



**GREATER  
CAMBRIDGE  
PARTNERSHIP**

Growing and sharing prosperity

Delivering our City Deal

**HISTON ROAD: BUS, CYCLING AND WALKING IMPROVEMENTS  
FINAL DESIGN**

**Report to:** Greater Cambridge Partnership Joint Assembly

15<sup>th</sup> November 2018

**Lead Officer:** Peter Blake - GCP Transport Director

**1. Purpose**

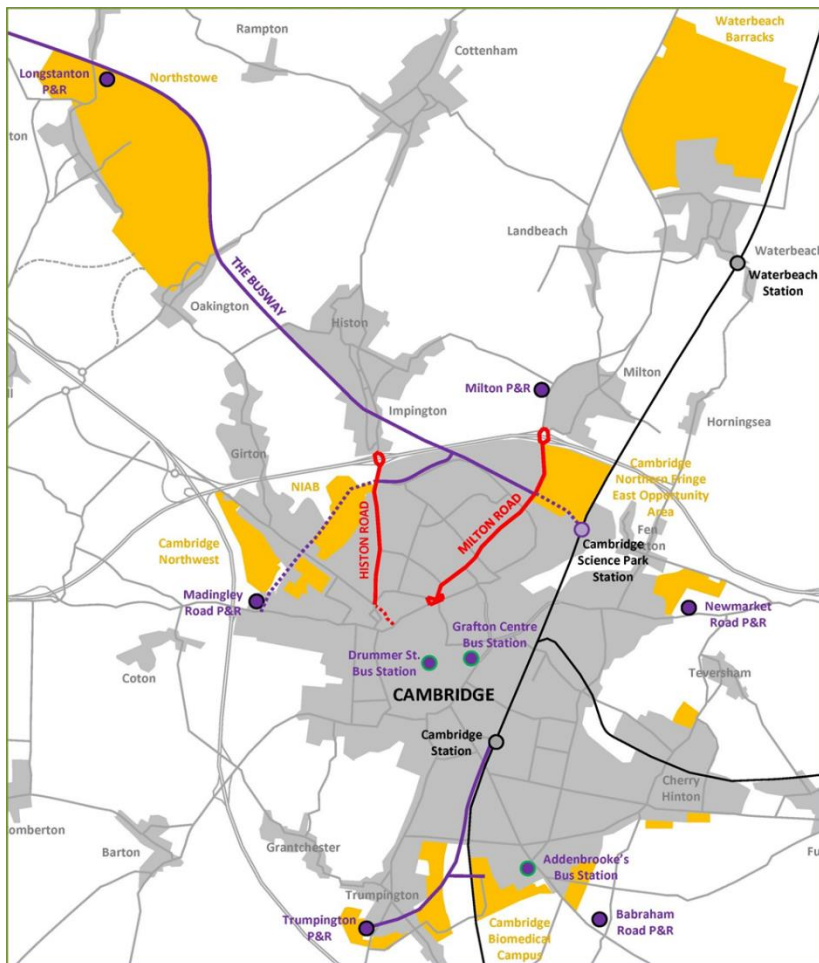
- 1.1. The Histon Road scheme supports the Greater Cambridge Partnership's (GCP's) transport vision of implementing improved public transport routes to encourage more people to use sustainable transport modes instead of the private car. This is a significant part of a wider public transport strategy which aims to support the feasibility of delivering proposed housing and employment growth at Cambridge Northern Fringe, Ely, Cambridge Science Park, Northstowe and Waterbeach (collectively around 27,000 new homes and 9,800 new jobs between 2011 and 2031).
- 1.2. This report sets out the final design for Histon Road that includes modifications to the previously approved design following public consultation feedback. In developing the final design, the consultant's design team has worked closely with the County Council's road safety, signals, and cycling projects teams to ensure that all aspects conform with current regulations, are considered safe and provide a good balance in terms of functionality for all users.
- 1.3. The report also presents the landscaping strategy and designs for the various landscape areas along Histon Road. These have been developed following further engagement with the Local Liaison Forum (LLF) in October 2018 and in partnership with Cambridge City Council.
- 1.4. The Joint Assembly is asked to comment on the report.

**2. Key Issues and Considerations**

- 2.1. The project has the following key objectives:
  - a) Comprehensive priority for buses in both directions wherever practicable;
  - b) Safer and more convenient routes for cycling and walking, segregated where practical and possible;
  - c) Enhance the environment, streetscape and air quality;
  - d) Additional capacity for sustainable trips to employment/education sites;
  - e) Increased bus patronage and new services; and
  - f) Maintain or reduce general traffic levels.

- 2.2. **Figure 1** indicates the length of Histon Road under consideration and shows its setting within the wider strategic context. The report considered by the Executive Board on 3<sup>rd</sup> November 2015 sets out the strategic and planning background, and broader context for the scheme.

**Figure 1: Histon Road in the Wider Area Context**



- 2.3. In March 2018, the Executive Board approved the preliminary design for Histon Road for public consultation. The consultation took place in the summer of 2018. Consultation leaflets were delivered to over 15,000 houses in north Cambridge and the village of Histon. Three formal consultation events took place that were all well attended. Over 900 responses were received. The consultation analysis report has been published online and is included as a background paper. In summary, all aspects consulted on received more support than opposition. The qualitative aspects of the consultation were of significant value in fine-tuning the final proposals.

### **3. Options and Emerging Recommendations**

- 3.1. Following the analysis of the consultation feedback and extensive dialogue with the County Council's road safety, signals and cycling projects teams, modifications have been made to the design. The following paragraphs set out the key changes that have been made and with reasons.

### ***Design Modifications.***

#### *Histon Road Junction with Victoria Road.*

- 3.2. Modifications to the design focus mainly on the provision for cyclists at this junction. Feedback suggested that the off road cycling provision proposed at the junction of Histon and Victoria Road would only be used by the minority of cyclists with the majority more likely to stay on road due to the longer “green” time afforded, compared to the off road crossing option. The current design addresses these comments by readdressing the balance and providing an improved on road solution at this location, whilst maintaining the ability for cyclists to navigate this area using an off road shared use pavement and crossing.

#### *Victoria Road approach to both Histon Road and Huntingdon Road Junctions*

- 3.3. Road safety officers were concerned that the lack of signal control for cyclists within the junction area would potentially place them at conflict with turning vehicles, other cyclists, and pedestrians. The current design addresses this by placing the cycle lanes at carriageway level, thus ensuring cyclists follow the same signal control as vehicles.

#### *Parking Bays, Crossing, Bus Stops and Loading Bay near Cranwell Court*

- 3.4. Feedback from the consultation focussed on the importance of maintaining some pay and display parking at this end of Histon Road to support local business. Road safety officers also recommended moving the proposed pedestrian crossing further from the junction to enhance the visibility of the crossing signals to drivers turning into Histon Road from Victoria Road. They also recommended moving the bus stop further from the junction to avoid blocking.
- 3.5. This combined feedback has led to a re-design of how we allocate some of these requirements in this small area. The parking bays have been retained as has the small loading area for the supermarket on the inbound side of Histon Road (denoted by single yellow line and signage). The crossing and the outbound bus stop has been moved further from the junction. With this configuration, there is no space to safely include a new inbound bus stop, instead the current pairing with the inbound bus stop just around the corner on Victoria Road is maintained.

#### *Bus Stops near Linden Close*

- 3.6. The bus stops in this location have been re-instated into the design. Feedback from the consultation highlighted the fact that these stops serve many people living in the Benson Road area via the footpath that provides access to Histon Road.

#### *Pedestrian Crossing and Bus Stops near Akeman Street*

- 3.7. A new location for a pedestrian crossing near Akeman Street was strongly supported as it provides improved access between the residential areas access by Akeman Street and the shopping areas on Histon Road. However, the very close proximity between this proposed crossing and the proposed (existing) crossing near to the Post Office was raised as an issue.
- 3.8. Following further engagement with the LLF and discussions with road safety officers about the positioning of bus stops in relation to crossing points and junctions in this area, the design has been developed including a new crossing point at the Akeman Street location. In order to locate the crossing in this position, the outbound bus stop has been moved to the

nearest safe location to the Post Office and the nearby proposed floating bus stop has been removed from the design.

#### *Histon Road/Gilbert Road/Warwick Road Junction*

- 3.9. The proposed junction design was largely supported through the consultation, although some concern was raised that slightly more width should be provided for cyclists using the on-road option though the junction. Road safety, signals and cycling projects officers also recommended modifications to the design to improve functionality, flexibility, and in particular accessibility for visually impaired pedestrians.
- 3.10. While the principles of the previous junction design are largely retained, modifications seek to incorporate all of the comments received from consultees, and officers. Slightly more space has been afforded to on-road, cyclists. Rather than segregated pedestrian/cycle crossings, the new design includes toucan crossings. This almost halves the number of signal poles required and provides much greater flexibility for cyclists to legally navigate the junction in all directions during the crossing phase. The toucan crossing system requires the surrounding area to be shared use rather than fully segregated. This also follows a strong recommendation from road safety officers.

#### *Crossing near Carisbrooke Road*

- 3.11. The public consultation indicated a preference for a new signalised crossing to be located near to Carisbrooke Road. The position of this new crossing is strategically important as it will serve pedestrians and cyclists accessing Histon Road from Darwin Green via a planned link at this location. The new crossing has been included in the current design and requires the proposed bus lane to be shortened slightly as a result.

#### *Footpath Widths*

- 3.12. Slight alterations have been made to footpath widths to the north of Gilbert Road in order to ensure a more consistent 1.8m width.

#### **Key Design Considerations**

- 3.13. The final technical design is presented in **Appendix B** and key considerations of the scheme are detailed in the following sections of this report.

#### **Junctions**

- 3.14. Alternative designs for the 4 main junctions along Histon Road have been considered in detail. This work is supported by detailed traffic modelling in order to assess the benefits or impacts that the proposed designs will have. The modelling work demonstrates that in combination with other City Access proposals, the scheme will improve future journey times and reliability and reduce queuing at each of the key junctions along Histon Road, compared to an alternative 'Do Nothing' scenario of no change. A summary of each junction includes:
  - **Victoria Road/Huntingdon Road** – the junction is severely constrained. It is very difficult to significantly modify the junction without affecting traffic flows. However, it has been possible to set out a design that improves the environment for both pedestrians and in particular cyclists, offering some separation from motorised vehicles in the area where there is a current conflict. These benefits seek to be achieved without adverse impact on the ability for traffic (including buses) to flow through what is a busy junction.

- **Gilbert Road** – while the detail has been modified, the design continues to use many aspects of the alternative LLF design which offers significant benefit to cyclists by providing off road facilities in all directions. The design also offers on road advance stop lines for in/outbound commuter cyclists who may prefer to cross the junction on road due to the longer green time.
- **Darwin Green** - the Darwin Green junction will be delivered by the developers and has already gone through a significant planning process. Officers are continuing the dialogue with the consultants/developers to ensure that the final design fits well with and follows the general principles of the proposed Histon Road scheme.
- **Kings Hedges Road** - officers have assessed the Kings Hedges junction and do not propose to make any changes to it aside from improving the cycle lane approach from the A14 junction which can be achieved without affecting the performance of the junction itself with regard to vehicle flows.

### ***Bus Lanes and Bus Stops***

- 3.15. A key aim of the project is to enhance bus priority on Histon Road. The design includes a length of inbound bus lane extending from Blackhall Road to a point 40m south of Carisbrooke Road. The bus lane is estimated to improve future inbound bus journey times in the peak by up to 2.5 minutes enhancing reliability of service.
- 3.16. It is intended that implementation of the scheme will look to include bus priority measures at the junctions in the form of bus detection and a subsequent hurry call on the signal sequence. At this stage the benefits from early bus detection at traffic signals have not been built into the traffic model.
- 3.17. The approximate location of existing bus stops has been retained. It is proposed that where width allows the scheme will incorporate floating bus stops. This follows extensive work that has been undertaken by the County Council in developing the design alongside disability groups, cycle campaign groups, and other stakeholders, including an independent study to demonstrate their effectiveness and safety. Where floating bus stops are proposed the designs aim to provide a minimum island width of 2.3m, and in most cases it has been possible to provide up to 2.5m, in order to allow adequate space for wheelchair users to manoeuvre.

### ***Cycling and Walking***

- 3.18. The provision of high quality cycling and pedestrian infrastructure is an important objective of this scheme. As well as improvements at junctions, the design includes improved cycle lanes along the length of Histon Road. Where the road is narrower, towards the southern end of the scheme, the aim is to provide an advisory 1.5m wide cycle lane on both inbound and outbound side of the road. The advisory cycle lanes progress into segregated lanes (Cambridge Kerb) as the road widens towards the Gilbert Road junction.
- 3.19. Between Gilbert Road and the Darwin Green junction the aim is to provide up to 2m wide segregated outbound cycle lane (1.5m minimum width in pinch points). On the inbound side of the road a 1.5m cycle path is protected by the bus lane for the majority of its length. The enhanced cycle infrastructure will improve safety and accessibility for cyclists but also address the current situation where vehicular flow is often disrupted due to the proximity of vehicles and cycles.
- 3.20. The aim is to provide 1.8m wide footpaths along the length of the scheme, where current kerb lines allow, with a 1.4m wide minimum in pinch points. Pedestrian improvements also include provision of a new crossing in close proximity to the junction with Victoria Road

(timed with the junction signals so as to not delay buses), as well as formalising a crossing at Carisbrooke Road.

- 3.21. The scheme will include raised tables across the minor residential side roads to improve accessibility for pedestrians.

#### ***Removal of On-street Parking***

- 3.22. In order to deliver highway improvements in the narrow southern section of Histon Road, it will be necessary to remove the current on street parking. This includes 31 resident parking bays that are part of the Benson Area Residents' Parking Zone (RPZ) and 11 pay and display parking bays. Removal of the on street parking is dependent on the ability to mitigate the impact, therefore, a detailed parking survey was undertaken within the area (the methodology agreed with the LLF in advance). The survey demonstrates that during the mornings and evenings there is sufficient space within the Benson Area RPZ to accommodate the displaced residents parking, created from the proposed removal of parking bays on Histon Road. However it is accepted that there would be a level of inconvenience introduced by this proposal, especially to those residents living directly along Histon Road.
- 3.23. A number of points were raised by local residents and businesses including the requirement for loading, unloading, deliveries and accessibility for disabled people. These points need to be considered in detail when the Traffic Regulation Orders (TROs) are developed. It is planned to address these issues through the use of loading restrictions, along Histon Road, at peak times only.
- 3.24. With regard to the current pay and display bays on Histon Road, officers are working with the County Council's parking team to incorporate new pay and display bays in Linden Close as part of the new Stretton Area RPZ.

#### ***Landscape and Environment***

- 3.25. The design retains the line of trees running north from Gilbert Road to Carisbrooke Road. Following discussion with the Cambridge City Council arboriculture officer there is an understanding that if roots are damaged during construction there will be a commitment to replace any lost trees. It is worth noting that it will also be possible to retain much of the mature hedgerow to the north of Blackhall Road.
- 3.26. Designs for the four main landscaping opportunity areas were considered at a recent LLF workshop. These locations include Akeman Street junction, Gilbert Road/Warwick Road junction, and the junctions with Brownlow Road and Blackhall Road. A landscaping mitigation measure has also been set out to provide a new high fence and planting between Brownlow Road and Blackhall Road, replacing the existing hedgerow that currently screens a number of gardens on the outbound side of the road. The designs are set out in **Appendix A** alongside the landscape strategy for Histon Road.

#### ***Cost Benefit.***

- 3.27. The consultants WSP have prepared a cost benefit analysis of the scheme which has indicated a benefit to cost ratio (BCR) in the range of 1.6 to 2.9.
- 3.28. The approximate current day capital cost for the preliminary concept design is estimated to be £6 million as reported to the March Executive Board meeting.

#### **4. Next Steps and Milestones**

- 4.1. Subject to the decision made by the Executive Board, officers plan to follow the broad programme as set out below:

January 2019	Commence Detailed Design
July 2019	Detailed Design Complete
August 2019	Appoint Contractor
Autumn 2019	Executive Board decision to award and commence construction contract
Autumn 2019	Commence Construction
Autumn 2020	Scheme Complete – this is the subject of further timetabling work

## List of Appendices

Appendix A	Landscaping Strategy
Appendix B	Final Technical Design Layout and Key Features

## Background Papers

Title	Link
Executive Board agenda and minutes Nov 2015	<a href="http://scambs.moderngov.co.uk/ieListDocuments.aspx?CId=1074&amp;MId=6537&amp;Ver=4">http://scambs.moderngov.co.uk/ieListDocuments.aspx?CId=1074&amp;MId=6537&amp;Ver=4</a>
Executive Board agenda and minutes Jun 2016	<a href="http://scambs.moderngov.co.uk/ieListDocuments.aspx?CId=1074&amp;MId=6632&amp;Ver=4">http://scambs.moderngov.co.uk/ieListDocuments.aspx?CId=1074&amp;MId=6632&amp;Ver=4</a>
Executive Board agenda and minutes Nov 2017	<a href="http://scambs.moderngov.co.uk/ieListDocuments.aspx?CId=1074&amp;MId=6858&amp;Ver=4">http://scambs.moderngov.co.uk/ieListDocuments.aspx?CId=1074&amp;MId=6858&amp;Ver=4</a>
Executive Board agenda and minutes Mar 2018	<a href="http://scambs.moderngov.co.uk/ieListDocuments.aspx?CId=1074&amp;MId=7175&amp;Ver=4">http://scambs.moderngov.co.uk/ieListDocuments.aspx?CId=1074&amp;MId=7175&amp;Ver=4</a>
2018 Consultation Analysis Report	<a href="https://citydeal-live.storage.googleapis.com/upload/www.greatercambridge.org.uk/transport/transport-projects/Histon%20Road%20report%20v2.pdf">https://citydeal-live.storage.googleapis.com/upload/www.greatercambridge.org.uk/transport/transport-projects/Histon%20Road%20report%20v2.pdf</a>