

# South Gloucestershire Core Strategy

Review of Strategic Transport Case

Client: South Gloucestershire Council

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ATKINS

Plan Design Enable

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# 1. Introduction

## Purpose of this Document

- 1.1. **Policy CS5 (Location of Development)** of the South Gloucestershire Core Strategy<sup>1</sup> describes the framework for the location and scale of development in South Gloucestershire in the Core Strategy plan period to 2026. CS5 identifies that:
- *Most new development will take place within the communities of the North and East Fringes of Bristol urban area:*
    - *To 2016, the focus will be the development of existing commitments and the remaining South Gloucestershire Local Plan allocations; and*
    - *Post 2015/2016, new neighbourhoods of sustainable communities will be developed at Cribbs/Patchway and to the east of Harry Stoke*
  - *At Yate/Chipping Sodbury, new development will be of a scale appropriate to achieve greater self-containment and to improve the separate but inter-related roles and functions of the towns, focusing on investment in the town centres and improving the range and type of jobs; and*
  - *At Thornbury, new development will be of a scale appropriate to revitalise the town centre and strengthen community services and facilities.*
- 1.2. The Location of Development set out in the Core Strategy was subject to a detailed Sustainability Appraisal (SA)<sup>2</sup> by South Gloucestershire Council (SGC) compliant with European Strategic Environmental Assessment regulations. This used a comprehensive set of appraisal criteria, which included transport.
- 1.3. SGC appointed Atkins to undertake an independent review of the strategic transport case as considered by the SA for the selection of the location of the development defined in CS5.
- 1.4. SGC requested that the review also examine the strategic transport case for development in the East Fringe of Bristol. This strategic location was considered in the SA (defined as South of Emersons Green / East of Kingswood) but was not selected as a proposed location for development in the Core Strategy. This independent review has therefore considered the transport case for the following locations:
- Cribbs/Patchway;
  - West of M32 (which includes East of Harry Stoke New Neighbourhood as defined in the Core Strategy);
  - Yate and Chipping Sodbury;
  - Thornbury; and
  - South of Emersons Green/East of Kingswood.
- 1.5. The review has considered factors including the feasibility of providing and/or improving connectivity by sustainable travel modes, the ability to minimise the impacts of additional traffic on key routes and the deliverability of strategic transport infrastructure required to improve connectivity to each location.
- 1.6. The review has adopted a systematic and objective method to assess each location, in line with established transport planning best practice. It has drawn upon a range of supporting evidence including accessibility information drawn from a computer-based transport model.

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<sup>1</sup> South Gloucestershire Core Strategy: December 2011. Core Strategy incorporating Post-Submission Changes

<sup>2</sup> South Gloucestershire Core Strategy: Sustainability Appraisal Report, Main Report and Appendices to support the December 2011 Core Strategy incorporating Post-Submission Changes, South Gloucestershire Council, Dec 2011

## Structure of this Document

- 1.7. Chapter 2 describes the transport policy context in South Gloucestershire, including key policies in the Core Strategy and the Local Transport Plan.
- 1.8. Chapter 3 uses objectives from the Core Strategy to provide an assessment of the transport issues associated with alternative strategic locations for development.
- 1.9. Because of the specific issues associated with Yate/Chipping Sodbury and Thornbury, Chapter 4 assesses alternative sites in these two locations.

## 2. Policy Context

### Introduction

- 2.1. The assessment of the transport case for each of the locations requires an understanding of the wider objectives of sustainable development set out in the Core Strategy and the transport goals defined in the Third Joint Local Transport Plan (JLTP3) for the West of England<sup>3</sup>, which includes South Gloucestershire. This chapter summarises these key objectives and uses them to define criteria against which to assess the transport case for each location.

### Managing Future Development

- 2.2. In managing future development, the Core Strategy highlights the importance of accommodating new housing and jobs in ways that enable people to make sustainable travel choices and minimise environmental impacts of their journeys. It sets out the following:

- Concentrating the majority of new development to take advantage of existing services and facilities and higher levels of accessibility;
- Locating development where it will provide the opportunity to minimise the need to travel and allow safe and convenient access to services by walking, cycling and public transport;
- Recognising and protecting the identity and heritage of existing communities;
- Promoting greater self-containment and enhancing the service centre role of the market towns of Thornbury, Yate and Chipping Sodbury;
- Supporting local housing needs and services in villages;
- Protecting the Green Belt and the countryside from inappropriate development; and
- Providing a range of infrastructure, together with integration and access, in step with new development.

- 2.3. In transport terms, it explicitly highlights the importance of locating development in places with good accessibility to existing public transport services, with the opportunity to minimise the need to travel and to enable walking, cycling and public transport to meet travel needs. It also highlights the importance of appropriate transport infrastructure to support new development.

### Tackling Congestion and Improving Accessibility

- 2.4. In tackling congestion and improving accessibility, the Core Strategy highlights the impacts of historic housing and employment growth on travel conditions in the area, including high rates of traffic growth, congestion, unsustainable commuting patterns, longer journey times and impacts on the reliability of public transport.

- 2.5. It notes the commitment of the Council to working on transport issues with partners across the West of England through the Joint Local Transport Plan (discussed below). It sets out the following objectives:

- Reducing congestion and air pollution by improving accessibility by means other than the private car;
- Widely improving and enhancing opportunities for walking, cycling and using public transport, particularly to significant destinations, such as educational establishments, hospitals and employment areas; and

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<sup>3</sup> West of England JLTP3 <http://travelplus.org.uk/media/205985/jltp3%20march%202011.pdf>

- Completing delivery of the Greater Bristol Bus Network and delivering the North Fringe to Hengrove Package, the link from Temple Meads - Emersons Green and the Greater Bristol Metro Project.

- 2.6. The first two objectives are focused on improving accessibility by walking, cycling and public transport, therefore encouraging people to switch from travelling by car, helping to reduce congestion and pollution. The third objective is focused on the delivery of three major projects to improve public transport provision and hence support the first two objectives.
- 2.7. **Policy CS7** describes the Council's priorities for strategic transport infrastructure, which includes completion of the Greater Bristol Bus Network, rapid transit serving the North and East Fringes, improvements to rail services and a series of transport packages to support development in specific places. **Policy CS8** describes the Council's approach to improving accessibility, in which priority will be given to providing occupiers of new development with a range of travel options other than the car.

## Joint Local Transport Plan

- 2.8. The Third Joint Local Transport Plan (JLTP3) for the West of England <sup>4</sup> sets out the transport vision, objectives and implementation programme for the West of England, which includes South Gloucestershire. It describes how the authorities in the West of England will deliver an affordable, low carbon, accessible, integrated, efficient and reliable transport network to achieve a more competitive economy and better connected, more active and healthy communities.
- 2.9. The JLTP3 sets out the following goals, which drive the transport strategy and programme:
- Reduce carbon emissions;
  - Support economic growth;
  - Promote accessibility;
  - Contribute to better safety, security and health; and
  - Improve quality of life and a healthy natural environment.
- 2.10. In South Gloucestershire, the strategies for delivering these goals include promoting walking, cycling and public transport, tackling congestion, supporting delivery of new houses and jobs, increasing the capacity of transport networks, reducing the number of road casualties, encouraging more active travel, enhancing the public realm and minimising impacts on the natural and historic environment.
- 2.11. The JLTP3 describes a series of major schemes. In South Gloucestershire these comprise the North Fringe to Hengrove (NFH) Package, Emersons Green to Temple Meads Rapid Transit and Greater Bristol Metro. The NFH Package has subsequently secured Programme Entry status from the Department for Transport (DfT), with construction expected to commence in 2014. The Greater Bristol Metro is currently a priority project for the partners in the West of England. It is not expected that the Emersons Green to Temple Meads Rapid Transit scheme would be delivered until at least after 2020.

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<sup>4</sup> West of England JLTP3 <http://travelplus.org.uk/media/205985/jltp3%20march%202011.pdf>

## 3. Assessment of Locations

### Introduction

- 3.1. This chapter presents the assessment of the transport case for each of the locations described in Chapter 1. It sets out below the criteria used in the assessment process and then presents the assessment findings.

### Criteria used in assessing transport case for each location

- 3.2. Drawing on the policy framework in the JLTP3 and Core Strategy, the following criteria have been used in assessing the development locations:
1. Whether the location will enable connectivity and accessibility for walking and cycling to key destinations;
  2. Whether the location is already or can feasibly be served by high quality direct public transport links to key destinations;
  3. Whether the impacts of additional traffic to/from the location on key traffic routes can be minimised; and
  4. Whether strategic transport infrastructure can feasibly be provided to provide/improve connectivity to the location within the Plan period.
- 3.3. The performance of each location has been assessed against each of the above transport criteria, using a three point scale, as follows:
- Positive (+) i.e. the location performs well against the criterion;
  - Negative (-) i.e. the location performs badly against the criterion; or
  - Neutral (N), where the location is judged to perform neither positively or negatively against the criterion.

### Assessment Findings

- 3.4. Table 1 summarises the appraisal of each location against the criteria described above. A brief commentary of the appraisal for each location is provided below.

**Table 1. Appraisal of Locations against Transport Criteria**

Assessment Criteria		Cribbs / Patchway	West of M32	S of Emersons Green / E of Kingswood	Yate & Chipping Sodbury	Thornbury
1	Whether the location will enable connectivity and accessibility for walking and cycling to key local destinations	+	+	N	+	+
2	Whether the location is already or can feasibly be served by high quality direct public transport links to key local destinations	+	+	N	+	+
3	Whether the impacts of additional traffic to/from the location on key traffic routes can be minimised	N	+	-	N	N
6	Whether strategic transport infrastructure can feasibly be provided to provide/improve connectivity to the location within the Plan period	+	+	-	+	N

3.5. The locations at **Cribbs / Patchway** and **West of the M32** perform best, in relative terms, on transport grounds, as follows:

- They are located close to major employment and a range of existing community and shopping facilities, enabling people to walk or cycle to travel to access local destinations;
- It would be relatively straightforward to connect into existing infrastructure for walking and cycling that is already in place in adjacent areas;
- Both locations are already served by frequent bus services - including the Greater Bristol Bus Network (GBBN) - to a number of destinations;
- Both locations will be served by the North Fringe Hengrove Package major scheme, which will provide direct rapid transit services to other parts of the North Fringe and Bristol city centre. Given that this scheme is progressing through the delivery process with funding identified by the Department for Transport and the West of England authorities this scheme is considered deliverable within the plan period. In addition both locations would benefit from the proposed Greater Bristol Metro scheme which the West of England authorities have prioritised for implementation in the period 2016-2020.
- The West of M32 location would be enabled via the Stoke Gifford Transport Link (as part of the North Fringe Hengrove Package major scheme), which will provide significant mitigation to impacts of additional traffic on key routes. The traffic impacts of the Cribbs/Patchway location are considered neutral given the opportunity for significant mitigation of additional traffic by use of more sustainable modes of travel.

3.6. The area **South of Emersons Green/East of Kingswood** is considered to perform significantly less well on transport grounds. The following points apply in this case:

- There is currently limited employment in this area, with twice as many residents as jobs: large-scale residential development would result in significant out-commuting from the area;
- The nearest local shopping facilities and services are located more than comfortable walking distance from most parts of the site (although local shopping facilities and other local services would be provided on the site);
- Whilst cycling routes are provided to Longwell Green and Emersons Green (and beyond to the city centre), cycling is likely to be limited to more local journeys within the area;
- Existing bus service provision is variable. Existing bus services operating along the

(congested) A420 corridor to the south would not be within walking distance of much of the site. It would be necessary to introduce new routes to serve the area: this could include a new bus service operating on a north-south axis through the site, but this would provide limited travel options for residents of the site;

- There are no realistic opportunities for rail provision to serve the development location: public transport choices are therefore entirely based on the ability to improve local bus services;
- Given the future constraints to other modes, car use from the area would be high. The area would generate heavy traffic flows on already congested routes, including the A4174 Ring Road. Given the importance of the Ring Road as a primary route, this would significantly impact on the operation of the route and journey times for strategic traffic;
- There are no planned strategic transport infrastructure improvements that could be expected to be delivered within the plan period that would significantly improve connectivity by either car or public transport. The proposed rapid transit scheme between Bristol Temple Meads and Emersons Green (which would have linked to the development location) is not currently in the major scheme programme and technical work undertaken by the West of England authorities has demonstrated that there would be a number of environmental challenges in delivering such a scheme. Major public transport infrastructure that would be necessary to support development in the East Fringe will not, therefore, be forthcoming in the foreseeable future; and
- The Transport Assessment (TA) assumed that development would be complete by 2016, with no allowance for traffic conditions beyond 2016. Given that development would be unlikely to commence before 2016, the assumption in the TA is not realistic. In contrast, the assessments for the New Neighbourhoods made allowance for traffic conditions in 2026 or beyond. The TA demonstrates that the junctions (following large-scale improvements) would operate just within capacity in 2016. However, they would operate over capacity after 2016 with potentially long delays. The highway improvements on the A4174 Ring Road designed to cater for traffic generated by the East Fringe proposals therefore appear to be flawed.

3.7. The option for development in the **Yate and Chipping Sodbury area** would perform relatively well in transport terms:

- The two towns already have a good range of shops and services thereby facilitating short journeys and walking and cycling;
- The area is already served by good walking and cycling links and there is good potential to encourage cycling for travel to/from new development;
- There are frequent bus services to the North Fringe and Bristol, with good bus connections serving large parts of Yate and Chipping Sodbury;
- Whilst there are congestion issues on the A432 route, junctions in the area could be improved to mitigate the impacts of increased traffic demand. The impact is therefore considered neutral;
- Yate would experience some benefits from strategic transport infrastructure through components of the Yate and Chipping Sodbury Package and, to some degree, from the North Fringe Hengrove Package. Both packages are considered feasibly deliverable within the plan period. In addition, Yate would benefit from the proposed Greater Bristol Metro scheme, which the West of England authorities have prioritised for implementation in the period 2016-2020.

3.8. The strategy for development at **Thornbury** would be to support the vitality of the town centre and local community facilities. As such the assessment of the strategic transport case is less relevant. Nevertheless, the assessment shows that development in Thornbury would perform relatively well in transport terms:

- New development could feasibly be located within walking and cycling distance of the town

centre;

- Whilst there are some issues with current walking and cycling routes, these could be addressed to facilitate walking and cycling as attractive options for travel in the town;
- Thornbury is served by buses to Bristol and the North Fringe and services could be routed to serve new development in the town;
- It would be possible to mitigate the impacts of additional traffic on the local road network although the overall impact on key routes is considered neutral;
- Although some elements of the Rural Package (included as strategic transport infrastructure in Policy CS7) could provide some benefit to improving connectivity the overall impact is considered neutral.

## Conclusions

- 3.9. The assessments above demonstrate that development at Cribbs/Patchway, West of the M32, Yate / Chipping Sodbury and Thornbury would perform well in transport terms. They also highlight the shortcomings, on transport grounds, of the Area of Search to the South of Emersons Green / East of Kingswood.
- 3.10. It is recognised that several potential options have been identified for development at Yate / Chipping Sodbury and Thornbury: the following chapter addresses these issues in detail.

## 4. Further Assessment of Sites at Yate/Chipping Sodbury and Thornbury

### Introduction

- 4.1. Although included in the comparison of the transport case for development locations above, it is recognised that the strategic cases for development at Yate/Chipping Sodbury and at Thornbury are based on other issues. A further assessment has been made of the transport case for development at alternative sites in these two strategic locations.
- 4.2. A more detailed set of criteria has been used to compare the transport case for alternative sites related to the objectives set out in the Core Strategy, as follows:
- Whether it is possible to enable people to access jobs and services easily, safely and affordably;
  - Whether it is feasible to improve connectivity and accessibility to the site by sustainable modes;
  - Whether it is feasible to provide high quality links and wayfinding for walking and cycling;
  - Whether it is feasible to provide high quality direct public transport links to key destinations; and
  - Whether it is possible to mitigate the wider impacts of additional traffic on key traffic routes.

### Appraisal of Locations in the Yate & Chipping Sodbury Area

- 4.3. The SA describes the appraisal of five alternative locations to accommodate major development in the Yate & Chipping Sodbury area, as follows:
- Site A: Engine Common;
  - Site B: North Brimsham;
  - Site C: Yate Rocks (north of Peg Hill);
  - Site D: North of Chipping Sodbury; and
  - Site E: East of Chipping Sodbury.
- 4.4. The appraisal of the strengths and weaknesses, on specific transport grounds, of each of these options is summarised in the table below.

**Table 2. Appraisal of Locations in the Yate & Chipping Sodbury area**

Transport Objective		Engine Common	North Brimsham	Yate Rocks	N Chipping Sodbury	E Chipping Sodbury
1	Whether it is possible to enable people to access jobs and services easily, safely and	-	+	N	N	N
2	Whether it is feasible to improve connectivity and accessibility to the site by sustainable modes	-	+	-	-	N
3	Whether it is feasible to provide high quality links and wayfinding for walking and cycling	N	+	N	-	N
4	Whether it is feasible to provide high quality direct public transport links to key destinations	-	+	-	-	N
5	Whether it is possible to mitigate the wider impacts of additional traffic on key traffic routes	N	+	+	+	+

4.5. The site at **North Brimsham** would perform best on transport grounds:

- It would provide the critical mass of new development to support the provision of local facilities, including local shops and primary schools, which will support reducing travel by car;
- Provision of employment land would support the creation of more jobs that better match the skills of residents, helping to tackle out-commuting from the area;
- Good quality walking and cycling links would connect to the existing network, providing good access to Yate town centre; and
- Whilst this area is not currently well served by buses, development of this scale would increase potential demand, making a strong case for significant improvements to bus services, which would also better meet the needs of existing residents in north Yate.

4.6. The site at **Engine Common** would have a number of weaknesses:

- Severance from the rest of Yate by the railway line means that it would be difficult to integrate the site with existing communities;
- There would be severance of walking and cycling routes;
- It would be difficult to serve the site by public transport and, even if bus services were introduced, they would be of limited wider benefit to the town.

4.7. The sites at **Yate Rocks** and **North Chipping Sodbury** would have challenges in terms of the ability of residents to walk and cycle to local services and the ability to provide improved bus services to meet the needs of new residents. The site at **East Chipping Sodbury** could facilitate easy walking and cycling to Chipping Sodbury town centre and existing bus services could be extended into the site.

4.8. This transport case assessment supports the conclusions of the SA that the best performing site is that at North Yate. This assessment is based on the assumption that an appropriate package of transport measures is delivered to ensure good quality access to the town centre by walking, cycling and public transport and appropriate access arrangements by car. The transport issues associated with this site are discussed in more detail in the **North Yate Transport Review**.

## Appraisal of Locations in the Thornbury Area

4.9. The SA describes an extensive process of consideration of alternative locations in the Thornbury area. It initially considered six broad areas of search and removed three areas on sustainability

grounds, including factors relating to isolation from and barriers to integration with the current form of the town.

4.10. The remaining areas were then used to inform the drafting of six broad options for the location of possible development, as follows:

- Option 1: Morton Way, north east of Thornbury (350-400 houses);
- Option 2: Morton Way, east of Thornbury (90-110 houses);
- Option 3: Morton Way, south east of Thornbury (750-900 houses);
- Option 4: adjacent to Bristol Road, on south west side of town centre (90-100 houses);
- Option 5: Kington Lane / Castle Street, on north west side of town centre (40-50 houses);
- Option 6: Park Farm, to north of Thornbury (500-600 houses).

4.11. The appraisal of the strengths and weaknesses, on specific transport grounds, of each of these options is summarised in the table below.

**Table 3. Appraisal of Locations in the Thornbury area**

Transport Objective		1. Morton Way (NE)	2. Morton Way (E)	3. Morton Way (SE)	4. Bristol Rd (SW of t/c)	5. Kington Ln (NW of t/c)	6. Park Farm (North)
		Score	Score	Score	Score		Score
1	Whether it is possible to enable people to access jobs and services easily, safely and	-	-	-	-	-	+
2	Whether it is feasible to improve connectivity and accessibility to the site by sustainable modes	-	N	N	+	N	+
3	Whether it is feasible to provide high quality links and wayfinding for walking and cycling	-	-	-	+	+	+
4	Whether it is feasible to provide high quality direct public transport links to key destinations	N	N	N	+	N	+
5	Whether it is possible to mitigate the wider impacts of additional traffic on key traffic routes	N	N	N	N	N	N

4.12. This confirms the conclusions drawn from the SA that the options to the east of Morton Way (Options 1,2 and 3) would less sustainable in transport terms than the other sites:

- These options would not enable people to access local services in Thornbury easily, given the distance to walk and cycle into the town centre; and
- Whilst two of these options could be served by minor diversions to existing bus routes, the form and location of development could encourage unsustainable car-based commuting out of the town.

4.13. Options 4 and 5 would perform relatively well on transport grounds, although it is noted that they are smaller sites and would therefore have lower impacts.

4.14. Option 6, at Park Farm, would perform best in transport terms:

- It would enable residents to access local services easily, including Castle School and the town centre, with potential to improve walking and cycling links to the town centre; and
- Whilst the site is not currently adjacent to existing bus routes, there would be scope to divert and enhance existing services, facilitated by the construction of a new access for buses to enter the site.

- 4.15. This transport case assessment supports the conclusions of the SA that the best performing site is Park Farm. This assessment is based on the assumption that an appropriate package of transport measures is delivered to ensure good quality access to the town centre by walking, cycling and public transport and appropriate access arrangements by car. The transport issues associated with this site are discussed in more detail in the **Thornbury Transport Review**.

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