
To: Greater Cambridge Partnership
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Subject: Response to Cambourne–Cambridge consultation 2017/18
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We do not support either of the options proposed for Park & Ride locations, nor any of the bus route options.

We are disappointed that our ideas, presented in response to the consultation held in 2015, have not received serious consideration.

In essence we believe that, rather than building extensive new road capacity for buses, we need to:

- Make better use of existing road capacity, which is already sufficient for vehicles that *need* to drive into the city – especially if traffic moving between the A428 and M11 could do so directly at the Girton Interchange.
- Build travel hubs and re-route bus services to provide attractive, comfortable, reliable and flexible public transport options from closer to where people live.
- Create safe (i.e. segregated wherever possible) and convenient cycle and pedestrian routes within the city and into rural travel hubs.

Medium term objective

‘Fix’ the Girton Interchange and add a Park & Ride

We are clear that additional connections and a Park & Ride at the Girton Interchange should be a headline objective for the Greater Cambridge Partners. That will resolve the main bottleneck between Cambourne and Cambridge, which is the section of the A1303 between Maddingley Mulch roundabout and the M11 junction. It will achieve this by:

- giving A428–M11 through traffic a faster route that avoids the A1303;
- providing a new location for a Park & Ride that serves traffic arriving on the A14, A428 and M11 (this site would support a high-frequency, long-hours bus service without subsidy);
- enabling the closure of the existing Maddingley Rd Park & Ride, further reducing traffic on the A1303.

It would also reduce ‘rat-running’ through Toft, Comberton and Barton to reach the M11 at the Barton Interchange.

Ideally the Girton Interchange should become an all-ways junction, but at a minimum, it should provide connections between the A428, M11 and A1307.

Measures to implement now

In the meantime, we recommend:

1. A trial of Inbound Flow Control on Madingley Hill.
2. New bus stations and upgraded stops to make express bus services more accessible and attractive.
3. A trial of a bus gate on Northampton St.
4. A detailed assessment of the benefits and disbenefits of re-routing large buses via the inner ring road along a continuous anticlockwise bus lane, with all other traffic circulating clockwise.
5. Upgrading and extending segregated cycling infrastructure to connect up the villages to each other, to travel hubs and to Cambridge.

In more detail, our recommendations are:

1. Inbound Flow Control

Model and trial the use of Inbound Flow Control to regulate the flow of traffic on the A1303 east of Madingley Mulch roundabout and provide bus priority without building a bus lane all the way into the city:

- Install traffic lights on the A1303 east of the Madingley Mulch roundabout just before Madingley Wood. Widen that 500m section of road to include two extra eastbound lanes, one to serve as a bypass (bus) lane, and one as a peak-time queuing lane.
- Install traffic lights at the Cambridge Road junction to regulate the flow of traffic from Madingley and Coton.
- Widen the last 125m of the M11 off-ramp to five lanes, to provide a lane for westbound traffic, a bypass lane, and three lanes for holding eastbound traffic at peak times.

2. Travel hubs

Build high quality infrastructure to facilitate interchanging with buses outside the city:

- Build a new Park & Ride site at the Girton Interchange, connected to the A1307 (Huntingdon Rd), which is being remodelled as part of the A14 upgrade. This will serve A428 traffic when new connections are added at the Girton Interchange (see above). At that point the existing Madingley Rd P&R site may be closed and repurposed.
- Create a travel hub at Cambourne.
- Create a travel hub at Bourn Airfield (as part of its development).
- Create a travel hub between Hardwick and Highfields Caldecote.
- Create an express bus stop on the A1303 at the junction of Cambridge Rd, to serve Coton and Madingley residents.

3. Bus gate on Northampton St

Address a key point of delay to buses on the main bus route:

- Trial a bus gate on Northampton Street (limiting through traffic at all times to buses, cycles and other permitted vehicles). Other traffic is diverted via Lady Margaret Road, Mount Pleasant / Shelly Row, and Victoria Rd. This would reduce the traffic flowing through the Castle St–Magdalene St junction, enabling shorter traffic light phases, making it much quicker for buses and cycles to pass through, and for pedestrians to cross.

4. Enhanced bus services

Model and trial a redesign of the bus route network in Cambridge city centre to use the inner ring road as an interchange instead of the Drummer St area:

- Run bus services more or less as the Citi 4 runs now to Queens Rd, with peak-time services operating with fewer stops.
- Run feeder services from villages north and south of the A428 into travel hubs. Off-peak, these services may either connect with express services at hubs or run into Cambridge, depending on what type of service people support (in practice).
- At Queens Rd, buses turn right to join a continuous bus lane following the inner ring road. (Other traffic would all circulate in a clockwise direction.)
- Stops around the inner ring road would enable passengers to interchange to services to all other parts of the city (see diagram below).
- At peak times, run direct services between Cambourne and Cambridge North via the A428, A14 and busway from the B1049 (Histon Rd).
- At peak times run direct services between Cambourne and the Biomedical Campus via the A428, A1303, M11, Trumpington P&R and guided busway.

Approximate travel times to three destinations are given in the appendix. From this it is clear that the fastest journey times are achieved using existing trunk roads. Other routes, including GCP options, are not very significantly different.

Though SCT routes are in some instances slower than GCP routes, SCT routes offer:

- Greater flexibility in terms of destinations that may be reached with a single interchange.
- Better support for slightly more complex A → B → C → A journeys.
- More opportunities to stop-off (e.g. to do some shopping in town on the way home).
- Options to suit different people's travel needs and mobility, and the weather.
- Backup options when there's disruption.

We believe this flexibility transforms public transport more radically than simply reducing journey times and reliability between two points.

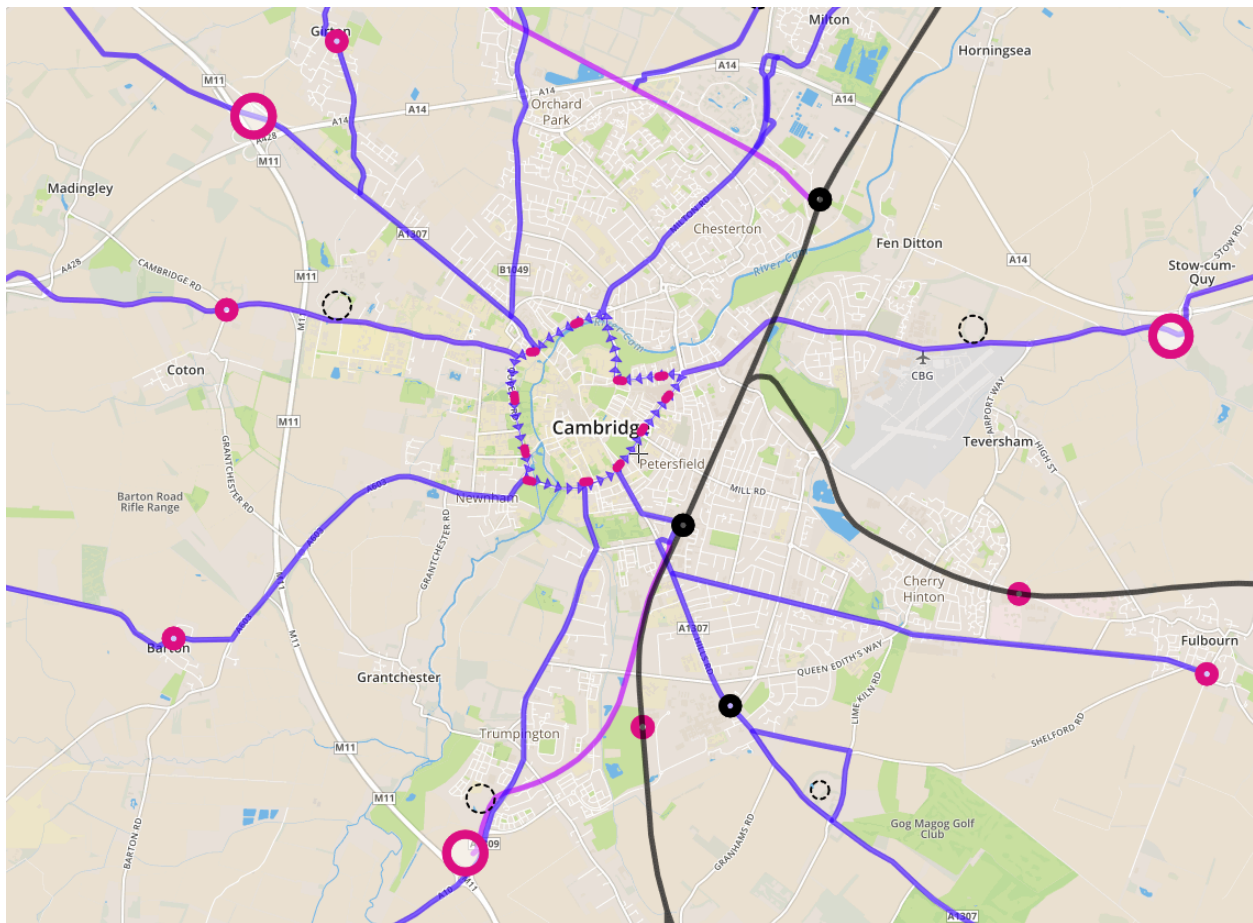


Figure 1: Main bus routes (purple), including circulation around the inner ring road; railway lines (black); long-term location of P&R sites (large circle; black dashed circles indicate retired sites); travel hubs (small circles)

5. Upgraded cycling and walking infrastructure

Upgrade and extend segregated infrastructure for cycling and walking to enable more short journeys to be completed on foot or cycle, within and between villages, to and from travel hubs, and into and out of Cambridge:

- Provide high quality, safe cycle/footpaths connecting travel hubs with homes, businesses and amenities in the local area.
- Build an off-road 2-way cycle path on the north side of Cambridge Road from the edge of Madingley village to the A1303.
- Upgrade the two-way cycle path from Cambridge Rd to the Eddington junction.
- Upgrade the cycle/footways between the Eddington junction and Northampton St in whatever way best fits desired usage and available space.
- Redesign the Eddington junction to be easier and quicker for people walking and cycling to cross.
- Realign Coton cycle/footpath with the M11 overbridge on the east side to link with Ada Lovelace Road, and on the west side to eliminate the right-angle bends.
- Create a cross-country cycle way by upgrading existing bridle ways (Whitwell Way, Port Way and Harcamlow Way) and footpaths linking Coton, Hardwick, Highfields Caldecote, and

Bourn. Surfaces should be all-weather, but in keeping with the rural setting (i.e. not blacktop). Road crossings should be clearly visible to motorists, with appropriate traffic calming measures in place; and, where a staggered crossing is unavoidable, a segregated cycle/footway should be created alongside that section of road.

- Create a new cycle way between Highfields Caldecote and Cambourne via Bourn Airfield as part of the Bourn Airfield development.

Omissions from current consultation

- The omission of land acquisition costs is misleading, as this will make Option C considerably more expensive. (It would have been perfectly reasonable to offer a range for the cost, with the lower end based on agricultural land values.)
- There is no indication of the journey time, service frequency or interchanges needed to reach major destinations other than the city centre, yet the aim of this scheme is to connect Cambourne to all major employment sites: the Biomedical Campus, the Science Park and Northern Fringe, CB1, Cambridge East, Cherry Hinton business parks, or research parks around the A505.
- No peak-time outbound journey times are given. These are currently faster for the Citi 4 than peak-time inbound. For a fair comparison, these should have been shown for all options. The tidal bus lane in Option B should give it an advantage over Option A, which has only an inbound bus lane.
- The mention that a 'one-way system may be needed' for Adams Rd requires explanation. Which other road would carry contraflow traffic? Herschel/Sylvester Rd or Clarkson/Wilberforce Rd?
- There is no indication of how the Western Orbital will connect with any of the options proposed.
- There is no indication of how the 'northern orbital' (via Eddington, Darwin Green and Orchard Park to Cambridge North station) will connect with any of the options proposed.

Comments on options

- If Options A or B were brought forward, we would strongly defend preserving the setting of the American Military Cemetery, including the wide verges on the north side of the A1303.
- We do not believe that gantries are an appropriate addition to this rural approach to Cambridge, if they are indeed a requirement in Option B. Physical segregation in the form of kerbed lane dividers could be acceptable.

Option C

- Option C routes run too far to the south to provide a convenient service for Eddington, Madingley Rd and, at least for the purple route (650m south of Madingley Rd), parts of the West Cambridge site.

- It is currently unknown which of the Option C routes would a CAM¹ articulated bus be able to negotiate safely. Only the blue route avoids right-angle bends, which may be a significant determinant of which route is viable.
- CAM² proposes a tunnel from the West Cambridge site: the location of the tunnel portal is critically important to the alignment of the surface busway.
- Is it desirable to run a large number of buses on Grange Rd, which is currently a traffic-calmed route with a large number of people, including children, cycling and walking?
- If Option C is seen by the respective landowners to enable further development south of the Cambridge West site (the 'West Fields'), then this must be made public and debated openly.

Option C via Silver St

- From our calculations, Option C provides a significantly shorter journey time *only* if buses continue into town via Silver St to Downing St. However, Stagecoach has indicated that it would most likely route services via Northampton St.
- We do not believe that it is appropriate to route large buses (and certainly not articulated buses possibly envisaged for CAM³) via Silver St to Downing St. Silver St is narrow in places and carries a large volume of people walking and cycling, especially in summer. Pembroke St and Downing St are often congested with cars queuing for the Grand Arcade car park, delaying buses which cannot overtake the queue.

Option C via Northampton St

- From our calculations, Option C via Northampton St offers very little time advantage over other options.
- If buses emerge at the Rugby Club exit, they would need to turn left into Grange Rd at a narrow, blind corner. Is there sufficient space and is it safe?
- Will it require traffic lights to ensure buses do not meet between the Rugby Club entrance and Herschel Rd?

¹ The bus rapid transit proposal contained in the [Mass Transit Options Appraisal report](#) by Steer Davies Gleave.

² See above.

³ See above.

Appendix: Comparative journey times

The following table indicates approximate journey times from a notional travel hub in Cambourne near the Business Park to three specific destinations. SCT options are based on having Inbound Flow Control on the A1303, a bus gate on Northampton St, and a continuous bus lane anticlockwise around the inner ring road (as illustrated above).

	Cambourne (nr Business Park) to John Lewis	Segment time	Approx total journey time
a)	<i>Citi 4</i>		29-40
	Old St Neots Rd, A1303 inbound bus lane to Queens Rd	20-26	
	Northampton St, Chesterton Rd, Victoria Ave, Emmanuel St to Drummer St	7-11	
	Walk 200m	2-3	
	<i>Return journey</i>		28-34
	Walk 200m	2-3	
	Emmanuel St, Victoria Ave, Chesterton Rd, Northampton St	7	
	A1303, Old St Neots Rd	19-24	
b)	<i>GCP Option A</i>		29-34
	Old St Neots Rd, A1303 inbound bus lane to Queens Rd	20	
	Northampton St, Chesterton Rd, Victoria Ave, Emmanuel St to Drummer St	7-11	
	Walk 200m	2-3	
c)	<i>GCP Option B</i>		29-34
	A1303 tidal bus lane to Queens Rd	20	
	Northampton St, Chesterton Rd, Victoria Ave, Emmanuel St to Drummer St	7-11	
	Walk 200m	2-3	
d)	<i>GCP Option C via Silver St</i>		20-26
	A1303 to Madingley Mulch	10	
	New busway to Grange Rd	5-8	
	West Rd, Queens Rd, Silver St, Trumpington St, Pembroke St, Downing St to St Andrews St	5-8	

Cambourne (nr Business Park) to John Lewis		Segment time	Approx total journey time
e)	<i>GCP Option C via Northampton St</i>		27-34
	A1303 to Madingley Mulch	10	
	New busway to Grange Rd	5-8	
	Grange Rd, Madingley Rd to Queens Rd	3	
	Northampton St, Chesterton Rd, Victoria Ave, Emmanuel Rd to Drummer St	7-11	
	Walk 200m	2	
f)	<i>SCT Inbound Flow Control + inner ring bus lane + walk</i>		32-34
	Via A1303 Inbound Flow Control bus lane to Queens Rd	21	
	Via inner ring road anticlockwise to Hills Rd	5	
	Walk 550m	6-8	
	<i>Return journey</i>		30-38
	Walk 650m to Four Lamps roundabout (Maids Causeway-Jesus Lane)	7-10	
	Inner ring road anticlockwise to Queens Rd	4	
	A1303	19-24	
g)	<i>SCT Inbound Flow Control + inner ring bus lane + local bus</i>		27-34
	A1303 Inbound Flow Control bus lane to Queens Rd	20-21	
	Inner ring road anticlockwise to Hills Rd	5	
	Change to local service to city centre (up to 6 mins wait)	2-8	
	<i>Return journey</i>		24-39
	Local service via Hobson St, Jesus Lane, Bridge St, Magdalene St to Northampton St	5	
	Change to express service to Cambourne (up to 10 mins wait)	19-34	

Cambourne (nr Business Park) to Biomedical Campus		Segment time	Approx total journey time
a) <i>SCT peak-time via M11</i>			26
A1303 Inbound Flow Control to M11		16	
M11, Hauxton Rd to Trumpington P&R		7	
Southern busway		3	
b) <i>SCT via A1303</i>			36-47
A1303 (Inbound Flow Control bus lane) to Queens Rd		20-21	
Inner ring road anticlockwise to Hills Rd		5	
Change to Addenbrooke's express service at any stop before Hills Rd (up to 10 mins wait)		11-21	
<i>Return journey</i>			38-53
Hills Rd to Gonville Place		11	
Inner ring road anticlockwise to Madingley Rd		8	
Change to Cambourne service at any stop before Madingley Rd (up to 10 mins wait)		19-34	
Cambourne (nr Business Park) to Science Park		Segment time	Approx total journey time
a) <i>SCT peak-time express service via A14</i>			25
Via A428, A14, Histon Rd, busway (to Cambridge North)		25	
b) <i>SCT single interchange</i>			36-47
A1303 (Inbound Flow Control bus lane) to Queens Rd		20-21	
Inner ring road anticlockwise to Mitcham's Corner		11	
Change to a Milton Rd express service at any stop before Mitcham's Corner (up to 10 mins wait)		5-15	
<i>Return journey</i>			26-41
Milton Rd to Mitcham's Corner		5	
Inner ring road anticlockwise to Madingley Rd		2	
Change to Cambourne service before Madingley Rd (up to 10 mins wait)		19-34	

Cambourne (nr Business Park) to Science Park		Segment time	Approx total journey time
c)	<i>SCT walk to interchange</i>		36-51
	A1303 (Inbound Flow Control bus lane) to Queens Rd	20-21	
	Walk to Mitcham's Corner	10-15	
	Catch Milton Rd express service (up to 10 mins wait)	5-15	
	<i>Return journey: use Route b</i>		26-41
d)	<i>SCT local bus to interchange</i>		28-45
	A1303 (Inbound Flow Control bus lane) to Queens Rd	20-21	
	Change to local clockwise service to Mitcham's Corner (up to 6 mins wait)	3-9	
	Catch Milton Rd express service (up to 10 mins wait)	5-15	
	<i>Return journey: use Route b</i>		26-41
e)	<i>SCT cycle to interchange</i>		30-41
	A1303 (Inbound Flow Control bus lane) to Queens Rd	20-21	
	Hire bike to cycle to Mitcham's Corner	5	
	Catch Milton Rd express service (up to 10 mins wait)	5-15	
	<i>Return journey: use Route b</i>		26-41
f)	<i>SCT bus & cycle</i>		36-37
	A1303 (Inbound Flow Control bus lane) to Queens Rd	20-21	
	Hire bike to cycle to Science Park	16	
g)	<i>SCT bus & e-cycle</i>		32-33
	A1303 (Inbound Flow Control bus lane) to Queens Rd	20-21	
	Hire bike to e-cycle to Science Park	12	

Assumptions

- Bus journey times based on existing timetables (e.g. Citi 4 & U) or 30kph (18.5mph) around inner ring road (continuous bus lane)
- Walking speed assumed to be 4-6kph (2.5-3.75mph)
- Express service frequency assumed to be 10 minutes / 6 per hour
- Local service frequency assumed to be 6 minutes / 10 per hour
- Return journey is the same time as inbound unless shown separately