

8 September 2015

- To: Members of the Greater Cambridge City Deal Joint Assembly:**
- | | |
|----------------------------|---|
| Councillor Tim Bick | Cambridge City Council (Chairman) |
| Councillor Roger Hickford | Cambridgeshire County Council (Vice-Chairman) |
| Councillor David Baigent | Cambridge City Council |
| Councillor Kevin Price | Cambridge City Council |
| Councillor Maurice Leeke | Cambridgeshire County Council |
| Councillor Noel Kavanagh | Cambridgeshire County Council |
| Councillor Francis Burkitt | South Cambridgeshire District Council |
| Councillor Bridget Smith | South Cambridgeshire District Council |
| Councillor Tim Wotherspoon | South Cambridgeshire District Council |
| Claire Ruskin | Cambridge Network |
| Sir Michael Marshall | Marshall Group |
| Andy Williams | AstraZeneca |
| Anne Constantine | Cambridge Regional College |
| Jane Ramsey | Cambridge University Hospitals |
| Helen Valentine | Anglia Ruskin University |

Dear Sir / Madam

You are invited to attend the next meeting of the **GREATER CAMBRIDGE CITY DEAL JOINT ASSEMBLY**, which will be held in **SOUTH CAMBRIDGESHIRE HALL, CAMBOURNE** on **WEDNESDAY, 16 SEPTEMBER 2015** at **10.00 a.m.**

AGENDA

	PAGES
1. Apologies for absence To receive any apologies for absence.	
2. Minutes of the previous meeting To confirm the minutes of the previous meeting held on 15 July 2015 as a correct record.	1 - 10
3. Declarations of interest To receive any declarations of interest from Members of the Joint Assembly.	
4. Questions by members of the public To receive any questions from members of the public. The standard protocol to be observed by public speakers is attached.	11 - 12
5. Petitions To receive any petitions for consideration by the Joint Assembly.	

- 6. REPORTS SCHEDULED TO BE CONSIDERED BY THE GREATER CAMBRIDGE CITY DEAL EXECUTIVE BOARD**
- 6 (a) M11 bus-only slip-roads feasibility report** **13 - 70**
To consider the attached report by Graham Hughes, Executive Director (Cambridgeshire County Council).
- 6 (b) Greater Cambridge City Deal financial monitoring** **71 - 76**
To consider the attached report by Chris Malyon, Chief Finance Officer (Cambridgeshire County Council).
- 6 (c) Greater Cambridge City Deal workstream update** **77 - 78**
To consider the attached update report from each of the Greater Cambridge City Deal workstreams.
- 7. Greater Cambridge City Deal Forward Plan and schedule of meetings** **79 - 88**
To consider the attached Greater Cambridge City Deal Executive Board.

Future meetings of the Greater Cambridge City Deal Joint Assembly are scheduled to be held as follows:

7 October 2015 – 2pm
13 November 2015 – 2pm
17 December 2015 – 2pm
12 February 2016 – 2pm
24 March 2016 – 2pm
2 June 2016 – 2pm
7 July 2016 – 2pm
25 August 2016 – 2pm
29 September 2016 – 2pm
3 November 2016 – 2pm
1 December 2016 – 2pm



GREATER CAMBRIDGE CITY DEAL JOINT ASSEMBLY

Minutes of the Greater Cambridge City Deal Joint Assembly held on
Wednesday, 15 July 2015 at 2.00 p.m.

Members of the Greater Cambridge City Deal Joint Assembly:

Councillor Tim Bick	Cambridge City Council (Chairman)
Councillor Roger Hickford	Cambridgeshire County Council (Vice-Chairman)
Councillor Kevin Price	Cambridge City Council
Councillor Maurice Leeke	Cambridgeshire County Council
Councillor Noel Kavanagh	Cambridgeshire County Council
Councillor Bridget Smith	South Cambridgeshire District Council
Councillor Tim Wotherspoon	South Cambridgeshire District Council
Claire Ruskin	Cambridge Network
Sir Michael Marshall	Marshall Group
Andy Williams	AstraZeneca
Helen Valentine	Anglia Ruskin University

Members and substitutes of the Greater Cambridge City Deal Executive Board:

Councillor Ian Bates	Cambridgeshire County Council
Councillor Ray Manning	South Cambridgeshire District Council
Roger Taylor	University of Cambridge

Officers/advisors

Antoinette Jackson	Cambridge City Council
Andrew Limb	Cambridge City Council
Mike Davies	Cambridgeshire County Council
Graham Hughes	Cambridgeshire County Council
Stuart Walmsley	Cambridgeshire County Council
Aaron Blowers	City Deal Partnership
Dan Clarke	Connecting Cambridgeshire
Adrian Cannard	Greater Cambridge Greater Peterborough Enterprise Partnership
Alex Colyer	South Cambridgeshire District Council
Graham Watts	South Cambridgeshire District Council

1. APOLOGIES FOR ABSENCE

Apologies for absence were received from Councillor Dave Baigent (Cambridge City Council), Councillor Francis Burkitt (South Cambridgeshire District Council), Anne Constantine (Cambridge Regional College) and Jane Ramsey (Cambridge University Hospitals).

2. MINUTES OF THE PREVIOUS MEETING

The minutes of the previous meeting held on 3 June 2015 were confirmed and signed by the Chairman as a correct record.

3. DECLARATIONS OF INTEREST

No declarations of interest were made.

4. QUESTIONS BY MEMBERS OF THE PUBLIC

The Chairman reported that a number of public questions had been received which related to items on the agenda for this meeting. He intended to accept those questions as part of considering the respective item. One question not related to any items on the agenda had been received and was asked and answered as follows:

Question by Stephen Lunn

Mr Lunn made a statement explaining that East Anglia Haulage was an employer of a significant number of local people at Madingley Mulch and that he was somewhat surprised and disappointed that he had not been contacted by anyone in authority connected with the Cambridge City Deal concerning the proposed option for a new Park and Ride site east of the Madingley Mulch roundabout. He highlighted that local press items had triggered concerns from his employees as to what the potential implications were for his business in the future and thus its continued employment. Whilst appreciating that the drawings published had been referred to as being indicative at this stage, he said that not only did the drawings for the site and option 1 (c) in general have dramatic implications for future passing trade, but they also appeared to include his site as part of the proposed Park and Ride development.

Mr Lunn therefore asked the following question:

“Does the proposed Park and Ride development footprint east of the Madingley Mulch roundabout include our site, or only the land to the north of the current A1303?”

Stuart Walmsley, Head of Major Infrastructure Delivery at Cambridgeshire County Council, responded by saying that the Council had spoken to colleagues at East Anglia Haulage in relation to this issue. He confirmed that all ownerships in the area were being looked at as part of developing the options but that nothing at this stage had been determined. Landowners and businesses in the area would be consulted prior to any decisions being taken, to gain a better understanding of the issues and opportunities in relation to the route. Mr Walmsley confirmed that an initial consultation process had been approved which would be taking place in the Autumn. It was noted that a meeting had been subsequently arranged to meet with representatives of East Anglia Haulage on-site on 4 August 2015.

5. PETITIONS

No petitions for consideration by the Joint Assembly had been received.

6. REPORTS SCHEDULED FOR CONSIDERATION BY THE GREATER CAMBRIDGE CITY DEAL EXECUTIVE BOARD

6 (a) Chisholm Trail cycle links

The Joint Assembly considered a report which summarised a recommended route for the Chisholm Trail proposed to be taken forward to public consultation.

Mike Davies, Team Leader of Cycling Projects at Cambridgeshire County Council, presented the report and highlighted the following benefits of the recommended route for

the Chisholm Trail:

- a safer, direct and more convenient largely off-road route for cycling and walking;
- improved access to green spaces, employment areas, retail sites and residential centres;
- links into a network of existing cycle routes;
- minimal impact on other motor traffic journey times;
- enhancement of the environment, streetscape and air quality;
- provision of a link from the main Cambridge railway station to the new railway station at Chesterton;
- the creation of more capacity for sustainable trips along the rail corridor;
- links to strategic priorities for City Deal cross-city cycle improvements.

The Chairman took this opportunity to invite receipt of public questions and statements, as follows:

Statement by Jim Chisholm

Mr Chisholm explained that a number of European cities had tackled car congestion by providing better cycling facilities and better public transport and that Leicester, Nottingham and Coventry were examples of cities in England where car dominated structures were being removed.

In relation to economic benefit, he said that some people feared that improved cycling facilities would solely allow individuals to cross town quicker and provided very little economic benefit. He was of the view, however, that as a result of route improvements there had been huge increases in cycling into Cambridge from villages in the past ten years and it was getting new people to cycle that would provide economic benefits. Mr Chisholm suggested that the recommended route should be seen as a route that would give many less confident riders, who currently drove to work, a pleasant, relaxing, healthy, more reliable and probably even quicker trip by cycle or on foot, therefore achieving those economic benefits by reducing congestion. He added that many of the sections of the new route could be provided without any heavy engineering.

Mr Chisholm closed by saying that it was not necessary to force people out of their cars to reduce congestion, and that simply providing good alternatives for those willing to change would make a difference.

The Joint Assembly noted the statement.

Question by Chris Smith

Mr Smith said that the route was built over Fen Ditton Meadows, across the curtilage of the Leper Chapel, a Grade 1 listed building, over Coldham's Common, a county wildlife site, and through other public and open green space, with no adverse effects noted in the report. He therefore asked what the adverse effects of this scheme were believed to be prior to its adoption by this group, including those on the rights of commoners and landscape.

In terms of the cost benefit ratio, Mr Smith said that with a ratio of 35:1 and a cost of around £12.5 million including the Fen Ditton bridge, this would indicate implied benefits of approximately £420 million. Given the route was perhaps 210 metres shorter end to end than existing cycle routes, this equated to £2 million per metre in benefits. He therefore asked for an explanation as to how this figure of £2 million per metre would represent

value for money.

Mr Davies responded by saying that the proposed underpass would provide a link from the Leper Chapel site to the lake on the south side of New Market Road. This would present opportunities to enhance the site in terms of planting and landscaping, but also in terms of access by foot and bicycle. It would also mean that more less-able people could use the car park near the lake and access the Chapel via the underpass. He added that ecological and heritage surveys were planned and emphasised that the project presented an opportunity to enhance, not degrade, the Chapel as a destination and as an asset to the City.

It was noted that partners would work closely with Cambridge Past, Present and Future, friends of the Leper Church and other organisations to develop a project that met all needs and gave the best outcome.

In terms of the cost benefit ratio, Mr Davies explained that the 35:1 ration had been put together based on the benefits of moving car trips to cycle, the figures relating to which had been endorsed by the Department for Transport.

Mr Davies said that the proposed route was designed to be much more direct, safer and attractive for users in comparison to the existing road-based routes. By crossing the River Cam on a new bridge, Newmarket Road via an underpass and Mill Road via spare rail arches, the proposed route would avoid a number of busy and dangerous roads and existing junctions. Routing the path across green spaces and providing direct access to two stations and various important centres along the way, he felt, would ensure a pleasant, direct and convenient route that was likely to attract new cyclists and which supported the objective of modal shift from the private motor vehicle.

Statement by Robin Pellew

Mr Pellew said that Cambridge Past, Present and Future had been a consistent long-term supporter of the proposed Chisholm Trail, and emphasised the organisation's continued support for the project.

He referred to the Leper Chapel on the North side of Newmarket Road as being the oldest roofed building in Cambridge in continuous use, dating back to around 1150, and that it was a Grade 1 listed building together with its curtilage so as to protect its setting. He also highlighted that the Meadows were ecologically rich in species and a county wildlife site. In addition, Mr Pellew stated that the Stourbridge Fair dated back to 1114 and was held every year in September in front of the Chapel. With the Chapel and the Fair he reminded the Joint Assembly that these were some of the oldest roots of contemporary Cambridge, dating back even before the founding of the University. Cambridge Past, Present and the Future had steadfastly defended the Chapel and its Meadows from encroachment and development and Mr Pellew said that it would continue to do so.

Mr Pellew said that the preferred route by the consultant involved a tunnel under the Newmarket Road opening some 50 metres from the Chapel door, which would then run to the east of the Chapel through the curtilage and then up the east side of the Meadows. Cambridge Past, Present and Future had serious concerns about this proposed route which it felt was an invasion of a Grade 1 listed property that would seriously impact the setting of the Chapel. With a public cycleway through the middle of the site, Mr Pellew did not think it would be possible to stage the Stourbridge Fair in front of the Chapel.

Mr Pellew, on behalf of Cambridge Past, Present and the Future, therefore advised the Joint Assembly that it did not at the moment endorse the preferred route as proposed and

that consultation would need to take place with the Friends of the Leper Chapel, Historic England and other partners. It would then like to enter into discussion with the consultant and the City Council to explore other options, not least the route outlined in option (b). Mr Pellew repeated overall support for the Trail, but reserved the right to oppose the routing through the Grade 1 curtilage of the Leper Chapel.

Mr Davies responded by saying that his colleague and the consultant had met with a representative of the Friends of the Leper Chapel and the Chief Executive of Cambridge Past, Present and Future on 1 June 2015 on-site to open discussions about the proposal. Subsequently there had been further discussions to seek permission to enter Cambridge Past, Present and Future land to undertake ecology, heritage and topographical surveys, for which agreement had been given. He added that the Chief Executive of Cambridge Past, Present and Future was helping write the scope for the heritage survey which was extremely useful and would be mutually beneficial.

Mr Davies said that, if developed carefully and sensitively, the project should enhance the setting and access to the Chapel site, stating that partners would work closely with Cambridge Past, Present and Future and other bodies towards the very best outcome. He added that the consultant had a proven track record of delivering sensitive sustainable transport projects, most of which included habitat enhancements, public art and, in many cases, had strived to showcase historic and heritage issues.

Referring to option (b), Mr Davies said that it would impact negatively on the privacy of a property which currently backed onto fields on one side and the railway line on the other, but confirmed that this issue would be covered in the consultation.

The Chairman invited Members of the Joint Assembly to discuss the proposal set out in the report, further to which the following points were noted:

- careful consideration had to be given to the impact on Leper Chapel as a result of any route proposed as part of this project, including landscaping and the location and design of proposed public art;
- a question was raised as to why the proposed route could not follow the existing railway line. It was noted that the railway had been followed as much as possible, but railway infrastructure and buildings, together with operational issues such as delivery and storage yards for some commercial premises, did not make this possible for the whole route;
- the report was very encouraging and sought to address an aspiration that had been around for a long time;
- safety and convenience were two important aspects of the route that made it very positive;
- the Leper Chapel was a very valuable asset, but this should not prevent the route progressing nearby, or prevent a proposed underpass near Newmarket Road;
- a question was raised as to whether specialist conservation expertise would be used to ensure that significant advice and consideration was given to the sensitivities surrounding the Leper Chapel. It was noted that the City Council's urban design team had such expertise in place, together with the Chief Executive of Cambridge Past, Present and Future who had significant experience and who would be working closely with partners on the project. Reassurance was given that further specialist advice and expertise would be sought if necessary. Mr Davies made it clear that the Councils would be working closely with all interested parties in the area and that this was not purely an engineering project. He addressed fears of unsightly underpasses by referring to examples in Royston of attractive and safe underpasses which had been put in place that were much different in

- appearance to the perceived concrete underpasses commonly seen in urban areas;
- it was agreed that the words ‘for the purpose of public consultation’ should be added to the first recommendation contained within the report, to make it clear that the route was a proposal for consultation, rather than a route proposed for approval;
 - the terms ‘premature’ and ‘undeliverable’ had been muted by one of the public speakers as part of their statements and a response to these claims was requested. Mr Davies said that a significant amount of work had been undertaken by the consultants on this proposed route and the option set out in the report, in his view, represented the best, most balanced, direct and safe route in order to achieve the ambitions of the Chisholm Trail. He acknowledged that certain sections of the route may present problems in due course which could themselves become undeliverable. If such circumstances occurred, however, alternatives would have to be found;
 - in answer to a question regarding the flexibility of the scheme in terms of changes that could be proposed as part of the consultation, Mr Davies said that there were a number of options that could be included within the consultation to aid responses. He cited four possible options regarding Leper Chapel and the use of a crossing instead of an underpass for Newmarket Road as examples that could be included within the consultation document.

The Joint Assembly unanimously **RECOMMENDED** that the Executive Board:

- (a) Approves the proposed route option for the Chisholm Trail for the purposes of public consultation.
- (b) Gives approval to proceed to consultation on the route in the Autumn 2015.

6 (b) Cross-city cycle improvements

Consideration was given to a report which summarised the strategic approach and key principles for developing the cross-city cycle improvements in Cambridge and set out some early work that had been undertaken, informed by stakeholder engagement, on the routes which would benefit most.

Mike Davies, Team Leader of Cycling Projects, presented the report and highlighted that the proposed priority cross-city cycle schemes represented strategic links to both radial and orbital cycle routes, especially those to employment or development sites. He referred Members to Appendices 2 and 3 of the report which set out a scoring methodology and a list of scored schemes, respectively. Plan 1 attached to the report also illustrated the proposed location of City Deal cross-city schemes. It was noted that the chosen schemes were the result of the outcomes of a stakeholder workshop held on 7 March 2015.

The Chairman took this opportunity to invite receipt of public questions and statements, as follows:

Statement by Roxanne De Beaux

Roxanne De Beaux represented the Cambridge Cycling Campaign which welcomed the proposed cross-city cycling routes and strongly supported the proposed improvements to the nominated corridors. She said that these were clearly areas where improvements were required and the Campaign was confident that high quality improvements to these

corridors would achieve the desired modal shifts and reduce congestion.

Regarding the Hills Road and Addenbrooke's corridor, Ms De Beaux said that nothing short of a separate light phase would improve the safety for the most vulnerable. She added that the advance lights would not add significant improvement to the existing situation where cyclists, through their sheer number, already dominated this intersection and prevented any more than a few cars from getting through at a time. There was also a high risk of collision in this area so the Campaign recommended that a better solution with separate light signals and safer cycling infrastructure should be included.

The Campaign supported proposed improvements to links to East Cambridge and the National Cycle Network 11, however, it felt that there should be proposals for further assessment and suggested investigating use of Section 106 funding from the Ice Rink and Marshall's developments.

Ms De Beaux emphasised the terrible infrastructure for cycles on Arbury Road and said the Campaign agreed that this route must be improved due to the lack of alternative routes. The Campaign was also pleased to see the links to the North Cambridge Station and looked forward to seeing further details of this. It did, however, recommend a scheme to improve the Trumpington Road and Lensfield Road double roundabout which was an appalling junction where many accidents had occurred and had not been included on the list of schemes.

In closing Ms De Beaux said that the Cambridge Cycling Campaign was very pleased with the proposals presented and the improvements that they would provide for cycling in Cambridge.

The Joint Assembly noted the statement.

Statement by Councillor Peter Sarris

Councillor Peter Sarris of Cambridge City Council, representing the East Chesterton Ward, wanted to make it clear that all Ward Councillors from East Chesterton fully were fully supportive of the proposed improvements to link the railway station and science park and emphasised that there was also a great deal of local support for these schemes. He did make the point, however, that it would be important for officers to be conscious of anxieties by residents regarding access being impeded in the Green End Road area when bringing forward that particular scheme.

The Joint Assembly noted the statement.

The Chairman invited Members of the Joint Assembly to discuss the proposal set out in the report, further to which the following points were noted:

- reference was made to the omission of schemes in Mill Road that scored highly but had not been included. It was noted that schemes at Mill Road and Lensfield Road had purposely been omitted as they would potentially be improved as part of the city centre access study. This piece of work would be submitted to the Joint Assembly and Executive Board for consideration in due course;
- a comment was made that cycle routes did not often join up with one another. The improvements within the report were therefore welcomed but a question was asked as to whether these schemes would connect to existing routes. Stuart Walmsley, Head of Major Infrastructure Delivery at Cambridgeshire County Council, reported that the City Deal provided an opportunity to build more infrastructure around cycling and provide solutions to some long-standing problems. He referred to the

proposed Chisholm Trail as an example of a strategic route that would provide connectivity to other routes in the area as well as link up with other employment sites across the city;

- in terms of the £900,000 required to improve the Hills Road and Addenbrooke's corridor, a question was raised as to whether this could be supplemented by Section 106 funding. It was noted that £900,000 was an early estimate at this stage, but it was noted that Section 106 funding could be available to support this particular scheme;
- a question was raised regarding the provision of secure cycle parking and whether £25,000 would be enough in view of the number of additional cyclists these schemes, and other City Deal schemes, aspired to produce through model shift. It was noted that the County and City Councils had been developing and delivering a programme of such improvements for many years and the additional City Deal monies would secure funding for the programme moving forward. In addition, a point was made that lots of these schemes were aimed at people commuting to work, therefore, provision of parking at employer sites would be equally as important as parking provision at the railway and bus stations and other similar key locations in the city.

The Joint Assembly unanimously **RECOMMENDED** that the Executive Board:

- (a) Approves the choice of the proposed priority strategic cross-city cycle schemes as set out in the report.
- (b) Approves the public consultation on the schemes, as set out in the report.
- (c) Agrees to receive a report on the consultation results of each scheme and endorse the findings.

6 (c) Smarter Cambridgeshire work stream

The Joint Assembly considered a report which set out a proposal for a 'smart cities' approach within the City Deal programme to help support the delivery of improved transport, skills and housing and unlock further sustainable economic growth within Greater Cambridge.

Andrew Limb, Head of Corporate Strategy at Cambridge City Council, presented the report and referred to Connecting Cambridgeshire, a multi-agency programme established to address digital connectivity infrastructure shortfall and support better exploitation of digital technology across all sectors. The Connecting Cambridgeshire programme included a number of work streams and one of those strands included the investigation of 'smart' technologies and its relevance for Cambridgeshire and, specifically, the City Deal programme.

The Executive Board allocated £20,000 for two years to develop a smart cities work stream with a view to seeking bids for external funding. A 'smart cities' workshop was held early this year with a number of local expert speakers and City Deal Joint Assembly and Executive Board representatives, where it was requested that a 'Smarter Cambridgeshire' proposal be developed. Proposals had therefore been worked up and the initial objectives of the Smarter Cambridgeshire project, through to 2016, would be to:

- generate an outline 'smart architecture' blueprint which would facilitate the delivery of a 'test bed/demonstrator' programme;
- establish and deliver an initial one year test bed/demonstrator programme of work

packages which implemented small scale 'smart' solutions, with a focus to transport related opportunities;

- establish and participate in a wider forum for collaboration with and information exchange between complementary work programmes and other initiatives across the wider Cambridge research and development communities to develop and showcase the smart credentials and profile of the area;
- investigate Government, EU and other funding opportunities and co-ordinate funding bids to develop the Smarter Cambridgeshire programme in both the short and medium term;
- investigate and develop collaboration opportunities with other nearby cities, including Peterborough and Milton Keynes;
- develop a longer term smart cities approach which reflects the level of ambition for Greater Cambridge. This would complement and influence the emerging City Deal programme to ensure that smart characteristics were incorporated within the overall approach to housing, transport and skills as part of the delivery of the City Deal.

The following points were noted during discussion:

- £20,000 seemed quite a small investment considering the proposed objectives. It was noted that the key behind this work stream was to unlock further funding, working alongside and complimenting the Connecting Cambridgeshire programme and organisations such as Cambridge Network. Members of the Assembly were reminded that a significant amount of external funding was available to support the objectives of this project;
- it was positive that the aspiration of the project was wider than the Greater Cambridge area, as people commuted into and visited the area from places further afield;
- a question was raised as to examples of good practice from other smart cities. Dan Clarke, from the Connecting Cambridgeshire team, reported that Birmingham, Bristol, Glasgow and Milton Keynes had all demonstrated good practice and confirmed that he had already been in discussions with representatives from Bristol and Milton Keynes.

The Joint Assembly unanimously **RECOMMENDED** that the Executive Board approves the establishment of a Smarter Cambridgeshire work stream for Greater Cambridge, as outlined in Appendices A and B of the report, to be overseen within the City Deal governance arrangements.

7. GREATER CAMBRIDGE CITY DEAL WORK PROGRAMME AND SCHEDULE OF MEETINGS

The Joint Assembly **NOTED** the City Deal work programme.

In view of the cancellation of the City Deal Executive Board meeting originally scheduled to be held on 9 September 2015, it was **AGREED** that the Joint Assembly meeting scheduled to be held on 25 August 2015 would also be cancelled.

The Joint Assembly **NOTED** its schedule of meetings for the remainder of 2015, with dates for meetings in 2016 to be confirmed in due course.

The Meeting ended at 3.50 p.m.

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Agenda Item 4

Questions by the public and public speaking

At the discretion of the Chairman, members of the public may ask questions at meetings of the Joint Assembly. This standard protocol is to be observed by public speakers:

- (a) notice of the question should be given to the Democratic Services team at South Cambridgeshire District Council (as administering authority) by 10am the day before the meeting;
- (b) questioners will not be permitted to raise the competence or performance of a member, officer or representative of any partner on the Joint Assembly, nor any matter involving exempt information (normally considered as 'confidential');
- (c) questioners cannot make any abusive or defamatory comments;
- (d) if any clarification of what the questioner has said is required, the Chairman will have the discretion to allow other Assembly members to ask questions;
- (e) the questioner will not be permitted to participate in any subsequent discussion and will not be entitled to vote;
- (f) the Chairman will decide when and what time will be set aside for questions depending on the amount of business on the agenda for the meeting. Normally questions will be received as the first substantive item of the meeting;
- (g) individual questioners will be permitted to speak for a maximum of three minutes;
- (h) in the event of questions considered by the Chairman as duplicating one another, it may be necessary for a spokesperson to be nominated to put forward the question on behalf of other questioners. If a spokesperson cannot be nominated or agreed, the questioner of the first such question received will be entitled to put forward their question.

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Agenda Item 6a



Report To: Greater Cambridge City Deal Executive Board

1 October 2015

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

M11 Bus-only Slip-Roads Feasibility Report

1. Purpose

1.1 On 17th June 2015 the Greater Cambridge City Deal Executive Board instructed officers to bring a report to the September cycle of the Joint Assembly and Executive Board meetings containing a high level appraisal of the technical implications and costs of creating bus-only slip-roads at the following locations:

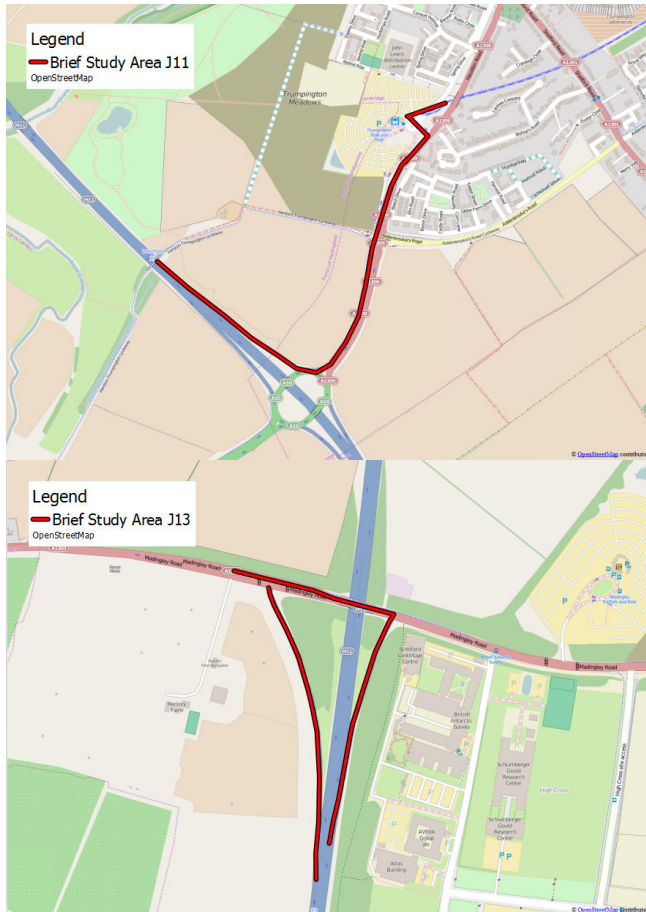
(i) M11 junction 13: when turning off the A1303 (going east) onto the M11 (going south);

(ii) M11 junction 13: creating a bus lane alongside the existing sliproad off the M11, that would get priority treatment at the traffic lights;

(iii) M11 junction 11: turning off the M11 (going south) between the existing farm and footbridge and the existing slip-road, then going round the corner of the farmland at Trumpington Meadows, running parallel to (and west of) Trumpington Road, and entering the Trumpington Road Park and Ride thence joining up to the Guided Busway.

1.2 In relation to J13 it was considered necessary in order to ensure that the appraisal was realistic in an operational context, to assess options for bus priority across the junction. This is because it would not be realistic to only appraise bus slip roads if buses could not access the slip roads with priority.

1.3 The study areas are set out in Map 1 (next page.)



Map 1: Study areas for this report

1.3 The technical report is appended to this paper. A summary of the concepts and a short assessment of their impact on the A42/Western Orbital Study is contained in section 4 below.

1.4 This study has identified that a number of concepts are available to provide bus-only slip roads at Junctions 11 and 13 of the M11. Costings and concept designs have been provided for each concept.

1.5 This study avoids policy based assessment of the appraisal options. Some of the concepts may not be policy compliant to the adopted local transport strategy objectives. No concepts are 'recommended' or 'preferred' but are set out for illustrative purposes only for completeness. Any further assessment of these (or other) concepts should be carried out in the context of the relevant City Deal project development framework.

2. Recommendations

2.1 The Board is asked to:-

- (i) Note the findings from the technical report;
- (ii) Note that the outcome of the A428/ A1303 (Madingley Rise and Madingley Road) corridor and Western Orbital scheme development work will be the key determinant in considering the future recommended bus priority options in the locations set out in this report.

3 Reasons for Recommendations

3.1 The A428/ A1303 corridor scheme is a high priority scheme for the City Deal programme and a key proposal within the Local Transport Plan 2011-2026. The Western Orbital is a scheme undergoing early development as part of the City Deal with the objective of providing for orbital bus movements to the west of Cambridge.

3.2 Both of these schemes will be developed through the Department for Transport major scheme framework approach (WebTag). This will include wide ranging technical work, public consultation and support the recommendation of a preferred option or options for these schemes. In addition, a preferred alignment and level of public transport priority can be determined. Until the relevant stage of this process has been reached it is unknown if/how improvements of junctions 11 and 13 of the M11 will support the preferred options. Continued development of one of the options included within this M11 study outside of the Webtag process could therefore result in abortive work/costs. It may also unduly impact the 'stage by stage' method of assessment which will be a key factor in assessing schemes during the necessary statutory processes.

3.3 The concepts within this paper have been generated primarily on the basis of engineering feasibility. Some of the concepts are likely to have major strategic and policy level impacts both within the City Deal context as well as the adopted local transport strategies. These impacts have not been assessed.

4 Background

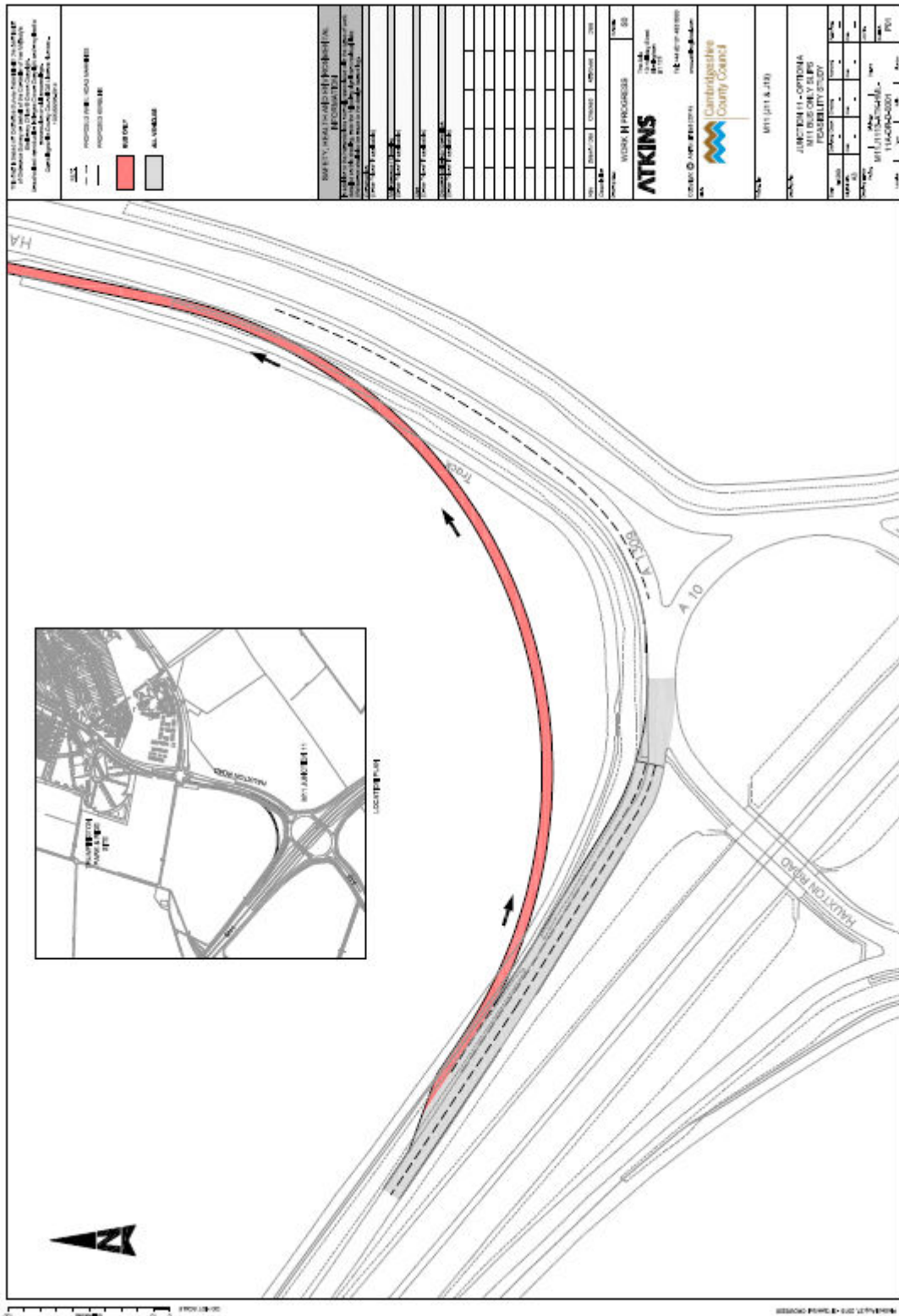
4.1 This study has been approached separately at this time to the City Deal projects and each option considered has been taken as a stand-alone scheme designed to operate independently . .

4.2 As with other City Deal work, the study firstly identified a long list of concepts that were generated and assessed in order to identify a short list for more detailed analysis.

4.3 The following shortlisted concepts are summarised below

Junction 11: Concept A

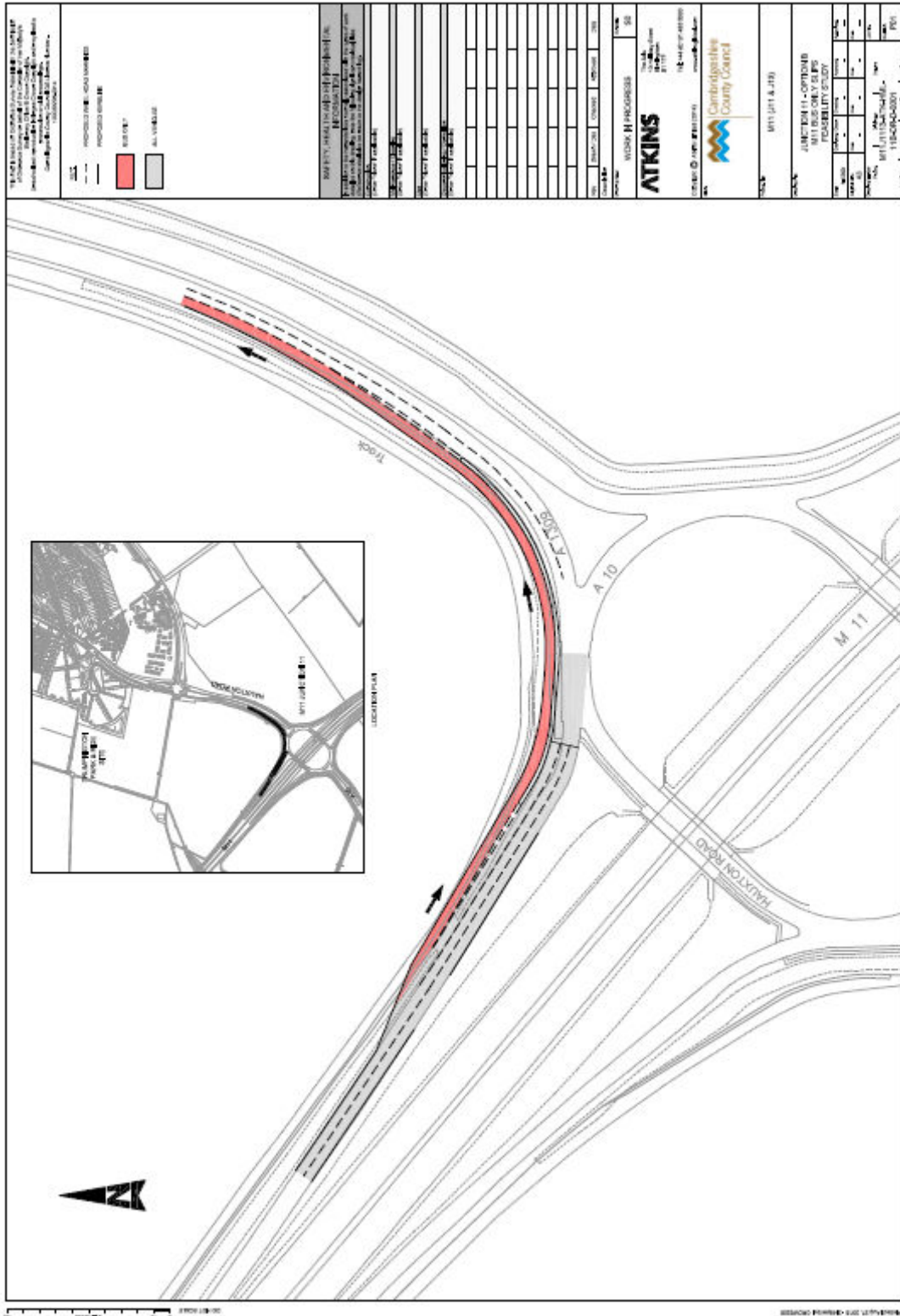
This option provides a bus-only access road running alongside the existing general traffic slip road from the M11 towards Trumpington Park and Ride. This option also provides a fully segregated bus-only access to the Park and Ride site.



Map 2: J11 Concept A

Junction 11: Concept B

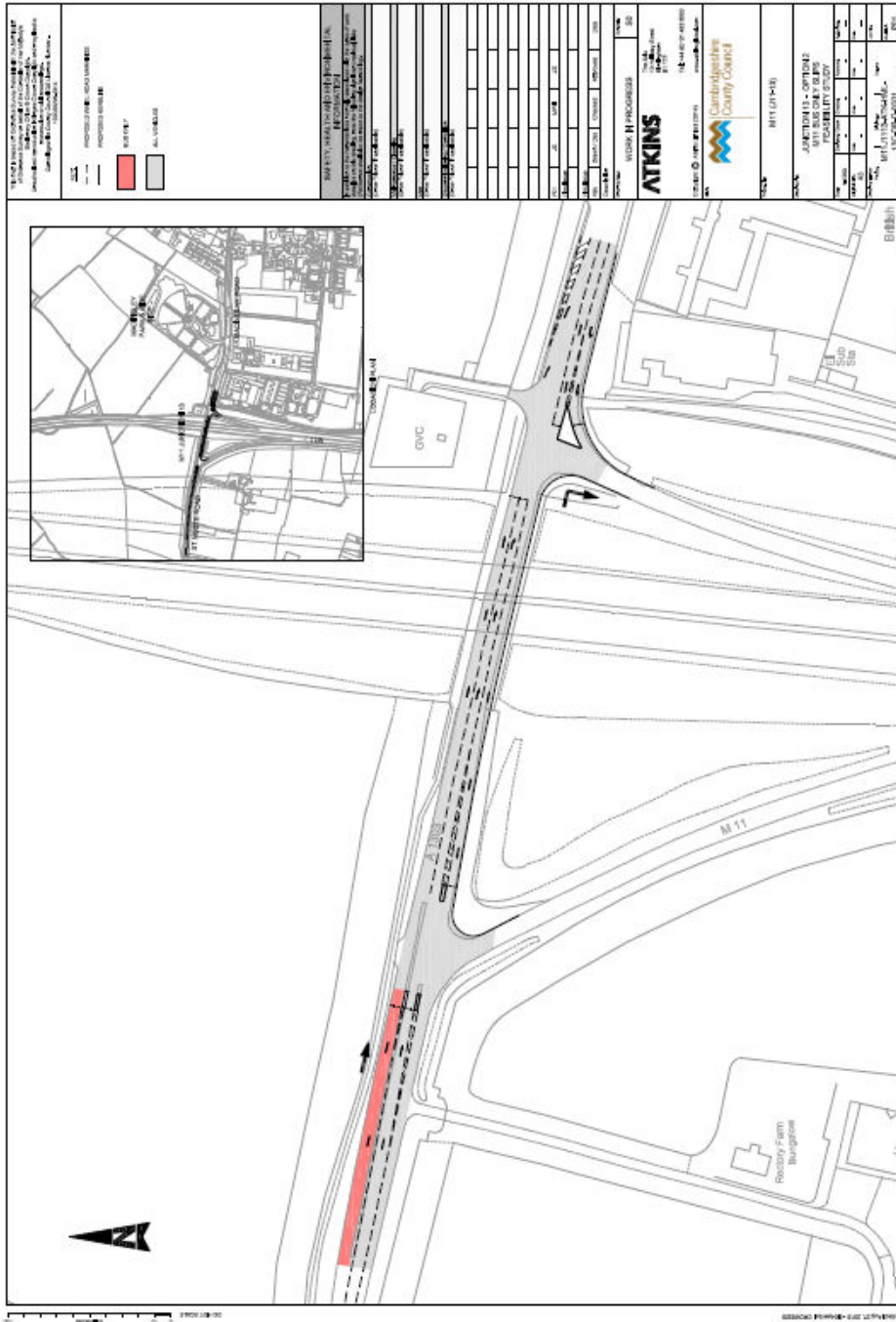
This option provides a bus-only access route parallel to the existing off slip and bypasses the existing traffic signals at the end of the slip road. The bus only access route then continues onto the dedicated Park and Ride traffic lane beyond the junction.



Map 3: J11 Concept B

Junction 13: Concept 2

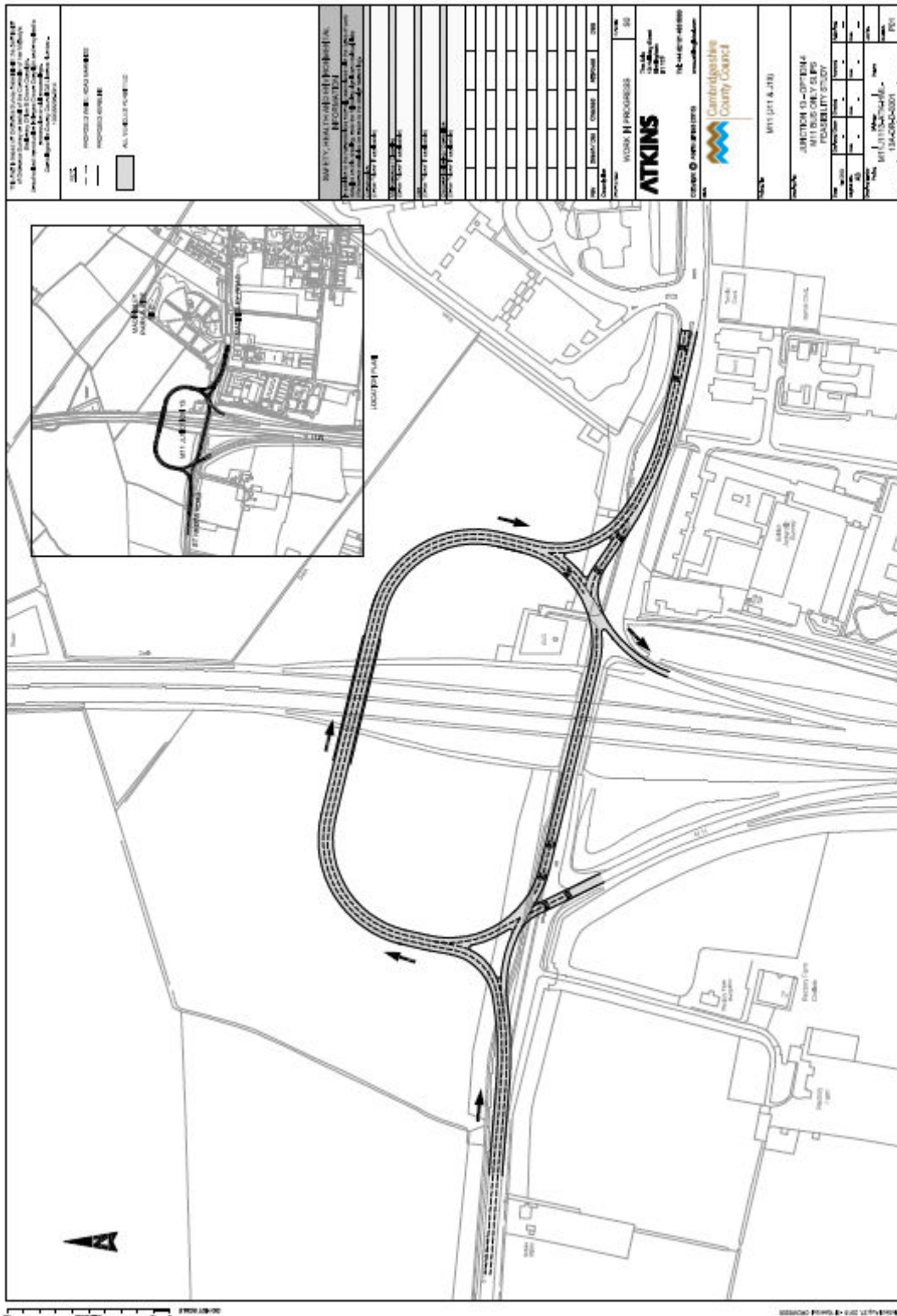
Concept 2 provides a bus priority measure based on vehicle detection on the eastbound approach to Madingley Road Bridge for buses turning right onto the M11. Buses can be held at the signals to allow traffic coming off the M11 to turn onto Madingley Road and merge into the straight-ahead lane unobstructed. Buses heading eastbound would have priority at the signals over other vehicles. The introduction of bus detector loops to enable a 'green wave' across the bridge towards Cambridge and the M11 southbound. A new signal controlled junction would be installed to the east of the bridge for the M11 southbound on-slip to ensure that traffic does not block back across the bridge preventing the bus gate from operating effectively.



Map 6: J13 Concept 2

Junction 13: Concept 4

Concept 4 requires the construction of a new gyratory at the junction with all-traffic capacity. This would involve a new structure over the M11 to the north of the current bridge. The gyratory would accommodate 3 traffic lanes.



Map 7: J13 Concept 4

4.54 The shortlisted concepts for junctions 11 and 13 was sent to Highways England for comment. Highways England do not have any policy objections to the principle of bus priority measures at motorway junctions. Any objections are likely to relate to design issues such as adherence to standards or operation matters such as congestion or safety. In addition to this, while in policy terms new junctions on motorways can be supported for public transport interchanges there would nevertheless need to be a strong case, in particular justifying why access cannot reasonably be achieved via an existing junction.

4.5 Highways England also provided a number of technical comments for each of the concepts that would need to be reviewed should any of the concepts be progressed further, along with continued engagement.

4.6 As has been discussed any more detailed work on the concepts would be within the context of the A428/Western Orbital work. However it is recognised that it may be of interest to briefly summarise any known implications of each concept on these option development work for these projects and these are offered in Table 1.

Table 1: Concepts in the context of developing City Deal Schemes		
	A428	Western Orbital
J11 Concept A (bus only access road alongside existing slip)	No direct impact on options	<p>Only limited bus priority would be available approaching J11 as bus lane length would be limited by agricultural bridge - could affect business case</p> <p>Low penetration to Trumpington Meadows development – could affect business case</p> <p>If new P&R is created on west of motorway it would need to be joined via new bus link across motorway</p> <p>Does not fit well with a new busway next to M11 as no reason to take bus as far as J11.</p>
J11 Concept B (bus lane on existing slip)	No direct impact on options	As Concept A

Table 1: Concepts in the context of developing City Deal Schemes		
	A428	Western Orbital
<u>J11 Concept C</u> (new bus only route coming off before existing J11)	No direct impact on options	<p>Offers more 'bus priority' benefits because could avoid constraint of agricultural bridge.</p> <p>High level of penetration in Trumpington Meadow which could support business case</p> <p>Fits best with busway alongside M11 as otherwise it would create new interface with M11 itself which may not win support from HE – due to enforcement and safety issues.</p> <p>If new P&R is created on west of motorway it would need to be joined via new bus link across motorway</p>
<u>J13 Concept 1</u> (bus lane across existing bridge)	<p>This option works against M11 running for buses because it does not address congestion at J13 from M11 so buses would be caught in general traffic queue unless Highways England (HE) agreed to hard shoulder running</p> <p>As such this option would tend to support a busway along side the M11 to avoid J13 altogether</p>	<p>This concept shows that it is possible to put a bus lane across the bridge which would support A428 options 1A and 1B however the key issue would be the cost to general traffic delay.</p> <p>It should be noted that Option 1C avoids the M11 bridge altogether.</p>
<u>J13 Concept 2</u> (bus gate across existing bridge)	As concept 1	<p>This option involves a long phases of stationary traffic to allow buses to 'clear' the bridge. This could promote priority in line with A428 Options 1A and 1B but again at potential high cost to general traffic.</p>

Table 1: Concepts in the context of developing City Deal Schemes		
	A428	Western Orbital
<u>J13 Concept 4</u> (new gyratory adding to existing junction)	<p>This concept could potentially support M11 running for buses if it reduced congestion at J13. In that case buses could receive a new bus lane on the junction approach close enough to make a difference.</p> <p>This concept could result in more traffic on local routes which may create congestion problems in other parts of the network that could negatively impact bus priority schemes on existing highway.</p>	<p>This option could support option 1A and 1B if it improved traffic flow across the M11 bridge and perhaps provided a direct arm to the Madingley Road P&R site (much of the delay on Madingley Road is currently due to the P&R junction) It could also provide an arm to the northern loop of option 1B.</p> <p>If capacity of junction 13 were increased for general traffic this may impact the business case for P&R at J11. If car journeys were made more attractive from J13 to J11 then this could impact business case for Western Orbital.</p>

Table 1: Concepts in the context of developing City Deal Schemes		
	A428	Western Orbital
J13 Concept 5 (new bus only slip road southbound)	<p>This option does not address the congestion issues at J13 for general traffic and so would not support M11 running north bound because buses would continue to be caught in existing queues.</p> <p>On the south bound it would provide priority access but in reality there is no need for this because the existing J13 southbound is only backed up if there is congestion on the motorway itself so this option would only work with hard shoulder running in that instance which is unlikely to be agreeable to HE.</p> <p>As such it does not seem possible to combine this option with a busway directly – buses would have to emerge onto the M11 and then re-join a busway at a later point – but again this may not be acceptable to HE</p>	<p>This concept has less direct impact on options 1A and 1B in itself however in practice it would likely need to be combined with concepts 1 or 2 above in order to allow for 'Western Orbital' buses to get to the new loop in a prioritised way. In this case the comments on concepts 1 and 2 above would also apply.</p>

Table 1: Brief review of concepts on A428/Western Orbital

4.7; The summary of Table 1 is that in each of the shortlisted concepts would have impacts on the preferred option development in one or the other or both of the linked projects. This further supports the recommendation that the key next steps are to establish preferred options for the linked projects to ensure congruence with consideration of the junctions.

4.8 Impacts on the local road network and the consistency with other City Deal scheme proposals (for example those that could be adopted in the city centre) would need to be fully understood before any assessment on impacts could be made. As such these designs are presented only as 'concepts' with no recommendation as to which would be preferred.

5 Next Steps

5.1 The pre-existing development work for both the A428/A1303 and Western Orbital schemes will continue including public consultation to be carried out with the aim of identifying a preferred option.

5.2 The bus priority concepts contained in this report may be considered further at a later date should they tie in with the preferred options identified in the A428/A1303 and/or Western Orbital study. At that stage other concepts may be generated. Any concepts developed as part of these other projects would be fully assessed for engineering, environmental and policy impacts.

6 Implications

6.1 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:	None
Legal:	There are no legal implications in this report.
Staffing:	Project management is undertaken by the Cambridgeshire County Council Major Infrastructure Delivery team.
Risk;	A full project risk register has been developed.
Equality & Diversity	There are no equality or diversity implications in this report.
Climate Change:	There are no climate change implications in this report.
Community Safety:	There are no community safety implications in this report.

Appendices

M11 BUS-ONLY SLIP-ROADS FEASIBILITY REPORT

Appendices to this document can be viewed via the following link:

<http://www.gccitydeal.co.uk/citydeal/info/2/transport/1/transport/3>

Background Papers

No other background papers were relied upon in the writing of this report.

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M11 Bus-only Slip-Roads

Feasibility Report
Cambridgeshire County Council

21 August 2015

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1. Introduction

Atkins has been commissioned by Cambridge County Council (CCC) to undertake a high-level appraisal of bus-only slip lanes at Junctions 11 and 13 of the M11. Opportunities to improve bus journey time reliability have been considered which include new bus only slip roads and provision of bus-only lanes. High-level appraisals have been undertaken to review the scheme feasibility and provide indicative costs for the options.

This report emerged as the result of recommendations made by the City Deal Joint Assembly to the City Deal Executive Board on the 3rd June 2015. This report has been brought forward at this time as a result of these recommendations, however it must be noted that this is out of sequence with a full assessment of such infrastructure improvements. A full assessment of any options that are worthy of further consideration will be undertaken in due course. This report will be presented at the October cycle of City Deal Joint Assembly and City Executive Board meetings.

These proposals are not included in the Transport Strategy for Cambridge and South Cambridgeshire. As such this report avoids a policy based assessment of the appraisal options. Some of the options may not be policy compliant to the adopted local transport strategy objectives. No options are 'recommended' or 'preferred' but are set out for illustrative purposes only for completeness. Any further assessment of these (or other) options should be carried out in the context of the relevant City Deal project development framework.

1.1. Background

Currently a number of infrastructure schemes are being proposed as part of the Cambridge City Deal. These include schemes within the A428 Corridor Study and the Western Orbital Study. The A428 Corridor Study aims to provide advice to the City Deal partners on options to help deliver congestion free public transport serving the A428 corridor in order to avoid an increase in current congestion levels and public transport journey times. A number of options have been identified which will be going out to public consultation in October 2015. The Western Orbital study considers the potential to provide an orbital route to the west to improve access to existing and proposed residential and commercial areas.

This report reviews opportunities to provide bus-only slip roads at Junctions 11 and 13 of the M11 to improve journey time reliability for existing buses using these junctions. This report has been developed separately to the City Deal projects and each option considered has been taken as a stand-alone scheme designed to operate independently. However, in concluding the impact of each option it is important to consider its wider impact in terms of other proposals as well as local impacts. A full assessment of any options considered further will be undertaken in due process in the fullness of time.

1.2. Objectives of the Report

The aim of this report is to conduct an initial and high-level appraisal of the technical implications and costs of creating bus-only slip-roads to present to the October cycle of City Deal Joint Assembly and City Deal Executive Board meetings.

The junction locations are shown in Figure 1-1 for M11 Junction 13 and Figure 1-2 for M11 Junction 11.

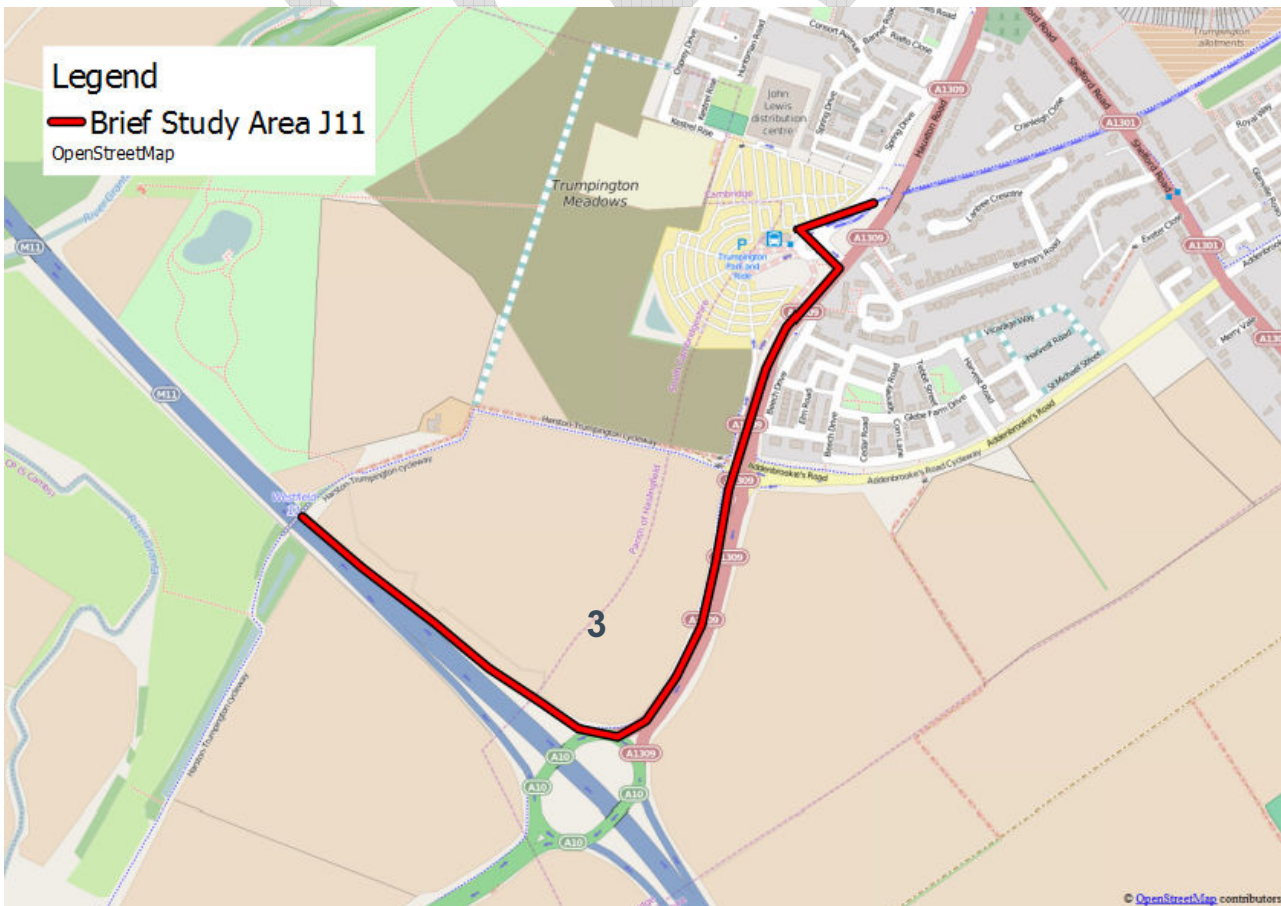
- 1) At M11 Junction 13: when turning off the A1303 (going east) onto the M11 (going south);
- 2) At M11 Junction 13: creating a bus lane alongside the existing slip-road off the M11, which would get priority treatment at the traffic lights; and
- 3) At M11 Junction 11: turning off the M11 (going south) between the existing farm and footbridge and the existing slip-road, then going round the corner of the farmland at Trumpington Meadows, running parallel to (and west of) Trumpington Road, and entering the Trumpington Road Park and Ride thence joining up to the Guided Busway.

While meeting these parameters it was considered relevant to ensure that a wider assessment of the junction options was also undertaken. This provides for a more realistic set of proposals which reflect the actual constraints/opportunities of the junction.

Figure 1-1 M11 Junction 13 Focus Area



Figure 1-2 M11 Junction 11 Focus Area



In order to meet the overall objectives of the report a number of deliverables have been identified by CCC as follows:

- To prepare a report outlining a high feasibility assessment for the provision of bus-only slip roads at Junctions 11 and 13 of the M11;
- To produce an indicative concept design for Junction 11 southbound dedicated bus access to Trumpington Park and Ride, including indicative alignment and traffic control / management measures;
- To produce an indicative concept design for Junction 13 southbound and northbound dedicated bus access to the A1303, including indicative alignment and traffic control / management measures;
- To produce an indicative alignment for bus priority across the existing Junction 13 bridge, allowing for a right turn manoeuvre into the southbound slip;
- Provide a basic operational assessment of Junction 13 options;
- To provide a separate technical note reviewing the Junction 13 bridge;
- To provide a model validation report, outlining the modelling process;
- To provide an outline budget cost for each option presented, taking into account services present at the Junction 13 bridge; and
- To identify comparable bus-only slip roads on motorways in the UK.

1.3. Structure of Report

The remainder of this report is structured as follows:

- **Section 2** details the methodology undertaken to achieve the aims and objectives outlined by the City Deal Joint Assembly to the City Deal Executive Board and CCC;
- **Section 3** outlines the data obtained through desktop research and a site visit;
- **Section 4** provides details of the initial option development including those options discounted at this stage;
- **Section 5** outlines the processes involved in option testing including traffic modelling, highway design and bridge assessments;
- **Section 6** provides a provisional costing of each of the options;
- **Section 7** provides a review of those options tested in Section 5 focusing on the impacts on buses and general traffic; and
- **Section 8** provides our summary and conclusions.

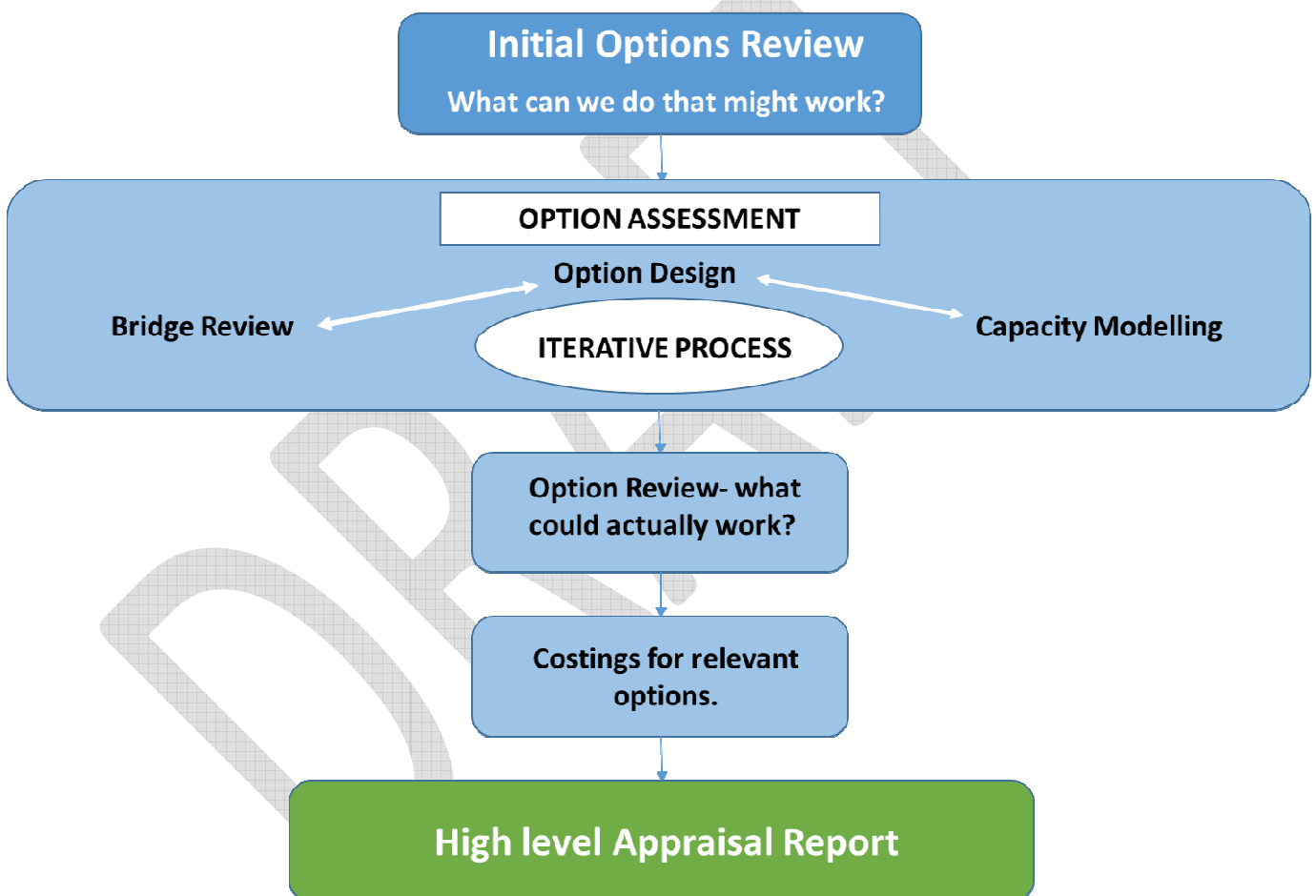
2. Methodology

This section of the report summarises the methodology used to generate, assess, review and cost options for providing bus-only slip roads at Junctions 11 and 13 of the M11.

The aim of this report is to provide an initial and high-level appraisal of the technical implications and costs of creating bus-only slip roads. The methodology focuses upon providing an assessment of the 'workability' of each option based upon highway design, bridge assessment and traffic modelling, with provisional costing of options. The assessment does not include strategic modelling or cost-benefit analysis and it is not intended that the assessment is WebTag compliant since it is outside of the City Deal process and is focussed on providing an assessment of the high-level feasibility rather than economic justification of any option.

The overall methodology followed during the assessment is set out in Figure 2-1 and summarised below.

Figure 2-1 Methodology



The methodology required close collaboration of highway engineers, bridge engineers and traffic modellers. In addition regular workshops were held with CCC to inform on current process and review options at the initial option review and option assessment stages. The methodology does not consider policy compliance review as this was considered outside the scope for this high level review project.

2.1. Initial Option Review

Work on the report commenced with an internal workshop held by Atkins on 16th July, closely followed by a workshop between CCC and Atkins on 22nd July to scope potential options for providing bus-only slip roads at Junctions 11 and 13 of the M11. The workshops focused upon the options outlined by the City Deal Joint Committee (see Section 1.2), however, other options for providing bus-only slip roads were also considered where these were considered to be in line with the aims and objectives of the report.

The purpose of the initial options review was to generate options and discuss any which were felt to be unworkable at this early stage. As a result of discussions some options were discounted and did not continue to the option assessment stage. During the initial options review stage a desktop review of other bus-only slip roads within the UK was also undertaken to inform the development of options during the option assessment stage.

2.2. Option Development and Assessment

Following the initial options review a total of 3 options for Junction 11 and 4 options for Junction 13 were considered in the option development and assessment stage. The option development and assessment followed an iterative process with bridge assessment, highway design and traffic modelling all taking place simultaneously.

During the option development and assessment process any options shown to be unworkable in terms of bridge assessment, highway design or traffic modelling were immediately discounted.

2.2.1. Bridge Assessment

A bridge assessment was undertaken based on information provided by Highways England and utilities searches undertaken by Atkins. The assessment at Junction 13 was undertaken to consider whether it was feasible to reconfigure the highway cross section within the width available between the bridge parapets to provide additional space for buses. The full assessment is presented in a Technical Note in Appendix D.

2.2.2. Design

Options identified at the initial options review were developed to a feasibility design stage within CAD. The designs were developed to a scale of 1:500 as 2D arrangements based on DMRB design standards. Consideration of buildability was provided as comments for each of the options.

2.2.3. Traffic Modelling

A microsimulation traffic model was developed for Junction 13 of the M11 to provide an indication as to if there were any high-level operational issues that may prevent an option from being considered further. The model was developed using available data, including a traffic count undertaken in 2014 and OS Base plans and information on signal timings and junction operation gathered during a site visit.

Microsimulation modelling has not been undertaken for Junction 11 of the M11 as possible schemes at this junction would not have an impact upon local traffic. Nevertheless data on existing queueing at the junction has been used to inform the development of options. This is further outlined in Section 5.4 of this report.

2.2.4. Option Review

An option review workshop between CCC and Atkins was held on 5th August to review each of the options assessed and identify any that should not be taken forward to the costing stage. An internal meeting was also held on 12th August to record the performance of each of the options considering:

- Can the option be constructed?
- Does it offer journey time savings or increased reliability to buses?
- Does it adversely impact existing vehicular traffic?
- Does it offer wider benefits? and
- What are the key risks and issues?

2.2.5. Option Costing

An initial costing exercise was carried out for each of the options remaining following the option review. This was a high level costing based on standard information for construction, combined with professional opinion on additional costs.

2.3. Limitations of this Report

The aim of the report was for an initial high-level assessment of the technical implications and costs of providing bus-only slip roads. Due to the need to report at the October cycle of City Deal Joint Assembly and City Deal Executive Board meetings the time available to undertake the assessment was constrained. A number of assumptions have been made in order to provide an initial high-level assessment and these are outlined below:

- Design has been undertaken at a feasibility level only, to inform other assessments and provide an indication on whether construction of the option would be feasible. Further design including 3D design would need to be undertaken should any option be developed following this report;
- Traffic modelling has been undertaken for the immediate Junction 13 of the M11 only. Due to time constraints strategic modelling has not been used to inform this report, however possible strategic effects have been identified where possible based on professional opinion. Further modelling, including strategic modelling would be required should any option be developed following this report;
- A bridge assessment has been undertaken using available information from Highways England. The assessment is not a Structural Review to BD 101/11 and Assessment to BD 21/01 as this was not possible given the tight programme and is beyond the scope of a high-level assessment. Should any option be developed following this report, this level of assessment would be required;
- This report is an initial high-level appraisal and is not WebTag compliant and therefore the level of detail is reduced and any numerical results won't necessarily reflect the real performance of options;
- The report does not include options outside of the restricted geographical area as stated in the City Deal Board instruction and therefore limits options that may be outside of this area;
- The report is commissioned ahead of the A428 consultation and therefore does not consider public or stakeholder engagement; and
- The report is commissioned ahead of the sequential Western Orbital study programme

Further detailed assumptions made within the traffic modelling are outlined in Section 5.3.

3. Data Collection and Desktop Study

This section of the report outlines the data collected to inform the development of options to provide bus-only slip roads at Junctions 11 and 13 of the M11. This includes a desktop study of similar schemes in the UK and a site visit to review conditions for buses and general traffic at each junction.

3.1. Desktop Study

An initial desktop investigation was undertaken to identify any existing bus-only slip roads within the UK which would provide a basis for design of options for M11 Junctions 11 and 13. The review also aimed to identify whether bus-only slip roads had been considered feasible in other locations.

3.1.1. Existing Bus-Only Slip Roads

Four examples of existing bus-only slip roads have been identified through desktop research and information provided by Highways England.

3.1.1.1. London Luton – Parkway Road to Airport Way

This route is located at London Luton Airport, connecting Parkway Road to Airport Way (A1081), providing a more direct route for buses between the rail station and airport. This slip road serves the rail-air shuttle service from the Luton Airport Parkway rail station to the airport. The road was installed as part of the East Luton Corridor Improvements Scheme. The service runs every 10 minutes until midnight and there is one bus for each arriving train between midnight and 5am. A location plan is shown in Appendix A.

The bus-only slip road in this location originates from Parkway Road close to Luton Parkway Station. It is likely that bus and traffic speeds in this location would be relatively slow. The bus-only slip road merges with a bus lane on New Airport Way, rather than with a general traffic lane. These conditions are not considered to be a good proxy for conditions at Junctions 13 of the M11 where buses may be required to merge with general traffic or high-speed traffic on the M11. However potential options for Junction 11 may involve dedicated bus provision similar to that provided between Parkway Road and Airport Way.

3.1.1.2. M4 Junction 4 to 4a (Heathrow Airport Spur): Bus Lane (Lane 4) and advance signals with bus gate signals

The M4 spur bus lane was Britain's first motorway bus lane. The M4 spur provides general vehicle access to Heathrow Airport. The spur is frequently congested, with queues stretching up to 1.4km back to the M4. The two-way bus lane, opened in 1997 allows buses to avoid these queues. The location of the bus-only lane is shown in Appendix A.

The introduction of the bus lane on the M4 Spur did not reduce the remaining capacity for general traffic. The bus lane runs adjacent to lane 3 of the M4 Spur (on the outside lane of the carriageway). It starts on the spur itself (with appropriate signage) and finishes around 50 metres from the Heathrow access roundabout (Tunnel Road roundabout) at a bus gate. This bus gate allows the bus to enter the roundabout prior to general traffic.

The M4 Spur bus lane is a good example of an existing bus lane in operation in the UK which provides 'visible' priority to buses over general traffic, promoting the use of sustainable modes of travel over the private car.

3.1.1.3. M606 Junction 1 to M62 Bradford: High Occupancy Vehicle (HOV) bypass lane (2+ lane)

A 'high-occupancy vehicle lane' is provided on the M606/M62 junction near Bradford. It is the UK's first motorway carpool lane. The 2.7 km lane scheme is southbound only and allows vehicles with more than one person in the car a fast track onto the M62 eastbound at Junction 26. The location of the HOV lane is shown in Appendix A.

Whilst not specifically a bus lane, buses are able to use the HOV lane to access the M62 eastbound at the junction and is a clear example of a measure promoting the use of sustainable modes of travel over the private car.

3.1.1.4. A52 Brian Clough Way, Nottingham: Bus Lane

Highways England provided information relating to the A52 Brian Clough Way in Nottingham, which has a bus lane from its junction with Ilkeston Road/Derby Road to its junction with Wollaton Vale. The bus lane is in addition to the two running lanes and run towards the town centre only. The location of the bus-only lane is shown in Appendix A.

3.1.2. Proposed Bus-Only Slip Roads

The desktop review has also considered proposed schemes for bus-only slip roads.

3.1.2.1. A47 Postwick Interchange

A bus-only slip road was proposed by an objector as part of Alternative Option 6A of the A47 Postwick Interchange Scheme in Norfolk. The proposed westbound merging slip road would extend from the existing Postwick Park and Ride roundabout and connect to the A47. This option was ultimately deemed unviable because it was considered to be an *“unacceptable risk on the safe operation of the A47 trunk road due to predicted queuing onto the mainline”* and had *“a number of design issues which raise safety concerns with elements of highway geometry significantly below design standards”*. One major safety concern was that it would lead to increased likelihood of side swipe conflicts at the junction.¹

3.1.2.2. Transport for London Blackwall Tunnel to Silvertown Tunnel

Transport for London (TfL) have also proposed the installation of 4 bus only slip roads between Blackwall Tunnel and Silvertown Tunnel, and the North Greenwich bus station in London, and potentially for commuter coaches serving the Greenwich Peninsula. A bus-only slip road servicing Blackwall Tunnel southbound would be located after the tunnel portal and onto Millennium Way, whilst a northbound bus-only slip road will be provided from Tunnel Avenue to Blackwall Lane Northbound. Silvertown tunnel will have a bus-only slip road from Boord Street to Millennium Way and a second bus-only slip road from Millennium Way to the tunnel approach.² These schemes are in the early stages of development and have not been granted planning permission.

3.1.3. Summary

Review of existing bus-only slip road schemes in the UK shows that all existing schemes considered are in operation at airport locations. In these locations they provide a key link between public transport interchanges and prevent buses from being delayed by considerable general traffic queues. However the method for this assessment is to provide a linear improvement adjacent to general traffic congestion instead of providing movement specific priority between different classes of road. Nevertheless the desktop study indicates that bus-only slip roads have been implemented elsewhere in the UK.

Other schemes have also been proposed within the UK. There is evidence that these schemes have led to safety concerns. This suggests that if an option to provide bus-only slip roads at Junction 11 and/or 13 of the M11 was to be taken forward detailed assessment of safety would need to be included in the detailed design.

3.2. Utilities Searches

A utilities search was conducted in order to determine the services running along the M11 Junction 13 Bridge. Services within the bridge are detailed in the full service report included in Appendix B of this report.

3.3. Traffic Counts

The traffic counts used to inform the assessment were collected on Wednesday 18th June 2014 as part of the A428 Corridor Study. The M11 on and off-slip junctions were included as part of this wider data collection and has been made available for use in this assessment. Data was collected as a single day Manual Classified Count in 30 minute intervals, supported by two-week Automatic Traffic Counts.

¹ <http://www.norfolk.gov.uk/view/NCC144139>

² <https://tfl.gov.uk/cdn/static/cms/documents/st-silvertown-tunnel-transport-assessment.pdf>

4. Initial Option Review

This section of the report outlines the initial option review. The initial option review led to the generation of a range of options to provide bus-only slip roads at both Junctions 11 and 13 of the M11 at this stage as hand-drawn sketches. These options were discussed at two workshops and any which were outside of the scope of the report or were not feasible for reasons of highway design or traffic impact were discounted.

4.1. Initial Scoping

As outlined in Section 2 of this report initial scoping was undertaken at an internal workshop on 16th July, followed closely by a Client workshop with CCC on 22nd July. Initial plans for all the options considered at this stage are shown in Appendix C and summarised below.

4.1.1. Junction 11

4.1.1.1. Options Taken Forward

Initial option review indicates that the options below are likely to be workable in design terms and meet the overall aims and objectives of this assessment. As a result these options will be further considered during the option assessment stage of this report.

Junction 11: Option A

This option provides a bus-only access road running off-line but adjacent to the existing general traffic slip road from the M11 towards Trumpington Park and Ride. This option also provides a fully segregated bus-only access to the Park and Ride site.

Junction 11: Option B

This option provides a bus-only access route parallel to the existing off slip and bypasses the existing traffic signals at the end of the slip road. The existing slip-road would be widened to accommodate the extra lane. The bus only access route then continues onto the dedicated Park and Ride traffic lane beyond the junction.

Junction 11: Option C

This option provides a bus-only slip road leaving the M11 prior to the existing agricultural bridge (for buses travelling southbound on the M11). It is likely that this option could require widening of the existing agricultural bridge. The segregated bus-only lane could continue to the Park & Ride site.

The agricultural bridge is located 55m upstream from the start of the M11 Junction 11 southbound off-slip and 540m from the stopline at the top of the off-slip. Highway designers present at the workshop indicated that it is not possible to provide a bus-only slip road leaving the M11 south of the agricultural bridge due to the proximity of Junction 11 that meets DMRB standards.

4.1.1.2. Option Discounted

It is important to note that 'discounted' options only means 'discounted within the limited scope of this study'. This study was specifically limited in terms of its brief. As such there may – within the wider City Deal context – be a case for revisiting some of the options discounted within this report as part of the overall scheme development work for the Western Orbital and A428 Cambridge City Deal projects.

Junction 11: Option D

This option provides a bus priority measure at the existing M11 Junction to allow buses to move through the junction ahead of general vehicular traffic which would be held back at the signals.

Initial review suggests that this option would not provide any benefit to buses unless a segregated bus lane could be provided at the slip. A bus lane could not be provided at this location without widening and in this case either Option A or Option B would offer greater benefits as buses would have a free flow arrangement. For this reason this option was discounted at the initial option review stage and will not be considered during the option assessment stage of the assessment.

4.1.2. M11 Junction 13

4.1.2.1. Options Taken Forward

Initial option review indicates that the options below are likely to be workable in design terms and meet the overall aims and objectives of the report. As a result these options will be further considered during the option assessment stage of the assessment.

Junction 13: Option 1

This option provides a bus-only lane eastbound over the M11 on Madingley Road towards Cambridge. No signals are present in this option, allowing the bus to continue forward unobstructed. An introduction of bus detector loops would enable a 'green wave' across the bridge towards Cambridge and the M11 southbound. A new signal controlled junction would be required to the east of the bridge for the M11 southbound on-slip.

Junction 13: Option 2

Option 2 provides a bus priority measure based on vehicle detection on the eastbound approach to Madingley Road Bridge for buses turning right onto the M11. Buses can be held at the signals to allow traffic coming off the M11 to turn onto Madingley Road and merge into the straight-ahead lane unobstructed. Buses heading eastbound would have priority at the signals over other vehicles. The introduction of bus detector loops to enable a 'green wave' across the bridge towards Cambridge and the M11 southbound. A new signal controlled junction would be installed to the east of the bridge for the M11 southbound on-slip to ensure that traffic does not block back across the bridge preventing the bus gate from operating effectively.

Junction 13: Option 4

Option 4 requires the construction of a new gyratory at the junction with all-traffic capacity. This would involve a new structure over the M11 to the north of the current bridge. The gyratory would accommodate 3 traffic lanes.

Junction 13: Option 5

This option provides of a bus-only loop to the north of Junction 13 to bring buses from the Madingley Road Bridge south onto the M11 prior to general traffic joining. In order to prevent buses turning right onto the slip road a bus lane is proposed to run across the bridge and down the loop, unopposed. A total of 4 lanes would run across the bridge (3 eastbound and 1 westbound). The potential for a bus stop to serve Madingley Park & Ride and the Cambridge North-west development was also discussed.

4.1.2.2. Options Discounted

Junction 13: Option 3

This option provides a segregated bus-only slip road on the off-side of the existing M11 off-slip. This would allow buses on the slip road to by-pass existing traffic queues and reach the signals at the top of the slip road quickly.

At the initial review workshop it was agreed that for this option to provide a real benefit to buses the bus lane would need to extend far to the south of the junction along the M11 for this option to offer any real benefit to buses. This is because during peak periods traffic can queue along the M11 as far back as the Coton junction. Provision of a bus-only lane on the slip only would limit the capacity of the M11 Junction 13 off-slip which would consequently lead to greater congestion on the slip and M11. Highways England also reviewed this option and suggested that it would not be workable. As a result this option was discounted at the initial review stage and will not be considered during the option assessment stage of the assessment.

Junction 13: Option 6

This option consists of a new structure to the north of Junction 13 for buses to join the M11 prior to general traffic in a similar manner to Option 5.

Initial option review recognised that this could offer wider benefits if provided with one of the options currently being reviewed as part of the A428 Cambridge City Deal Study. However this option was considered out of scope for this report, based on the requirements outlined by the City Deal Joint Assembly and City Deal Executive Board and as a result it will not be considered in the option assessment stage of the report.

Junction 13: Discounted Option 7

This option consists of new bus-only slip roads onto the M11 at the location of the existing Coton footbridge.

Initial option review recognised that this could offer wider benefits if provided with one of the options currently being reviewed as part of the A428 Cambridge City Deal Study. However this option was considered out of scope for this report, based on the requirements outlined by the City Deal Joint Assembly and City Deal Executive Board and as a result it will not be considered in the option assessment stage of the report.

4.2. Summary

The initial option review generated 3 options for Junction 11 and 4 options for Junction 13 which were considered suitable for further assessment in the option assessment stage of the report.

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5. Option Development and Assessment

This section of the report outlines the development and assessment of the initial options. This includes feasibility highway design and traffic modelling. In addition the results of an assessment of the bridge crossing of the Junction 13 of the M11 are detailed.

5.1. Bridge Assessment

An assessment of the M11 Junction 13 Bridge has been conducted as part of this report. A separate technical note, outlining the detailed findings, is provided in Appendix D of this report. The bridge assessment concluded that:

- Widening of the carriageway across the M11 Junction 13 Bridge is feasible within the existing structure providing that the lane width across the 3 lanes does not exceed 10.95 m (3 x 3.65m lanes) and that the lanes remain in the same location on the bridge deck;
- The carriageway can be widened to 12.9-13.65m, with the diversion of services from one side of the bridge to the other (i.e. either all services run through the northern service trench or all services run through the southern service trench. This option would require further assessment due to the increase in width beyond 3 x 3.65m lanes (which has an effect on bridge loading); and
- By diverting the services from the bridge entirely, the carriageway width can be widened to 15.3m, leaving the verges at a minimum width of 0.6m. This would allow the provision of 4 lanes across the carriageway. This option would require significant further modelling and assessment. A new bridge or extension to the existing bridge would be required to accommodate services and non-motorised users under this scenario.

The results of the bridge assessment support the development of any of the options from the initial option development. However the level of modifications required to the bridge will vary for each option as follows:

- Options 1 and 2 can be accommodated with minor changes to the existing carriageway. Lanes could either remain as existing or be modified to provide 3.65m lanes (to meet highway standards) with minor works and no stats diversions required;
- Option 4 would require a new bridge to be constructed to the north of the existing structure. This is feasible with no modifications to the existing structure (or with minor modifications to increase lane width as described for Options 1 and 2 above); and
- Option 5 would require the provision of four lanes across the bridge (three general traffic lanes and one bus-only lane). This would require a total minimum width of 14.2m (3.5m bus lane, 0.6m reservation, 3.5 metre traffic lane and two further 3.3m traffic lanes) and is only possible with the complete diversion of services from the bridge.

5.2. Design

Feasibility design drawings of all options are presented in Appendix E of this report. These have been designed in accordance with DMRB. This section of the report outlines the assumptions and notes made during the design of each option in turn. It has been assumed that any land required to accommodate these works would be available and that existing pedestrian crossing facilities would be maintained. A detailed design note is presented in Appendix F.

5.2.1. Junction 11: Option A

The current layout of the roundabout was maintained, however the length of slip road was limited by the distance from the adjacent off-slip. The segregated bus lane that has been assumed to be bus only, would provide access to the P&R site. There is potential for this to be made an all-traffic lane to the P&R.

Further work would need to consider appropriate signage to indicate the bus only lane. A more detailed assessment of the impact of the existing queuing at this junction would also be advised.

5.2.2. Junction 11: Option B

The current layout of the roundabout has been maintained and the slip-road widened to provide a bus-only slip exiting earlier. There is potential for this to be made an all-traffic lane to the P&R.

Further work would need to consider appropriate signage to indicate the bus only lane. A more detailed assessment of the impact of the existing queuing at this junction would also be advised along with assessment of the pedestrian / cycle infrastructure.

5.2.3. Junction 11: Option C

The design of Option C progressed following the initial option review. Iterations of the design for a bus-only slip road and escape lane, for general traffic movements made into the bus lane in error, determined that space was not available to achieve this prior to or after the agricultural bridge. As a result the final design extends the off-slip at Junction 11 for all traffic to the north of the agricultural bridge, with a bus-only slip road branching from the extended off-slip. As the bus-only lane travels adjacent to the off-slip the need for an escape lane is removed.

In the event that this option is progressed, further assessment would be required on the widening of the agricultural bridge and a new structure to accommodate a two lane slip-road at the location of the existing agricultural bridge. Further work would need to consider appropriate signage to indicate the bus only lane.

5.2.4. Junction 13: Option 1

The design process involved reinstating the previously removed elongated bus lane junction bypass island. If taken forward, the reason behind the original removal would have to be determined. Consideration would also need to be made of the existing narrow lane width across the bridge, in order to meet DMRB standards.

5.2.5. Junction 13: Option 2

As with Option 1, the reason behind the removal of the elongated bus lane junction bypass island would need to be determined. In addition, further structural assessment and consultation with statutory undertakers is required at detail design phase to determine the nature of the bridge widening.

5.2.6. Junction 13: Option 4

The new structure has been located at a suitable distance to allow for future expansion of the junction as well as accommodating 3 x 3.65m lanes. The nature of the high-level design would allow the majority of the junction to be built off-line therefore reducing the disruption to the existing traffic network. Further consideration of this option would need to take into account the location of stats and the existing GVC.

5.2.7. Junction 13: Option 5

Further consideration of this option at detailed design stage would need to take into account the location of a gas pipeline which has been identified close to the proposed location of the on-slip. Effective signage would need to be provided to ensure that drivers on the M11 are warned of slow merging traffic.

5.3. High Level Modelling Assessment: Junction 13

Options to provide bus-only slip roads at Junction 13 of the M11 are likely to have considerable effects on existing traffic using the junction. As a result the impact of options for this junction have been assessed using traffic modelling. The results of this modelling are described in this section of the report, with a Technical Note, presented in Appendix G providing further detail.

5.3.1. Site Visit

The site visit on the 3rd August identified that Junction 13 operates in two stages (A1303 traffic in one stage and slip road traffic in a second stage) and that the bus gate indicated on OS base plans for eastbound buses entering Junction 13 is not in operation (i.e. the bus signal mirrors the A1303 eastbound signal and does not offer buses any form of priority). The phasing of the traffic signals was also observed, so that this could be replicated where possible within the model. It was noted that since the site visit occurred outside DMRB Neutral Traffic times, during school holidays, the observations may not be representative of typical traffic conditions.

5.3.2. Method and Assumptions

Microsimulation modelling has been selected as an appropriate method for conducting an initial high-level assessment of the options for M11 Junction 13. The process followed to develop the microsimulation model is summarised below.

5.3.3. Base Model

A 2014 base model was developed on which to test the options for the junction. The performance of Junction 13 is sensitive to the performance of the Park and Ride access junction on Madingley Road and other junctions within the corridor. Therefore it is recommended that if any of the options are taken forward more detailed modelling of adjacent junctions would need to be considered as part of any further assessment of these options.

To provide a suitable validation of the base model, a number of assumptions were made. These assumptions are related to the limited scope of the model and the availability of information at the time for this assessment, namely:

- Additional traffic demand was added at the western end of Madingley Road to the observed stopline traffic counts at M11 junction 13 to replicate the observed length of queues;
- Site observations suggest that a key cause of the queues at Junction 13 are the tailbacks from the adjacent P&R junction. Assumptions have been made regarding the operation and timing of the traffic signals and pedestrian crossing; and
- No signal plan information was made available for M11 junction 13. A vehicle actuated signal control, reactive to gaps in flow, has been derived to provide a best estimate of the on-street operation of the traffic signals.

5.3.4. Option Modelling

The four options taken forward from the Initial Option Review of Junction 13 were modelled within VISSIM (Options 1, 2, 4 and 5). The performance of each of these options is detailed in the technical note provided as a separate document and summarised below.

Option 1

This option causes little change to the eastbound travel time from Madingley Mulch to Coton for general vehicular traffic, but does improve the bus travel time from Coton to the P&R. This is because the option provides benefits to buses at the stopline (bus priority), but cannot offer benefits to buses waiting in a queue to reach the stopline.

Option 2

This option operates in a very similar manner to Option 1 with the only difference for buses being they may face a red light when bus priority is unable to react immediately (i.e. when an opposing stage is yet to reach its minimum green). This offers improved safety of the merge movement between buses and general traffic on the M11 Bridge however it does not reduce the overall performance of the junction.

Option 4

This option has been tested as a priority junction, however there is an opportunity to signalise the junction if required. This option gives priority the eastbound flow from Madingley Road as there is no conflict when entering the roundabout, providing free flowing access to the Park and Ride site. The M11 off-slip right turners also have priority into the offside lane, but then must access the middle lane on the northern section of the circulatory to continue into the City, or offside lane to enter the Park and Ride site.

The middle lane is heavily utilised by the Madingley Road flow and therefore lane changing becomes difficult for the M11 flow and this results in queues tailing back on the off-slip. This also restricts the priority given to buses either turning right on to the M11 (which would use the nearside lane) or those entering the Park and Ride site (using the offside lane), since the access to these lanes may be restricted by the queue in the middle lane, or by vehicles attempting to merge into this lane and blocking the offside or nearside lanes.

It should be noted that the influence of the adjacent Park and Ride junction is the primary determining factor for the performance of this option. While the option in isolation may improve the operation of Junction 13 itself, restrictions elsewhere in the network may not allow the junction to operate to its ultimate potential. Strategic modelling would be required to reflect the impact of other junctions on Junction 13 of the M11 and this is outside the scope of this report.

Option 5

This option operates in a similar manner to the other options, helping to improve reliability for buses once they reach the bus lane 300m west of the M11 off-slip junction. Buses still have to travel through the queue approaching the M11 off-slip, so the majority of bus delay still remains and journey times do not improve significantly. The operation of the junction for general traffic is largely unaffected, however the merge point for buses is moved to east of the overbridge, giving rise to slight congestion at this point for buses accessing the Park and Ride site.

Summary

The high-level modelling work undertaken does not highlight any specific issues that would prevent any of the above options being taken forwards for further consideration at this stage. The performance of any option would be ultimately reliant on the conditions and performance of the adjacent network and junctions. It is important to note that, with the exception of Option 4, none of the options proposed have the potential to improve these existing queues. Unless these queues are bypassed by public transport infrastructure or mitigated, buses will remain delayed as they are also held in the queues until they reach the bus lane approximately 300m on approach to the junction.

It is therefore highly important that further work is undertaken to consider the full impacts of any option in the context of the wider corridor as a whole using a more holistic and detailed modelling approach, as the ultimate performance of any option would be influenced by a better understanding of the performance and interactions of adjacent junctions and clarification over the assumptions stated above.

5.4. Traffic Flow Analysis: Junction 11

Further analysis of the design of Junction 11 Options A and B has been conducted. Based on the AM and PM average speeds on the southbound off-slip shown in Appendix H, it is predicted that the two options will not provide a large benefit in terms of bus journey time savings as buses have the potential to be held up on the slip before entering the bus-only lane.

The AM peak Trafficmaster data shows that in the traffic has an average speed of 10-20mph. The PM peak traffic an average speed of 20-30mph along the length of the slip. Given the queues shown above, it is considered that Options A and B may offer little benefit to buses in terms of journey time reliability.

6. Option Costing

All options considered within the option development and assessment stage have been the subject of a high-level assessment of the cost of implementation. A provisional cost has been prepared based on feasibility drawings and derived from the latest competitive rates taken from Atkins' records to indicate an outline cost for the proposed works. The costs do not include land acquisition, service diversions and temporary traffic management measures. The results are summarised in Table 6-1. The full costing details are shown Appendix I.

It is important to note that these costs are indicative and will need to be updated as further detail becomes available. Options have been provided as a range of costs. For Options C, Option 4 and Option 5 the construction of new bridges within the options produces a wider range of costs. This accounts for the fact that construction of new bridges, particularly over a motorway carriageway, has the potential to involve complicated construction methods.

Table 6-1 Option Costing

Option	Cost (Approximate)
J11 Option A	£1.2 million
J11 Option B	£800,000
J11 Option C	£4.7 million - £5.7 million
J13 Option 1	£150,000- £425,000*
J13 Option 2	£150,000- £425,000*
J13 Option 4	£22 million - £42 million
J13 Option 5	£4.2 million – £7.2 million

*The lower end of this range does not include widening of the existing Junction 13 Bridge to provide 3.65m lanes to meet DMRB standards. The upper end of the range allows for widening to meet DMRB standards.

7. Option Review

Option review was undertaken at an internal meeting on 13th August, involving bridge engineers, highway designers and traffic modellers. The aim of the option review was to identify the benefits and constraints of each of the options. The option review does not measure the relative performance of each of the options against the others. It should be recognised that the options may only provide benefits in the peak hours only where congestion would otherwise delay buses.

The option review considered the following:

- Can the option be constructed?
 - This considered whether the design process identified any reasons why the option could not be constructed. Where the design process identified that the option could be constructed, options requiring further mitigation or design/safety consideration were identified;
- Does it offer journey time savings or increased reliability to buses?
 - This considered whether the microsimulation modelling identified journey time savings for buses within the option. Where journey time savings were identified options which would also offer increased reliability were also identified;
- Does it adversely impact upon existing vehicular traffic?
 - This considered whether the microsimulation modelling identified impacts upon existing traffic queueing or journey times for the option. Where impacts on existing traffic were identified options which would produce major impacts on existing traffic flows and queueing were identified;
- Does it offer wider benefits?
 - This considered whether the option would offer wider benefits linked to proposed developments, options currently being considered within the A428 corridor study or options currently being considered within the Western Orbital study; and
- Key risks and issues:
 - This identifies whether any key risks or issues were identified during the option assessment stage.

The results of the option review are shown in Table 7-1.

Table 7-1 Option Review

Option	Cost	Can it be constructed?			Does it offer journey time savings to buses?			Does it adversely impact vehicular traffic?			Does it offer other/wider benefits?		Key risks and issues
		No	Yes (with mitigation)	Yes	No	Yes	Yes (and improved reliability)	No/ positive impact	Minor	Major	Yes	No	
J11 Option A – Slip off-line at junction	£1.2million		✓ M11 off-slip may require extension to meet design standards during detailed design.			✓ Benefits are limited as existing queueing on the off-slip extends onto the M11 in peak periods (see Section 5.2).		✓				✓ Direct access to P&R	Enforcement and signage of bus-only lane needs further consideration. Land acquisition should be considered at detailed design.
J11 Option B – slip on-line at junction	£800,000			✓ with embankment widening.		✓ Benefits are limited as existing queueing on the off-slip extends onto the M11 in peak periods (see Section 5.2).		✓				✓	Land acquisition should be considered at detailed design. Enforcement and signage of bus-only lane needs further consideration. Option to make bus lane all vehicle access to Park & Ride.

Option	Cost	Can it be constructed?			Does it offer journey time savings to buses?			Does it adversely impact vehicular traffic?			Does it offer other/wider benefits?		Key risks and issues	
		No	Yes (with mitigation)	Yes	No	Yes	Yes (and improved reliability)	No/ positive impact	Minor	Major	Yes	No		
J11 Option C – slip from agricultural bridge	£4.7-5.7 million		✓ new bridge required. Land take may be considerable.				✓ as buses are removed from the M11 off-slip prior to existing queues.	✓ positive due to removal of existing bus lane on A1309 leading to increased capacity and potential reduction in blocking back to M11.				✓ A bus stop could be provided in Trumpington Meadows development Direct access to P&R avoiding Hauxton Road Junction.		Considerable land acquisition may be required for this option. Enforcement and signage of bus-only lane needs further consideration.
J13 Option 1 – bus only lane – no signals	£150,000-425,000			✓ fits within existing carriageway. Minor improvement in journey time.		✓ improvement in journey time across the junction however buses remain in A1303 queues on approach.		✓				✓		Conflict of right turning traffic with bus lane (safety issue) – needs to be considered further in detailed design.

Option	Cost	Can it be constructed?			Does it offer journey time savings to buses?			Does it adversely impact vehicular traffic?			Does it offer other/wider benefits?		Key risks and issues
		No	Yes (with mitigation)	Yes	No	Yes	Yes (and improved reliability)	No/ positive impact	Minor	Major	Yes	No	
J13 Option 2 – bus only lane with signals	£150,000-425,000		✓ widening provides no capacity benefit but may provide safety benefit.	✓ without widening.		✓		✓ widening provides no capacity benefit but may provide safety benefit.				✓	Existing lane width is substandard.
J13 Option 4 – new gyratory structure	£22-42 million		✓ New structure required across M11.			✓ eastbound buses are required further.		✓ potential to modify lane arrangement to improve conditions for particular movements at the junction.			✓ potential access to development and P&R site. Wider strategic benefits – fits with A428 Cambridge City Deal Study.		Modifications to P&R junction may be required Strategic assessment required due to potential to change strategic movement across the City. Land Acquisition Cycle and Pedestrian Routes would need further consideration in detailed design.

Option	Cost	Can it be constructed?			Does it offer journey time savings to buses?			Does it adversely impact vehicular traffic?			Does it offer other/wider benefits?		Key risks and issues	
		No	Yes (with mitigation)	Yes	No	Yes	Yes (and improved reliability)	No/ positive impact	Minor	Major	Yes	No		
J13 Option 5 – bus only loop to the north of existing structure	£4.2-7.2 million	✓	✓ Bridge widening to 4 lanes may not be possible within existing structure. All services require diversion. New structure to support pedestrian and cycle movements may be required.				✓ eastbound buses are required to travel further however reliability is increased.	✓				✓ Potential stop for Cambridge North West Development and access to the P&R site.		Distance between bus and traffic slips may lead to safety concerns and requires consideration at detailed design. Structural assessment of bridge required Secondary structure for pedestrians and/or cyclists and stairs relocation likely to be required.

8. Summary and Conclusions

8.1. Summary

Atkins were commissioned by CCC to produce an initial and high-level appraisal of the technical implications and costs of creating bus-only slip roads:

- 1) At M11 Junction 13: when turning off the A1303 (going east) onto the M11 (going south);
- 2) At M11 Junction 13: creating a bus lane alongside the existing slip road off the M11, which would get priority treatment at the traffic lights; and
- 3) At M11 Junction 11: turning off the M11 (going south) between the existing farm and footbridge and the existing slip-road, then going round the corner of the farmland at Trumpington Meadows, running parallel to (and west of) Trumpington Road, and entering the Trumpington Road Park and Ride thence joining up to the Guided Busway.

The aim of this report is to inform a report to the October cycle of City Deal Joint Assembly and City Deal Executive Board meetings.

8.1.1. Initial Options Review

The assessment commenced with a review of the potential options to provide bus-only slip roads at each of the junctions. A workshop attended by CCC and Atkins designers, traffic modellers and bridge engineers identified any options which were not considered workable and these options were not progressed to the next stage of the assessment. The initial option review generated 3 options for Junction 11 and 4 options for Junction 13 which were considered suitable for further assessment in the option assessment stage.

8.1.2. Option Development and Assessment

Option development and assessment followed an iterative process with bridge review, highway design and traffic modelling being undertaken simultaneously. This allowed each aspect to be informed by the others, for example the traffic modelling identified that a certain lane arrangement maximised the performance of the option, therefore this could be fed into the option design.

8.1.3. Option Costing

All options considered within the option development and assessment stage were the subject of a high-level assessment of the cost of implementation. A provisional cost has been prepared based on feasibility drawings and derived from the latest competitive rates taken from Atkins' records to indicate an outline cost for the proposed works.

8.1.4. Option Review

Option review was undertaken at an internal meeting on 13th August, involving bridge engineers, highway designers and traffic modellers. The aim of the option review was to identify the benefits and constraints of each of the options. The option review does not measure the relative performance of each of the options in comparison to the others.

8.2. Conclusions

This report has identified that a number of options are available to provide bus-only slip roads at Junctions 11 and 13 of the M11. Costings and concept designs have been provided for each option.

8.2.1. Junction 11

The provision of a bus-only slip road at the existing M11 southbound off-slip (Option A and Option B) is technically feasible within DMRB design standards, at a relatively low cost. However the existing junction experiences queuing on approach to the M11 off-slip during peak periods and the provision of a dedicated bus-only slip road in this location could offer limited journey time savings for buses as they would be subject to any existing traffic queues on approach to the junction.

The provision of a bus-only slip road exiting the M11 prior to the agricultural bridge is considered outside the scope of the initial recommendations of this report. However this option was progressed as it would be the only way to provide a segregated bus-only slip road which commenced before existing traffic queues at the

junction (a similar option could not be provided to the south of the bridge as it would not meet DMRB design standards). It would be a relatively expensive scheme to construct, however this option would provide better journey time reliability and improved journey times for buses as they would leave the M11 prior to any traffic queues on approach to the junction.

In summary, minor modifications to the existing layout of Junction 11 of the M11 to provide bus-only slip roads could offer small improvements to journey times for buses. This is based on a number of assumptions and as the report provides a high-level of assessment a number of further assessments would be required to provide certainty. In order to provide greater benefits to journey times and reliability the bus-only slip is required to leave the M11 before the location of the existing agricultural bridge to the north of the junction bypassing existing traffic queues on the M11 on approach to Junction 11, which is a relatively high cost option.

8.2.2. Junction 13

Modifications to the existing arrangement across the bridge at M11 Junction 13 (Options 1 and 2) would provide a small improvement to journey times for buses, allowing them to turn right onto the M11 ahead of vehicular traffic. These options could be implemented at relatively low cost. However buses approaching the junction would still be subject to existing queueing on approach, particularly on the M11 off-slip and A1309 (although a bus lane is provided for 300m on approach to the junction). The journey time benefit crossing the bridge is considered to be minimal compared to the time spent in these existing queues, which would not be reduced under Option A or Option B.

The provision of a gyratory system with a new bridge structure at the junction (Option 4) has the potential to offer improvements to buses in terms of journey time savings and increased reliability. A gyratory system also offers flexibility for the future of the junction as new junction arms could be added in the future if required. It could also offer the potential to benefit vehicular traffic, depending on the junction layout used. However this option would be very costly to implement and any benefit may be limited due to the operational performance of existing adjacent junctions.

The provision of a bus-only loop to the north of Junction 13 to bring buses from the Madingley Road Bridge south onto the M11 prior to general traffic joining would improve journey times for buses, despite the increased travel distance provided by the bus-only loop. However this option would be very costly to implement and further detailed assessment would be required on the safety of buses merging onto the M11.

In summary, minor modifications to the existing layout of Junction 13 of the M11 to provide bus priority across the existing bridge structure would offer limited journey time savings for buses. Major interventions in the form of a new gyratory or bus-only loop at the junction have the potential to offer greater journey time savings and/or increased reliability for buses, however may be limited in their benefit by the performance of the adjacent sections of the road network. They would also offer greater flexibility for future growth, however these options would be costly to construct.

Appendix A. Examples of Existing Schemes

A.1. Luton Airport

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A.2. Heathrow Spur

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A.3. M606 Bradford

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A.4. Brian Clough Way, Nottingham

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Appendix B. Utilities Searches Report

DRAFT

Appendix C. Initial Option Plans

DRAFT

Appendix D. Bridge Assessment Technical Note

DRAFT

Appendix E. High-level Drawings

DRAFT

Appendix F. Design Process Note

DRAFT

Appendix G. Modelling Technical Note

DRAFT

Appendix H. Traffic Flow Analysis

DRAFT

Appendix I. Costings Summary

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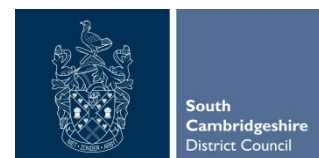
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Agenda Item 6b



Report To: Greater Cambridge City Deal Executive Board

1 October 2015

Lead Officer: Chris Malyon, Chief Finance Officer Cambridgeshire County Council

Greater Cambridge City Deal Financial Monitoring

1. Purpose

- 1.1 The primary purpose of this report is to provide the Executive Board with the financial monitoring position for the period ending 31st August 2015. The report also seeks to facilitate a discussion regarding the future utilisation of the uncommitted resources within the non-project resource pool through the establishment of a framework upon which proposals can be evaluated.

2. Recommendations

- 2.1 It is recommended that the Executive Board:-
- a) Note the financial position as at 31st August 2015;
 - b) Agree to the funding of the on-going revenue commitments, as set out in paragraph 4 for the five years of phase 1 of the Programme;
 - b) Agree the proposed framework for considering new proposals to be funded from the non-project resource pool.

3. Reasons for Recommendations

- 3.1 The Executive Board will be receiving regular financial monitoring reports that set out expenditure against budget profiles as this is a general “yard stick” of progress on implementation of both programme and non-project activity. The recommendations also provide an opportunity for the Executive Board to establish a framework against which future proposals that are to be resourced from the non-project resource pool are evaluated.

4. Background

- 4.1 On 28th January 2015 the Executive Board agreed the capital programme for the first five years of the City Deal Partnership as set out below:-

Project	£m
Milton Road Bus Priority	23.04
Madingley Bus Priority	34.56
Histon Bus Priority	4.28
A428/M11 Bus Segregation	24.48
City Centre Improvements/Cross City Cycle Improvements	22.66

A1307 Corridor Including Bus Priority	39.00
Chisolm Trail	8.40
Year 1 to 5 Pipeline Development	10.60
Year 6 to 10 Programme Development	9.00
Programme Management and early scheme development	4.50
Total	180.52

4.2 At the subsequent meeting in March the Board agreed to the pooling of a proportion of the New Homes Bonus (NHB) received by the three local authorities appertaining to the City Deal area. The report highlighted that there was a degree of uncertainty around whether NHB would survive the forthcoming Comprehensive Spending Review (CSR). It was therefore agreed to adopt a relatively prudent approach to the utilisation of this pooled resource and not to exceed commitments beyond the availability of the relative NHB for 2015/16.

4.3 The Executive Board therefore agreed to fund the following expenditure from the non-project pool.

Activity	Budget £000
Programme Central Co-Ordination Function	150
Strategic Communications	60
Economic Assessment	10
Smarter Greater Cambridge	20
Inward Investment & Account Management	60
Housing	200
Total	500

4.4 A commitment was also made to agree a forward funding commitment against these items for 2016/17. Some of the items will of course be required throughout the duration of phase 1 of the City Deal programme. The "Total" column below has therefore been included in order to project forward the potential balance within the current pool (ie excluding further contributions). Given the on-going nature of these activities the Executive Board is asked to confirm their funding for Phase 1 of the Programme in order that the resources that are available for other projects can be clearly identified.

Activity	2015/16 £000	2016/17 £000	Total £000
Available Funding	4,586	4,086	4,586
Programme Central Co-ordination Function	150	150	750
Strategic Communications	60	60	300
Economic Assessment	10	10	50
Smarter Greater Cambridge	20	20	40
Inward Investment & Account Management	60	90	170
Housing	200	200	400
Total Budget	500	530	1,710
Funding to be carried forward (see note below)	4,086	3,556	2,876

- 4.5 In addition the Executive Board considered a further proposal on the establishment of a City Deal Skills Service at the subsequent meeting in June. The Executive Board agreed to adopt the model of the Skills Service and its governance as set out in the paper and requested officers establish it so that it can start work at the beginning of the next academic year (September 2015). The annual operating cost of the service was set out in the paper in the sum of £255,956.
- 4.6 In the first year, the service will also require start-up costs which will include basic equipment such as laptops, phones, stationery. It is expected that those working in the service will operate flexibly and generally not have an office base so no costs for that have been included.
- 4.7 Funding for the service will come from a variety of sources. The Enterprise Partnership has agreed to contribute £50,000 per year. The County Council can contribute one post in kind valued at £50,000, and efficiencies by joining the service up with the existing Skills Service operated by the Enterprise Partnership will generate savings of £25,000.
- 4.8 The net cost expected to be met by the City Deal pooled funding is therefore £130,956. This is an additional revenue budgetary provision that will be added to the budgetary provisions set out in the above table.
- 4.9 Whilst there is a commitment to this funding position this has to be subject to review following the announcement of the outcomes of the Comprehensive Spending Review and the associated grant settlement for 2016/17.

5. Financial Position for the period ending 31st August 2015

- 5.1 To date the projects that are core to the delivery of the City Deal objectives, and for which the £100m commitment from the Government has been received, have been termed for budgetary purposes as 'the programme'. The costs that are ancillary to the programme have been termed as 'non-programme costs'. Going forward it would be more appropriate to use the terms revenue and capital. This would not prevent the Board from agreeing the utilisation of any element of the resource pool to support a project of a capital nature. The following paragraphs therefore set out the current financial position of both revenue and capital for the period ending 31st August 2015.
- 5.2 Capital
- 5.2.1 Attached as an Appendix to this report are programme costs incurred to the end of August 2015. An attempt has been made to profile the expenditure over the five years of the programme but at this point the sums are relatively indicative. Project leads will continue to work on refining these profiles in order that forward projections of expenditure become more robust.
- 5.2.2 A summary of the expenditure as at the end of August is set out in the table below:-

Project Description	Budget to date £	Expenditure to date £	Variance £	2015-16 Budget £
Histon Road Bus Priority	120,550	65,272	55,278	183,850
Milton Road Bus Priority	134,700	75,414	59,286	203,400
Chisholm Trail	48,000	21,893	26,107	320,000
A428 to M11 Bus Priority	50,000	375	49,625	270,000
Madingley Road Bus Priority	50,000	0	50,000	270,000
City Centre Capacity Improvements	124,000	181,090	-57,090	194,386

A1307 Bus Priority	133,586	59,323	74,263	262,350
Cross-City Cycle Improvements	7,500	16,278	-8,778	96,000
Western Orbital	23,000	56,938	-33,938	130,000
City Deal	0	2,384	-2,384	0
Total	691,336	478,967	212,369	1,929,986

5.3 Revenue

5.3.1 Very little revenue expenditure has been incurred to date. Although a full year provision was made for budgetary purposes for a number of activities it was always known that the full year impact would not be incurred in 2015/16. This is partly due to recruitment timelines, partner organisation governance processes, and lead-in times for some activities. However as the profile of expenditure could not be estimated at the point of agreeing the budget, a full year affect was provided for with an expectation that such funding would be carried forward to support the on-going delivery of these activities.

5.3.2 The actual expenditure incurred as at the end of August is as follows:-

Budget Line	Description	Actual to 31 st August £
Programme Co-ordination	Project Management	16,876
Miscellaneous	Meeting Costs	645
Total		17,521

6. Resource Pool Resource Availability

6.1 The table in section 4.4 sets out the potential available resources from the existing resource pool as agreed in the March budget report. If the subsequent decision is made to fund the net cost of the City Deal Skills programme as highlighted in section 4.8 (in the sum of £654,780 over the period of phase 1 of the programme) the residual resource available is just over £2.2m. Although some minor costs have been incurred that had no specific budgetary provision there will be some savings from the associated delay in various activities such as staff recruitment that will negate these costs.

6.2 The above resource assumes that no further New Homes Bonus contributions will be made to the pool. This position will be reviewed following the outcome of the forthcoming CSR and local finance settlement. The Executive Board could however consider how it might wish to utilise the residual resource whilst retaining an element of contingency for any projects that could arise in the coming four years.

6.3 Although the unallocated sum within the pool is available it is important to ensure that this is not seen as 'free' money. This is a resource made available by all three local authorities and as a result other activities have not been funded in order to facilitate the outcomes and aspirations that were set out in the City Deal proposal. It is therefore important that resources are allocated to activities that support those outcomes.

6.4 The following activities could be used as an aide memoire by the Board during their deliberations on this issue. Whilst resources have already been allocated to these activities, should the Board give some steer as to their potential priorities, Officers could develop a range of options for further consideration:-

- Economic assessment

- Communications
- Smart/digital
- Economic development
- Finance
- Governance
- Housing
- Infrastructure programme
- Strategic planning
- Skills

6.5 The critical point must be that any investment by the Executive Board must be in an activity relevant to facilitating or pursuing the growth of the high value Greater Cambridge economy, and developing streamlined decision making, consistent with the principles of the City Deal. The above is not an exclusive schedule but is intended to support the development of a set of criteria against which resources can be allocated.

6.6 The Executive Board have the ability to consider at length the potential options available to them as the current unallocated is retained to support the objectives of the City Deal Programme. It is important however not to over commit the available resource until such time as the potential for future funding has been clarified. An update on the potential pool going forward will be presented to the Executive Board following the outcome of the Comprehensive Spending Review is known.

7. Implications

7.1 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 there were no significant implications.

8. Background Papers

- a) Capital Programme report at January Executive Board meeting
- b) Partnership Budget report at March Executive Board meeting

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Agenda Item 6c

Greater Cambridge City Deal Joint Assembly

16 September 2015 – Workstream update

Update	Upcoming milestones
Communications	
<ul style="list-style-type: none"> • A recruitment process is under way to recruit to the City Deal Communications Manager post • Consultation is being prepared for the A428 corridor, Chisholm Trail and cross-city cycle improvements schemes 	<ul style="list-style-type: none"> • October-November 2015: Public consultation on A428 corridor and Chisholm Trail • January-February 2016: Public consultation on cross-city cycle improvements
Economic development and promotion	
<ul style="list-style-type: none"> • Jonathan Brech has recently been appointed as Cambridge Development Director, working with Cambridge Ahead • Officers are exploring potential to join up work between the partner bodies on economic development, including synergies with LEP funded work on business advice via their new Signpost2Grow website 	<ul style="list-style-type: none"> •
Finance	
<i>Covered on the main agenda</i>	<ul style="list-style-type: none"> • November 2015: 2015/16 Quarter 2 financial monitoring report to Executive Board • December 2015: Autumn Statement
Governance	
<ul style="list-style-type: none"> • Work on potential governance options for a prospective devolution deal is ongoing, with the City Deal commitment to a strong and binding governance arrangement for Greater Cambridge a key aspect of that work – work to progress City Deal governance and investigate potential long-term models is therefore likely to be informed by that wider piece of work 	<ul style="list-style-type: none"> • Late September: Continuing discussions on potential devolution models • October: Potential initiation of officer project work on City Deal governance
Housing	
<ul style="list-style-type: none"> • All three Councils approved the establishment of the Housing Development Agency (HDA) in July • An officer workshop was held in August to map out the next steps to implement the HAD 	<ul style="list-style-type: none"> • Late September: Inaugural meeting of the HDA Shadow Board
Infrastructure programme	
<ul style="list-style-type: none"> • Work on options is being undertaken to inform upcoming decisions on the 	<ul style="list-style-type: none"> • November 2015: Executive Board to consider options for Histon Road and

remaining tranche 1 schemes	<p>Milton Road bus priority schemes</p> <ul style="list-style-type: none"> December 2015: Executive Board to consider initial tranche 2 prioritisation and options for A1307 corridor
Payment-by-results mechanism	
<ul style="list-style-type: none"> Cambridgeshire County Council will soon be leading the commissioning of an independent economic assessment panel to undertake assessments on behalf of four city-regions with similar mechanisms in their respective deals (including Glasgow, Manchester and West Yorkshire) 	<ul style="list-style-type: none"> March 2016: Independent economic assessment panel expected to be commissioned
Skills	
<ul style="list-style-type: none"> The LEP is in the process of tendering for the Skills Service as agreed earlier in 2015, which is expected to come into operation shortly 	<ul style="list-style-type: none"> September: Skills Service becomes operational
Smart/digital	
<ul style="list-style-type: none"> Officers are working with BT, Milton Keynes and Leeds on a bid to the Innovate UK Internet of Things Cities demonstrator Work is taking place to establish options for the data and communication infrastructure needed to support smart city applications 	<ul style="list-style-type: none"> 30 September: Submission of Internet of Things bid 31 October: 'Smart Cities' engagement event #hack Cambridge
Strategic planning	
<ul style="list-style-type: none"> Further work on the Local Plans was requested by the examining inspectors – this is underway and on track to proceed through member processes in October/November 	<ul style="list-style-type: none"> 6 November: Six weeks of consultation begins February 2016: Proposed modifications to the Local Plans to be submitted for inspection

Greater Cambridge City Deal Executive Board Forward Plan of decisions

Notice is hereby given of:

- Decisions that that will be taken by the Greater Cambridge City Deal Executive Board, including key decisions as identified in the table below
- Confidential or exempt executive decisions that will be taken in a meeting from which the public will be excluded (for whole or part)

A 'key decision' is one that is likely:

- a) to result in the incurring of expenditure which is, or the making of savings which are, significant having regard to the budget for the service or function to which the decision relates; or
- b) to be significant in terms of its effects on communities living or working in the Greater Cambridge area.

Item title	Summary of decision (including notice of confidential or exempt information, if appropriate)	Officer lead(s)	Key decision?
Meeting date: 1 October 2015		Reports for each item to be published: 23 September 2015	
High-level review of M11 junctions	To review work undertaken to consider high level options for M11 junctions 11 and 13, following the decision of the 18 June Executive Board meeting.	Graham Hughes	No
2015/16 Quarter 1 financial monitoring report	To note financial information from April-June 2015.	Chris Malyon	No
Workstream update	To note progress on the various workstreams.	Alex Colyer Graham Hughes Andrew Limb	No

Meeting date: 3 November 2015		Reports for each item to be published: 26 October 2015	
Histon Road bus priority – options and approval to consult	To review the outcome of options development work and to approve public consultation on those options.	Graham Hughes	Yes
Milton Road bus priority – options and approval to consult	To review the outcome of options development work and to approve public consultation on those options.	Graham Hughes	Yes
Congestion in Cambridge	To receive feedback on discussions held with key traffic generators in Cambridge and to approve public consultation.	Graham Hughes	No
Six-monthly report on housing	To note progress on delivering the housing workstream and consider any issues arising.	Alex Colyer	No
Six-monthly report on skills	To note progress on delivering the skills workstream and consider any issues arising.	Graham Hughes	No
2015/16 Quarter 2 financial monitoring report	To note financial information from July-September 2015.	Chris Malyon	No
Smarter Cambridgeshire workstream update	To note progress on implementing the Smarter Cambridgeshire workstream.	Graham Hughes	No
Meeting date: 3 December 2015		Reports for each item to be published: 25 November 2015	
A1307 corridor to include bus priority – options and approval to consult	To review the outcome of options development work and to approve public consultation on those options.	Graham Hughes	Yes
Western Orbital – options and approval to consult	To review the outcome of options development work and to approve public consultation on those options.	Graham Hughes	Yes

Initial prioritisation of schemes for tranche 2 – report on further economic appraisal	To note the outcome of initial prioritisation of potential tranche 2 infrastructure programme schemes according to forecast economic benefits and to approve the proposed approach to the development of schemes for consideration for tranche 2.	Graham Hughes	No
Workstream update	To note progress on workstreams not covered by the main agenda items.	Alex Colyer Graham Hughes Andrew Limb	No
Meeting date: 15 January 2016		Reports for each item to be published: 7 January 2016	
City centre capacity improvements – options and approval to consult	To review the outcome of options development work and to approve public consultation on those options.	Graham Hughes	Yes
Workstream update	To note progress on workstreams not covered by the main agenda items.	Alex Colyer Graham Hughes Andrew Limb	No
Meeting date: 3 March 2016		Reports for each item to be published: 24 February 2016	
Madingley Road – consultation results and selection of preferred option	To consider the outcomes of the public consultation on the initial options and to select a preferred option to develop in greater detail, to be subject to public consultation before being brought back to the Executive Board for approval to progress to detailed design.	Graham Hughes	Yes

A428-M11 – consultation results and selection of preferred option	To consider the outcomes of the public consultation on the initial options and to select a preferred option to develop in greater detail, to be subject to public consultation before being brought back to the Executive Board for approval to progress to detailed design.	Graham Hughes	Yes
Chisholm Trail – consultation results and approval to progress detailed design of selected route			
Bourn Airfield/Cambourne busway – consultation results and selection of preferred option	To consider the outcomes of the public consultation on the initial options and to select a preferred option to develop in greater detail, to be subject to public consultation before being brought back to the Executive Board for approval to progress to detailed design.	Graham Hughes	Yes
Cambridge Access Study – Options Report		Graham Hughes	No
2015/16 Quarter 3 financial monitoring report	To note financial information from October-December 2015.	Chris Malyon	No
Workstream update	To note progress on workstreams not covered by the main agenda items.	Alex Colyer Graham Hughes Andrew Limb	No

Meeting date: 8 April 2016		Reports for each item to be published: 31 March 2016	
Cross-city cycling – scheme detail and approval to deliver	To consider detailed schemes informed by public consultation, and to approve delivery of the schemes.	Graham Hughes	Yes
Workstream update	To note progress on workstreams not covered by the main agenda items.	Alex Colyer Graham Hughes Andrew Limb	No
Meeting date: 16 June 2016		Reports for each item to be published: 8 June 2016	
Histon Road – consultation results and selection of preferred measures	To consider the outcomes of the public consultation on the initial options and to select a preferred option to develop in greater detail, to be subject to public consultation before being brought back to the Executive Board for approval to progress to detailed design.	Graham Hughes	Yes
Annual skills review	To note progress made in 2015/16 on delivering the skills workstream and consider any issues arising.	Graham Hughes	No
Annual housing review	To note progress made in 2015/16 on delivering the housing workstream and consider any issues arising.	Alex Colyer	No
2015/16 end of year financial monitoring report	To note financial information from the 2015/16 financial year.	Chris Malyon	No
Workstream update	To note progress on workstreams not covered by the main agenda items.	Alex Colyer Graham Hughes Andrew Limb	No

Meeting date: 22 July 2016		Reports for each item to be published: 14 July 2016	
Milton Road – consultation results and selection of preferred measures	To consider the outcomes of the public consultation on the initial options and to select a preferred option to develop in greater detail, to be subject to public consultation before being brought back to the Executive Board for approval to progress to detailed design.	Graham Hughes	Yes
Western Orbital – consultation results and selection of preferred measures	To consider the outcomes of the public consultation on the initial options and to select a preferred option to develop in greater detail, to be subject to public consultation before being brought back to the Executive Board for approval to progress to detailed design.	Graham Hughes	Yes
City centre capacity improvements – consultation results and selection of preferred option(s)	To consider the outcomes of the public consultation on the initial options and to select a preferred option to develop in greater detail, to be subject to public consultation before being brought back to the Executive Board for approval to progress to detailed design.	Graham Hughes	Yes
Workstream update	To note progress on workstreams not covered by the main agenda items.	Alex Colyer Graham Hughes Andrew Limb	No

Meeting date: 8 September 2016		Reports for each item to be published: 31 August 2016	
2016/17 Quarter 1 financial monitoring report	To note financial information from April-June 2016.		
Workstream update	To note progress on workstreams not covered by the main agenda items.	Alex Colyer Graham Hughes Andrew Limb	No
Meeting date: 13 October 2016		Reports for each item to be published: 5 October 2016	
Chisholm Trail – approval of construction	To approve construction of the scheme.	Graham Hughes	Yes
Workstream update	To note progress on workstreams not covered by the main agenda items.	Alex Colyer Graham Hughes Andrew Limb	No
Meeting date: 17 November 2016		Reports for each item to be published: 9 November 2016	
City centre capacity improvements – approval to consult on preferred option(s)	To approve public consultation on the initial options, after which a further Executive Board decision will be taken to approve detailed development of the preferred option(s).	Graham Hughes	Yes
A1307 corridor to include bus priority – consultation results and selection of preferred option	To consider the outcomes of the public consultation on the initial options and to select a preferred option to develop in greater detail, to be subject to public consultation before being brought back to the Executive Board for approval to progress to detailed design.	Graham Hughes	Yes

Six-monthly report on skills	To note progress on delivering the skills workstream and consider any issues arising.	Graham Hughes	No
Six-monthly report on housing	To note progress on delivering the housing workstream and consider any issues arising.	Graham Hughes	No
2016/17 Quarter 2 financial monitoring report	To note financial information from July-September 2016.	Chris Malyon	No
Workstream update	To note progress on workstreams not covered by the main agenda items.	Alex Colyer Graham Hughes Andrew Limb	No
Meeting date: 15 December 2016		Reports for each item to be published: 7 December 2016	
Madingley Road – Full Business Case and approval to progress detailed design	To consider the Full Business Case for the scheme and to approve detailed design, undertaking statutory processes and procurement prior to a final decision being made by the Executive Board to construct the scheme.	Graham Hughes	Yes
A428-M11 – Full Business Case and approval to progress detailed design	To consider the Full Business Case for the scheme and to approve detailed design, undertaking statutory processes and procurement prior to a final decision being made by the Executive Board to construct the scheme.	Graham Hughes	Yes
Bourn Airfield/Cambourne busway – Full Business Case and approval to progress detailed design	To consider the Full Business Case for the scheme and to approve detailed design, undertaking statutory processes and procurement prior to a final decision being made by the Executive Board to construct the scheme.	Graham Hughes	Yes

Workstream update	To note progress on workstreams not covered by the main agenda items.	Alex Colyer Graham Hughes Andrew Limb	No
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