



Greater Cambridge City Deal

Initial summary of responses to the Tackling Congestion: Call for Evidence

9th December 2015

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1. Introduction and overview

- 1.1. One of the key issues that impacts upon the whole City Deal programme is how to solve the current congestion problems in Cambridge. In response to this, the Greater Cambridge City Deal Executive Board prioritised The Cambridge Access Study in the City Deal Tranche 1 programme. This study considers the conditions and challenges on the transport network in and around Cambridge including the City Centre.
- 1.2. This Study will recommend transformative improvements and interventions to considerably improve access, capacity, and movement to and within the city. It also aims to reduce congestion and delay, and general traffic levels in the city to below current levels. The Study will also consider opportunities for enhancing the public realm and quality of the environment. Mott MacDonald has been appointed to provide consultants support with this work.
- 1.3. To inform and tie in with this work, Members of the City Deal Executive Board and Assembly invited individuals or organisations to put forward their thoughts on how they believe the congestion issues in Cambridge can be solved. As well as inviting written submissions, three public sessions were arranged where people or organisations could present their perspectives on the problem and potential solutions. These sessions included a mix of local people and organisations, and expert speakers in the transport field who were able to put forward ideas and discuss various congestion tackling proposals, drawing from a wealth of recent experience. Table 1 summarises the number of submissions received along with attendance at the hearings.

Table 1 Number of respondents to Call for Evidence

	Local person / organisation	Invited expert	Total
Written submission	55	1	56
Written submission and spoke at hearing session	11	-	11
Spoke at hearing session	5	5	10
Total	71	6	77

2. Purpose and limitations of report

- 2.1. The purpose of this report is to provide a summary of the responses received to the Call for Evidence. The report identifies common themes that have emerged from the responses and attempts to present them in a way that will assist the Assembly and Board in their initial consideration of which ideas should be taken forward for analysis.
- 2.2. This summary does not detail each and every proposal put forward by each individual, however, each submission is available to view in full at <http://www.gccitydeal.co.uk/citydeal/info/2/transport/1/transport/10>.
- 2.3. Due to the tight timescale between the end of the Call for Evidence and the publication of Board and Assembly papers, it has not yet been possible to provide any analysis of the merits of each proposal. Once officers are given a steer from the Board and Assembly on further analysis, then this exercise will be undertaken and brought back to Members to discuss.
- 2.4. The Call for Evidence asked for suggestions and ideas that could help tackle congestion problems in Cambridge. Many of the responses are wide ranging in nature, and include ideas that seem unlikely to have a significant impact on congestion or on providing viable alternatives to private car travel. This summary primarily focuses on the suggestions that directly address the question that was raised by the Board and Assembly.

3. Expert speakers and the experience from other cities

- 3.1. Alongside suggestions from local people and organisations, the Board and Assembly were keen to call on the expertise of eminent transport experts and also from other cities where different demand management measures had been used. A number of these were invited to speak and answer questions from Board and Assembly Members at the hearings. The following appeared:
- Transport for London (congestion charging)
 - Nottingham City Council (workplace parking levy)
 - Imperial College (congestion charging)
 - The Campaign for Better Transport (a range of sustainable travel initiatives)
 - RAC Foundation (congestion charging and fiscal measures)
- 3.2. The full details of the presentations and questions asked can be viewed at <http://www.gccitydeal.co.uk/citydeal/info/2/transport/1/transport/10>. The following paragraphs provide a brief overview of their presentations.
- 3.3. Stephen Joseph from The Campaign for Better Transport discussed how growth doesn't necessarily need to mean more and more cars and that investment in sustainable travel can help grow the economy. He also gave examples of how new development can be less car dependent and suggested that experience in European cities showed that traffic growth could not only be halted; traffic could be reduced. He also highlighted the need for not only capital investment but also a revenue source.
- 3.4. Steve Gooding from the RAC Foundation talked about the importance of having good data so you know where people are coming from and going to. He also talked about the pros and cons of various demand management measures such as congestion charging, workplace parking levy and parking charges, in conjunction with road space reallocation. A key point was that authorities need to be clear on exactly what the aim of each measure is, for example revenue raising or limiting traffic growth.
- 3.5. Peter Wright from Transport for London (TfL) spoke about the experience of congestion charging in the capital. He highlighted that to implement such a scheme, political commitment is vital, and also the importance of public information campaigns prior to a scheme going live so that people understand how it is going to work.
- 3.6. The London scheme was expensive to implement as much investment was made into back office set up to ensure that the scheme was guaranteed to work from day 1, although developments in technology in subsequent years

mean that set up costs have reduced. Running costs are now approximately 30% of revenue so it does provide a revenue source.

- 3.7. Although congestion is now back to previous levels, he emphasised that this is in large part due to the freed up space being reallocated to sustainable modes or to the public realm, such as in Trafalgar Square. Traffic levels are still down on levels seen before the congestion charge was introduced. He made the point that congestion in London would be much worse without the congestion charge. The London congestion charge is now £11.50 per day.
- 3.8. Stephen Glaister from Imperial College London also spoke about congestion charging. He too emphasised the importance of clear messages and good communications when explaining such a scheme to the public and being absolutely clear on what the charge was and who it was for.
- 3.9. He talked about the difficulty in persuading people of the benefits before a charge was brought in, citing the difficulties in Manchester and the eventual no-vote when a referendum was held. However he pointed to evidence that shows that once a scheme is in place, it is supported. He also suggested that a scheme wouldn't work - including in London – if residents received a discount.
- 3.10. Jason Gooding and Nigel Hallam from Nottingham City Council spoke about the Workplace Parking Levy. The scheme targets peak time congestion by levying an annual fee on employers of £375 per parking space. £25m has been raised in five years and has helped fund the expansion of the tram network including some Park & Ride provision, redevelopment of the railway station and some bus links.
- 3.11. The Workplace Parking Levy has low operating costs of 5% and importantly gives a source of revenue which allows the authority to lever more money from government by having its own revenue stream. As the tram line has only just started operation, it is too early to definitively assess whether there is a significant impact on levels of congestion.

Further expert input

- 3.12. A written response was provided by Professor Jonas Eliasson from Sweden's Royal Institute of Technology, detailing the impact of congestion charging in Stockholm.
- 3.13. Doctor Steve Melia of the University of the West of England could not attend any of the Call for Evidence hearings but was available to meet with four members of the Board and Assembly on 4th December.

- 3.14. He suggested that congestion was potentially an insolvable problem and the focus should be on alternatives to private car travel. Ensuring people can still travel and maintaining quality of life using alternatives was the key and new communities had a role to play here – use of existing railway infrastructure and ‘car free’ developments with good public transport from the early days can help.
- 3.15. He also pointed out that many places in Europe seen as exemplars of sustainable transport are not transport nirvanas, and their successes had been very hard won politically. However, the best examples often have a ‘wow factor’ that is largely absent in this country, for example, the removal of mass parking along the River Rhone in Lyon.

4. Local suggestions and ideas

- 4.1. In addition to hearing evidence from expert speakers, the Board and Assembly also heard many suggestions put forward from local people and interested groups with ideas on how the congestion problem in Cambridge could be tackled.
- 4.2. Sixteen local people or organisations spoke at the hearings; eleven of these also submitted written evidence. A further 55 local people or organisations submitted written evidence. Written evidence was requested by 30th November 2015. While further submissions received by the end of the year will be considered, they are not discussed in this paper. The suggestions received were both wide ranging and varied. Full submissions can be found at <http://www.gccitydeal.co.uk/citydeal/info/2/transport/1/transport/10>.
- 4.3. The range of suggestions can broadly be categorised into the themes below:
 - What is an acceptable level of congestion
 - Public transport Infrastructure and service improvements (carrots)
 - Infrastructure improvements for active modes (carrots)
 - Demand management (sticks)
 - Highway capacity
 - Technology
 - Behavioural change
 - Environment
- 4.4. A recurring theme which is worth highlighting at the outset was what constitutes an acceptable level of congestion, and how much change would need to take place to reach that position. Several referred to the 'half term effect' and how levels of traffic seem more acceptable during the school holidays. One submission went into more detail about the misconception between 'delay' and 'flow' on the network. It was suggested that whilst most people when asked guess that delay decreases by 30% or more during school holidays, generally traffic flow falls by less than 10%. This led the contributor to suggest that under current conditions you only need to create conditions that encourage one in twenty to start using the bus and a similar number to start cycling to realise relatively delay-free conditions on the vast majority of days.
- 4.5. The subsequent commentary in this section provides a summary of responses categorised into the remaining headings listed above. Table 2 shows these categories and the range of points that were made under each, with an indication of the frequency with which the theme was raised. It should be noted that no assessment has been made of the effectiveness or achievability of any of the responses summarised below.

Table 2 Number of submissions addressing particular themes / suggestions

Theme / Suggestion	Number of representations
Demand Management & Fiscal Measures	
Further limiting access to the city centre and Further Selective Road Closures (includes: extension of Core Scheme, pedestrianisation etc.)	14
Further Parking Controls (includes: more residents parking zones, reductions in city centre car parks, reduction in free street parking)	20
Road Pricing (includes: Congestion charge – various forms suggested for testing)	22
Workplace Parking Levy (includes: taxing private non-residential parking in the city)	8
'Gating' and Queue Redistribution	4
Tourist Tax	2
Technology	
Smart Traffic Management (includes: syncing signals more efficiently and further use of SCOOT system)	10
Data Collection Tools (to better understand actual trips and movements)	2
Smart Card Tickets, RTPI, Journey Planning etc. (includes multi-modal, multi-operator tickets too)	5
Autonomous Vehicles	2
Public Transport Infrastructure & Service Improvements	
Bus Lanes, Tidal-flow Bus Lanes, Bus Priority Measures	10
Bus Rapid Transit	5
More Attractive Bus Journeys (includes: improving reliability, re-routing, nicer buses, quality bus partnerships and contacts)	16
Rail Investment (includes: new stations, re-opening old lines, increasing capacity)	5
Underground Public Transport Systems (includes: tunnelling for buses, metros etc.)	9
Transport Hubs & Interchanges (includes new ones, upgrades to existing and linking of modes)	9
Upgrading/Improving Park and Ride (includes: Removing charge, new P&R sites, extending capacity of current sites, longer operation of services and free/discounted travel on P&R)	28

Theme / Suggestion	Number of representations
Infrastructure Improvements for Active Modes	
Enhanced Cycle Networks (in/from rural areas) (includes: more cycle lanes, more segregation of cycle lanes, links to services and Cambridge, joining the villages etc.)	17
Enhanced Cycle Networks (urban/city) (includes: more cycle lanes, more segregation of cycle lanes)	25
Further Cycle Priority at Junctions (includes: priority at junctions etc.)	11
Cycle Parking (includes: new city centre facility, additional, secure racks at businesses/schools/leisure etc.)	11
Improved Pedestrian Facilities	7
Highway Capacity Enhancements	
Junction Improvements (includes: measures aimed at traffic flow improvements)	9
New Roads (includes: orbital movements, southern relief road etc.)	6
Re-Classify Roads by Use	1
Promote/Priority for Motorcycles/Scooters (includes: use of bus lanes)	3
Behavioural Change	
Last Mile Delivery & Consolidation Points and More Management of Delivery Vehicles (includes: reducing freight/HGVs etc.)	9
Tackling School & Sixth Form Traffic (includes: using P&R sites as drop-off pick up, spreading hour of opening)	15
Peak hour spreading (includes: business hour change)	5
Car Clubs & Car Sharing	4
Low Emission Vehicles (includes: electric vehicles, driverless vehicles etc.)	2

4.6. The following sections of this paper provide a summary of the range of responses received under each theme.

Public transport Infrastructure and service improvements

Road space redistribution

- 4.7. A number of suggestions were made about the redistribution of road space, primarily in favour of buses and cycles. One idea put forward included reconfiguring a number of the radial routes into the city in order to make space for dedicated bus lanes and segregated cycle lanes. It highlighted the current problem of not enough space for both and suggested that by making the radials bus-only for the inbound journey, then some road space could be reconfigured. The idea would need the completion of a link between the A14 and the A11 and better bus service frequencies.

Rail

- 4.8. A number of representations called for greater investment in rail to help solve the congestion issues in the Cambridge area.
- 4.9. Specific examples included a comprehensive idea for a Cambridge and District railway, which involves separating local train services in the area around Cambridge from long distance routes to London and other cities. New stations would be built / rebuilt at Hinxton Hall, Harston, Cherry Hinton, Fulbourn and Six Mile Bottom. The new stations would allow long distance trains to overtake local ones, which pull into platforms on separate outside tracks. This local network would integrate with the cycle network through some carriages giving more space over to cycle storage, such as on the S-train network in Copenhagen.
- 4.10. Expanding the local network with a similar scheme to the Bristol City Deal MetroWest scheme was also put forward, to tie in with a package of rail and public transport proposals for the existing corridors.
- 4.11. In addition to new railway stations, further investment in the railway network was suggested through the reopening of the Haverhill line and also the upgrade of the Newmarket line. Frequency increases were also suggested as these would make rail usage even more attractive, along with integration with other modes of transport and multimodal ticketing.

Buses

- 4.12. The issue of bus management in the city centre was raised with suggestions for improving efficiency around the bus station made. Opposing suggestions included both reducing the number of services terminating in the city centre and reducing the number of services that run through. Indeed a number of suggestions were made for re-routing buses more efficiently. Other suggestions included better scheduling of layover and driver changes so they

take place at the end of routes rather than in the city centre. More legislative approaches, such as Bus Quality Contracts were also mentioned. It was suggested that long-distance buses should be removed from terminating in and travelling through the city centre and that the fleet of buses should be upgraded to look more attractive and include more comforts such as wifi. One idea for achieving this was for Cambridge to take control of its own bus services.

- 4.13. There are a couple of ideas for linking together the south-east science parks, either by a loop service serving the parks, or by an on-demand service that picks up passengers and travels directly back to the parks or to the station.
- 4.14. The suggestion of further guided bus routes was also made. One option put forward was to build a guideway out towards Newmarket and Burwell where house prices are cheaper. There were also suggestions about improving the frequency of bus services out to the South Cambs villages to 2-hourly and extending morning, evening and weekend running.

Park & Ride

- 4.15. The cost of using public transport came up as a barrier to people using alternatives to the private car. A recurring theme was that the Park & Ride system should be free to use if we want people to make the shift, with a number of responses also calling for the removal of the parking charge at the sites.
- 4.16. The importance of the Park & Ride system was highlighted by a large number of respondents with ideas for further expansion of the Park and Ride network in the area. A suggestion put forward by a number of people is for regular bus services to run from and through outlying areas and villages into the Park & Ride sites seven days a week. A system to deliver shopping to the Park & Ride sites was also put forward. The existing Park & Ride sites could be increased in size by building multi-storeys and there were suggestions that Park & Ride should not only be provided on every entry to the city, but also a 'double ring' so that other Park & Rides are provided further out.
- 4.17. Suggestions were also made about encouraging people to Park & Cycle from the Park & Ride sites and using the sites as long distance coach drop off points.

Transport Hubs

- 4.18. The increased use of transport hubs or interchanges outside of the city for people to switch modes was suggested.

- 4.19. Two areas of land have been suggested as potential sites for a new transport hub at Whittlesford Station, which would open the potential for more multimodal trips. It was suggested that this would allow greater east-west bus travel and enable more cycle trips to be made to the station. One area is close to Whittlesford Parkway station itself, the other is located at the A1307/A11 junction and would serve as a new Park & Ride site.
- 4.20. Other hubs around the city were also suggested; at West Cambridge with links to Addenbrooke's and the Science Park, with the point being made that not everyone wants to get to the city centre.

Metro

- 4.21. More bold suggestions included a metro line linking in to the historic core as part of a multimodal package of improvements. The line would connect to a hub at Girton Interchange that would also be home to a new long-distance bus station as well as an orbital public transport system. In addition, one of the presenters at the third hearing session also put forward ideas for a metro style public transport system to feed into the existing public transport network.

Tunnels

- 4.22. A package of improvements that would be brought forward in conjunction with a congestion charging scheme was proposed. In addition to walking and cycling measures, tunnels under the city are proposed for use by bus rapid transit. One east-west tunnel and another north-south was proposed, allowing buses to reach a remodelled bus station and the main railway station. A similar idea from another contributor proposed three tunnels radiating out from Market Hill. One would head north-east to the Science Park and new station, one to the south towards Addenbrooke's and another to the west towards Madingley Road P&R, with 13 stations across the network.

Infrastructure improvements for active modes

Cycling

- 4.23. Some detailed proposals for new cycle routes were received. One proposal was for the development of an urban 'City Ring' which is linked to a series of rural 'Rings'. The benefits of the rings would be to encourage both local journeys between villages, as well as encouraging long commuter distances by bike, through feeding into the 'City Ring'. The proposal would also help to connect young people to village colleges in locations such as Comberton, Bottisham and Sawston. The proposed rings are the City Ring, the Landbeach Ring, the Waterbeach Ring, the Bottisham Ring, the Babraham Ring, the Comberton Ring and the Bar Hill Ring. Additional routes were also proposed

along the Cambridge-Royston, Cambridge-Ely and Cambridge-Cambourne corridors.

- 4.24. A number of measures were also proposed to address the major barriers to riding bicycles in the city area, including dangerous junctions, cycle parking and the enabling of intermodal journeys. One such suggestion was the classification of roads by function as in the Netherlands. In the Greater Cambridge context, a simple three level classification of Access, Distributor or through route was suggested. Once roads are classified, future public realm improvements, removal of rat-runs and road engineering of the streets can be designed according to the classification. Related to this, one contributor suggested the use of clearly colour coded surface colours that identify pedestrian/vehicular/cycle use on highways where mixed use occurs.
- 4.25. Other engineering solutions put forward included segregated cycleways on every main road; the removal of side junctions on main roads; safe junction designs that segregate cycle movements from heavy vehicles; massive increase in cycle parking in city centre and at employment sites; a comprehensive cycleway network plan with clear route planning, new park and ride sites on radial routes into Cambridge with bicycle rental; rural cycleways that connect residents to local services. In addition to engineering measures, a 'bicycle account' is proposed, which reflects the reality of and aspirations of the population by documenting the current state of the bicycle network, the people who use it, what they like and dislike about current provision and long-term plans. It was suggested that changes to where cyclists can cycle may also be beneficial, such as crossing minor traffic lights where there is very little traffic, in the same way that pedestrians cross on a red light if it is safe; cycling down the quieter one way streets, therefore accessing safer "back" routes, avoiding more major roads; being allowed to use some pavements with care.
- 4.26. Ideas were also put forward to help solve the issue of a need for more cycle parking in the centre of Cambridge. This included proposals for new, large cycle parks such as using more of or even all of the Grand Arcade car park under City Hotel as a cycle park.
- 4.27. A number of individual route upgrades were also put forward. These included: Upgrading the Coton Footpath to a cycle superhighway, safe river crossing from the Backs to the city centre to separate cyclists from pedestrians and tourists, a safe route between Ely and Cambridge, linking Orchard Park and Arbury with Histon, Impington and Cottenham, linking Madingley to Girton, linking Coton to Long Road, Hardwick and Caldecote, linking Grantchester to Haslingfield and Barton and linking Trumpington Park & Ride to Hauxton.

Demand management

- 4.28. There were various ideas that were suggested in relation to possible demand management techniques or 'sticks'. One contributor suggested that traffic control should not prohibit traffic as much as it does. Using a floodplain analogy, it was suggested that traffic should be allowed to find its own level with local traffic finding its own way through the suburbs and external traffic coming into the centre using major thoroughfares.

Access controls

- 4.29. Several contributors proposed a traffic-free city centre as part of a package of measures – essentially an expansion of the current Core Scheme area. From the suggestions received, boundaries could include Chesterton Road/Northampton St/Queen's Road/East Road/Fen Causeway. There were also numerous calls for other access controls and route management to stop rat running and make key routes more free for buses and cyclists.
- 4.30. Conversely, a suggestion to reopen Silver Street to general traffic was also made as part of a statement that much of the problem with congestion in the city is due to areas being restricted. Other suggestions included a ban on taxis in the centre and small electric vehicles to ferry people around the central zone. The removal of tourist buses from The Backs and city centre was also put forward, with an alternative suggestion of using the Park & Ride sites as a base to bus people in on small electric vehicles.

Parking

- 4.31. Restricting parking, in all its forms featured several times in proposals. It was suggested in a number of responses that parking was either too cheap or too easy and this formed a barrier to mode switch.
- 4.32. There were a number of proposals to get rid of the city centre car parks and turn them over to other uses; for example to use as a location for recharging electric vehicles, or for delivery vehicles to unload. It was suggested that the Grand Arcade car park could be used as a public or university exhibition centre, with a small area for disabled parking and Shopmobility centre. Another suggestion was to remove or reduce all free and pay & display street parking across the city, also to make higher charges for residential parking in the Controlled Parking Zone (CPZ).
- 4.33. A review of the parking available was also suggested, as was restricting the leasing of Council garages to local residents for the use of parking.
- 4.34. An alternative suggestion to reducing the city centre car parking was to introduce a new, large underground car park below Parkers Piece.

Fiscal

- 4.35. The topic of congestion charging featured positively in a significant number of responses. Its benefits both as a tool for managing demand on the network and also a source of revenue with which to fund non-car alternatives were highlighted. Different systems were suggested, with both the London system and the Singapore point system being cited. Written evidence was also received from a Swedish academic on the success of the Stockholm system, where the system consists of 18 charging points located at the main bottlenecks on arterials leading into and out of the inner city, with a time-differentiated toll being charged in each direction. Vehicles are charged each time they pass a control point, with a maximum amount per vehicle and day of 6 Euros. Traffic across the cordon was reduced by around 20% after implementation, leading to substantial congestion reductions in and around the city.
- 4.36. A workplace parking levy was suggested locally as a potential means of raising revenue to invest in transport measures. However there were also concerns that it would make Cambridge uncompetitive
- 4.37. Other fiscal measures which were suggested included the introduction of a 'room tax' on hotel rooms which can be used to help improve bike and pedestrian paths and subsidise bus travel as is done in towns in the US; tax increases for businesses providing car parking spaces and tax breaks for businesses providing cycle racks or employee buses.
- 4.38. There were also proposals the cost of parking in the city centre should increase; there should be higher charges for residents' parking and that the retail parks on Newmarket Road should charge for parking to discourage people from using them as cheaper parking alternatives to the city centre car parks. A refund could be offered to shoppers genuinely using the Newmarket Road stores if they spend over £20 for example.

Highway capacity

Junction improvements and Highway Capacity

- 4.39. A number of suggestions were made regarding improving traffic flow by improving 'problem' junctions and clearing key radials for smoother traffic flows. For example, congestion problems in the Newmarket Road area were highlighted, with proposals for the introduction of traffic lights on the Wadloes Road/Barnwell Road/Newmarket Road roundabout put forward. A suggestion that more road space should be given to vehicles travelling straight ahead at the Ditton Lane/Newmarket Road junction was also made, to solve the problem of vehicles travelling straight on getting caught up in traffic queuing to

turn right into Ditton Lane. Improve junctions around the 'ring road' of Cambridge was another suggestion made

- 4.40. The timing and sequence of traffic lights at the Catholic Church junction was identified as a problem which it was considered caused the capacity of the junction to be greatly reduced and could be improved with some tweaking. Another suggestion was to replace complicated junctions such as the Huntingdon Road/Histon Road/Victoria Road junction with a roundabout.
- 4.41. Looking further out of Cambridge, a suggestion was made about how to upgrade the A1301 / A505 roundabout to the south east of the city. A proposal has been submitted to increase capacity at the junction while at the same time making it attractive for cyclists and pedestrians to use. A new junction for the M11 / A11 was also suggested, as well as upgrade works to the A1301 itself. The redesign of the Girton Interchange to provide an all-ways junction and a location for a Park & Ride was also put forward, as was linking the A14, M11 and A428 junction (M11 junction 14) with Madingley Road / M11 junction (M11 junction 13) to create a free flowing gyratory.
- 4.42. The idea of increasing the road access from conurbations within South Cambridgeshire to other towns with good transport links, such as railway stations, was also put forward. An example given was improving links between Cambourne and St Neots railway station to discourage people from coming into Cambridge.
- 4.43. Another major piece of infrastructure suggested was that of an orbital road around Cambridge with link roads running parallel to the A14 and M11 to cater for local traffic and tunnels under Shelford and the hills south of the city to reduce its environmental impact – the so called southern relief road.
- 4.44. Submissions were also received encouraging the use of motorbikes, scooters and powered two-wheelers to help alleviate congestion. An example put forward to achieve this is allowing them to use bus lanes and provide them with free car parking in the city centre – measures introduced in some other cities.

Technology

- 4.45. The importance of good data collection was highlighted by another contributor, who advocated investing significantly in a system of centralised data collection and traffic management within the city. Installing sensors on the traffic lights and allowing centralised control ought to give an immediate improvement to traffic flow, as well as giving us the data with which to plan more ambitious initiatives.

- 4.46. A further suggestion was the use of a series of low-cost telematics solutions that facilitate both the collection and mining of data on traffic patterns and the dissemination of real time traffic information. Ideas include installing GPS telematics machine to machine (m2m) terminals on taxis, delivery vans, the city's own fleet and other professional vehicles deliver. The terminals would provide real-time traffic information 24/7 to improve the management of flows and to generate more precise data for anticipating and resolving problems. The idea could also extend to a fleet of 'Boris' bikes, personal bikes and buses.
- 4.47. The use of smart ticketing was also suggested, with a local equivalent of an Oyster card being introduced that could be used on the buses and trains.
- 4.48. Other technological solutions put forward included discouraging intra-city car trips by installing trackers in cars and introducing a limit to the number of journeys permitted in the city, further use of Real Time Passenger Information and an 'App' that allows users to share journeys on the school run – Lift2School

Smart Traffic Management

- 4.49. A suggestion was also made about how traffic signalling and technology can be more efficiently used to help manage the Cambridge traffic better. This could include syncing traffic signals to 'real time' situations, reallocating the queues of general traffic to areas that would need to be provided outside of the city boundaries – a so called "gating" of traffic – all done in conjunction with a range of complimentary measures designed at reducing the traffic entering the city centre.

Behavioural change

- 4.50. The behavioural change suggestions received were predominantly about spreading out the demand for road space throughout the day through varying the times that people need to travel.

Businesses

- 4.51. In relation to commuting, one contributor suggested that employers should be more flexible about the times that their staff are able to start and finish work in order that they can adjust their travelling time to avoid rush hour. They also suggested that a four-day working week would help. Another suggestion was that the planning system could be used to spread out the start/finish times of new employment centres, so that a certain percentage of employees had to arrive or depart before or after certain times.

Schools

- 4.52. In a similar vein to encouraging employers to take more responsibility to help address the congestion problem, another contributor suggested that schools should take more ownership of the problem and be involved in the solution. The suggestion was that all schools should be made to bring children in on school buses as per the system in the US if they live too far to bike or walk and the schools themselves should enforce this. A number of participants suggested that schools should somehow make use of the park and ride sites and bus their pupils in from there rather than be dropped off at the school if they can't walk or cycle from home. Again, encouraging schools to organise chaperoned buses to the school and promoting them to parents, tax incentives for the schools to actively reduce school and staff usage.
- 4.53. There was a similar suggestion in relation to - amongst other issues - the timing of deliveries. Suggestions varied between deliveries only taking place between 1am and 5am, another suggested that parked delivery vehicles not be allowed in the city centre between 7am and 7pm, especially those in bus lanes.
- 4.54. The issue of deliveries and shopping was a common theme amongst a number of contributors. One person observed that shops should be encouraged to become 'display' only, and the customer collects at an out of town hub associated with the Park & Ride sites. The idea of out of town hubs was echoed in several suggestions. First and last mile goods delivery using a combination of Urban Consolidation Centres and Collection Points, coupled with low emission vehicles or cargo bikes to incentivise responsible deliveries is another idea.

Low Emission Vehicles, Autonomous Vehicles, Car Clubs and Car Sharing

- 4.55. Some responses also put forward the need to promote car sharing, car clubs and the further use of low emission vehicles. Car clubs and specifically, electric car clubs were suggested and whilst charging infrastructure would be required, it was suggested that this is reasonably cheap to set up.
- 4.56. A suggestion made and indeed presented to the hearing session was for the use of autonomous vehicles, which it was said would become more commonplace within the next two decades. These could form both public and private vehicles and can coexist and link with existing public transport systems¹. They also allow for the reduction of polluting vehicles in the centre of Cambridge. Work already is already planned as part of the Tranche 2 City

¹ Work is already planned as part of the Tranche 2 City Deal scheme development to consider how autonomous vehicles might form part of the passenger transport network, working with Cambridge University's Department of Engineering.

Deal preparation to consider how autonomous vehicles might form part of the passenger transport network, working with Cambridge University's Department of Engineering.

Environment

Design, Public Realm and Air Quality

- 4.57. The design of any transport intervention and the need to ensure it does not impact upon the character of the city was a common theme in the responses. The importance of protecting the built and natural environment came across strongly, with good design and improving the public realm being points made.
- 4.58. Responses were received regarding the need to enhance and maintain the verges of all radial routes into Cambridge due to the environmental and social benefits brought about by trees and green spaces.
- 4.59. The point was made that if the roads are widened it just encourages more traffic and changes the nature of the city. Removing the green spaces was also cited as a potential cause for even worse air pollution. Ensuring that air quality issues were tackled was itself a commonly highlighted issue.

Process and problems

- 4.60. There were some submissions which weren't so much solutions to the congestion problems; rather they were a commentary on the Call for Evidence process and how the City Deal money will be spent.
- 4.61. One of these suggested that those with an expectation that investment in new infrastructure would be proportional to the forecast modal shift are mistaken. A second was a plea to think big, act small and a third was to take a more holistic approach to transport planning in the city as parking charges have increased year on year but nothing has been done to improve public transport and achieve modal shift.
- 4.62. Other comments and suggestions included the establishment of environmental standards against which transport proposals must be judged, a critique of the location of new development which was said to cause more trips than necessary and has fuelled 'foreign investors' buying property in the city centre, which in turn has caused rents to rise. The need for a strong communications campaign about the proposals to win over the hearts and minds of the public was also argued for.
- 4.63. Some responses included comments on governance and legislation and how this process should seize the opportunity to alter the way decisions are made and devolve power and finances to a more local governance structure.

5. Conclusion

- 5.1. Members of the City Deal Executive Board and Assembly invited individuals and organisations to put forward their thoughts on how they believe the congestion issues in Cambridge can be solved.
- 5.2. The submissions to this Call for Evidence are summarised in brief in this paper, but have not yet been assessed in terms of how successfully they might address the question raised by the Board and Assembly.

Links to Call for Evidence submissions and presentations, and other useful information

- 5.3. The submissions received to the Call for Evidence and the presentations made at the hearing sessions can be viewed at:
<http://www.gccitydeal.co.uk/citydeal/info/2/transport/1/transport/10>
- 5.4. This page also provides details of the Cambridge Access Study, including the [Audit Report](#) prepared by Mott MacDonald.
- 5.5. In addition, the following can be accessed from the above web page.
 - Written submissions to the Tackling Congestion: Call for Evidence.
 - Presentations made at the Tackling Congestion: Call for Evidence hearings.
 - Initial Summary of the evidence received (this document).
 - Notes of the Tackling Congestion: Call for Evidence hearings and of the 'Traffic Generators' meeting.
 - Presentations made at the 'Traffic Generators' meeting.
- 5.6. The Transport Strategy for Cambridge and South Cambridgeshire can be viewed at:
<http://www.cambridgeshire.gov.uk/tscsc/>