



**Report To:** Greater Cambridge City Deal Executive Board

9 June 2016

**Lead Officer:** Graham Hughes, Executive Director, Economy and Environment, Cambridgeshire County Council

## Cambridge Access and Capacity Study

### Purpose

1. To review the outcomes of the Cambridge Access Study and the Call for Evidence on tackling congestion in Cambridge, and to decide on next steps.
2. This report sets out a proposed Congestion Reduction package to meet the objectives and achieve the vision of the Greater Cambridge City Deal, as set out in paragraphs 8 to 13 below. It recommends engaging with the public and stakeholders to gather their views on the package, prior to the Board considering whether to take the package forward at its meeting in January 2017.

### Recommendations

3. It is recommended that:
  - a. The Board notes the Call for Evidence Analysis and the Cambridge Access Study Long List and Short List Reports and outcomes.
  - b. The Board agrees the policy approach for a Congestion Reduction package, incorporating:
    - Better bus services and expanded usage of Park and Rides
    - Better pedestrian and cycling infrastructure
    - Better streetscape and public realm
    - Peak Congestion Control Points in the weekday morning and evening peak periods
    - A Workplace Parking Levy
    - On-Street Parking Controls (including Residents' Parking)
    - Smart Technology
    - Travel Planning
  - c. The Board notes the consultation and engagement principles appended to this report (see Appendix D) and agree the principles of the engagement process on the proposed Congestion Reduction package, to commence in July 2016.
  - d. That, subject to the agreement of recommendation b), the Board endorses the proposal for a trial implementation of Peak Congestion Control Points, possibly on a phased basis in late 2017 using an experimental Traffic Regulation Order. A consultation on the Order would be held during the experimental period.

## **Executive Summary / Reasons for Recommendations**

4. The strategic objectives for the Greater Cambridge City Deal and the transport vision and objectives are summarised in paragraphs 8 to 13 below. To achieve them, it is essential that congestion and delay are addressed and that capacity in and around the City Centre for pedestrians, cyclists and public transport users is increased.
5. This report sets out the work that has been undertaken by the Cambridge Access Study and the analysis of responses to the Call for Evidence on tackling congestion in Cambridge. A shortlist of measures that could be successful as part of a package in achieving the vision and objectives has been set out by the Cambridge Access Study. On the basis of the work undertaken, this report recommends a proposed Congestion Reduction package set out in Appendix B that would deliver the vision and objectives. The key elements of the Congestion Reduction package are noted in recommendation b) above. The proposed package would:
  - provide for more, and more reliable, public transport trips on key routes into the city,
  - deliver better conditions for cyclists and pedestrians in many areas,
  - improve the Public Realm
  - remove many through trips by private car from the city during peak periods,
  - allow for further investment in public transport provision, and;
  - allow for investment in infrastructure in the later tranches of the Greater Cambridge City Deal transport programme as part of the local funding contribution to the programme.
6. Alternative interventions that have been shortlisted by the Access Study such as road user charging might achieve similar benefits, but are assessed as being more challenging in terms of deliverability in a reasonable timescale, affordability, and in terms of fairness and equity.
7. Proposals for engagement on the proposed Congestion Reduction package are set out, as are indications of timescales in which individual elements could be delivered and the links with the delivery of the wider Greater Cambridge City Deal programme.

## **Background**

### ***Growth, Transport and the Greater Cambridge City Deal***

8. The submission Local Plans for Cambridge and South Cambridgeshire (see Background Documents below) set out the vision for sustainable economic and housing growth in the Greater Cambridge area to 2031. The Greater Cambridge City Deal supports these plans, by ensuring the transport infrastructure needed can be delivered. The strategic objectives of the City Greater Cambridge City Deal are:
  - to nurture the conditions necessary to enable the potential of Greater Cambridge to create and retain the international high-tech businesses of the future;
  - to better target investment to the needs of the Greater Cambridge economy by ensuring those decisions are informed by the needs of businesses and other key stakeholders such as the universities;
  - to markedly improve connectivity and networks between clusters and labour markets so that the right conditions are in place to drive further growth; and
  - to attract and retain more skilled people by investing in transport and housing whilst maintaining a good quality of life, in turn allowing a long-term increase in jobs emerging from the internationally competitive clusters and more university spin-outs.

9. Over the past 20 years, measures such as the Cambridge Core Traffic Scheme, Park and Ride and the Busway have been very successful at providing capacity for new trips into Cambridge by sustainable modes of transport. However, the amount of vehicular traffic travelling into the city has remained constant over this period, and congestion has worsened.
10. With the further housing and economic growth that is planned for the Greater Cambridge area, conditions on the transport network will get worse still if we do not take action to provide new transport capacity and manage congestion. If we do nothing, time spent in congested conditions is forecast to more than double by 2031. Radical interventions are needed to provide new transport capacity and allow for rational decisions by car drivers to change their travel behaviour to more reliable and convenient alternatives.

### *Greater Cambridge Transport Vision and Objectives*

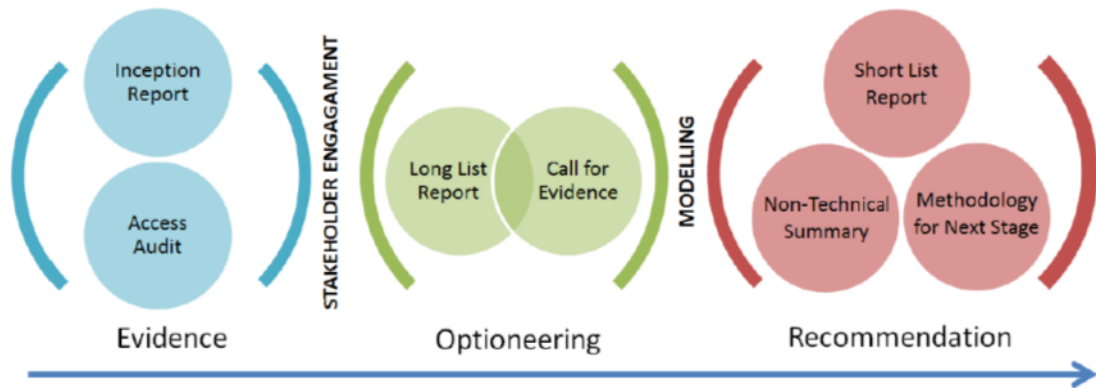
11. The transport vision for Greater Cambridge (the vision) is that it should be easy to get into, out of, and around Cambridge by public transport, by bike and on foot.
12. To achieve this, the aim is that despite the anticipated growth in journeys of about 30% by 2031, there will be a reduction in peak hour vehicular traffic of 10-15% from 2011 levels. This reduction is broadly equivalent to the reduction in traffic that is seen in the morning peak period when schools are on their half term break.
13. The Greater Cambridge City Deal's transport strategy objectives (the objectives) are:
  - To ensure transport in Greater Cambridge supports economic growth and the continuation of the Cambridge Phenomenon
  - To bring about a step change in the quality and reliability of public transport in Greater Cambridge by tackling congestion, investing in the infrastructure needed for quicker, more reliable public transport journeys and working in partnership with public transport providers.
  - To reallocate road space to public transport, cycling and walking to encourage journeys using these modes and reduce traffic volumes.
  - To encourage continued growth in the numbers of people cycling in and into Greater Cambridge.
  - To use the opportunities that road space reallocation, congestion reduction, and infrastructure projects offer to improve air quality, the public realm and the historic and natural environment.

### ***The Cambridge Access Study***

14. Consultant Mott MacDonald was commissioned to undertake the Cambridge Access Study, which has considered the effectiveness and deliverability of potential options to achieve the vision and meet the objectives, with a specific focus on the interventions that will address access and capacity in and around the city centre. It considers what packages of measures might be most effective in this respect. The process for the Access Study is shown diagrammatically in Figure 1.
15. The Access Study has several outputs, which are available on the Greater Cambridge City Deal's website (see Background Papers below). These are the:
  - Access Audit Report (July 2015)
  - Call for Evidence Analysis (May 2016)
  - Long List Report (May 2016)
  - Short List Report (May 2016)

16. The content of the Call for Evidence analysis, Long List Report and Short List Report are considered in detail below.

**Figure 1: Access Study process**

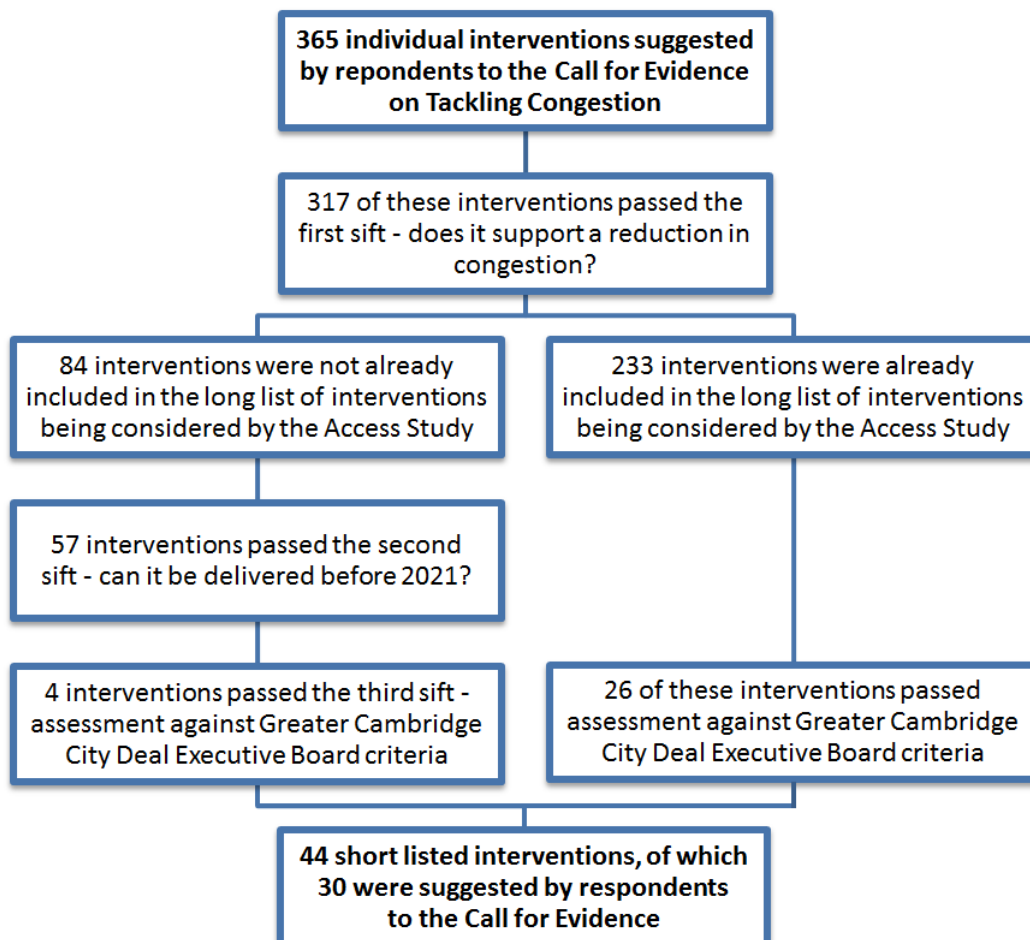


## The Cambridge Access Study

### *Call for Evidence on tackling congestion*

17. In November 2015, a Call for Evidence was launched to gather views, ideas and evidence aimed at tackling congestion in Cambridge. Written evidence was invited and interested parties presented their ideas at three public hearings held on the 16th, 18th and 30th November.

**Figure 2: Call for Evidence analysis of suggestions**



18. Submissions were published on the Greater Cambridge City Deal's website (see Background Papers below) and an initial summary of them was presented to the Joint Assembly on 17 December 2015 and to the Executive Board on 15 January 2016.
19. At the 15 January meeting, the Executive Board agreed the criteria for assessing submissions to the Call for Evidence. These criteria were also used in the assessment of other interventions being considered by the Access Study.
20. The Call for Evidence Analysis has been published on the Greater Cambridge City Deal's website (see Background Papers below). Figure 2 provides a summary of the sifting of suggestions made by respondents.
21. It should be noted that many suggestions made by different respondents duplicate each other, and the overall number of 365 suggestions significantly overstates the number of discrete suggestions. Duplicate suggestions were consolidated in the second sift of interventions. The table in Appendix A provides some detail on this; for example, cycle network improvements into the city from surrounding areas were suggested 17 times.
22. Suggested interventions that did not meet the sifting criteria may still be considered in other areas of the Greater Cambridge City Deal's programme. For example, the proposal to remove side road junctions on main roads is being considered in the design of the Milton Road and Histon Road schemes.

### ***Long List Report***

23. The Long List Report (available on the Cambridge Access Study website – see Background Papers below) considers potential interventions to meet eight outputs:
  1. Deliver a comprehensive and attractive Park and Ride service
  2. Deliver a comprehensive and attractive local bus network
  3. Deliver an increased rail mode share
  4. Deliver an increased cycling mode share
  5. Deliver an increased walking mode share
  6. Deliver a smarter network for smarter users
  7. Deliver efficient freight and servicing management
  8. Directly address city centre traffic growth
24. The interventions were sifted against the same criteria as agreed by the Executive Board and used in the third sift of suggestions made to the Call for Evidence.
  - Value for Money
  - Implementation
  - Fairness
  - Effectiveness
  - Economic Impact
  - Dependencies and broader benefits
  - Environmental Impact and Design
25. The Long List Report identified 44 interventions (see Appendix C) as having potential to contribute to achieving the outputs noted above, and that met the sifting criteria agreed by the Executive Board. These included 30 interventions that were also suggested by respondents to the Call for Evidence, as noted in Figure 2 above. Of the short-listed interventions, it is those under the theme 'Demand Management and Fiscal Measures' that are either:
  - Not included in current plans, or
  - Considered to be most likely to be able to deliver the desired outputs as part of a wider package.

26. The interventions shortlisted in this theme are:
- Smart access controls at existing key congested links
  - Road-space reallocation to non-car modes
  - Workplace Parking Levy
  - Road user charging
  - Parking / loading controls on key bus routes
27. The following sections provide commentary on a proposed Congestion Reduction package based around two of these interventions and discuss alternative options.

### **The proposed Congestion Reduction package**

28. Assessment of the ideas from the Call for Evidence and the Access study work show that improving City Centre access and tackling congestion requires a blend of measures to manage demand for private car use and improve the attractiveness of alternatives. This report therefore puts forward a proposed Congestion Reduction package, which is discussed in more detail in Appendix B. It has eight key elements:
- Better bus services and expanded usage of Park and Rides
  - Better pedestrian and cycling infrastructure
  - Better streetscape and public realm
  - Peak Congestion Control Points in the weekday morning and evening peak periods
  - A Workplace Parking Levy
  - On-Street Parking Controls (including Residents' Parking)
  - Smart Technology
  - Travel Planning
29. The package aims to provide reliable and seamless journeys for bus users, cyclists and pedestrians on key routes into the city. Additional investment in public transport infrastructure and services and pedestrian and cycling infrastructure would therefore be made. This would add to and enhance the investment already planned in new capacity in the three tranches of the Greater Cambridge City Deal's overall transport programme.
30. Peak Congestion Control Points in the morning and evening peak periods would reallocate road space in and around the city centre, prioritising buses, cyclists and pedestrians and restricting general vehicular traffic on key routes for this purpose. Improved streetscape and public realm would also be sought as part of the design of these interventions, taking advantage of the opportunity that less demand from vehicles for road space in these areas would bring.
31. A Workplace Parking Levy (WPL) would tackle problems associated with traffic congestion by providing revenue funding for local transport and by acting as an incentive for employers to manage and potentially reduce their workplace parking. Income raised would fund specific measures to address congestion and provide new sustainable transport capacity to address the travel needs of employers and their staff. Employers would have the opportunity to influence and input into the choice of and design of measures to be funded.
32. Additional on-street parking controls including new Residents' Parking zones would be used to manage problems that might occur due to displacement of trips due to the Peak Congestion Control Points and WPL.

33. Improvements to traffic signals and control systems would assist in the management of the transport network, and would allow greater priority to be given to pedestrians, cyclists and buses.

***Better public transport, pedestrian and cycling infrastructure, and better streetscape and public realm***

34. The Access Study supports the need for more investment in Park and Ride and in other measures to support the extension of bus services. The Congestion Reduction package would involve some or all of:
- extended routes to more necklace villages,
  - extended operating hours for services to take better account of the variable working patterns of people working in the city and at its main employment hubs,
  - new express bus services from surrounding towns, and
  - additional Park and Ride and rural interchange capacity at existing or already planned new sites, or at further new sites as necessary
35. Cambridge North railway station will open in May 2017 and the Greater Cambridge City Deal programme will support the ongoing development of proposals for a station at Addenbrooke's, which is one of the shortlisted Access Study interventions.
36. Junction priority will continue to be developed for cyclists, pedestrians, and buses, including on radial routes and the Inner Ring Road, and opportunities for improvements in concert with the Peak Congestion Control Points would be sought.
37. Reduced peak time traffic would create opportunities for improvements to streetscape and public realm, for example on Hills Road between Station Road and the City Centre. These will be identified as part of the ongoing development and design of measures in the wider Greater Cambridge City Deal programme.
38. The Congestion Reduction package would have some implications for the Trunk Road network, including on the A14 and the M11. Consideration will be given to the targeted deployment of the Cambridge City Council's A14 Mitigation Fund of £1.5M on measures included in the Cambridge Access programme.

***Peak Congestion Control Points***

39. Peak Congestion Control Points would limit or ban general vehicular traffic on key routes during the morning and evening peak periods where such interventions would lead to a significant benefit to buses, pedestrians and cyclists. The Cambridge Core Scheme currently has six such points in the city centre. Six Peak Congestion Control Point options have been modelled for the purposes of 'proof of concept'. These are:
- Options that place Peak Congestion Control Points on the inner ring road.
    - **Option 1**; on Grange Road, Queens Road and East Road.
    - **Option 2**; on Grange Road, Queens Road, East Road, Elizabeth Way and Maids Causeway.
  - Options that place Peak Congestion Control Points on key bus routes.
    - **Option 3**; on Hills Road.
    - **Option 4**; on East Road, Hills Road and Mill Road.
    - **Option 5**; on East Road, Hills Road, Mill Road and Coldhams Lane.
  - An option that is a combination of Options 1 and 5 above:
    - **Option 6**; on Grange Road, Queens Road, East Road, Hills Road, Mill Road and Coldhams Lane.

40. The six options are shown illustratively in Figure B1 in Appendix B, along with more detail on how the options were developed.
41. All of these options were tested as simple 'full peak period closure' schemes, allowing no general traffic access through any of the potential new Peak Congestion Control Points in the peaks. They do not therefore represent detailed proposed schemes; at this point in time they demonstrate the potential of the approach. Therefore before final implementation, they will be refined to ensure they meet the objectives of the City Deal and provide the correct balance of outcomes for all users.
42. Options 1, 5 and 6 show potential for significant improvements on the parts of the network that are most problematic for public transport journeys. The modelling work included an initial assessment of the potential for modal shift to public transport, walking and cycling as a result of the peak period closures in these three options. A summary of the initial assessment of the impacts of these three options on forecast traffic flows and on mode share of trips are detailed in Appendix B. Further detail is included in the Short List Report (see Background Papers below).
43. Options 2, 3 and 4 are not recommended to be taken forward as:
  - Option 2 was assessed as having too great a level of negative impacts for relatively little benefit over Option 1.
  - Option 3 was assessed as having only local benefits on Hills Road rather than the wider benefits seen in the other options.
  - Option 4 led to significant additional traffic on Coldhams Lane which would be difficult to deal with. By contrast, Option 5 redistributes this traffic onto routes where it is likely to be easier to deal with and therefore is preferred over Option 4.

#### *Proposed experimental implementation of Peak Congestion Control Points*

44. For the Peak Congestion Control Points, the most significant success factors will be the extent to which travellers change their behaviour and the reliability of bus services is improved. Modelling can only go so far in predicting these behavioural changes.
45. The implementation of a small number of Peak Congestion Control Points is relatively simple, and they could be 'refined' on the ground relatively easily. Given the challenge of accurately predicting how people will respond, and the fact that there is a pressing need to address current congestion, it is considered that an experimental approach is the best way to take this element of the proposed package forward.
46. Option 6 is most effective in reducing congestion in Cambridge but requires the greatest level of change in travel behaviour. Officers recommend that the Board agrees to present Option 6 as the preferred Peak Congestion Control Point option. Its implementation could be phased in order to allow drivers to adapt to the changes. Further work would be undertaken on the most appropriate phasing and this, together with further assessment of impacts, would be reported to the Board in January 2017.
47. The preferred option would then be worked up and tested via an experimental Traffic Regulation Order for implementation from late 2017. The experimental order process permits some phasing of interventions to be introduced and tested during the trial.

#### *Early provision of extra capacity for public transport, walking and cycling trips*

48. Initial work has been undertaken to identify the additional capacity in the public transport network that could be available in 2017 alongside the experimental implementation of Peak Congestion Control Points.



- Cambridge North Station will be open from May 2017.
- Initial assessment indicates that the five Cambridge and two Busway Park and Ride sites currently have spare parking capacity that could cater for at least 60% of the total mode shift away from car use for trips into the city that might be seen with the Peak Congestion Control Points if a scheme were implemented in 2017.
- Stagecoach currently deploys additional vehicles to try and maintain service frequency in congested conditions. Removing congestion on key routes would give an immediate improvement in reliability for these services and opportunity for the additional vehicles to be used to increase frequency of services or to be deployed on new routes.
- In addition, the bus companies have indicated that, given sufficient notice, they would provide extra buses and increased frequencies to meet the demand from the day of implementation.

49. As the Peak Congestion Control Point proposals were worked up, opportunities to reallocate road space to provide better facilities for public transport, pedestrians and cyclists or to improve the public realm would be investigated. However, permanent implementation of such schemes would probably need to be delayed until after the experimental order period when any permanent changes had been confirmed.

### ***Workplace Parking Levy***

50. In order to deliver high quality public transport, revenue funding is needed. The Greater Cambridge City Deal delivers significant amounts of infrastructure funding from Government, but no revenue funding. It is therefore recommended that the introduction of a Workplace Parking Levy (WPL) should be an integral part of the overall Congestion Reduction package, as this would provide an on-going income stream that would then be invested in transport in the Greater Cambridge area to meet the transport needs of employers and employees.
51. The WPL proposal is modelled on the approach taken in Nottingham. A potential Cambridge WPL zone based on the Nottingham approach is shown in the map in Appendix B. The Nottingham scheme covers employers' premises where there are more than 10 parking spaces in use – which broadly equates to the largest 10% of employers in Nottingham. Between them, these employers account for around 63% of workplace parking capacity in Nottingham. Small employers are therefore not affected.
52. The Nottingham scheme charges employers £1.50 per weekday per car park space. The employer may or may not choose to pass that on to its employees; the experience in Nottingham is that many do.
53. A bespoke Cambridge scheme developed on similar principles would be expected to generate revenue of £7-11M per annum. It is important to note that the main impact of WPL on congestion is in its ability to bring in funding that can be invested in the provision of additional transport capacity. On its own, a WPL would not be expected to reduce congestion and improve network conditions significantly. Nottingham has forecast a reduction in traffic growth of 7% as a result of its WPL.
54. If the Board agrees to pursue the recommended package, a Cambridge scheme would be developed engaging with employers ahead of consultation in 2017.

### ***On-street parking controls including Residents' Parking Zones***

55. Further expansion of on-street parking controls including Residents' Parking zones would reduce the availability of on-street commuter parking, to help to ensure that trips not directly affected by the Peak Congestion Control Points do not increase, in

particular where the implementation of WPL results in displacement of parking onto neighbouring streets.

56. The Greater Cambridge City Deal Executive Board is not responsible for the policy on Residents' Parking in Cambridge. Instead, that policy is made by the County Council and implemented by the Cambridge Joint Area Committee (CJAC); a joint committee of the County and City Councils. CJAC is currently reviewing Residents' Parking Policy in Cambridge. Officers recommend that the Executive Board works with CJAC on the review of the policy, timescales for which are set out in Appendix B. It could be appropriate for the Greater Cambridge City Deal to fund the implementation of new Residents' Parking zones if they assist in meeting objectives for City Centre access.

#### ***Potential timescales for the delivery of the Congestion Reduction package***

57. Parts 2 and 3 of Appendix B set out potential timescales for the implementation of the proposed Congestion Reduction package.
58. There could be experimental implementation of Peak Congestion Control Points from late 2017.
59. With the advantage of experience gained in Nottingham, a Workplace Parking Levy could be implemented in 3 years, subject to statutory processes.
60. If, following the public and stakeholder engagement on the Congestion Reduction package set out herein, the Board wishes to progress the package, the elements of the approach would be worked up in detail. Work would be undertaken to develop and refine Peak Congestion Control Point options that would be tested experimentally. Further modelling of the approach and the Congestion Reduction package would be undertaken, and optimised solutions sought. Opportunities for reallocation of road-space around experimental Peak Congestion Control Points would also be identified.
61. Implementation of the Peak Congestion Control Point options would initially be through the use of an Experimental Traffic Regulation Order for up to eighteen months. There would be no formal public consultation on the detail of proposals prior to implementation, as the formal public consultation would be undertaken during the experiment period, allowing people to judge and comment on the impacts directly.

#### **Links with the prioritised Tranche 1 programme**

62. Cities that have had the most obvious success in catering for new travel demand without gridlock are typically characterised by the ability of large numbers of people to travel on the public transport network or by bike or on foot more effectively and reliably than in a car. However, even in these places, congestion remains.
63. The proposed Congestion Reduction package relies upon additional non-car transport capacity being provided to cater for displaced car trips reliably and conveniently by public transport, walking and cycling. The demand management measures in the Congestion Reduction package will only succeed if this capacity is provided. The proposed package outlined above and the proposed infrastructure schemes already in development therefore provide a comprehensive package and are not alternative approaches.
64. The Greater Cambridge City Deal's wider transport programme will deliver the infrastructure needed for this capacity to be provided. Work on the Access Study has not identified options for managing demand within the city that would remove the need for other City Deal interventions, such as the Milton Road, Histon Road or Cambourne to Cambridge schemes in tranche 1 of the programme.

65. The timetable in Part 3 of Appendix B sets out how Greater Cambridge City Deal Tranche 1 scheme implementation might tie in with the implementation of the proposed Congestion Reduction package.

*Links with Tranches 2 and 3 of the Greater Cambridge City Deal programme*

66. The detail of the proposed Congestion Reduction package if and when worked up would inform the programming of the Tranche 2 and 3 programmes.

***Access Study Short List Report***

67. The Short List Report produced by Mott MacDonald as part of the Cambridge Access Study (see Background papers below) takes stock of the outcomes of the Call for Evidence Report and the Long List Report. It considers in more detail the interventions that were shortlisted. Work on the Short List Report directly informed the development of the Congestion Reduction package. The Short List report contains further more detailed analysis of the shortlisted interventions.

**Potential alternatives to the proposed package**

68. The Access Study has considered numerous policy approaches and potential schemes, including the 365 individual suggestions made by respondents to the Call for Evidence on tackling congestion. The process by which these policy approaches and schemes have been assessed is set out above.

***Congestion charging***

69. An alternative option that might achieve similar benefits to the proposed Congestion Reduction package would involve the introduction of a congestion charging scheme. This policy approach could be similar to the proposed package, but would replace the WPL, and potentially some Peak Congestion Control Points and on-street parking controls with a congestion charge. A morning peak period congestion charge of £5 would be likely to raise £40-44M per annum.
70. A congestion charge would be likely to be effective in reducing car journeys, and would allow for a greater level of investment in alternative capacity, but it would also involve a greater financial burden on individuals, particularly those living outside the City, than the proposed Congestion Reduction package in order to be effective. It would be likely – dependant on the type of charging scheme – to affect all drivers in the city during its hours of operation.
71. Given its wider impacts, a congestion charge would have greater dependency on the delivery of supporting infrastructure to provide new non-car capacity that would require a longer period before implementation, with an attendant delay in realising benefits. It would also be more costly to implement and more costly and onerous to run, and would penalise people who might not have alternative choices to travelling by car in the charging zone.
72. On the basis of experience in London, it is also likely that a charge would need to rise at a much faster rate than inflation to maintain the benefits of a scheme. The price of the London scheme doubled from £5 to £10 in the eight years after it came into effect in 2003, and it is now £11.50.
73. A feature of the London scheme is that while traffic levels have reduced, traffic speeds have still declined in the period since the scheme was implemented. However, Transport for London considers that this is due to measures that they implemented to

improve the urban environment, increase road safety and prioritise public transport, pedestrian and cycle traffic, which have reduced the capacity of the road network.

74. In a Cambridge context, similar reallocation of road space, such as more bus lanes or even Peak Congestion Control Points, might still be required to achieve the levels of public transport service and reliability needed to deliver the overall outcomes that are sought.

***Iterations of the proposed Congestion Reduction package or of a Congestion charging policy approach***

75. Both the recommended Congestion Reduction package and the alternative congestion charging-based package could be varied in a number of different ways. Elements could be added or removed from either package. While this might lead to packages that were perceived as easier to agree and implement, packages that removed elements would be less likely to achieve the transport vision of Greater Cambridge and the transport objectives of the Greater Cambridge City Deal. For example, removal of the WPL from the proposed Congestion Reduction package would have two main negative impacts

- It would remove the revenue stream that would permit further investment in public transport services and further infrastructure to improve non-car options.
- It would remove a cost factor that might encourage modal shift.

***'Do-nothing'***

76. This is not recommended. Modelling undertaken in support of the Cambridge and South Cambridgeshire Local Plans indicated that a do-nothing approach would result in a more than 30% increase in traffic, and time spent in congested conditions more than doubling by 2031. It was clear from the Call for Evidence that there is a general acceptance that there are significant problems on the transport network, and that with planned growth, interventions are needed to ensure the transport network continues to support the area's economy and caters for an increasing demand for travel.

***Other options that were suggested in the Call for Evidence but are not recommended to be taken forward***

***Tunnels***

77. Tunnelling options are not recommended to be taken forward primarily due to high costs and impracticality. The Access Study considered indicative costs of a system involving four tunnel portals and around 5,000 yards of bus tunnel underneath the city centre. Using the cost of the Limehouse Link tunnel in London's Docklands as a benchmark, and adjusting for inflation, this system would be likely to cost around £1.15B. Tunnel portals would need a large amount of space; it is highly doubtful that three of the portals shown in the option considered by Mott MacDonald could be delivered. Alternative locations for such portals in Cambridge are not obvious. Officers do not believe that an affordable, practically deliverable bus tunnel scheme is possible.

***'Inbound flow control'***

78. Inbound flow control or 'gating' could potentially deliver congestion relief, although there is a high risk that it would fail in this regard as it would allow the release of suppressed demand for travel by car within the city. The impact would fall only on drivers from outside of Cambridge, who typically have fewer alternative travel options available to them. It would not provide good alternative travel options to those

travelling from outside the city while it would allow those within the city to travel more easily. It is also unclear how the system would work in the evening peak period.

### **Public and stakeholder engagement, July to October 2016**

79. It is recommended that the proposed Congestion Reduction package be communicated to the public using a variety of activities, media channels, and materials from July to October 2016.
80. This engagement would set out clearly the proposed Congestion Reduction package and the reasoning behind it, and invite qualitative feedback on it. This feedback would be recorded and collated and fed back to the Joint Assembly and Executive Board at their January 2017 meetings. At this point, the Executive Board would be asked to consider whether to progress the Congestion Reduction package.
81. The July – October 2016 public and stakeholder engagement would focus on:
  - Engaging with people on the proposed Congestion Reduction package, on what it involves, how it fits together and what it aims to achieve, seeking to build their understanding of it and listening to their feedback.
  - Communicating how the Call for Evidence and Access Study informed the development of the proposed Congestion Reduction package.
  - Communicating how, when and by whom the different elements of the Congestion Reduction package would be implemented.
  - Involving stakeholders in the development of the detail of proposals.
82. This will provide the public and stakeholders with a full understanding of the proposed Congestion Reduction package, the policy approach behind it, and the future benefits of the package, informing their feedback to the engagement process.
83. Engagement activities and materials will be prepared, held and disseminated in a wide variety of platforms, locations and media to ensure an inclusive and proactive participation from the spectrum of audiences that would currently or in the future benefit from or be affected by the proposed Congestion Reduction package.
84. Appendix D provides details of the consultation and engagement principles that apply to transport infrastructure schemes delivered by the Greater Cambridge City Deal.

### **Options**

85. In considering the recommendation in this paper, a number of options are available to the Executive Board.
86. Recommendation b): the Board could:
  - Agree the proposed Congestion Reduction package
  - Request that further work is undertaken to develop further the proposed Congestion Reduction package, instead of agreeing it now
  - Ask officers to work up a different policy option or options
  - Make minor changes to the proposed package while keeping to the current timescale. The scope for such changes is likely to be limited while maintaining the planned timescales.
87. Recommendation c): the Board could:
  - Agree the public and stakeholder engagement proposals and timescales.
  - Defer the start of the public and stakeholder engagement proposals to September, allowing more detail to be worked up and presented.

88. Recommendation d):
- Officers consider that an experimental implementation would be the most effective way of introducing and gauging the impact of the Peak Congestion Control Point options, and would give the flexibility to quickly modify or iterate the Peak Congestion Control Points to achieve better results. Officers recommend that the Board does not accept recommendation b) as it stands if it does not also accept recommendation d).

### **Implications**

89. In the writing of this report, taking into account financial, legal, staffing, risk management, equality and diversity, climate change, community safety and any other key issues, the following implications have been considered:

#### ***Financial and other resources***

90. The proposed Congestion Reduction package would lead to expenditure on the development and implementation of the measures included in it. Through the Workplace Parking Levy it would bring a revenue stream that could generate £7-11M per annum that would be invested in transport infrastructure and services.
91. There could be a need to identify revenue funding to pump prime the early delivery of new public transport services ahead of the introduction of the Peak Congestion Control Points and again before the introduction of the Workplace Parking Levy.

#### ***Legal***

92. Specific statutory processes related to delivery of specific interventions are referred to in the report and appendices.

#### ***Staffing***

93. Recruitment processes are underway for delivery team staff for the Cambridge Access programme. For a Workplace Parking Levy, the option to buy in expertise from Nottingham is also available and is recommended.

#### ***Risk Management***

94. The proposed Congestion Reduction package has a number of strands that fit together, and includes some challenging measures that are likely to lead to much public and stakeholder interest. Effective communication and clear messaging will be needed and the public and stakeholder engagement will need to be open and well managed.
95. The experimental introduction of the Peak Congestion Control Points offers an opportunity to test and tweak the scheme. However, as the scheme relies on behaviour change, time may be needed for new travel patterns to become established, and resolve may be needed to stay with the scheme while this happens.

#### ***Equality and Diversity***

96. The proposed Congestion Reduction package seeks to avoid interventions that would have unfair implications for residents of different areas and to avoid any social impacts. Nonetheless, care would be needed in the detailed design of the Peak Congestion Control Point, Workplace Parking Levy and on-street parking proposals to ensure such impacts were not realised.

97. The options of road pricing and of flow control by 'gating' have not been recommended to be taken forward in part because they would have differential impacts in Cambridge and South Cambridgeshire that could be seen as discriminating against South Cambridgeshire residents who worked in the city.

### ***Climate Change and Environmental***

98. If the proposed Congestion Reduction package is successful in achieving mode shift away from the private car to public transport, walking and cycling, transport emissions in the Greater Cambridge area will be reduced.

### ***Consultation responses and Communication***

99. The report details the responses and presentations that were made Call for Evidence on Tackling Congestion in Cambridge in November 2015. Proposals for public and stakeholder engagement on the proposed Congestion Reduction package between June and October 2016 are also detailed. Appendix D details the Greater Cambridge City Deal's engagement principles.

## **Background Papers**

### ***Cambridge Access Study***

The Cambridge Access Study web page can be found at:

[http://www.gccitydeal.co.uk/citydeal/info/2/transport/1/transport\\_projects\\_and\\_consultations/6](http://www.gccitydeal.co.uk/citydeal/info/2/transport/1/transport_projects_and_consultations/6)

The following reports are available on this webpage:

- Audit Report (July 2015)
- Call for Evidence Analysis (May 2016)
- Long List Report (May 2016)
- Short List Report (May 2016)

### **Call for Evidence**

In addition, further details of the Call for Evidence can be accessed from the Cambridge Access Study web page, including:

- 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, including notes of the Tackling Congestion: Call for Evidence hearings and of the 'Traffic Generators' meeting.
- Presentations made at the 'Traffic Generators' meeting.

### ***Greater Cambridge City Deal transport infrastructure programme***

First tranche Great Cambridge City Deal transport schemes, 2015/16 to 2019/20

<http://www.gccitydeal.co.uk/citydeal/info/2/transport/9/transport/2>

### ***Transport policy context***

#### **Third Cambridgeshire Local Transport Plan 2011-2031**

Policies and Strategy document

<http://www.cambridgeshire.gov.uk/ltp>

Long Term Transport Strategy document

<http://www.cambridgeshire.gov.uk/lts>

Transport Strategy for Cambridge and South Cambridgeshire

The Transport Strategy for Cambridge and South Cambridgeshire can be viewed at:  
<http://www.cambridgeshire.gov.uk/tscsc/>

**Planning policy context**

Local Plans

Cambridge Local Plan

<https://www.cambridge.gov.uk/local-plan-review>

South Cambridgeshire Local Plan

<https://www.scambs.gov.uk/ldf/localplan>

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**List of Appendices**

- Appendix A:** Call for Evidence main themes
- Appendix B:** The proposed Congestion Reduction package
- Appendix C:** Shortlisted interventions from the Access Study
- Appendix D:** Engagement principles



## Appendix A Summary of main themes and ideas raised by respondents to the Call for Evidence

Theme / Suggestion	Number of representations
<b>Demand Management &amp; Fiscal Measures</b>	
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
<b>Technology</b>	
Smart Traffic Management (Includes: syncing signals more efficiently and further use of SCOOT system)	10
Data Collection Tools	2
Smart Card Tickets, RTPI, Journey Planning etc. (Includes: multi-modal, multi-operator tickets too)	5
Autonomous Vehicles	2
<b>Public Transport Infrastructure &amp; Service Improvements</b>	
Bus Lanes, Tidal-flow Bus Lanes, Bus Priority Measures	10
Bus Rapid Transit	5
More Attractive Bus Journeys (Includes: reliability, 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
<b>Infrastructure Improvements for Active Modes</b>	
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

Theme / Suggestion	Number of representations
<b>Highway Capacity Enhancements</b>	
Junction Improvements (Includes: measures aimed at traffic flow improvements)	9
New Roads (Includes: orbital movements to the east of the city and a southern relief road)	6
Re-Classify Roads by Use	1
Promote / priority for Motorcycles/Scooters (Includes use of bus lanes)	3
<b>Behavioural Change</b>	
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

## **Appendix B: The proposed Congestion Reduction package**

### **Tackling Cambridge's Congestion**

#### **The Strategy and vision for Greater Cambridge**

Local Plans for Cambridge and South Cambridgeshire set out the vision for sustainable growth in the Greater Cambridge area to 2031. The Transport Strategy for Cambridge and South Cambridgeshire was developed in parallel with the Local Plans and sets out the strategy approach and infrastructure needed to address the transport demands that come with the planned growth in a sustainable way. The Greater Cambridge City Deal supports these plans, by ensuring the transport infrastructure needed can be delivered. The strategic objectives of the City Deal are:

- to nurture the conditions necessary to enable the potential of Greater Cambridge to create and retain the international high-tech businesses of the future;
- to better target investment to the needs of the Greater Cambridge economy by ensuring those decisions are informed by the needs of businesses and other key stakeholders such as the universities;
- to markedly improve connectivity and networks between clusters and labour markets so that the right conditions are in place to drive further growth; and
- to attract and retain more skilled people by investing in transport and housing whilst maintaining a good quality of life, in turn allowing a long-term increase in jobs emerging from the internationally competitive clusters and more university spin-outs.

The transport vision for Greater Cambridge is that it should be easy to get into, out of and around Cambridge by public transport, by bike and on foot. The aim is that, despite the anticipated growth in journeys of about 30% by 2031, there will be a reduction in peak hour traffic of 10-15% by 2031, using 2011 as a baseline.

This aim is based on pragmatism as well as being grounded in national and local policy; there is not space on the transport network to cater for the increase in travel demand that will be seen with planned growth if travel behaviour does not move away from private car use.

The Greater Cambridge City Deal transport strategy objectives are:

- To ensure transport in Greater Cambridge supports economic growth and the continuation of the Cambridge Phenomenon
- To bring about a step change in the quality and reliability of public transport in Greater Cambridge by tackling congestion, investing in the infrastructure needed for quicker, more reliable public transport journeys and working in partnership with public transport providers.
- To reallocate road space to public transport, cycling and walking to encourage journeys using these modes and reduce traffic volumes.
- To encourage continued growth in the numbers of people cycling in Greater Cambridge.
- To use the opportunities from road space reallocation, congestion reduction, and infrastructure projects offer to improve air quality, the public realm and the historic and natural environment.

## **Part 1: The Proposed Package**

The proposal on which engagement would take place in the summer and autumn 2016 will be a package of measures to reduce peak time traffic flows and congestion, improving bus reliability, conditions for cyclists and pedestrians, and creating opportunities to improve the public realm. The package consists of the following elements.

- Better bus services and expanded usage of Park and Rides
- Better pedestrian and cycling infrastructure
- Better streetscape and public realm
- Peak Congestion Control Points in the weekday morning and evening peak periods
- A Workplace Parking Levy
- On-Street Parking Controls (including Residents' Parking)
- Smart Technology
- Travel Planning

The following sections describe each element of the proposed package.

### **1 Better public transport**

A key objective of the proposed Congestion Reduction package is to remove congestion on the key bus corridors, which would result in an immediate improvement in bus reliability and reduced journey times. Tranche 1 of the Greater Cambridge City Deal already includes significant infrastructure to improve bus journey times and reliability on key routes into Cambridge from new settlements. The Cambourne to Cambridge, A1307 and Western Orbital schemes all include consideration of new Park and Ride provision.

Stagecoach currently deploys additional vehicles to try and maintain service frequency in congested conditions. Removing congestion on key radial and city centre routes would give an immediate improvement in reliability and frequency for services that use these routes and opportunity for the redeployment of the extra vehicles on new routes. In addition, the bus companies have indicated that, given sufficient notice, they would provide extra buses and increased frequencies to meet the demand from the day of implementation of the Peak Congestion Control Points element of the proposed Congestion Reduction package.

Initial assessment indicates that the current five Cambridge and two Busway Park and Ride sites have spare parking capacity that could cater for the total mode shift away from car use for trips into the city that might be seen with the Peak Congestion Control Points if implemented in 2017. In reality, rail, cycling and other bus services would also cater for many of these trips. However, additional buses are likely to be needed to cater for the shift away from car use; these could be on new routes or supplement existing Park and Ride services. Additional Park and Ride car park capacity will still be needed to cater for future growth. Advance funding of further service enhancements prior to the implementation of a Workplace Parking Levy (WPL) would also need to be considered.

Potential new interchange sites that might be relatively quickly developed would be identified as part of the development of the proposed Congestion Reduction package, including adjacent to railway stations in the Greater Cambridge area and beyond. WPL could be used to fund this infrastructure.

The new Cambridge North Station will open in May 2017. This will eliminate the need to cross the city to access the rail network, and will allow access to employment in North Cambridge by rail. The Access Study also includes the proposed new station to serve Addenbrooke's, the Biomedical Campus and the south of the city in the shortlist of interventions to tackle congestion in the city.

## 2 Better cycling infrastructure

The Peak Congestion Control Points will reduce traffic on key routes in Cambridge resulting in an immediate improvement in conditions for cyclists. Opportunities for quick wins for cyclists will be identified, such as the re-allocation of road space.

High quality cycling infrastructure to enable people to cycle easily and safely around Greater Cambridge is already being delivered with Cycle City Ambition Grant schemes either complete or being implemented this year. Tranche 1 of the Greater Cambridge City Deal includes the Chisholm Trail and Cross-City cycling routes. All other tranche 1 schemes, and moving forward, tranche 2 and 3 schemes include significant new cycling facilities.

A proposal is being developed to provide a comprehensive network for commuting into Cambridge from surrounding settlements. WPL could be used to fund this infrastructure.

## 3 Better streetscape and public realm

The removal of traffic in the busiest periods from key routes would allow for improvements to the streetscape and public realm. Where less space is needed for motor vehicles, and where maximum throughput of vehicles is no longer the key factor, a better balance between movement and place can be achieved.

Opportunities for improvements would be identified as part of the proposed Congestion Reduction package development. The permanent implementation of such measures would be as part of the final implementation of a Peak Congestion Control Point scheme, if it were confirmed following the trial implementation using the experimental Traffic Regulation order process.

## 4 Peak Congestion Control Points in the weekday morning and evening peak periods

To provide the road space needed to increase the capacity and reliability of bus services, improve conditions for pedestrians and cyclists and manage congestion, Peak Congestion Control Points in and around the city centre would limit access to buses, cyclists, and taxis in the peak periods. The Peak Congestion Control Points would be located at key points on the network, with the aim of using the minimum number of restrictions to give the maximum traffic reduction effect across the widest part of the network. The closures will limit cross city car journeys, which have the greatest impact on congestion.

Six Peak Congestion Control Point options have been subject to initial testing. These are shown indicatively in Figure B1 and are as follows:

- Options that place Peak Congestion Control Points on the Ring Road.
  - **Option 1**; on Grange Road, Queens Road and East Road.
  - **Option 2**; on Grange Road, Queens Road, East Road, Elizabeth Way and Maids Causeway.
- Options that place Peak Congestion Control Points on key Bus Routes.
  - **Option 3**; on Hills Road.
  - **Option 4**; on East Road, Hills Road and Mill Road.
  - **Option 5**; on East Road, Hills Road, Mill Road and Coldhams Lane.
- An option that is a combination of the two approaches above.
  - **Option 6**; on Grange Road, Queens Road, East Road, Hills Road, Mill Road and Coldhams Lane.

Options 1 and 2 were proposed to test the concept of cutting the ring road to prevent through movements. Option 1 effectively cuts the ring road in two places (East Road is informally the Inner ring road). Option 2 cuts it in three places.

Options 3, 4 and 5 were proposed to test the concept of reducing general traffic on key routes for public transport, walking and cycling where congestion is particularly problematic. Option 3 focuses specifically on Hills Road which is the busiest road in the city for buses, and also one of the most congested, particularly in the evening peak period. Options 4 and 5 iterate from Option 3 to manage where traffic is displaced to. Both Options 4 and 5 also cut East Road; informally the inner ring road.

Option 6 combines Options 1 and 5 to see if the benefits from both could be achieved without severe negative impacts.

Of these six options:

- **Option 1** would provide benefits in the north of the city but less so in the south.
- **Option 2** was assessed as having too great a level of negative impacts for relatively little benefit over Option 1.
- **Option 3** would provide local benefits on Hills Road rather than the wider benefits seen in the other options.
- **Option 4** provides good benefits on East Road, Hills Road and East Road, but would lead to significant additional traffic on Coldhams Lane that would be difficult to deal with.
- **Option 5** is an iteration of Option 4, and redistributes this traffic away from Coldhams Lane onto routes where it is likely to be easier to deal with and therefore is preferred over Option 4.
- **Option 6** is most effective in reducing congestion in Cambridge but requires the greatest level of change in travel behaviour.

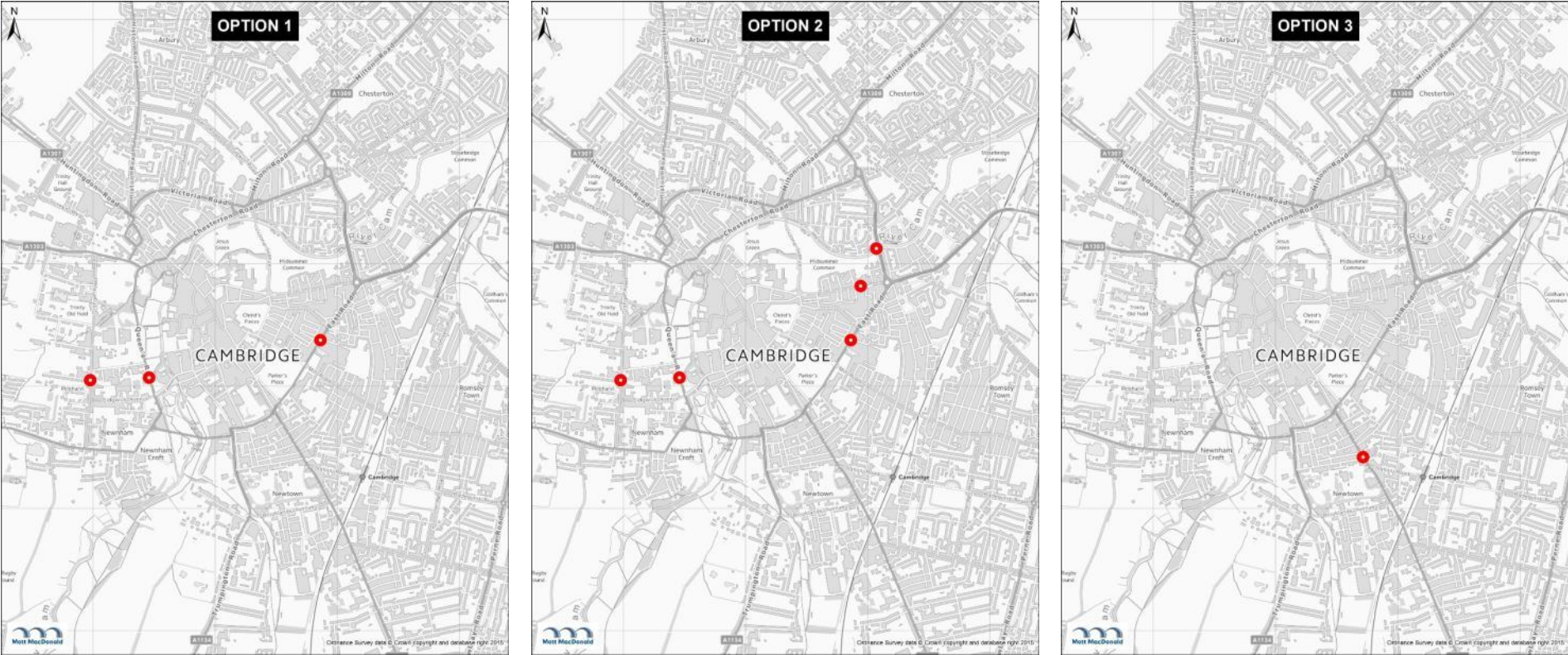
On the basis of the initial assessment, the benefits seen in Options 1, 5 and 6 are worth pursuing. Option 6 provides the greatest level of benefits, and the level of behaviour change that might be facilitated by this option is likely to be needed to cater for the population and economic growth occurring in the Greater Cambridge area.

The most significant success factor will be the extent to which travellers change their behaviour, and transport modelling can only go so far in predicting these behavioural changes. The implementation of a small number of Peak Congestion Control Points is relatively simple, and they could be 'tweaked' relatively easily. Given the challenge of accurately predicting how people will respond, and the fact that there is a pressing need to address current congestion, it is considered that an experimental approach is the best way to take this element of the proposed Congestion Reduction package forward.

Initial public and stakeholder engagement in the summer / autumn of 2016 would focus on effectively communicating the proposed Congestion Reduction package and the role of Peak Congestion Control Points in it. More detailed technical work would be undertaken to refine a Peak Congestion Control Points scheme that could be tested through an Experimental Traffic Regulation Order from late 2017. This work would include consideration of variations of the closure points by location, time, and whether all movements would be barred. Potential options for phasing of implementation to allow drivers to adapt to the changes would also be investigated. This work would be reported to the Executive Board in January 2017.

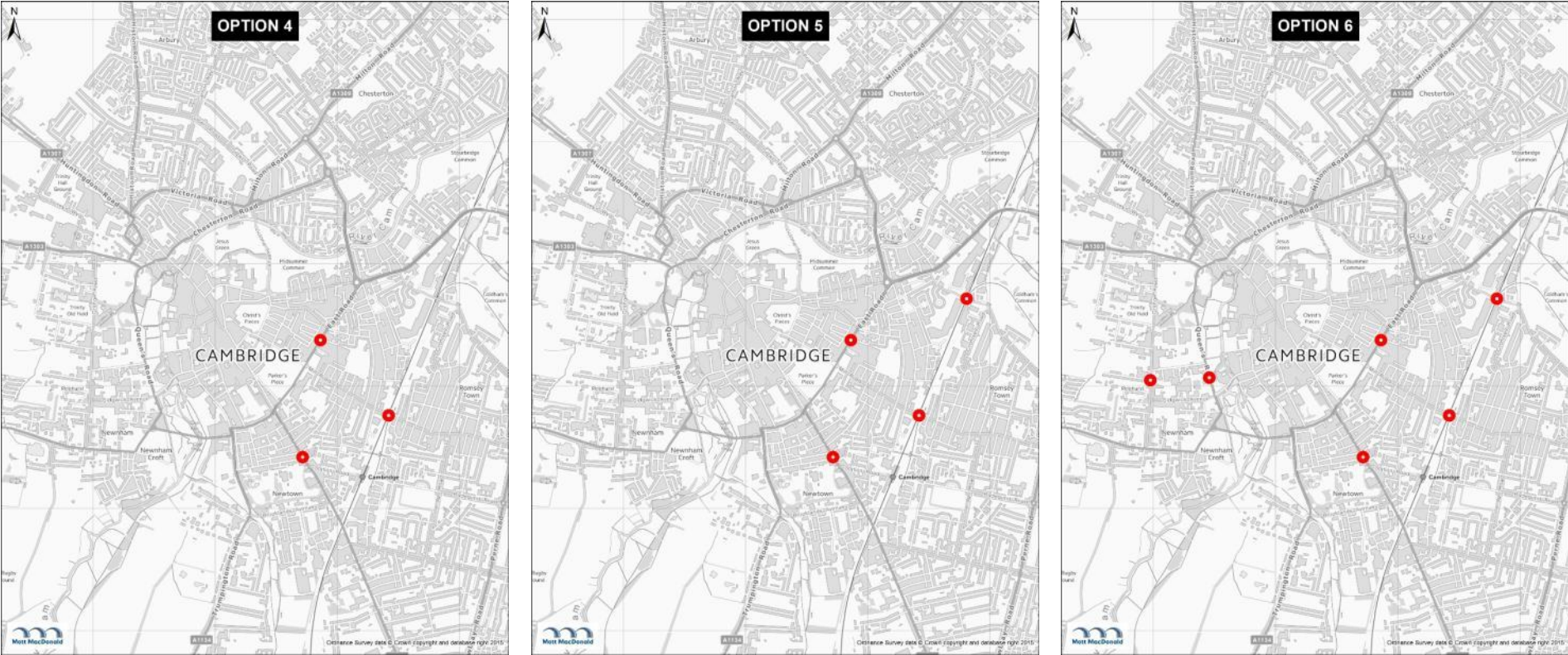
The experimental approach would take place without further formal public consultation prior to implementation, although informal consultation would take place with the emergency services, bus operators, the Road Haulage Association and Freight Transport Association as required by the regulations. Public consultation on the experiment would take place post implementation. Details of the experimental Traffic Regulation Order process would be set out in the engagement on the proposed package from July 2016.

**Figure B1: Peak Congestion Control Point options 1, 2 and 3**  
(Control point locations shown are indicative only)



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**Figure B2: Peak Congestion Control Point options 4, 5 and 6**  
(Control point locations shown are indicative only)



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It is proposed that for the experiment the closures would only operate Monday to Friday from 7am to 10am, and from 4pm to 6:30pm. These times are proposed to minimise the number of drivers that seek to travel earlier or later to avoid the closures. The procedures do allow for the experiment to be varied, but it is better to aim for a more onerous restriction and relax it if necessary than the other way round. These details may be refined as part of the development of the Peak Congestion Control scheme.

To permit enforcement by Automatic Number Plate Recognition cameras, the closure points would be designated as bus gates. The County Council will be replacing the existing rising bollards in the city with camera enforcement in the 2016/17 financial year and already has in place arrangements for purchasing equipment and operating camera enforcement.

It is proposed that access through the closure points would be limited to: cyclists, scheduled service buses, local taxis, and emergency vehicles. These are the groups permitted through the existing core scheme closure points.

The current Cambridge core traffic scheme allows private hire cars access through the existing closure points; however it is considered that this may not be appropriate for these closures. It is relatively simple and cheap to register a vehicle as a private hire car with no obligation to accept a hire and where apps such as Uber have been deployed there have been large increases in numbers of private hire cars.

As with the current core scheme vehicles would need to be registered and authorised to use the closure points. Unauthorised vehicles would be liable to a penalty charge. Disabled drivers would not be exempt. As with the core traffic scheme, in special circumstances exceptional authorisation may be permitted; for example, in the case of a doctor's surgery in close vicinity to a closure point.

The closure points would be sited at, or close to, points where vehicles can turn, with appropriate signs in place both at the closure point and in advance. The existing system of Variable Message Signs will be used to give advance warning of the closures, and would be augmented if necessary.

## **5 Workplace Parking Levy**

A Workplace Parking Levy (WPL) would act with smart Peak Congestion Control Points to further reduce numbers of commuter car trips to employer's premises in Cambridge and help to ensure that car trips not directly affected by the Peak Congestion Control Points do not increase. However, the primary purpose of the WPL would be to bring a revenue stream that would fund infrastructure and sustainable transport improvements, including supporting public transport provision. This investment would be targeted at sustainable transport capacity that would provide for the travel demand of employers.

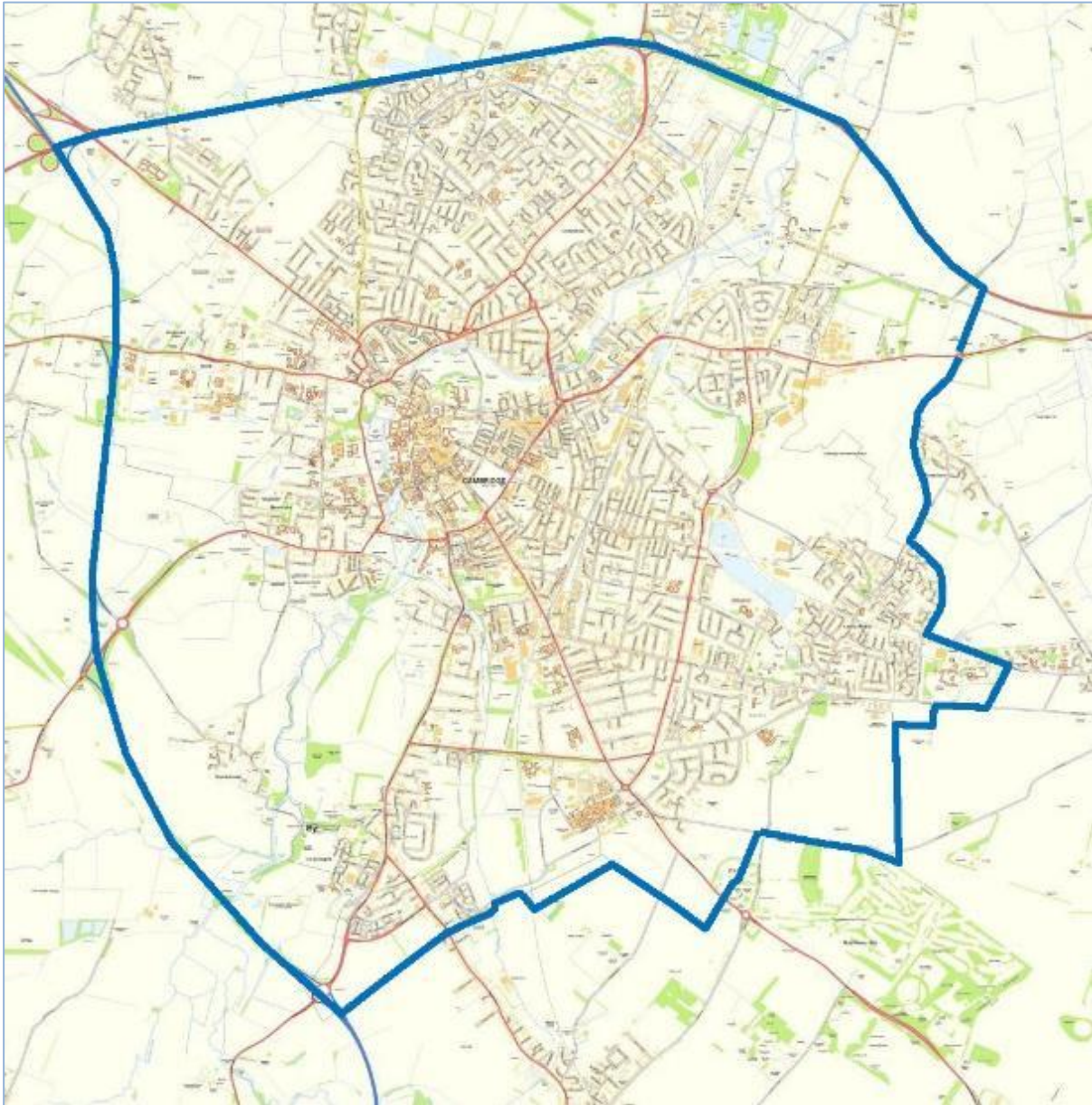
The proposal for engagement on WPL as part of the package will use the successful Nottingham scheme as an illustrative example, including Nottingham's charging levels, exemptions for small businesses, licensing and enforcement arrangements. In the Nottingham scheme exemptions for those with ten or fewer spaces mean that only 10% of employers are required to pay the levy; however these employers have around 63% of the workplace parking spaces in Nottingham.

The annual charge per parking space in Nottingham is £375 (equivalent to £1.50 per working day). If this figure were applied to Cambridge, a WPL scheme could raise revenue in the order of £7m to £11m per annum.

The levy is applied to spaces actually used. Employers apply for a license for the spaces they use, including exempt spaces, and the Council regularly monitors usage to establish that the number of spaces is correct. Visitor and customer parking are excluded.

Nottingham City Council applies WPL to the whole city. A proposed zone covering Cambridge and adjoining urban fringes in South Cambridgeshire is shown on the map in Figure B3.

**Figure B3 Proposed zone for a Workplace Parking Levy for Cambridge**



The area is bounded to the north by the A14 and to the west by the M11. All of Cherry Hinton is included; in addition, in the vicinity of Addenbrooke's and Cherry Hinton the area includes the identified South Cambridgeshire Local Plan Allocations that adjoin the boundary with the City. The WPL would therefore cover the Cambridge City area, excluding the small areas to the north of the A14 and the west of the M11, and include those parts of South Cambridgeshire within the A14 and M11, and that are allocated for development in the fringe areas in the draft South Cambridgeshire Local Plan.

The proposed Congestion Reduction package engagement over the summer / autumn of 2016 would include a programme for adapting the Nottingham scheme to ensure it is appropriate to the Cambridge conditions; this would include consideration of:

- Setting of charging levels.
- Exemptions.
- Licensing.
- Enforcement.

The final scheme would be subject to further consultation prior to introduction.

It is a requirement of the legislation (Transport Act 2000) that the package of measures to be funded from WPL needs to be set out, and must be:

*“for application by the authority for the purpose of directly or indirectly facilitating the achievement of policies in the authority’s Local Transport Plan.”*

The authority as defined by the legislation is Cambridgeshire County Council, as the local traffic authority. The Greater Cambridge City Deal programme is drawn from the Third Cambridgeshire Local Transport Plan 2011-2031 (LTP3) and from the Transport Strategy for Cambridge and South Cambridgeshire, which is part of the LTP3 suite of strategy documents. While the legislation would technically allow revenue to be spent anywhere in Cambridgeshire, for the avoidance of doubt, it would be spent in the Greater Cambridge City Deal on transport measures that directly benefit businesses / employers in the area, and focussed as noted below.

The detailed package of measures to be funded from WPL would be developed through engagement with the business / employer community to ensure maximum support. At this stage it is proposed that the measures would focus on providing support for journeys to and from work, such as:

- Support for peak hour express bus services from major satellite settlements and orbital bus services.
- Support to reduce the cost of smartcard season tickets.
- Further enhancements to the cycle network.
- Additional Park and Ride capacity.
- Support for travel planning with schools and employers.

These measures would directly facilitate the achievement of policies in the Third Cambridgeshire Local Transport Plan.

## **6 On Street Parking Controls**

Further expansion of residents parking and on-street parking controls would reduce the availability of on-street commuter parking. It would help to ensure that trips not directly affected by the Peak Congestion Control Points do not increase, and would ensure that any displacement of parking onto neighbouring streets due to either the Peak Congestion Control or the WPL Points could be managed.

The County Council is responsible for on-street parking policy. The Implementation of that policy is delegated to the Cambridge Joint Area Committee (CJAC), a joint Committee with Members from the City and County Councils. CJAC is currently reviewing the County Council’s Resident’s Parking Policy and their programme is set out in Figure B4.

Charges for permits would remain as it is unlikely to be acceptable to business to cross subsidise residents’ parking from WPL, and no other revenue funding is available. To appropriately manage the impact of changes on local businesses, and in accordance with the current policy, short stay pay and display parking would be provided at appropriate locations.

**Figure B4 Timetable for CJAC review of Residents Parking Policy**

<b>Milestone Date</b>	<b>Milestone No.</b>	<b>Milestone Description</b>
7th June 2016	1	CJAC – Agree Terms of Reference & Scope
26th July 2016	2	CJAC – Present progress report
25th October 2016	3	CJAC – Final Present of recommendations
8th November 2016	4	County Council Highways and Community Infrastructure Committee – Authorisation
January 2017	5	Implementation

## **7 Smart Technology**

Use of technology and data gathering to provide information to improve journeys, particularly on public transport and through digital way finding and use of smart signals to facilitate bus priority and provide enhanced facilities for pedestrians and cyclists.

New equipment may allow for localised improvements to capacity, but significant increases in network capacity should not be expected. New and replacement traffic signals introduced as part of infrastructure schemes will give priority to buses, pedestrians and cyclists. Existing traffic signal operations and systems will be reviewed to take account of the reductions and changes in traffic flows arising from the implementation of the package.

The Smart Cambridge programme is developing proposals as part of the Greater Cambridge City Deal programme, and these will be implemented where appropriate as part of the Cambridge Access programme.

## **8 Travel Planning**

A travel planning service would be made available to all businesses, schools, and individuals. This would help businesses, schools, and individuals to adapt to the changes, providing advice and support about alternative modes of travel, ways of working, travel information and support for changes to facilities, such as cycle parking.

Through Travel for Cambridgeshire this service is already provided, usually as part of a planning condition on new developments. This approach will be expanded to existing businesses and schools funded from WPL. Advanced funding prior to the introduction of WPL will be required.

## Part 2: Potential delivery timescales

**Figure B5 Notional delivery timescales for the Congestion Reduction package**

Times are from 'in principle' decision to develop these aspects of the package following the initial consultation.

Item	Timescale	Notes
<b>1 Better bus services and expanded usage of Park and Rides</b>		
Better bus services	9 months – 1 year	<ul style="list-style-type: none"> <li>Day 1 improvement in bus reliability and reduction in bus journey times from Peak Congestion Control Points.</li> <li>Subject to notice to operators- increase in bus services and new intermediate fare zone.</li> <li>Subject to revenue funding - additional service enhancements e.g. orbital services and express services.</li> </ul>
Better bus infrastructure	2 years – 4 years	<ul style="list-style-type: none"> <li>Tranche 1 schemes already under development.</li> </ul>
New Park and Ride Sites	3-5 years	<ul style="list-style-type: none"> <li>Requires site selection process, planning permission including heritage and environmental impact assessments, land acquisition.</li> <li>Note significant spare capacity in existing P&amp;R sites.</li> </ul>
<b>2 Better pedestrian and cycling infrastructure</b>		
Better conditions for cycling	9 months	<ul style="list-style-type: none"> <li>Day 1 improvement in cycling conditions resulting from traffic reductions from Peak Congestion Control Points.</li> <li>Potential for experimental TROs to reallocate road space released.</li> </ul>
Cycling infrastructure	immediate – 4 years	<ul style="list-style-type: none"> <li>Tranche 1 cycling schemes already under development. First schemes delivered late 2016 – Cross City Cycling.</li> <li>Cycle City Ambition Grant schemes being delivered.</li> </ul>
<b>3 Better streetscape and public realm</b>		
	Immediate – 4 years	<ul style="list-style-type: none"> <li>Delivery will be linked to the timing of other schemes.</li> </ul>
<b>4 Peak Congestion Control Points in the weekday morning and evening peak periods</b>		
Experimental	9 months – 1 year	<ul style="list-style-type: none"> <li>Experimental TRO process</li> <li>No further pre-implementation public consultation.</li> </ul>
Permanent	2 years	<ul style="list-style-type: none"> <li>Standard TRO process</li> <li>Detailed scheme development, consultation and formal objection period prior to implementation.</li> </ul>
<b>5 Workplace Parking Levy</b>		
	3 years – 5 years	<ul style="list-style-type: none"> <li>Scheme parameters need to be developed. Consultation and formal Order process required.</li> </ul>
<b>6 On-Street Parking Controls (including Residents' Parking)</b>		
	2 years+	<ul style="list-style-type: none"> <li>Minimum time for TRO process. Actual time will depend on scale of expansion and level of consultation.</li> </ul>
<b>7 Smart Technology</b>		
Better data and journey information		<ul style="list-style-type: none"> <li>An ongoing process as technologies and systems become available</li> </ul>
Smart traffic signals	9 months – 2 years	<ul style="list-style-type: none"> <li>Reconfiguring existing traffic signals to changed conditions, depends on scope of changes. Timings can be reconfigured almost immediately. Changes to junction configuration requiring physical works take longer.</li> </ul>
<b>8 Travel Planning</b>		
Travel planning	Immediate	<ul style="list-style-type: none"> <li>Advice and support to businesses, schools and individuals, to help them adapt to the changed circumstances. Can be funded from WPL but will require funding in advance of implementation of measures.</li> </ul>

### Part 3: Notional time line for key decisions and implementation

Note that dates noted below for schemes in the proposed Congestion Reduction package are indicative only, and would be very likely to change as projects became more clearly defined.

**Figure B6 Notional time line for key decisions and implementation**

2016	<b>July-Oct</b>	<b>Public and stakeholder engagement on Congestion Package</b>
	Oct	Decision to Implement Chisholm Trail
	Nov	Decision to implement Cross City Cycling
2017	<b>Jan</b>	<b>Decision to proceed with Congestion Package</b>
	May	Opening of Cambridge North Station
	Aug	Cross City Cycling Schemes completed
	<b>Sept</b>	<b>Start of Peak Congestion Control Points Experiment</b>
	Oct	Decision to implement Histon Road scheme
	Nov	Tranche 2 programme approved
2018	Feb	Decision to implement Milton Road scheme
	Mar	Decision to implement Cambourne to Cambridge scheme
	Apr	Decision to implement A1307 corridor scheme
	Sept	Decision to implement Western Orbital Scheme*
	<b>Oct</b>	<b>Implementation of additional on-street parking controls</b>
2019	Jan	Decision to implement A10 North scheme*
	Feb	Histon Road Scheme completed
	<b>Mar</b>	<b>Peak Congestion Control Points made permanent</b>
	<b>Dec</b>	<b>Decision to implement Workplace Parking Levy</b>
2020	April	Tranche 2 funding received
	June	Milton Road Scheme completed
	June	Final stage of Chisholm Trail completed

\*Subject to tranche 2 funding

**Appendix C Shortlisted interventions from the Access Study**  
(44 total, including 30 suggested in the Call for Evidence)

Schemes in the shortlist that were suggested by respondents to the Call for Evidence are highlighted in **blue bold**.

Proposal		Recommendation
<b>Proposals likely to be wholly deliverable in Tranche 1</b>		
Demand Management & Fiscal Measures	<b>Smart-Peak Congestion Control Points at existing key congested links</b>	<b>Included in the proposed Congestion Reduction package.</b>
	<b>Parking / loading controls on key bus routes</b>	Would be considered as part of the development of the proposed Congestion Reduction package.
Technology	<b>Coordinated, optimised and responsive UTC system</b>	<b>Included in the proposed Congestion Reduction package.</b>
	<b>Expansion of VMS network and real time travel information broadcasting</b>	
Infrastructure Improvements for Active Modes	Provide good access and facilities at the start and end of key cycle paths	Principle will be worked across the GCCD Cambridge City Deal Programme.
	<b>Improve walking routes between Public Transport nodes and key destinations</b>	
	<b>Increase cycle parking in City Centre core</b>	<b>Included in the proposed Congestion Reduction package.</b>
Behavioural Change	<b>Shuttle buses to collect school children at park and ride sites</b>	Some services have been running for several years, and facilities at Trumpington have been recently expanded. Further opportunities will be sought.
<b>Proposals that could commence in Tranche 1 but might take longer to deliver</b>		
Demand Management & Fiscal Measures	<b>Road space reallocation to non-car modes</b>	<b>Included in the proposed Congestion Reduction package.</b>
	<b>Road user charging</b>	Not included in the proposed Congestion Reduction package. Could form the basis of an alternative policy approach to the proposed package.
	<b>Implement a Workplace Parking Levy</b>	<b>Included in the proposed Congestion Reduction package.</b>
Technology	Road works management and coordination	Being delivered by County Council
	Improved responsiveness to disruptions	
	Dedicated multi-modal journey planning app for Cambridge	Private sector could deliver. Cambridge University and the Biomedical Campus also pursuing.
Public Transport Infrastructure & service Improvements	Improve vehicular access to existing park and ride sites	Will be considered as part of the following GCCD schemes. <ul style="list-style-type: none"> <li>• Cambourne to Cambridge</li> <li>• A1307</li> <li>• A10(N)</li> <li>• Western Orbital</li> <li>• Newmarket Road</li> </ul>

Proposal	Recommendation	
<b>Proposals that could commence in Tranche 1 but might take longer to deliver (continued)</b>		
Public Transport Infrastructure & service Improvements	<b>New park and ride sites</b>	<p>Already under consideration as part of the following GCCD schemes:</p> <ul style="list-style-type: none"> <li>• Cambourne to Cambridge</li> <li>• A1307</li> <li>• Western Orbital</li> <li>• Newmarket Road</li> </ul> <p>Additional sites may be considered if further capacity is needed.</p>
	<b>Deck park and ride car parks to increase capacity</b>	Will be considered as part of any GCCD schemes that deliver new Park and Ride sites or might require expansion of existing sites.
	<b>Expand high quality passenger facilities at park and ride sites</b>	Will be considered as part of any GCCD schemes that deliver new Park and Ride sites or might require expansion of existing sites.
	<b>Ensure park and ride routes serve highest demand destinations</b>	Proposals for new bus services will be worked up as part of the further development of the Cambridge Access package
	Maximise routeing of park and ride services on busways	
	<b>New bus lanes to bypass congested sections</b>	<p>Proposals already incorporated in the following GCCD schemes:</p> <ul style="list-style-type: none"> <li>• Histon Road</li> <li>• Milton Road</li> <li>• Cambourne to Cambridge</li> <li>• A1307</li> <li>• A10(N)</li> <li>• Western Orbital</li> <li>• Newmarket Road</li> <li>• Eastern Orbital</li> </ul> <p>Further opportunities would be investigated as part of the proposed Congestion Reduction package.</p>
	<b>Bus actuation at signals to clear queues (where bus lane not possible)</b>	Already in place at some signals. Will be incorporated in GCCD bus priority schemes.
	<b>Expand high quality bus stops / interchanges etc.</b>	Will be incorporated in all City Deal bus priority schemes. Opportunities beyond the current programme will be further investigated.
	<b>Expand and improve high quality bus vehicle fleet</b>	The Councils and Bus Companies are already working together on bids for the greening of the bus fleet, which would involve new, high quality vehicles.
	Interchange all out-of-city bus services at park and ride sites	Will be considered on a case by case basis.
Increased passenger capacity at Cambridge station	Additional passenger circulation space in the ticket office currently being delivered by Abellio Greater Anglia. Further capacity may be needed in future.	



Proposal		Recommendation
<b>Proposals that could commence in Tranche 1 but might take longer to deliver (continued)</b>		
Public Transport Infrastructure & service Improvements	<b>Cambridge Biomedical Campus Station</b>	City Deal partners are working with the Biomedical Campus and others to bring forward proposals for the station.
	Frequent buses between stations and main destinations	<b>Included in the proposed Congestion Reduction package.</b>
Infrastructure Improvements for Active Modes	<b>Provide and link segregated cycle ways with park and ride sites</b>	<b>Included in the proposed Congestion Reduction package.</b>
	<b>Resurface and remark roads, cycle lanes and footpaths including colour coding mixed use areas</b>	<b>Recommended for inclusion in proposed Congestion Reduction package.</b>
	<b>Expand quality cycle parking at park and ride sites</b>	Will be actioned by City Deal schemes that deliver new Park and ride sites. Facilities at existing sites will be reviewed – refer to Cross- City cycle improvements team.
	Improved cycle link between Cambridge station and city centre	<b>Included in the proposed Congestion Reduction package.</b>
	Quality cycle links for new rail stations	Will be delivered as an integral part of new station proposals (as is already the case with Cambridge North Station).
	<b>Identify and prioritise primary and secondary cycle route network</b>	<b>Included in the proposed Congestion Reduction package.</b>
	<b>Deliver network of cycle routes to necklace villages</b>	Gaps in the GCCD programme will be identified by the work to identify and prioritise primary and secondary cycle route network and considered for delivery from GCCD or other sources following on from this work.
	<b>Address high pedestrian accident / conflict routes and junctions</b>	<b>Included in the proposed Congestion Reduction package.</b>
Behavioural Change	<b>Consolidate freight at park and ride sites</b>	Private sector could deliver
	Consolidate freight at edge of city centre sites	
	Spread freight movements through Smart Locker technology	
	<b>Spread freight movements through out of hours deliveries</b>	
	Freight delivery by cycle	
	<b>Parcel collection at rail stations</b>	
	<b>Car clubs and car sharing schemes</b>	Car clubs already operate in the city but there is scope for expansion. Private sector could deliver.
<b>School Travel Plans and school bus programme</b>	<b>School travel plans included in the proposed Congestion Reduction package.</b> School buses would be considered further as part of the development of the package.	

## Appendix D Consultation and Engagement Principles

### Introduction

On 12th February 2016, the Joint Assembly asked about the consultation principles that apply for City Deal schemes. Paragraph 5.3 of the City Deal Executive Board Terms of Reference states:

*"The lead role on projects shall be determined by the Board, subject to the principle that the lead authority should be the Council primarily responsible for the service in question for their area. The procurement and other rules of the lead authority will apply in respect of projects."*

### Transport scheme consultation and engagement principles

For transport projects, the lead authority is the County Council whose consultation and community engagement principles in its Listening and Involving Strategy apply. The strategy can be viewed at [www.cambridgeshireinsight.org.uk/file/2906/download](http://www.cambridgeshireinsight.org.uk/file/2906/download)

The key good practice principles of the Cambridgeshire Listening and Involving Strategy are:

- A. Consultation and involvement will be clearly linked to decision-making and take place as early as possible in the decision-making process.
- B. Consultation and involvement will be carried out to a high standard.
- C. Consultation and involvement will be inclusive.
- D. Consultation and involvement will be cost-effective and co-ordinated.

The principles within the strategy are equally applicable to both Engagement and Consultation exercises in that:

- Communication will be clear, explaining what we are asking or informing and how the collected views will be used.
- Listening to the views and feedback which would then be collated and shared with the Joint Assembly and Executive Board.
- Involving stakeholder representative groups in early engagement exercises that would then lead to future wider and inclusive consultation practices.

An Engagement Strategy is focussed on informing and communicating a package and inviting qualitative feedback by listening to people's views and involving stakeholder representative groups in focus group discussions.

A Consultation Strategy is a formal process in which questions are asked based on the relevant information and answers are collated and analysed where results are fed into the decision-making process.

These principles, like the Cambridge City and South Cambridgeshire principles, set a high standard. All three sets of principles are broadly similar, emphasising the importance of early involvement of affected parties, transparency, inclusiveness, continuous improvement, planning and clear communication of outcomes.

The difference between these and the Cambridge City Council Code of Best Practice for consultation and community engagement is that the latter requires a named officer contact for each consultation. Using a City Deal mailbox for the City Deal consultations and a dedicated phone number allows us to respond to people more quickly and ensure enquiries relating to multiple consultations and all aspects of this extensive programme can be handled helpfully and efficiently.

### **Action**

A summary of the consultation principles that apply to City Deal schemes of all types will be made available on the City Deal website.