

# Technical Note: Transport measures to support growth identified in the Woking Borough Core Strategy

November 2011

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### Transport measures to mitigate growth identified in the Woking Borough Core Strategy

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#### Issue and Revision Record

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## **1 Status of this document**

This is a Surrey County Council officer level document containing evidence to support the Woking Borough Core Strategy Publication Draft (Woking Borough Council, July 2011). The information presented on existing and future highway problems is based on the Surrey Infrastructure Capacity Project (SICP) report, and the 2010 Transport Assessment.

This note is intended to inform the Borough Council's Infrastructure Delivery Plan (IDP) which will set out the infrastructure to support the growth set out in its Core Strategy.

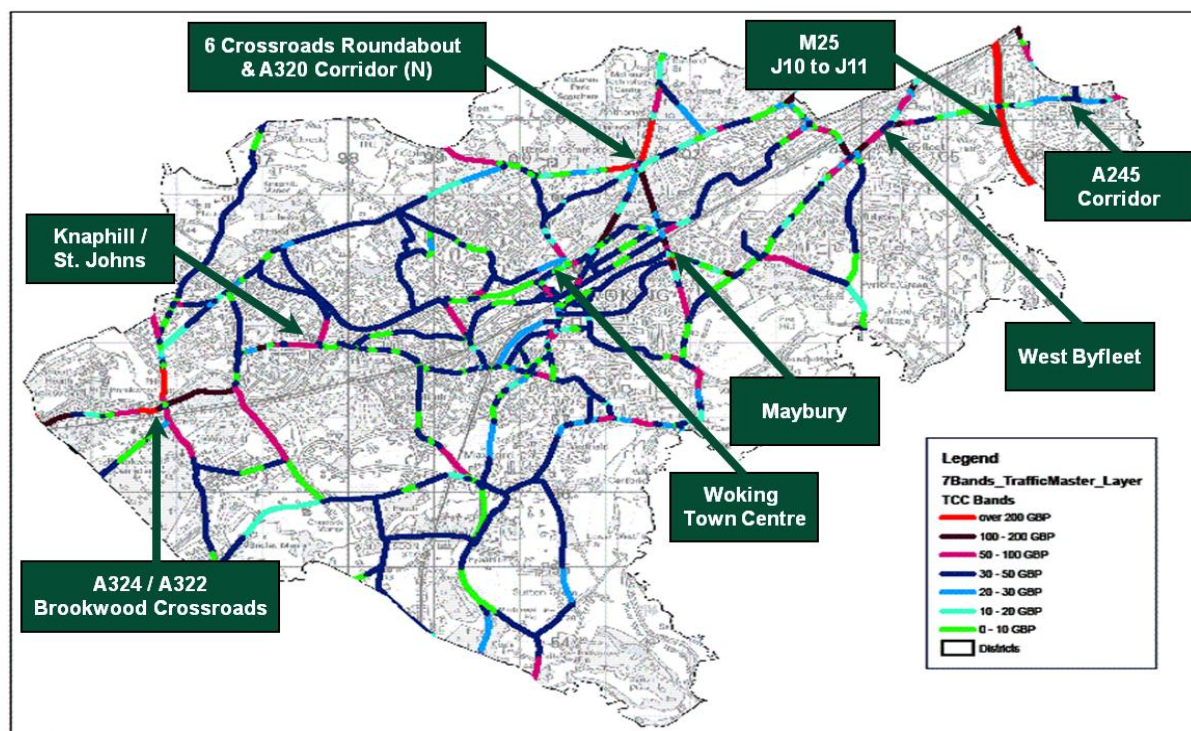
It will be the basis for preparing a Local Transport Strategy for Woking which in turn will enable:

- The infrastructure requirements to support growth to be identified and costed to support the need for a CIL charge; and,
- The development of a more detailed list of schemes with costs. These will be capable of being implemented and forming part of the CIL 'Section 123' List.

The Local Transport Strategy will require formal review and agreement by Surrey County Council.

## 2 Existing highway problems

High levels of car usage and an economically active population combine to produce considerable peak hour congestion at key locations in Woking borough.



**Figure 1: Existing transport-related problem areas in the borough of Woking**

Source: (Congestion Journey Time Acquisition Monitoring System (CJAMS) DfT 07/08

Congestion problem areas on the highway network within the borough of Woking have been identified using 'Cost of Congestion' mapping using (CJAMS). The map uses the difference in free-flow and congested travel times, weighted traffic flows and monetary values for different vehicles types to calculate cost of congestion for each road in the morning peak period.

The identified problem areas are:

- Woking town centre
- Maybury
- Knaphill / St Johns
- A324 / A322 Brookwood Crossroads
- West Byfleet & A245 corridor
- Six Crossroads Roundabout & A320 corridor
- M25 J10-J11 (Highways Agency)

Congestion issues on the local road network can lead to other transport related problems such as delays to car drivers, pedestrians and public transport users, in can also act as a barrier to movement and contribute to the potential risk of increased traffic collisions. Congestion is also the key issue in relation to air quality. Stop start driving conditions and slower vehicle speeds resulting from congestion can lead to higher roadside pollutant concentrations, hence causing greater risks to pedestrians and adjacent residential properties. Many areas in the borough suffer from one or more of these transport related problems.

### 3 Future highway problems

In order to understand the likely impacts of the proposed future developments on the highway network a transport assessment was undertaken using the County Transport Model (Surrey County Council, 10 December 2010, rev 3, Transport Evaluation for Woking Borough Council's Core Strategy: 2026 Transport Assessment Report). The purpose of the assessment was to assist in assessing the sensitivity of both the Strategic Route Network (SRN) and Local Road Network (LRN), including classified A and B roads, to the likely additional traffic generated by committed (with planning permissions) and non-committed (without planning permissions) residential and commercial development as proposed in the emerging Core Strategy of the Local Development Framework (LDF). The assessment also identified specific locations which may either require additional infrastructure provision or further investigation to identify possible mitigation measures.

The transport assessment considered the likely impact that the proposed developments could have on the highway network in the borough by testing various scenarios against a 2005 base year and 2026 'Do-Minimum' reference case.

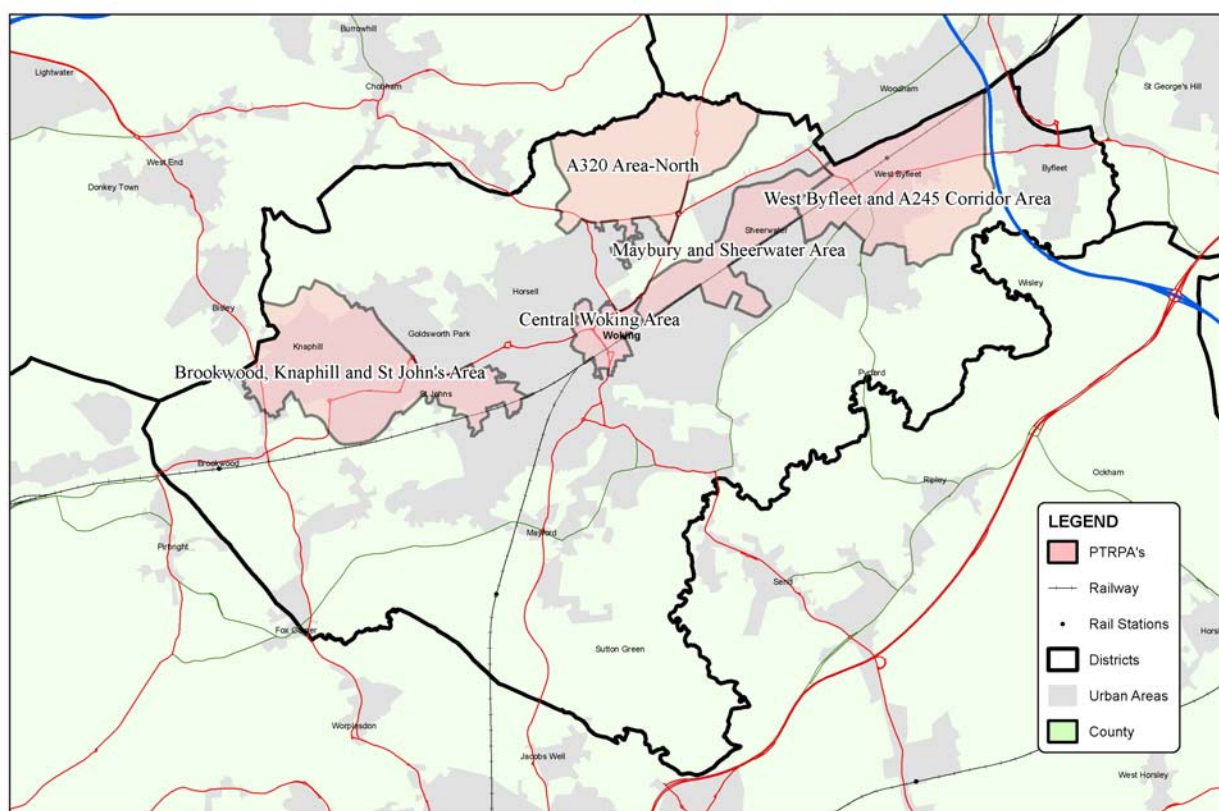
- Scenario A: approved planning permissions since 2005
- Scenario B: all development with and without planning permissions (including 'developable' and 'deliverable' SHLAA (Strategic Housing Land Availability Assessment) sites and retail and employment floorspace projections

In addition to the 'local' transport assessment, as part of the Surrey Infrastructure Capacity Project, the county council has also undertaken a strategic county-wide assessment to assess the cumulative impacts of all known future development. This development is as proposed in the eleven borough and district councils' emerging core strategies, and, in addition, large developments located externally to the county. This ensured that any strategic infrastructure requirements identified could be used to support each borough's need to produce a local Infrastructure Delivery Plan.

The main outcomes of both the county-wide and local transport assessments have been based on aggregations of modelled outputs of network summary statistics including vehicle kilometrage, travel times and average speeds. Further analysis has been undertaken by comparing journey times, traffic flows and volume/capacity ratio plots and highway capacity assessments on several motorway merges and diverges between the reference cases and Scenarios A and B to establish the sensitivity of the SRN and LRN to the impacts of the proposed development.

Both assessments have identified similar key locations within the borough of Woking which are predicted to experience greater ‘transport-related problems’ such as increases in journey times and traffic flows resulting in more congestion and hence less reliable journey times, which in the absence of appropriate mitigation, might be exacerbated over the Core Strategy plan period. These future priority problem areas shown in Figure 2 and listed below:

- Central Woking
- Maybury & Sheerwater
- Brookwood, Knaphill & St Johns
- West Byfleet & A245 corridor
- Westfield
- A320 corridor north of Woking to borough boundary



**Figure 2: Future priority transport-related problem areas (FTRPAs) in the borough of Woking – based on census boundaries**

The overall conclusions of both the county-wide and local transport assessments suggest that:

- Limited highway capacity infrastructure improvements (on either the SRN or LRN) are required for any particular area / corridor
- A combination of other transport measures, drawn from the transport strategies of the Surrey Transport Plan (Surrey County Council, April 2011), will help support and manage planned growth.

The Moor Lane housing site (440 dwellings) is not within the above identified problem areas and local transport infrastructure requirements to address the additional demand will be determined when proposals for this site are developed.

Given the strategic nature of the assessment, modelling limitations and the uncertainty of the size, distribution and land-use of any future planned developments, the interpretation of the likely impacts on both the SRN and LRN within this assessment should be treated as broad strategic projections, and as such further work will be needed (including complementary analysis using appropriate tools) to assist in the identification of additional transport provision at a more local and detailed level.

#### **4 Woking Local Development Documents: Core Strategy Publication document (July 2011)**

The Core Strategy Publication document (July 2011) sets out the borough-wide policy for transport and accessibility:

CS18: Transport and accessibility

The Council is committed to developing a well integrated community connected by a sustainable transport system which connects people to jobs, services and community facilities, and minimises impacts on biodiversity. This will be achieved by taking the following steps.

- Joint working with key stakeholders through the Transport for Woking Partnership to ensure that the principal objectives and overall vision of the Surrey Local Transport Plan are met.
- Locating most new development in the main urban areas, served by a range of sustainable transport modes, such as public transport, walking and cycling to minimise the need to travel and distance travelled.
- Ensuring development proposals provide appropriate infrastructure measures to mitigate the adverse effects of development traffic and other environmental and safety impacts (direct or cumulative). ... Developer contributions<sup>13</sup> will be secured to implement transport mitigation schemes.
- Supporting proposals that deliver improvements and increased accessibility to cycle, pedestrian and public transport networks and interchange facilities. In particular, proposals to improve easy access between Woking Rail Station and the town centre will be encouraged.
- Implementing maximum car parking standards for all types of non-residential development, including consideration of zero parking in Woking Town Centre, providing it does not create new or exacerbate existing on-street car parking problems. Minimum standards will be set for residential development. However, in applying these standards, the Council will seek to ensure that this will not undermine the overall sustainability objectives of the Core Strategy, including the effects on highway safety. If necessary, the Council will consider managing the demand and supply of parking in order to control congestion and encourage use of sustainable transport.
- Ensuring that changes made to transport infrastructure or increase in road vehicle usage will not have an adverse effect on the integrity of an SPA, SAC or Ramsar site.

The supporting text emphasises that 'There is significant scope to influence a shift in the mode of travel from car-based journeys to public transport and cycling' (para 5.161) in the borough. Woking Rail Station is 'pivotal' in providing 'effective interchange between modes and local, regional and national destinations and, complements the economic role of the Borough as a regional focus for infrastructure, in particular the regeneration of the town centre' (para 5.164).

Further and more specific transport-related objectives for each transport-related problem area, as drawn from the Core Strategy Publication document, are set out in the next section.



## 5 The Surrey Transport Plan LTP3

The Surrey Transport Plan is the third Local Transport Plan (LTP) for the county. It is a statutory plan (required by the Local Transport Act 2008 and Transport Act 2000), which replaced the second LTP on 1 April 2011. Like the previous Plans, the Surrey Transport Plan is partly an aspirational document.

The vision and objectives of the Surrey Transport Plan are as follows:

**Vision** To help people to meet their transport and travel needs effectively, reliably, safely and sustainably within Surrey; in order to promote economic vibrancy, protect and enhance the environment and improve the quality of life.

### Objectives

- **Effective transport:** To facilitate end-to-end journeys for residents, business and visitors by maintaining the road network, delivering public transport services and, where appropriate, providing enhancements.
- **Reliable transport:** To improve the journey time reliability of travel in Surrey.
- **Safe transport:** To improve road safety and the security of the travelling public in Surrey.
- **Sustainable transport:** To provide an integrated transport system that protects the environment, keeps people healthy and provides for lower carbon transport choices.

The Surrey Transport Plan includes a number of strategies which look forward to 2026. The purpose of each strategy is to set out the most effective, value for money, and customer-focused measures, interventions and policy tools that will best tackle problems and address objectives and targets. Thus the strategies set out the preferred measures (together comprising a 'toolkit' of possible interventions) rather than specific transport schemes for implementation.

## **6 Transport measures to support growth and achieve Core Strategy and LTP3 Objectives**

As noted above, it is considered that the scale of impacts within the identified future priority transport-related problem areas can be managed by implementing a combination of the transport strategies and measures contained within the Surrey Transport Plan. These impacts arise from existing movement patterns but will be made worse by the growth proposed in the Core Strategy.

There is some flexibility in the overall package of measures with no one solution considered essential to unlock development. However, the overall package of measures is considered necessary to support planned growth and deliver the Woking Core Strategy and LTP3 objectives and to mitigate impact from growth.

Joint working between the county and borough councils has been undertaken to identify problem areas and outline mitigating solutions have been discussed.

The following tables show outline transport solutions or packages of solutions. These schemes do not generally provide additional network capacity but seek to manage the existing network and provide more sustainable transport choices.

The schedules include the purposes of each scheme or package, indicative costs, broad phasing, possible identified funding sources and delivery bodies for each of the six problem areas. More work will need to be undertaken to ensure that:

- a) the schemes will provide the best value for money when assessed against the impacts of growth and transport objectives.
- b) there are no more effective options/alternatives available to address the problems and transport objectives
- c) the schemes can be delivered within the indicative costs identified and the core strategy timescale.

## Central Woking

### **LDF Core Strategy Publication Document (July 2011)**

Specific transport-related objectives for Woking Town Centre (Policy CS2):

- Primary focus of economic and housing growth
- Improve and upgrade public transport system and cycle facilities
- Improvements to Woking Railway Station seen as key

### **Transport-related problems in the area:**

- Congestion (congestion-related delay and/or unreliability)
- Community severance caused by limited crossings of the rail lines and also in the town centre north of the rail station,
- Possible suppression of the potential for economic activity

Scheme description	Scheme purpose	Phasing	Estimated cost *	Funding sources	Delivery Requirements	Delivery body
Woking transport interchange hub at the rail station	Improved interchange between rail, bus, walking and cycling modes in and around Woking rail station in order to  a) Improve overall accessibility of the town centre b) Encourage sustainable travel choices c) Accommodate growth	0-5 years	£2.7m	CIL, S106/278, LSTF, LTP	Impact assessment  Feasibility study	Surrey CC with Network Rail
<i>Including</i>						
<i>Piazza, bus interchange and taxi rank to south side of station, 'kiss and ride' (on Oriental Road)</i>			£1m		<i>Feasibility Study</i>	<i>Network Rail</i>
<i>Secure bike parking area within station facilities on south side</i>			£0.2m	<i>LSTF Bid, South West Trains (SWT)</i>		<i>SWT</i>
<i>Improvements to bus interchange north side of station</i>			£1.5m	<i>Developer contributions from Gateway Dev't</i>	<i>Subject to Gateway Development</i>	<i>Developer Woking BC</i>

\* All costs are indicative and subject to refinement and revision.

## Central Woking (Cont)

Scheme/package description	Scheme purpose	Phasing	Estimated cost *	Funding sources	Delivery Requirements	Delivery body
Victoria Arch - Pedestrian/cycle tunnel or twin tunnels provided on one or both sides of the existing railway bridge (Borough Council promoted scheme) Possible phased approach to one tunnel solution with relocation of road space Improvements on approach roads (A320)	To address community severance caused by railway and promote access to town centre by cycling and walking	6-10 years	£8-10m (Subject to feasibility)	CIL, LTP £2.1m developer contributions already identified	Feasibility Study Options testing Impact assessment Full scheme funding not yet identified	Woking BC Surrey CC Network Rail
<i>Including</i> <i>Potential additional pedestrian/cycle link across the railway to the east</i>			<i>Unknown</i>			
Cycle and pedestrian improvements in and on approach to town centre and Woking station interchange hub	To promote access to town centre by cycling and walking	0-5 years 6-10 years	£0.3-£0.6m £0.75m-£1.25m	CIL, LSTF, LTP		Surrey CC
<i>Including</i> <i>Cycle link from York Road to De Lara Way (the Hydra trail)</i> <i>Cycle link improvement from Woking Station to south Woking via A320 and Barnsbury Estate</i> <i>Woking High School to town centre link (the Jupiter trail)</i> <i>Brewery Road urban realm improvements</i>		0-5 years 0-5 years 6-10 years 6-10 years	£0.05-£0.1m £0.25-£0.5m £0.25m £0.5m-1m	<i>Part of LSTF bid</i>  <i>LTP, Developer funding</i>	  <i>3<sup>rd</sup> party land issue</i> <i>Feasibility and impact study</i>	
Upgrade and extend Urban Traffic Control System for central Woking to A320 corridor	To maximise road network efficiency	6-10 years	£0.5m	LTP, Developer contributions	Route management study	Surrey CC

\* All costs are indicative and subject to refinement and revision.

## Maybury & Sheerwater

<p><b>LDF Core Strategy Publication Document (July 2011)</b>                  Specific transport-related objectives for Maybury and Sheerwater, a 'Priority Place' (Policy CS5):</p> <ul style="list-style-type: none"> <li>• Bring forward proposals for a new access road through Monument Way East</li> <li>• Seek improvements to bus services from Sheerwater</li> <li>• Improve existing cycle network through Maybury and Sheerwater including the provision of secure cycle parking</li> <li>• Assess parking provision around the shopping parade in Sheerwater to increase trade and protect local businesses</li> <li>• Improve accessibility using a variety of transport modes (para 4.43)</li> </ul>	<p><b>Transport-related problems in the area:</b></p> <ul style="list-style-type: none"> <li>• Community severance</li> <li>• Poor accessibility for those without a car and those with mobility impairments</li> <li>• Congestion (congestion-related delay and/or unreliability) [where the strategic roads join the estate, but not within the estate]</li> <li>• Suppression of the potential for economic activity in the area</li> </ul>
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Scheme/package description	Scheme purpose	Phasing	Estimated cost*	Funding sources	Delivery Requirements	Delivery body
Sheerwater Access Improvements (Borough Council promoted scheme):	To reduce severance and attract investment. Improve accessibility for all modes. Environmental improvements to residential area	0- 5years  6-10 years	£3m-5m  £1.3m-£2.3m	LTP Developer contributions 3 <sup>rd</sup> party investment Woking BC (up to 50%)	Detailed feasibility study 3 <sup>rd</sup> party agreements Planning permission	Surrey CC
<i>Including</i>						
<i>Sheerwater access road –Via Monument Way East</i>		<i>0-5 years</i>	<i>£3m-5m</i>			
<i>Optional link to Monument Way West</i>	<i>Environmental benefits</i>					
<i>Devonshire Avenue/Albert Drive junction improvements</i>	<i>Access to Bishop David Brown School</i>	<i>6-10 years</i>	<i>£0.3m</i>			
Complementary area improvements to public transport, cycle, walking and public realm	Improvements to support regeneration and investment	6- 10 years	£1m-£2m	CIL and LTP		

\* All costs are indicative and subject to refinement and revision.

## West Byfleet & A245 Corridor

<p><b>LDF Core Strategy Publication Document (July 2011)</b></p> <p>Specific transport-related objectives for West Byfleet (Policy CS3):</p> <ul style="list-style-type: none"> <li>• Improve access for pedestrians, cyclists and public transport users</li> <li>• Retain Broadoaks as a site for a high quality business park</li> </ul>	<p><b>Transport-related problems in the area:</b></p> <ul style="list-style-type: none"> <li>• Congestion (congestion-related delay and/or unreliability)</li> <li>• Suppression of the potential for economic activity in the area</li> <li>• Number, severity and risk of accidents</li> </ul>
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Scheme/package description	Scheme purpose	Phasing	Estimated cost*	Funding sources	Delivery Requirements	Delivery body
A245 corridor improvements:	To improve road network efficiency To improve accessibility for cyclists	Various see below	£1.75m (* excluding land acquisition and utility costs)	Various see below	Corridor movement study & Impact assessment	Surrey CC
<i>Including</i>						
<i>Cycle route A245 Parvis Road</i>		<i>0-5 years</i>	<i>£0.7m</i>	<i>LSTF Bid, Developer contributions</i>		
<i>A245 Sheerwater Road shared footway/cycleway</i>		<i>0-5 years</i>	<i>£0.3m</i>	<i>LSTF Bid, Developer contributions</i>		
<i>Woodham Lane/Sheerwater Road junction improvement</i>		<i>0-5 years</i>	<i>£0.25m*</i>	<i>LTP, Developer Contributions</i>	<i>Detailed feasibility</i>	
<i>Sheerwater Road/Old Woking Road junction improvement</i>		<i>0 -5 years</i>	<i>£0.25m*</i>	<i>LTP, Developer Contributions</i>	<i>Detailed feasibility</i>	
<i>West Byfleet corner junction improvement (Old Woking Road/Pyrford Road/Camphill Road)</i>		<i>0-5 years</i>	<i>£0.25m*</i>	<i>LTP, Developer Contributions</i>	<i>Detailed feasibility</i>	
<i>Review the need for additional pedestrian crossings on A245</i>		<i>6-10 years</i>	<i>£0.1m per crossing</i>	<i>LTP, Developer Contributions</i>	<i>Detailed feasibility</i>	

\* All costs are indicative and subject to refinement and revision.

## West Byfleet & A245 Corridor (Cont)

Scheme/package description	Scheme purpose	Phasing	Estimated cost*	Funding sources	Delivery Requirements	Delivery body
Improve the one-way system in West Byfleet centre, including routeing of buses and bus stop locations around rail station and pedestrian and cycle access to the station	Improved interchange between rail, bus, walking and cycling modes in and around West Byfleet station	0-5 years	£1m-£2m	CIL, LTP LSTF	Options analysis Feasibility study	

\* All costs are indicative and subject to refinement and revision.

## Brookwood, Knaphill & St Johns

<p><b>LDF Core Strategy Publication Document (July 2011)</b></p> <p>Specific transport-related objectives for Brookwood, Knaphill &amp; St Johns:</p> <ul style="list-style-type: none"> <li>• None defined.</li> </ul>	<p><b>Transport-related problems in the area:</b></p> <ul style="list-style-type: none"> <li>• Congestion (congestion-related delay and/or unreliability)</li> <li>• Community severance</li> </ul>
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Scheme/package, description	Scheme purpose	Phasing	Estimated cost*	Funding sources	Delivery Requirements	Delivery body
Minor local area road, safety and accessibility improvement schemes	Improve accessibility to local centres and Woking town centre for pedestrians and cyclists	0-1years 6-15 years	£0.1m £1m-£2m	LTP, S106 developer funding for Brookwood Farm development		Surrey CC
<i>Including</i>  <i>Shared use cycle route adjacent to A322 Redding Way - Basingstoke Canal</i>	<i>Link Knaphill to wider cycle network</i>	<i>0-5 years</i>	<i>£0.1m</i>			

\* All costs are indicative and subject to refinement and revision.



## A320 corridor north of Woking

<p><b>LDF Core Strategy Publication Document (July 2011)</b></p> <p>Specific transport-related objectives for A320 Corridor north of Woking:</p> <ul style="list-style-type: none"> <li>• None defined.</li> </ul>	<p><b>Transport-related problems in the area:</b></p> <ul style="list-style-type: none"> <li>• Congestion (congestion-related delay and/or unreliability)</li> <li>• Damage to environmentally sensitive sites</li> <li>• Suppression of the potential for economic activity in the area</li> </ul>
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Scheme/package description	Scheme purpose	Phasing	Estimated cost*	Funding sources	Delivery Requirements	Delivery body
A320 corridor improvements from town centre to Six Crossroads Roundabout including:	To improve network efficiency  To accommodate growth and facilitate more sustainable travel choices	6-15 years	£1m-£5m	Developer funding	Corridor study	Surrey CC
Possible measures:  Six Crossroads Roundabout possible junction upgrade  Improvements to side roads						

\* All costs are indicative and subject to refinement and revision.

## 7 Estimated costs and funding

The estimates of costs of the schemes identified over the first 5 years is approx £9m - £12m.

Potential funding will be a combination of:

- Developer contributions:
  - i) Section 106 development contributions (these are identified where known)
  - ii) The Community Infrastructure Levy CIL. Based on best estimates, CIL receipts of could amount to approximately £5m the next 5 years for transport related infrastructure.
- Local Sustainable Transport Fund (LSTF) – a bid will be submitted by the 20<sup>th</sup> December 2011
- Funding through the County Council (Govt grants such as LTP, LSTF and major schemes)
- SCC Local Committee allocations
- Borough Council
- 3<sup>rd</sup> party contributions

The actual costs will depend on the precise schemes brought forward and each scheme will require a detailed feasibility study. The availability of funding will also depend on a number of factors. Nevertheless the cost of the package of schemes currently identified is reasonably in line with potential funding over the next 5 years.

Beyond 5 years scheme costs and possible funding sources become more and more difficult to estimate with any degree of certainty.

## 8 Woking Borough Local Plan 1999 road schemes

The Woking Borough Local Plan 1999 contains a schedule of road schemes. To date, the only scheme to be completed is the improvement of the Brook House Junction at the eastern end of Victoria Way (Policy WTC18 part v).

The Borough Council considers the following schemes continue to be important to help deliver growth and economic regeneration as part of its emerging Core Strategy:

- Sheerwater Access Improvements (Alternative to MV25); and,
- Victoria Arch Scheme in Woking Town centre.

These schemes are included in the above measures along with aspects of:

- Public Transport hub at Woking Station (WTC19)

The County Council will review all major highway schemes in spring 2012 including the Bisley Common to Brookwood Cross Roads Scheme (MV24) and Chertsey Road/ Monument Road link (MV25). These schemes are not included in the tables in section 4 as they are unlikely to proceed.