Progress update on the Sustainable Movement Corridor scheme
Guildford Borough Council, June 2016

1. Introduction

The concept of the Sustainable Movement Corridor (hereafter the ‘SMC’) was first developed by consultant Arup in the Guildford Town and Approaches Movement Study (GTAMS).

Guildford Borough Council’s Executive endorsed the Strategy Report of the GTAMS study in April 2014. The Executive also authorised study work to develop the SMC concept further, including establishing the preferred route, any further route options, the potential location of any land bridges across the A3 trunk road, and any further land which could be safeguarded for the SMC corridor through the Local Plan process.

The Proposed Submission Local Plan (Guildford Borough Council, June 2016) includes the SMC in Policy I3 Sustainable transport for new development, in the Appendix C Infrastructure schedule and in a number of site allocation policies.

The SMC will provide a priority pathway through the urban area of Guildford for buses, pedestrians and cyclists, serving the new communities at Blackwell Farm, SARP and Gosden Hill Farm including the new Park and Ride site, the new Guildford West (Park Barn) and Guildford East (Merrow) rail stations, the Onslow Park and Ride, both of the University of Surrey’s campuses, the town centre and Guildford rail station.

Journeys on the SMC will be rapid and reliable by bus and safe and direct on foot and by bike.

The SMC will be implemented in sections during the plan period, largely on existing roads and with the urban extensions at Blackwell Farm, SARP and Gosden Hill Farm, and some sites in the town centre, required to make provision for the corridor.

The route sections of the proposed SMC are listed in Appendix C Infrastructure Schedule of the Proposed Submission Local Plan.

This progress update describes:

- Origin of SMC concept
- Subsequent study work undertaken and future directions
- SMC in the Proposed Submission Local Plan: strategy and sites (June 2016)
- Difference between SMC in the Proposed Submission Local Plan: strategy and sites (June 2016) and Arup’s original concept
- Sustainable Movement Corridor design formats
- Route, component route sections and phasing of route sections
- Potential impacts on the performance of the local highway network
2. Origin of Sustainable Movement Corridor concept

The concept of the SMC was first developed by consultant Arup in the *Guildford Town and Approaches Movement Study (GTAMS)*. The aim of the study was to develop a recommended long term movement strategy to 2050 for the town of Guildford.

The SMC concept, “providing a priority pathway through the town for pedestrians, cyclists and public transport” ([GTAMS Strategy Report, Arup, March 2015](#)), was the “centrepiece” of the recommended strategy. Arup stated that “It can be used by existing bus services, but also by new services running only on this corridor, potentially Bus Rapid Transit (BRT) or even a tram system, if there is significant growth in demand in future to support this type of technology.”

Pages 13-15 of the [GTAMS Strategy Report (Arup, March 2015)](#) describes Arup’s thinking behind the concept. Figure 1 below is a diagrammatic representation of Arup’s concept.

![Figure 1: Arup’s concept of the Sustainable Movement Corridor](source: ‘Figure 7: Defining the Sustainable Movement Corridor’ from Arup, March 2015)
3. Subsequent study work undertaken and future directions

Subsequent to the GTAMS study, study work has been undertaken on various route sections of the SMC.

**Sustainable Movement Corridor: Yorkie's Bridge – feasibility design of a new Yorkie’s Bridge structure carrying the SMC (Arup)**

Arup was commissioned by Guildford Borough Council in 2014 to prepare concept designs for a replacement new Yorkie’s Bridge.

This study work has informed scheme SMC2 Sustainable Movement Corridor: Yorkie’s Bridge in the Proposed Submission Local Plan: strategy and sites (June 2016).

The scheme will provide a new Yorkie’s Bridge structure over the railway linking between the University of Surrey’s Stag Hill campus and Walnut Tree Close utilising the access road that currently provides access to Jewson and to the present Yorkie’s Bridge.

The preferred option is shown in Figure 2 below.

![Figure 2: Preferred option for the Sustainable Movement Corridor: Yorkie’s Bridge](source: extract from Arup drawing number HW-SK-007 Issue 02)
The option minimises land-take and costs. In this concept layout, the deck of the proposed new bridge has been kept as narrow as possible. Given the relatively low frequency of bus movements that will use the bridge, it is proposed that a traffic control system will be used so that only one bus at a time will be on the bridge and using a bidirectional bus lane. Walking and cycling facilities are proposed alongside the bus lane.

In the future, following the redevelopment of the Jewson site (as per Policy A5: Jewsons, Walnut Tree Close, Guildford), a dedicated branch of the Sustainable Movement Corridor for pedestrians and cyclists can be extended from the Yorkie's Bridge access road to Station View. This is as per Policy A10: Land for Sustainable Movement Corridor Town Centre Phase 2, off Walnut Tree Close, Guildford and SMC4 Sustainable Movement Corridor: Town Centre Phase 2. See the Proposed Submission Local Plan: strategy and sites (June 2016) for site allocation policies A5 and A10 and scheme SMC4. Pedestrians and cyclists will then be able to use this branch of the SMC route to access Guildford railway station and onwards to the town centre, as an alternative to the SMC branch on the southern section of Walnut Tree Close.

This layout has also been used as a template to allocate the land in Policy A10: Land for Sustainable Movement Corridor Town Centre Phase 2, off Walnut Tree Close, Guildford, in the Proposed Submission Local Plan: strategy and sites (June 2016).

**Sustainable Movement Corridor: Walnut Tree Close to A322 Woodbridge Road/A25 Woodbridge Road/A25 Ladymead junction via Guildford town centre – concept designs (WSP Parsons Brinckerhoff)**

As part of the commission for the Council’s Guildford Town Centre Highway Assessment (GOTCHA) study, consultant WSP Parsons Brinckerhoff (hereafter WSP-PB) has prepared a number of draft concept layouts for the SMC between Walnut Tree Close and the A322 Woodbridge Road/A25 Ladymead/A25 Parkway junction via Guildford town centre. These take account of Allies and Morrison Urban Practitioners’ preferred gyratory scenarios 1 and 2, as set out in the Guildford Town Centre and Hinterland Masterplan Report: Final draft report for consultation (Allies and Morrison Urban Practitioners, October 2015).

WSP-PB prepared SMC ‘max’ and SMC ‘light’ schemes as draft concept layouts that could be incorporated into further work. In the SMC ‘max’ concept, the ‘preferred’ design provides separate lanes for buses, cyclists and pedestrians, with ideally, as a minimum, the bus and cycle lanes co-located to one side of the carriageway, with general traffic lanes on the other side. In addition, the two bus lanes are adjacent to one another, with the two cycle lanes beside and also adjacent to one another.

This categorisation has also been used in study work by AECOM – see below – and has informed the SMC type 1 and SMC type 2 design formats described in section 6.

A number of draft options have been prepared and an extract from one showing a potential concept layout at A322 Onslow Street/A322 Woodbridge Road/A246 York Road junction is shown in Figure 3 overleaf.

This study work has informed scheme SMC3 Sustainable Movement Corridor: Town Centre Phase 1 and SMC4 Sustainable Movement Corridor: Town Centre Phase 2 in the Proposed Submission Local Plan: strategy and sites (June 2016).
This work is now being taken forward by the Major Projects Team at Guildford Borough Council working in conjunction with Surrey County Council.

Sustainable Movement Corridor: A322 Woodbridge Road/A25 Woodbridge Road/A25 Ladymead junction to Slyfield Industrial Estate – proof of concept (AECOM)

AECOM was commissioned by Guildford Borough Council in 2015 to undertake a study to establish the proof of concept for this section of the SMC.

A site visit was undertaken by AECOM to identify constraints along this section. Enquiries were also issued to statutory undertakers under Section C2 of the New Roads and Street Works Act to obtain asset location plans defining the location of existing utility apparatus.

This study has identified that there is sufficient space within the A25 corridor and the section of the A320 that extends from the Ladymead junction to the junction with the...
A3 eastbound merge slip road to provide a SMC incorporating separate facilities for pedestrians, cyclists and pedestrians in a layout referred to as ‘SMC max’. Potential improvement measures on this section of the highway network include the introduction of a bus lane and bus gate on the eastbound and westbound carriageway of the A25, an additional bus lane on the northbound carriageway of the A320 and Selective Vehicular Detection at the junction between the A320/A3 westbound diverge. Non-motorised user routes along this section of the highway network are also proposed to be improved by widening the existing footways on the A25 and A320 to form shared use facilities.

The section of the A320 that extends from the junction with the A3 eastbound merge slip road to the Slyfield Industrial Estate is constrained by the presence of third party land and structures, which limit the width of highway land that is available to accommodate separate facilities for pedestrians, cyclists and buses and preclude the provision of the ideal ‘SMC max’ corridor. However, a range of alternative improvement measures have been identified, which form part of an ‘SMC light’ scheme that is intended to enable bus services to be extended to the Slyfield Industrial Estate, whilst allowing bus journey times to be improved and gaps in the existing pedestrian and cycle network to be removed. These measures include a new one way bus loop that would extend into the southeast corner of the Industrial Estate, via the widened Slyfield Waste Transfer Station access road, before being permitted to travel in a westerly direction along Moorfield Road, turning south onto the A320 Woking Road and re-joining the existing route on the old Woking Road. Bus priority measures are also proposed in the form of Selective Vehicular Detection at signalised junctions along the A320 and additional bus lanes at the Stoughton Road roundabout. Improvements to the non-motorised user network are proposed in the form of additional shared footway/cycleways alongside the A320 and new Toucan crossings to accommodate key desire lines across existing carriageways.

A potential concept layout of SMC on the A25 Ladymead is shown in Figure 4 overleaf.
**Figure 4: Option for a potential concept layout of SMC on the A25 Ladymead**
*(source: AECOM)*

This study work has informed scheme SMC5 Sustainable Movement Corridor: North in the Proposed Submission Local Plan: strategy and sites (June 2016).

**West Guildford Sustainable Transport Corridor (Peter Brett Associates)**

Blackwell Development Limited (a company owned by The University of Surrey) commissioned Peter Brett Associates (PBA) to consider the provision of measures to realise bus priority and cycle route improvements on the corridor from the Blackwell Farm site to Guildford town centre.

The proposals focus on elements that the University is able to deliver using land within the public highway or the University’s control. It is recognised that there could be further opportunities relating to other land / related to other land owners.

The proposals include:

- Buses continuing to route through Manor Park and Stag Hill campuses of the University of Surrey, largely as per existing arrangements given that these are already managed areas with limited traffic congestion.
- Recommendation to consider further the potential for tidal bus lane on Egerton Road as it passes under the A3 trunk road, with signalised control at either end controlling its use by buses, whilst retaining two working lanes of general traffic. It would be anticipated that the tidal bus lane would be used westbound in the morning peak period and eastbound in the evening peak period.
- Potential changes to the Tesco roundabout or conversion to a signal junction.
- Extension and widening of the eastbound bus stops on Egerton Road.
• Potential to widen and resurface the existing footpath connection to the south of the Cathedral from The Chase to Alresford Road, with Alresford Road a quiet road suitable for cycling which connects to Ridgemount which has speed cushions and itself connects south to Guildford Park Road leading to Guildford railway station.

This study work has informed scheme SMC1 Sustainable Movement Corridor: West scheme in the Proposed Submission Local Plan: strategy and sites (June 2016).

Summary

As can be seen with the various commissions above, a significant amount of study work has been undertaken to investigate options for the SMC. The only section that has not been investigated in terms of concept layout and feasibility is the section of the SMC from A25/A320 Stoke Crossroads to the proposed Gosden Hill Farm site. This section is likely to follow the A25 Parkway and A3100 London Road through Burpham. This is the SMC6 Sustainable Movement Corridor: East from the Proposed Submission Local Plan: strategy and sites (June 2016).
4. SMC in the Proposed Submission Local Plan: strategy and sites (June 2016)

The SMC is featured in the Proposed Submission Local Plan: strategy and sites (June 2016) in various sections:

- It is included in the Spatial Vision
- Policy I3: Sustainable transport for new developments, which states that “We will expect new development to: …contribute to the delivery of the route of the proposed Sustainable Movement Corridor in the town of Guildford where appropriate.”
- Policy A10 Land for Sustainable Movement Corridor Town Centre Phase 2, off Walnut Tree Close, Guildford
- Requirements with respect to the SMC are included in site allocation Policies A5, A7, A16, A17, A24, A25 and A26
- Route sections are included in the Appendix C Infrastructure Schedule as schemes SMC1, SMC2, SMC3, SMC4, SMC5 and SMC6.

5. Difference between SMC in the Proposed Submission Local Plan: strategy and sites (June 2016) and Arup’s original concept

The present SMC scheme, as represented in the Proposed Submission Local Plan: strategy and sites (June 2016), differs from Arup’s original concept in several ways:

- It provides connections to and extends through the strategic sites at SARP, Gosden Hill Farm and Blackwell Farm. However, the potential for these connections was envisaged by Arup, who stated that there were “potential opportunities for growth that could be supported by such a movement corridor” (Arup, March 2015). This is set out in site allocation Policies A24, A25 and A26 respectively.

- It crosses beneath the A3 trunk road in two locations; to the west, on the Egerton Road corridor, and to the east, on the A320 Woking Road. This is different from Arup’s concept that suggested the potential provision of one or more land bridges on which the Sustainable Movement Corridor could cross the A3 trunk road.

- There is explicit acknowledgement in the Proposed Submission Local Plan: strategy and sites (June 2016) that the SMC will be implemented largely on existing roads through the present urban area of Guildford. There will be different design approaches depending on the context. For instance, on the private roads of the University of Surrey’s Stag Hill campus, the Council envisages that the SMC will share the route with general traffic and users accessing the campus. Similarly, on southern section of the Walnut Tree Close, an adopted road, which is expected to be closed to through traffic (subject to the outcome of an experimental scheme), the SMC is likely to be unfettered by general traffic which will be limited to those accessing properties and businesses. The SMC will use existing bus lanes (e.g. on the A25 Parkway) or may provide new bus lanes, in some locations replacing on-street parking on its route. Elsewhere, the SMC will share road space, with opportunities taken to provide pre-signals for bus services on the SMC.
6. Sustainable Movement Corridor design formats

As a guide for future feasibility and design study work on the SMC scheme, we have identified SMC type 1 and type 2 design formats as follows:

- **SMC type 1**: provides separate lanes for bus, cycle and pedestrian, with ideally, as a minimum, the bus and cycle lanes co-located to one side of the carriageway, with general traffic lanes on the other side.

- **SMC type 2**: Use of bus priority measures and bus lanes at congested sections of the highway and at interchanges. Buses share general traffic lanes where there are free-flow conditions. Shared lanes are provided for cyclists and pedestrians.

Whilst SMC type 1 represents a preferred approach providing high priority for buses, pedestrians and cyclists, it may not prove necessary or appropriate in various locations.

7. Route, component route sections and phasing of route sections

*Route and component route sections*

The route sections of the SMC are shown in Figure 5 overleaf.

In the Proposed Submission Local Plan: strategy and sites (June 2016) itself, we do not consider that it is necessary to show the route of the SMC where it uses land within the highway boundary of adopted local roads, land through the campuses of the University of Surrey, or is reflected in site allocation policies. The only site allocation policy which includes a map indicating a part of the route of the SMC is Policy A10 Land for Sustainable Movement Corridor Town Centre Phase 2, off Walnut Tree Close, Guildford, which effectively replaces site allocation policy 122 from the Draft Guildford borough Local Plan: strategy and sites (July 2014).

Table 1 summarises the likely design formats for the SMC in the various sections, based on the current feasibility work. The sections are consistent with the Appendix C Infrastructure Schedule of the Proposed Submission Local Plan: strategy and sites (June 2016).
Figure 5: Route sections of the Sustainable Movement Corridor
Table 1: Likely design formats for the SMC in the various sections, based on the current feasibility work

<table>
<thead>
<tr>
<th>Route section</th>
<th>Likely features</th>
<th>Delivered when</th>
<th>Delivered by</th>
<th>Likely cost and funding source</th>
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| SMC1                | Blackwell Farm site: SMC type 1  
Surrey Research Park: SMC type 2  
Manor Park campus: SMC type 1 and/or type 2  
Egerton Road: SMC type 2  
Stag Hill campus: SMC type 2  
Guildford Park Road and Farnham Road (coincident with SMC: Town Centre Phase 1):  
SMC type 2                                                                 | Between 2018 and 2033 | Surrey County Council, Guildford Borough Council and developer(s) | £20m  
Developer contributions and Local Growth Fund |
| SMC2                | Replacement Yorkie’s Bridge: SMC type 1  
Approaches from Manor Park campus and from Walnut Tree Close: SMC type 1                                                                 | Between 2018 and 2033 | Surrey County Council, Guildford Borough Council, Network Rail and developer(s) | £10m  
Developer contributions and Local Growth Fund |
| SMC3                | Walnut Tree Close (southern end closed to through traffic by temporary experimental road closure): SMC type 2  
Replacement Walnut Bridge and Bedford Road: SMC type 1 (pedestrians and cyclists only)  
Bridge Street and/or Friary Bridge: SMC type 2  
Onslow Street: SMC type 2  
A322 Woodbridge Road: SMC type 2                                                                 | Between 2018 and 2022 | Surrey County Council and Guildford Borough Council | £5m-£10m  
Developer contributions and Local Growth Fund |
<table>
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<tbody>
<tr>
<td>SMC4</td>
<td>Sustainable Movement Corridor: Town Centre Phase 2 Walnut Tree Close: SMC type 2 Station View: SMC type 1 (pedestrians and cyclists only) Bridge Street: SMC type 1 Onslow Street: SMC type 1 and/or type 2 A322 Woodbridge Road: SMC type 2</td>
<td>Between 2018 and 2033</td>
<td>Surrey County Council, Guildford Borough Council, Network Rail and developer(s)</td>
<td>£5m-£10m Developer contributions and Local Growth Fund</td>
</tr>
<tr>
<td>SMC5</td>
<td>Sustainable Movement Corridor: North A25 Ladymead: SMC type 2 A320 Woking Road between A25 Parkway junction and Stoughton Road roundabout: SMC type 2 Old Woking Road: SMC type 2 Old Farm Road and Slyfield Green: SMC type 2 Slyfield Industrial Estate: SMC type 2</td>
<td>Between 2018 and 2033</td>
<td>Surrey County Council, Guildford Borough Council and developer(s)</td>
<td>£20m Developer contributions and Local Growth Fund</td>
</tr>
<tr>
<td>SMC6</td>
<td>Sustainable Movement Corridor: East A25 Parkway between A320 and A3100: SMC type 2 A3100 London Road between A25 and A3: SMC type 2 Gosden Hill Farm site: SMC type 1</td>
<td>Between 2018 and 2033</td>
<td>Surrey County Council, Guildford Borough Council and developer(s)</td>
<td>£20m Developer contributions and Local Growth Fund</td>
</tr>
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**Phasing of route sections**

Phasing for the delivery of the sections of the SMC is shown in the Table 5.

The Guildford town centre section is proposed to be delivered in two phases as follows:

The delivery of scheme SMC3 Sustainable Movement Corridor: Town Centre Phase 1 would follow the experimental closure of Walnut Tree Close (with the option of making this a permanent change) as part of the scheme LRN1 Guildford Town Centre Transport Package.

With SMC3 implemented, pedestrians and cyclists travelling to and from University of Surrey’s Stag Hill campus and further afield will be encouraged to use the present Yorkie’s Bridge and then continue southwards towards Guildford railway station via the southern section of the closed Walnut Tree Close.

With the delivery of scheme SMC2 Sustainable Movement Corridor: Yorkie’s Bridge, buses will be able to cross the replacement new Yorkie’s Bridge, which also will include provision for pedestrians and cyclists. Pedestrians, cyclists and buses will all continue southwards towards Guildford railway station via the southern section of Walnut Tree Close, which may be closed permanently subject to the results of the experimental closure.

At some point in the future, following the redevelopment of the Jewson site (as per Policy A5: Jewsons, Walnut Tree Close, Guildford), a dedicated branch of the Sustainable Movement Corridor for pedestrians and cyclists can be extended from the Yorkie’s Bridge access road to Station View. This is as per Policy A10: Land for Sustainable Movement Corridor Town Centre Phase 2, off Walnut Tree Close, Guildford and SMC4 Sustainable Movement Corridor: Town Centre Phase 2. See the Proposed Submission Local Plan: strategy and sites (June 2016) for site allocation policies A5 and A10 and scheme SMC4. Pedestrians and cyclists will then be able to use this branch of the SMC route to access Guildford railway station and onwards to the town centre, as an alternative to the SMC branch on the southern section of Walnut Tree Close.

**8. Potential impacts on the performance of the local highway network**

The impact of the SMC on the operation of the highway network in Guildford will need to be balanced against the benefits in terms of improved bus journey times and the safe provision of facilities for pedestrians and cyclists.

Through the GOTCHA study, Guildford Borough Council and Surrey County Council have an up-to-date microsimulation model of Guildford town centre that can be used to model the effect of the various options for the SMC, alongside other options for changes to the town centre road network.

The Strategic Highway Assessment Report: Guildford Borough Proposed Submission Local Plan “June 2016” (Surrey County Council, June 2016) does not take account of the SMC and the potential modal shift in the town centre that could occur once it is delivered.
A study by Cairns, Atkins and Goodwin (2002) on ‘disappearing traffic’, which assessed the evidence from case studies of the traffic impact of highway capacity reductions, found that “well-designed and well-implemented schemes to reallocate roadspace away from general traffic can help to improve conditions for pedestrians, cyclists or public transport users, without significantly increasing congestion or other related problems.” However, as the above study noted, “all schemes are different, and each will need to be considered according to its own circumstances”.

Further feasibility and design work for the SMC is ongoing and planned.

1 Available at http://contextsensitivesolutions.org/content/reading/disappearing-traffic/resources/disappearing-traffic/ (accessed 3 June 2016)