between Loose Rd/Boughton Lane & approaches to TC.
	A274 Willington Street junction	Junction capacity improvements.		13/1149 - £180k 13/1523 -£30k 13/0951 £55.8k
	A274 Wallis Avenue junction	Junction capacity improvements.		13/1149 - £180k 13/1523 -£30k 13/0951 £55.8k
	A274 Corridor	Bus journey time reliability.	Bus priority measures: Incorporating measures from the Willington Street junction to the Wheatsheaf junction, together with bus infrastructure improvements	13/1149 - £1.8m 13/1523 - £300k 13/0951 - £558k
	A229 Loose Road/Cripple Street/Boughton Lane junction	Junction capacity improvements		

Area	Junction	Aim	Intervention	IDP Reference
Maidstone Urban Area – North West Strategic Area	A20/Coldharbour Lane junction	Capacity improvements.	Junction capacity and signals/left hand turn lane off A20 to M20 junction 5 link road.	13/1702 - £338K split between A20/Coldharbour & A26/Fountain Lane. 13/1749 -£676K. 14/501209 - £189k 14/500412 - £29.4k split between A26/Fountain Lane & Coldharbour
	A20/M20 Junction 5	Junction capacity and signals		14/501209 £12k (Towards J5 improvements on the M20)
	A20/M20 Junction 5	Capacity improvements	Interim improvement to M20 J5 roundabout including white lining scheme	13/1702 - £21.5k 13/1749 - £43K
	A20/B2246 Hermitage Lane junction	Junction capacity improvements		
	A26/Fountain Lane /Hermitage Lane junctions	Capacity improvements.	Changes to accommodate right turn vehicles within the junction introduction of MOVA and pedestrian sensing.	13/1702 - £338K split between A20/Coldharbour & A26/Fountain Lane.

Area	Junction	Aim	Intervention	IDP Reference
				13/1702 - £96.2k 13/1749 - £200k 14/500412 - £29.4k split between A26/Fountain Lane & Coldharbour
Invicta Park Broad Location	Improvements to Royal Engineers Road/Springfield/Invicta Park roundabout	Capacity improvements	Partial signalisation	
Rural Areas	A229 Linton Crossroads	Capacity improvements.	Works on junction approaches.	14/0566 - £108k
	A20 Harrietsham	Works to improve safety and pedestrian/cycle access		14/0828 - £399k
	A274 North Street/Kings Road Headcorn	Capacity improvements.	Signalisation	
	Oak Lane and junction of Oak Lane and Wheeler Street Headcorn	Safety improvements.	Junction improvements and new footway	S278 under 13/1943

Area	Junction	Aim	Intervention	IDP Reference
	Highway schemes associated with Lenham area	Capacity/safety improvements.	Improvements to junctions at A20/Ham Lane, A20/Old Ashford Road and Maidstone Road/HighStreet/Faversham Road/Old Ashford Road	
	A229 Station Road/High St/Headcorn Rd and Marden Rd Staplehurst	Junction capacity improvements		
	Hampstead Lane/Maidstone Rd Junction	Capacity improvements.	Provision of right turn lane on Hampstead Lane	

Action H2: Maintain and develop Maidstone's Intelligent Transport Systems and the proactive sharing of real time traffic and transport information with road users to manage congestion

8.11 KCC is committed to building on the success of the Maidstone Urban Traffic Management and Control (UTMC) system to continue enabling the County and Borough Councils to maximise the capacity of the existing road network and to respond proactively to incidents. In doing so, both Councils will seek to make use of new and emerging technology to share real-time traffic and travel information with road users and facilitate informed journey choices. KCC will also continue to work closely with Highways England to ensure that the management of the strategic and local road networks is fully integrated.

Action H3: Facilitate and promote the expansion of the County Hall Car Club service to encourage an increase in demand on an annual basis

8.12 MBC currently includes two pool cars and two pool bikes – which can be reserved for use by any member of staff. Usage of these vehicles is low relative to similar schemes elsewhere in the UK. However, utilisation of Zipcar amongst KCC staff is encouraging, and recent acquisition of electric vehicles has proven popular. KCC are looking to procure additional contract services to enhance this scheme in due course.

Action H4: Actively promote and encourage car sharing initiatives

8.13 Maidstone has one of the highest rates of single occupancy car use in the county with 52% of vehicle trips having only single occupants. In order to lower this rate and to incentivise higher car occupancy KCC manages 'kentjourneyshare'; a free web-based service which links drivers, passengers, walkers, cyclists and taxi users who make similar journeys and encourages them to share their trip.

8.14 Additionally, KCC manages the 'New Ways 2 Work' scheme (of which MBC is a founding member) which is a collaborative partnership of Kent businesses, local authorities, transport providers and other organisations for encouraging sustainable travel choices. This scheme essentially promotes sensible and efficient use of vehicles and road space to enable traffic to keep moving. This will be maintained indefinitely and can be accessed at http://newways2work.org.uk

Action H5: Ensure road safety education continues to be provided for across the borough

8.15 Improving road user behaviour continues to be the main priority within KCC's approach to further reducing road casualties. The priority concerns and challenges that have been identified through the analysis of crash and casualty data and wider research findings are: speed, road user impairment, and anti-social values. KCC published a Road Casualty Reduction Strategy in 2014 for the period 2014-2020.[26]

8.16 For the period 2014-2020, KCC has therefore committed to preparing a three-year rolling programme of activities that uses the individual and combined effects of education, training and publicity in an intelligence-led manner. Crash data and research findings will be used to guide priorities, to identify key target groups and to determine the most effective ways of communicating with them.

8.17 Kent County Council will lead collective partnership working through the Kent and Medway Casualty Reduction Group (CaRe Group) to improve road user behaviour through public education activities including publicity campaigns, public engagement projects and public relations strategies.

Action H6: Installation of additional electric charging points and the promotion of electric car use

8.18 There are 2 units currently installed outside Sessions House (one is serving the car club, one is available for public use), 2 units in Invicta House car park available to the public at weekends, one unit at Maidstone Leisure Centre and two units have been installed in the MBC car park. In addition, there is also one charging point installed at the KCC Aylesford Highway Depot, although this is mainly for use by KCC employees.

8.19 There are also several additional points on or close to the motorway network (including a model specific fast-charge facility at Eclipse Park close to M20 Junction 7) and at some local hotels, but KCC/MBC have not been involved in these installations. MBC will work closely with KCC to expand the number of electric charging points across the borough through the life of this Strategy.

Future Strategic Interventions

8.20 As part of the review of the ITS and the Maidstone Borough Local Plan that will commence by 2022 the Council will in conjunction with KCC examine the evidence and justification for future strategic interventions on the highway network.

Parking

8.21 The Actions:

Action P1: Introduce Parking Standards to ensure a means by which development can ensure an appropriate amount of parking is provided and reduce the overall demand for car parking

26 Road Casualty Reduction Strategy for Kent

8.22 The new Parking Standards will ensure that the needs of car users are adequately met but also that the agreed level of provision does not undermine more sustainable modes of travel where these are readily available. However, where there is no alternative to use of the private car, the Standards will enable a fair and appropriate amount of parking to be provided. The Standards will also provide for developments' cycle and powered two wheeler (PTW) parking requirements, as well as ensuring that they incorporate electric vehicle charging infrastructure where appropriate.

Action P2: Optimise long stay parking charges to extract maximum value from parking charges, whilst controlling demand through a 50% increase in long-stay charges by 2031

8.23 This action will look to review the pricing structure for car-parks in Maidstone town centre through the introduction of dynamic car-park charging and the use of improved information to assist drivers with the overall aim of raising long-stay car parking charges by 50% by 2031.

8.24 A key problem with the current situation is that the town centre has a number of relatively small car parks in the inner town centre core and relatively little information (other than the King Street car-park which is just identified as open or closed) as to whether they are at capacity. This is in contrast to the Fremlin Walk car-park, the two Mall car-parks and Lockmeadow car-park which are included on electronic boards on key radial routes into the town centre and their remaining capacity displayed.

8.25 This leads to traffic circulating the town centre in the search for parking spaces adding to overall congestion and general issues with air quality.

8.26 The town centre parking and pricing strategy moving forward will therefore, seek to encourage long-stay parking into the larger car-parks on the edge of the town centre (e.g. Sittingbourne Road/Vinters Road and Mote Road) and to improve the provision and reliability of roadside driver information (including routing) showing available capacity in all publicly accessible off-street town centre car-parks. This will require additional technology in each of the car-parks to more closely monitor patronage to enable roadside information to be updated.

8.27 A review of existing parking provision in the town centre will take place to establish what measures might be introduced to encourage long-stay parking into the larger edge-of-centre car parks and to establish whether there is any scope for rationalisation of existing provision. This is linked to action P3 below.

8.28 As part of this overall strategy the impact of the closure of the Sittingbourne Road Park & Ride site that occurred in early 2016 will need to be monitored closely.

8.29 The pricing strategy should be flexible enough to promote and support a corresponding increase in bus service frequencies to respond and to assist in encouraging modal shift towards public transport, cycling and walking to further reduce reliance on the use of the private car by 2031.

Action P3: Optimise the level of parking space provision in the town centre.

8.30 There is currently a very high level of parking provision within Maidstone town centre. It is proposed that there should be no net increase in the quantum of parking available in the town over the period of this strategy as a means of discouraging car use from current and new developments. The town centre parking supply will be kept under review to make the best use of available land and associated income streams.

Action P4: Improve parking enforcement on highways to reduce the impact of obstruction on bus reliability

8.31 Recent discussions with Arriva the largest bus operator in the borough have highlighted the significant impact of highway obstruction on bus operations and reliability. This applies to the other operating companies as well. Enhanced enforcement of existing parking restrictions on bus routes by MBC will assist all bus operators to maintain timetable schedules.

8.32 The situation will be kept under review and if enhanced enforcement of the existing parking restrictions proves to be insufficient to maintain reliable bus operations, the feasibility of other interventions, for example 'Red Routes' which are already used in large cities elsewhere in the UK, will be investigated.

Ultra-Low/Zero Emissions Vehicles

8.33 The Actions

Action UL/Zero Emissions1: Encourage the provision of suitable infrastructure for ultra-low and zero emissions vehicles throughout the borough.

8.34 In relation to the encouragement of the use of vehicles with zero or ultra-low emissions a two pronged process will be required. Firstly adopted Parking Standards for new development will require appropriate charging points to be made available or for pre-wiring to be put in place to enable easier and less costly retro-fitting. Secondly, incentives such as discounted or free parking can be introduced to encourage the use of ultra-low or zero emissions vehicles for journeys into the town centre.

8.35 On 17 December 2015, the Government announced an extension to the existing plug-in car-grant beyond the existing notified February 2016 date, to at least the end of March 2018. The maximum subsidy has been lowered from £5000 to £4500 and two grant rates will be introduced from 1 March 2016 to focus financial support on the 'greenest' vehicles:

- Category 1 vehicles with a zero emission range of over 70 miles will benefit from the maximum £4500 grant.
- Category 2 and 3 vehicles with a shorter zero emission range (petrol/diesel hybrid vehicles) will benefit from a grant of £2500.
- A price-cap of £60,000 has also been introduced for category 2 and 3 vehicles; vehicles priced above this level will not receive a grant whereas Category 1 vehicles above this level will remain eligible for the full £4500 grant.

8.36 Importantly, the Government has also announced it will continue to provide a £500 grant to Ultra Low Emission Vehicle (ULEV) users towards having a charging point installed at their home (estimated to be approximately 50% of the cost).

8.37 During the life of the ITS and Local Plan the technology surrounding vehicles will change, for example, the current limited use of Hydrogen fuel-cell powered vehicles is likely to increase as more models come to the market.

8.38 Technology already exists to enable the manufacture of hydrogen through electrolysis (and power can be provided by renewable sources) to service fuel-cell cars for a reduced cost compared to a conventional hydrogen filling station to which fuel is delivered. An example of this approach constructed by Honda in Swindon opened in 2014 and is also used to fuel some of Swindon Council's vehicles.

8.39 The Council should seek to accommodate, in an appropriate location, the provision of a publicly accessible hydrogen filling station within the borough.

Public Transport

8.40 <u>The Actions:</u>

Action PT1: Provide bus priority measures on strategic routes linking the town centre to residential developments and key local amenities

8.41 Bus priority measures are vital to delivering a network that encourages public transport use, through ensuring journey times can compete with private car use. Allowing buses to bypass key areas of congestion through the use of junction priority measures, provides passengers with a clear advantage, while also contributing to improved air quality through less congested bus journey times. Key areas identified for bus priority measures include:

- Sutton Road, Northbound, between Willington Street and Wheatsheaf Junction: This would make a significant contribution to improving the speed and reliability of buses operating on this busy corridor and would directly serve the South East Maidstone strategic housing allocation proposed in the Local Plan. Proposals include:

i. The incorporation of bus priority measures into the capacity improvement schemes for the junction of Willington Street/Wallis Avenue and the A274 Sutton Road.
ii. Limited widening at the St Saviours Road junction by lengthening the left turn flare lane and a relocation of the bus stop and making it left turn only with an exception for buses going straight ahead.
iii. Relocation of the bus stops at the end of Mangravet Avenue as these are not well related to pedestrian crossing movements or the existing population at Grove/Road Mangravet Avenue.
iv. Bus pre-signal on the in-bound approach to the Wheatsheaf junction on Sutton Road.

- Bus only link between the proposed Langley Park Farm and Rumwood Green developments (Local Plan sites H1(5) and H1(10)) to maximise bus service penetration of new residential developments to the south of the A274.
- Romney Place bus lane: Romney Place is not designed as a major through route and its heavy use during peak periods causes significant congestion on Lower Stone Street delaying buses seeking to access The Mall Chequers Bus Station. It also causes hazards to pedestrians seeking to cross Romney Place at its junction with Lower Stone Street. The implementation of an eastbound bus lane, in place of the existing carriageway lane, will ease congestion and improve access times for buses routing along this road to the bus station, while also positively impacting on air quality.
- Installation of bus activated traffic signals at junctions to significantly improve bus journey times with little or no impact on general traffic. Key locations are:

1. Earl Street/Fairmeadow.
2. Fairmeadow/St Faith's Street.
3. A229 Royal Engineers Way/Chatham Road - reintroduction of bus activation at the southbound bus only right turn signals from the A229.

Action PT2: Facilitate an improvement of bus services to ensure a good frequency of service provided by high quality buses is provided on all radial routes to the town centre within the Maidstone Urban Area

8.42 Ensuring a frequent bus service encourages public transport use, improving passenger perceptions of the convenience and robustness of using buses, through essentially allowing more flexibility in their use of the service. The frequency needs to be regular enough to prevent the timetabling acting as a deterrent to passenger use. The improvements in passenger numbers driven through frequency improvements has been seen on existing bus routes in Maidstone which have seen patronage increase with frequency enhancements. The following routes and frequencies should be provided (at a minimum in the peak hours):

- A20 London Road – 7-8 minute frequency (Currently at this frequency).

- A274 Sutton Road – 6-7 minute frequency; Currently 8 minutes on part; to be expanded when housing schemes progress and to be combined with the bus priority measures outlined in PT1.
- A229 Royal Engineers Way (to and from the Medway Towns) - 10 minute frequency (currently Service 101 (Sapphire standard) is on a 12 minute frequency).
- A26 Tonbridge Road – 7-8 minute frequency (currently 10 minutes. Work with service providers to upgrade service to Sapphire standard (or equivalent) and explore the possibility of extending the 6X service (Maidstone-Pembury Hospital Route) into Maidstone Town Centre.
- A229 Loose Road – 10 minute frequency. Potential to increase frequency of 89 service from Coxheath from every 20 to every 15 mins. Potential to increase service 5 from Staplehurst to a half-hour frequency.
- A249 Sittingbourne Road (to and from Sittingbourne/Faversham) – 15 minute frequency coupled with the promotion and an increase in frequency of services 333 and 334 from Sittingbourne and Faversham. Work with the service providers to upgrade service to Sapphire standard (or equivalent).
- A20 Ashford Road – 20 minute frequency

Action PT3: Increase the proportion of school children using the bus to get to school

8.43 Travel to and from schools creates significant pressure on the highway network, which requires intervention to encourage alternative travel arrangements to car drop-off and pick-up. KCC currently provides the following bus passes, to encourage and promote bus travel among young people:

- Young Persons Travel Pass - provides travel on almost all public bus services in Kent for an annual fee of £270 (from September 2016) for young people living in the county who are in academic years 7 to 11. Families with more than two children can get a third or fourth pass free on application.
- 16+ Travel Card - provides subsidised bus travel for 16-19 year olds continuing with education or vocational training. The card costs up to £400 per annum.

8.44 These need to remain in place to continue to manage school travel patterns, reducing the congestion caused by travel to and from schools.

Action PT4: Continue to engage with and facilitate statutory Quality Bus Partnership (QBP) schemes in Maidstone

8.45 The QBP was set up to improve and facilitate communication and decision making regarding bus service provision in the Maidstone area. Attendance by representatives from KCC, HE, MBC and bus operators allows collaborative discussion of any bus related matters and MBC will continue to engage with this group. The promotion of the use of S106 agreements for bus service improvements, including subsidisation of services, improvements to signage and the provision of bus shelters will be a key input into this group as will ensuring that operators continue to upgrade fleets to less polluting and fuel efficient models. The scope to promote and further develop flexible ticketing products, including integrated bus/rail ticketing, will be also be investigated through the QBP.

8.46 Via the QBP bus operators will also be encouraged to engage with existing Transport User Groups from across the Borough to discuss issues.

Action PT5: Improve rail station access for pedestrians, cyclists and the mobility impaired

8.47 Rail stations need to be accessible by all modes of transport, including by the mobility impaired. Suitable walking and cycling routes between local housing and the stations are required. The stations themselves require sufficient car parking to meet demand without actively encouraging car access over more sustainable modes. Basic cycle parking should be provided as a minimum, with significant secure provision at key strategic rail stations. The following locations have been identified as priorities for station access improvements:

- Barming Station – Enhanced pedestrian and cycle access required to link the station with existing and proposed development in the local area and hospital. In particular the provision of the pedestrian crossing near the station is required to ensure a safe pedestrian route across the busy Hermitage Lane to the station and a direct pedestrian and cycle access from Hermitage Land and Allington to the London-bound platform.

- Staplehurst - A new pedestrian and cycle link between the railway station and the residential area to the south of the Lodge Road Industrial Estate, with improvements to the ease and quality of bus/rail interchange within the vicinity of the railway station.

- Harrietsham Station - New pedestrian and cycle link between Harrietsham Primary School and Harrietsham railway station.

- Marden Station - Provision of a new shelter, additional seats, CCTV, lighting and cycle parking.

- East Farleigh, Harrietsham, Hollingbourne, Headcorn, Lenham, Marden, Maidstone Barracks, Maidstone West and Yalding Stations do not have step-free access to each platform. The Council will work with Network Rail and the Train Operating Company to secure such access to enable all passengers to be able to 'turn-up and-go' without the need for prior appointment.

Action PT6: Improve the frequency and quality of bus services between Maidstone town centre, M20 Junction 7 and Sittingbourne/Faversham

8.48 The Council will seek through appropriate s106 obligations to secure the improved frequency and quality of bus services between Maidstone town centre and the M20 Junction 7 area and onwards to Sittingbourne/Faversham, and vice versa. This will require the provision of three additional buses/drivers to ensure a minimum 15 minute daytime service frequency between the M20 Junction 7 area and the town centre, thus increasing daytime frequencies to Faversham and Sittingbourne to every 30 minutes respectively. The increased frequency of evening and weekend bus services will also be sought.

8.49 Funding for the enhancement should be provided for five years. The Council will work with and encourage the bus operator to upgrade the service between Sittingbourne and Faversham to a 'Sapphire' standard of service or equivalent (which should include dedicated drivers, upgraded seating, the availability of free Wi-Fi and at-seat charging facilities). Improvement to the existing signalised junctions at New Cut Road/A20 Ashford Road and A20 Ashford Road/Square Hill by upgrading signals and/or their control systems will also be secured.

Action PT7: Provision of a North West Maidstone Bus Loop

8.50 The Council will seek through appropriate s106 obligations to secure funding for five years for the operation of a 'bus-loop' service in north west Maidstone connecting Maidstone Hospital and the new housing sites on or adjacent to Hermitage Lane and London Road to Maidstone town centre along London Road via a bus gate on Howard Drive Allington. This is likely to be achieved by the extension of existing hourly service 19 westwards beyond the town centre to Palace Wood and Maidstone Hospital and the re-routing of service 60 which currently runs along London Road to Hermitage Lane via Coldharbour Roundabout.

Action PT8: Promote the provision of high quality bus services from the Rural Service Centres including interchange facilities at rail stations

8.51 A key objective for the strategy is the promotion of alternatives to private vehicle commuting into Maidstone through the provision of high quality fast bus services from the Rural Service Centres and major villages.

8.52 Opportunities for bus facilities should be provided at village railway stations to increase interchange capability and the attractiveness of using public transport as part of the 'door-to-door' integrated approach envisaged by the DfT. It is acknowledged that some of the southern rail stations in the borough are used as railheads serving a wider area to which people travel to for onward commuting. The ITS will seek to ensure that travel to the rail stations is less reliant on private means of transport.

8.53 Opportunities will also be sought through appropriate s106 obligations for increases to the frequency and extent of bus services from the RSC's to enable improvements to such services to be initially established with the aim of ensuring longer-term viability after the support period finishes and as planned development is delivered. Such measures will also seek to ensure that there are viable and sustainable alternatives to reliance on private means of transport.

Action PT9: Lobby Government and Train Operating Companies (TOCs) for improved rail services to the Maidstone urban area

8.54 Southeastern operates train services in the Kent region including Maidstone. At the end of 2014 Southeastern had their existing rail franchise extended to June 2018. This extension included the provision of better services to Maidstone by the addition of direct Maidstone East to London Blackfriars services. Whilst a small improvement, previous connections to Cannon Street and London Bridge have still been lost, and the frequency of service to Blackfriars is poor.

8.55 High Speed 1, by which Southeastern serves many Kent towns into and out of St Pancras International via Ebbsfleet, in most cases does not benefit Maidstone. It is now possible to travel from Ashford to London in less than 40 minutes, whereas Maidstone East to Victoria still generally takes more than 1 hour, even though Ashford is many miles further from London than Maidstone. A limited three AM peak journeys to London from Maidstone West along the Medway Valley Line to HS1 via Strood with three return PM peak journeys from London has however, been operating successfully and has increased patronage of the Medway Valley Line significantly.

8.56 To correct this imbalance, in the run up to the re-franchising, MBC will review rail services and in conjunction with KCC, passenger groups and the Kent Community Rail Partnership, lobby the government for enhancements to Maidstone services in the new franchise timetable.

- MBC will seek the restoration of direct AM and PM Peak weekday Charing Cross, Cannon Street and London Bridge services
- MBC will seek the expansion of the current limited Medway Valley Line HS1 service to an all day service.
- The extensive upgrade work, as part of the Thameslink programme, also provides an opportunity to lobby for the new franchise to require the continuation of planned improved connections to the capital via Blackfriars from the Thameslink Services that will commence serving Maidstone East with a two train per hour AM and PM peak service and a more limited off-peak service from 2018.
- MBC will also lobby for a reduced service time from Maidstone East to Victoria as part of the new franchise agreement.

8.57 Headcorn, Staplehurst and Marden are served by half hourly services to Charing Cross and due to the speed of these services, some commuters from the Maidstone urban area use these stations in preference to those located in

the town. The Council will lobby the DfT and Train Operating Company to ensure that there is no reduction in the speed or frequency of services from these stations as an integral requirement of the new franchise when awarded.

8.58 Transport for London (TfL) has proposed to take control of rail services which operate mostly or wholly within Greater London as re-franchising takes place. The Council has made its views known to the DfT and TfL through a consultation exercise in early 2016 and will continue to lobby to ensure that the developing proposals are not to the detriment of rail services within Maidstone Borough.

8.59 The possibility of the re-introduction of a direct Maidstone to Gatwick Airport service which ceased some years ago should also be assessed.

Action PT10: Investigate the potential for further rail halts at Tovil, Teston and Allington

8.60 In line with the increase in rail traffic, the potential for the provision of extra rail halts should be investigated. Discussions with rail operators and user groups should identify how such provision may be made, and how it can be funded.

Action PT11: Improve bus facilities at Maidstone East and Maidstone West rail stations to maximise interchange capabilities

8.61 Improvements are necessary to improve the bus interchange capabilities at both Maidstone East and Maidstone West stations to provide for new or enhanced bus services from outside the Maidstone urban area to terminate. Bus facilities should be incorporated into redevelopment plans for these major town centre locations.

Action PT12: Improve interchange facilities at Staplehurst rail station

8.62 The Council is currently working with Southeastern, KCC and bus service providers to secure significant improvements to the existing interchange facilities at Staplehurst rail station to increase the number of buses directly serving the facility, as well as improved pedestrian/cycle linkages on Station Approach. Early designs and cost estimates have been produced which will be further refined and developed as funding is secured from appropriate s106 obligations.

Action PT13: Work towards an improved bus station in Maidstone town centre

8.63 The Council is currently working with Capital and Regional, the landowners of The Mall Chequers Shopping Centre, KCC and bus service providers to secure significant improvements to the existing bus station to improve the passenger experience and operational efficiency. Early designs and cost estimates have been produced which will be further refined and developed as funding is secured.

8.64 In the longer term, The Mall Chequers Shopping Centre and adjoining land, where the current bus interchange facility is located, is earmarked for potential redevelopment towards the latter end of the Local Plan period. As part of the regeneration of the site and area, the Council will work with the Centre's owners (and other land owners that may be affected) together with the public transport operators to secure the provision of a new bus interchange facility that is more accessible, user-friendly and fit-for purpose in the light of the desire for improved bus service provision and patronage across the borough.

Action PT14: Better information and marketing of public transport options and improved signage

8.65 Work with KCC, neighbouring authorities, bus/rail operators and user groups (including the Kent Community Rail Partnership) to implement an integrated, cohesive approach to the provision of public transport information and marketing, including:

- Real time bus information
- Journey planning apps
- Maintaining informative, up to date websites
- Improved signage between train stations in Maidstone
- Improving the availability and ease of use of on-line/mobile app ticket purchasing
- Promote and further develop the availability of flexible ticketing products in general, including integrated bus/rail ticketing.

Walking

The Actions:

- More detailed treatment of the walking actions are presented in the separate Walking and Cycling Strategy.

Action W1: Provision of accessible pedestrian routes for all users

8.66 The pedestrian network should provide equal access for all users. Achieving this outcome will require the removal of physical obstacles and the introduction of more accessible elements to the pedestrian environment including dropped kerbs, tactile paving and wide footways. Step free access should be provided for all key routes, making use of ramps and lifts as appropriate.

Action W2: Improve pedestrian access across the River Medway in Maidstone town centre

8.67 The provision of better pedestrian routes across the Medway would encourage walking between the different areas of the town centre and local housing developments. Enhancing the ability for pedestrians to easily traverse the river improves the connectivity of the town centre, not only encouraging walking but contributing to economic benefits through better accessibility between businesses and retail outlets on either side of the river. The Council is working with KCC on the Bridges Gyratory scheme to ensure that pedestrian (and cycle) access across the river is not compromised.

8.68 The pedestrian bridge connecting Maidstone East and Maidstone Barracks Station has recently undergone refurbishment to improve the pedestrian environment. Further areas for improvement include:

- Continuing to develop the River Medway towpath to improve both the pedestrian and cyclist experience; and
- Investigation of the benefits of building a pedestrian bridge to improve connectivity over the River Medway between Earl Street and St Peter's Street.

Action W3: Implement public realm improvement schemes within the town centre, such that pedestrian access is the primary mode within the central core of Maidstone

8.69 One of the most important ways of making streets more attractive is to reduce the dominance of vehicles. This can be achieved by restricting traffic, slowing it down and making drivers more aware of other road users by changing the carriageway/pavement distinction to a 'shared space', where no user has priority. Ideally, people should be able to walk wherever they want to, by the most direct route, with as little conflict with traffic as possible.

8.70 Accessible and attractive town centre streets not only enhance the pedestrian experience, but through encouraging pedestrian movement, public realm improvements can make a vital contribution to the regeneration of the commercial centre. MBC has recently successfully completed its High Street Public Realm Scheme, which has revitalised the High Street and now supports future growth in nearby businesses. Building on this success, MBC also has aspirations to upgrade the upper half of Week Street (further towards Maidstone East Station) and Gabriel's Hill.

Action W4: Identify priority areas for implementation of safety improvements to reduce traffic collisions involving pedestrians and cyclists

8.71 Personal injury collision data will be reviewed to identify significant clusters of collisions involving pedestrians and cyclists and to analyse the main causes of these collisions. This review will be used to develop a priority list of locations (e.g. road junctions, pedestrian crossing locations) where safety improvements are required. These could include the upgrading of pedestrian facilities and speed control measures such as the introduction of 20mph limits.

Action W5: Actively encourage and promote walk to school initiatives

8.72 MBC is a sponsor of the KM Charity Group 'Walk to School' which seeks to encourage more parents and children to walk to school. Across the County since its inception, the Charity has resulted in:

- 40,000 children and families being involved;
- 600,000 green journeys annually; and
- 250,000 school run car journeys removed.

8.73 As school induced traffic has a significant impact on the road network during peak times, schemes such as these contribute greatly to managing traffic congestion.

8.74 Since January 2013 some 62,128 cars have been removed from the road in Maidstone Borough as a result of this initiative.[27], but there is clearly more that can be done as no Maidstone schools appear in the top five.

8.75 MBC will appoint a school travel plan champion to work with schools on investigating the potential scope and functions of School Travel Plans which would seek amongst other issues to further reduce the number of car trips undertaking the "school run". The potential benefits of staggered school opening/closing times will also be investigated through the School Travel Plan process.

Action W6: Improve street signage with better pedestrian wayfinding and a reduction in footway clutter

8.76 Numerous columns for street signs and street furniture can prevent the free flow of pedestrian movement and create hazards and unnecessary barriers. There is scope to rationalise street signage and street furniture to reduce the number of columns and general street clutter to provide more footway space.

27 KM Charity Team: Walk to school: Green Travel Data

8.77 Efficient wayfinding can encourage walking and cycling through providing people with the information they need to navigate the town successfully, and understand the journey times between locations. Having clearly branded, consistent, wayfinding throughout the town not only provides information and reassurance to those less familiar with the area, but also adds to the overall experience of the public realm.

Cycling

The Actions:

8.78 More detailed treatment of the cycling actions are presented in the separate Walking and Cycling Strategy.

Action C1: Maintain and further develop a strategic cycle network, connecting the town centre to key facilities and residential areas

8.79 Maidstone should have a comprehensive, safe, cycle network in order to facilitate and encourage cycle journeys. At present the borough has a number of cycle routes focused on the urban area, however these are often disjointed with limited off road options. Delivering a strong strategic cycle network requires:

- Maintenance and enhancement of existing cycle infrastructure. Reviewing cycle routes and links already in place ensuring:
    - Existing gaps in the network are addressed, providing safe and continuous linkages to known destinations e.g. The Oakwood Park Education Campus.
    - Routes are unimpeded by street furniture, pavement parking and other obstructions
    - Routes are maintained clearing cycle ways of hazardous defects and overgrown vegetation
    - Appropriate signage is in place to clearly identify cycle routes
- Development of new strategic cycle routes to and from the town centre from key residential and employment sites encouraging cycling as a commuting option. Key strategic links required to further enhance Maidstone's cycle network include:
    i. The South East Cycle Link, developing a route into Maidstone from Langley along the Loose Valley to connect with the Loose Greenway Scheme that is being progressed.
    ii. The River Medway Towpath Scheme from Barming Bridge to Allington (together with links at key points along this route from either side of the River Medway)

iii. B2246 Hermitage Lane Cycle Lane.

iv. A route linking Kings Hill to Maidstone Town Centre along North Pole Road, North Street, South Street Barming, through to Rectory Lane and Fant Farm to Upper Fant Road Maidstone.

v. Reviewing Traffic Regulation Orders to examine whether cycles can be better accommodated on parts of the existing highway network; e.g. across Barming and Tovil footbridges and along Week Street (out of shopping hours).

- Enhancement of leisure cycle facilities and routes, to further encourage cycling as a leisure pursuit. Providing appropriate cycle facilities at key recreation areas, including a Pump Track in a cycle accessible location or other recreational cycle facility including Mote Park, with a specific focus on improving the riverside paths and routes along the Medway. Longer term possibilities include:

  i. extension of the Medway Towpath Scheme from Barming Bridge to Yalding;

  ii. a signposted route from Lenham to Headcorn, Staplehurst, Marden, Laddingford and Yalding across the southern part of the borough;

  iii. a signposted route across the North Downs from the Stockbury valley/Hucking to Wichling/Otterden with connections to Swale and Lenham.

Action C2: Maintain and further develop cycle routes in rural settlements connecting local amenities and transport hubs (rail stations and bus stops where new and improved cycle parking can be provided in conjunction with Action C6) to housing.

8.80 The borough has a number of Rural Service Centres, and cycling facilities within these are variable. Local communities should have the following facilities in place to encourage cycling for short localised trips;

- Cycle routes to schools
- Cycle routes to railway stations
- Cycle parking provision at schools, railway stations and bus stops (where frequent interurban services are available/planned)
- Cycle parking provision at key local amenities (e.g. health care, retail and recreation sites)

8.81 The following specific local cycle improvements have been identified to be addressed:

- Harrietsham: implementation of a cycle route between the primary school and rail station;
- Staplehurst: implementation of a cycle route connecting the rail station to the residential area to the south of the Lodge Road Industrial Estate;
- Staplehurst: provision of cycle parking at the village shops;
- Headcorn: shelter for cycle parking provided at the railway station;
- Hollingbourne: provision of cycle parking at the station;
- Marden: additional cycle parking provision at the railway station;
- Bearsted: additional cycle parking provision at the railway station;
- Maidstone Hospital: additional cycle parking;
- Maidstone West: additional cycle parking provision at the railway station.
- Cycle parking should be provided in urban shopping parades e.g. Beverley Road, Queens Road crossroads, Barming and Loose Road shopping parade.

Action C3: MBC and KCC to work with partners to ensure the regular maintenance of all cycle tracks within the borough.

Action C4:

a. All Year 6 children will have access to Level 1 and 2 Bikeability training, and children in Years 7-9 will have access to Level 3 training.
b. Adult cycle training will continue to be offered, through initiatives including workplace travel planning.

Action C5: Support the Maidstone Cycle Campaign Forum as a group to promote the cycling cause in the borough; in order to ensure the Walking and Cycling Strategy and the Integrated Transport Strategy provide a coherent strategy for the promotion of Active Travel in the borough.

8.82 In January 2015 the Maidstone Cycle Campaign Forum was re-launched providing an arena to discuss local cycling issues. Continued support and involvement in the forum provides valuable insight into local cyclist's perspectives and issues, which can feed into making informed decisions regarding the development of Maidstone's cycle infrastructure.

8.83 The forum also actively promotes cycling through building a strong cycling community hosting regular events that encourage cycling across the borough, and raising awareness of the existing and emerging cycle facilities.

Action C6: Improved cycle security and parking at all key transport hubs and public amenities (including schools, healthcare facilities and retail locations)

8.84 Sufficient secure cycle parking is essential if people are to be motivated to cycle. The type of parking provided should be considered in relation to the user profiles; in short stay locations simple Sheffield stands can provide a convenient means for cyclist to park up, however in locations where it is likely cycles will be left for long time periods more sheltered parking or lockers can be more appropriate.

Action C7: Encourage employers to incorporate cycling into Workplace Travel Plans

8.85 Currently 0.8% of Maidstone residents cycle to work according to the Office for National Statistics. Travel plans provide an opportunity to improve levels of cycling by improving cycling facilities at employment locations. KCC currently offers advice and support to business, schools and other organisations on travel planning, advocating not just the wider transportation, but also the business benefits of implementing travel plans. Such plans are encouraged as they can include commitment to improving cycling facilities including secure parking, bike lockers and shower facilities; all of which help make cycling a realistic commuting option for employees.

Action C8: Promote cycling in schools through School Travel Plans.

8.86 Getting children involved in cycling and providing education on safe cycling is important in developing a longer term cycling culture within the borough.

8.87 The council will look to encourage and promote cycle education in schools including, Bikeability, and national standard cycle training provided at a local level by KCC and school games organisations at primary and secondary schools across Kent. Aimed at children in year 4 and above, the courses give children the skills to make safer choices when cycling and to enjoy the freedom of riding a bike. Bikeability courses are also available for adults. Nationally, over 1.7million people have benefited from the training.

8.88 The potential benefits of staggered school opening/closing times will be investigated through the School Travel Plan process, which by managing the volume of 'school run' vehicular traffic may contribute towards improved cycle safety.

Action C9: Ensure all cycle routes are fully advertised and signposted within the borough.

Action C10: Revise and update the "Explore Maidstone Walking and Cycling Map" to extend coverage to the wider borough and indicate destinations in neighbouring local authorities. Map to be available both electronically and in paper format.

Action C11: Standardise and clarify the requirements of planning applications with respect to the provision of walking and cycling facilities, to promote the use of these active travel modes.

Action C12: MBC, KCC and the Maidstone Cycle Campaign Forum to identify opportunities to establish local cycling events.

Action C13: MBC and KCC to identify locations throughout the cycle network where new automatic cycle counters should be installed to enable a detailed analysis of usage. Installation to proceed as resources allow, but each new cycle infrastructure proposal will be assessed to see if an additional counter should be added to augment the data gathering process.

9.1 The purpose of any strategy is to have a means of achieving desired results. However, given the complexities and scale of the issues this strategy deals with it is often difficult to identify if the desired results are being achieved.

9.2 The table below identifies targets to monitor the progress of the ITS in achieving its objective. In setting these targets, every effort has been made to ensure they are both realistic but also ambitious, ensuring the best possible level of service is provided to those living within the borough with the indicative funding levels.

Target	Description
1	To increase walking mode share in Maidstone from 8% of all work trips to more than 10% of all work trips by 2021 and 12% by 2031.
2	To increase cycling mode share in Maidstone from 0.8% to more than 2% of all work trips by 2021 and 3% by 2031.
3	To increase public transport mode share in Maidstone from 7.3% to more than 10% of all work trips by 2021 and 12% by 2031.
4	To decrease car driver mode share in Maidstone from 44.3% of all work trips to below 40% by 2021 and below 37% by 2031.
5	To undertake a full and independent review of Maidstone's Park and Ride provision, issue and act upon recommendations by 2017.
6	To double the number of electric charging points in Maidstone by 2021 and to double again by 2031.

9.3 Data to monitor the above will be sourced from traffic management updates; school and workplace travel plans; future census data; and bus patronage data from bus operators. Future footfall and traffic surveys conducted by KCC will also provide important interim data to monitor how progress is being made towards the general aims and objectives of the ITS.

9.4 The Borough and County Councils will also need to assess whether there are any implications for the borough's transport network arising from projects with wider impacts such as the new Integrated Kent Franchise (IKF) in 2018 or the potential Lower Thames Crossing project.

9.5 The latter is still at a relatively early stage. Highways England is, however, currently evaluating two potential route corridors (the area adjacent to the existing Dartford crossings and to the east of Gravesend). Formal public consultation on the potential route options took place in early 2016. If accepted as a scheme, subject to funding and the necessary consents (as a significant piece of National Infrastructure), works may commence in 2020/2021 with a potential opening in 2025. However, the route options did not incorporate earlier proposals to upgrade the A229 link between the M20 and M2. These were discounted on cost and environmental grounds. As such, the potential impact of the Lower Thames Crossing project on the borough is considered to be relatively minor.

9.6 At this stage, potential strategic projects and interventions have not been justified taking account of the implementation of sustainable transport policies but may be considered as the ITS is reviewed in conjunction with the Maidstone Borough Local Plan.

9.7 The ITS is designed to be a living strategy, one that is flexible and can adapt to changing circumstances. To this end, it will be subject to monitoring and review which will align with the work to monitor and review the Local Plan once that is adopted. The first major review is therefore scheduled to commence by 2022, although the monitoring work will clearly commence prior to then to inform the review process.

10.1 The implications of the ITS on the borough's highway network have been tested by using the Maidstone VISUM strategic highway network model to assess alternative transport infrastructure scenarios and their impacts in terms of travel time and distance.

10.2 The Maidstone VISUM model is a strategic highways model which is best suited to modelling highways improvements. It can, however, identify how trips can transfer between car and public transport; how vehicle trips may be reassigned across the network; and it can highlight locations where travel time delay may be experienced as a result of constrained highway capacity. It can model bus service changes, but in assessing the attractiveness of these services it is unable to take into account bus capacity issues; furthermore it is unable to model bus priority measures. Increases in walking and cycling can only be reflected in an estimation of the number of car trips which may be removed from the road network due to changes in mode share. Furthermore, as a strategic model VISUM is unsuited to assessing individual junction capacity, or to assessing the impacts of proposed infrastructure improvements at those junctions.

Modelling Scenarios

10.3 The VISUM model was first developed by JMP Consultants Ltd for MBC in 2007/8 to help assess the impact of the Kent International Gateway proposal and the previous Core Strategy preferred option for new development. It was updated in 2011 for a previous version of the ITS and a report prepared in April 2012 which assessed the current and future demand for travel in the Maidstone Core Strategy.

10.4 Just over 10,000 new houses were input into the model (significantly fewer than the current objectively assessed need) and four options were tested; Option 1 being the reference case, Options 2 and 3 including various road and public transport assumptions, and Option 4 modelling the provision of the South East Maidstone Strategic Link (SEMSL). The results are presented in the JMP Report dated 12 April 2012 (Maidstone Integrated Parking Strategy Research) and it was concluded that, although SEMSL had strong potential for handling traffic from the south and east of Maidstone, there was overcapacity on key routes and it was unlikely to reduce traffic congestion on the scale that was initially anticipated and offered lower value for money than Options 2 and 3.

10.5 The present version of the VISUM model was updated in 2014 to take account of revised proposals for the Local Plan and to update baseline conditions.

10.6 Certain ITS actions have been tested in various new Do Something (DS) scenarios which identify the changes in impact on the highway network which may be achieved if the actions are implemented during the plan-period. A final DS scenario has been run with the objectively assessed need for housing numbers and an agreed programme of highway and transport improvements. It has two variants, DS4a and DS4b, the former including a South East Maidstone Strategic Link (SEMSL). All other highway and transport improvements are identical in both variants.

10.7 Both scenarios incorporate the provision of the housing, commercial and retail activity proposed in the Local Plan for the plan period to 2031 as follows:

- 18,560 residential units
- 151,000 m² of employment space
- 12,100 m² of retail space

2031 Do Minimum (DM)

10.8 A base case scenario known as Do Minimum (DM) provides the benchmark for understanding the predicted overall impact of the ITS on travel demand and network conditions in Maidstone in the plan period (to 2031) from a base case established in 2014 without any significant highways interventions, except the proposed Bridge Gyratory scheme in Maidstone town centre, or any other transport interventions. This scenario has been re-run with the objectively assessed need for housing included, for a true reflection of the DM impacts.

2031 Do Something (DS4)

10.9 A series of Do Something (DS) scenarios (DS1-DS4) model a range of highway improvements agreed with KCC and certain sustainable transport initiatives in the ITS, although it was not possible to model all of these initiatives in VISUM. The agreed highway junction mitigations incorporated in the model runs, in addition to the Bridges Gyratory scheme are:

- A20/ Coldharbour Lane Junction
- A249/Bearsted Road roundabout
- Bearsted Road/New Cut junction
- Dual carriageway between A249 and New Cut junctions
- A20 Ashford Road/Willington Street
- A229/A274 Wheatsheaf Junction
- A274/Wallis Avenue Junction
- A26 Fountain Lane Junction

10.10 For DS4a and DS4b different modelling assumptions from DS2 and DS3 were included for the sustainable transport assumptions as follows:

- typical 10 minute bus frequency on radial corridors;
- discounting of walk/cycle trips to be based on a distance threshold of 5km within the town centre; and
- 50% increase in long-stay parking charges.

Strategic modelling results

10.11 Previous scenarios tested by VISUM were a highways based option (DS1), a sustainable transport option (DS2) and a hybrid scenario (DS3). These did not model the emerging Local Plan objectively assessed need for housing and so do not provide a true forecast of network conditions in 2031. Consideration of the model results is therefore focused on scenarios DS4a and DS4b.

10.12 The results for the DM scenario indicate an increase in network travel time during the AM peak of 33% in 2031 relative to the 2014 baseline, from 8,250 to 11,000 hours. For scenario DS4a (with SEMSL), the network travel time during the AM peak is increased to 9,300 hours in 2031. This represents an increase of 6% relative to the 2014 baseline, but a reduction of 15.5% relative to the 2031 DM scenario. For scenario DS4b (without SEMSL), the network travel time during the AM peak is increased to 9,800 hours in 2031, a reduction of 11% relative to the 2031 DM scenario. The journey time reduction achieved with scenario DS4a relative to DS4b is 4.5%.

10.13 The modest journey time saving for DS4a relative to DS4b is reflected in the published VISUM traffic flow outputs for the two scenarios [28]. These suggest that the reassignment of traffic from the urban area with SEMSL in place is limited. For example the forecast two-way AM peak traffic flow on the A229 Loose Road north of the Wheatsheaf junction in the year 2031 is 3,000 vehicles for DS4a, compared with 3,200 for DS4b. On Willington Street (North), the equivalent flows for the two scenarios are 2,300 for DS4a and 2,400 vehicles for DS4b.

10.14 Forecast travel times from VISUM for the year 2031 have been published for eight road corridors. On the A274 Sutton Road, the predicted AM peak inbound travel time is 12 minutes 26 seconds for DS4a compared with 13 minutes 38 seconds for DS4b. The predicted AM peak outbound travel time is 11 minutes 7 seconds for DS4a and 11 minutes 53 seconds for DS4b. The forecast travel time savings of approximately one minute with SEMSL in place cannot be regarded as significant when considered in the context of the variations in traffic conditions that can typically be expected to occur on a day-to-day basis.

10.15 The VISUM outputs for DS4a and DS4b do not, therefore, conclusively demonstrate the beneficial impacts of SEMSL upon congestion. All other transport interventions are identical for both scenarios. The outputs for scenario DS4b demonstrate a level of impact on the highway network with Local Plan growth which, following mitigation with a balanced package of highway, public transport and walking/cycling improvements, cannot be regarded as severe in the context of the National Planning Policy Framework.

Localised junction modelling

10.16 As noted above, VISUM is a strategic highway model and as such is unsuited to the assessment of individual junction capacity. Accordingly, more useful modelling relating to additional junction capacity assessments have been undertaken using the LinSig, ARCADY and PICADY modelling software packages for specific locations around the borough which have been identified as being potentially sensitive to future traffic flow changes.

28 Amey (March 2016), Maidstone VISUM Transport Model Forecasting Report

A274 Sutton Road

10.17 The A274 Sutton Road and A229 Loose Road already experience traffic congestion, particularly at peak times, largely due to the capacity of the signalised junctions. Linsig models have been built for the four signalised junctions on the A274/A229 corridor, namely:

- A229/Armstrong Road/Park Way;
- A229/A274/Cranbourne Avenue;
- A274/St Saviour's Road; and
- A274/Wallis Avenue/Willington Street.

10.18 With no changes to the existing highway infrastructure, background growth in traffic flows combined with additional traffic associated with new developments on the corridor will make congestion worse, both in duration and intensity (i.e. longer periods of queuing and much longer queues).

10.19 The package of priority highway capacity improvements referred to in paragraph 10.7 above has been developed to mitigate the impacts of increased traffic flows arising from planned development in the emerging Local Plan. To complement these capacity improvements for general traffic, bus priority proposals have been developed (described in Action PT1) which will protect buses from residual queues and delays, contributing to quick and reliable bus services toward Maidstone town centre, with largely continuous bus priority between Wallis Avenue and Armstrong Road.

10.20 The impacts of the highway capacity improvements, together with the bus priority proposals, have been tested using the Linsig models. The model outputs confirm that the bus priority proposals will not affect capacity for general traffic, nor increase queues or delays for other road users.

A229 Loose Road

10.21 Work is ongoing with KCC to identify and secure highway capacity improvements (Action H1) on the A229 Loose Road from its junction with Upper Stone Street/Sheals Crescent to its junction with Boughton Lane/Cripple Street.

10.22 At the A229 Loose Road/A274 Sutton Road "Wheatsheaf" junction, works identified by KCC involve making Cranborne Avenue entry only from the junction, which would enable an additional 340 vehicles per hour to pass through the junction and mitigate the impact of development currently proposed. Other identified capacity improvements involve the alteration of lane markings at Loose Road / Upper Stone Street / Sheal's Crescent junction; works at Loose Road / Armstrong Road / Park Way; and the relocation and/or removal of bus stops to allow traffic to pass in both directions when a bus is stationary.

10.23 In light of the now quashed Inspector's appeal decision (APP/U2235/A/14/2227839) in relation to application 13/2197 for 220 housing units on land at Boughton Lane (Local Plan site H1(29)), a study was

commissioned [29] to consider possible capacity improvement measures at the A229 Loose Road / Boughton Lane / Cripple Street signalised junction, which already experiences traffic congestion. No highway mitigation measures had previously been identified for this site in support of the Local Plan housing allocation.

10.24 Various options were therefore considered to improve highway capacity, comprising the widening/reconfiguration of the existing signal junction as well as its replacement by a mini-roundabout. The results of the junction modelling indicate that, with the implementation of mitigation measures, proposed and committed developments in the area can be delivered with improved operating conditions for car and bus users alike on the operation of the A229 Loose Road/Boughton Lane/Cripple Street junction.

A229 Royal Engineers Way

10.25 As the Local Plan identifies Invicta Park Barracks as a broad location for housing growth towards the end of the Plan period (post 2026), a study was commissioned [30] to consider the capacity at the roundabout junction of the A229 Royal Engineers Road which serves the existing Barracks. ARCADY modelling shows that the existing roundabout is forecast to operate above capacity in 2031, with or without housing development on the Barracks site.

10.26 LinSig modelling demonstrates that partial signalisation of the roundabout would successfully mitigate the impacts of Local Plan development and expected background growth, with queueing reduced to below existing levels.

Rural Service Centre junction modelling

10.27 Modelling undertaken within Lenham, Headcorn, Staplehurst and Coxheath indicates that key junctions within these RSCs and Larger Villages will continue to operate satisfactorily in future years, taking into account the additional traffic generated by Local Plan development sites, with mitigation measures implemented where necessary.

29 Mott MacDonald (2016), A229 / Boughton Lane - Junction Review.
30 Mott MacDonald (2016), Invicta, Maidstone - Junction Review.