
Sevenoaks District Transport Study

Evidence base report

Final Report



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Prepared for Sevenoaks District Council

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0 Executive Summary

Commission of JMP Consulting

Sevenoaks District Council (SDC) commissioned JMP Consulting Ltd (JMP) to undertake the Sevenoaks District Transport Study. This study is a precursor to the development of the Sevenoaks Transport Strategy (STS) that will cover the period up to 2026. This is our report to the Council describing the outcomes of the study that was begun in January 2007 and completed in July.

The study was required to perform three functions, to:

- Provide SDC with the evidence base for the Transport Strategy development as part of the Local development Framework (LDF);
- Compile a data base on which the Transport Strategy and planning policies can be based; and
- Identify key action points that the Council can take forward into the Transport Strategy.

Mobility and transport is an integral part of society and a key issue in a largely rural area like Sevenoaks District. Increasing car ownership and usage in line with national trends result in a high dependency on the private car to satisfy movement needs.

The resulting increase in traffic volumes and road congestion contribute to and create a poorer quality environment. The car is a convenient and versatile means of transport for many but at increasing social, environmental and economic cost.

The key issues can be summarised as follows:

- Congestion in the Sevenoaks District is not exceptional with the main concentration of congestion being around Sevenoaks Town and Swanley.
- It should be noted that overall accident levels are low in the district with only three junctions identified where four accidents have taken place in a 36 month period. These are not accident black spots according to KCC definitions.
- Heavy dependency on rail for commuting: In order to satisfy this growing need, further negotiations for improvements to services are needed.
- There are major gaps in the current bus network to the north east of the district, as well as poor access to and from the villages between Sevenoaks Town and Chiddingstone Causeway.
- There is high car ownership in an affluent district.
- Provision for cycling and pedestrians are generally low throughout the district with only four cycle routes in place.
- The rural areas in the district have a dispersed population with a reliance on the car. As a result it is difficult to maintain a frequent, reliable, viable bus service.
- Community transport is currently provided and its importance will increase as the currently ageing population will increase its reliance on those facilities and they no longer have access to a car.
- Development pressures will continue to exist for Sevenoaks District due to its accessible nature for commuting to Central London.
- Parking problems exists around commuter stations and in town centres.
- Air quality management areas are increasing from eight to 12 at the end of 2007 and will require traffic management to assist in abating the problem.

SDC, and its partners – notably KCC, have a wide range of instruments available that can be adopted to help achieve their objectives and assist in tackling local transport issues. Many are being taken forward in other plans and strategies. These include:

- Kent Local Transport Plan LTP2;
- Sevenoaks Sustainable Community Action Plan; and
- Sevenoaks District Local Plan.

In addition, the Sevenoaks District Transport Strategy will also benefit from the contributions made at the two meetings of the Transport Forum, on 30 January 2007 and 26 March, and the PESTLE analysis.

Potential options to meet the objectives and tackle local transport issues include:

- Network management: Introduction of bus priority measures, smart cards and variable message signs
- Smarter Choices:
 - Expand school, workplace and area travel planning
 - Promote car sharing and car clubs
 - Encourage different work patterns e.g. tele-working
- Provide access for the mobility impaired
- Establish a Transport Partnership
- Improve pedestrian routes, e.g. A25 Seal Road
- Build better provision for pedestrians into new developments
- Develop the Rights of Way network
- Improve the streetscape for non-motorised transport, in particular walking
- Provide cycle friendly infrastructure
- Improve local bus services, additional services include:
 - east-west bus services;
 - bus services to Gatwick airport, Sevenoaks rail station, Edenbridge; and also to rural areas
- Develop a new bus station for Swanley
- Maintain the concessionary fares scheme
- Continue to provide revenue support for non-commercial services
- Develop a Quality Bus Partnership or Punctuality Improvement Plan
- Maintain community transport services and introduce supplementary Dial-a-Ride
- Promote the introduction of new coach services
- Improve accessibility of taxi vehicles and provide taxis for home to school transport
- Create and promote a Sevenoaks integrated interchange
- Develop the Integrated Kent Franchise
- Improve integration between modes
- Possibly introduce road user charging
- Encourage mixed use, higher density developments
- Locate new developments to reduce travel demands
- Reduce parking availability
- Facilitate highways improvement program including junction improvements, access and relief roads and
- Reduce parking standards on-street and in new developments
- Introduce additional speed/ safety cameras
- Encourage safer driving through campaigns and physical measures
- Designate lorry routes and investigate the potential for lorry lanes and Freight Quality Partnerships

Objectives of the Transport Strategy include:

- Investigating viable alternatives to the car, such as encouraging more journeys by bus, train, cycling and walking, that will improve travel choice;
- Identify barriers to the take up of alternative forms of transport and recommend actions to address this issue;
- Reducing traffic congestion by improving traffic management to reduce congested areas, improving air quality and assessing the viability of other options such as car sharing and identifying possible solutions such as new roads;
- Identifying schemes which target casualty reduction and reducing inappropriate speeds to improve road safety in order to inform the responsible highway authorities on national and county level;
- Reducing travel demand by reducing and controlling the number of car journeys made into town centres and locating new development close to good transport links and local facilities to reduce car journeys. It will also identify key parking issues and identify possible solutions to alleviate problems such as commuter parking in the district;
- Improving travel awareness by encouraging travel plans and partnership working with internal and external stakeholders and transport providers. This will include looking at innovative approaches to public transport in rural areas;
- Improving access for all including rural accessibility and access to healthcare; and
- Improving the environment, air quality and the quality of life.

The integration of measures into a coherent strategy or package, in which the individual measures complement one another, and potentially help to redress any adverse impacts of measures chosen on their own, is vital. It is in these ways that synergy can be obtained.

1 Introduction

Commission of JMP Consulting

- 1.1 Sevenoaks District Council (SDC) commissioned JMP Consulting Ltd (JMP) to undertake the Sevenoaks District Transport Study. This study is a precursor to the development of the Sevenoaks Transport Strategy (STS) that will cover the period up to 2026. This is our report to the Council describing the outcomes of the study that was begun in January 2007 and completed in August.
- 1.2 The study was required to perform three functions, to:
- Provide SDC with the evidence base for the Transport Strategy development as part of the Local development Framework (LDF);
 - Compile a data base on which the Transport Strategy and planning policies can be based; and
 - Identify key action points that the Council can take forward into the Transport Strategy.

Format of this report

- 1.3 This report is comprised of ten chapters:
- **Chapter 2** describes the objectives of the study in detail and revisits the methodology applied in undertaking the study;
 - **Chapter 3** reports on the initial PESTLE analysis of the action points;
 - **Chapter 4** considers the key land-use and transport issues that are facing the area and that are likely to emerge over the period of the forthcoming transport strategy;
 - **Chapter 5** describes the policy background that will set the context within which the transport strategy must be developed;
 - **Chapter 6** reports on the data review undertaken and identifies the gaps in data that may be pertinent to the preparation of the transport strategy;
 - **Chapter 7** reviews relevant research and case studies;
 - **Chapter 8** points out the range of options in response to the issues highlighted in the report; and
 - **Chapter 9** provides some recommendations for the development of the transport strategy.

2 Study objectives

Sevenoaks District Transport Study objectives

- 2.1 SDC set out three objectives for this transport study (see **Appendix A**) which are to:
- Provide a comprehensive and robust evidence base for policies in the forthcoming Transport Strategy;
 - Provide a comprehensive and robust evidence base for planning policies in the revised draft of the new Sevenoaks Local Development Framework (LDF) and any supporting Supplementary Planning Documents (which the Council may wish to publish subsequently); and
 - Inform corporate strategies/initiatives including an approach for Section 106 agreements.
- 2.2 These objectives emphasise the strong interdependence between land-use planning decisions and transport activity. For the forthcoming Sevenoaks Transport Strategy (STS) and Local Development Framework (LDF), a comprehensive and robust evidence base will be essential to ensure that the actions proposed are founded on as good an understanding of transport behaviour as is possible. Since the STS is planned to cover the LDF period up to 2026, the evidence base is likely to be more robust for the earlier years and therefore may need to be reviewed over time.
- 2.3 This Transport Study will act as the evidence base for the emerging Strategy and will help to identify key issues to be taken forward into this Strategy.
- 2.4 The District Council is also in the process of replacing the District Wide Local Plan with a Local Development Framework (LDF). The transport study will therefore also act as the evidence base for future Development Plan Documents (DPDs) that will form the LDF.

3 Stakeholder consultation and PESTLE analysis

Stakeholders' views

- 3.1 At the first Transport Forum stakeholders made a range of suggestions for the study. The notes of that meeting are attached as **Appendix B**. It was suggested that 'Air Quality and Quality of Life' related issues be added as action points. It was agreed that the presented list was a draft list which would be extended through the input of the stakeholder meeting and the course of the data research for the transport strategy. Further, more specific points raised were the lack of a vision statement, the importance of parking restrictions and disability access and transport related issues. With regard to a vision statement, it is anticipated that this would be developed as part of the Sevenoaks Transport Strategy. In addition the need for motivation to reduce car use and changing transport pricing were mentioned.

PESTLE analysis

- 3.2 The strategy environment – the context within which the Sevenoaks Transport Strategy is formulated, assessed and realised – includes all external factors that may have an impact on the strategy development. A PESTLE analysis is designed to help establish these possible influences and impacts comprehensively and systematically upon the strategy during the development phase. This initial PESTLE analysis should also help identify potential risks faced by the forthcoming STS.
- 3.3 The PESTLE impact aims to identify any potential issues and possible needs for further evidence/ data across six main areas of interests:
- Political (e.g. to assess the political and public acceptability);
 - Economic/ financial (e.g. to assess the impact on the local economy and including the identification of possible funding streams and S106 agreements);
 - Social (e.g. to ascertain the impact on social exclusion);
 - Technological (e.g. to consider the impact of any expected technical developments);
 - Legal/ regulatory (e.g. to ensure that interventions are legal); and
 - Environmental/ ecological (e.g. to assess the likely environmental impact).
- 3.4 In addition, some PESTLE analyses consider three other issues: management, quality, safety. It is not proposed that this appraisal covers these issues but this may be required when the STS is near finalisation.
- 3.5 This appraisal framework takes into consideration the scale of the impact and distinguishes between evidence of short term impacts (up to 5 years i.e. the completion of the implementation of the Kent Local Transport Plan) and impacts that last into the long term (up to 2026 – the period covered by the Local Development Framework). The framework is based on a scoring scale of between -5 and +5 to reflect evidence of the scale of impacts and longevity of that impact. The level of scores reported are based on technical experience and professional judgement but are clearly open to interrogation and so should only be used as a guide. A blank cell means that the impact is expected to be neutral.
- 3.6 A wide range of possible interventions are also identified. These are meant to be illustrative and are not necessarily comprehensive. Nevertheless they are all actions that SDC itself, or in conjunction with its partners, could implement.

T 3.1 PESTLE analysis

Action points	Stakeholder ranking/ score	Study Team ranking/ score
Investigating alternatives to the car	6th (-7; +23)	3rd (+3; +12)
Identifying barriers to alternative modes	4th (-5; +24)	5th (-4; +14)
Reducing traffic congestion through traffic management	2nd (-6; +31)	2nd (-1; +17)
Improving safety	7th (0; +14)	3rd (-7; +22)
Reducing travel demand	4th (-0; +19)	5th (-7; +13)
Improving travel awareness	1st (+8; +22)	1st (+7; +23)
Improving access for all	8th (-0; +11)	7th (-4; +11)
Improving the environment	3rd (-2; +24)	7th (-5; +12)

PESTLE tables

- 3.7 The tables summarising the PESTLE analysis are included in **Appendix C**.
- 3.8 These tables demonstrate the range and complexity of possible interventions that could be adopted by SDC. Some could be implemented fairly speedily, such as promoting travel plans, or removing guard railing, while others would have a much longer timescale, especially new road building. As a result the timings of the impacts will vary as will their scale of impact.

Building on the PESTLE analysis

- 3.9 The PESTLE analysis will be used to provide a basis for developing the full STS in due course. Those actions which seem to generate the best responses in terms of promoting sustainable travel, reducing congestion and environmental degradation while maximising accessibility, will be considered within the STS. Measures which do not satisfy these criteria will be discarded.
- 3.10 It is suggested that a full PESTLE analysis be undertaken prior to the final strategy being agreed.

4 Key Issues for transport in the Sevenoaks District area

Introduction

- 4.1 Mobility and transport is an integral part of society and a key issue in a largely rural area like Sevenoaks District. Increasing car ownership and usage in line with national trends result in a high dependency on the private car to satisfy movement needs.
- 4.2 The resulting increase in traffic volumes and road congestion contribute to and create a poorer quality environment. The car is a convenient and versatile means of transport for many but at increasing social, environmental and economic cost.
- 4.3 While car dependency, the resulting highway infrastructure and the lack of alternative modes play an important part in the transport issues for Sevenoaks District, there are a number of other challenges within the transport context faced by the Sevenoaks District which are described in this chapter.

Affordable and reliable public transport

- 4.4 The local economy and society require an efficient and integrated transport system for people, goods and information to function effectively. While motorisation has contributed to modern society and its mobility, it has also enabled urban sprawl, increased dependence on private transport and widened the social gap between those with and without access to housing, employment, education, leisure health and social services.
- 4.5 It has become apparent that improved public transport is essential to allow for a significant reduction in congestion and traffic related pollution, and cannot be solved through vehicle technology and modern fuels alone. Urban congestion is also a problem for bus operators since it disrupts timetabled services.
- 4.6 Rural public transport is particularly difficult to establish without public subsidy due to increased distances involved and a lack of density. While the district is very attractive to the affluent population with access to the private car, the needs of users for non-car based travel, voluntary or non-voluntary, need to be considered for a district-wide strategy. Furthermore the increasing longevity of life could mean an increasing number of pensioners who are more dependent upon public transport. Community Transport may be appropriate for these, and others, in the area. The district is already served by several organisations providing such services: Age Concern (Sevenoaks Town and Swanley); the Sevenoaks, Edenbridge and Swanley Volunteer Centres; the Compaid Trust; the West Kent Disabled & Sensory Impaired Group; Independence and Access Matters; the Edenbridge Voluntary Transport Agency; and Voluntary Action – West Kent.
- 4.7 While commuter travel to London by train is high (16.3%, compared to 5.6% for the South East and 4.2% for England), other public transport modes in Sevenoaks District, especially bus, are weak with only 2% using the bus compared to 4.4% for the South East and 7.5% in England.

Rail network

- 4.8 The structure of the Kent rail network is rather complicated, due to the different stopping patterns and the existence of several London termini served from the town.
- 4.9 Rail services to and from Sevenoaks District are currently focussed on the links to London (compare **Tables 4.1** and **Figure 4.2 to 4.3**). The line from Sevenoaks Town (or from Hastings via Sevenoaks Town) receives the greatest service frequency with both local and fast services. The north of the district is serviced by three local services via

Swanley and one fast service terminating in London. Further important connections include those to and from Ashford and Tunbridge Wells.

- 4.10 The south of the district is serviced by three lines, two of which are operated by Southern and one by Southeastern. However all lines are low frequency local services.

T 4.1 Sevenoaks District: rail services

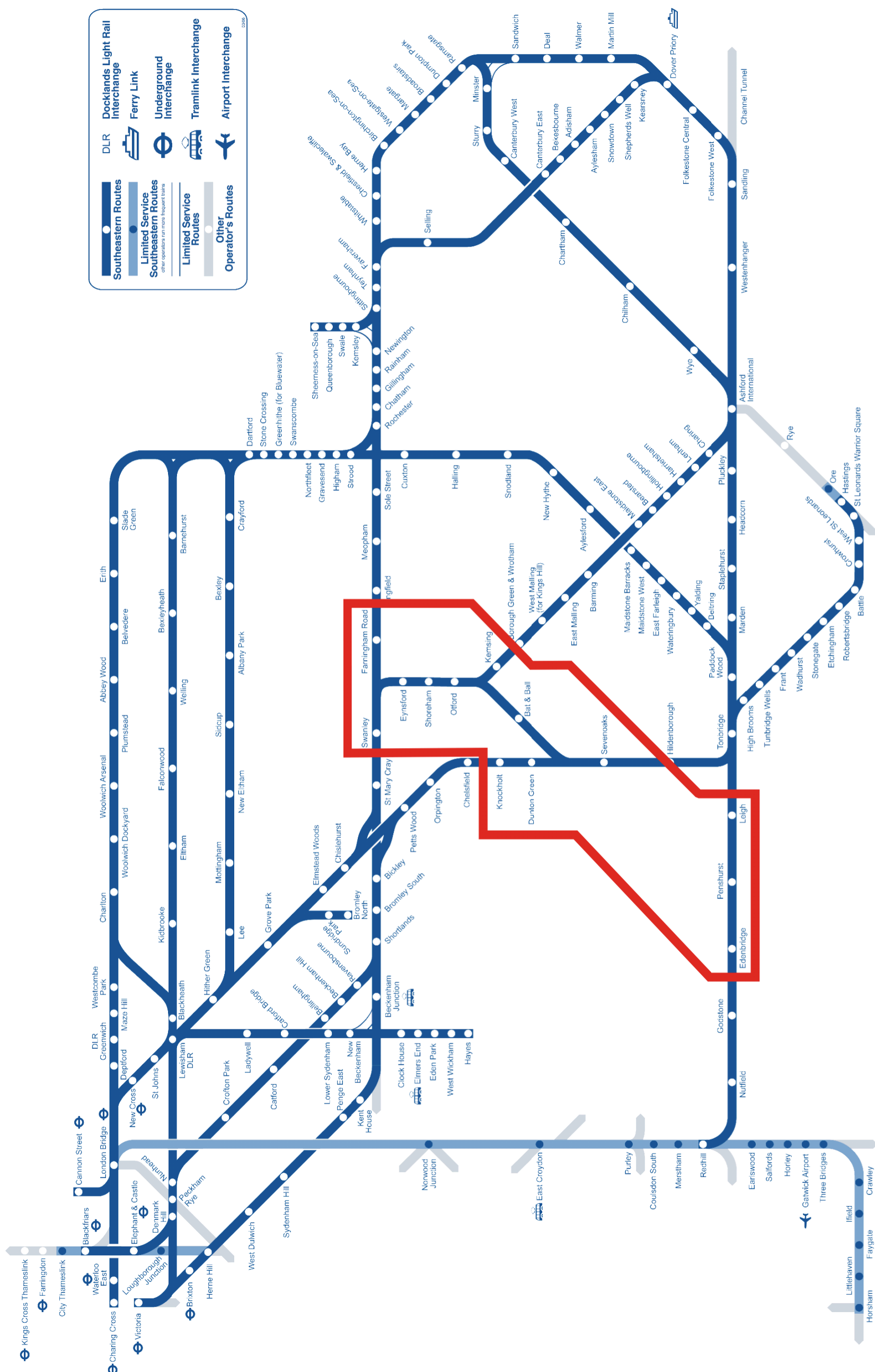
Line	Franchise	Sevenoaks District stops	Peak frequency	Off-peak frequency
Sevenoaks Town to London Blackfriars/ Victoria	South Eastern	Swanley, Eynsford, Shoreham, Otford, Bat & Ball, Sevenoaks Town (local service)	2 per hour	2 per hour
Sevenoaks Town to London Bridge/ Cannon Street	South Eastern	Knockholt, Dunton Green, Sevenoaks Town (local service)	2-3 per hour	1 per hour
Hastings to London Bridge/ Cannon Street/ Charing Cross via Sevenoaks Town and Tunbridge Wells	South Eastern	Sevenoaks Town (fast service)	6-7 per hour	4 per hour
Ashford to London Bridge/ Cannon Street/ Charing Cross via Sevenoaks Town	South Eastern	Sevenoaks Town (fast service)	4 per hour	2 per hour
Otford to London Victoria	South Eastern	Otford, Swanley (fast service)	3-4 per hour	2 per hour
Swanley to London Blackfriars	South Eastern	Swanley (local service)	3-4 per hour	2 per hour
Faversham to London Victoria	South Eastern	Swanley, Longfield (local service)	3 per hour	1 per hour
Margate to London Victoria via Ashford	South Eastern	Swanley, Otford, Kemsing (local service)	3 per hour	1 per hour
Tonbridge to Redhill/ Horsham	South Eastern	Edenbridge, Penhurst, Leigh (local service)	2 per hour	2 per hour
Uckfield to East Croydon	Southern	Edenbridge Town, Hever, Cowden (local service)	2 per hour	1 per hour
Tonbridge to London Bridge	Southern	Edenbridge, Penhurst, Leigh (local service)	1 per hour	1 per hour

Source: South Eastern and Southern timetables (to May 2007)

- 4.11 As can be seen above, main line services via Swanley generally run to Victoria (also via Herne Hill), though there are some limited services into London Blackfriars, Cannon Street and Charing Cross.
- 4.12 In comparison, main line services via Orpington all run to a mixture of Charing Cross and Cannon Street. Fast services to London Charing Cross also stop at Waterloo East, and partly at London Bridge, while the remaining fast service terminate at London Bridge, with every second service continuing into London Cannon Street.
- 4.13 Services to London Blackfriars go via Elephant & Castle, but some local services continue to London City Thameslink.
- 4.14 Capacity on the Southeastern rail network is the key problem in the area, with ridership having risen by *“more than 20% over the past years”* (Mike Gibson, Public Affairs at South Eastern Trains; investigations revealed that there were no more definitive figures available). While this trend cannot be quantified any further, it is confirmed by the increase in importance of rail travel outlined by the National Travel Survey (DfT 2005), as well as the relative regional importance of rail commuting in the South East from CENSUS 2001. While the current situation needs a solution, the expected growth for the London economy and the pressure on the local housing market must also be taken into account when designing future capacities for Southeastern network routes. The introduction of a 12-car service is also expected to help reduce congestion on the road links, in particular the most congested parts of the M20 and M25.

- 4.15 The Channel Tunnel Rail Link (CTRL), linking the Sevenoaks District via Ashford, needs to be taken into account for its role in European strategic transport network.

F 4.2 Southeastern: rail network



Source: South Eastern website (April 2007)

F 4.3 Southern Railways: rail network



Key

- Southern Routes
- Routes served by Southern where most trains are run by other operators
- Key Stations
- Connections with London Underground
- Connections with Croydon Tramlink
- Limited Southern service station
- Other train operator route
- National Rail tickets & promotions available
- Airport interchange
- Fastway bus
- Railbus combined ticket available
- Ferry service interchange
- Other train operators may provide additional services along Southern routes

Source: Southern website (April 2007)

- 4.16 While problems of overcrowding are common on the Sevenoaks Town to London lines, the Edenbridge services (Tonbridge-Redhill) are now also reported to be overcrowded due to rapidly increased demand and a lack of rolling stock. While the service has improved over time, the increasing local demand needs to be taken into account, and improvements could benefit Kent and Surrey residents, as well as improving services to and from Gatwick airport.
- 4.17 There are currently very poor services operating to and from Maidstone which is the county town and hosts the Crown Court. In addition, the comparatively poorer rail service from Maidstone into London results in a large number of commuters accessing Sevenoaks Town by car to board the London bound fast train service. The emerging parking problems around the station and the additional private car trips need to be addressed.
- 4.18 Further restrictions to the capacity on the rail links are capacity issues in the London termini as well as a total of eight level crossings between Maidstone and London which require speed restrictions. In addition, Network Rail point out in detail the following infrastructure bottlenecks restricting capacity on the Kent network:
- the restrictive layout of the approaches to London Bridge, with numerous conflicting moves between the different service groups across a series of flat junctions;
 - the limited number of through platforms at London Bridge, especially on the Charing Cross line where all stopping London bound trains have to be timetabled through Platform 6, the busiest railway platform in Europe;
 - the two track low speed section from London Bridge to Metropolitan Junction;
 - the flat junctions in the Lewisham and Hither Green areas;
 - the limited number of platforms at Charing Cross, together with some restrictions caused by the short length and reduced width at the end of Platforms 5 and 6;
 - a mix of fast and stopping services on the mainly two track section between Orpington and Tonbridge;
 - power supply restrictions south of Tunbridge Wells, requiring trains to attach and detach in the station or at Tonbridge. This is exacerbated by the track layout in the area with several single track sections through gauge restricted tunnels;
 - ten car platforms on each of the lines to Dartford, and beyond;
 - a mix of fast (including Eurostar) and stopping services on the two track section in the Herne Hill area, exacerbated by the flat crossing with the First Capital Connect route;
 - the number of shunt moves required, and the capacity this takes up, to access the depot at Ramsgate; and
 - passenger congestion at key stations such as Charing Cross, Waterloo East, Victoria and London Bridge
- 4.19 However, these issues are outside the authority of the SDC.
- 4.20 Studies have been carried out by the Sevenoaks Rail Travellers Association which highlight the importance of rail travel for the London commute, and the importance of further service frequency increases to cater for the additional demand caused by increase in residential population.
- 4.21 The two rail franchises servicing the Sevenoaks District area are owned by Govia, a joint venture between transport groups Go-Ahead Group and Keolis. Southern Railway (officially New Southern Railway Ltd) was at first branded as South Central following its takeover of services previously operated by Connex South Central in 2000, before being re-branded as Southern on 30 May 2004. The current franchise term runs from mid 2003

to December 2009. Operation of the Southeastern franchise commenced on 1 April 2006 and will last for six years, with an automatic extension of another two years if performance targets are met. This means that the franchise is likely to run until 31 March 2014.

- 4.22 The lifetimes of the above franchises are a major issue to consider over the lifetime of the emerging Transport Strategy.
- 4.23 Performance figures are only available across franchises, but cannot be broken down into individual routes. Passenger Focus published the biannual National Passenger Survey Spring 2006 from which general conclusions can be drawn for the overall routes but not for Sevenoaks District itself. Overall satisfaction with the Southern franchise is 78% which is a significant long term increase of 9% since spring 2005, but a slight decline of 1% since autumn 2005. A similar overall performance is accounted for the South Eastern franchise at 78%, having increased from 72% in spring 2005 (+6%) and 77% (+1%) in autumn 2005.
- 4.24 In comparison, the national comparison figures of customers being either good or satisfied is 90%, while the two operators performance in regional relative terms is average at 78% for London and the South East.
- 4.25 In detail, significant trends (positive and negative) in the operator's performance have been identified for Southern Railways (spring 2005 to spring 2006):
- Information provision of about train times/platforms (+4%);
 - Upkeep/repair of station buildings/platforms (+4%);
 - Station cleanliness (+8%);
 - Station facilities and services (+5%);
 - Connection with other forms of public transport (+5%);
 - Staff availability at station (+4%);
 - The frequency of the trains on that route (+7%);
 - Punctuality/reliability (+13%);
 - Scheduled journey time (+5%);
 - Cleanliness of train (+11%);
 - Upkeep/ repair of train (+14%);
 - Information provision during the journey (+14%);
 - Helpfulness and attitude of train staff (+12%);
 - Train toilet facilities (+12%);
 - Seating area comfort (+10%);
 - Ease of getting on and off (+8%);
 - Personal security (+5%);
 - Cleanliness of inside (+12%);
 - Cleanliness of outside (+15%); and
 - Staff availability on train (+7%).

4.26 The same exercise has been performed with the detailed statistics available for Southeastern:

- Upkeep/ repair of station buildings/ platforms (+4%);
- Cleanliness of station (+7%);
- Attitudes and helpfulness of the staff (+5%);
- Connections with other forms of public transport (-4);
- Punctuality/reliability (+7%);
- Scheduled journey time (+5%);
- Cleanliness of train (+11%);
- Upkeep and repair of train (+11%);
- Information provision during journey (+4%);
- Helpfulness and attitude train staff (+12%);
- Train toilet facilities (+5);
- Sufficient room for all the passengers to sit/stand (-4%);
- Cleanliness of inside (+11%); and
- Cleanliness of outside (+15%).

4.27 Overall, customer satisfaction figures, as well as the detailed analysis of the individual issues affecting the station and train facilities, generally indicate a positive trend between spring 2005 and 2006. This is true in particular for Southern Railways, for which no negative trends can be observed, but 20 out of 31 categories have seen a significant improvement (11 unchanged).

4.28 By comparison, Southeastern have improved their satisfactory scores in 12 categories, while connectivity to other public transport modes and available passenger room has significantly decreased (but in 17 categories their scores are unchanged).

F 4.4 Sevenoaks Town: rail station entrance



4.29 Station access is another important issue; access to stations is not necessarily barrier free and seamless interchange to other modes difficult. **Figure 4.4** shows the stairs to the Sevenoaks rail station building as an example of limiting access for the mobility impaired.

Bus network

4.30 While rail networks mainly support the long distance transport along key routes, bus networks are attempting to provide area-wide access across the District.

4.31 Sevenoaks District is serviced by a large number of bus routes. However, the greatest proportion are low frequency routes with 2 hourly services reducing down to only 1 run per day, as well as mere peak hour services and school transport only services.

4.32 There is north-south divide in available bus services, with the north covered by a number of high frequency buses within the London buses network (London travel zone 6), operated by Metrobus. Arriva operates a number of hourly services across the District, linking the major towns: Swanley, Dartford, Sevenoaks Town, Tonbridge, Tunbridge Wells, Bluewater (compare **Table 4.5**), based on data acquired from Kent County Council (KCC). Daytime frequencies refer to all-day frequencies and include off-peak services.

T 4.5 Sevenoaks District: most frequent bus services

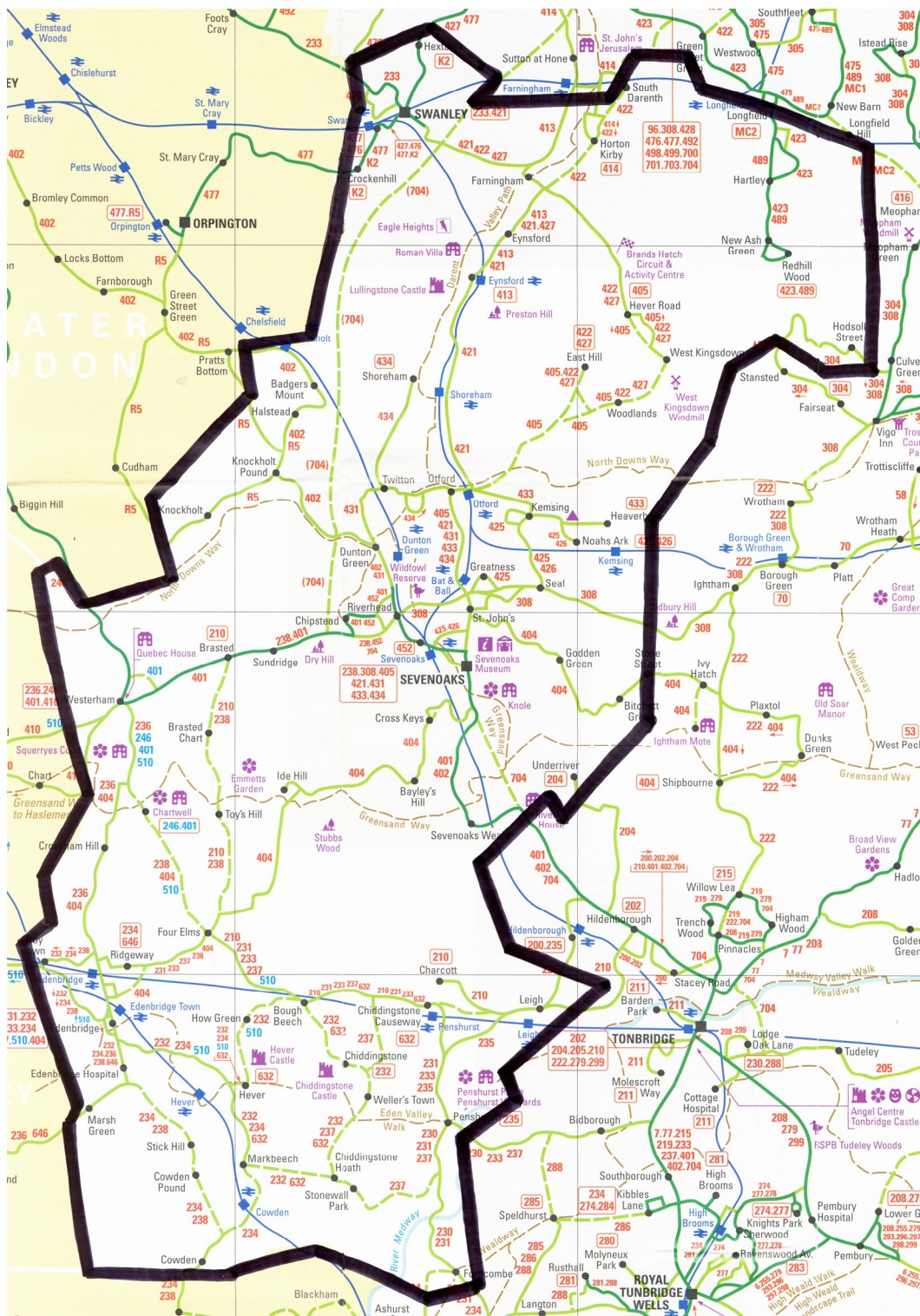
No	Route	Operator	Weekday daytime frequency	Weekend daytime frequency
233	Swanley - Sidcup - Eltham	Metrobus	20 min	20 min
246	Bromley - Biggin Hill - Westerham - Chartwell	Metrobus	30 min	30 min
308	Bluewater - Swanscombe - Northfleet - Gravesend - Istead Rise - Meopham - Vigo - Wrotham - Borough Green - Ightham - Seal - Sevenoaks Town	Arriva	60 min	60 min
401	Chartwell (Sundays when open) - Westerham - Brasted - Chipstead - Sevenoaks Town - Hildenborough - Tonbridge - Southborough - Tunbridge Wells	Arriva	60 min	60 min
402	Tunbridge Wells - Southborough - Tonbridge (20 min) - Hildenborough (30 min) - Sevenoaks Weald (60 min) - Sevenoaks Town - Dunton Green - Knockholt - Badgers Mount - Pratt's Bottom - Farnborough - Bromley (60 min)	Arriva/ Autocar	20/ 30/ 60 min	20/ 30/ 60 min
413/ 414	Dartford - Sutton at Hone - (South Darent 414) - (Horton Kirby 414) - (Eynsford 413)	Arriva	30 min	30 min
423	Dartford - Fleet Estate - Bluewater - Darent Valley Hospital - Longfield - New Ash Green	Arriva/ Lewis Travel UK/ Kent Top Travel	60 min	60 min
431/ 432	Kemsing - Seal - Greatness - Sevenoaks - Otford - Twitton - (Shoreham) - Dunton Green Riverhead - Sevenoaks - Greatness - Seal - Kemsing (opposite direction 432)	Arriva	30 min	30 min
476	Bluewater - Darent Valley Hospital - Dartford - Joydens Wood - Swanley	Arriva	60 min	60 min
477	Bluewater - Darent Valley Hosp. - Dartford - Hextable - Swanley - Crockenhill (20/ 40 min) - Orpington (60 min)	Arriva	20/ 40/ 60 min	20/ 40/ 60 min
489	Gravesend - Pepper Hill - Southfleet - Longfield - New Ash Green	Arriva/ Lewis Travel UK/ Kent Top Travel	60 min	90 min
R5	Orpington - Green Street Green - Knockholt - Halstead - Cudham - Green Street Green - Orpington	Metrobus	60 min	60 min

Source: KCC (April 2007)

4.33 In the future, the currently peak hour route 452 between Sevenoaks Town and Chipstead, via Riverhead, is expected to change to all daytime operation between 6:30am and 6pm.

4.34 A map of the bus network (compare Figure 4.6) shows the focal points of routes in Sevenoaks Town, as well as comparatively good north-south connections. There are two gaps in the network to access the villages east of New Ash Green and Hartley, as well as the villages between Sevenoaks Town and Chiddingstone Causeway.

F 4.6 Sevenoaks District: entire bus network



Source: KCC, May 2006

4.35 The poor coverage of the area by bus becomes clearer when the network is reduced to only the high frequency routes; routes with a minimum 60 minute peak frequencies, and 30 minute peak frequencies, is shown in **Figure 4.7**. There are no bus routes running at frequencies of less than 20 minutes.

F 4.7 Sevenoaks District: most frequent bus services



Based on: KCC (April 2007)

4.36 Although KCC is responsible for public transport across Kent, the District Council works closely with them to support and enhance the local network. Nevertheless bus services are often perceived to be poor and many residents are reluctant to use them. SDC is involved in providing and maintaining many bus stops and timetable displays. The District Council provides subsidised minibuses for older residents, residents with

special needs, those who cannot easily access public transport and young people. The Council's travel concession scheme is available to people aged 60 and above and some people with disabilities who live in the Sevenoaks District. These services address the accessibility issues of people with special needs, but do not improve rural accessibility for the general public.

- 4.37 Bus services in Edenbridge are particularly poor considering Edenbridge's importance as a town centre for the surrounding, largely rural areas. In this particular case, the interchange between rail and bus is complicated by the fact that local bus services no longer access the bus stop in front of Edenbridge station (compare **Figure 4.8**).

F 4.8 Edenbridge: bus service



- 4.38 Only some of the routes operating in Sevenoaks District can be run commercially. This is largely due to the rural, low density character of the District which makes a viable bus operation at acceptable service frequencies difficult.
- 4.39 In order to improve accessibility to buses, the introduction of low floor buses and/ or raised kerbs to ease boarding alighting for passengers with mobility impairments is occurring. While Arriva has announced an upgrade of their entire fleet, low-floor bus introduction should become a prerequisite for all new or renewed route commissions.
- 4.40 In this context the importance of intermodal interchange, both between private and public transport (Park&Ride, Kiss&Ride, cycle storage, pedestrian access) and between local and regional/ national public transport modes (rail stations, airports) should be highlighted. The synchronisation of bus and rail operator timetables requires partnership working of the various parties involved, while the introduction of PlusBus (add-on to the rail ticket for unlimited bus travel) has been successful in Tonbridge and Tunbridge Wells which is not currently available in the District. It is, however, appreciated that Sevenoaks District will require an improved route network to justify its introduction.

- 4.41 Real Time Information is currently being installed at bus stops in the Sevenoaks District; however problems are being experienced due to technical difficulties. However this is being addressed and it is hoped that a system can be introduced shortly.
- 4.42 SDC currently offers a travel concession scheme (free off peak and weekend travel) is available to people aged 60 and above and some people with disabilities. Free travel for children and young people has not been introduced yet. However a trial for those aged 16-17 is scheduled for Canterbury, Tonbridge and Tunbridge Wells in June 2007.

Community transport

- 4.43 There are a number of voluntary transport services available in the Sevenoaks District, operated by
- Age Concern Swanley (Dartford to Sevenoaks Town minibus);
 - Compaid Trust (minibus service to day centres/ shopping for mobility-impaired);
 - Sevenoaks Direct Services (elderly shopping bus service);
 - Sevenoaks Volunteer Bureaux (Brighter Futures Project: including transport services for elderly to maintain active lifestyle);
 - Swanley Volunteer Centre (PEGASUS transport service to medical appointments); and
 - Women’s Institute (transport to meetings).
- 4.44 KCC runs a community bus service to enable transport for the elderly to and from day centres, lunch clubs and shopping which is operated by Age Concern Sevenoaks. There are further organised shopping trips organised by SDC. Other opportunities to increase mobility within the district arise from available private hire vehicles which enable any person or group to hire SDC owned vehicles and drivers for functions, during the day, evenings and weekends.
- 4.45 As stated above, these services address the accessibility issues of people with special needs, but do not improve rural accessibility for the general public.

Taxi

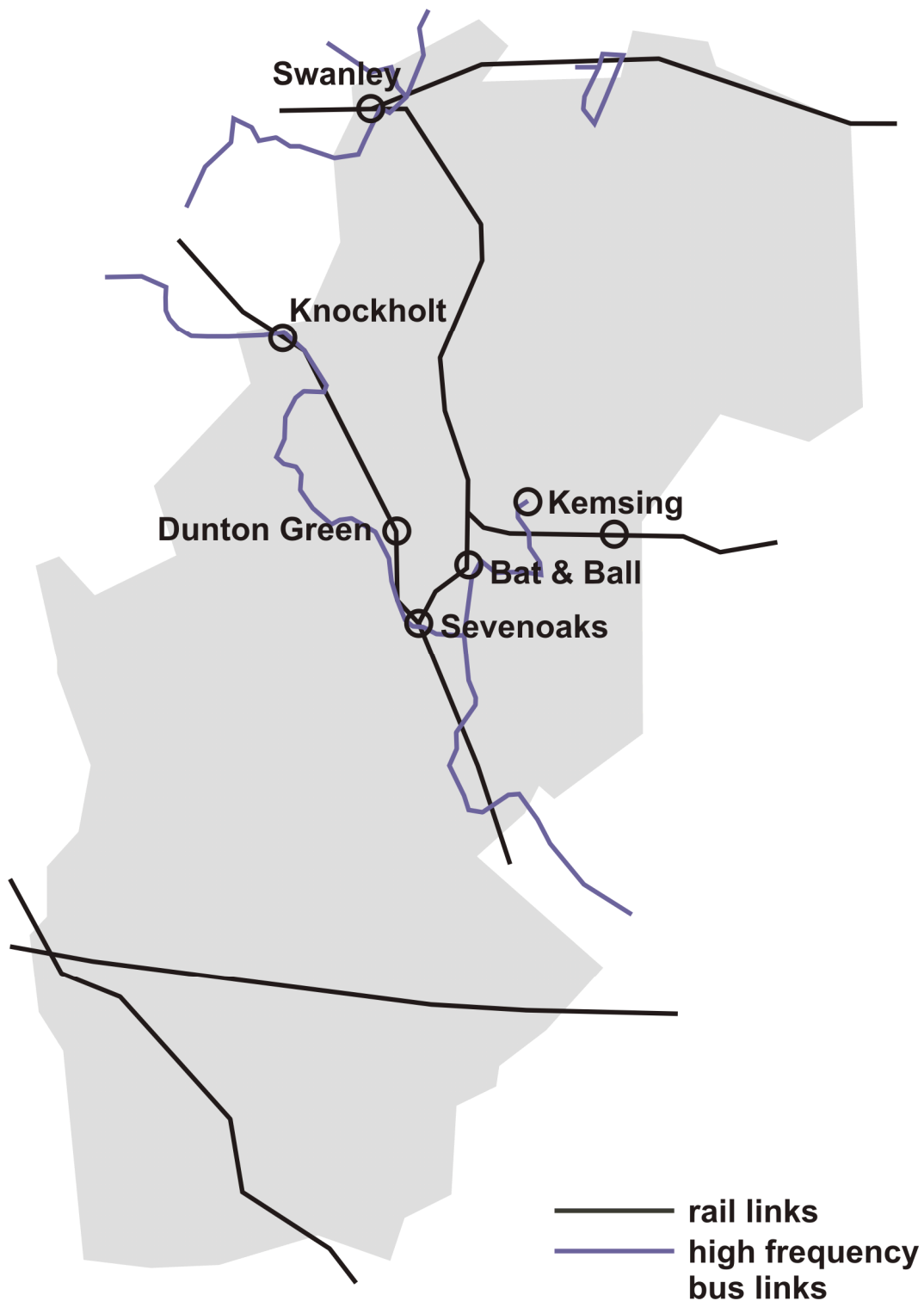
- 4.46 SDC is responsible for licensing all hire vehicles which operate in the District and which are provided with a driver and operated with less than nine passenger seats. This affects two types of vehicles, namely:
- ‘Hackney carriages’ (max eight passengers), which can be hired from a taxi rank or by being hailed in the street and fares are metered. Alternatively, it can fulfill the function of a private hire vehicle to be booked by phone; or
 - Private Hire Vehicle (max nine passengers), only available by pre-booking it or by visiting the operating centre of the vehicle. Almost all the owners of private hire vehicles in Sevenoaks District choose not to have meters.
- 4.47 While Hackney carriage fares are subject to a maximum fare laid down by the Council, private hire vehicles are not governed by a Council maximum fare rate. Out of the large number of operators in the Sevenoaks District, five have been identified as providing wheelchair accessible transport services.

Conclusion

- 4.48 In conclusion, the following public transport nodes currently available should be considered for improvement within the Transport Strategy, in particular when choosing sites for future development, mainly around the key train stations in combination with high frequency bus routes, as shown in **Figure 4.9**.

4.49 The settlements in Figure 4.9 have the most frequent bus services in peak hour, combined with rail access and in transport terms alone would represent the most sustainable locations for development.

F 4.9 Sevenoaks District: key transport nodes



Based on: KCC (May 2006 & April 2007)

Rural issues

- 4.50 While the town centre environments are a key issue in Sevenoaks District, the rural and sparsely populated nature of the District results in specific transport issues that also needs addressing. Rural areas have a dispersed population and hence greater reliance on the car than urban areas. As a result this makes it difficult to run frequent, viable bus services. Those that do not have access to a car therefore have accessibility problems.
- 4.51 There are several medium-sized rural villages located in the Sevenoaks District that are poorly accessible by public transport. Figure 4.7 visualises these gaps in the bus network, particularly in the villages in the South of the district. Examples include villages around Edenbridge, Hever, Chiddingstone and Penhurst.
- 4.52 Rural public transport is a particular problem: the relatively sparse population in rural areas and poorly utilised services means that most services are not commercial. Furthermore, cost pressures arising from higher wage demands have imperilled bus operations profitability, including on some urban routes.
- 4.53 In addition, the rural nature of the District attracts leisure tourism which is highly dependent on motorised individual transport. Examples are the villages in the Darenth Valley, through which a 19 mile (30.4km) path runs between Westerham and the River Thames.
- 4.54 The particular importance of this issue for the Darenth Valley is the significant growth that car-borne leisure traffic has seen in recent years. According to the National Statistics Survey (DfT 2005), 31% of all trips in 2005 were for leisure purposes, which includes visiting friends, eating out, sport and entertainment, holiday and day trips, or just going for a walk. The broad category of leisure accounted for 40 per cent of the distance travelled in 2005. Within this leisure category, 70% of all trips were made as a car driver or car passenger, with walking being the next greatest mode for leisure trips at 10%.
- 4.55 Further examples of historic sites, parks, walks and other leisure destinations include:
- Eden Valley Museum, Penshurst Place, Hever Castle, Chiddingstone Castle (Edenbridge);
 - Winston Churchill's former home at Chartwell and Squerryes Court (Westerham); and
 - Lullingstone Castle and Lullingstone Roman Villa (Eynsford);
 - Eagle Heights (between Eynsford and the M25); and
 - Knole House & Park (Sevenoaks Town).

F 4.10 Parking pressures in village locations



- 4.56 While parking at and around these rural destinations is considered the key element to resolve in tourism-related transport issues, measures in the Transport Strategy need to be linked to improvements to the current poor public transport accessibility which would also help address the needs of the local population without cars.

Travel behaviour

- 4.57 As outlined above, the level of car ownership and usage has grown along with the national average over the past decades. As depicted in **Table 4.11**, access to a car/ van in the household in the Sevenoaks District is significantly above the average England levels and also higher than in the South East on average.

Private car ownership

- 4.58 Census 2001 data shows only 15% of population with no private car access (South East 19%; England: 27%). The figure of access to two or more cars per household is particularly high in the Sevenoaks District, at 45%, in comparison with 38% for the South East and 30% for England on average.

T 4.11 CENSUS 2001: car ownership (KS17 dataset)

Number of car or vans in household	Sevenoaks District	South East	England
None	14.6%	19.4%	26.8%
1	40.8%	42.6%	43.7%
2	33.3%	29.6%	23.6%
3	8.4%	6.3%	4.5%
4+	2.9%	2.1%	1.4%
Total number of car and vans	64,503	4,271,483	22,607,629

Source: CENSUS 2001

- 4.59 The high car ownership levels are confirmed by a travel survey carried out as part of the Air Quality Action Plan development. The study used its Citizens Panel to conduct research into local vehicle use by surveying residents at the end of 2003.
- 4.60 This survey showed that cars are used mainly for leisure purposes (87%), in-town shopping (79%), and commuting to work (53%). 17% use vehicles for school-runs, although 59% of these would consider allowing their children to use alternative forms of transport for this journey (Source: SDC Air Quality Action Plan, Nov 2006).
- 4.61 Almost all respondents (96%) report that they have access to at least one vehicle within the household, with 65% of respondents having access to two or more vehicles.

Private car usage

- 4.62 While access to private cars is particularly high, car usage as a means to travel to work (60%) is at a similar, or slightly lower, level than the regional (65%) and national averages (61%). Proximity to and dependency on the London economy, combined with the existing congestion levels on the motorway network around London and direct train connections, train commute is the second most dominate mode after the private car at 16% (South East: 6%; England: 4%).
- 4.63 Travel by other public transport modes, bus in particular, is negligible in the Sevenoaks District (2%). Further distinctive patterns in travel behaviour are the low representation of non-motorised modes. Cycling accounts for less than one percent in the Sevenoaks District travel to work profile in comparison to 3% for the average South East and England figures. Walking to work (7%) is also below the average of the South East and England (10%), as shown in **Table 4.12**.

T 4.12 CENSUS 2001: travel to work (KS15 dataset)

	Sevenoaks District	South East	England
Underground, Metro, Light Rail or Tram	0.2%	0.2%	3.2%
Train	16.3%	5.6%	4.2%
Bus, Mini Bus or Coach	2.0%	4.4%	7.5%
Motorcycle, Scooter or Moped	1.3%	1.1%	1.1%
Car/ Van driver	55.4%	59.2%	54.9%
Car/ Van passenger	4.4%	5.7%	6.1%
Taxi or Minicab	0.4%	0.4%	0.5%
Bicycle	0.9%	3.1%	2.8%
Walk	7.3%	9.9%	10.0%
Other	0.4%	0.5%	0.5%
Work from Home	11.4%	9.9%	9.2%

Source: CENSUS 2001

4.64 In order to view the travel pattern in the regional context, **Table 4.13** shows the key statistics in comparison to the other 11 Districts and Medway Borough, as well as providing average figures for Kent County, the South East region and England.

T 4.13 CENSUS 2001: district comparison (KS15 & KS17 data sets)

District/ Borough	Cars/ household (high to low)	Work from Home (high to low)	PT mode share (high to low)	Car mode share (low to high)	NMT mode share (low to high)	Distance travelled to work (high to low)	PT users in households without car or van (low to high)
Ashford	4 (1.33)	3 (11.34)	10 (9.52)	12 (66.78)	7 (11.89)	1 (19.15)	5 (13.06)
Canterbury	10 (1.15)	6 (9.99)	11 (9.00)	4 (62.88)	13 (17.58)	7 (17.08)	10 (22.06)
Dartford	6 (1.23)	13 (7.20)	1 (21.39)	3 (62.40)	2 (8.74)	13 (13.95)	7 (15.17)
Dover	12 (1.11)	10 (8.58)	12 (8.41)	13 (67.26)	11 (15.10)	11 (15.08)	12 (28.02)
Gravesham	9 (1.19)	11 (8.23)	3 (18.09)	6 (63.99)	3 (9.29)	10 (16.10)	8 (17.81)
Maidstone	3 (1.37)	4 (10.08)	7 (11.64)	10 (66.41)	6 (11.45)	8 (16.98)	4 (11.55)
Medway	8 (1.19)	12 (7.62)	5 (15.16)	9 (65.90)	5 (10.90)	4 (17.45)	9 (18.37)
Sevenoaks	1 (1.45)	1 (11.43)	2 (20.15)	2 (59.85)	1 (8.19)	5 (17.25)	1 (5.58)
Shepway	11 (1.15)	5 (10.03)	13 (8.16)	11 (66.68)	10 (14.56)	9 (16.74)	11 (23.93)
Swale	7 (1.22)	8 (9.17)	8 (11.09)	8 (65.83)	8 (13.50)	3 (17.46)	6 (15.14)
Thanet	13 (0.98)	9 (9.03)	9 (10.90)	5 (63.56)	12 (15.97)	12 (14.85)	13 (34.30)
Tonbridge and Malling	2 (1.41)	7 (9.96)	6 (14.00)	7 (65.73)	4 (9.97)	6 (17.2)	2 (8.67)
Tunbridge Wells	5 (1.32)	2 (11.42)	4 (16.06)	1 (58.01)	9 (14.02)	2 (18.17)	3 (11.34)
Kent	1.24	9.77	13.08	64.13	12.56	16.73	14.97
South East	1.30	9.93	11.74	64.83	12.98	14.89	17.73
England	1.11	9.16	16.53	61.03	12.82	13.31	30.45

Source: CENSUS 2001

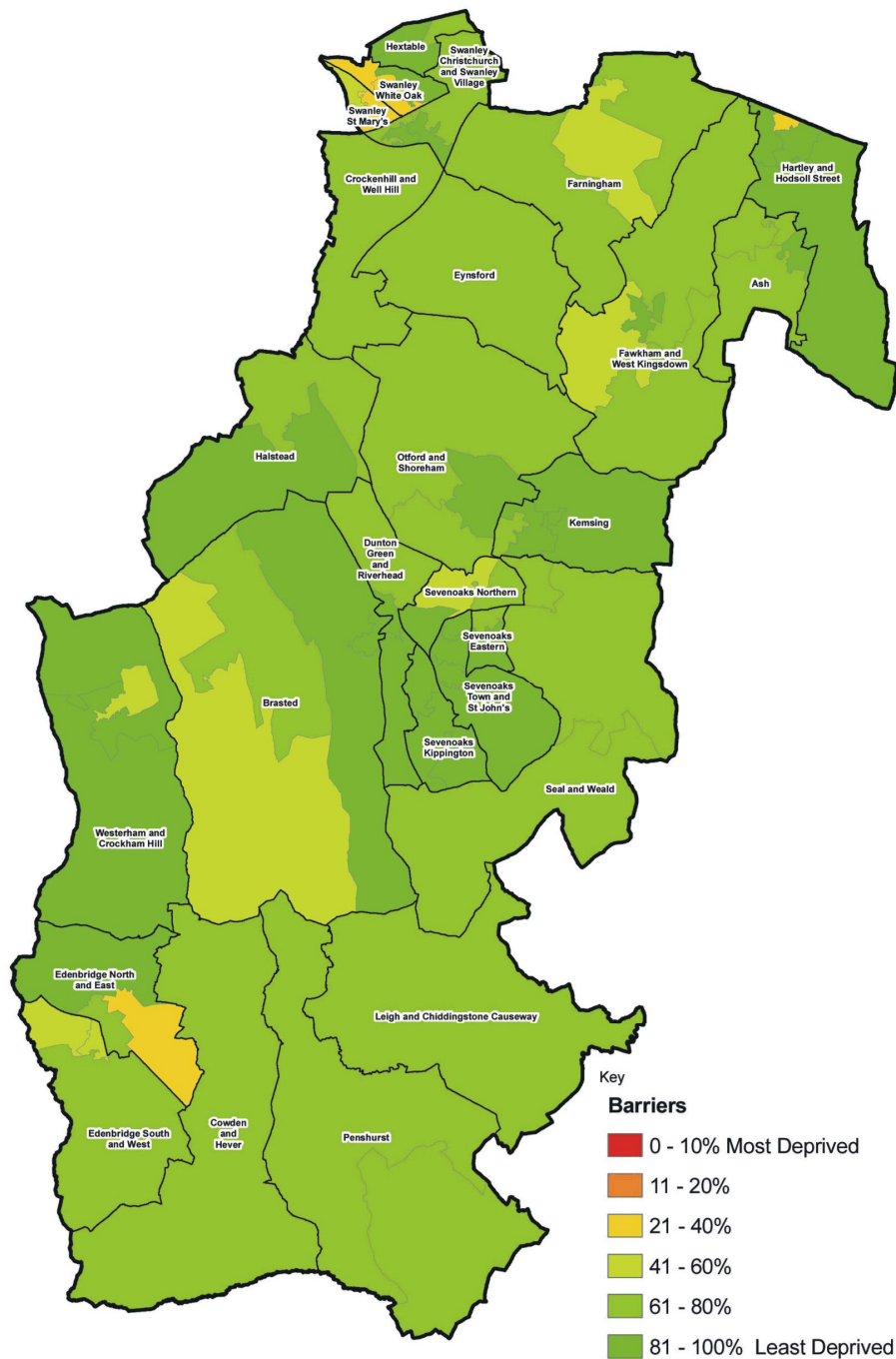
- 4.65 The ranking table reveals that Sevenoaks District travel patterns are not typical in comparison with other Kent Districts, but are located on either end of the spectrum for each category analysed.
- 4.66 Coinciding with the Sevenoaks Districts reliance on the private car, the share of public transport users without access to a private car, i.e. forced to use public transport, is the lowest in the County (5.6%). In comparison the average for Kent County is 15.0%, 17.7% for the South East and 30.5% for England.
- 4.67 Correspondingly, the public transport mode share (20.2%) is the second highest in the County (the highest is Dartford) due to the high levels of commuting by rail. In comparison, public transport level across the county (16.5%), South East (11.8%) and Kent County (13.0%) are significantly lower.
- 4.68 The current low relevance of non-motorised modes such as walking and cycling to work/ education is reflected in the lowest mode share (8.2%) in the County. Average comparison figures on county, regional and national level are above 12.5%. Working from home is a very popular option in the Sevenoaks District, accounting for 11.4% of the working population, which is above the average for the South East (9.9%).
- 4.69 The distance travelled to work (17.25 miles) is slightly above Kent average (16.73 miles), ranking fifth in comparison with the other districts.
- 4.70 Although no Census data exists for leisure travel, experience with leisure-related travel, the rural character of the area and the high car ownership indicate a high traffic generation from this activity. Similar assumptions can be drawn for retail related travel.

- 4.71 Increasing car ownership and traffic growth lead to congestion issues in the Sevenoaks District, in particular across the motorway network and in the town centres, as well as increased parking pressures.

Land-uses/ economic relation to London

- 4.72 The Sevenoaks District attraction draws largely from its proximity to the Greater London area, its location within and around the M20/ M25/ M26 triangle and the excellent and direct public transport links into Central London. Junction 5 of the M25 is less than 3 miles from Sevenoaks town centre, and lies within the district boundary. The economic performance of Central London has led to prosperity in the region, with many residents seeking the rural characteristics of the district.
- 4.73 According to the previous Local Plan, Sevenoaks District is not a self-contained labour market: about 56% of the resident workforce commute, with London (38%) and Thameside (6.0%) being the most popular destinations. Some in-commuting also occurs, particularly for non-manual jobs.
- 4.74 At the same time the interrelation with the economy of Central London has led to a dependency and a land-use pattern which is generally dominated by residential developments. Combined with the rural setting, direct access to open land and nature, the region offers good living conditions to those able to afford the increasing prices in the housing market and private transport to support the land-use structure.
- 4.75 The *Urban Housing Potential Study* (Feb 2004) estimated a total yield for the district of 624 dwellings, between 2004 and 2021 (18 years), 507 of which are expected to be available during the first eight years (up to 2010). This will be replaced by a Market Land Availability Assessment, which will take into account the recently published PPS3 on housing. A Housing Market and Needs Assessment is currently being prepared, which will analyse needs and demands for residential development in the District.
- 4.76 The South East Plan Submission document requires the District to accommodate 155 dwellings per year up to 2026 and it will be for the Local Development Framework to set appropriate locations for housing.
- 4.77 Sevenoaks District is an affluent area but has an ageing and declining population; however, there are pockets of deprivation, in particular in Swanley and Edenbridge, as shown in **Figure 4.14**.
- 4.78 The area has good transport links, many first class tourist attractions and a range of local leisure facilities, sports grounds, recreation areas and scenic country walks. Historical sites include Penshurst Place, Hever Castle, Winston Churchill's former home at Chartwell, Lullingstone Castle and Roman Villa, and Knole Park (on the edge of Sevenoaks Town). Sevenoaks Town has the Playhouse Theatre, however, other cultural venues are not widely available but are catered for through easy access to Central London.
- 4.79 Sevenoaks School is another important attractor to the area. Edenbridge is currently without a secondary school, which results in prolonged school trips either to Sevenoaks Town, or into secondary schools in the neighbouring districts or counties such as Surrey or Sussex.
- 4.80 Access to other leisure facilities, workplaces, retail, education, and health provision is largely concentrated in the two key hubs Swanley (North) and Sevenoaks Town/ Riverhead South), as well as Edenbridge to cover the southwest of the district. There are also many villages and hamlets of which the largest are Hartley, Hextable, New Ash Green, Westerham and West Kingsdown, and large areas of countryside.

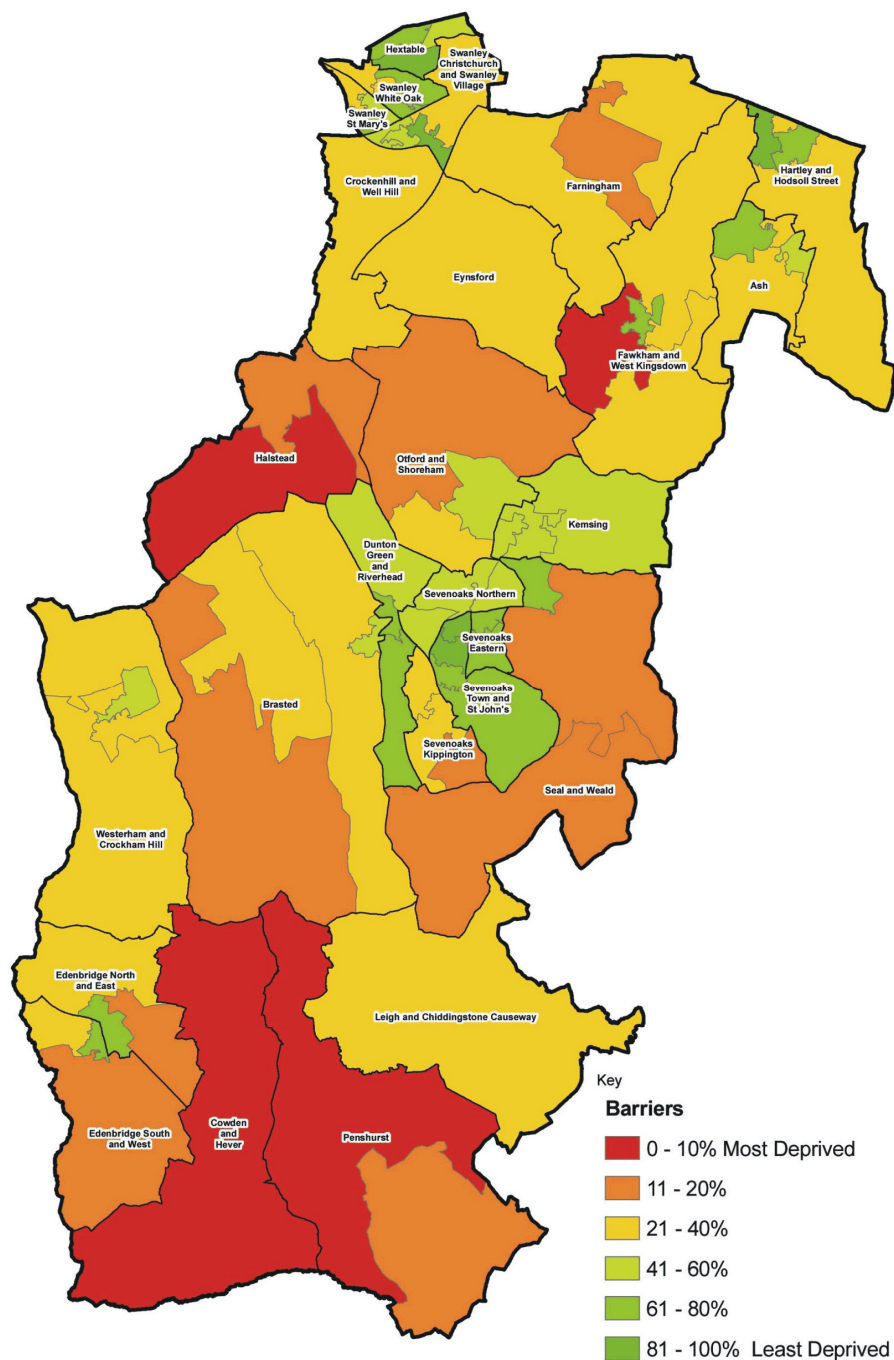
F 4.14 Sevenoaks District: indices of multiple deprivation



Source: SDC Sustainability Appraisal Scoping Report

4.81 By comparison to the above map on multiple deprivation, the deprivation indices showing barriers to housing and services, which are identified by issues such as overcrowding and affordability (compare **Figure 4.15**) indicate the accessibility problems deriving from the land use situation in the Sevenoaks District.

F 4.15 Sevenoaks District: barriers to housing and services



Source: SDC Sustainability Appraisal Scoping Report

4.82 The local economy is not dominated by any large employer, rather having several small and medium-sized enterprises. Key employers include SDC and hospital facilities and West Kent Housing in the public sector. In the private sector, Glaxo Smith Kline, two military research institutes associated to the MOD at Fort Halstead (dstl, QinetiQ), BT and the major supermarket chains represent the key employers, as shown in **Table 4.16**. While BT used to be the largest employer in the district, this is no longer the case.

T 4.16 Sevenoaks District: large employers

Organisation/ employer	Total staff	Sector
Glaxo Smith Kline, Leigh	2,500	Private
Fort Halstead (dstl, QinetiQ)	N/A	Private
Sevenoaks Hospital	800	Public
BT	400-500	Private
Asda, Swanley	550	Private
SDC Offices, Sevenoaks Town	320	Public
Sainsbury's, Sevenoaks Town	300	Private
Sevenoaks School	300	Private
Tesco, Riverhead	300	Private
Lenta Business Space, Swanley	300	Private
Waitrose, Sevenoaks Town	250	Private
United House, Swanley	250	Private
Swan Mill Paper House, Swanley	240	Private
Royal London Society for the Blind, Seal	200	Charity
Swanley Banqueting	200	Private
West Kent Housing Association, Sevenoaks Town	170	Public
Tesco Stores Ltd (High Street), Sevenoaks Town	150	Private
SDC Direct Services Depot, Dunbrik	120	Public

Sources: *Sevenoaks Business Database/ BT & Glaxo Smith Kline*

- 4.83 While Sevenoaks Town has a reasonable shopping centre, with several local and specialist shops, it competes with Bluewater, Bromley and Tunbridge Wells. According to the retail study their influence on current shopping patterns in Sevenoaks District is unlikely to increase to any significant degree in the short term. While Dartford has the least influence on shopping patterns in Sevenoaks District, Maidstone has recently strengthened its position following the opening of the Fremlin Walk Shopping Centre in 2005. Maidstone has recently implemented a new retail centre which is more than likely to attract shoppers away from the eastern part of Sevenoaks District catchment area in the future.
- 4.84 Sevenoaks Town functions as the principal town centre within the District. It is a vital and viable town centre, with a low vacancy rate, rising rental levels and growing retailer demand. The town centre currently has a good range and choice of comparison goods retailers and has benefited from the development of the Blighs Meadow shopping scheme. The convenience goods provision is also good with a range of town centre stores and two out-of-centre food superstores, one at the Riverhead residential area. In the town centre, the two sites for which there are proposals in the pipeline at Blighs Meadow offer potential for further retail development.
- 4.85 Swanley is performing adequately as a convenience goods and services centre. In comparison with Sevenoaks Town it has more of an urban district or service centre function. Edenbridge is currently a reasonably economically healthy centre, serving as a convenience shopping and services destination.
- 4.86 The large shopping centres of Bluewater, just off the M2 in Kent, and Lakeside off the M25 by the Dartford Crossing, Essex, are around 20 miles away from Sevenoaks town centre, and are easily accessible by private car.
- 4.87 Access to hospitals is poor, in particular by public transport. **Table 4.17** lists the nearest hospitals within and around the district and provides estimated travel times from Sevenoaks town centre (TN13 1HG). Planning permission has been granted for a new hospital at Pembury, Tunbridge Wells.

T 4.17 Sevenoaks Town: door-to-door travel times to health facilities

Hospital	AM peak travel time by public transport	AM peak travel time by private car and mileage
Darent Valley Hospital (24hr A&E); DA2 8DA	1hr 10min – 1hr 50min	32 mins / 16.2miles
Edenbridge and District War Memorial Hospital; TN8 5DA	1hr 10min – 1hr 20min	41 mins / 11.0miles
Kent and Sussex Hospital (24hr A&E); TN4 8AT	50min – 1hr	32 mins / 14.6miles
Farnborough Princess Royal University Hospital, BR6 8ND	50min – 1hr 10min	31 mins / 12.5miles
Pembury Hospital; TN2 4QL	1hr – 1hr 20min	25 mins / 12.0miles
Queen Mary's Hospital (24hr A&E); DA14 6LF	1hr – 1hr 10min	33 mins / 15.6miles
Sevenoaks Hospital; TN13 3PH	15min – 25min	6 mins / 1.3miles
Tonbridge Cottage Hospital; TN11 0NE	50min – 1hr	26 mins / 10.2miles

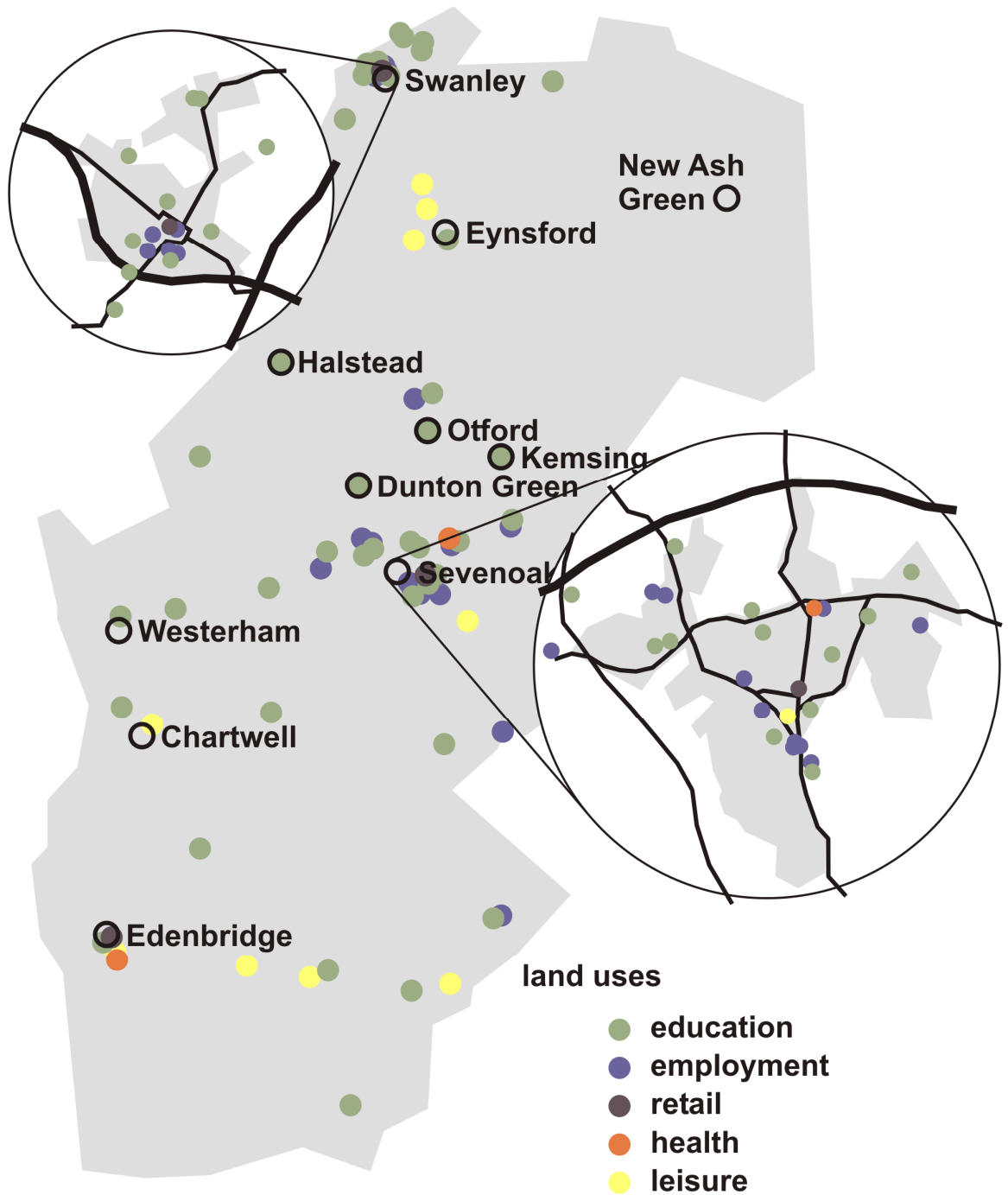
Source: *Transport Direct journey planner*

4.88 These issues are closely linked with the provision of transport infrastructure and social inclusion. The land use patterns and the rural nature of the district encourage the use of private transport, and the distances involved do not allow for a high use of non-motorised modes. Lack of parking pressures and low density do not support a good local public transport network. The focus of out-commuting on Central London supports the rail services network, which has in turn resulted in overcrowding and poor service quality on many trains.

4.89 In summary the following key trip generators were identified for Sevenoaks District, comprising of the following land uses, as shown in **Figure 4.18**:

- Schools;
- Major employers;
- Retail;
- Hospitals; and
- Leisure centres.

F 4.18 Sevenoaks District: major trip generators



Based on: KCC

Highway network/ congestion/ accidents

4.90 The M25, M20 and M26 motorways are easily accessible as they cross the District. Consequently Gatwick and Heathrow airports, the Channel Ports and the Channel Tunnel Rail Link are all within easy reach of residents of Sevenoaks District via the extensive road network. Along with the M26, and M25, the A21 and A25 serve as bypasses for Sevenoaks Town.

- 4.91 Congestion on the motorway and major trunk network in the District is an issue. Both at trunk network and inner town road level, traffic is heavy at peak periods which causes congestion and air quality problems.
- 4.92 With the M25, one of Europe's busiest motorways, handling around 200,000 vehicles every day, congestion levels are severe. The Highways Agency has scheduled a widening from dual 3 lanes to dual 4 lanes between junctions 5 and 7 which is crucial to the Sevenoaks District in order to reduce traffic congestion and improve air quality. Tenders are currently being submitted, the Environmental Statement is due to be published in 2011, and construction is expected to start in 2012 subject to coordination with other planned works. In addition, the Highways Agency is investigating the possibility of east facing slip roads junction 5.
- 4.93 Further projects include the widening of the M25 between Junctions 1b and 3. The Highways Agency announced in April 2004 that it would develop proposals for widening the M25 between Junctions 1b and 3 including the M26 (Junction 2A) and the M20 (Junction 3). Work began on 11th June 2007 and completion is scheduled for Autumn 2008.
- 4.94 The proposals include:
- Widening the M25 to 4 lanes between the south facing slip roads of Junction 2 and the north facing (M20) slip roads of Junction 3;
 - The southbound M25 be widened to 3 lanes from Junction 1B to south of Junction 2;
 - No land take from outside the current limits of the M25;
 - Low noise road surfacing and/or noise fencing to shield properties and to reduce traffic noise; and
 - Improved drainage pollution measures to move away spillage from the highway and prevent contamination of water courses.
- 4.95 This scheme forms part of the Highways Agency's existing strategic roads programme. The M25 is one of the busiest routes in England, the upgrades to this part of the motorway are vital in tackling congestion and improving the journey time and reliability to the Dartford Crossing from the south and to the Channel Tunnel and Ports from the west.
- 4.96 The section between junctions 5 and 7 of the M25 is also due to be widened. Due to the need to manage traffic flows better the Highways Agency are planning to widen the carriageways from dual 3 lanes to dual 4 lanes. It would build the new lanes partly over the current hard shoulders with new hard shoulders built alongside, except under or over bridges, but within land the Agency already owns.
- 4.97 Full tenders were submitted in early 2007 and the publication of an Environmental Statement is due in 2011. Public consultation will precede the submission of the details of the proposals to the Secretary of State. He will then decide whether the scheme should proceed. The Agency could start construction in 2012 subject to coordination with other planned works on M25 and other major roads.
- 4.98 Recently completed highway projects with an impact on Sevenoaks District include:
- Carriageway improvements on A20 Swanley bypass (August 2004);
 - Surface replacement on M20 Junction 2 to 3 (Borough Green);
 - Resurfacing and remarking of M25 Junction 6 roundabout (August 2005);
 - Resurfacing of M26 (M25 to Junction 2A) (April 2006);
 - Resurfacing of M25 Junction 5 to 6 (Clacket Lane); and
 - Upgrading of street lighting at M25 Junction 5 (December 2006)

4.99 It should be noted that the above schemes will require monitoring. Their impacts are as yet unknown. It is usual to allow a scheme to be in place at least two years before the full impacts can be monitored.

4.100 Another key issue to be highlighted is the varying responsibilities for the highway network in the district. There is a large representation of highways and trunk roads in the District that fall under the competence of the Highways Agency, namely M20, M25, M26 and A21. Further roads are under the responsibility of West Kent Highway Services. With responsibilities for the highway network split, partnership working becomes a critical issue when solving highway network problems, in particular capacity issues.

Congestion

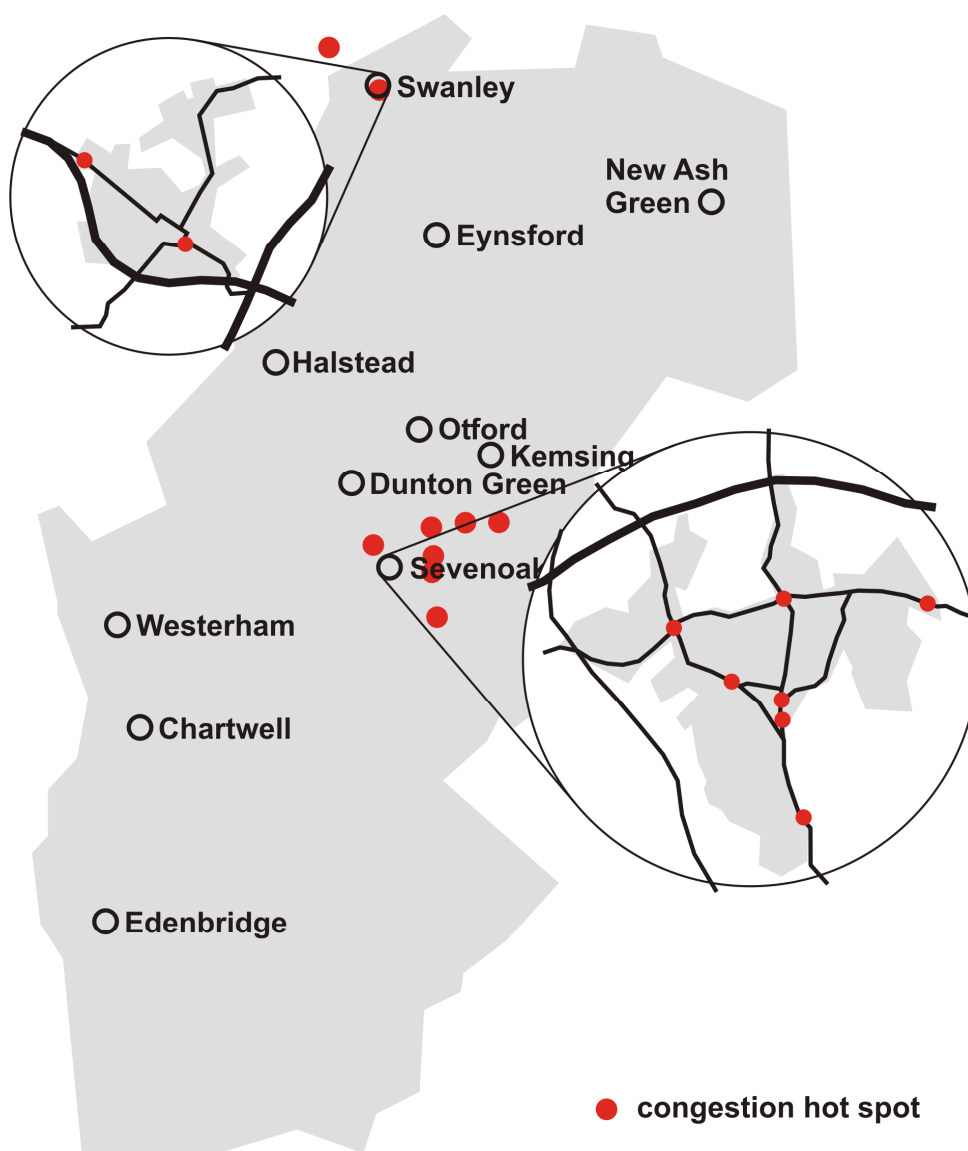
4.101 While the main congestion pinch points are located on the motorway network, in particular the nearby M25 sections and junctions, there are a number of local congestion points.

4.102 A list of other locations in Sevenoaks District experiencing significant congestion has been drawn up by KCC using evidence from elected members and local knowledge. An objective method to measure congestion is still being agreed with the DfT. The list comprises:

- A25 Bat & Ball traffic signal junction, Sevenoaks Town;
- A25 / A224 mini roundabouts, Riverhead (peak time delays);
- A224 London Road traffic signal j/w Hitchen Hatch Lane, Sevenoaks Town (peak time delays);
- A25 High Street, Seal;
- A225 High Street, Sevenoaks Town;
- A225 Tonbridge Road, Sevenoaks Town (outside Sevenoaks School);
- A225 Dartford Road j/w B2019 Seal Hollow Road (peak time delays);
- B2173 High Street j/w Goldsel Road, Swanley; and
- B2173 London Road j/w Birchwood Road, Swanley

4.103 These peak hour congestion hotspots have been mapped on the subsequent **Figure 4.19**. The map shows a concentration of congestion around Sevenoaks Town, as well as two congestion hot spots in the Swanley area.

F 4.19 Sevenoaks District: congestion hot spots



Based on: KCC (May 2007)

- 4.104 By comparison to other areas in the county, congestion in the Sevenoaks District is not exceptional.

Fatalities

- 4.105 Three year personal injury data has been assessed (on the basis of STATS 19 information) to identify accident black spots in the district. KCC defines these points on the network as where there have been six or more personal injury crashes in a three year period. The most recent exercise for Sevenoaks District showed the following results:
- 4.106 **Table 4.20** and **Figure 4.21** show the trunk network junction of Sevenoaks Bypass (A21) with Westerham Road as the location with the number of incidents rising over the past 3 years. The A20 Main Road/ Eynsford Road T-junction had 6 accidents within the observed period, while accidents levels have dropped significantly over the past 24 months. Finally, two junctions on London Road in Swanley town centre (Birchwood Road, Bartholomew Way) are identified, however there are no constant patterns in the accident data over time.

T 4.20 Sevenoaks District: accident black spots

	Nov 03-Oct 04	Nov 04-Oct 05	Nov 05-Oct 06	Total
A25 Westerham Road j/w A21	2	3	4	9
B2173 London Road/Birchwood Road, Swanley	2	0	5	7
Eynsford Road j/w A20 Main Road, Farningham	4	1	1	6
B2173 London Road / Bartholomew Way Roundabout, Swanley	0	6	0	6
Top of A224 Polhill, j/w Otford Lane, Shoreham	0	2	2	4
Birchwood Road j/w Leydenhatch Lane, Swanley	1	2	1	4
A233 Westerham Hill j/w Pilgrims Way, Westerham	0	1	3	4

Source: KCC (May 2007)

F 4.21 Sevenoaks District: accident black spots



Based on: KCC (May 2007)

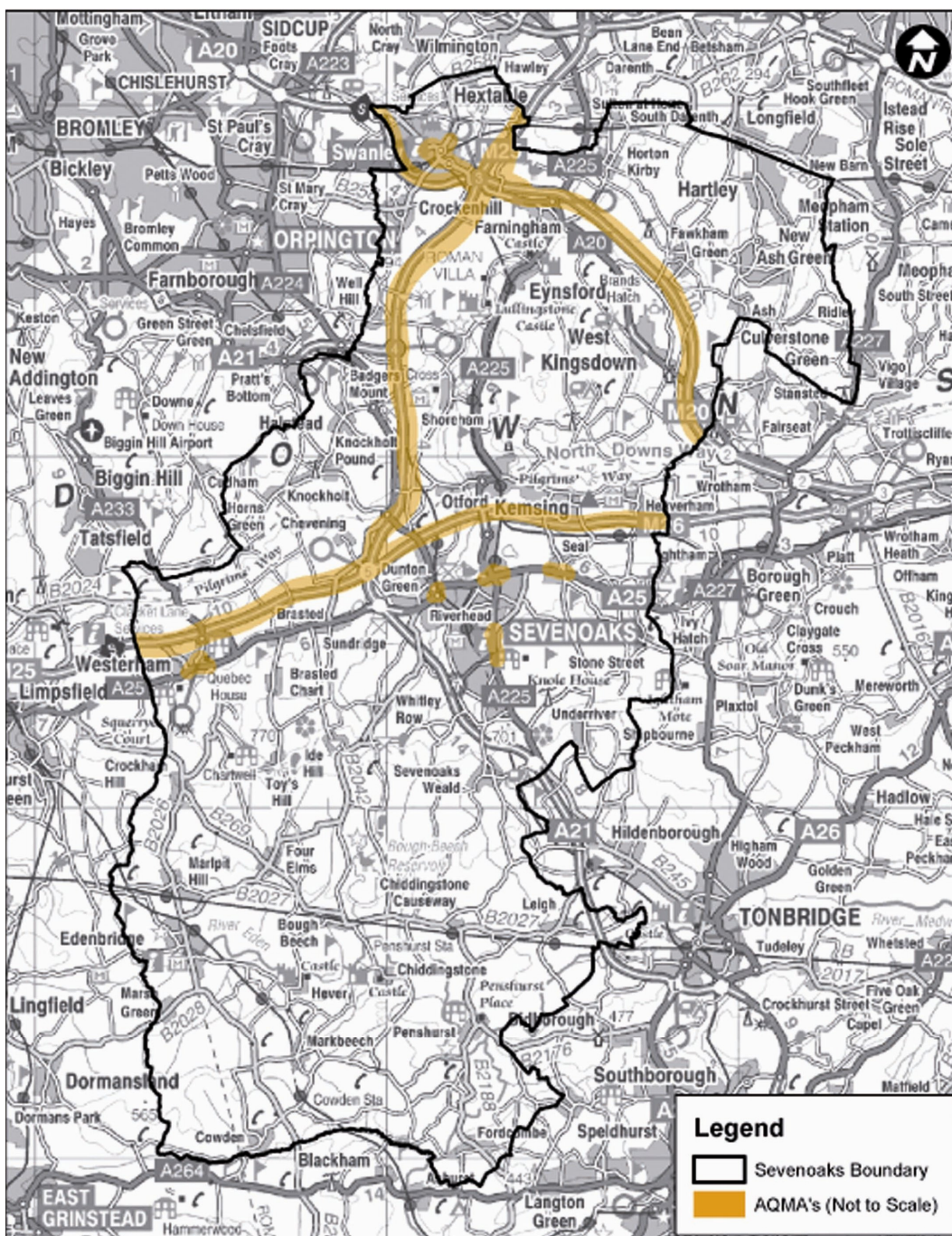
4.107 While the last three sites in Shoreham, Swanley and Westerham are not accident black spots using the KCC definition as they carried four accidents over a 36 month period,

they are included in the list. This is due to overall accident levels in the Sevenoaks District which have been described as comparatively low by KCC Highways.

Air and noise pollution

- 4.108 Air and noise pollution is a severe threat to public health and to the quality of life. While industrial pollution has generally reduced in the last thirty to forty years, increased road traffic has had a significant impact on air quality. This includes a very high proportion of heavy goods vehicles on the motorway network, in particular to and from the Channel ports and tunnel.
- 4.109 The introduction of the Environment Act in 1995 required local authorities to regularly assess the air quality in their area against targets set in the National Air Quality Strategy. They were required to designate Air Quality Management Areas (AQMA) for locations where targets were not met and where the public are exposed to the pollution.
- 4.110 The first five AQMAs in Sevenoaks District were declared in 2002, encompassing the M25, M26, M20, A20 Swanley by-pass and a section of the A25 (junction with A224) at Riverhead for expecting to exceed the Nitrogen dioxide (NO²) annual average objective. In addition part of the M25 is designated for exceeding the Fine Particles (PM10) 24hr objective.
- 4.111 The Air Quality Action Plan (Nov 2006) defined action to tackle air quality issues through the following actions:
- | | |
|----------|--|
| Action 1 | To ensure the delivery of the aims and objectives of the existing and proposed Community Plans which relate to air quality (Ongoing but progress monitored quarterly through the Community Plan); |
| Action 2 | Continue to develop the Local Development Framework to include Air Quality considerations (Early 2007); and |
| Action 3 | The District Council will continue to proactively consult, lobby and work together with the County Council generally and with regard to AQMAs to achieve the aims, objectives and targets set out in Towards 2010 and specifically in the LTP (Ongoing process to be monitored via bi-annual monitoring return). |
- 4.112 The existing and future AQMAs in Sevenoaks District show the importance of this issue for the district, largely rooted in the location within a key motorway network triangle, and should be pursued further, in partnership with the environmental department, as part of the development of the Transport Strategy.
- 4.113 Five further areas were designated in 2006. These cover Sevenoaks High Street and the Bat and Ball junction of the A25/A225, Westerham and Swanley Town Centres and High Street (A25) Seal. Further review and assessments were undertaken 2006 and will be in 2009. It is anticipated to add a further four sites to this list in the second half of 2007.
- 4.114 All currently designated AQMAs are shown in **Figure 4.22**. Detailed AQMA inset maps are included as **Appendix D**.

F 4.22 Sevenoaks District: designated AQMAs



Source: SDC (May 2007)

Walking or cycling alternatives

- 4.115 While the Census analysis revealed the low importance of non-motorised modes in Sevenoaks District, in particular in comparison to the neighbouring districts, site visits of the area have revealed the potential of improving pedestrian and cycling facilities.
- 4.116 Indeed the LTP2, which has an objective to increase the number of daily cycle trips, emphasises the need for increased cycling which would mean less traffic on Kent's roads and consequently less congestion and pollution. Good progress has been made in Kent on cycling with over 490km of cycle network in the County and an increase of 56% in

cycling levels over the life of LTP1. A new Cycling Strategy has been prepared for the County which will form a foundation to develop urban networks for towns in West Kent and for increasing utility cycling within the main urban areas.

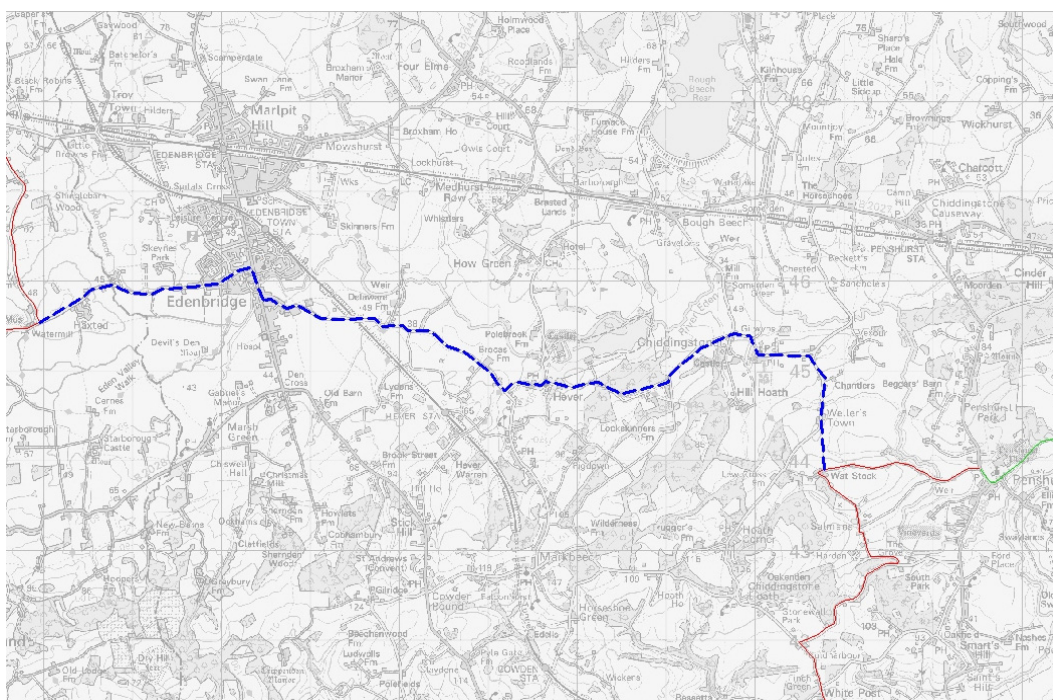
4.117 Underpinning the approach is a range of integrated transport schemes including cycle parking facilities, expanding the National Cycle Network, implementing Safer Routes to Schools, cycle crossings and so on. Additionally, KCC will continue to provide safe cycling training to school pupils and to work in partnership with cycle user groups. Local cycling organisations will continue to be consulted in early planning stages for routes and facilities so that their needs are provided for in finalised schemes, wherever possible. The need for good cycle routes and facilities associated with new developments is recognised through Kent Design and plans for cycle facilities are included in development briefs and plans. The levels of cycle parking and cycle facilities are included in KCC's new Vehicle Parking Standards.

4.118 The cycle routes that are currently in place are at the following locations;

- i) Edenbridge relief road,
- ii) B2173 London Road, Swanley,
- iii) A20 West Kingsdown,
- iv) Old London Road, Halstead.

4.119 Coverage of the National Cycle Network (NCN) in central Kent, and in Sevenoaks District is particularly poor. Only Regional Cycle Route 12 connects Penhurst Place and Tonbridge passing through Leigh in the very southeast of the District. However the local SUTRANS group is very keen to improve this and has identified a potential new route (compare **Figure 4.23**), connecting Edenbridge with Regional Cycle Route 12.

F 4.23 Penhurst Place/ Tonbridge: suggested SUTRANS cycle route



Source: SUTRANS (March 2007)

4.120 Despite the lack of dedicated infrastructure, cyclists are a visible component of Sevenoaks District road traffic, which is also indicated by the significance of cycle parking around Sevenoaks rail station (compare **Figure 4.24**). Sevenoaks' Sustainable Development Action Plan revealed that over 70% of all car journeys are under 5 miles

and 46% are less than 2 miles, many of which could be potentially replaced by cycling journeys if hard measures (i.e. infrastructure) were to be combined with smart measures (e.g. travel awareness campaigns, travel planning, marketing).

F 4.24 Sevenoaks rail station: cycle parking



- 4.121 In addition, all transport users are pedestrians, at the least at the start and end of their journeys. Pedestrian environments, even around bus and rail stations where they are most crucial, do not meet the needs of users who prefer wide, informal crossings without being restricted by guard railing. As shown in **Figure 4.25**, most pedestrians are highly focussed on direct routes and will bypass restricting infrastructure, while the availability of formal crossing points with tactile paving, audible crossing information and traffic lights is key to provide access for the mobility and sight impaired.
- 4.122 With regard to leisure walking, Sevenoaks District is considered very accessible and attractive with tourists and walking groups for a wide network of public rights of way.

F 4.25 Sevenoaks rail station: pedestrian environment



Parking/ Park&Ride

4.123 The issue of congestion and parking are closely linked in Sevenoaks District. Whilst the effect of high car ownership is softened by a high commuting public transport mode split, CENSUS data does not take into account the importance of car travel as an access mode to public transport and the resulting congestion (also from Kiss&Ride) and parking problems around the main commuter stations. In addition, leisure traffic is largely based on car travel which causes pressure on the town centre car parking situation and spills out into the surrounding residential areas if not properly managed.

Off-street parking

4.124 The district currently supports the availability of private off-street parking, thus reducing supply problems, there are 21 car parks in Sevenoaks District and the Council manages car parks in six towns and villages throughout the District, as shown in **Tables 4.26 to 4.29**.

T 4.26 Eynsford/ Kemsing/ Shoreham: existing Council car parks

Town	Location	Capacity	Charge period
Kemsing	Kemsing village	40 spaces	Free
Shoreham	Filston Lane	28 spaces	Free
Eynsford	High Street	21 spaces	Free

T 4.27 Sevenoaks Town: existing Council car parks

Town	Location	Capacity	Charge period
Sevenoaks	Blighs	241 spaces (Short stay only, max 3 hour)	Mon-Sat 8.30am-6.30pm, evening flat rate
Sevenoaks	Bradbourne	168 season ticket spaces, 48 day ticket spaces	Mon-Sat all day, £780 annually
Sevenoaks	Suffolk Way	156 spaces , plus motorcycle parking (Short stay only, max stay 4 hours)	Mon-Sat 8.30am-6.30pm, evening flat rate
Sevenoaks	Council Offices (off Gordon Road)	146 spaces (Sat only)	Free
Sevenoaks	South Park	143 spaces (Short stay only, max 4 hours)	Mon-Sat 8.30am-6.30pm, evening flat rate
Sevenoaks	Buckhurst 2	91 spaces, 150 business season tickets (Long and short stay Mon-Sat, max stay 4 hours)	Mon-Sat 8.30am-6.30pm, £560 annually, evening flat rate
Sevenoaks	Sennocke	84 season ticket spaces	Mon-Sat 8.30am/10am-6.30pm, £820 annually, evening flat rate
Sevenoaks	St John's Hill	65 spaces (short and long stay)	Mon-Sat 8.30am-6.30pm
Sevenoaks	Buckhurst 1	60 spaces , plus motorcycle parking (Short stay only, max stay 4 hours)	Mon-Sat 6.30am-9.30pm
Sevenoaks	Pembroke Road	54 spaces (Long stay Mon-Fri, short stay Sat, max stay 4 hours)	Mon-Sat 8.30am-6.30pm, evening flat rate
Sevenoaks	St James Road	21 spaces (short and long stay)	Mon-Sat 8.30am-6.30pm
<i>Sevenoaks Town Total:</i>		<i>1,229 spaces</i>	

T 4.28 Swanley: existing Council car parks

Town	Location	Capacity	Charge period
Swanley	Bevan Place	80 spaces (short and long stay)	Mon-Sat 8.30am-6.30pm
Swanley	Station Road	48 spaces (short and long stay)	Mon-Sat 8.30am-6.30pm
Swanley	Park Road	34 spaces (Short stay only)	Mon-Sat 8.30am-6.30pm
<i>Swanley Total:</i>		<i>162 spaces</i>	

T 4.29 Westerham: existing Council car parks

Town	Location	Capacity	Charge period
Westerham	Darenth	97 spaces (short and long stay)	Mon-Sat 8.30am-6.30pm
Westerham	Quebec Avenue	35 spaces (short and long stay)	Mon-Sat 8.30am-6.30pm
Westerham	Vicarage Hill	20 spaces (Short stay only, max stay 2 hours)	Mon-Sat 8.30am-6.30pm
Westerham	Fullers Hill	11 spaces (Short stay only, max stay 2 hours)	Mon-Sat 8.30am-6.30pm
<i>Westerham Total:</i>		<i>163 spaces</i>	

Source: SDC (April 2007)

4.125 It should be noted that NCP does not list any further car parks in the district.

On-street parking Controlled parking

4.126 Large parts of the District still have uncontrolled on-street parking. In situations such as around the main commuter rail stations and in town centres, uncontrolled parking can result in an undesirable urban environment, especially for other users such as pedestrians and cyclists, while the impact on the local (retail) economy needs to be taken into account.

4.127 Currently there are 9 residents parking zones in the Sevenoaks District, allowing residents with the appropriate parking permit to park on-street within the marked parking bays.

4.128 There are currently only four existing CPZs in the district, all located in Sevenoaks District.

Sevenoaks Town (four)

- Zone A: Granville Rd, Eardley Rd, Argyle Rd, Gordon Rd & Lime Tree Walk
- Zone B: Buckhurst Avenue
- Zone C: Hitchen Hatch Lane
- Zone D: Bosville Road

Swanley (three)

- Zone SW1 Bevan: Bevan Place
- Zone SW1 Lila: Lila Place
- Zone SW1 Edwards: Edwards Gardens

Westerham (three)

- Zone W1: The Green
- Zone W2: Croydon Road, Marlborough Court & High St
- Zone W3: Fullers Hill

Edenbridge (one)

- Zone EB1: Stangrove Road

4.129 The District Council is undertaking a major review of on-street parking in the Sevenoaks Town area and is consulting with residents and resident associations for their views on draft proposals to improve local arrangements. Amongst the aims of the review are to better regulate commuter parking and to make available more parking for people who shop or work in the town. The following **Table 4.30** lists areas of controlled parking currently developed in Sevenoaks District and provides an overview of the current status.

T 4.30 Sevenoaks District: planned controlled parking areas

Town	Location	Measures	Status
Edenbridge	Station Road junction with Fircroft Way	Revise waiting restrictions	Agreed
	Church Street (near St Peter & St Paul's Church)	Mark new parking bays; revise waiting restrictions	Agreed
	Forge Croft junction with Greenfield	Introduce waiting restrictions	Agreed
	High Street junction with Station Road	Re-make legal order to reflect the changes in the road layout	Agreed
	High Street junction with Forge Croft	Change waiting restrictions; extend the waiting times in the on-street parking bay	Agreed
	High Street roundabout with Mont St Aignan Way	Revise waiting restrictions; extend the waiting times in the on-street parking bay	Agreed
	High Street junction with Hever Road	Revise waiting restrictions; extend on-street parking bay	Agreed
	Penlee Close	Introduce waiting restrictions	Agreed
	Stangrove Road junction with the High Street	Revise waiting restrictions; extend the waiting times in the on-street parking bay	Agreed
Eynsford	Stangrove Road junction with the High Street Relief Road	Re-make legal order to reflect the changes in the road layout	Agreed
	Eynsford Old Mill Close	Introduce parking restrictions	Under consultation
Farningham	Manor Farm	Introduce parking restrictions	Under consultation
	The Teardrop Centre (London Road)	Introduce parking restrictions	Under consultation

Town	Location	Measures	Status
Sevenoaks	Amherst Hill (Riverhead)	Revise waiting restrictions; introduce bus stop clearway	Under consultation
	Bradbourne Lakes area	Revise waiting restrictions	Under consultation
	Bradbourne Park Road area	Revise waiting restrictions	Under consultation
	Breaside Avenue area	Revise waiting restrictions	Under consultation
	Brittains Lane area		Under consultation
	Buckhurst Avenue area	Revise waiting restrictions; introduce police bay	Under consultation
	Grassy Lane & Hoggarden Lane	Revise waiting restrictions	Under consultation
	Hitchen Hatch Lane, Mount Harry Road, Woodside Road and Blair Drive area	Revise waiting restrictions; introduce pay & display; introduce bus stop clearway	Under consultation
	London Road (The station area)	Revise waiting restrictions; introduce pay & display	Under consultation
	Morewood Close	Revise waiting restrictions; introduce pay & display	Under consultation
	Montreal Park area	Revise waiting restrictions	Under consultation
	Plymouth Drive and Knole Way area	Revise waiting restrictions; introduce pay & display	Under consultation
	Solefields Road & Soleoak Drive	Revise waiting restrictions; introduce school keep clear	Under consultation
	South Park area	Revise waiting restrictions	Under consultation
	St Botolphs Road area	Revise waiting restrictions; introduce pay & display	Under consultation
	The Drive area	Revise waiting restrictions	Under consultation
	Valley Drive & Crownfields	Revise waiting restrictions	Under consultation
	Vine Court Road and Hollybush Road area	Revise waiting restrictions; introduce pay & display; introduce bus stop clearway	Under consultation
	Residents Parking Zone A (amendments to existing)	Revise waiting restrictions; introduce disabled bay; introduce school bus bay; introduce pay & display	Under consultation
	Swanley	Azalea Drive area	Revise waiting and parking restrictions
High Firs area		Revise waiting and parking restrictions	Under consultation
Kingswood Avenue area		Revise waiting and parking restrictions	Under consultation
London Road & Oliver Road		Introduce parking and waiting restrictions	Under consultation
St Georges Road area		Revise waiting and parking restrictions	Under consultation
Station Road		Revise waiting and parking restrictions	Under consultation
Swanley Lane		Revise parking restrictions	Under consultation
Oakleigh Close		Introduce parking and waiting restrictions	Under consultation
Shoreham	Darenth Way	Introduce residents parking bays	Under consultation
Westerham	Croydon Road	Introduce new pay and display parking bays; introduce residents parking scheme	Agreed
	Croydon Road (from Westways to the Fire Station)	Make permanent existing experimental waiting restrictions	Agreed
	Rysted Lane	Introduce new waiting restrictions.	Agreed
	The Green and Market Square	Change the existing restriction	Agreed

Source: SDC (April 2007)

- 4.130 Consideration is also being given to making a number of parking permits available to people who work in the town and for the owners of environmentally friendly vehicles such as hybrid or Liquefied Petroleum Gas (LPG) cars. Should the proposals go ahead,

several hundred more parking spaces could become available within Sevenoaks District but only for certain classes of vehicle.

4.131 A series of objectives have been set out for Sevenoaks Town Centre:

- Management of commuter parking;
- Management of all-day parking;
- Improvement/ provision of additional short-term, resident and permit parking facilities;
- Prevention of any displacement of parking;
- Facilitation of town centre parking;
- Provision for pick up and drop off children at the nursery school;
- Provision for safer street environment around schools;
- Deterring parking around junctions to improve visibility/ safety;
- Reduction of vehicle speed; and
- Management of access for large vehicles.

4.132 While the parking situation appears to be a local problem around the stations, it is to a significant degree caused by commuters from outside the District. Partnership working with Kent CC, the neighbouring Districts and Network Rail is required to discuss future demand and potential solutions.

4.133 Sevenoaks rail station in particular is perceived as an attractive commuter station. There is currently a 2 year waiting list to obtain a permit. Off-street parking pressure is high and there are no dedicated P&R facilities available. However similar situations exist throughout the district (e.g. in Edenbridge) as shown in **Figures 4.31** and **4.32**, where the overspill from formal P&R parking affect the local station environment, including the crucial pedestrian links into the town centre and to public transport interchanges.

4.134 Considering the population catchment of Sevenoaks Town, it is currently not considered feasible to introduce a formal P&R service. The major activities in Sevenoaks Town do not generate sufficient movements to make a P&R service likely to be viable without significant and on-going revenue support. By comparison, urban congestion has not reached a severity (compare para 4.101) to justify P&R on its own. Furthermore it could prove difficult to find sites for such a facility without encroaching into protected landscape.

F 4.31 Edenbridge station: Park & Ride



F 4.32 Edenbridge station: informal Park & Ride



Sustainable transport priorities

- 4.135 Sevenoaks District offers very little priority schemes for buses, cyclists, and pedestrians.

Town centre environments

- 4.136 There are various demands on the public space environments in town centres: market places, meeting places, traffic lanes, parking spaces, play area. Even within the transport context the demand of different users, i.e. modes, have to be balanced in a town centre environment. This is particularly relevant where delivery vehicles, public service vehicles, public transport, private cars (moving and parking), motorised two-wheelers, cyclists and, in particular, pedestrians, meet in competition for the limited space available.
- 4.137 The three key town centres in Sevenoaks District are Edenbridge, Sevenoaks Town and Swanley. The issues of town centre environment and high streets in the district are highlighted below.

Edenbridge town centre

- 4.138 Edenbridge High Street is a typical rural town centre environment in the way that the private car is the key access mode to the local amenities from the surrounding areas. As shown in **Figure 4.33**, parked cars dominate the street environment, affecting not only moving traffic but also the space available to pedestrians. The photo also highlights the importance of the public realm as a meeting point and a place to rest and watch other people walk by, here represented by a set of park benches in front of the town pharmacy.

F 4.33 Edenbridge: high street parking



- 4.139 In addition to the parking situation, the pressure from moving traffic and the uneven distribution of space available to motorised and non-motorised traffic becomes apparent from **Figure 4.34**, showing off-peak period (10.30am) traffic flows on a weekday.

4.140 This is despite the existing relief road which has improved the through traffic situation in Edenbridge, but it has been reported that this has also negatively affected retailing in the High Street.

F 4.34 Edenbridge: high street traffic



4.141 While the on-street parking situation was improved by the public car park on the back on the High Street, the public space connecting the two (see **Figure 4.35**) is dominated by infrastructure focussing on the private car (over-demonstrating the undesirability of walking), rather than creating an area facilitating the prominent user, the pedestrian. This is of particular importance as the public space shown is also in use for the Thursday market, where the additional street furniture is expected to be inappropriate for the operation of the market.

F 4.35 Edenbridge: public spaces



Sevenoaks town centre

- 4.142 Sevenoaks High Street shows a similar distribution of road space between motorised and non-motorised users as Edenbridge. While the restricted availability of space is appreciated for a short section of the High Street, priorities in general need to focus more on the most vulnerable road users. Despite the car-focussed environment and a lack of dedicated infrastructure, a high number of cyclists were observed on the High Street during the site visit, showing the potential of cycling in the district despite its rural setting and topography.
- 4.143 Further examples of inappropriate road layouts due to the restricted and illegal parking contributing to conflict in the town centre environments are shown in **Figures 4.36** and **4.37**.

F 4.36 Sevenoaks Town: high street road distribution



F 4.37 Sevenoaks Town: illegal parking



Swanley town centre

- 4.144 Swanley town centre represents a typical 1960's pedestrianised district retail centre. While the Sevenoaks Retail Study (May 2005) reports Swanley as a well maintained shopping environment and an adequate retail offer, the poor architectural quality is shown below in **Figure 4.38**.
- 4.145 As shown in **Figure 4.39**, the shopping centre provides a poor quality public realm, however in a different context than the High Street described above. This proves the case that pedestrianisation is not necessarily a successful concept for creating a viable and attractive environment for all. While the traffic volumes of the Bartholomew Road bypass explain the implementation of the measure at its time, modern urban design focuses on negotiating the demands of all modes rather than separation of transport modes. The pedestrian zone hosts a very popular market on Wednesdays.

F 4.38 Swanley town centre: public realm



F 4.39 Swanley town centre: public realm



Development pressures

- 4.146 There are two particular developments which have recently been brought forward and from which an effect on the transport network and service can be predicted due to their size.
- 4.147 The West Kent Cold Store site on the edge of Dunton Green covers 7.7 hectares and comprises industrial buildings used primarily for food processing and distribution, together with office space and the former Plasmarc works. An outline planning application was submitted by Berkeley Homes in May 2006 for the re-development of the site for a mixed use development including up to 500 dwellings and office space together with associated infrastructure. Amendments to the scheme were formally submitted in March 2007 in relation to the design parameters of the scheme. The scheme raises a number of policy issues that must be addressed, including loss of employment, housing supply, highway capacity and other environmental impacts as 93% is Green Belt. An Environmental Statement has been submitted as part of the application together with a draft Section 106 agreement, the latter of which is currently being negotiated. To date, the Section 106 agreement seeks contributions to improve public footpaths linking to the site, provide an improved bus service (including bus services through the site) and improvements to a nearby railway station.
- 4.148 Another major application was submitted for the re-development of the former Horton Kirby Paper Mill site in October 2005 which included a proposed 210 dwellings. Following public consultation it was granted planning permission after completion of a section 106 agreement (S106) in October 2006. Implemented measures included improved routes to school, bus service enhancements and physical improvements to Farningham Road rail station. The S106 secured a number of financial contributions towards improving and enhancing local facilities, the provision of affordable housing and matters in relation to the Listed Buildings and the future management of the site.

4.149 In conclusion all proposals are creating a significant impact on travel patterns in the area which needs to be taken into consideration.

Key issues

4.150 The key issues can be summarised as follows:

- Congestion in the Sevenoaks District is not exceptional with the main concentration of congestion being around Sevenoaks Town and Swanley.
- It should be noted that overall accident levels are low in the district with only three junctions identified where four accidents have taken place in a 36 month period. These are not accident black spots according to KCC definitions.
- Heavy dependency on rail for commuting: In order to satisfy this growing need, further negotiations for improvements to services are needed.
- There are major gaps in the current bus network between New Ash Green and Sevenoaks in the North East of the District as well as poor access to and from the villages between Sevenoaks Town and Chiddingstone Causeway.
- There is high car ownership in an affluent district.
- Provision for cycling and pedestrians are generally low throughout the district with only four cycle routes in place.
- The rural areas in the district have a dispersed population with a reliance on the car. As a result it is difficult to maintain a frequent, reliable, viable bus service.
- Community transport is currently provided and its importance will increase as the currently ageing population will increase its reliance on those facilities and they no longer have access to a car.
- Development pressures will continue to exist for Sevenoaks District due to its accessible nature for commuting to Central London.
- Parking problems exists around commuter stations and in town centres.
- Air quality management areas are increasing from eight to 12 at the end of 2007 and will require traffic management to assist in abating the problem.

5 Policy background and what it means for Sevenoaks District

Introduction

- 5.1 The Sevenoaks Transport Strategy must be formulated within constraints set by land-use and transport policies on various levels.
- 5.2 This chapter very briefly sets out the most important transport and land-use policies that are likely to influence the Sevenoaks District in the future. **Table 5.1** shows an overview of the policies reviewed by administrative level.

T 5.1 Overview of policies

Level	Policy title
EU	Directive 2001/42/EC of the European Parliament and the Council on the assessment of the effects of certain plans and programmes on the environment (Strategic Environmental Assessment directive 2001)
EU	COM(2001) 370: European transport policy for 2010: time to decide (Transport White Paper 2001)
UK	Planning Policy Guidance 13: Transport (1998)
South East	Regional Planning Guidance 9
South East	South East Plan (Draft 2007/ 2008)
South East	Regional Transport Strategy
South East	Regional Economic Strategy
London	London Plan (2004)
Kent	Vision for Kent (2002)
Kent	Kent Partnership
Kent	Kent's Supporting Independence Programme (2002)
Kent	Kent & Medway Structure Plan (2006)
Kent	Kent Environment Strategy (2003)
Kent	Local Transport Plans (2001-2006, 2007-2011)
Kent	KCC Local Transport Plan (2006-2011)
Sevenoaks	Sevenoaks District Community Plan
Sevenoaks	Sevenoaks District Local Plan

- 5.3 While the overall policy context for the development of transport and land-use planning policy in Sevenoaks District is set at the EU, national and regional levels, it is the local policies that will be of particular importance for the development of the transport strategy. Thus details of the key EU, national and regional policies are summarised in **Appendix E** while those directly applicable to Kent and Sevenoaks District are described here.

County (Kent County Council)

- 5.4 In addition to national and local policy requirements the Sevenoaks Transport Strategy must also take account of policies adopted by KCC.

- 5.5 The vision for transport set out by KCC is:

"To provide good accessibility to jobs and services for all sections of the community in Kent and to improve the environment by reducing congestion and pollution, widening the choice of transport available and by developing public transport, walking and cycling".

- 5.6 The first Vision for Kent, launched in April 2002, presented what the county was setting out to achieve over the next 20 years and has been fully reviewed recently. There are

eight key strands to the Vision, one being to create a county where "jobs and services are easily accessible for all sections of the community and where traffic growth and congestion are reduced". All of the transport actions identified in the Vision have been directly integrated into the second LTP (see below).

Kent Partnership

- 5.7 The Kent Partnership was formed as a result of the Local Government Act 2000 which required local authorities to work through local strategic partnerships (LSPs). It comprises representatives from the public, private, voluntary and community sectors. Responsible for overseeing progress of the Vision for Kent, it has a key role in encouraging community leadership, supporting new initiatives and ensuring effective delivery of services. One sub-group is concerned with Economic Development and Sustainable Communities, and takes into account wider sustainability issues, such as transport. A dedicated support group of the Kent Partnership, composed of officers of partners from all sectors, pays particular attention to issues such as transport and the environment which are not covered by the existing sub-groups.

Kent Supporting Independence Programme

- 5.8 Kent's Supporting Independence Programme (SIP) was set up in April 2002. Its aim is to ensure that everyone living in the county is enabled to live the fullest and most independent life possible. The emphasis is on generating better opportunities for all, with a long-term goal of creating sustainable solutions to the problems of dependency. One of the most fundamental ingredients of independence is accessibility to jobs, services and opportunities. The Accessibility Strategy for Kent, (ASK) identifies the whereabouts and accessibility needs of different socio-economic groups as required by the Government, but also the groups identified through the SIP as requiring most assistance.

Kent & Medway Structure Plan

- 5.9 The deposit Kent & Medway Structure Plan (KMSP), which underwent an Examination-In-Public in September 2004, provides the strategic planning framework to guide decisions on development, transport and environmental issues in Kent and Medway from 2001-2021. It identifies the demands and opportunities arising from Kent's "gateway" position, but also threats and challenges from over-development and from the Government's growth targets. Housing projections for urban areas in the Sevenoaks district itself are stated as modest in order to maintain a balanced mix of land uses and safeguarded employment land. However Kent county housing provisions and additional employment space present major challenges to the transportation system in Kent which will directly impact on Sevenoaks. The KMSP was adopted on 6 July 2006 and accompanying Supplementary Planning Guidance (SPG) was adopted on 13 July 2006. The KMSP will eventually be replaced by the South East Plan.

Kent Environment Strategy

- 5.10 The Kent Environment Strategy (2003) highlights six key challenges facing Kent's environment and one of these is the increasing level of traffic in the County. The Strategy proposes to move towards a more balanced, integrated transport system with an emphasis on reducing travel demand, increasing sustainable modes of transport and reducing the movement of goods. In 2005, a Progress Report was published which highlighted that progress against increasing traffic and air pollution was poor and that more "sticks" may need to be considered if we are to realise the ambitions set out. The recommended actions include:

- Reflecting KMSP transport policies in other plans (e.g. the second LTP and emerging LDF);
- Continuing partnership working between the rail industry and local authorities;
- Seeking external funding for continued station improvements;

- Ensuring better integration between services provided by rail and bus operators;
- Expanding Quality Bus Partnerships and with further investment in buses;
- Establishing district walking strategies and focussing on routes for improvement;
- Developing further travel plans for schools in Kent;
- Continuing bus service support via Rural Bus Grant;
- Developing the KCC Quiet Lanes initiative;
- Continuing to lobby government to increase freight on rail; and
- Implementing further local traffic management schemes.

5.11 Kent's second LTP takes these recommendations forward through the objectives of Accessibility, Sustainable Regeneration, Demand Management, Environment Heritage and Communities, Integration and their underpinning policies and investment programmes.

The First Local Transport Plan (LTP1)

5.12 LTP1 covered the period 2001-6, setting out the programme for investment in transportation schemes for Kent County Council. Progress during that period was impressive, including:

- A 32% reduction in the number of people killed or seriously injured on Kent's roads from the baseline 1994-98 average. A 45% reduction in the number of children killed or seriously injured against the same baseline;
- A 17% increase in bus patronage on 2000/01 baseline levels;
- A 106% increase in the percentage of bus users satisfied with local services in Kent from the 2000/01 baseline of 33% to 68% in 2003/4; and
- An increase in cycling of 56% on 2000/01 baseline levels.

The Second Local Transport Plan (LTP2)

5.13 Future investment plans, contained in LTP2, set out the programme for 2007-2011. It contains a comprehensive programme of integrated transport schemes to deliver against both the Government's and the Kent's community priorities. The County Council has substantial amounts of investment planned for transport in its programme. When added to other investment by Government, developers, transport operators, District Councils and other activity by the County Council, LTP2 headline targets are to achieve :-

- A 10% increase (from 58%) by 2011 in the number of households within 30 minutes travelling time of a hospital by public transport;
- A 5% increase (from 88.9%) by 2011 in the number of households within 15 minutes of a GP's surgery by public transport;
- By 2007/8 a 40% reduction on 2000 levels in the number of people killed & seriously injured on Kent's roads with a corresponding 50% reduction for children. A corresponding 10% reduction in the number of people slightly injured by 2010/11;
- A reduction in average vehicle speeds on Kent's roads in residential areas by 10% by 2011;
- A 2% increase per year in bus patronage on 2003/4 levels;
- A 6% improvement in bus punctuality by 2011;
- A 38% increase in cycling on 2003/4 levels by 2011;
- Restraining Kent wide traffic growth to less than 2% per annum; and

- A 10% increase in the use of sustainable transport modes for journeys to school by 2011.

5.14 LTP2 seeks to:

- Develop an ambitious and coherent integrated transport programme based upon a more pro-active approach to demand management. This programme will be appraised by using a rigorous evaluation methodology based upon outcomes and to demonstrate these to the Government so that inward investment in the County is maximised;
- Represent Kent's current and future transport needs vigorously to Government and press for more funding for maintaining the local road network;
- Test the continuing relevance of the LTP2 objectives with the community, whilst developing them to ensure relevance to national, regional & County needs;
- Rationalise and reduce the number of local targets and indicators to simplify the monitoring of progress and focus more closely on key outcomes; and
- Ensure monitoring and implementation of the LTP is an integral part of the new internal structures following changes in transportation and highway service delivery.

5.15 The vision for transport set out by Kent County Council is:

"To provide good accessibility to jobs and services for all sections of the community in Kent and to improve the environment by reducing congestion and pollution, widening the choice of transport available and by developing public transport, walking and cycling".

5.16 Through this vision, the County Council's aim is that:

- The residents of Kent will enjoy greater independence with better access to opportunities, and a greater choice in how they travel;
- The transport network will support economic regeneration and growth that will not automatically result in increased congestion for all users;
- Fewer people will be injured and hurt when travelling, especially children and those from more deprived areas;
- Delays and incidents will cause less disruption to people's journeys and travellers will be better informed; and
- Residents will suffer from less road noise and pollution and some of the damage to the local environment caused by traffic in Kent will be reversed.

District (Sevenoaks District Council)

Sevenoaks District Community Plan

5.17 The Sevenoaks Community Plan, *Making it Happen – Together*, sets out the sustainable community action plan for 2007-10.

5.18 Amongst the priorities it sets out are:

- to improve safety on the roads;
- to reduce poverty and social exclusion;
- improve access to health services; and

- promote the transport network, use of public transport and alternative transport and reduce the need to travel.

5.19 These priorities reflect those stated by the public in consultation, some of which are listed in **Appendix F**. The Sevenoaks Community Plan is available at: http://www.sevenoaks.gov.uk/community_living/sevenoaks_district_community_plan/default.asp

Sevenoaks District Local Plan (2000)

5.20 The Local Plan explains that the main aim is to encourage people to use public transport and other sustainable forms of transport. The study's main findings must support the main aim of the current Plan i.e.:

'To promote an integrated transport network which encourages the use of public transport and other environmentally suitable modes of transport and reduces the need to travel by private car.'

5.21 The District Council is working to replace the Local Plan with a Local Development Framework (LDF). The Local Development Scheme (LDS) sets out a timetable for the replacement of the Local Plan, along with documents to be prepared. The LDS is a rolling project plan for the production of documents, plans and policies that will form part of the LDF for SDC. This is available at <http://www.sevenoaks.gov.uk/lids>. The core strategy (see below) will set out the strategic policies for the area.

5.22 It should be noted that this core strategy is currently being revised.

What it means for Sevenoaks District

5.23 In essence, these policies at the local (Kent and Sevenoaks District) level reflect those set out by the EU, national and regional government. These suggest that decisions affecting land-use and transport must give much greater emphasis to locating and designing developments and transport infrastructure (as well as services) with regard to reducing car use and encouraging travel by sustainable modes.

5.24 The national and strategic level growth policies have an important impact on policy-making at county and local levels, as the overall objectives for achieving growth and sustainability are distilled down into district and town specific policies. At the local level, these policies are important in that they should allow growth to take place without overwhelming the facilities of Sevenoaks District or harming their identities, by providing guiding principles for new developments.

6 Data Review and Gap Analysis

Development of a data bank for SDC

- 6.1 The data collection and review exercise among stakeholders was carried out to form a key part of the evidence base for the Sevenoaks Transport Strategy and Local Development Framework documents.
- 6.2 The data collated underwent a data gap analysis to identify where there are omissions in the evidence due to inexistence of data, doubts about the quality of data or geographical inconsistencies. In particular the data was reviewed and assessed for its usefulness for developing the Sevenoaks Transport Strategy.
- 6.3 As travel behaviour is subject to rapid change, including the shift in mode split over the past years, increased car ownership and commuting distance, and decreasing self containment ratio, it is advisable to validate the data available against current figures to quantify this change. **Appendix G** shows the most recent status of the data base, broken down into the categories outlined above and sorted by holder of the individual data set.
- 6.4 A full review of data and current land-use and transport models, as well as the analysis of data gaps is included in **Appendix H**.

Omitted data

- 6.5 Having reviewed all data sources, the following data gaps have been identified:
- 6.6 Data on **rail operator's performance** is only available network-wide, rather than route-specific, which would be suitable for assessing current performance and plan for future demands. In addition, there is currently no facility to report on **bus operator's performance**.
- 6.7 **Modal integration** is the key theme for a modern Transport Strategy. In order to allow for an optimisation of the integration of public transport (bus to train), Park & Ride, Kiss & Ride and walking and cycling (including parking) to public transport hubs need to be assessed further. The subject of integration also includes **ticket integration** which should be investigated further. **Ticketing & fare agreements** with transport operators need to be investigated further and included into the forthcoming strategy.
- 6.8 As nearby major public transport network, the future plans for Gatwick Airport and the future channel tunnel rail service stopping at Ashford International should be taken into account for Sevenoaks District.
- 6.9 We have not received any data with relation to **freight, delivery and servicing** issue in the district. Freight issues are important factors which need to be considered in the Transport Strategy.
- 6.10 While community transport has been widely discussed above, data about usage of **taxis and other private hire vehicles** is limited. Information on licensing fees and maximum taxi fares is available but there is no data available on usage of these modes.
- 6.11 Limited **parking** related data has been reported to the study team. It is expected that parking studies for the main towns in the district will reveal existing parking pressures. This issue is closely linked to the current situation of informal Park-and-Ride in the district around key train stations. The Transport Strategy will have to address the parking demand in town centres and around stations.

Requirement for land-use and transport models

- 6.12 Given that Sevenoaks District is not a growth area and has not been designated with a significant level of new housing provision (for example 5,000+) or other development, then it is unlikely that a strategic transport model or a detailed local area model that would cost in the region of £250,000 to develop would be supported by the Highways Agency or the County Council.
- 6.13 The SDC Transport Strategy could be developed without the provision of a major transport model and appraisal of the impacts of potential development sites could be carried out using microsimulation techniques, such as VISSIM or specific junction models. As the transport strategy develops then the scope of the potential impacts and the appraisal of such impacts should be discussed with the Highway Authority. Such models would depend on local transport data being made available such a journey to work, key origins and destinations information and turning count data at key junctions within the context of the development proposals.

7 Literature review of relevant research & case studies

Introduction

- 7.1 The literature on transport and travel behaviour is vast. This review is therefore selective, yet it illustrates the fundamental shift over the last two decades in thinking about transport provision.
- 7.2 Eleven key reports have been reviewed, covering the period from 1989 up to the present day. All of these have significantly influenced transport policy or have drawn together evidence from research and case studies. Most have been published by the government or its agencies and are of particular relevance to Sevenoaks District and its environs. The documents are listed in **Table 7.1**. (Although there have been organisational changes affecting the Department for Transport, all documents from this department, as well as its predecessor bodies, are referred as being published by the DfT.)

T 7.1 Documents covered in literature review

Title	Author	Publication date
Roads to Prosperity	Department for Transport, 1989	Department for Transport, 1989
Trunk Roads and the Generation of Traffic	Standing Advisory Committee on Trunk Road Assessment (SACTRA)	Department for Transport, 1994
Solving Congestion - when we must not build roads, increase spending, lose votes, damage the economy or harm the environment, and will never find equilibrium	Phil Goodwin	Inaugural Lecture University College London, October 1997
Traffic Impact of Highway Capacity Reductions: Assessment of the Evidence	Cairns, Hass-Klau and Goodwin	Landor Publishing, March 1998
Rural transport: an overview of key issues	Commission for Integrated Transport (CfIT)	Department for Transport, 2001
The Demand for Public Transport	Transport Research Laboratory (TRL)	TRL, 2003
The bus industry - encouraging local delivery	Commission for Integrated Transport (CfIT)	Department for Transport, 2004
Smarter Choices - Changing The Way We Travel	Cairns, Sloman, Newson, Anable, Kirkbride and Goodwin	Department for Transport, 2004
Transport Investment, Transport Intensity and Economic Growth: interim report	Standing Advisory Committee on Trunk Road Assessment (SACTRA)	Department for Transport, 2006
Beyond Transport Infrastructure – lessons for the future from recent road projects	CPRE and the Countryside Agency,	Natural England, July 2006
World review of road pricing	Commission for Integrated Transport (CfIT)	Department for Transport, 2006

- 7.3 The full review of these documents is contained in **Appendix I**. and a description of relevant case studies of Smarter Choices projects, both within the UK and overseas, in **Appendix J**.

Review conclusions

- 7.4 Transport plans generally include a wide range of instruments of transport policy. Increasingly there has been a growing concern over the limited range of travel options that many people experience and the potential damage to the environment as a result of increased car dependency and use.
- 7.5 As the literature review demonstrates, a significant shift in government policy has occurred over the past two decades – no longer is adding to road capacity seen as the most appropriate means of ensuring mobility while addressing problems of congestion.

Indeed the provision of new road space may only provide a temporary respite and may actually make congestion worse. Furthermore new road space, or other transport investments, may not even encourage regeneration since the benefits are complex. New investment not only enables improved access from an area to wider markets but it also allows other places access to the locality.

- 7.6 If road capacity will be inadequate to meet all the demands on it, are there ways of using it more effectively? This issue does not only relate to allowing vehicles along a road by traffic control or one way systems. It requires reallocating space away from 'general traffic' to more selective uses: bus lanes, or cycle lanes, disabled travellers, emergency services, lorry-lanes or pedestrians. The literature review suggests that the use of motorised modes (i.e. the private car) is deliberately discouraged by giving priority to other modes of travel supported by travel awareness and marketing methods, especially in urban areas. This could involve changing the use of road space to achieve a more efficient use of the network, environmental advantage, enhanced street attractiveness or improved safety.
- 7.7 The problem is that all of these interventions improve conditions of movement for the favoured users, but tend to reduce capacity for other classes of traffic.
- 7.8 The technical assessment of such measures has often been calculated on the assumption that all traffic displaced from one street will simply divert to another. If this is true, the predicted effect is at best displaced congestion, at worst traffic chaos. But many towns and cities have introduced such measures and succeeded. Often there has been a short period of disruption, but no prolonged traffic congestion at levels worse than those which already prevailed. Sometimes there has not even been a short term problem.
- 7.9 A wide range of measures are recognised now as having a role to play in transport planning, including highway capacity reduction alongside land-use planning measures and the encouragement of bus use, walking and cycling. Buses in particular need priority measures to improve their efficiency. In parallel the adoption of road pricing could both encourage the types of behavioural change that "Smarter Choices" are designed to support and generate funds for implementing such measures. Growing evidence exists of the benefits that such interventions bring as the case studies described in **Appendix K**. show. While most type of Smarter Choice measures are readily applicable to urban areas, many are also relevant to rural transport issues. Nevertheless it must be noted that since rural areas rely on car use to a greater extent than urban areas, such measures would need sensitive adoption in the Sevenoaks District.
- 7.10 The performance and effectiveness of Smarter Choices measures has been demonstrated by a DfT-funded study. If there were to be a significant expansion in Smarter Choices projects the potential impact could be:
- A reduction in peak period urban traffic of about 21% (off-peak 13%);
 - A reduction of peak period non-urban traffic of about 14% (off-peak 7%);
 - A nationwide reduction in all traffic of about 11%.
- 7.11 The study estimated that the public expenditure cost of achieving reduced car use by Smarter Choices is in the region of 1.5 pence per car kilometre, or £15 for removing each 1000 vehicle kilometres of traffic. The benefit of reduced traffic congestion is estimated on average to be about 15p per car kilometre removed; it is considered to be approximately three times higher in congested urban conditions. Consequently, the authors concluded, that every £1 spent on Smarter Choices could bring about £10 of benefit in reduced congestion.
- 7.12 The key lesson from the literature review is that road space is a scarce resource that needs to be managed effectively. Various measures are available to help reduce the

pressure of car traffic, including Smarter Choices, but also that land-use planning should be integrated more effectively with transport interventions.

8 Potential options

Introduction

- 8.1 SDC, and its partners – notably KCC, have a wide range of instruments available that can be adopted to help achieve their objectives and assist in tackling local transport issues. Many are being taken forward in other plans and strategies. These include:
- Kent Local Transport Plan LTP2;
 - Sevenoaks Sustainable Community Action Plan; and
 - Sevenoaks District Local Plan.
- 8.2 In addition, the Sevenoaks District Transport Strategy will also benefit from the contributions made at the two meetings of the Transport Forum, on 30 January 2007 and 26 March, and the PESTLE analysis.

Network management

Develop a Kent Traffic Management & Information Centre

- 8.3 Introduction of the Kent Traffic Management & Information Centre enables a central hub for county-wide traffic management.

Source: LTP

Introduce Intelligent Transport Systems (ITS)

- 8.4 Introduction of ITS includes bus priority measures, smart cards and Variable Message Signs (VMS).

Source: LTP

Possibly develop a major transport model

- 8.5 The current level of proposed development in Sevenoaks District cannot support or justify the development of a major transport model. However the need for a model should be constantly reviewed over time.

Source: Consultants proposal

Smarter Choices

- 8.6 Smarter Choices cover a range of ‘soft’ measures often designed to complement the provision of infrastructure that will encourage more sustainable travel (see **Appendix J**). They include a range of measures such as public transport information and marketing, travel awareness campaigns, personalised travel planning, car sharing, car clubs, teleworking, teleconferencing, home shopping etc, often brought together within a travel plan. Through the requiring the adoption of area, residential, company or school travel plans, SDC can influence travel behaviour. Expenditure on such schemes is mostly small but their impact can be large.
- 8.7 Options to take forward include the development of Area Travel Plans to cover the large number of small and medium-sized enterprises in the District for which an individual travel plan may not be justified. Travel Plans for all educational establishments and also for all new residential developments should also be considered.

Expand school, workplace and area travel planning

- 8.8 Further school and workplace travel plans and area travel plans should be developed and promoted through the planning process.

Source: LTP, Sustainable Community Action Plan, Sevenoaks Transport Forum, Consultant's proposals

Promote car sharing and car clubs

- 8.9 Initiate mode shift from single occupancy vehicles to more sustainable modes through promoting car sharing (ride sharing, specifically addressing car usage) and car clubs (commercial short, notice, short term car hire, specifically addressing car ownership)

Source: Sevenoaks Transport Forum, Consultants proposals

Encourage different work patterns e.g. tele-working

- 8.10 Encouraging and promoting alternative work pattern, such as working from home, tele-conferencing etc addresses peak commuting traffic by removing the need to travel.

Source: Sevenoaks Transport Forum, Consultant's proposals

Promote travel awareness campaigns

- 8.11 Mode shift requires change in people's travel behaviour, a change which can only be initiated through awareness campaigns, e.g. addressing healthy and responsible lifestyles.

Source: Sevenoaks Transport Forum, Consultants proposals

Inclusion

Provide access for the mobility impaired

- 8.12 Inclusive design is a requirement for all transport-related infrastructure. A variety of mobility impaired groups must be facilitated through provision of ramps, lower kerbs on strategic pedestrian routes, high kerb on bus stops providing step-free access, audible and tactile information on routes and crossings.

Source: LTP, Sustainable Community Action Plan, Sevenoaks Transport Forum, Consultants proposals

Set up a Transport Partnership to address the needs of the elderly, frail and those in rural areas

- 8.13 Partnership working with a number of interest groups representing sometimes conflicting mobility needs is required to ensure inclusive design of new or amended transport infrastructure.

Source: Sustainable Community Action Plan, Consultants proposals

Walking

Improve pedestrian routes, e.g. A25 Seal Road

- 8.14 Pedestrian route improvements encompass providing new footways, improving the condition of existing footways (surfacing, effective widths, etc), enhanced pedestrian crossings (formal crossing where appropriate), and introduction of refuges and dropped kerbs. In particular the pedestrian routes connecting into town centres should be improved.

Source: LTP, Sevenoaks District Local Plan, Sustainable Community Action Plan, Consultants proposals

Build better provision for pedestrians into new developments

- 8.15 Effective provision for pedestrians needs to be included into new developments.

Source: LTP, Consultants proposals

Develop the Rights of Way network

- 8.16 Building on the existing network, Rights of Way assist the network of public highway footpaths and cycle routes.

Source: LTP

Improve the street scene

- 8.17 An attractive streetscape and good design encourages non-motorised transport, in particular walking.

Source: LTP, Consultants proposals

Cycling/ motorcycling

- 8.18 SDC has powers to adopt many small scale schemes to encourage walking and cycling. However some need to be in conjunction with other organisations, especially KCC.

- 8.19 The local nature of walking and cycling facilities enables the Council to link measures to forthcoming developments and request funding from developers based on Section 106 of the Town and Country Planning Act 1990.

Provide cycle friendly routes into major developments, e.g. employment centres

- 8.20 Cycle routes linking new residential areas with key shopping centres, railway stations and educational establishments for pedestrians and cyclists are required to enhance the use of non-motorised modes.

Source: LTP, Consultants proposals

Improve road safety e.g. provide cycle crossings, advanced stop lines

- 8.21 Making the road network more cycle friendly by improving the safety and convenience of the network will make it more accessible for cyclists. Tucan crossings and cycle advanced stop lines should be introduced on main cycle routes.

Source: LTP, Consultants proposals

Construct cycle lanes

- 8.22 Cycle lanes (on and off-street/ mandatory or advisory) provide dedicated infrastructure for cyclists. Other measures include Advanced Stop Lines and cycle gates which give greater priority and allow access by bike in preference to vehicles. As well as making cycling safer, they can attract more people to cycle in preference to driving, hence reducing car use. The costs themselves will depend very much on the availability of suitable corridors but are generally low.

Source: Sevenoaks District Local Plan, Sevenoaks Transport Forum, Consultants proposals

Provide secure cycle parking

- 8.23 Increased cycle parking is required, especially in town centres and key public transport interchange point, in order to meet the current demands as well as enabling a further shift to both public transport and non-motorised modes. Secure cycle storage encompasses facilities protected from the weather, well lit, safe to use, providing both natural and additional surveillance (e.g. CCTV), located in close proximity to active frontages and entrances to main attractors/ interchange points. A safe and secure environment should be provided at day and night time.

Source: Sevenoaks District Local Plan, Sevenoaks Transport Forum, Consultants proposals

Provide secure motorcycle parking

- 8.24 Similar to cycle parking facilities should be introduced around main attractors, located close to entrance areas. Where high activity level during day and nighttimes cannot be ensured, artificial surveillance measures such as CCTV should assist.

Source: Sevenoaks District Local Plan

Local buses

Improve bus services

- 8.25 While existing bus service levels should be maintained, improved bus services requested include:

- east-west bus services;
- bus services to Gatwick airport;
- bus services to Sevenoaks rail station;
- bus services into Edenbridge; and
- bus services to rural areas.

Source: Sevenoaks Transport Forum, Sevenoaks District Local Plan

- 8.26 Further expansion of the network needs to be investigated. Section 106 contributions from major developments would be a good measure to kick-start a new or improved public transport service, they need to be in place before the development is first occupied, not upon half or full occupancy when travel behaviour is already formed, as is often agreed to

Expand bus priority

- 8.27 There is a strong case for bus priority where congestion from other traffic causes delays in the timetable and therefore reduced reliability and attractiveness of public transport in relation to the private car. An area to be targeted in particular is the Sevenoaks to Riverhead corridor.
- 8.28 Bus lane provision and bus priorities at signalised junctions could be taken forward by SDC in association with the bus operator, and KCC via a Quality Bus Partnership (QBP), or a Quality Bus Contract (QBC). Increased services, both for buses and Community Transport, might need to be funded by the Council.

Source: Sevenoaks Transport Forum, Consultants proposals

Develop a new bus station

- 8.29 A new bus station is requested for Swanley. Facilities should be modelled after the Sevenoaks bus station at Buckhurst Lane, combining dedicated bus stands and associated shelters with a manned information point, toilets and a cafeteria.

Source: Sevenoaks District Local Plan

Introduce network wide low floor buses

- 8.30 Step-free access schemes should be introduced to improve public transport access to wheelchair users, mobility impaired and customers with prams. This can be achieved through low floor buses, as well as adjustment of bus stop kerb heights, or a combination of both.

Source: Sevenoaks Transport Forum

Improve safety/ security at bus stops and on-board

- 8.31 Increased police and community support office presence at bus stations and the introduction of CCTV on buses can contribute to security as well as perceived security. In particular this is recommended on school run buses.

Source: LTP, Sustainable Community Action Plan

Maintain the concessionary fares scheme

- 8.32 The concessionary fares scheme should be extended. In addition, the Transport Forum also suggested introducing free bus travel for 16/17 year olds, similar to the scheme in Tunbridge Wells.

Source: LTP, Sustainable Community Action Plan, Sevenoaks Transport Forum

Continue to provide revenue support for non-commercial services

Source: LTP

Develop a Quality Bus Partnership or Punctuality Improvement Plan

- 8.33 In order to improve performance on the bus routes and increase coordination between the public transport operators and the council, increased partnership working is required.
- 8.34 Quality Bus Partnerships are a useful instrument to encourage investment from all parties; these have not been used in the Sevenoaks District yet but could be considered.

Source: Sevenoaks Transport Forum, Consultants proposals

Community transport and taxis

Maintain community transport services

- 8.35 The current level of mini bus and other community transport facilities to service a number of groups and residents in poorly accessible locations should be maintained, and potentially extended.

Source: LTP, Sustainable Community Action Plan, Sevenoaks Transport Forum

Introduce supplementary Dial-a-Ride

- 8.36 Considering the rural structure of the district, the introduction of Dial-A-Ride to access the sparsely populated areas outside the main centres is considered a viable alternative. Following on from a trial in Swanley, Dial-a-ride should be considered for further development for Swanley and Sevenoaks in particular.

Source: Sevenoaks Transport Forum, Consultants proposals

Promote the introduction of new coach services

- 8.37 The council should seek the introduction of express coach services e.g. to Maidstone, Gatwick, Guildford.

Source: Sevenoaks Transport Forum

Improve accessibility of taxi vehicles

- 8.38 Measures include provision of taxis ranks, and short-stay drop-off and pick-up areas, especially around main public transport interchanges.

Source: LTP, Sevenoaks District Local Plan

Provide taxis for home to school transport

- 8.39 A taxi scheme can assist conventional public transport in rural areas where a subsidised community bus service is not applicable.

Source: LTP

Passenger Rail

- 8.40 Provision of new rail services is the responsibility of Network Rail and the Train Operating Companies, with whom the Council would need to liaise. It is now largely the reopening of closed rail lines, the provision of new stations, lengthening the trains or new services.

- 8.41 Rail infrastructure projects vary substantially in cost which may therefore be a substantial barrier to implementation. The main practical constraints, as for other infrastructure projects, are the lengthy timescales for implementation and the availability of land; although the latter may be eased by the existence of rights of way.

- 8.42 Local authority powers are most important for improving the access to railway stations for those on foot, cycle, bus or by car (for example by improving station car parking arrangements). Some schemes may be relatively inexpensive, for example cycle parking, but new car parks have high costs unless part of a new development.

Programmed improvements

- 8.43 In order to resolve some of the capacity problems outlined above, the following improvements have been programmed by Network Rail. The opening of Section 2 of the High Speed One line in November 2007 will remove Eurostar trains from the line via Herne Hill and Swanley, releasing sufficient capacity to enable additional Victoria to Beckenham Junction services to run.

- 8.44 A major timetable recast in 2007 is aimed at making better use of existing capacity, especially in the critical London Bridge corridor at peak times. Infrastructure improvements are expected to enable a new Integrated Kent Franchise (IKF) timetable from December 2009 which will enable performance improvements and potentially additional services around the London area. Where possible, removing conflicting moves across the flat junctions on the London Bridge approaches is also envisaged.

- 8.45 In addition, the implementation of the Thameslink Programme will largely eliminate the bottleneck caused by the existing track and station layout in the London Bridge area. This will have major benefits for services into Charing Cross, including enabling all trains to call at London Bridge. Future interchanges programmed by Network Rail include interfaces with planned Crossrail Line at Abbey Wood, the planned DLR extension at Woolwich Arsenal and East London Line Extension at New Cross.

- 8.46 In addition there is an ongoing renewals programme and signalling changes are foreseen for the Kent network. Power supply issues and signalling problems currently prevent 12

car trains running to Hastings via Tunbridge Wells. This leads to the need for trains to split and join at Tunbridge Wells, an activity that adds to journey times and regularly leads to delays. Investigations have, however, concluded that it would not be economically feasible to upgrade the power supply at this time.

Enable rail capacity enhancements

- 8.47 There is a requirement to facilitate capacity improvements on main London commuter lines. This includes allowing for 12-car trains at stations and replacing level crossings en route. While this is no responsibility of the District Council, improvements can be supported through effective coordination and partnership working.
- 8.48 Further non-London related lines in requirement of capacity upgrades include east-west links via Edenbridge on the Redhill to Tonbridge rail line as well as more services to Maidstone.

Source: LTP, Sevenoaks Transport Forum

Create and promote a Sevenoaks integrated interchange

- 8.49 In order to facilitate mode shift to public transport, the interchange between long-distance modes such as the main rail lines and the bus routes, community services, taxis, and non-motorised modes enabling the last stage of the trip and therefore enabling the public transport trip as a whole. Developing an inter-modal interchange at Sevenoaks rail station should be aspired to enable better access to the station.

Source: LTP, Sevenoaks Transport Forum

Develop the Integrated Kent Franchise

- 8.50 The Integrated Kent Franchise, encompassing current South Eastern Trains routes through Kent, parts of Sussex and South East London, and the Channel Tunnel Rail Link ("CTRL") from the Medway towns, Ashford and East Kent to Ebbsfleet, and on to Stratford and St. Pancras (from 2009), was recently launched and should be developed and supported by the council.

Source: LTP

Improved integration

Improve bus to rail timetable integration

- 8.51 Service planning should be developed to integrate bus & rail physically at stations, and to synchronise bus & rail timetables.

Source: LTP, Sevenoaks Transport Forum, Consultant's proposals

Introduce integrated ticketing

- 8.52 The introduction of PlusBus will further increase the attractiveness of public transport as a whole and enable better integration. Further opportunities for integrated ticketing should be sought by the council.

Source: LTP, Sevenoaks Transport Forum, Consultant's proposals

Improved information

Provide assisted journey planning

- 8.53 A centralised database with travel information is required to enable (personalised) journey planning.

Source: LTP

Improve public transport information

- 8.54 With lack of timetabling information one of the key barriers to public transport usage, potential options range from leaflet campaigns, integrated maps cross-referencing rail, bus and other community services, to real-time dynamic service information and provision via mobile phone.

Source: LTP, Sevenoaks District Local Plan, Sevenoaks Transport Forum, Sustainable Community Action Plan, Consultant's proposals

Travel demand restraint

Possibly introduce road user charging

- 8.55 Road user charging is not considered appropriate for any of the local routes or town centres at this point in time. However the option should be continuously reviewed depending upon progress with the national scheme.

Source: LTP

Encourage mixed use, higher density developments

- 8.56 Mixed use development reduced the need to travel and addresses surveillance issues by ensuring sufficient activity levels at all times of the day.

Source: LTP, Sevenoaks Transport Forum

Locate new developments to reduce travel demands

- 8.57 In addition to the land use mix and density of new development, the location of new development in close proximity to good public transport nodes enables less-car dependent lifestyles. The council should seek these accessible sites for new developments.

Source: Sevenoaks Transport Forum, Consultant's proposals

Reduce parking availability

- 8.58 Finally, the unavailability of car parking (e.g. through low car/ zero car housing) can contribute to mode shift, given a sufficient level of alternatives, preferably public transport.

Source: LTP

Highways

Facilitate road building and improvement program

- 8.59 The Local Plan requires the following general highways improvement program:

- Junction improvements;
- Construct relief roads;
- Build access roads;
- Provide new link roads;
- Provide on-line improvements e.g. road straightening;
- Introduce countryside traffic zones; and
- Possibly introduce a one-way system.

Source: Sevenoaks District Local Plan

- 8.60 More localised, there were a number of other highways related proposals:

High Occupancy Lanes

- 8.61 In combination with bus priority lanes, high occupancy vehicle (HOV) lanes are an effective measure to initiative mode shift from single occupancy vehicles, and thereby relieve congestion, particularly on radial corridors during peak hours. The Sevenoaks Town to Riverhead corridor was suggested as an example.

Source: LTP, Sevenoaks Transport Forum, Consultant's proposals

Construct a better road link from Sevenoaks Town to London

Source: Sevenoaks Transport Forum

Construct a M25/A21 link

Source: Sevenoaks Transport Forum

Improve motorway access into Sevenoaks District

Source: Sevenoaks Transport Forum

Introduce corridor improvements e.g. M25 widening with the Highways Agency

- 8.62 The M25 widening programme is currently underway.

Source: LTP

Press for additional east facing slip roads at M26/ Riverhead Link Road

Source: LTP

Ban inappropriate right hand turns

Source: LTP

Ensure that access is onto local road only

Source: Sevenoaks District Local Plan

Introduce rear servicing facilities

Source: Sevenoaks District Local Plan

Parking

- 8.63 The Council also determines parking in new developments and the overall provision of off-street, and on-street, parking in the town via development control decisions, its parking management strategy, the determination of Controlled Parking Zones and pricing levels.

Reduce parking standards on-street and in new developments, reduce car parking availability

- 8.64 Parking standards probably offer the single most direct impact on levels of car use that the authority possesses. Developers can now be required to satisfy restrictive maximum standards of parking provision. Thus the resulting parking that adds to the stock of private non-residential space is less than it would have been. Such measures can limit the growth in parking space and hence in car use by using parking controls as a restraint tool.

Source: LTP, Sevenoaks Transport Forum, Consultant's proposals

Change balance of short/long stay parking to discourage long-stay

- 8.65 The determination of Controlled Parking Zones and pricing levels – the relationship between short and long-stay parking charges both on and off-street – via a parking management strategy could alleviate congestion pressure in the town. Building on the existing nine residents parking zones in the Sevenoaks District, more were introduced in addition to the initial capital costs operational expenses must also be funded, usually by penalty notices, which may be unpredictable.

Source: Sevenoaks District Local Plan

Coach parking provision at Sevenoaks rail station

Source: Sevenoaks District Local Plan

Adopt the parking plan for Sevenoaks District

Source: LTP

Road safety improvements

Introduce additional speed/ safety cameras

- 8.66 Road safety can be addressed by the installation of more cameras.

Source: Sevenoaks Transport Forum

Re-engineer highways to protect vulnerable users

- 8.67 Good highway design addresses road safety. Where appropriate, existing design should be reviewed to increase road safety.

Source: LTP

Encourage safer driving

- 8.68 Marketing campaign to promote safer driving should be initiated by the council.

Source: Sustainable Community Action Plan

Ensure visible speed limit signs

- 8.69 Visibility on speed limit signs through clearance of pavements of obstructions should be facilitated through on-going maintenance.

Source: Sustainable Community Action Plan

Investigate accident reduction measures

- 8.70 The junction of A25 Westerham Road and A21 Sevenoaks bypass should be investigated as an accident reduction measure. The B2173 London Road in Swanley and junction of A20 Main Road with Eynsford Road in Farningham should also be investigated.

Source: Consultants proposals

Air Quality Management Areas (AQMAs)

Low Emission Zones in town centres

- 8.71 The introduction of low emission zones in town centres can address air quality issues in particularly trafficked areas.

Source: Sevenoaks Transport Forum

AQMA development

- 8.72 Possibly extend/ add to the 10 existing AQMAs currently in the Sevenoaks District. In particular, the Riverhead area was requested by the Sevenoaks Transport Forum

Source: LTP, Sevenoaks Transport Forum

Other measures to be considered in the strategy

- 8.73 The forthcoming Strategy will take forward those measures already in progress or planned as part of other programmes. But in addition to those measures identified above there are others over which SDC either has direct control or some degree of influence which merit detailed consideration in the Strategy. These are considered below.

Land-Use planning measures

- 8.74 Most land-use measures are designed, following the principles of PPG 13, to encourage the use of public transport, cycling and walking, shorter distance journeys (which in turn further favour cycling and walking), and less frequent travel. Land-use measures are less likely to influence freight movements, with the exception of the encouragement of development near to rail facilities.
- 8.75 As the body responsible for producing the Local Development Framework and development control decisions, SDC has considerable powers to influence land-use patterns over the longer term. Development densities can be specified in the Local Development Framework (LDF), and will apply to new residential development. Higher densities enable more opportunities to be reached within a given distance, and hence may encourage shorter journeys and cycling and walking. By increasing population and employment densities, they may also make public transport more viable.
- 8.76 Locating new developments close to facilities and at sustainable public transport nodes is a way of reducing journey lengths and giving the option to undertake journeys by more sustainable modes. This can lead to a corridor-style development but such an approach should reduce journey lengths and improve accessibility. Development mix can also be specified in the LDF in such a way that houses are closer to places of work and to other attractions such as schools, shops and leisure facilities. However, while such policies should improve accessibility, users may not, in practice, travel to the jobs and leisure facilities which are nearest to their homes. Furthermore such policies will only apply to new development and redevelopment, and will thus take some time to have a significant impact.
- 8.77 SDC has two means of using the land-use planning system to raise funds for transport provision. Contributions to transport infrastructure can be required from developers as part of the process of obtaining planning gain (under Section 106 and 278 agreements), negotiated by the authority in association with KCC. This approach has been applied successfully to secure finance for new roads, bus services, cycle lanes, pedestrian crossings and also for the provision of Park & Ride (P&R) sites.

Proposed objectives

- 8.78 The key question with each of the measures is its ability to achieve one or more of the objectives identified in the forthcoming Sevenoaks Transport Strategy.
- 8.79 The District Council set out six action points to form the basis for the Strategy, each of which addresses key transport issues. These action points provided a useful starting point for this study but were adapted in the light of comments and suggestions from the stakeholders. In light of the discussions at the first Transport Forum two changes were made so eight action points or objectives are now applicable:

- Investigating viable alternatives to the car, such as encouraging more journeys by bus, train, cycling and walking, that will improve travel choice;
- Identify barriers to the take up of alternative forms of transport and recommend actions to address this issue;
- Reducing traffic congestion by improving traffic management to reduce congested areas, improving air quality and assessing the viability of other options such as car sharing and identifying possible solutions such as new roads;
- Identifying schemes which target casualty reduction and reducing inappropriate speeds to improve road safety in order to inform the responsible highway authorities on national and county level;
- Reducing travel demand by reducing and controlling the number of car journeys made into town centres and locating new development close to good transport links and local facilities to reduce car journeys. It will also identify key parking issues and identify possible solutions to alleviate problems such as commuter parking in the district;
- Improving travel awareness by encouraging travel plans and partnership working with internal and external stakeholders and transport providers. This will include looking at innovative approaches to public transport in rural areas;
- Improving access for all including rural accessibility and access to healthcare; and
- Improving the environment, air quality and the quality of life.

8.80 While the achievement of objectives is crucial, it is also important to avoid worsening conditions under other objectives.

8.81 The two main constraints on implementation are those of finance and practicability. In addition, there are a number of practical constraints, which vary from measure to measure. Some take a considerable time to implement, and are therefore not available as short-term solutions. Others are the responsibility of other organisations, and can only be modified by negotiation.

8.82 The integration of measures into a coherent strategy or package, in which the individual measures complement one another, and potentially help to redress any adverse impacts of measures chosen on their own, is vital. It is in these ways that synergy can be obtained.

9 Conclusions and recommendations

- 9.1 This final chapter provides a summary of the key issues emerging from site audits, policy reviews and stakeholder consultation. It provides a series of recommendations for taking forward options and key actions for potential inclusion in the Transport Strategy.

Key issues

- 9.2 The key issues evolved from the Sevenoaks District Transport Study can be summarised as follows:

- Congestion in the Sevenoaks District is not exceptional with the main concentration of congestion being around Sevenoaks Town and Swanley
- It should be noted that overall accident levels are low in the district with only three junctions identified where four accidents have taken place in a 36 month period. These are not accident black spots according to KCC definitions
- Heavy dependency on rail for commuting: In order to satisfy this growing need, further negotiations for improvements to services are needed
- There are major gaps in the current bus network to the north east of the district, as well as poor access to and from the villages between Sevenoaks Town and Chiddingstone Causeway
- There is high car ownership in an affluent district
- Provision for cycling and pedestrians are generally low throughout the district with only four cycle routes in place
- The rural areas in the district have a dispersed population with a reliance on the car. As a result it is difficult to maintain a frequent, reliable, viable bus service
- Community transport is currently provided and its importance will increase as the currently ageing population will increase its reliance on those facilities and they no longer have access to a car
- Development pressures will continue to exist for Sevenoaks District due to its accessible nature for commuting to Central London
- Parking problems exists around commuter stations and in town centres
- Air quality management areas are increasing from eight to 12 at the end of 2007 and will require traffic management to assist in abating the problem

Key options

- 9.3 The Sevenoaks Transport Strategy options should be developed in the context of the existing Kent County Council Local Transport Plan 2 and Sevenoaks Community Strategy and also take into account the stakeholder consultation and PESTLE analysis carried out for this study. These documents have already identified the need for walking, cycling provision and network management.
- 9.4 Existing transport measures that are currently supported by Sevenoaks Council and other organisations, for example, Kent County Council should be maintained and developed further where possible for inclusion in the strategy. This is particularly relevant to community transport provision.

9.5 Measures that support influencing travel behaviour are currently being developed by Kent County Council and should be supported by Sevenoaks District Council, for example, School Travel Plans and Work Place Travel Plans. Such measures should be included in the strategy development for inclusion in the Local Development Framework as they impact on land use and transport schemes.

9.6 The Sevenoaks Transport Strategy should set out the detailed requirements for the options identified in section 8, and listed below:

Network management

- Develop a Kent Traffic Management & Information Centre
- Introduce Intelligent Transport Systems (ITS)
- Possibly develop a major transport model

Smarter Choices

- Expand school, workplace and area travel planning
- Promote car sharing and car clubs
- Encourage different work patterns e.g. tele-working
- Promote travel awareness campaigns

Inclusion

- Provide access for the mobility impaired
- Set up a Transport Partnership to address the needs of the elderly, frail and those in rural areas

Walking

- Improve pedestrian routes, e.g. A25 Seal Road
- Build better provision for pedestrians into new developments
- Develop the Rights of Way network
- Improve the street scene

Cycling/ motorcycling

- Provide cycle friendly routes into major developments, e.g. employment centres
- Improve road safety e.g. provide cycle crossings, advanced stop lines
- Construct cycle lanes
- Provide secure cycle parking
- Provide secure motorcycle parking

Local buses

- Improve bus services
- Expand bus priority
- Develop a new bus station
- Introduce network wide low floor buses
- Improve safety/ security at bus stops and on-board
- Maintain the concessionary fares scheme
- Continue to provide revenue support for non-commercial services
- Develop a Quality Bus Partnership or Punctuality Improvement Plan

Community transport and taxis

- Maintain community transport services
- Introduce supplementary Dial-a-Ride

- Promote the introduction of new coach services
- Improve accessibility of taxi vehicles
- Provide taxis for home to school transport

Passenger Rail

- Programmed improvements
- Enable rail capacity enhancements
- Create and promote a Sevenoaks integrated interchange
- Develop the Integrated Kent Franchise

Improved integration

- Improve bus to rail timetable integration
- Introduce integrated ticketing

Improved information

- Provide assisted journey planning
- Improve public transport information

Travel demand restraint

- Possibly introduce road user charging
- Encourage mixed use, higher density developments
- Locate new developments to reduce travel demands
- Reduce parking availability

Highways

- Facilitate road building and improvement program
- High Occupancy Lanes
- Construct a better road link from Sevenoaks Town to London
- Construct a M25/A21 link
- Improve motorway access into Sevenoaks District
- Introduce corridor improvements e.g. M25 widening with the Highways Agency
- Press for additional east facing slip roads at M26/ Riverhead Link Road
- Ban inappropriate right hand turns
- Ensure that access is onto local road only
- Introduce rear servicing facilities

Parking

- Reduce parking standards on-street and in new developments, reduce car parking availability
- Change balance of short/long stay parking to discourage long-stay
- Coach parking provision at Sevenoaks rail station
- Adopt the parking plan for Sevenoaks District

Road safety improvements

- Introduce additional speed/ safety cameras
- Re-engineer highways to protect vulnerable users
- Encourage safer driving
- Ensure visible speed limit signs
- Investigate accident reduction measures

Air Quality Management Areas (AQMAs)

- Low Emission Zones in town centres
- AQMA development

Other measures to be considered in the strategy

- Land-Use planning measures

- 9.7 An assessment of the Transport Strategy components will be needed and, if possible, the public's views of potential strategies gathered. Political commitment for a preferred strategy must also be secured. As part of the scheme development process the priorities will need to be set, phasing determined, synergies identified and funding secured with the strategy. Prior to implementation a process of monitoring and review will also need to be determined.

Potential funding sources

- 9.8 Funding for the programme to be set out in the forthcoming Sevenoaks Transport Strategy could come from various sources:
- KCC Second Local Transport Plan;
 - Internal SDC resources;
 - Revenue from parking charges and enforcement;
 - Section 278 agreements with developers; and
 - Section 106 agreements with developers.

- 9.9 In order that these scarce resources are effectively spent, we recommend that the Council prepare a rolling programme of schemes that could be funded by S106 (and S278) agreements. Such a plan will give confidence to Council officers in their negotiations with developers, enable S106 (and S278) schemes to be integrated with those funded from other sources and ensure that the maximum benefit is accrued from such investment. This plan should set priorities for future expenditure and underpin the Transport Strategy.

Key actions and recommendations

- 9.10 The strategy must focus upon promoting sustainable transport in accordance with national, regional and county policy, as well as the lessons learnt from the literature review and the experience of implementing Smarter Choices interventions.
- 9.11 The strategy should also emphasise the role of land-use planning decisions on influencing travel behaviour, and review the transport implications of the current and likely future housing allocations. Land-use planning provides the Council with excellent opportunities to improve access via public transport, by locating new developments near to public transport nodes, and also to improve the urban environment by agreeing designs that encourage and facilitate easier walking.
- 9.12 All the options proposed for inclusion in the Transport Strategy should be subject to a formal assessment so that their cost-effectiveness and impact can be demonstrated prior to implementation. It may be that a vision statement, as recommended at the first meeting of the Transport Forum, could encourage a cohesiveness to the Sevenoaks Transport Strategy.
- 9.13 While the data and evidence base available to the District Council has gaps, we do not believe that it is inadequate for the purpose of developing and delivering the transport strategy. Over the 20-year period covered by the LDF data collection and availability will improve but the Council should monitor trends and update the data bank regularly. This is a resource that should be made available widely within the Council

- 9.14 The absence of a land-use or transport model for the Sevenoaks District should not prove to be an impediment to the development of the Sevenoaks Transport Strategy. At present we do not see the need for the development of a transport model for the Sevenoaks District. As data collection improves in the future it may become beneficial for a separate Sevenoaks District model to be constructed, however.

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