

**Report To:** Greater Cambridge City Deal Executive Board 3 November 2015

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

---

## Milton Road Bus Priority, Walking and Cycling Measures: Approval to Consult

### Purpose

- 1 This report sets out a range of measures which have emerged from an initial technical study of Milton Road undertaken by consultants, WSP. The report explains the background to this development work and seeks approval to carry out a public consultation on these measures to inform the development of preferred proposals.
- 2 The City Deal Executive Board determined that the Milton Road project will be delivered as part of the Tranche 1 infrastructure programme. The project covers the length of Milton Road from the A14 interchange south to and including the gyratory junction at Mitcham's Corner.
- 3 This project supports the City Deal priority of achieving efficient and reliable movement between key existing and future housing and employment sites.
- 4 A consultation strategy is appended to this paper. It is proposed to undertake consultation concurrent with that for a similar scheme for Histon Road as there are expected to be links and dependencies between the two projects. Following the consultation a preferred set of measures (potentially with options) will be worked up in more detail and a full business case presented for approval, subject to further consultation.

### Recommendations

- 5 The Executive Board is recommended to:
  - a. Note the findings from the initial assessment and technical study;
  - b. Approve public consultation on the illustrative measures as set out in this report and as shown on the accompanying plans, including consideration of further walking and cycling improvements at Mitcham's Corner;
  - c. Support the consideration of changes to the Science Park-Cowley Road junction following the completion of a wider A10 corridor transport study; and
  - d. Agree to receive a report on consultation in mid 2016 on a preferred set of measures.

### Recommendations from the Joint Assembly:

The Joint Assembly recommended that the Executive Board:

- (a) Notes the findings from the initial assessment and technical study.
- (b) Approves public consultation on the illustrative measures as set out in the report and as shown on the accompanying plans, including consideration of further walking and cycling improvements at Mitcham's Corner, and encourages all other ideas to be properly considered.
- (c) Supports the consideration of changes to the Science Park-Cowley Road junction following the completion of a wider A10 corridor transport study.
- (d) Agrees to receive a report on consultation in mid-2016 on a preferred set of measures.

### **Reasons for Recommendations**

- 6 Milton Road is a high priority scheme for the City Deal programme and a key proposal within the Local Transport Plan 2011-2026. Technical work has identified various measures that are proposed for public consultation. The consultation will help with the selection of a preferred set of measures for detailed development.

### **Background**

#### Key objectives

- 7 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

- 8 **Figure 1** indicates the length of Milton Road under consideration and shows its setting in a wider context. Future planned developments at Northstowe, Waterbeach Barracks and the Cambridge Northern Fringe East (CNFE) site are all expected to have significant implications for transport along Milton Road. The Mitcham's Corner gyratory junction has been identified as an opportunity area within the City Council's draft submission City Local Plan.

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



- 9 Milton Road is one of the key radials into Cambridge and is identified as an increasingly important public transport corridor as part of the Transport Strategy for Cambridge and South Cambridgeshire (TSCSC) and Long Term Transport Strategy (LTTS). It suffers from congestion at peak times and bus reliability is poor.
- 10 A new railway station for Cambridge, within the CNFE site, has been granted planning permission and is expected to open by late 2016 and a new section of busway linking the new station site with Milton Road and the existing Busway to St Ives has recently been completed (see **Fig. 1**).
- 11 Taking into account planned growth in the Greater Cambridge area up to 2031, it is estimated that the number of buses using the Milton Road corridor is likely to double during peak periods.
- 12 A similar project is being developed for Histon Road (See Agenda Item No. 6(a)). Initially, the development timetables for these projects will run concurrently to allow any traffic displacement or project dependencies to be explored in a joined up way. However, the construction phases will be staggered to minimise any impacts on the road network in the north of the city.
- Considerations**
- 13 An initial budget estimate of £23.04 million was set for the Milton Road project by the City Deal Board when the first tranche of projects was approved.

- 14 The assessment work undertaken so far complies with the Department for Transport technical scheme appraisal methodology (known as WebTAG). This approach:
- Allows for clearly unfeasible options to be sifted out at an early stage;
  - Allows for early public consultation;
  - Avoids abortive work on detailed design for proposals which are clearly unacceptable;
  - Provides robust basis for identification of preferred option;
  - Ensures that the shortlisted schemes are all potentially deliverable from a technical perspective

### Options assessment

- 15 For much of Milton Road there is considerable width available within the highway boundary. The optimum highway cross section providing segregation of pedestrians, cyclists, buses and general traffic, as noted below, was therefore used as a starting point for the development process. It has been applied along the whole corridor to optimise its use in a way that best meets the project objectives. Where the cross section does not fit the available width, it has been modified and adapted, adopting an asymmetrical profile where necessary. Some relatively modest areas of land outside the highway have been identified that could be procured to help towards achieving the desired measures. Existing junction layouts and methods of control have been reviewed in the context of the project objectives. From this process two sets of proposals have been developed ('Do maximum' and 'Do something') to provide options for public consultation.

The optimum cross section is based on the following minimum desirable widths:

Footway: 2 metres	Bus lane: 3 metres
Cycleway: 2 metres	Traffic lane: 3 metres

### Proposed measures

#### 'Do Maximum' and 'Do something'

- 16 Two sets of options have been developed to illustrate the range of measures that could be implemented. The consultation responses will help to shape the preferred option, which could be a combination of the measures in these two illustrative options. **Appendix 1** summarises the measures in terms of sustainable transport modes and junctions. Plans illustrating the options are available within the background technical report at:  
<http://www.gccitydeal.co.uk/citydeal/info/2/transport/1/transport/8>
- 17 As implied, the 'Do maximum' measures aim to provide the maximum benefit in terms of the project objectives but they would have significant impacts on the public realm and local access. They would provide high quality, segregated and continuous bus and cycling infrastructure throughout and improved crossing facilities for pedestrians. Journey times and service reliability would improve considerably for buses, key factors in making buses more attractive to potential users. Cycling journey times would become more reliable and, equally important; the road environment for cycling would be enhanced through segregated facilities. Cycling would become a more pleasant and less stressful experience, factors which are known to encourage more people to cycle. Segregation would also improve the experience for pedestrians.

- 18 The 'Do something' option offers less overall benefit for bus movements although journey time and service reliability would still improve. The level of improvement for cycling and walking would be similar to the 'Do Maximum' option. Overall, the impact on the public realm would be reduced although a considerable number of highway trees would still be removed.
- 19 Both options would include the provision of early bus detection, linked to the real time passenger information system (RTPI) at all signal controlled junctions to prioritise bus movements at times when required. Other work would be undertaken to upgrade signals equipment to provide a consistent signalling regime along the whole route.

#### Costs and funding

- 20 At this stage of project development it is difficult to give an idea of the cost of delivering each set of proposals but an initial assessment based on typical engineering costs suggests that the costs for both options would be similar and could be met from the initial project budget estimate. However, any cost assessment at this stage should be treated with caution as it is not possible at this time to assess the costs associated with, amongst other things, land purchase, compensation claims and the relocation of public utility apparatus which are expected to be very significant.
- 21 There is an expectation that contributions will be made towards the funding of the measures from developments whose impact the proposed scheme helps to mitigate, notably from various planning applications submitted for sites on the Science Park and potentially from sites on the Cambridge Northern Fringe (East). It may be necessary to select an appropriate mix of measures to deliver the most cost effective and efficient solution and it is recommended that the selection of a set of measures to form a 'preferred scheme' is best undertaken in light of feedback from an initial public consultation.

#### Traffic modelling

- 22 Modelling work is in hand to assess the likely outcomes from the measures including journey times and the relocation of traffic which will help inform public consultation. It is anticipated that this work would be completed by mid-October.

#### **Emerging issues**

- 23 Ahead of consultation some key issues are emerging that are brought to the Executive Board's attention.

#### Highway trees and verges

- 24 Both options will have an impact on highway trees and verges with the 'Do maximum' option requiring the removal of most of the existing highway trees in the highway and the loss of substantial areas of verge. Some opportunities for new highway landscaping will arise from both sets of proposals but there will be limited space for new tree planting under the 'Do maximum' measures whereas the 'Do something' proposals provide potential areas for new landscaping and tree planting to offset the removal of highway trees, albeit at the expense of some lengths of bus lane. There may be opportunities for tree planting on land outside the highway to minimise any overall reduction in tree numbers. A tree condition survey has been being undertaken which will help inform future consultation.

### Public realm

- 25 The City Deal has identified the potential to invest in public realm improvements as part of project delivery and an assessment of project proposals needs to take into account the impact on the public realm and engineering solutions need to be informed by landscape and urban design advice. Achieving the right mix of transport benefits, public realm enhancements and mitigation measures will be an important focus for public consultation.

### Parking and servicing

- 26 Both options will impact on current highway parking and consideration will need to be given to how any displacement of parked vehicles might be managed. The measures would also have implications for servicing and deliveries and it is expected that existing parking restrictions would need to be revised to better manage these operational aspects. Public consultation will help inform this process and could build on work already undertaken by local members to explore residents parking needs in the area between Chesterton Road and Milton Road.

### Displaced traffic

- 27 The potential displacement of traffic onto other routes as a result of restricted turns and entry restrictions will also need to be considered and this is being modelled to assess the change in traffic patterns. It may prove necessary to widen the scope of the scheme to provide mitigation measures on some side roads, where appropriate.

### Bus stops

- 28 Whilst the use of floating bus stops to avoid cyclists overtaking buses is not explicit in the plans, calls for their inclusion are expected. The opportunity to provide this type of bus stop layout will be explored at public consultation although it is unlikely that adequate room will exist at a number of bus stop locations. The experience gained from the floating buses stops recently constructed along Huntingdon Road and Hills Road will help inform this process.

### Elizabeth Way roundabout

- 29 Removal of the roundabout and the installation of traffic signals to improve cycle safety and to allow the prioritisation of bus movements is one of the most significant changes being proposed. The public realm would change significantly but the current central island landscaping could be replaced by other areas of landscaping around the new junction.

### Mitcham's Corner

- 30 Mitcham's Corner, which is at the centre of a figure of 8 road layout forming part of the ring road, is identified by the City Council through the draft Local Plan as an 'Opportunity Area' with a policy objective of improving the public realm of this district centre. The City Council will be preparing and consulting on a master plan over the next 10 months to help deliver significant public realm improvements, in cooperation with the County Council and local stakeholders. The master plan will put forward a proposal for tackling the problems created by the large road gyratory as well as provide guidance for the re-development of key sites within this district centre. Close collaboration between the councils is already established which is important to the success of both the City Deal and the development of a master plan for Mitcham's Corner.

- 31 The City Council has already undertaken collaborative work with stakeholders to explore the potential for public realm improvements. A plan which gives a flavour of the type and scope of improvements that are considered desirable for the area is attached at **Appendix 4**. The concept is based on reducing the impact of traffic, potentially through the severing of the current gyratory road system, to facilitate public realm improvements. This has yet to be tested from a traffic management perspective but traffic modelling work is currently underway to assess the likely impact on traffic delays on the junction approaches with the gyratory severed.
- 32 From the perspective of the City Deal project, the problems for buses relate more to delays in getting to Mitcham's Corner rather than negotiating the junction itself, although the use of early bus detection to prioritise bus entry onto the junction from Milton Road forms part of the proposed measures. It is recognised that the junction environment is poor from a walking and cycling perspective and that the public realm project offers a way of delivering improvements for these modes but care needs to be taken to avoid improving the junction at the expense of significantly increased traffic delays and a worsening of the highway environment on the junction approaches.
- 33 It is proposed that the outcomes from the modelling work and the work previously undertaken by the City Council should be included in the public consultation exercise for the Milton Road corridor project to explore the best ways of achieving walking and cycling improvements. This work would dovetail with the City Council's master plan exercise.
- 34 Delivering the level of change being advocated for Mitcham's Corner will require significant funding, perhaps as much as £4-5 million pounds, on top of the cost for the initial options outlined in this report. As stated earlier, the City Deal has identified the potential to invest in public realm improvements as part of project delivery but careful consideration of the business case for any contribution towards Mitcham's Corner improvements is advised to ensure that it represents value for money when assessed against the City Deal objectives.

#### Science Park-Cowley Road Area

- 35 The brief for the project covers the length of Milton Road from Mitcham's Corner through to the A14 interchange. Despite significant junction improvements being completed in 2007, the Science Park and Cowley Road junctions still experience significant congestion for lengthy periods of the day. The proposed measures include some short/medium term improvements for cycling and a short term measure to modify the signal sequence to improve capacity is currently being considered that may be funded through developer contributions ahead of the delivery of the City Deal project should further planning applications be submitted in the area. However, it is considered premature to consider more significant junction improvements to improve bus journey times until such time as a clearer picture emerges on the implications of further growth along the A10 corridor.
- 36 A process is underway to appoint consultants to undertake a study to assess the transport implications of future growth in the Cambridge Northern Fringe East area, on Waterbeach Barracks and along the A10 corridor more generally. The findings from this study are not expected to be known until the summer of next year. Further progress should also have been made on changes to Milton interchange as part of the A14 improvements. Therefore, it is recommended that any detailed consideration of further changes to the Science Park and Cowley Road junctions is

held over until that time although, given the obvious need for intervention here, developer contributions should be sought from sites that impact on this location.

#### Land acquisition

- 37 Both options indicate where land could be acquired to achieve the project objectives, although the areas are relatively modest. Land acquisition through a compulsory purchase order (CPO) would have implications for the delivery timetable.

#### **Consultation and Engagement**

- 38 **Appendix 2** sets out a process for a first round of public consultation. This consists of the following main elements:

- Joint process covering both the Milton Road and Histon Road project measures
- Key stakeholder briefing sessions, staffed public exhibitions at key venues primarily in the north of the city and at Park & Ride sites, local member engagement, wider member briefings and project information made available at community venues, on relevant bus services and at Park & Ride sites
- A focus on encouraging on-line response to facilitate a more cost and time effective exercise.

#### **Programme**

- 39 **Appendix 3** sets out a tentative project timeline, which should be taken as indicative only at this time given the fact that preferred scheme measures are not yet clear. A more detailed programme will be prepared in light of the preferred measures that emerge from an initial public consultation.

#### **Next steps**

- 40 It is recommended that the measures set out in this report are put forward for public consultation to inform and influence the selection of individual measures to form a 'preferred scheme' for more detailed development and further public consultation.
- 41 Further work is being undertaken prior to public consultation to build on the technical work undertaken to date. This will provide some indication of the expected effects and outcomes of the various measures, particularly in terms of any traffic / parking displacement and journey times and an initial assessment of a business case. More detailed work will be required following the selection of a 'preferred scheme' to facilitate a full business case assessment.

#### **Implications**

- 42 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. There is the potential for contributions towards improvement at Mitcham's Corner from Cambridge City Council. Development related contributions are also anticipated from various Science Park sites.

### 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.

### 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

No formal consultation has been undertaken to date although an informal drop-in session was held in June to give key stakeholders an opportunity to raise issues of concern associated with the route to inform the process of identifying possible measures. Subject to Executive Board approval, further work will be undertaken in November and early December to prepare more detail for a public consultation, which would commence before the end of the year. This report sets out a plan for future public consultation.

### Community Safety

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

## **Background Papers**

No further background papers were used in the preparation of this report.

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)

Telephone: 01223 743701

## APPENDIX 1: SUMMARY OF PROPOSALS

	'Do maximum'	'Do something'
Bus	Almost continuous inbound bus lane from approach to Green End Road junction through to Mitcham's Corner	Inbound bus lane on approach to Green End Road Almost continuous inbound bus lane between Woodhead Drive and Mitcham's Corner
	Outbound bus lane on approach to Gilbert Road Almost continuous outbound bus lane between Ascham Road and the bus way junction	Outbound bus lane on approach to Elizabeth Way and approach to Arbury Road Almost continuous outbound bus lane between Woodhead Drive and the bus way junction
	Early bus detection on all approaches to signal controlled junctions	
Cycling	Continuous segregated inbound cycle lane from approach to Green End Road junction through to Mitcham's Corner	
	Continuous segregated outbound cycle lane from Mitcham's Corner to Lovell Road junction	
	Bi-directional segregated cycle lane between Lovell Road and Bus way junction	
	Segregated cycle lane from Bus way junction to Science Park junction	
Walking	Floating bus stops where space permits	
	Raised crossing points across side roads	
	Upgraded signal crossings near Lovell Road and Kendall Way to provide better links for cross routes	
Junctions	Upgraded footway surfaces	
	Removal of Elizabeth Way roundabout and installation of traffic signals	
	Prohibition of right turn into Arbury Road	
	Closure of Union Lane for motor vehicle access and egress	
Prohibition of right turn into Gilbert Road		

## APPENDIX 2: SUMMARY OF PUBLIC CONSULTATION

### 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 corridors.

### ENGAGEMENT

Public Consultation to run from mid-December until the end of January, consisting of the following main elements:

- Briefings for local members and any wider member interest
- Briefings for local representatives including parish councils and residents' associations
- Briefings for key stakeholders including transport interest groups, disability groups and businesses
- 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 and at Milton, Babraham, Longstanton and St. Ives Park & Ride sites
- Information displays in shelters at bus stops along both corridors
- 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 select preferred measures.

### KEY MESSAGES

The key messages for the Histon Road and Milton Road corridors 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.
- The consultation is the start of the delivery process and there will be further opportunities to comment as the project is taken forward.

#### ON-LINE QUESTIONNAIRE/SURVEY

A questionnaire will be provided for each corridor which will seek views for respondents using a sliding scale of support to assess how well each project objective is being met. This will inform a future process to bring together the best combination of measures as a coherent preferred option 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.

