



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

9 June 2016

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

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## Histon Road Bus Priority, Walking and Cycling Measures: Report on Initial Consultation and Selection of a Preferred Option

### Purpose

- 1 This report reviews the feedback from a consultation on initial project ideas, sets out recommendations on a preferred project option and seeks approval to carry out a further public consultation.

Unless stated otherwise, all the background documents referred to in this report are available here:

[http://www.gccitydeal.co.uk/citydeal/info/2/transport/1/transport\\_projects\\_and\\_consultations/5](http://www.gccitydeal.co.uk/citydeal/info/2/transport/1/transport_projects_and_consultations/5)

### Context and Scope

- 2 The project supports the City Deal priority of achieving efficient and reliable movement between key existing and future housing and employment sites and is being delivered as part of the Tranche 1 infrastructure programme
- 3 In particular, the project will support the delivery of new housing at Northstowe and provide improved links with employment sites within the city. The project is being developed concurrently with a similar scheme for Milton Road, as there are links and dependencies between the two projects.
- 4 The project aims to provide improved infrastructure for buses to improve service reliability and journey times and to enhance the quality and safety of cycling and walking facilities.

### Recommendations

- 5 The Executive Board is recommended to:
  - a. Note the findings in the initial consultation report;
  - b. Take forward the initial ideas included in the 'Do Maximum' option for further design work, excluding the idea of banning the right turn into Warwick Road and the idea of 'floating' bus stops;  
**(Note: please refer to Section 25 and 26 of this report in relation to this recommendation)**
  - c. Note the further technical work that would be undertaken over the summer period to develop a preferred option layout for further consultation;
  - d. Support the development of traffic management measures to mitigate displaced traffic and parking for the purposes of further consultation;

- e. Delegate authority to the Executive Director of Economy, Transport and Environment, in consultation with the Chairman and Vice-Chairman of the Executive Board, to approve a further consultation for a preferred option scheme design, as detailed in Section 43 of this report; and
- f. Note the procurement plan for project delivery, the revised project programme and the consultation plan set out in this report.

### **Reasons for Recommendations**

- 6 Histon Road is a high priority scheme for the City Deal programme and a key proposal within the Local Transport Plan 2011-2026. Earlier technical work identified various options that have been the subject of public consultation and a preferred set of measures now needs to be selected for detailed development.
- 7 An assessment has been undertaken of various bus lane layouts (see Appendix 3) to determine the layout that is being recommended as part of a project preferred option.
- 8 Consideration needs to be given to suitable traffic management measures to ensure that any unacceptable displacement of traffic and parking, as a consequence of the project, are mitigated where necessary and appropriate.

### **Background**

#### Key objectives

- 9 The project has the following key objectives, (in no particular order):
  - a) Comprehensive priority for buses in both directions wherever practicable;
  - b) Additional capacity for sustainable trips to employment/education sites;
  - c) Increased bus patronage and new services;
  - d) Safer and more convenient routes for cycling and walking, segregated where practical and possible;
  - e) Maintain or reduce general traffic levels; and
  - f) Enhance the environment, streetscape and air quality.

#### Development

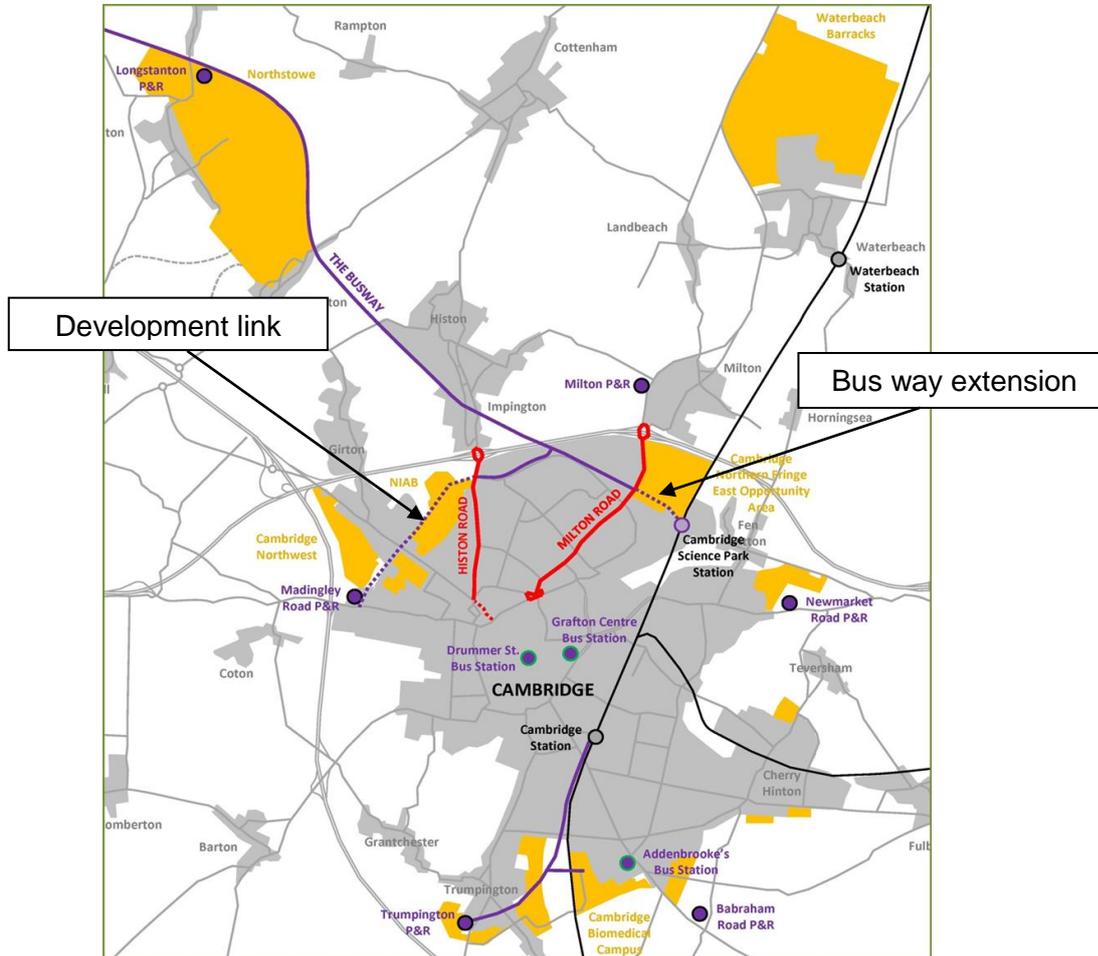
- 10 **Figure 1** below indicates the length of Histon Road under consideration and shows its setting in a wider context. The report considered by the Executive Board on 3<sup>rd</sup> November last year sets out the strategic and planning background and context for the scheme.

#### Options assessment

- 11 At its meeting on 3<sup>rd</sup> November 2015, the Executive Board considered a report on technical work undertaken by consultants, WSP/Parsons Brinkerhoff, to identify initial ideas for delivering the project objectives. Two options were put forward:
  - a 'Do Maximum' option comprising measures to provide the maximum benefit in terms of the project objectives but with a significant impact on the urban street scene and local access
  - a 'Do something' option offering less overall benefit for bus movements (although journey time and reliability would still improve over that experienced now), a similar level of improvement for cycling and walking but with slightly less impact on the public realm.

The Board resolved to undertake consultation on the two options. The consultants' draft options report, which contains drawings of the initial ideas, is available as a background document. The Board report and minutes are available here: <http://scams.moderngov.co.uk/ieListDocuments.aspx?CId=1074&MId=6537&Ver=4> [http://www.gccitydeal.co.uk/citydeal/info/2/transport/1/transport\\_projects\\_and\\_consultations/5](http://www.gccitydeal.co.uk/citydeal/info/2/transport/1/transport_projects_and_consultations/5)

**Figure 1: Histon Road in the wider area context**



### Considerations

- 12 An initial budget estimate of around £4 million was set for the Histon Road project by the City Deal Board when the first tranche of projects was approved. The technical work to date is in line with the Department for Transport technical scheme appraisal methodology (known as WebTAG) and the City Deal objectives set out in the City Deal document agreed between the five City Deal partners and Government: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/321722/Greater\\_Cambridge\\_City\\_Deal\\_Document.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/321722/Greater_Cambridge_City_Deal_Document.pdf)

### Initial consultation

- 13 In line with the Executive Board decision of 3<sup>rd</sup> November 2015, a consultation exercise for the initial project ideas was undertaken between 14<sup>th</sup> December and 15<sup>th</sup> February. Full details of the consultation process, the response to consultation and its analysis are provided in the report prepared by consultants WSP which is available as a background document.

- 14 The consultation is strongly influenced by a large percentage of responses from those living along and close to the route with far fewer responses from outside the area and from other stakeholder groups. The initial ideas have received a generally negative response although some aspects have been received positively. Appendix 1 sets out the headline results from the consultation and the key issues that have emerged, along with officer comment. A full report on the consultation and its results is available as a background document
- 15 The consultation sought suggestions and ideas on other ways of achieving the project aims and the responses are summarised in Appendix 2 along with officer comment.

### **Further assessment work**

- 16 Following consultation, further work has been undertaken to assess the opportunities to respond to the issues that have emerged and to provide further detail to inform a decision on a preferred option. Some of the initial ideas put forward are considered to be pivotal in achieving the project objectives even though they may have received a negative response at consultation.

#### Highway cross-section

- 17 As Histon Road is currently a two lane road, the provision of any bus lane would require road widening and the focus has been on how best to use a three lane layout from a bus perspective. As with the Milton Road project, the option of using a tidal bus lane arrangement has been explored to see if this provides a better use of carriageway space. The option of providing an inbound bus lane on the approach to the Gilbert Road junction coupled with an outbound bus lane on the approach to the King's Hedges Road junction has also been assessed as an alternative to providing a continuous inbound bus lane as shown in the initial 'Do Maximum' ideas.
- 18 An assessment of the likely bus journey time benefits of tidal flow arrangements has been undertaken to allow comparison with other bus lane options. The safety, operational, streetscape and maintenance challenges arising from tidal flow options have also been assessed through an officer/consultant workshop. Technical notes on current tidal flow schemes and assessment of tidal bus lane options are available as background documents and are referenced in an interim options report.

#### 'Floating' bus stops

- 19 Whilst the idea of providing 'floating' bus stops, which would allow cyclists to avoid overtaking buses at bus stops, gained some degree of support, the limited highway space available at most existing bus stops means that additional land would be required. This is considered to be impractical at many existing bus stop locations and therefore, it is recommended that floating bus stops should not be considered further.

#### Traffic modelling

- 20 Further work has been undertaken to assess the impacts of various bus lane design options (without the idea of banning the right turn into Warwick Road but including the changes at the Victoria Road junction) and changes to traffic flows on the road network which is detailed in the interim options report.
- 21 Appendix 3 compares various bus lane option journey times against a 'Do Nothing' scenario based on traffic modelling using a Paramics micro-simulation model constructed for the Histon Road corridor. It also sets out a comparison of these options in terms of benefits for bus services, urban landscape impact and risk.

- 22 Whilst modelling helps inform the decision making process there are issues that need to be taken into account when considering the modelling results. At this stage the benefits from early bus detection at traffic signals has not been built into the traffic model and further refinements in the model will allow bus dwell times to be more accurately reflected. Therefore, the modelled bus journey times should reduce when further modelling is undertaken.
- 23 The various bus lane layouts combined with the changes suggested at the Victoria Road junction all achieve bus journey time savings in the morning peak period but of varying lengths. How much the Victoria Road junction changes contribute towards these savings is not known at this time as the modelling has not been broken down to this level of detail.
- 24 Whilst the Victoria Road junction changes contribute positively towards bus journey time savings in the morning peak period, the displacement of traffic that results from these changes has a potentially negative impact on evening peak period bus journey times. This is primarily due to displaced trips from Victoria Road adopting alternative routes that result in more right turn movements from Histon Road, notably at the Gilbert Road and Roseford Road junctions, which causes more delay to all outbound traffic, resulting in longer bus journey times than a 'Do Nothing' scenario.
- 25 Whilst the predicted savings in the morning peak period exceed the time losses in the evening peak period, there is a need to understand more fully the contribution that the changes suggested at the Victoria Road junction make towards bus journey time savings to determine whether these ideas should form part of a preferred option and, if so, to consider mitigation measures to reduce any negative impact on evening peak period bus journeys. Mitigation might involve the retention of a right turn lane at the Gilbert Road junction and traffic management measures to deter or prevent through movements on Roseford Road.
- 26 Further modelling work is in hand to examine this issue more fully but the outcomes are not known at the time of the publication of this report. However, the modelling results will be published prior to any formal consideration of this report to inform a decision on the recommendations put forward.
- 27 The 'Do Maximum' and 'Do Something' bus lane options provide an inbound bus lane between King's Hedges Road and Gilbert Road but with the 'Do Something' option a short section is omitted near the Roseford Road junction. Therefore, the 'Do Something' option cannot be expected to achieve as much bus journey time saving as the 'Do Maximum' option and therefore it has not been modelled at this time.
- 28 The interim options report identifies various routes where traffic levels are expected to change (increases and reductions) as a result of the restricted traffic movements proposed in the Milton Road and Histon Road projects. The report provides a commentary on the reasons for these changes. Appendix 4 provides a diagrammatic representation of these road network flow changes across the northern part of the city during the peak periods.

### Cycling

- 29 On the southern section, where highway space is very constrained, the initial ideas for cycling improvements have been reviewed and it is considered that the provision of advisory cycle lanes on each side combined with parking prohibitions offers the best option for future development.

## Preferred option

- 30 Determining the bus lane layout is a key element in establishing the cross sectional profile of the street layout for the preferred option. Appendix 3 sets out an assessment of the options that have been considered. The key findings from this assessment and the conclusions drawn are as follows:

### Impact on the urban landscape

All the options utilise a three traffic lane wide carriageway and, therefore, have very similar impacts on the street scene. Whilst the removal of highway trees is an issue of local concern there would be little difference in the numbers that would be removed by each option and the opportunities for tree replacement, both within and outside the highway, would be considered as part of whatever option pursued. The tidal flow options would require the installation of gantry signing along the length of the bus lanes which will impact significantly on the street scene.

### Bus journey time savings

The tidal flow options provide better bus journey time savings in the direction of the peak flow but are less effective in the opposite direction. Overall, the 'Do Maximum' option offers the greatest time savings for buses with little difference between the savings achieved by the other options. Whilst not modelled, the 'Do something' option cannot be expected to achieve greater time savings than the 'Do maximum' option.

### Risks

The 'Do Maximum' option requires additional land outside the highway boundary which would have to be purchased and this could involve compulsory purchase with its associated risks. Early engagement with landowners would be undertaken. All other options can be accommodated within the highway boundary.

The tidal flow options would require Department for Transport authorisation for the signing regime with no guarantee of approval. There are also safety issues that would require careful scrutiny through the safety audit process. Accommodating the foundations for gantry signs within a constrained highway width would be challenging and could also necessitate the use of land outside the highway boundary

- 31 Taking into account the bus lane assessment set out in Appendix 3, and the conclusions set out above, it is considered that the 'Do Maximum' bus lane layout should be taken forward as part of the preferred option for further design layout work to facilitate a second round of consultation. Appendix 5 summarises the key elements that the preferred option would comprise of, along with the rationale for their inclusion. ***(Please refer to Section 25 above with regard to the Victoria Road junction measures)***

## Future work

- 32 The following work would be undertaken over the summer/early autumn period to prepare a design for a preferred layout for consultation.

### Engagement

- 33 A joint Histon Road and Milton Road Local Liaison Forum (LLF) is being formed with local councillors to facilitate communications as both projects are developed further. Local councillors will determine which stakeholder groups they wish to attend the LLF meetings with project officers giving the necessary support.

## Design

- 34 Detailed highway layout plans will be developed for the preferred option which will involve input from urban design professionals to ensure that street scene aspects, particularly highway trees and other planting areas, are given careful consideration and weight in the design process. Street scene images of the layout at various locations along the route will be prepared to provide a visual impression of what the design would look like. To inform and influence this design work, informal consultation with key stakeholders, particularly local residents groups, will be undertaken over the summer period to get feedback on specific design aspects such as cross section design layout options for the footway, cycleway and green landscaping elements, tree planting (tree species, size and spacing of trees), and the use and design of other landscaping areas.
- 35 Trial pits will be dug at various sites along the route to check the location of public utility services to validate the information provided by the utility companies to inform the design process.

## Traffic modelling

- 36 The modelling done to date will be revised to take account of the likely impacts arising from the package of measures emerging from the Cambridge Access and Capacity Study to show how this would affect journey time performance and the business case for the project..
- 37 The changes in traffic flows on the surrounding road network that are likely to arise as a result of the Milton Road and Histon Road schemes will be explored in greater detail to inform the design work for the preferred option, particularly the Gilbert Road junction layout, to address the issue of increased right turning movements in the evening peak period identified earlier in the report. Consideration will also be given to measures to mitigate any adverse impacts on side roads through further engagement with the LLF to consider the need for and the traffic management options available to mitigate any significant impacts. The mitigation proposals that emerge from this dialogue will also form part of the next consultation.
- 38 For the preferred option, new signal timings will be developed to achieve a suitable balance of main road and side road traffic delays which will be coupled with an early bus detection mechanism. This will facilitate further traffic modelling to refine the work already undertaken on bus journey times and to then assess non-bus journey times for comparison which will then feed into the initial project business case.

## Parking

- 39 Additional parking management proposals will be developed to complement the preferred option to ensure its efficient operation and to manage the displacement of any parking into side roads and to mitigate the loss of any local residents parking. These proposals, which will be developed with input from local councillors and residents' groups through the LLF, will form part of the next consultation. This will provide an opportunity to address some existing local parking issues on neighbouring side roads where demand exceeds supply and where residents have to compete with commuters for parking space.

## Business Case and Costs

- 40 An initial business case for the preferred option will be prepared over the summer/early autumn period to form part of the next consultation to allow the public to reflect on the cost effectiveness of the scheme. This work will be revised as the project moves through the next stages of development. A final full business case

would be considered by the Executive Board, prior to any decision to approve the construction of a scheme.

- 41 The approximate capital costs for the preferred option is £2.5 million. However, this estimate does not allow for various cost elements which are not known at this time including (but not limited to):
- land purchase & any compensation claims;
  - the potential relocation of utilities which is expected to be substantial;
  - risk and contingencies;
  - operations and maintenance;
  - inflation;
  - contractor's overheads, profit and preliminaries; and
  - design fees and construction / project management.

The initial business case for the preferred option will provide more detail on these costs.

### **Second consultation and officer delegation**

- 42 Subject to the successful completion of design, traffic modelling and business case work over the summer/early autumn period, a second round of consultation on the preferred option detailed design, parking and traffic management mitigation proposals and an initial business case will be undertaken during November and December covering the Milton Road and Histon Road projects. The consultation will seek to set the two schemes in the wider City Deal context identifying how they complement the measures emerging from the Cambridge Access and Capacity study. An earlier project timeline suggested this would take place early in 2017 but this can be brought forward subject to appropriate officer delegation.
- 43 To facilitate this process, it is recommended that the Executive Director, Economy, Transport and Environment, be delegated authority to approve the undertaking of a further consultation. This delegation would need to be exercised in consultation with the Chair and vice-chair of the Board and the other Board members if they deemed it appropriate and would cover the following elements that would form part of the consultation package:
- Plans showing detailed highway design layouts including any design variations/options, green landscaping including tree planting, bus stop locations and landscaping for other areas
  - Modelling outputs comparing bus and non-bus journey times
  - A draft business case
  - Parking and traffic management proposals to support the operation of the project and to mitigate scheme impacts.

The delegation would only be exercised on scheme details outlined above. The alternative would be for the details of the scheme as outlined above to come back to the Board and Assembly ahead of the consultation being finalised – this would mean consultation would need to take place later.

A consultation process and programme is set out in Appendix 6.

### **Procurement**

- 44 The early involvement of a contractor in large infrastructure projects can minimise construction risk, lead to a more readily deliverable design and allow more innovative construction methods to be utilised. Setting in place a procurement plan to allow the early appointment of a contractor would facilitate an early start of construction for the Histon Road scheme.

- 45 With a scheme of this nature it is recommended that it should be delivered through a design and build process whereby the appointed contractor is tasked with preparing a detailed engineering design and a target construction cost and then undertaking its construction once the design and target cost are accepted.
- 46 The County Council is a partner in the Eastern Highways Framework, a contract shared by 11 local authorities in the eastern region. It is considered that this would provide a suitable vehicle for the delivery of the scheme for Histon Road. Use of the framework will reduce procurement and contract preparation time as the pre-qualification and tendering process have identified suitable contractors under a competitive process and the legal basis of the contract is already established. A further competitive process within the framework, where the selected contractors are invited to compete for the scheme will ensure that best value is obtained.
- 47 A two stage Design and Construct contract would bring the contractor into the project team early, with the team working together through the design and construction phases. This provides benefits of ensuring that the contractor can use his experience in the design phase to reduce overall project risk and ensure buildability. There is a presumption that the scheme will be delivered as a single package, but there is no guarantee that the contractor will move directly from detailed design to construction. This would be conditional on satisfactory performance and agreement of a construction target cost based on their detailed design.
- 48 A works 'package' would be prepared which would set out the requirements of the project and the framework contractors would then compete for the design and build contract through a detailed design target cost/initial construction target cost bid. Subject to acceptance of this procurement approach, it is anticipated that a contractor would be appointed by the late autumn of this year.
- 49 Following the second round of consultation and approval of a preferred option layout by the Executive Board, the contractor would assume full responsibility for detailed engineering design work. Appointing the contractor to develop the detailed design would not pre-empt the final decision to implement the scheme.

### **Programme**

- 50 A revised project timeline is provided as Appendix 7. Attention is drawn to the assumptions upon which the programme is based. It is anticipated that the Executive Board would consider the response to the second consultation and take decisions on a scheme design for a final consultation, to satisfy statutory processes, at its meeting in June 2017. The programme will be revised as detailed design work continues and the timeline assumptions are clarified and will be shared with public utility companies and Highways England in relation to the A14 improvement works.

### **Implications**

- 51 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

The scheme development and implementation is funded from the City Deal funding stream.

#### Legal

No significant legal implications have been identified at this stage although they may emerge as the project moves towards the statutory process stage.

### Staffing

Project management is undertaken by Cambridgeshire County Council's Major Infrastructure Delivery Team. All schemes are worked up in collaboration with the District Councils.

### Risk Management

A full project risk register forms part of the Project Plan.

### Equality and Diversity

There are no equality or diversity implications in this report.

### Climate Change and Environmental

The proposed measures have the potential to reduce congestion and improve air quality in the longer term through encouraging a shift towards sustainable transport modes.

### Consultation responses and Communication

This report sets out a plan for further public consultation. The setting up of a Local Liaison Forum and further informal stakeholder meetings, ahead of further formal consultation, will also help facilitate engagement on the project.

### Community Safety

Some of the options set out in this report will help reduce road casualties on Histon Road and improve road safety.

## **Background Papers**

The following documents were used in the preparation of this report:

Milton Road and Histon Road Corridors – Draft Options report (WSP)

Histon Road consultation report (WSP)

Histon Road and Milton Road Interim Options Report (WSP)

Technical note: Tidal flow bus lane assessment (County Council)

Technical note: Tidal flow bus lane review (Atkins)

Executive Board agenda and minutes 03/11/15

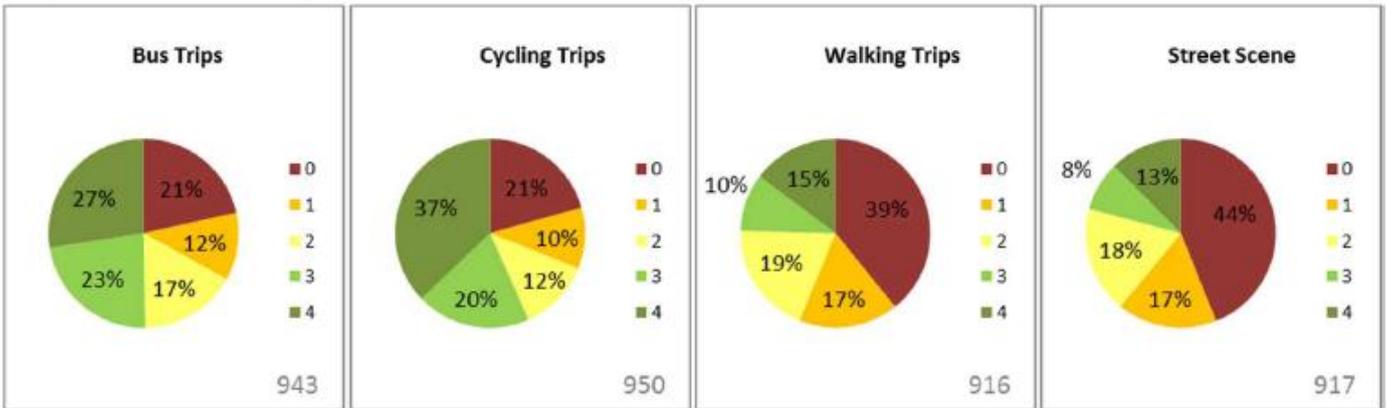
Report Author: Richard Preston, Project Manager, Highway Projects, Major Infrastructure Delivery Team, CCC

Email: [Richard.preston@cambridgeshire.gov.uk](mailto:Richard.preston@cambridgeshire.gov.uk)

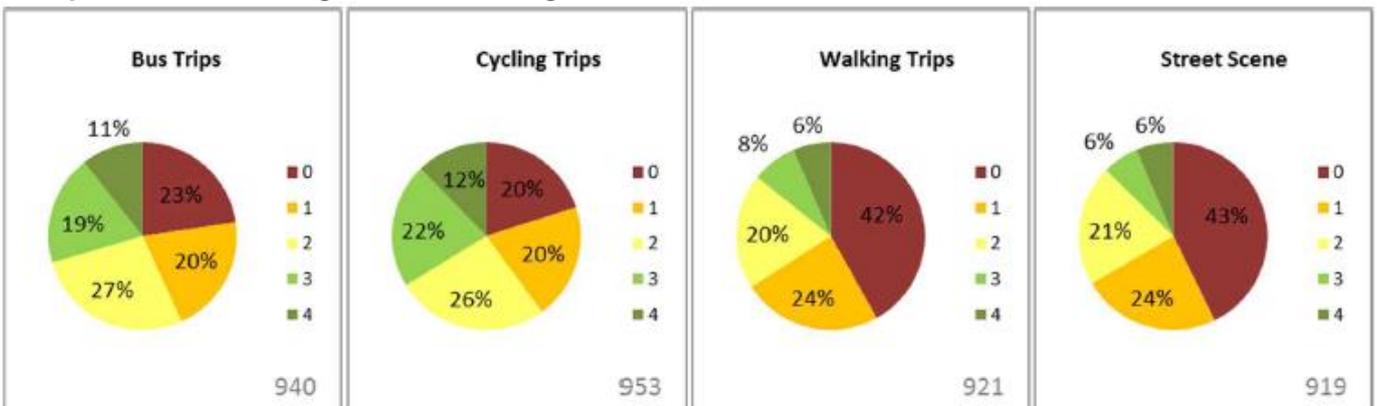
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# APPENDIX 1: CONSULTATION HEADLINE RESULTS AND EMERGING ISSUES

## Improvement rankings: 'Do Maximum'



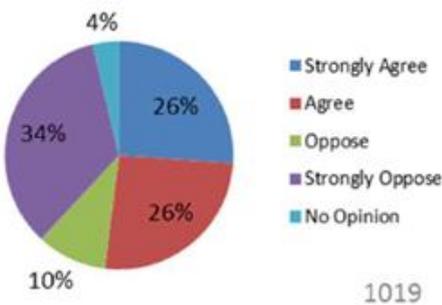
## Improvement ranking: 'Do Something'



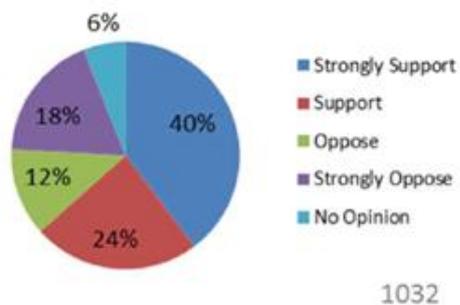
### KEY

0 = No improvement    1 = Little improvement    2 = Moderate improvement    3 = Significant improvement  
 4 = Very significant improvement

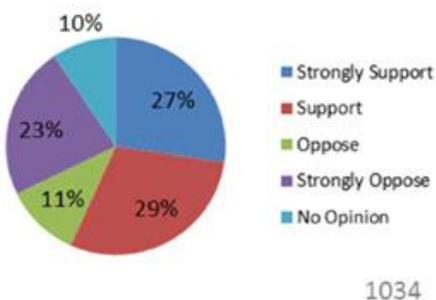
**Q7. Histon Road/Huntingdon Road/Victoria Road junction: Should the initial ideas be considered further?**



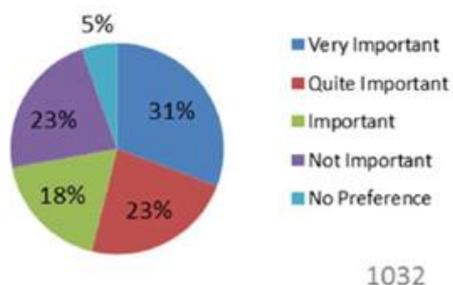
**Q8. How far do you support the removal of on-road parking to improve cycle safety and reduce traffic delays (particularly for buses)?**



**Q9. How far do you support the creation of the new style of bus stop along Histon Road?**



**Q10. How important is it to enhance the street scene, where possible, on Histon Road with new landscape areas, better surfacing materials, new verges and tree planting?**



EMERGING ISSUE	OFFICER COMMENT
<p><b>Banned Turning Movements</b>  [No motor vehicle access to Victoria Road, No right turn to Histon Road (except buses), No right turn into Warwick Road]  Impact of displaced traffic on side roads  Inconvenience to local trips  Lack of accessibility to schools and businesses</p>	<p>There is strong opposition to the initial idea of banning the right turn at the Warwick Road junction based on the inconvenience this would cause and the risk of traffic being displaced to residential streets. These concerns need to be weighed against the benefits of reduced delays if the banned turn was implemented.</p> <p>In light of the consultation, it may be better to address these junction delays through re-design work rather than by movement restrictions and, therefore, the idea of banning the right turn should be set aside and only reconsidered if future modelling work over the summer period shows a clear need for reconsideration.</p> <p>Despite a generally negative response, it is felt that the access restrictions at the Histon Road/Victoria Road junction are pivotal to achieving reliable and reduced bus journey times and improving conditions for cycling. Therefore, these measures should be developed further for consideration as part of the next consultation, despite a generally negative response.</p>
<p><b>Loss of Trees</b>  Impact on street scene  Vandalism of any replacement saplings</p>	<p>The impact on the street scene, in particular highway trees and verges, of carriageway widening to create space for further bus and cycle lanes is a significant issue of local concern although the number of highway trees along Histon Road is relatively small.</p> <p>On Histon Road the 'Do Maximum' option would achieve more benefit for buses and cycling than the 'Do Something' option but the difference in street scene impact between each option is not expected to be significant. Therefore it is felt that that the 'Do Maximum' option should also be taken forward for further development and future detailed consultation.</p> <p>This could require the use of land outside the existing highway boundaries and this aspect would need careful assessment and direct consultation with the relevant landowners.</p>
<p><b>Bus Lanes and Bus Services</b>  41% of responses mentioned buses, with majority focussing on frequency, reliability and quality of services rather than proposed bus lane  Changes to Citi 8 service / Lack of local access to Busway services / Bus lanes not justified by low number of buses</p>	<p>As identified in earlier reports, the number of buses using Histon Road is expected to double as planned growth takes place.</p> <p>The local concerns over the lack of access to the bus way services that use Histon Road is not an issue directly linked to the design of the project but the future provision of bus services along Histon Road and other key access routes is a matter that is being considered through ongoing liaison and discussion between the Great Cambridge City Deal and bus operators.</p>
<p><b>Cycleways</b>  Avoid half way house  Need consistent high standard design</p>	<p>The initial ideas put forward provide the potential for significant improvements for cyclists using Histon Road although it is recognised that the degree of improvement is likely to be less at the southern end of the corridor where the highway width is much constrained and compromises in the standard of cycling facility may need to be made.</p>

<p><b>Removal of parking</b>  27% of comments made reference to removal of parking (57% in support, 31% opposed)</p>	<p>The idea of removing carriageway parking on the southern section of Histon Road has received a reasonable level of support although it would impact on some local residents and businesses.</p> <p>Therefore, it is considered that this idea should be developed further for future consultation, including parking management proposals to mitigate the impact on current users.</p>
<p><b>Walking trips</b>  Lack of maintenance of footways  Need for additional crossing points</p>	<p>Highway maintenance matters are not a matter directly germane to the project but it is intended that the improvements developed through the project will provide higher quality and better constructed footways which will lessen future maintenance needs</p> <p>As part of the next stage in developing a detailed scheme design, current crossing facilities will be reviewed and consideration given to the need for additional crossings based on consultation feedback.</p>

## APPENDIX 2: ALTERNATIVE PROJECT IDEAS

Alternative Idea / Suggestion	Frequency of suggestion/idea	Comment
Alternative cross section layouts to reduce or eliminate the need to remove trees	39%	Various options based on a three lane cross section are assessed in this report to identify the optimum layout for bus improvements. It is not possible to provide a bus lane(s) and segregated cycle facilities without road widening along the corridor which will inevitably impact on some highway trees. Other areas for tree planting will be sought as part of the next stage of design.
Make public transport more affordable	9%	The City Deal does not have powers to set bus fares but if bus services are able to operation more reliably and frequency this will increase patronage and in the longer term may lead to cheaper bus travel.
Include pedestrian crossing near to Aldi and Iceland	8%	This idea will be explored as part of the next design stage.
Remove charge for parking at Park & Ride sites	8%	On its own, this is unlikely to achieve a significant reduction in traffic delays or improve the performance of bus services
Make Busway services stop at the bus stops along Histon Road	7%	Busway services are intended to provide an express service for passengers to/from the city. If services stop at local stops this may make the service less attractive to current and future users. New bus infrastructure to make local services quicker and more reliable may lead to increased patronage and a more frequency service in the future.
Increase the number of bus stops and distribute them more evenly	7%	Histon Road is current well served with bus stops. Providing more stops will increase bus dwell times making trips longer?
Introduce a congestion charge	6%	This idea has been considered as part of the Cambridge Access and Capacity Study (see meeting agenda)
Introduce residents only parking on roads off Histon Road to enable easier parking for residents and dis-incentivise driving	5%	Additional parking management measures will be considered for side roads along Histon Road which could include residents only parking bays to ensure adequate space is available for local residents.
Revert the Citi 8 bus service back to its previous route which served the railway station and Addenbrooke's Hospital	4%	Whilst the routing of bus services is something for bus operators to determine, these matters are being discussed as part of an on-going dialogue between the City Deal and bus operators.

Consider a bi-directional cycle lane on one side rather than one on each side	4%	This option may require more crossing movements across the main road to reach a bi-directional facility. The idea of providing a segregated cycle lane each side has received generally good support at consultation and is the favoured option.
Consider only vehicular banned turns, thus allowing cyclists to make these turn movements	4%	The idea of banning the right turn into Warwick Road is to be set aside. The ideas for restricting vehicle movements at the Victoria Road junction only impact on motor vehicle movements.
Introduce a Park & Ride at Histon	4%	The need to expand Park & Ride capacity has been considered as part of the Cambridge Access and Capacity Study (see meeting agenda).
Consider where alternative parking is going to be located, if removed	3%	Adequate capacity exists in neighbouring side roads to accommodate any parking removed from the main road. New parking controls will be developed as part of the next design stage for future consultation.
Increase the reliability of buses by using stricter regulations	3%	The reliability of bus services is a matter for the Traffic Commissioners. Stricter regulations will not create the conditions required on the highway to allow buses to keep to timetable – this will only be achieved through new bus infrastructure.
Continue cycleways and other infrastructure beyond the scope of this study to create a continuous route	2%	Other City Deal projects will provide similar infrastructure improvements across the City Deal area road network.

### APPENDIX 3: COMPARISON OF BUS LANE OPTIONS

#### BUS JOURNEY TIMES (2031): Journey time (between A14 interchange and Victoria Road junction) in seconds

OPTION	AM PEAK		PM PEAK	
	Inbound	Outbound	Inbound	Outbound
'Do Nothing'	689	747	386	473
'Do Maximum' Continuous inbound bus lane through to Gilbert Road	504	543	369	552
'Do Maximum' variation: Split inbound and outbound bus lane through to Gilbert Road junction	523	608	387	553
Tidal flow Option A Reversible peak period central bus lane	528	706	418	515
Tidal flow Option B Alternating peak period kerb side bus lanes	504	643	420	482

Note: the results for Tidal Option A are influenced by local service bus trips which more likely to use the traffic lane rather than the bus lane given the need to access bus stops

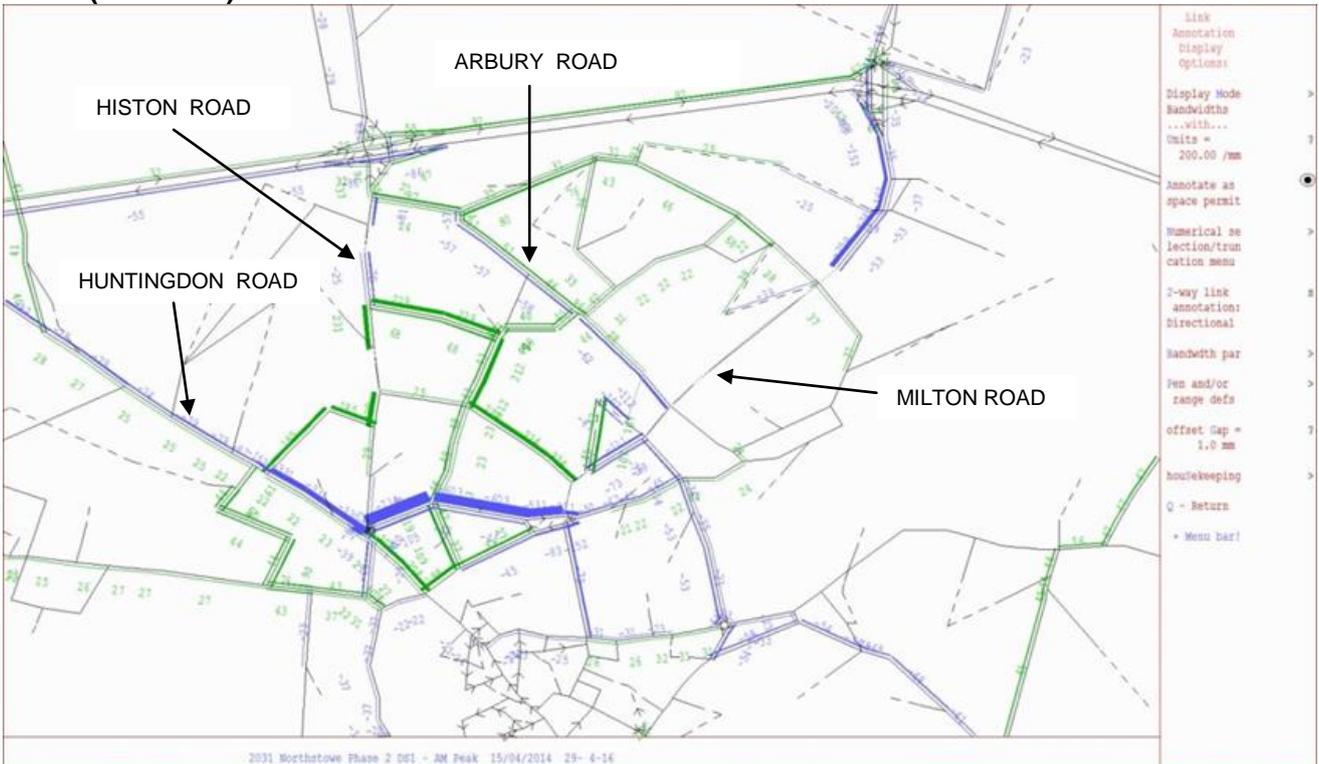
Option	Benefits to bus services	Impact on urban landscape	Risks
<b>'Do nothing'</b>	Bus delays increase and reliability reduces as traffic levels and delays grow	Existing urban landscape retained	<p>Failure to deliver new transport infrastructure will adversely impact on economic and housing growth</p> <p>Quality of the highway environment reduces as traffic delays increase and air quality reduces</p>
<b>'Do Maximum'</b> Continuous inbound bus lane through to Gilbert Road	Overall provides the best journey time savings but performs better in the morning peak period No outbound savings during PM peak period	<p>Removal of almost all highway trees and verge areas north of Gilbert Road although the number of highway trees affected is relatively small</p> <p>Limited opportunities for tree replanting on the highway near junctions but some opportunities for new verge areas</p>	<p>Lack of bus priority for outbound buses</p> <p>Wider carriageway creates more severance of the local community</p> <p>Requires additional land outside the highway boundary</p>
<b>'Do Maximum' variation:</b> Split inbound and outbound bus lane through to Gilbert Road junction	Similar pattern of journey time results as 'Do Maximum' option but less effective overall No savings during PM peak period	<p>Potential for new tree planting to be offered within frontage properties</p> <p>Loss of existing garden hedges where additional land required but potential for new planting to be provided</p>	<p>Wider carriageway creates more severance of the local community</p> <p>Bus lanes not long enough to ensure buses always bypass traffic queues</p>
<b>'Do Something'</b> Split inbound and outbound bus lane through to Gilbert Road junction	Expected to provide less journey time savings than 'Do Maximum' option	<p>Removal of almost all highway trees and verge areas north of Gilbert Road although the number of highway trees affected is relatively small</p> <p>Limited opportunities for tree replanting on the highway near junctions but some opportunities for new verge areas</p> <p>Potential for new tree planting to be offered within frontage properties</p>	<p>Bus lanes not long enough to ensure buses always bypass traffic queues</p>

<p><b>Tidal flow Option A</b> Reversible peak period central bus lane</p>	<p>Performs better in AM peak period but not as well as 'Do Maximum' option No savings during PM peak period</p>	<p>Removal of almost all highway trees and verge areas north of Gilbert Road although the number of highway trees affected is relatively small</p> <p>Limited opportunities for tree replanting on the highway near junctions but some opportunities for new verge areas</p>	<p>Failure to secure Department for Transport approval for gantry signing system</p> <p>Increase risk of road collisions if drivers/riders fail to understand lane changing operation</p>
<p><b>Tidal flow Option B</b> Alternating peak period kerb side bus lane</p>	<p>Performs better in AM peak period but not as well as 'Do Maximum' option No savings during PM peak period</p>	<p>Potential for new tree planting to be offered within frontage properties</p> <p>Significant visual impact of gantry signing north of Gilbert Road</p>	<p>Potential for litigation if vehicle conflicts occur when lane changing occurs</p> <p>Inadequate space to accommodate gantry signing foundations</p>

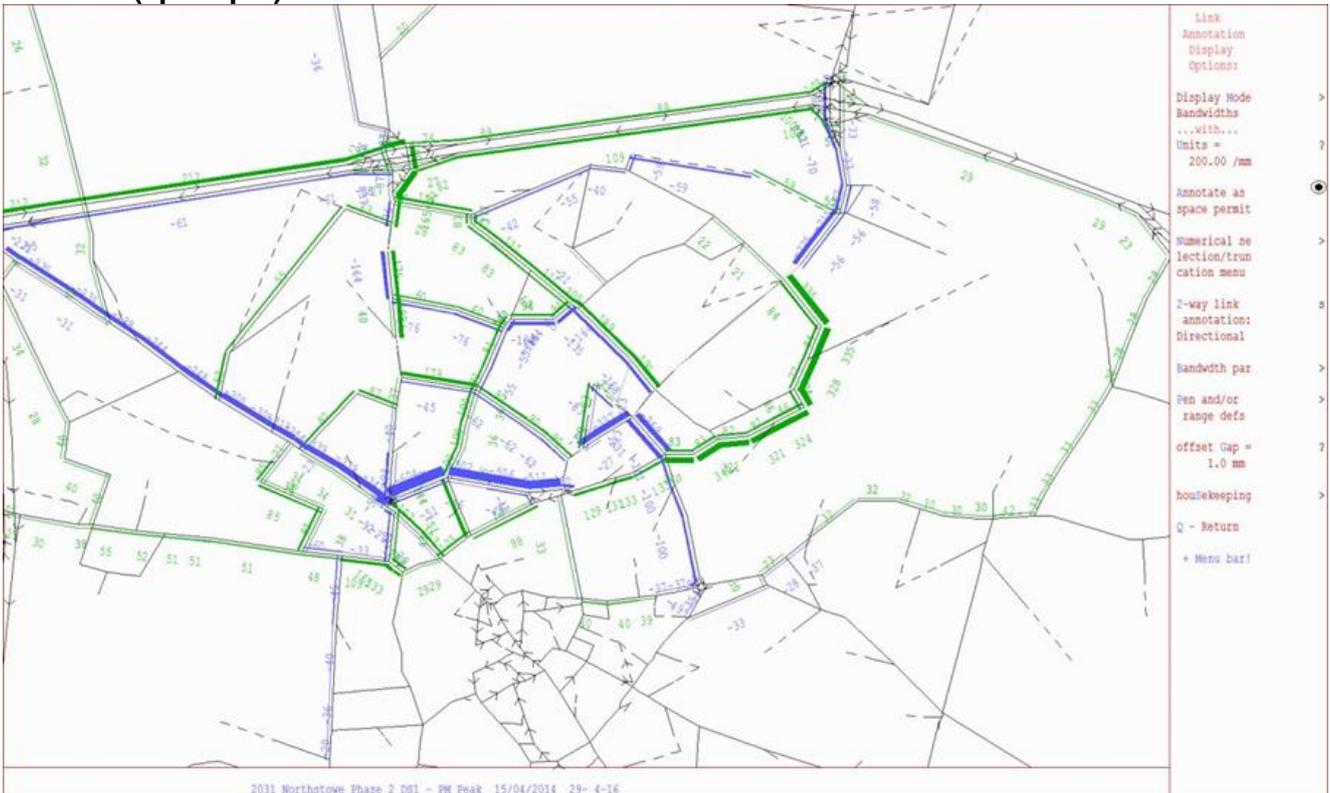
# APPENDIX 4: CHANGES IN ROAD NETWORK TAFFIC FLOWS

Key: Blue shows reductions, Green shows increases

## Peak (8am-9am)



## PM Peak (5pm-6pm)



## APPENDIX 5: PREFERRED OPTION KEY ELEMENTS

	Design element	Rationale for inclusion
Bus	Continuous inbound bus lane between King's Hedges Road and Gilbert Road	To optimise bus progression along the route
	Early bus detection on all approaches to signal controlled junctions	
	Some bus stops relocated	To avoid bus stops being located opposite each other to reduce traffic delays and improve safety
Cycling	Continuous segregated inbound cycle lane from King's Hedges Road junction through to vicinity of Rackham Close junction	To provide a higher standard of cycle facility with greater segregation from motor vehicles and pedestrians, where possible
	Continuous segregated outbound cycle lane from vicinity of Rackham Close junction to King's Hedges Road junction	
	Advisory cycle lanes on both sides between Victoria Road junction and vicinity of Rackham Close junction	
Walking	Re-designed side road junctions with at grade crossing points and reduced junction radii	To give greater priority to cycle and pedestrian movements across side roads and to create opportunities for localised street scape enhancement
	Upgraded footway surfaces throughout	It is expected that most footway surfaces will be disrupted by construction work and utility service diversions which creates the opportunity to strengthen and resurface footways to achieve a higher standard of finish to improve conditions for pedestrians, particularly those with less/limited mobility
	Explore option of an additional controlled crossing near the Aldi and Iceland stores	To improve pedestrian safety and accessibility
Junctions	Re-designed layout for the Histon Road/Victoria Road junction to prohibit entry to Victoria Road except for buses and cycling and prohibit the right turn from Victoria Road into Histon Road except buses and cycling <b><i>(Please refer to Sections 25 and 26 of this report)</i></b>	To simplify the operation of a complex junction to increase overall green time for Histon Road to reduce delays for buses and improve safety for cyclists and pedestrians as well as creating opportunities for localised streetscape enhancement
Parking and traffic management measures	Additional restrictions to prohibit all parking on all parts of the highway (other than in laybys) and peak period loading restrictions on certain sections Additional parking controls in side roads to accommodate displaced residential parking Measures on alternative routes to mitigate, where necessary, displaced traffic	To ensure that parking and loading/unloading do not adversely affect traffic progression and safety on the main road and to accommodate local parking needs To mitigate any unacceptable changes in traffic flow in residential streets

## APPENDIX 6: SECOND PUBLIC CONSULTATION PROCESS

### PRINCIPLES

The consultation will be undertaken in accordance with the City Deal approach to consultation, that the consultation principles of the Authority leading on the project should apply.

### AIMS

To:

- Engage with key stakeholders, the public and all interested parties in the consultation on proposals for bus priority, walking and cycling improvements.
- Ensure that messages reach the widest audiences, that all voices are heard and that channels are enabled for excellent 2-way communications.
- Provide unbiased, appropriate, timely, and clear information in plain English on the proposed options for the routes.

### ENGAGEMENT

Public Consultation to run from 1st November through to 19<sup>th</sup> December, consisting of the following main elements:

- Pre-consultation advance notification to households and businesses along both routes and the surrounding areas
- Pre-consultation briefings for local councillors and stakeholder groups
- Briefing for City Council North Area Committee
- Information leaflets delivered to households and businesses along both routes and the immediate side streets
- Press release/social media/web presence using [www.greatercambridgecitydeal.co.uk](http://www.greatercambridgecitydeal.co.uk)
- On-line questionnaire/survey
- Staffed public exhibitions at venues in proximity to both corridor areas
- Information made available at Milton, Babraham, St. Ives and Longstanton Park & Ride sites
- Information displays in shelters at bus stops along both routes and in the city centre
- Direct mail/e-mail
- Information in libraries, GP surgeries and other places of interest with passing trade
- Work with local schools and colleges

Post-consultation

- Analyse results
- Provide consultation outcomes through website, press release, direct mail/e-mail, local newsletters and magazines, social media.
- Bring a report back to the Executive Board to approve detailed scheme designs for statutory processes.

### KEY MESSAGES

The key messages for the Histon Road and Milton Road routes will be layered over the background of the vision for the Greater Cambridge City Deal as a whole. The vision will be strong part of the consultation information so that people know how this project fits with other priorities for the City Deal:

- Greater Cambridge City Deal (GCCD) brings together 5 organisations in a ground-breaking new partnership to create the conditions necessary to unlock the potential of Greater Cambridge.
- The City Deal aims to secure hundreds of millions of pounds of additional funding for investment in transport infrastructure to support high quality economic and housing growth over the coming decades. £100m of funding will be made available in the five years from April 2015. If certain conditions are met, we will be able to secure up to a

further £200m from April 2020 onwards and up to a final £200m from April 2025 onwards.

- Significant new investment for transport infrastructure will be brought to the area through the Greater Cambridge City Deal. Funding will be used to make it easier to get to work, and to move between the business and research centres. More sustainable transport methods will be prioritised by increasing road space for pedestrians, cyclists and public transport users and enabling more people to use public transport for at least some of their journey.
- The City Deal will aim to deliver the development strategy for Greater Cambridge contained in the submitted Cambridge and South Cambridgeshire Local Plans and the supporting transport infrastructure identified in the Transport Strategy for Cambridge and South Cambridgeshire.
- The City Deal will provide a huge boost for the local economy, and will kick start development and the creation of jobs by significantly improving accessibility and journey times.
- Histon Road and Milton Road bus priority aims to deliver high quality passenger transport, in terms of reliability, frequency and speed, complemented with good quality cycling and pedestrian facilities and an enhanced street scape.
- The consultation is a continuation of the delivery process and there will be further opportunities to comment as part of the statutory process stage of the project.

#### ON-LINE QUESTIONNAIRE/SURVEY

A questionnaire will be provided for each corridor which will seek views for respondents on how well the scheme design delivers each project objective and views on preferences for any options put forward. This will inform a further review of the design for each route.

#### STAKEHOLDERS

The consultation will seek to ensure that all users of Histon Road and Milton Road have the opportunity to have their say. Whilst the use of on-line techniques will be the main focus for responding, the consultation process will need to be sufficiently flexible to respond to the needs of those with disabilities.

