

Delivering our City Deal

GREATER CAMBRIDGE PARTNERSHIP EXECUTIVE BOARD

<u>4 00 pm</u> Thursday 1st October 2020 Virtual Meeting

During the Covid-19 pandemic GCP Joint Assembly and Executive Board meetings will be held virtually. These meetings will take place via Zoom and Microsoft Teams (for confidential or exempt items). **Meetings will be live streamed and can be accessed from the GCP YouTube Channel** - <u>Link</u>.

AGENDA

		PAGE NUMBER
1.	Apologies for Absence	(-)
2.	Appointment of Vice Chairperson	(-)
3.	Declaration of Interests	(-)
4.	Joint Assembly Membership	(3)
5.	Minutes	(4-36)
6.	Public Questions	(37-38)
7.	Feedback from the Joint Assembly	(39-42)
8.	Greenways – Barton, Bottisham, Horningsea, Sawston and The Swaffhams	(43-56)
9.	Better Public Transport - Waterbeach to North East Cambridge	(57-209)
10.	Better Public Transport - Cambridge Eastern Access Project	(210-350)
11.	Covid-19 – Skills and Employment	(351-355)
12.	GCP Quarterly Progress Report	(356-401)
13.	Date of Next Meeting	(-)

• 4:00 pm Thursday 10th December 2020

MEMBERSHIP

The Executive Board comprises the following members:

- Councillor Lewis Herbert
- Councillor Roger Hickford
 - Councillor Neil Gough -
 - Claire Ruskin
 - Phil Allmendinger
- Cambridge City Council
- Cambridgeshire County Council
 - South Cambridgeshire District Council
- Business Representative
- University Representative

By Invitation

Mayor James Palmer

[Exercising discretion available to him to interpret Standing Orders and, with the agreement of the other voting members of the Board, suspend them if necessary, the Chairperson will invite Mayor Palmer to join the meeting in a non-voting capacity, recognising the Combined Authority's role as the Strategic Transport Authority]

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For more information about this meeting, please contact Nicholas Mills (Cambridgeshire County Council Democratic Services) via e-mail at <u>Nicholas.Mills@cambridgeshire.gov.uk</u>



Growing and sharing prosperity
Delivering our City Deal

Report to: Greater Cambridge Partnership Executive Board

1st October 2020

Lead Officer: Rachel Stopard – Chief Executive, Greater Cambridge Partnership

JOINT ASSEMBLY MEMBERSHIP

1. Purpose

1.1 The purpose of the report is to invite the Executive Board to endorse the appointment of University representatives on the Joint Assembly.

2. Background

- 2.1 The Joint Assembly comprises three elected members appointed by each of the three member Councils; three co-opted members nominated by the Business Board; and three co-opted members nominated by the University of Cambridge. Members nominated by the Business Board and the University of Cambridge will become co-opted members on endorsement by the Executive Board.
- 2.2 Following the resignation of Jo Sainsbury and Dr John Wells the University has nominated the following:

Karen Kennedy – Head of Strategic Partnerships Office at Cambridge University.

Lucy Scott – CEO of the Cambridgeshire Educational Trust and Head of Chesterton Community College.

3. Recommendations

3.1 The Executive Board is recommended to:

Approve the appointment of Karen Kennedy and Lucy Scott to the Joint Assembly.



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GREATER CAMBRIDGE PARTNERSHIP EXECUTIVE BOARD

Minutes of the Greater Cambridge Partnership (GCP) Executive Board Thursday 25th June 2020 2:00 p.m. – 6:20 p.m.

PRESENT:

Members of the GCP Executive Board

Councillor Roger Hickford (Chairperson) Councillor Aiden Van de Weyer (Vice-Chairperson) Councillor Lewis Herbert Phil Allmendinger Claire Ruskin Cambridgeshire County Council South Cambridgeshire District Council Cambridge City Council University Representative Business Representative

Members of the GCP Joint Assembly in attendance

Councillor Tim Bick

Cambridge City Council

Officers

Peter Blake
Sarah Heywood
Simon Manville
Niamh Matthews
Nick Mills
Andrew Munro
Richard Preston
Paul Rawlinson
Gemma Shroeder
Rachel Stopard
Isobel Wade
Tim Watkins
Wilma Wilkie

Transport Director (GCP) Strategic Finance Business Partner (CCC) Project Manager (GCP) Head of Strategy and Programme (GCP) Democratic Services Officer (CCC) Project Manager (GCP) Project Manager (GCP) Project Manager (GCP) Project Manager, SMART (GCP) Chief Executive (GCP) Head of Transport Strategy (GCP) Project Manager (GCP) Governance and Relationship Manager (GCP)

1. ELECTION OF CHAIRPERSON

It was proposed by Councillor Herbert, seconded by Councillor Van de Weyer and resolved unanimously that Councillor Hickford be elected Chairperson of the GCP Executive Board for the municipal year 2020/21.

The Chairperson thanked Councillor Aiden Van de Weyer for his work as the previous Chairperson and paid tribute to Councillor Bates as his predecessor to the Executive Board.

2. NOMINATION OF VICE-CHAIRPERSON

It was proposed by Councillor Herbert, seconded by Councillor Hickford and resolved unanimously that Councillor Van de Weyer be elected Vice-Chairperson of the GCP Executive Board for the municipal year 2020/21.

3. APOLOGIES FOR ABSENCE

There were no apologies for absence.

4. DECLARATIONS OF INTEREST

There were no declarations of interest.

5. MINUTES

The minutes of the previous Executive Board meeting, held on 19th February 2020, were agreed as a correct record and the Chairperson agreed to sign a copy when possible.

One member observed that the third paragraph of agenda item 6 of the minutes, while acknowledging the interruption to the meeting by protestors, had not identified their cause or the focus of their protest.

6. PUBLIC QUESTIONS

The Chairperson informed the Executive Board that 20 public questions had been received and accepted, and that the questions would be taken at the start of the relevant agenda item, with details of the questions and a summary of the responses provided in **Appendix A** of the minutes.

It was noted that 2 questions related to agenda item 8 (Impact of and Response to COVID 19), 1 question related to agenda item 9 (GCP Quarterly Performance Report), 4 questions related to agenda item 10 (Public Transport Improvements and City Access Strategy: Update and Support for Covid-19 Recovery), 9 questions related to agenda item 13 (Cambridge South East Transport Scheme), 3 questions related to agenda item 16 (Foxton Travel Hub) and 1 question related to agenda item 17 (Greenways: Melbourn, Comberton and St Ives).

The Chairperson informed members that public speakers had been offered the choice of either presenting their question themselves or having it read out by an officer.

The Chairperson also noted that 3 councillors from constituent councils had requested to speak and that they would be invited to address the Executive Board at the start of the relevant agenda item.

7. FEEDBACK FROM THE JOINT ASSEMBLY

The Executive Board received a report from the Chairperson of the GCP Joint Assembly, Councillor Tim Bick, which summarised the discussions from the Joint Assembly meeting held on 4th June 2020.

Noting that he would highlight key considerations made by the Joint Assembly at the start of various agenda items, the Chairperson of the Joint Assembly expressed frustration that agenda item 14 (Cambourne to Cambridge Better Public Transport Project) had been withdrawn for a second time following extensive discussion by the Joint Assembly. He indicated that despite disagreement over a number of issues, a cross-party majority of the Joint Assembly had expressed support for the scheme moving forward as a project that would deliver benefits to the whole Greater Cambridge area. Recognising the need for alignment with the currently unfunded CAM Sub-Strategy, he argued that the proposal accomplished such an alignment and was required now, whereas the CAM would not be functioning for many years. He suggested that the GCP should provide leadership and clarity on the issue, noting that other key developments, such as the West Cambridge site or the 3500 new homes at Bourn Airfield, were being held up as a result of the delays.

8. IMPACT OF AND RESPONSE TO COVID-19

Public questions were invited from Wayne Boucher and Lilian Rundblad (on behalf of the Histon Road Area Residents' Association). The questions and a summary of the responses are provided at **Appendix A** of the minutes.

Councillor Neil Gough, South Cambridgeshire District Councillor for the ward of Cottenham, was invited to address the Executive Board. Highlighting the substantial increase to the time of bus journeys from Cottenham in to Cambridge as a result of the forthcoming closure of the inbound lane of Histon Road, he emphasised the negative impact on the educational choices and attainments of children and students who were dependent on the public transport route. Acknowledging previous efforts made by the GCP to mitigate the effects of the road closure and to provide a solution for the young people, he called for further attention to be given to the issue following the additional disruption to education that had resulted from Covid-19. The Transport Director observed that Stagecoach was gradually resuming its regular services following disruptions related to Covid-19 and suggested the Histon Road closure would have minimal impact on bus services. He informed the Executive Board that a plan for the new school year in September would be developed over the summer, although it would need to reflect the prevailing conditions at the time.

The Head of Strategy and Programme presented the report, which included details of a potential review of the GCP's programme in light of Covid-19, provided an overview of work commissioned to look at the likely impact of Covid-19 on the local economy, and detailed

the potential impact of Covid-19 on the GCP's current programme. Members were informed that the work carried out by Hatch Regeneris to understand the impact of Covid-19 on the local economy would help extend the evidence base providing scope for the eventual recovery strategy. Noting that it had previously been agreed to review the GCP's Future Investment Strategy following the completion of the Gateway Review, it was now suggested that the review should also cover the impacts of Covid-19. While significant delays to the GCP's programme were not expected as a result of the pandemic, regular reviews would be carried out to identify any issues that may arise, such as workforce absences or supply chain disruptions. Acknowledging concern about the impact on skills and the labour market, along with the difficulty in predicting such impacts, she suggested that it could also form a part of the proposed review. Members were also informed that the Modern Methods Units mentioned in section 7.1 of the report had been publically launched and were now occupied.

While discussing the report, the Executive Board:

- Recognised the importance of the work being carried out by Hatch Generis as part of the GCP's efforts to identify the impacts of Covid-19.
- Observed that certain sectors in the area were likely to be more seriously affected than others, such as the tourism sector and the University of Cambridge, which had a high number of international students.
- Expressed concern over rising unemployment and considered how the GCP could work alongside local authorities, local businesses, Anglia Ruskin University and the University of Cambridge to help support skills development, while maximising the number of jobs available.
- Recognised that knowledge intensive businesses were likely to suffer less than some other sectors and it was noted that businesses were actively looking at how they could recruit more young people or provide coaching and mentoring.
- Considered to what extent particular schemes and strategies, such as the Local Transport Plan and City Access Strategy, should be reassessed or changed as a result of evolving circumstances, noting that business cases should be appropriately revised throughout their development. The Transport Director confirmed that business cases were developed over stages and that impacts of Covid-19 would be taken in to account in all future stages.
- Recognised that the CPCA was leading local efforts on recovery planning and agreed to further consider and discuss how the GCP could collaborate as closely as possible with the CPCA on that collaboration strategy. Members emphasised the need for close collaboration between all levels of local government, organisations and businesses within the local area to overcome the short-term and long-term impacts of the pandemic, particularly with regard to an economic recovery plan.

The Executive Board resolved to:

(a) Note the commissioned Hatch Regeneris work currently being undertaken to understand the impact of Covid-19 on businesses and the local economy;

- (b) Note the potential impact of Covid-19 on the GCP's Programme; and
- (c) Agree to review the GCP's Future Investment Strategy considering the impact of Covid-19 as an essential element of that review and to inform the review, use available and accessible evidence produced in respect of Covid-19, including but not limited to the commissioned Hatch Regeneris work.

9. GCP QUARTERLY PROGRESS REPORT

A public question was invited from Jake Arnold-Forster. The question and a summary of the response is provided at **Appendix A** of the minutes.

The Head of Strategy and Programme presented a report to the Executive Board which provided an update on progress across the GCP programme and which included the rationale behind the proposal for a future investment review. Attention was drawn to the progress of Cambridge&, as detailed in section 28 of the report. Members were informed that the company was in its second phase of development and in discussion with the Cambridgeshire and Peterborough Combined Authority (CPCA) on how it could be involved in the growth service for which the CPCA was holding a procurement process. A further £50k investment was being sought from the GCP in order to advance the initial organisational set up, and emphasis was given to the time critical nature of its development given the intense efforts that would be required to recover from the effects of Covid-19. It was noted that the Joint Assembly had requested the business case for Cambridge& and that it had been included as an appendix to the report.

While discussing the report, the Executive Board:

- Clarified that the Transport Director was in the process of liaising with the Service Director of Highways and Transport at the County Council in order to provide a written response to the Chairperson of the Joint Assembly as to why the County Council had paused the implementation of new resident parking schemes for twelve months. It was observed that an original condition for the resident parking schemes had been for the concurrent development of Park and Ride sites on the outskirts of Cambridge, and further confirmation was requested as to whether the phasing of such sites was in line with the development of resident parking schemes.
- Expressed support for the work being carried out by Cambridge& and the importance of actively promoting inward investment.
- Welcomed the launching of the Modern Methods of Construction for Temporary Housing Units and suggested that further opportunities should be put forward for similar projects, especially given the relatively low costs involved.
- Argued that greater budgetary considerations should be given to skills and looking at behaviour change as a result of Covid-19, rather than large infrastructure projects. Unemployment would increase and businesses would face difficulties, with many young people finding themselves in unexpected circumstances. It was acknowledged that the GCP did not have internal skills resources, it had the ability and expertise to commission to organisations that would be able to provide necessary support.

The Executive Board resolved to:

- (a) Note progress across the GCP programme, including spend during the 2019/20 financial year; and
- (b) Invest a further £50k into Cambridge&, to enable the delivery of Cambridge&'s services over the course of 2020, as set out in section 28.

10. PUBLIC TRANSPORT IMPROVEMENTS AND CITY ACCESS STRATEGY: UPDATE AND SUPPORT FOR COVID-19 RECOVERY

Public questions were invited from Lynda Warth (on behalf of the Cambridgeshire British Horse Society), J O'Dwyer, David Wrathmall and Ericka Jacobs. The questions and a summary of the responses are provided at **Appendix A** of the minutes.

The Transport Director and Head of Transport Strategy presented the report, which provided an update on the City Access project, including how it could support Covid-19 recovery work, building on the short term measures that had been identified by the Joint Assembly and Executive Board in February 2020. Members were provided with up-to-date data which indicated that road traffic levels in the first three weeks of June were approximately 20% higher than the three preceding weeks. Cycling numbers had also increased by around 10%, although it was noted that cycling figures were more complicated to analyse as sensors deployed along commuter routes had seen a drop and then a rise as more people had been cycling for leisure and recreational purposes. The Executive Board was informed that the monitoring of temporary measures would enable a gathering of wider data on overall cycling levels. Although footfall in the city centre had decreased by 80% in April, numbers had risen since shops had begun to reopen on 15th June and were now 40% lower than before the lockdown. Benefits from these reductions in movement included improved air quality, faster and more reliable journeys on public transport, and decreased running costs for transport operators.

Attention was drawn to the three proposed priority areas for immediate investment and implementation detailed in section 5.2 of the report, which were creating space for pedestrians and cyclists, providing transport support for people and businesses to recover, and public transport recovery. The Executive Board was informed that the County Council's Highways and Transport Committee had considered the full list of schemes to be taken forward, with an intention to develop an expanding network of key routes that would include surrounding villages and Park and Ride sites. Final recommendations would be made to the Highways and Transport Committee once detailed design had been completed, and information on schemes would be provided to all affected parties ahead of their implementation, with consultations to be held during the trial period.

The Head of Transport Strategy emphasised that potential long-term changes to travel behaviour were still being analysed and future reports would provide further analysis once it had been carried out.

While discussing the report, the Executive Board:

- Observed that long-term measures had been due to be considered at the meeting and while acknowledging the need for their deferral in order to accommodate the impacts and emerging trends, as well as allowing for greater attention to be given to short-term measures, it was emphasised that long-term measures were also crucial to the recovery process.
- Sought clarification on the consultation processes for residents and other affected
 people regarding the schemes being considered by the GCP and the County Council,
 observing that experimental schemes should provide evidence that affected people had
 been properly consulted. One Member suggested a dedicated point of contact that
 could receive comments and concerns raised by members of the public. The Head of
 Transport Strategy confirmed that transparent consultation would be carried out with
 local communities and feedback sought from affected people in order to capture their
 concerns. The Project Manager observed that such concerns needed to be identified on
 a scheme by scheme basis so that the monitoring framework could provide evidence
 when judging schemes at the end of the trial period.
- Considered how work could be expanded to free up space in the city centre, further reducing conflict between cars, pedestrians and cyclists, while alleviating congestion for public transport. It was noted that the County Council had to fulfil a deadline in order to secure further funding, but it was argued that the wider agenda should not be forgotten. The Head of Transport Strategy recognised an opportunity to consider how temporary schemes, following monitoring and consultation, could evolve into permanent schemes, noting that some schemes were more appropriate for such extensions than others. She informed the Executive Board that the GCP was working with a wide range of partners, including the City Council and South Cambridgeshire District Council's planning team, in order to consider the medium term responses of the recovery effort.
- Expressed concern over the impacts that access restrictions would have on disabled people, given their reliance on motorised vehicles for moving around the city. The Project Manager highlighted the importance of ensuring that disabled people and disability groups were provided with clear information on what measures would be implemented and how they would be affected. He noted that many of the schemes involved restrictions for through access but not for residential access or other required access, such as that for disabled people, and it was therefore important to establish routes that would still be available. However, he acknowledged that some schemes involved complete restriction to access and careful consideration would have to be given to how access for disabled people would be managed in line with those schemes already in place. Reduced access to Blue Badge parking bays was a further issue under consideration.
- Acknowledged the objections raised to some of the proposed schemes, but given the
 opportunity to implement a wide variety of schemes on a temporary basis, it was
 suggested that the GCP should act boldly, as recommended by the Citizens' Assembly.
 One member argued that the negative impacts were largely minimal and were
 outweighed by the positive impacts, although it was suggested that greater emphasis
 could be placed on the positive impacts.

- Observed that gridlock in one part of the city often quickly spread to other parts of the city, with one member suggesting that camera based schemes that could be unlocked intelligently could assist in alleviating such disruptions.
- Proposed further areas for potential schemes, including cycling and walking around Cambridge train station, Mitcham's Corner, Mill Road, park and cycle schemes, and public access to eBikes.
- Suggested that the success of schemes was largely dependent on their compliance and enforcement, with one member proposing dedicated enforcement personnel. The Project Manager noted that enforcement was an important aspect of all the schemes, with some involving physical measures and others involving camera enforcement. He informed the Executive Board that the GCP was liaising with the County Council to ensure that the correct enforcement infrastructure was adopted in order to deliver the desired benefits and to avoid potential legal challenges.

The Executive Board resolved to:

- (a) Note that work to collect data on the transport impacts of Covid-19 is underway, and consider any early impacts on the city access strategy;
- (b) Agree a prioritised and refined package of short-term measures that supports Covid-19 recovery, with the following key elements:
 - Supporting the County Council's programme of road-space reallocation by funding and delivering the measures set out at para 5.6 on an experimental basis, as well as any further measures requested by the County Council and agreed by the Executive Board.
 - Supporting recovery through measures to enable more people and businesses to travel sustainably, including providing additional cycle parking, expanding access to ebikes and working with partners to develop a freight pilot.
 - Continuing to work with partners and operators to support the recovery of public transport; and
- (c) Note that the work to develop a set of packages of medium-longer term action will be brought to an Executive Board meeting.

11. RESPONSE TO CITIZENS' ASSEMBLY RECOMMENDATIONS

The Executive Board received a report which set out the GCP's proposed response to the Greater Cambridge Citizens' Assembly's recommendations on reducing congestion, improving air quality and providing better public transport in Greater Cambridge. Acknowledging that due to Covid-19 the current situation had changed significantly since the recommendations had been made to the GCP, the Head of Transport Strategy emphasised that the long-term plans being developed by the GCP would incorporate the feedback that had been provided by the Citizens' Assembly. She highlighted the proposal for a 'one-year on' report would be brought to the Joint Assembly and Executive Board later in the November and December meetings to provide an update on the response, which would coincide with the next stage of the City Access Strategy.

While discussing the report, the Chairperson of the Joint Assembly suggested that the response could include further details on the discussions held by the Joint Assembly and Executive Board at previous meetings, along with the resolutions that had been agreed, in order to provide clarity and commitment to the narrative. The Head of Transport Strategy agreed to include the information as an appendix to the response.

The Executive Board resolved to:

- (a) Agree the response to the Citizens' Assembly at Appendix 1 of the report;
- (b) Agree that in addition to producing a 'one-year-on' report, officers be asked to consider how Citizens' Assembly participants could be more frequently engaged and updated as part of developing the longer-term city access proposals; and
- (c) Agree that, going forward, officers should include a section in relevant reports detailing the contribution of projects to implementing the response to the Citizens' Assembly's recommendations.

12. LOCAL TRANSPORT PLAN – CAMBRIDGESHIRE AUTONOMOUS METRO (CAM) SUB-STRATEGY

The Transport Director presented the report, which outlined the CPCA's CAM Sub-Strategy and reviewed how it might impact decisions on GCP projects, particularly with regard to the Cambridge South East Transport Scheme. He emphasised that the GCP had taken steps to ensure its schemes complied with the Local Transport Plan and that this continued to be the case following the consultation on the Sub-Strategy. Therefore, the GCP was proposing to continue with its planned schemes.

The Executive Board resolved to:

Note the report.

13. CAMBRIDGE SOUTH EAST TRANSPORT SCHEME

Tony Orgee, Chairperson of the Cambridge South East Transport Local Liaison Forum (LLF), attended the meeting to provide an update on his presentation to the Joint Assembly. He emphasised the request for local communities, representatives and stakeholders to be involved throughout the scheme's development, noting that at the Joint Assembly meeting officers had acknowledged the need for better communication and consultation and that two further meetings had been organised by the GCP. He also suggested that schemes should be put on hold in order to allow business cases to be reconsidered following Covid-19, and argued that alternative route options should not to be ruled out yet.

Councillor Amanda Taylor, County Councillor for Queens Edith's Division, was invited to address the Executive Board. While welcoming the GCP's principles of improving active travel infrastructure and road safety, she argued that the proposals fell short of such objectives due to the cancellation of one of the Phase 1 schemes to construct an underpass close to the Gog Magog Hills and Wandlebury Country Park on the A1307. Highlighting the danger currently faced by those crossing the road in the area, particularly those crossing to

reach the bus stop for services in to Cambridge, she informed the Executive Board that the scheme's cancellation had been announced without prior consultation, although she acknowledged that it was agreed at the Joint Assembly to reconsider the issue following further consultation. Expressing concern over the lack of evidence for the decision, she sought clarification on who had made the decision to cancel the project and how it aligned with the aforementioned principles. The Transport Director acknowledged that further consultation was required and had been arranged, while the planning application had been withdrawn in order to allow such discussions and work to continue.

Public questions were invited from Howard Kettel, Lynda Warth (on behalf of the Cambridgeshire British Horse Society), Sam Davies, Dr Charlotte Vacogne, Sarah Brown, Stuart Newman, Clare Arthurs and Eleanor Clark. The questions and a summary of the responses are provided at **Appendix A** of the minutes.

The Chairperson of the Joint Assembly welcomed the further consultations that had been arranged and argued that it was important to avoid overlooking such engagement in the future, as such omissions detracted from the otherwise high level of consultation carried out by the GCP. Observing that the Joint Assembly had not disagreed with the proposed route alignment, he suggested that clarification on the reasons for not consulting on alternative options would be beneficial. He also requested that the Executive Board pay particular attention to the future role of the Babraham Park and Ride site, given that the Cambridge South East Transport Scheme was likely to draw traffic further in to the city.

The Executive Board received a report that included details of objections received in response to two Phase 1 Traffic Regulation Orders (TROs) that were required for the previously agreed short term programme of works, and a review of the technical work and public consultation undertaken to date contributing to the production of the Outline Business Case (OBC) for Phase 2 of the scheme. The Transport Director drew attention to the scheme's development process, as shown in section 4.6 of the report, and emphasised that the final decision and full business case would be considered at a later meeting of the Executive Board, following formal consultations and an environmental impact assessment. The Project Manager highlighted the extensive consultations that had been held and demonstrated to the Executive Board how the potential hub locations and subsequent route options had culminated with the proposed location and route alignment.

While discussing the report, the Executive Board:

- Observed that in line with the overall Greater Cambridge strategy, job growth was mainly occurring within the Green Belt while housing was being developed outside the Green Belt. It was argued that there were insufficient alternatives to car travel for moving between the two areas, with the route under discussion being one of the key corridors.
- Recognised the strength and variety of opinions from members of the public regarding the potential impacts on communities and the countryside and agreed that further work was required on landscaping and biodiversity issues. Members noted the extensive public involvement in various aspects of the scheme's development and recognised that support for schemes was often not expressed as fervently as opposition.
- Acknowledged the need for further consultation with residents of Stapleton and Shelford in order to resolve issues regarding the edges of settlements and to strengthen

confidence in the analysis that had been carried out and the process that had been followed. The Transport Director recognised the need for further consultation and emphasised the role of public engagement in improving and solidifying schemes.

- Observed the high level of support that the railway alternative route had received from local residents and communities. One member argued that it was not feasible to have a safe train and safe fast public transport route alongside each other, as had been demonstrated by safety issues and accidents that had occurred in similar circumstances south of Cambridge railway station, and that the decision should be based on technical assessments. Another member suggested that the route option could be continued to be developed alongside the preferred route option, with a final decision to be made later in the scheme's development process. The Transport Director observed that the detailed design stage of the preferred route alignment required design work on a yard by yard basis, which would be impractical to carry out on multiple route options. He noted that all routes had been robustly considered, in line with Department of Transport guidelines, and emphasised that the evidence case had been clear in presenting only one preferred solution. Detailed questions raised by residents and other affected stakeholders would be considered appropriately as part of the design process.
- Expressed concern about the impact that the proposed route would have on the Gog Magog Hills, although welcomed the potential benefits that the scheme could have for developing Nine Wells. Supported further spending on mitigations to protect the environment and conceal the scheme as much as possible. Further spending was supported on mitigations to protect the environment and conceal the scheme as much as possible, while members expressed frustration that environmental impacts were not assessed at an earlier stage of the process.
- Questioned whether the Park and Ride site would be large enough and whether it would provide sufficient cycle parking and storage space. The Transport Director assured the Executive Board that calculations had projected that the site was large enough, noting that the CPCA had developed plans to complement the scheme by extending it further to the east. While cycle parking details would be established during the detailed design stage, he suggested that increasing usage of eBikes would require secure cycle parking.
- Observed that while the Babraham Park and Ride site was ideally located for commuters
 walking to the Cambridge Biomedical Campus (CBC), it was not suitable for those who
 needed to make a connection to Cambridge Science Park. One member suggested that
 it should be considered how to connect the Park and Ride site to the Science Park in a
 way that avoided the city centre.
- Clarified that any potential changes to the scheme due to external impacts, such as Covid-19, could be made throughout the development process.
- Recognised the need to adapt schemes to accommodate future usage by CAM vehicles.
- Supported the need for the proposed Phase 1 TROs.

The Executive Board resolved to:

CSETS Phase 1

- (a) Make the Traffic Regulation Order to control parking at Linton High Street (objections received);
- (b) Make the Traffic Regulation Order for a west bound bus lane at Linton (objections received);

CSETS Phase 2

- (c) Note the results of Public Consultation;
- (d) Endorse the key conclusions of the OBC presenting a preferred high quality public transport, walking and cycling route as outlined in section 9.0 of the report;
- (e) Endorse the key conclusions of the OBC in relation to a travel hub location;
- (f) Request that officers undertake an Environmental Impact Assessment for the route and prepare a Transport and Works Act Order application;
- (g) Approve the procurement of Legal services to support the preparation of a Transport and Works Act Order
- (h) Approve a revised budget for the CSET Phase 2 project;
- Require officers to keep the scheme details and business case under review to ensure that the Full Business Case and final design reflects any changes arising from the LTP substrategy consultation, as well as emerging proposals from EWR and the CAM tunnelled and regional route sections; and
- (j) Require officers to develop a strategy for sustainable and carbon neutral solutions, and environmental improvements including protection and enhancement of the Nine Wells nature reserve.

14. CAMBOURNE TO CAMBRIDGE BETTER PUBLIC TRANSPORT PROJECT

The Chairperson informed the Executive Board that the item had been withdrawn from the agenda. While acknowledging the significant time, effort and expense that had been attributed to this project to date, Members noted that one of the GCP's main purposes was to resolve traffic and transport problems and deficiencies. Moving forward, Members called for greater openness and engagement with the CPCA, along with independent analysis, to ensure that the best route was found and agreed on by all involved in the scheme.

15. MADINGLEY ROAD WALKING AND CYCLE PROJECT

The Transport Director presented the report, which contained the results of consultations that had been held on the Madingley Road cycling and walking project, as well as the

recommended preferred option. Broad support had been expressed for both options that had been put forward, although option 2 received a slightly higher level of support due to having a greater impact and this support had been reinforced by the Joint Assembly. The Transport Director noted that the Joint Assembly had identified the possibility of linking Grange Road and Madingley Road junction in order to open up the Burrell's Walk and West Road access.

While discussing the report, the Executive Board:

- Welcomed the work that had been carried out in order to identify a preferred option, noting the limited routes in to Cambridge and difficulties in improving them.
- Identified the area as a particularly problematic section for public transport.
- Welcomed the development of walking and cycle routes to colleges and work locations to the west of Cambridge.

The Executive Board resolved to:

- (a) Note the outcome of the public consultation held from 12th January to 3rd March 2020;
- (b) Endorse the preferred option 2;
- (c) Approve the development of detailed scheme design in preparation for construction;
- (d) Approve the negotiation of the land and rights required for the delivery of the scheme; and
- (e) Note the commitment to ongoing dialogue with local stakeholders as part of the scheme development process.

16. FOXTON TRAVEL HUB

Public questions were invited from Annabel Wright (on behalf of Foxton Parish Council). The questions and a summary of the responses are provided at **Appendix A** of the minutes.

The Transport Director presented the report, which included an update on progress made on the Foxton Travel Hub project and a proposal to progress to the preparation of a Full Business Case. He emphasised that further work needed to be carried out with the local community to ensure that it understood how it would benefit from the connection of multiple modes of transport.

While discussing the report, the Executive Board:

• Highlighted the importance of further consultation and engagement with the local community, noting that they would not necessarily be the primary beneficiaries of the scheme and would be required to deal with its direct consequences.

- Observed the importance of capturing traffic as far out of the city centre as possible.
- Expressed concern over the safety of the level crossing and suggested that a bridge should connect the Travel Hub to the railway station.
- Emphasised that the connection between the A10, railway station, Guided Busway and future Melbourn Greenway would make it a genuinely multimodal Travel Hub.
- Suggested that priority should be given to Greenway cycle users during the scheme's detailed design stage.
- Acknowledged the importance of the views expressed by Hauxton residents.
- Argued that the construction of a bridge or underpass on the A10 should be a priority for National Rail. It was also confirmed that East West Rail was regularly consulted on proposals and route alignments.
- Supported the proposal for the Travel Hub to initially include 350 spaces and subsequently expand in a flexible process.

The Executive Board resolved to:

- (a) Note the findings of the public consultation;
- (b) Endorse recommendation of preferred site and associated infrastructure;
- (c) Endorse recommendation to develop green infrastructure which may include solar PV canopies above car parking spaces;
- (d) Approve the preparation and submission of a planning application for the proposed site;
- (e) Approve the negotiation of the land and rights required for the delivery of the scheme and the use of CPO, Side Roads Orders, parking enforcement and changes to speed limits;
- (f) Approve working with Network Rail to develop a scheme to work in partnership deliver a pedestrian crossing to support to scheme; and
- (g) Note the commitment to ongoing dialogue.

17. GREENWAYS: MELBOURN, COMBERTON AND ST IVES

A public question was invited from Lynda Warth (on behalf of the Cambridgeshire British Horse Society). The question and a summary of the response are provided at **Appendix A** of the minutes.

The Transport Director presented the report, which provided an update on the development of the Greenways programme and outline budgets for the Melbourn, Comberton and St Ives schemes. The Executive Board was informed that discussions were ongoing with

Cambridgeshire County Council and Hertfordshire County Council regarding the bridge at the western end of the Melbourn Greenway, which enjoyed considerable support and had received offers of financial support. As part of the development of the Comberton Greenway, it had been proposed by the Joint Assembly to include improvements along Adams Road, following the change to the preferred route of the Cambourne to Cambridge Better Public Transport Project. Noting that the cycling facilities that already existed in St Ives suffered from maintenance problems due to flooding, the Transport Director confirmed that part of the St Ives Greenway proposal involved ensuring that those existing facilities could be fully utilised throughout the year.

While discussing the report, the Executive Board:

- Welcomed progress on the schemes and observed that rather than just being routes in to and out of Cambridge, they served to enhance the high-demand rural network of cycling. While commuters would make use of the routes, people would also be able to safely travel between villages.
- Identified that there would be direct economic benefits resulting from the link between Melbourn and Royston, as demonstrated by widespread support by local businesses and organisations, including offers of financial contributions.
- Welcomed the inclusion of improvements to Adams Road in the Comberton Greenway. One member suggested that there were more important areas of the city to look at, especially given the fact that students, who represented most of the traffic cycle traffic along the route, would not be using it for most of the year due to Covid-19, although it was noted that the projects took time to complete and therefore students would probably have returned by the time works had been completed.
- Sought clarification on whether concrete was the best surface material for the St Ives Greenway, with regard to future renovations to the routes or adaptations to any different or more flexible form of transport. The Transport Director confirmed that the County Council was being consulted on the most appropriate surface material to use, in order to require as little maintenance as possible in the future. He emphasised that the objective was to enhance the cycle network to the greatest possible degree, and that any enhanced capacity given to other forms of public transport would also be welcome as a genuine alternative to the car.
- Recognised that eBikes should be able to use the Greenways but expressed concern that other forms of vehicles, such as motorbikes, would make use of the routes.

The Executive Board resolved to:

- (a) Note the progress made in developing the Greenways, working with local communities and stakeholders to date;
- (b) Note the outcome of public consultations;
- (c) Approve the scheme proposals and an outline budget of £6.5m for the Melbourn Greenway;

- (d) Approve the scheme proposals and an outline budget of £9m for the Comberton scheme;
- (e) Approve the scheme proposals and an outline budget of £7.5m for the St Ives scheme;
- (f) Approve the development of detailed scheme design in preparation for construction;
- (g) Approve the negotiation of the land and rights required for the delivery of the scheme; and
- (h) Note the commitment to ongoing dialogue with local stakeholders as part of the scheme development process.

18. DATE OF FUTURE MEETINGS

The Chairperson informed the Executive Board that the 2020 and 2021 meetings would start at 4:00 p.m., instead of 2:00 p.m. as indicated on the agenda. It was therefore noted that the next meeting was due be held at 4:00 p.m. on Thursday 1st October 2020 and that the remaining meeting dates for 2020 and 2021 were as follows:

- 4:00 p.m. Thursday 10th December 2020
- 4:00 p.m. Thursday 18th March 2021
- 4:00 p.m. Thursday 1st July 2021
- 4:00 p.m. Thursday 30th September 2021
- 4:00 p.m. Thursday 9th December 2021

Chairperson 1st October 2020

No*	Questioner	Question	Answer
		Agenda Item 8: Impact of and Response to Covid-19	
7	Wayne Boucher	Covid-19 should have caused a re-analysis of all GCP projects, in particular the traffic projections for both cars and buses. Has the GCP done this for the Histon Road project? The bus lane as it stood was only going to give a couple of minutes saving during the rush hour on the inbound side, and none on the outbound side. What do the projections say now?	 Histon Road, and schemes like Milton Road, are public transport, walking & cycling schemes. At the present time walking and cycling improvements are even more important than before The impact on longer term travel trends is the subject of much speculation. Future demand will continue to be kept under review. Data on traffic/journeys across Greater Cambridge are discussed
			in the Public Transport and City Access report.
13	Lilian Rundblad, Chair, HRARA	 Agenda Items 8, 9, and 10: Comments relating to Histon Road Scheme Histon Road Area Residents' Association wishes to raise the question of whether the plans as currently drawn up for the restructuring of Histon Road require fundamental reappraisal in the light of the radically different circumstances now affecting traffic flow in the area. Our world has changed and will probably never be the same again. Far fewer cars are using the road; more people are cycling and walking. In 4 days the closures enabling construction of an obsolete plan will start. New cycling and walking proposals adopted 16/6/20 within the Covid-19 Temporary cycling proposals ETRO by Highways (Space to Breathe) affects the Histon Road outbound lane. Key elements of the programme (Item 7, 2.5). 1. Removal of car parking along the road is already planned (no signs posted) 2. Reallocation of traffic lanes to accommodate bidirectional or contraflow cycle lanes – there are presently no cycle lanes in southern area; present cycle lane northern area is 0.91m wide! - photo Victoria Junction 22/6 3. Removal of railings – photo Victoria Road Junction 22/6 4. Installation of cycle parking – additional sites required 	 Histon Road, and schemes like Milton Road, are public transport, walking & cycling schemes. At the present time walking and cycling improvements are even more important than before The impact on longer term travel trends is the subject of much speculation. Future demand will continue to be kept under review. The construction plans for Histon Road ensure that there is cycle lane provision for both inbound and outbound cyclists when the one way traffic closure is put in place.

		 Item 8 – 6.2 Only tree/hedge clearing and replanting in north and unfinished Victoria Junction. No preparations for closures. Item 9 – The Histon Road project in the Government's Report was a major reason for the additional £400m to be released. 24.11 - HRARA expects that the additional costs for the urgent ETRO necessary during the construction period will be adhered to. Item 10 – No mention of Histon Road in this report. Perhaps included in Maintenance page 108. HRARA asks the GCP EB to direct the officers to ascertain that the safety for cyclists and pedestrians will be available on 29th June on Histon Road outbound lane when closure starts, following the Highways Key Elements' programme ETRO. 	
1	Jake Arnold- Forster	 Agenda item 9: GCP Quarterly Progress Report With reference to the Abbey Chesterton Bridge: When will the cycle/foot bridge be open? When will riverside access under the existing railway bridge be restored? 	 Work on the Chisholm Trail Phase one has continued through the Coronavirus lockdown period, but progress has slowed. Accordingly the current programme is only indicative. In response to the specific questions: Phase 1 is currently scheduled to be fully open late 2021 Targeting jetty connection can be reopened in Autumn 20

		Agenda Item 10: Public Transport Improvements and City Access Strategy: Update and Support for Covid-19 Recovery	
		Reallocation of Road Space Projects	The two proposals made are for the County Council to consider as the Highway Authority, and we have passed this question to them
		5.5 "The aim is to create a network of safe routes on key corridors, that will encourage cycling within the city but also from Park&Ride sites and nearby towns and villages."	to respond directly.
		The definition of Active Travel in the new Cambridge and Peterborough Combined Authority Local Transport Plan includes equestrians. There are nine references to 'Active Travel' in the report yet no reference to equestrians nor any reference as to what space has been allocated for their use.	
	Lynda Warth County Access &	The 25,500 horses in Cambridgeshire have the right to be ridden on every highway in the county (except motorways). They must be actively provided	
15	Bridleways Officer – Cambridgeshire British Horse	for and protected in the reallocation of road space schemes and not simply forgotten and left in the traffic flow on a reduced carriageway with fast moving cyclists tight up to their left hand side and vehicles on their right.	
	Society	Where highway signage currently excludes equestrians, a county wide policy needs to be adopted. Unless the GCP / Road Safety Audit deems the safest place for horse-riders to be is on the carriageway with the traffic and accepts the consequences of that decision , we propose:	
		 A blanket policy giving horse riders the legal right to use all routes including those marked with the blue "pedestrian / cycle only" or cycle stencil sign 	
		 Or All restrictive signs must be replaced with "pedestrian, cycle AND horse riders only" sign and used in future projects 	
		The Board has a duty of care to all lawful road users therefore will the Board agree that approval for these projects will include a caveat that safe provision for equestrians must be included and identified?	
		Demo 22 of 404	1

		Agenda Item 10: Public Transport Improvements and City Access Strategy: Update and Support for Covid-19 Recovery	
			Covid has had a disproportionate impact on various vulnerable
		At the recent Joint Assembly Board meeting a question was asked if disability organisations were consulted. It was answered along the lines of, "It's rather difficult at the moment but we'll let them know".	groups in our community and many of the measures proposed in the paper are aimed at creating space for all non-motorised users which will be particularly important to disabled members of our community.
		Public body you have duties under the Equality Act 2010 -The Equality Duty	
		has three aims. It requires public bodies to have due regard to the need to:	The County Council as the Highway Authority is leading work to
		eliminate unlawful discrimination,	deliver road space reallocation to support social distancing and
		 advance equality of opportunity, foster good relations.	active travel during the Covid-19 pandemic, and has tasked the GCP with developing and delivering schemes to support this work.
		Due regard means consciously thinking about the three aims of the Equality	
		Duty as part of the process of decision-making. This means that consideration of equality issues must influence the decisions reached by	To expedite delivery of the schemes, as requested by Government, the measures are being introduced on an
		public bodies.	experimental basis. Consultation is undertaken once the
6	J O'Dwyer	An efficient transport system is essential for a society to function. For	measures are in place.
		disabled people to fully participate in society, a fully accessible transport system is vital.	Following implementation, a wide ranging consultation exercise will be undertaken for each scheme which will include disability groups.
		If you accept that the best people to represent disabled people's interests are disabled people, then I would like to know who you are consulting with from the disabled community to fulfil your Equality Act duties?	Prodbar
		On viewing your website, I was unable to find any information on equal opportunities or disability except for knowledge on website accessibility. If it is there, it should be easier to locate.	
		Just as important are the areas of housing and employment. I found no reference to 'Lifetime Homes' or 'Lifetime Neighbourhoods' or information	
		about skills training for young disabled people in your website documents.	
		Disabled people's needs should be mainstreamed at the design stage and not bolted on at the end, which is invariably more expensive and far less 'fit for purpose'. Page 23 of 401	

		How many disabled people work in your organisation, this will indicate how serious you take the concept of 'equal opportunities'. I welcome your comments on the above.	
		Agenda Item 10: Public Transport Improvements and City Access Strategy	
		 The changes to road access in Cambridge City are being forced onto the population without consultation: Either with local residents. & it appears without involvement with their elected representatives. Many specific safety and practical concerns have been raised by residents about the individual schemes but have not been addressed. For example, it is doubted whether GCP have consulted with the emergency services:	Supporting more people to cycle and walk will be vital during the pandemic and as we recover, and the Government has asked local areas to reallocate road space to support this. The County Council – with input from GCP, other partners and stakeholders – has identified a series of measures that will create more space for walking and cycling, in order to support social distancing and encourage more active travel. The aim is to create a network of safe routes on key corridors, that will encourage cycling within the city but also from Park&Ride sites and nearby towns and villages.
18	David Wrathmall	 Cutting these access roads will force emergency vehicles onto roads that are already at breaking point. Putting at risk the 8-minute emergency response time. Although 'rat-running' is an issue, in the absence of public transport, roads	To expedite delivery of the schemes being undertaken by the GCP, the measures are being introduced on an experimental basis. Consultation is undertaken once the measures are in place. As well as seeking public feedback on the projects, the changes
		to be closed are used daily by many residents, including those with mobility issues, to reach medical, educational and retail infrastructures.	will be monitored through deployment of traffic sensors to record traffic levels and speeds. We will also be monitoring traffic levels across the wider city road network
		A recent petition to Peter Blake, received 300 objections to one particular road closure (Nightingale Avenue).	
		 It is important that GCP understand that the same residents that object to these road closures in their petition ALSO <u>support</u> improved cycling safety in their communities. Residents understand their local environment very well and & believe that 2-way car traffic and safe cycling schemes can <u>co-exist side by side</u>. Page 24 of 401 	

		 Residents understand these road closures will go-ahead for a trial period of 6 months. Residents are <u>now</u> waking up to the fact that decisions that have a serious impact on their lives are made without any communication let alone consultation. These road closure trials will <u>now</u> be monitored very carefully by residents. In order to bring residents into the consultation process over the next 6 months: Could GCP explain to residents the evaluation criteria that resulted in the decision to impose these road closures? How will the GPC appraise the success or failure of each trial to determine if the changes should be made permanent or reversed? 	
21	Ericka Jacobs	 Agenda Item 10: Public Transport Improvements and City Access Strategy: Update and Support for Covid-19 Recovery As a resident of Bateman Street in Newtown, I was interested to hear about the proposed Temporary cycle/pedestrian scheme proposals in my area. We have a huge number students walking and cycling to and from school, combined with busses, taxis and private motor vehicles 'rat running' down Bateman Street, along with school parents dropping off and collecting students. This leads to frequent conflicts on the road, often leading to dangerous situations and not a few near-misses and actual accidents, particularly involving cyclists. I see the need to improve not only the existing conditions for pedestrians and cyclists, but also to increase space for social distancing given the need to encourage more people to walk and cycle during the COVID-19 pandemic. However, I note that some of the proposed changes, including in Newtown, indicate that there is an intention to "prohibit motor vehicles at all times on the following short sections or road:" There is no language indicating that access will be maintained, for instance, for emergency vehicles, busses or indeed residents. 	Supporting more people to cycle and walk will be vital during the pandemic and as we recover, supporting social distancing and the Government has asked local areas to reallocate road space to support this. The intention is that access to all parts of the Newtown area will be maintained but in some cases the routes available may be longer and potentially less convenient by motor vehicle.

12 Howard Kettel Agenda Item 13: Cambridge South East Transport Scheme The Mott MacDonald 'CSET Phase 2 Shelford Railway Alignment: Design Development & Feasibility Assessment' report (May 2020) confirms that the alternative railway route is technically feasible, and with realistic performance assumptions performs at least as well as the chosen route. The precis of the technical report is incorrect. The report concludes that; 12 Howard Kettel The alternative Shelford Railway Alignment would avoid unnecessary damage to the unique, relatively unspoiled and historically important landscape adjacent to the Gog Magog Hills. It would avoid damage to Green Belt lands which are very important to the setting, and to nearby communities for recreation and amenity, and are of economic value for farming. The alternative would also bring considerable economic benefits to local communities by connecting them directly into the public transport network. Significant impacts in Gt Shelford including taking of gardens and demolition of up to 4 homes, and commercial property. Will the GCP pause the scheme and submit the alternative Shelford Railway Alignment to public consultation? The route was discounted as part of the options sifting process because DfT guidance says you can only progress options that are feasible and deliverable.		Please can you confirm whether such access will be maintained, and if so, change the wording to reflect this?"	
	12 Howard	change the wording to reflect this?"Agenda Item 13: Cambridge South East Transport SchemeThe Mott MacDonald 'CSET Phase 2 Shelford Railway Alignment: Design Development & Feasibility Assessment' report (May 2020) confirms that the alternative railway route is technically feasible, and with realistic performance assumptions performs at least as well as the chosen route.The alternative Shelford Railway Alignment would avoid unnecessary damage to the unique, relatively unspoiled and historically important landscape adjacent to the Gog Magog Hills. It would avoid damage to Gree Belt lands which are very important to the setting, and to nearby communities for recreation and amenity, and are of economic value for farming. The alternative would also bring considerable economic benefits to local communities by connecting them directly into the public transport network.Will the GCP pause the scheme and submit the alternative Shelford Railway	 concludes that; The railway alignment would have lower benefits and significantly higher costs of £29m; Journey times for the majority would increase and patronage would reduce; Significant impacts in Gt Shelford including taking of gardens and demolition of up to 4 homes, and commercial property. The route has deliverability and compatibility problems with the existing main railway line, EWR and the CAM proposals. The route was discounted as part of the options sifting process

		Agenda Item 13: Cambridge South East Transport Scheme	
16	Lynda Warth County Access & Bridleways Officer – Cambridgeshire British Horse Society	 6.12 ' the main objective of the Cambridge South East Transport Phase 2 project Improve active travel infrastructure and public transport provision for South East Cambridge. Improve Road Safety for all users of the A1307 Corridor The LTP states the Greenways will deliver new and improved segregated links from Cambridge for walkers, cyclists and horse riders. The Linton Greenway forms part of the CSETS project. The LTP also specifically states that equestrians will be included on the non-motorised user path alongside the A1307. The inclusion of equestrians on other transport projects is embedded within the LTP therefore the GCP must not exclude us as is proposed on the A1307 crossing schemes at Magog Farm and Hildersham cross roads and has already occurred on the Sawston Greenway. The Board has a duty of care to all residents therefore will the Board agreed that any approval for these projects includes a caveat that equestrians must be included in any provision for other non-motorised user groups? 	In the design of the Linton Greenway, GCP's intention has always been to provide enhanced facilities for all Non-Motorised Users where feasible. Officers will continue to work with local stakeholders and the highways authority to that end. In terms of the crossing at the Magog Farm shop, a request has been made to the Local Planning Authority to formally withdraw the planning application in order to allow for a period of further stakeholder engagement on the proposals. Stakeholder consultation events are planned for 21st and 28 th July 2020 to review the proposals.
8	Sam Davies	Agenda Item 13: Cambridge South East Transport Scheme The GCP's commitment to providing an NMU-compatible underpass between Wandlebury Country Park and Magog Down has been part of the CSET Phase 1 project definition since 2017. It therefore came as a surprise to learn at June's LLF that this commitment had been dropped by project officers without adequate consultation or exploration of satisfactory alternatives. The A1307 in this location severs local people's ability to access south Cambridge's two major outdoor recreation destinations. It is a 60mph road on a steep incline and includes sections of dual carriageway. Officers have proposed a small traffic island between the carriageways as a substitute for the underpass, which suggests that they are either agerant of, to have no	GCP has set up stakeholder engagement sessions on 21st and 28 th July 2020 to discuss the underpass scheme and review options to secure a safe and useable crossing of the A1307. A request was made to the Local Planning Authority to formally withdraw the planning application.

		 interest in, the needs of cyclists, pedestrians and equestrians. They have attempted to justify this on the grounds that, because there are no safe crossings elsewhere along the A1307, none is required here – but there is no site elsewhere on the A1307 with two major outdoor attractions and such a potentially high density of NMUs. Officers apologised for the breach of trust at both the LLF and the Joint Assembly meeting and have set a date for a stakeholder workshop in late July – but in the meantime they have already submitted a planning application for the inadequate traffic island I describe above. Given the stated ambitions of all three Councils represented on the GCP to support sustainable transport, and the GCP's own commitment to improving quality of life for residents, I ask Board Members to affirm that it is reasonable to expect delivery of a means of crossing the A1307 in this location which is both safe and useful; and to request that officers withdraw the current planning application and resume meaningful discussion with relevant stakeholders about how this will be achieved. 	
9	Dr. Charlotte Vacogne	Agenda Item 13: Cambridge South East Transport Scheme Will you re-examine the proposal to change the guided busway route to make it go through the old railway as suggested in this plan? https://www.cambridgeppf.org/south-east-cambridge-busway Can the local residents consider legal/other ways to fight this proposal, until when? Cutting through the stapleford and great shelford green belt will damage the environment, the view, cut through pedestrian paths used by joggers, families, to relax, walk around. I further reduce the green space that is so precious and becoming increasingly rare around Cambridge. The cheaper and easier option doesn't have to be the go-to option. Page 28 of 401	 The technical report on the old railway line route concludes that; The railway alignment would have lower benefits and significantly higher costs of £29m; Journey times for the majority would increase and patronage would reduce; Significant impacts in Gt Shelford including taking of gardens and demolition of up to 4 homes, and commercial property. The route has deliverability and compatibility problems with the existing main railway line, EWR and the CAM proposals. The route was discounted as part of the options sifting process. The <u>independent assessment</u> by LDA concludes that the degree of harm to the Green Belt from the proposals would be between

			Moderate, Moderate-Minor and Minor with appropriate planting, assessed in the context of the surrounding environment. With careful and robust landscaping and retention of as much of the existing vegetation as possible, harm to the Green Belt would be minimised The project team will continue to dialogue and engage with stakeholders on mitigation measures to be taken forward.
		Agenda Item 13: Cambridge South East Transport Scheme	
19	Dr. Charlotte Vacogne	I live in haverhill road and the busway cuts in the fields right behind my backyard. This will produces a small 'triangle' of field stuck between the back of all haverhill roads houses to tge east, the busway and a section of the footpath to the south.	All development is subject to the Local Plan and the local planning process.
19		There are deep worries that this will open the door to 'develop' and build on this triangle of land. This will defeat the purpose of us having bought the house (the main reason was the open wheat fields at the end of the garden). I would like to have reassurance of some sort that this won't be the case.	
		Agenda Item 13: Cambridge South East Transport Scheme	
10	Sarah (Rosie) Brown	 The GCP proposed route for the south-east busway boxes-in the village of Stapleford with three level crossings (existing railway plus two more for the busway). Given that the existing railway crossing already results in significant vehicle tailbacks down Hinton way / Station road, the addition of up to 16 buses per hour on the busway will increase this traffic significantly. In this context: How is the proposed route and additional road crossings considered acceptable by GCP, given that emergency vehicles will inevitably be delayed accessing houses, in particular those located between crossings (eg Leeway Ave)? This route will impede fire, police and ambulance access to residents and result in significant negative health and safety impacts. Page 29 of 401 	The crossings will be traffic signals similar to the existing Guided Busway, and not railway type level crossings that close for a significant period dictated by railway signalling. An assessment has been made which shows that the proposed traffic signals with bus priority would generate a minimal and infrequent traffic impact. No build-up of queued traffic will occur. The impact on air quality of the scheme will be fully evaluated in the Environmental Impact Assessment (EIA) for an approved preferred scheme. However, the small level of changes in traffic and lack of significant queuing is not anticipated to cause any significant changes to air quality.

Appendix A - 25th June 2020 Greater Cambridge Partnership Executive Board – Public Questions

		 What is the impact to local resident health from the increased NOx and particulates from increased static vehicle traffic at these multiple crossings? Will local air quality standards be exceeded? A 2018 report from Public Health England notes that air pollution is the leading cause of early death. Would the costs of tunnelling under the roads (in place of road crossings) make the cost of this route on a par with / more than the old Cambridge - Haverhill railway route? Is concern over this topic (and possibly others) the reason why there has been no stakeholder consultation on the alternative route options in recent months? If not, what was and how is it fair to local residents to move ahead with a scheme that will have negative health impacts and decrease quality of life? Given the lack of consultation with local communities in the past months regarding the south east transport busway, and the fact that questions asked in the previous GCP meeting were deferred until later in the agenda <i>and then not answered</i>, please answer this question now. 	Please refer to the response to Question 9 on railway option. Three public consultations have been held, in 2016, 2018 and 2019. All of which featured a public transport route between the A11 and Cambridge. The route currently proposed emerged from workshops with the Local Liaison Forum, to which all local councillors were invited along with key local stakeholders. held in 2017. The route was subject to public consultation in 2018 and 2019. The proposals have been presented to the Stapleford Annual Parish Meeting in 2018 and 2019, and also meetings of the Local Liaison Forum.
11	Stuart Newman	Agenda Item 13: Cambridge South East Transport SchemeI am a resident on Granhams Road, Great Shelford.The Great Shelford village council concluded that they could find little to recommend the plan as it goes past Shelford without providing a suitable stop for residents of Shelford to use. I can't see this on the list of public responses.This, however, must surely be a material objection where one of the key objectives of the plan is to improve links between the villages. How is the plan achieving this stated objective?Can I ask that further consideration is given to Granhams Road and Hinton Way. Both have railway crossings which disrupt them and the proposed new busway will cross these roads within a few hundred yards of the railway crossings. This has potential safety concerns as well as likely severely reducing access for residents on these roads. Page 30 of 401	 The Gt Shelford and Stapleford stops will increase the number of households within accessible distance of high quality public transport by 20% with the majority of these being in Stapleford. For Sawston, a further 444 households would be within this distance of the stop, giving an overall total of 1,058. Some busway services could loop through Stapleford and Gt Shelford and routing of existing buses will be considered to improve accessibility. Please refer to Question 9 with respect to the alternative railway route. Please refer to the answer to Question 10 for the impact of the proposed road crossings.

		Agenda Item 13: Cambridge South East Transport Scheme	
		In relation to the proposed level crossings on Hinton Way, Granham's Road and Haverhill Road:	Please refer to the answer to Question 10 for the impact of the proposed road crossings.
		1. What traffic modelling/research has been done to analyse the impact of these crossings on traffic flow on these routes, particularly during peak times?	Officers will work with the emergency services through the detailed design process A Department for Transport compliant <u>environmental appraisal</u>
		2. What measures are proposed to prevent the villages being disadvantaged in terms of access by emergency vehicles?	report has been carried out and published as an appendix to the Outline Business Case;
		3. What modelling/analysis has been done to establish the impact of idling traffic and increased congestion on air quality and noise pollution for local residents?	 Changes in air quality from any of the scheme options were judged to be minimal;
		 4. What measures are proposed to reduce/manage the impact of increased roadside parking along these streets? 	Assessment of noise impacts concluded that all scheme options would result in minor adverse impacts.
14	Clare Arthurs	More generally:	 A full assessment of the impacts of an approved preferred scheme on air quality and noise will be carried out as part an full Environmental Impact Assessment (EIA)
		5. What evidence do you have regarding likely levels of use of this busway? In particular, what are the projections of use from villages such as Stapleford, Shelford and Sawston (which are disproportionately affected) as compared with those from further away?	 The scheme provides park and ride capacity for up to 2500 cars Demand forecasts indicate that; 66% of trips would be from the A11 Travel Hub site; 29% from the Sawston, Stapleford and Great Shelford
		6. Will the cost/benefit analysis be revisited to take into account the financial impact of Covid and Brexit?	stops.
		7. Will GCP revisit this project to take into account reduced levels of employment and/or increased numbers of people working from home post Covid?	The long term impact of Covid-19 on travel habits is at present unknown. Public transport walking & cycling scheme and we are being encouraged by Government to develop active travel solutions
		 How are you going to make GCP communicate effectively with and be accountable to local stakeholders in this project? Page 31 of 401 	If permanent changes in transport demand resulting from Covid become apparent this will be subject to re-assessment during the Full Business Case

		 9. What consideration has been given to building a large Park and Ride on the proposed site, and running fleets of (Electric) buses to the Genome, Babraham and Biomedical Campuses, and on into town? This would reduce traffic to very local traffic, which could be further reduced by the provision of regular bus services. 10. What consideration has been given to introducing a congestion charge, in isolation or in combination with an extended P&R scheme as set out above? 	The development of the project has been informed by community and stakeholder engagement since its inception in 2016. This has included the establishment of a Local Liaison Forum for the project and three formal public consultations. The <u>Statement of</u> <u>Community Involvement</u> records how community and stakeholder engagement has influenced the development of the CSET project The proposals include Park and Ride from the A11 Travel Hub to the Biomedical Campus and central Cambridge. Public transport connections and active travel routes will also be provided between the Travel Hub, Granta Park and Babraham Research Campus. GCP's City Access project is proposing complementary measures to reduce reliance on car travel and free up the city centre's congested road space, to run better public transport services.
20	Eleanor Clark	Agenda Item 13: Cambridge South East Transport Scheme What research has been done and what evidence do you have regarding likely levels of use of this busway? In particular, what are the projections of use from villages such as Stapleford, Shelford and Sawston (Which are disproportionately affected)? How does the cost / benefit analysis stack up now post Covid and Brexit? It is widely expected that both employment and working patterns will fundamentally change after these events?	 The scheme has been subject to Department for Transport compliant traffic modelling (webTAG). Demand forecasts indicate that; 66% of trips would be from the A11 Travel Hub site; 29% from the Sawston, Stapleford and Great Shelford stops. Please refer to Question 14 regarding impacts of Covid and how these will be considered.

		Agenda Item 16: Foxton Travel Hub	
		The Outline Business Case states that the travel hub must be a 'multi-modal interchange', yet the proposal presented to the GCP Executive Board is for a 750 space car park with little consideration given to integrating with other travel modes such and bus and cycling. This does not contribute to the scheme's objective of maximising the potential for all journeys to be undertaken by sustainable modes of transport and The Board's stated aim to develop public transport, walking and cycling improvements in the A10 corridor.	The impact of Covid-19 on future travel trends is a matter of considerable speculation. The impacts, if known, will be included in the development of the Final Business Case. The scheme delivers clear multi-modal benefits; cycle and pedestrian facilities including linking with the Melbourn Greenway, integrating local bus & rail provision and actively exploring options for delivering a new pedestrian footbridge.
2	Annabel Wright, Foxton Parish Clerk	Counter to these aims, the number of proposed parking spaces has more than doubled in size during the project thereby seeking to encourage rather than restrict car use.	The report also makes clearly that an ongoing dialogue with the local community is essential to maximise benefits for the Foxton area.
		Given the aim to increase use of sustainable transport, create a multi- modal interchange, and the significant changes to travel patterns caused by the Coronavirus pandemic, will the GCP:	
		 a) Review the long-term demand and need for car parking? b) Re-design the travel hub to create a fully multi-modal interchange with less emphasis on parking and more on sustainable travel modes, in line with the GCP's objectives?and c) Delay making any decisions on this proposal until such work has been completed? 	
		Agenda Item 16: Foxton Travel Hub	
3	Annabel Wright, Foxton Parish Clerk	Foxton Parish Council would support a fully integrated, multi-modal travel hub as part of a strategic approach that includes bypassing Foxton level crossing. Moreover, in its response to the consultation, Network Rail stated that the creation of a large parking facility and resulting increases in vehicle and pedestrian movements would increase risks associated with the level crossing. The Outline Business Case also recognises that the level crossing is	The proposal for a level crossing bypass was originally being considered as a parallel scheme to the Foxton Travel Hub. Following the completion of the Strategic Outline Business Case (SOBC), the scheme to the Strategic Transport Authority, the Cambridge and Peterborough Combined Authority (CPCA), for its
		a key cause of congestion on the A10 in the Foxton area.	consideration.
		Page 33 of 401	GCP officers continue to regularly consult CPCA officers on the progression of the Level Crossing Bypass Scheme. At present, the

		Section 2.7 of the Outline Business case clearly shows that the proposal presented to the GCP Executive Board would stand in the way of any future level crossing bypass. What engagement has the GCP had with the Cambridge and Peterborough Combined Authority and Network Rail to seek a strategic solution that includes the problems caused by the Foxton level crossing?	construction of a bridge or underpass at Foxton is included in the Combined Authority's Local Transport Plan. The recommended option would not preclude the development of the level crossing bypass.
	Annabel Wright, Foxton Parish Clerk	Agenda Item 16: Foxton Travel Hub One of the scheme objectives is to "contribute to enhanced quality of life for those living and working in Greater Cambridge". In the proposal presented to the Board, the emphasis is on improving access to employment and economic opportunities in Cambridge and offers no benefit to residents of Foxton and surrounding villages - all part of Greater Cambridge. In fact the increase air and noise pollution will have a detrimental impact on those living and working in Foxton.	The public consultation showed that 42% of respondents preferred neither site option whilst 54% preferred one of the two proposed locations. It is notable that one of the recommendations of the Report, is to work with the local community and stakeholders to develop a package of local mitigation measures to address the potential concerns of stakeholders.
4		 42 per cent of respondents to the 2019 consultation stated that they preferred neither the North or South option yet a 'do nothing' option was not included in the Outline Business Case. In addition, many respondents made specific comments on the negative impacts of the proposals. What account has been taken of: a) Those that supported neither option; and b) The negative impacts on Foxton raised by respondents to the consultation, particularly those in response to questions 2 and 4? 	There is no evidence of any air quality issues along the A10 corridor between Royston and Cambridge. Appraisals indicate that both Travel Hub options would result in slight adverse noise impacts. Despite this, the assessment of noise sensitive receptors showed that existing noise sources, primarily from the A10 and railway, are likely to remain as the predominate sources of noise pollution.

		Agenda Item 17: Greenways	
		The Board is being asked to approve the scheme proposals for three Greenways. These include proposals to cover with tarmac, over the majority of their width, several bridleways which are currently rural, grassed paths e.g. the Whitwell Way. The amenity of a bridleway includes being able to chat whilst riding side by side with a friend, so path width is important for equestrians.	We agree that alternatives to Tarmac are available and should be properly considered in the context of the surrounding environment. Decisions on surfacing material will only be finalised at the detailed design stage.
17	Lynda Warth County Access & Bridleways Officer – Cambridgeshire British Horse Society	Since 1968, horse riders have willingly shared their bridleways with cyclists but we oppose the roadification of the Public Bridleway Network as has recently occurred at Reynolds Drove. We also oppose allowing the soft surface preferred by many users to be reduced or removed. There are many alternative surfaces on the market suitable for all users and far more appropriate for the countryside than tarmac. Will the Board agree to prohibit the use of tarmac for these Greenways on existing bridleways, field edges and rural locations and require a more sympathetic and suitable material be used instead? Will the Board also agree that their approval includes the protection and preservation of the bridleway amenity for horse riders?	A wide soft/grassy path alongside a wide hard-surfaced path is the proposed solution for Greenway paths, where space permits. Provision for some landscaping and appropriate planting to minimise visual impacts is also included in the project. The surface of Greenways must be suitable for all-weather/year- round use and it must be accessible to all potential users of the Greenways. Prohibiting the use of tarmac in all rural locations would not be an appropriate approach, however, we agree that care should be taken when choosing to use tarmac and alternatives will be properly considered. The project will protect, preserve and aim to improve bridleway amenity for all Non-Motorised Users including horse-riders.

* numbering refers to order in which the questions were received

25th June 2020 Greater Cambridge Partnership Joint Assembly – Question from Partner Organisation Representative Notice in Advance

No*	Questioner	Question	Answer
		Agenda Item 8: Impact of Covid-19 with reference to Histon Road Cycling and Walking Project	
5	Cllr Neil Gough and Cllr Eileen Wilson	We understand that the Histon Road closure will commence end June. We have both spoken at this Board before about the impact on students from Cottenham who attend further education in Cambridge and are dependent on public transportation. These students already face a typical 75-90 minute bus journey which will increase still further once the Histon Road closure is in place and the diversions are operating. We very much appreciated the widespread recognition at the Assembly and the Board of the need to put something in place for these young people, as any significant extension to the journey times is likely to impact educational choices and attainment. Since then, these students have suffered disruption to their education from Covid-19. Has the GCP prepared a plan to mitigate the consequences of the Histon Road closure for this group of young people or will they just have to put up with the impact on their	 Stagecoach is confident that in the short term there will be minimal delays to bus services when Histon Road is closed inbound given that the road network is relatively quiet. Over the summer we will need to see how the situation is evolving, and assess any impacts of the diversions on the affected public transport routes. Towards the end of July, officers will aim to discuss with Stagecoach their plans for School/6th form bus routes affected by the diversion for the beginning of September.
		education for the greater good?	

* numbering refers to order in which the questions were received



Greater Cambridge Partnership Executive Board Public Questions Protocol

Please note that during the Covid-19 pandemic Executive Board and Joint Assembly meetings will be held virtually via Zoom. The meetings will continue to be live streamed via the GCP YouTube Channel - <u>Link</u>. As a result there will be some temporary changes to arrangements for handling public questions. These will be kept under review and amended if necessary. Amended wording is shown in bold text below.

At the discretion of the Chairperson, members of the public may ask questions at meetings of the Executive Board. This standard protocol is to be observed by public speakers:

- Notice of the question should be sent to the Greater Cambridge Partnership Public Questions inbox [**public.questions@greatercambridge.org.uk**] no later than 10 a.m. three working days before the meeting.
- Questions should be limited to a maximum of 300 words.
- Questions should relate to items that are on the agenda for discussion at the meeting in question. The Chairperson will have the discretion to allow questions to be asked on other issues.
- Questioners will not be permitted to raise the competence or performance of a member, officer or representative of any partner on the Executive Board, nor any matter involving exempt information (normally considered as 'confidential').
- Questioners cannot make any abusive or defamatory comments.
- The Chairperson will decide when and what time will be set aside for questions depending on the amount of business on the agenda for the meeting.
- In the event of questions considered by the Chairperson 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.
- Where meetings are held virtually, the expectation is that questions will be read out by an
 officer on behalf of the questioner. This is the preferred approach in the interests of
 efficiency as it reduces the likelihood of technical difficulties. However, should they wish
 to do so, questioners will retain the right to temporarily join the virtual meeting to ask
 their question (see below).

- Details of the public questions accepted by the Chairperson will be circulated to members and published on the website along with other agenda papers in advance of the meeting.
- Individual questions will be read out at the relevant point in the meeting, usually at the start of the agenda item to which the question relates.
- The question will be answered at an appropriate point in the debate, usually as part of the introduction of the relevant item.
- Details of the questions asked at each meeting and a summary of the response given will be published online after the meeting and will included as an appendix to the minutes.
- In circumstances where the questioner has decided to ask their question virtually:
 - Individual questioners will be permitted to speak for a maximum of **two** minutes.
 - If any clarification of what the questioner has said is required, the Chairperson will have the discretion to allow other Executive Board members to ask questions.
 - The questioner will not be permitted to participate in any subsequent discussion and will not be entitled to vote.
 - In the event of technical difficulties the Chairperson reserves the right to determine that in the interests of efficiency, questions will be read out on behalf of the questioner.

PLEASE NOTE FROM 1st MAY 2019 THE E-MAIL ADDRESS FOR SUBMISSION OF PUBLIC QUESTIONS IS 'public.questions@greatercambridge.org.uk'



Report To: Greater Cambridge Partnership Executive Board

1st October 2020

Report From: Councillor Tim Bick, Chairperson, Greater Cambridge Partnership Joint Assembly

FEEDBACK FROM THE JOINT ASSEMBLY MEETING 10th SEPTEMBER 2020

1. Overview

- 1.1. This report is to provide the Executive Board with a summary of the discussion at the Greater Cambridge Partnership (GCP) Joint Assembly meeting held on Thursday 10th September 2020. The Board is invited to take this information into account in its decision making.
- 1.2. The Joint Assembly noted the resignation of Jo Sainsbury and Dr John Wells. The University was in the process of identifying new representatives and it was anticipated that these appointments would be endorsed at the next Executive Board meeting (agenda item 4 refers). The Joint Assembly expressed thanks to former members.
- 1.3. Nine public questions were received. Four questions were accepted as they were in line with the Public Question Protocol and related to an item on the agenda. The remainder were not accepted for submission to the meeting as they were of a more general nature. They will be handled in the same way as routine correspondence, receiving a direct response from the relevant project officer.
- 1.4 Five reports were considered and a summary of the Joint Assembly discussion is set out below.

2. Greenways: Barton, Bottisham, Horningsea, Sawston and The Swaffhams

- 2.1 The Joint Assembly was supportive of the Greenways programme and supported proposals for the Barton, Bottisham, Horningsea, Sawston and The Swaffhams Greenways. Members raised a number of questions about the detail of the individual schemes and the main points are summarised below. In addition, a number of general points were raised, including the importance of making satisfactory provision for ongoing maintenance and the need to ensure that the planned 'quick wins' were compatible with other improvements recently announced by the County Council as part of its response to Covid-19.
- 2.2 Members also discussed the proposed timetable for progressing this work, noting the indicative high level delivery timeline, set out in Appendix 4 to the report, which suggested completion could be as late as March 2025. There was a general desire for the individual Greenways to progress as soon as practical. It was acknowledged that land acquisition would ultimately drive the timetable and that the preferred approach was, where possible, to access land by agreement. Members welcomed plans to accelerate the timetable where this was feasible, including making use of Compulsory Purchase Orders where a settlement could not be reached with landowners. It was however recognised that this was not a simple process and could take up to eighteen months to complete.

- 2.3 Noting consultation to date had focussed on the main options and routes, the Joint Assembly welcomed plans for ongoing consultation on the detailed design of the Greenway schemes. Several of the public questions referred to concerns from horse riders and it was important to ensure that the equestrian community was involved in this process. It was also suggested that where possible there should be engagement with Parish Councils, recognising their interest in road safety, which included making applications for Local Highway Improvement Funds. It would be good for there to be joined-up thinking on this, to improve efficiency and avoid doubling up on planned work. It was confirmed that members would have an opportunity to consider the outcome of this further engagement and the proposed response to it. Once the design phase for each project was complete, detailed proposals for each Greenway would be presented for endorsement/approval to the Joint Assembly and Executive Board. In response to the suggestion that it would have been helpful to have more detail on the budget breakdown for each Greenway, it was noted that at this stage only high level assessments were available. Future reports would contain costs based on detailed technical assessments.
- 2.4 Commenting on the Barton Greenway, plans to link with the Baulk Path and connections to Grantchester and other parts of the City were welcomed. However, reference was made to a recent article in the Times claiming that the A603 within Cambridge was the most dangerous road for cyclists in the country. Once the Baulk Path joined Grantchester Road, the route into Newnham was extremely dangerous for cyclists. There was no point in building a wonderful cycle route which ended abruptly at a dangerous road and it was hoped that consideration would also be given to adjoining roads, with a view to making sure they were equally safe for cyclists; although this did not necessarily have to form part of the Greenways work. This was a matter of concern not just for Barton, but also for Greenways generally.
- 2.5 Referring to a recent South Cambridgeshire District Council Planning Committee discussion, it was noted that concerns had been expressed about a lack of lighting along part of the proposed Sawston Greenway. It was suggested that as part of further work officers should consider how to address safety concerns along remote sections of this route.

3. Better Public Transport: Waterbeach to North East Cambridge

- 3.1 The Joint Assembly endorsed the Options Appraisal Report (OAR) as a basis to formally consult on the proposed route options for a segregated public transport route along the Waterbeach to North East Cambridge Corridor. Members discussed the outcome of the stakeholder engagement process and plans to progress the project. Details of the key points raised are summarised below.
- 3.2 Several comments were made about the linear nature of the route options and the importance of focussing on the big picture, taking account of travel patterns to determine where people wanted to travel to and providing connectivity where it was needed. The overall aim should be to facilitate access from local villages to main stations, big business parks and key employment sites. It would be important to take account of the needs of villages along the route, noting that several key transport projects 'missed out' a number of villages alongside the A10; both to the east [for example Horningsea and Fen Ditton] and to the west [for example Cottenham and Rampton]. The aim should be to establish a structured public transport system. Commenting on the suggestion from Smarter Cambridge Transport that the focus should be on rail, it was pointed out that trains on this route were already pretty congested and improvements to rail very slow to achieve. Therefore consideration of other options was the right approach.
- 3.3 Members welcomed plans to start formal consultation and looked forward to hearing what people had to say. It would be important to take a flexible approach in taking this forward and it was acknowledged that a single corridor may not ultimately be the right solution. If the outcome of the consultation demonstrated demand, a package of proposals on different routes could be considered. Following the Executive Board's decision to adopt a place based approach to consultation, officers were asked to ensure that new arrangements were in place to provide

collective feedback for the Joint Assembly and Executive Board, similar to that provided by the Local Liaison Forum Chairs. This was considered important to avoid a scenario where special interest groups and stakeholders felt the only way they could make their views known was to submit a public question or send letters direct to members.

3.4 Referring to the planned consultation, it was noted that there were a number of significant consultations in the pipeline which impacted on this corridor. This included consultation on the relocation of the sewage works as part of the North East Cambridge Plan and the future of the A10. It was important to ensure this activity was co-ordinated and the consultation on the options for the Waterbeach to North East Cambridgeshire Corridor took account of the potential implications of these and other related developments. The policies contained in the City Council's North East Cambridge Area Action Plan were also important given their support for a significant shift away from the private car towards sustainable travel and zero growth of vehicular traffic in the area. Early engagement with Planning Officers would be essential. It was also important to acknowledge that several factors outside GCP's control would potentially have a major impact on the scope of the proposals for this corridor. For example, if a big expansion in capacity of the A10 was approved, this would hamper plans to achieve significant modal shift. Close collaboration with relevant stakeholders would be vital.

4. Better Public Transport: Cambridge Eastern Access Project

- 4.1 The Joint Assembly endorsed the OAR as a basis to formally consult on the proposed route options for a segregated public transport route along the Cambridge Eastern Access Corridor. Members discussed the outcome of the stakeholder engagement process and plans to progress the project. Details of the key points raised are summarised below.
- 4.2 Commenting on the study area, identified for the purposes of consultation, it was important to recognise that congestion started much further out. Initial stakeholder feedback had focussed on cycling as the primary mode of travel and it was suggested that this could be because the focus of engagement had been on the area closest to the City Centre. Planned consultation would need to pick up views of those travelling in from much further afield. Even within the study area it would be important to engage with communities that may not appreciate that the proposals could impact on them; for example Cherry Hinton residents. Consultation should also cover ways of improving the public realm along Newmarket Road. Unlike earlier schemes where there was a need to protect what was already perceived as a pleasant environment, the focus here was enhancement. It would also be helpful to include an explicit commitment about protecting the greenspace at Ditton Meadows and Coldham's Common. This should be clear upfront so people understood this was not under threat.
- 4.3 The Joint Assembly welcomed planned improvements to this corridor, which was perceived as one of the worst for cyclists coming into the Cambridge. Elizabeth Way roundabout was a particular problem which was highlighted as a priority for urgent improvement. Members repeated comments made under the Greenways item about not presenting users with a dangerous obstacle at the end of a safe cycle route, which was also relevant to plans for Newmarket Road.
- 4.4. As with the previous item, members commented on the importance of linking this consultation with other plans, helping respondents understand that there were a number of interrelated proposals with co-dependencies. Engagement with the local planning authorities was critical, recognising plans for this corridor would be heavily influenced by any potential development at Cambridge airport, which had not yet achieved a place in the new Local Plan. While it would be remiss not to refer to rail as part of these discussions, it was important to recognise the costs associated with this were significant and a decision for Network Rail.

4.5 Members also repeated earlier comments about the process for handling consultation feedback and were interested to hear more about how future place based consultations would take place and how the outcome would be fed into Joint Assembly and Executive Board meetings.

5. Covid-19: Skills and Employment

- 5.1 The Joint Assembly was very supportive of the proposed skills work package designed to address the impact of Covid-19 on the local skills base and labour market. There was an urgent need to support people who had lost their job and young people trying to get into the job market. Members were complimentary of the work done and the speed with which this proposal had been put together.
- 5.2 Commenting on the scope of the proposed work, it was suggested there may be a role for GCP in setting up some form of 'local task force' to step in and provide support for employees when companies folded or where employers planned large scale redundancies. It was also suggested that in addition to work with Cambridge Regional College, consideration should be given to extending work to cover other colleges, including those on the edge of Greater Cambridge. Members acknowledged that things would in future look very different and it was suggested that research was necessary to track the emerging shape of the labour market. There would be a need for some focus on intelligence gathering, which could form part of this initiative.
- 5.3 Some members commented that the list of potential activities was very ambitious and questioned whether funds were sufficient to achieve all of this. It was suggested that if the aim was to respond to the impact of Covid-19, a more targeted/sector based approach was necessary. There was a discussion about the inclusion of primary school careers activities in the list and some members questioned whether this should form part of a plan in response to Covid-19.

6. GCP Quarterly Progress Report

- 6.1 The Joint Assembly noted progress across the GCP programme and endorsed the specific proposals relating to the Greater Cambridge Apprenticeship Service; the ongoing project to increase the capacity of the energy grid in the Greater Cambridge area; and development of a Greater Cambridge Recovery Strategy.
- 6.2 There was support for the energy grid work, recognising how important this was in working towards zero-carbon targets. A number of renewable energy projects had not happened simply because of the constraints of the grid. Care would need to be taken to ensure this work did not incorporate what was the statutory responsibility of another body. Members emphasised that payback over time was essential and it was important that work on the delivery model clarified how this would be achieved.
- 6.3 Referring to the proposed recruitment of two new careers advisors through the Greater Cambridge Apprenticeship Service, it was asked whether recruitment for a 12 month period was realistic given the task. Noting the proposals had included an assessment of the current job market, it was acknowledged that this would be tested through the recruitment process.



Growing and sharing prosperity
Delivering our City Deal

Report to: Greater Cambridge Partnership Executive Board

1st October 2020

Lead Officer: Peter Blake – Transport Director, Greater Cambridge Partnership

<u>GREENWAYS – BARTON, BOTTISHAM, HORNINGSEA,</u> <u>SAWSTON AND SWAFFHAMS</u>

1. Purpose

- 1.1 The creation of a network of Greenways is part of a strategy to encourage commuting by sustainable transport modes into Cambridge city from South Cambridgeshire villages, in a bid to reduce traffic congestion and contribute towards improved air quality and better public health. The project also provides opportunities for countryside access and leisure.
- 1.2 The purpose of the report is to provide an update on progress with developing the Greenways network, working with local communities and stakeholders, to report the outcome of recent public consultations and to present outline scheme details and budget proposals for the Barton, Bottisham, Horningsea, Sawston and Swaffhams Greenways.

2. Recommendations

- 2.1. The Executive Board is recommended to:
 - a) Note the progress made in developing the Greenways, working with local communities and stakeholders to date and the outcome of public consultations;
 - Approve the scheme proposals and note an outline budget of £10m for the Barton Greenway;
 - c) Approve the scheme proposals and note an outline budget of £5m for the Bottisham Greenway;
 - d) Approve the scheme proposals and note an outline budget of £2.5m for the Horningsea Greenway;
 - e) Approve the scheme proposals and note an outline budget of £9m for the Sawston Greenway;
 - Approve the scheme proposals and note an outline budget of £4.5m for the Swaffhams Greenway;
 - g) Approve £1.25m for the development of detailed scheme design in preparation for construction in 2020/21;
 - h) Approve the negotiation of the land and rights required for the delivery of the scheme;
 - i) Note the commitment to ongoing dialogue with local stakeholders as part of the scheme development process.

3. Officer Comment on Joint Assembly Feedback and Issues Raised

3.1. Details of feedback the Joint Assembly are set out in the report from the Joint Assembly Chairperson. This contains details of matters discussed at the recent Joint Assembly meeting and a summary of feedback.

3.2. The Joint Assembly supported the Greenways schemes and raised a number of general comments and questions on local design issues. These points will be addressed as part of the design process of scheme development.

4. Background

- 4.1 The creation of a network of Greenways is part of a strategy to encourage commuting by sustainable transport modes into Cambridge city from South Cambridgeshire villages, in a bid to reduce traffic congestion and contribute towards improved air quality and better public health. The project also provides opportunities for countryside access and leisure. A map showing all of the Greenways is attached as **Appendix 1**.
- 4.2 This programme takes on even greater importance in light of Covid-19 and the potential increase in commuters wanting to access active travel solutions for their daily journey to work as Covid-19 restrictions ease.
- 4.3 Greenways have the potential to significantly ease access to a range of sites, including planned housing and employment growth at Babraham Research Campus, Cambridge Biomedical Campus, Cambridge Northern Fringe, Cambridge Southern Fringe, Cambridge Science Park, Granta Park, Wellcome Trust Genome Campus and West Cambridge (collectively around 10,500 new homes and 19,000 new jobs between 2011 and 2031).
- 4.4.1 Early community engagement was undertaken on all 12 Greenway routes, with 22 events held, between July 2017 and April 2018, the results and ideas from which informed the options then taken to public consultation.
- 4.4.2 There was a phased approach to public consultation on the routes, starting in July 2018 and completing in October 2019, with a total of 21 events taking place. There were 564 responses to the Barton consultation. 87% of respondents supported the formation of the Greenways network. We received 777 responses to the Sawston consultation. 94% of respondents supported the overall formation of the Greenways network. The Bottisham, Horningsea and Swaffhams Greenways are geographically relatively close and they come together as one route as they approach the city from Fen Ditton. The routes were therefore combined into a single consultation exercise. We received 183 responses to the consultation. 87% of respondents supported the overall formation of the Greenways network.
- 4.5 Recommendations presented in this report are based on the preferences identified from the consultation responses as well as engagement with key stakeholders. Further stakeholder engagement and negotiation with landowners will be required to progress the detailed design of the routes.

5 Options and Proposals

Barton

- 5.1 Barton is located approximately 6km southwest of Cambridge across flat terrain and for cyclists it is currently served by shared use paths adjacent to the A603. Parts of the existing cycle route have already received investment and the percentage of residents that cycle to work is expected to have risen significantly from the 23% shown in the 2011 census.
- 5.2 Interventions including widening, improving surfacing and incorporating solar lighting in places along the path have been popular with many pedestrians and cyclists. The resulting increase in pedestrian and cycle traffic has led to calls to prioritise increased safety at

junctions, to improve the 'pinch points' along the route and to provide more attractive offroad routing where possible.

- 5.3 In network terms the Barton Greenway would link to the recently approved Comberton Greenway to the east via a recently constructed 'Quick Win' scheme and via a new link on the north side of Barton Road.
- 5.4 During the community engagement sessions, multiple route options were considered for the Greenway. Significant levels of support were identified for safety improvements where the Greenway crosses the northbound slip-road of the M11 and the Grantchester Road from Coton and the southbound slip-road at Junction 12. The bridge over the M11 was also considered to be a significant deterrent to use of the path as it stands and the proposal to widen the path was well supported.
- 5.5 The public consultation suggested a number of options for improvements and still allowed for alternative routes to be suggested. The consultation leaflet can be viewed at this link: <u>https://www.greatercambridge.org.uk/transport/transport-projects/greenways/barton-greenway</u>
- 5.6 Whilst improvements to the existing bridleway from Barton to Grantchester and the existing permissive path known as 'The Baulk' were well supported, significant concerns were also voiced about the potential environmental and visual impacts of upgrading the surface of these paths. The operational requirement of the Baulk path as a farm track and field access was also raised. Delivery of these links is likely to require significant further stakeholder engagement and consultation.
- 5.7 The recommendation is to approve the final route as shown in **Appendix 2**.
- 5.8 The proposed £10m budget will be used to complete the detailed design of the scheme, statutory processes including planning permission, and land procurement. At this stage it is felt that is sufficient to cover the construction costs to deliver all elements of the scheme.
- 5.9 The table below sets out the proposed details for each section of the Greenway, though these are subject to landowner agreement, road safety audit, planning and other statutory processes.

BARTON GREENWAY						
SECTION	PROPOSED FORM OF GREENWAY					
Barton Village	Connecting the recent 'Quick Win' link to Comberton to the east, there will be new signage and the route through Barton Village will include a reduced speed limit of 20mph combined with some new on-road traffic calming and widened and resurfaced paths to better accommodate high volumes of walking and cycling traffic.					
New Road/Cambridge Road Junction	A reconfigured junction incorporating new traffic lights and safer crossings on all arms of the junction.					
Barton to Grantchester (including link to the proposed Haslingfield Greenway)	3m wide new shared use path with a 3m wide grassed area on one side (for horse riders, joggers and ramblers). There are some trees which will be protected and may create localised narrow points. Landscaping will be used to minimise visual impact and will include pollinator promoting planting. As with other Bridleways in rural locations the surface material of this path will be decided during the detailed design phase of the project and key stakeholders will have the opportunity to guide this decision.					
'The Baulk' path to Grantchester	3m wide new shared use path with a 3m wide grassed area on					
Road	one side (for horse riders, joggers and ramblers). Landscaping					

	will be used to minimise visual impact and will include pollinator promoting planting. As with other bridleways in rural locations the surface material of this path will be decided during the detailed design phase of the project and key stakeholders will have the opportunity to guide this decision. It is noted that this path should be robust to accommodate some agricultural traffic as well as non-motorised users.
A603 Cambridge Road & Roundabout (M11N Slip Road)	A widened path and realigned approach path to a new underpass to safely bypass the existing motorway slip road crossing.
Bridge over M11	Reallocation of carriageway space over the M11 bridge to widen the shared use path and create a suitable separation strip from the carriageway. A reduced speed limit to 40 mph. Work with Highways England to design and install a new taller bridge parapet.
Barton Road/ Coton Road/ Grantchester Road Roundabout	A new smaller roundabout and a new underpass under Grantchester Road with realigned approach paths. The roundabout will retain two lanes and traffic flow capacity will be maintained.
Barton Road	Reallocation of carriageway space to widen the existing shared use path to 3m where possible and create a suitable separation strip from the carriageway.
Barton Road - Cambridge	Current cycle path to be resurfaced and widened where necessary, no trees will be removed and there will be opportunity for key stakeholders to influence the design, including landscaping and planting in some locations along this section. Priority crossings for Greenway users across side road junctions to improve safety and continuity for users. Junctions to be reconfigured to slow turning motor vehicles.

Bottisham, Horningsea and The Swaffhams

- 5.10 Bottisham is located approximately 10km from Cambridge. Horningsea is approximately 7km and the villages of Swaffham Bulbeck and Swaffham Prior are approximately 13km and 15km respectively. All of these villages are to the east or northeast of Cambridge across flat terrain and for cyclists they are all currently served by shared use paths of varying quality and widths adjacent to the carriageway. Parts of the existing cycle routes have already received investment including the highly regarded Quy to Lode path which also provides good access towards the National Trust's Anglesey Abbey. Some Greenways 'Quick Win' interventions to install solar stud lighting and to resurface and widen some sections of path have also been popular locally, however many other sections of the paths would still be considered substandard for use by significant numbers of pedestrians, cyclists or equestrians. The percentage of residents that cycle to work is expected to have risen since the 2011 census which showed levels of between 3% and 9%.
- 5.11 Substantial current and future growth to the east of Cambridge including the 'Wing' development site are expected to bring increased journey numbers for both commuting and leisure purposes and the Greenways would be well positioned to cater for increases in sustainable transport modes.
- 5.12 In network terms the Bottisham, Horningsea and The Swaffhams Greenways meet in Fen Ditton before continuing towards Cambridge where they would link to the Chisholm Trail (currently under construction), with Cambridge Station to the south and Cambridge North station just across the new Abbey-Chesterton bridge. The Greenway route continues onwards past the Green Dragon bridge and as far as the Riverside bridge with its link to Chesterton. This route provides an excellent off-road alternative to the A1303 (Newmarket Road).

- 5.13 During the community engagement sessions, a 'blank canvas' approach was applied to the three routes and the public was asked to tell us their preferences for route alignments. People were invited to identify where they experienced problems or barriers when walking and cycling. Whilst a large number of route options were identified, strong support emerged for off-road routes which were considered safer than mixing with motor traffic. Additionally improved surfacing, signage and lighting were identified as measures that would dramatically improve conditions for pedestrians and cyclists. Significant levels of local support were identified for some elements and sections of path. The Wadloes path in Fen Ditton and a section of NCN51 adjacent to the A1303, near Cambridge Airport, were subsequently widened and resurfaced and solar stud lighting was installed in appropriate locations as part of a programme of 'quick win' schemes undertaken in 2018/19.
- 5.14 The public consultation suggested a number of options for improvements and still allowed for alternative routes to be suggested. The consultation leaflet can be viewed via these links: <u>https://www.greatercambridge.org.uk/transport/transport-projects/greenways/bottisham-greenway</u> <u>https://www.greatercambridge.org.uk/transport/transport-projects/greenways/horningsea-greenway</u> <u>https://www.greatercambridge.org.uk/transport/transport-projects/greenways/horningsea-greenway</u> <u>https://www.greatercambridge.org.uk/transport/transport-projects/greenways/swaffhams-greenways</u>
- 5.15 The recommendation is to approve the final route as shown in **Appendix 3.**
- 5.16 The proposed £5m budget for Bottisham Greenway, £2.5m budget for Horningsea Greenway and £4.5m budget for The Swaffhams Greenway will be used to complete the detailed design of the scheme, statutory processes including planning permission, and land procurement. At this stage it is felt that these budgets are sufficient to cover the construction costs to deliver all elements of the three schemes to a high standard of provision.
- 5.17 The tables below set out the proposed details for each section of each Greenway, though these are subject to landowner agreement, road safety audit, planning and other statutory processes.

BOTTISHAM GREENWAY	
SECTION	PROPOSED FORM OF GREENWAY
Bell Road, Bottisham	New signage in the village to indicate the start of the route. 3m wide new shared use path set back from the road edge. Landscaping will be used to minimise visual impact and will include pollinator promoting planting. New raised-table feature to slow motor traffic entering the village and improve access onto the path.
Dunsley Corner – 'The Missing	Crossing point set back from the junction. Give way markings to
Sock'	give priority to those crossing. Landscaping around the junction
	to include pollinator promoting planting.
A14 Underpass	Widen and realign the southern approach to provide better visibility through the underpass. Upgrade lighting in the underpass. Kerb segregated path along the Quy Hotel access road with improved landscaping.
A1303 Newmarket Road	Widen and resurface existing path over Quy Water and with new signage and landscaping where possible. Set crossing point back from the junction at High Ditch Road with wide central island designed to slow motor traffic and enable priority for those crossing.
Airport Way to The Wing development	New direct path from Newmarket Road/Airport Way roundabout, into the Wing development cycle route.

Ditton Lane Underpass	New underpass underneath Ditton Lane directly linking the
	existing paths on both sides.

HORNINGSEA GREENWAY								
SECTION	PROPOSED FORM OF GREENWAY							
Horningsea Village	New build-out with landscaping to include pollinator promoting							
	planting. Raised table to calm traffic and provide safer transition							
	for cyclists between the road and the off-road Greenway path.							
Horningsea to the A14 including	Introduce soft landscaped verge to include pollinator promoting							
bridge at J34	planting. Further widening of the path on the west side of							
	Horningsea Road. Reallocation of carriageway space over the							
	A14 bridge at J34, to widen the shared use path and create a							
	suitable separation strip from the carriageway. Work with							
	Highways England to design and install a new taller bridge							
	parapet.							
B1047 Horningsea Road	Widen the shared-use path on the west side of Horningsea Road							
	to complete the 'missing link'.							
Fen Ditton Village	Work with the Church and local community to implement a							
	locally-led scheme to improve visibility of the Wadloes path							
	entrance and also improve the area at the entrance to Fen Ditton							
	Church to incorporate landscaping, planting and some							
	reallocation of road space while still accommodating turning							
	vehicles and those related to Church functions.							
Wadloes path to Ditton	Selective path widening, new signage and landscaping							
Meadows 'Bow Tie'	improvements.							
Ditton Meadows to Riverside	Continuation of 'quick win' resurfacing work to link to the							
Bridge	Riverside bridge. Signage in appropriate locations including at							
	the junction with the Chisholm Trail.							

THE SWAFFHAMS GREENWAY									
SECTION	PROPOSED FORM OF GREENWAY								
Swaffham Prior	New signage to indicate the start of the route in the village.								
	Reallocate road space to widen the existing path on the slip road								
	between High Street and the B1102. Slow motor traffic entering								
	the village by giving priority to pedestrians and cyclists.								
Swaffham Bulbeck	n Bulbeck A widened path over Gutter Bridge ditch. A new 3m wide pat								
	around the Green. A widened and surfaced route via the public								
	path beside Lordship Cottage. New 3m wide shared-use path								
	beside Commercial End to Green Bank Road								
B1102 Swaffham Road	Priority crossings on raised table traffic calming features, set								
	back from the junctions of Longmeadow and Lode Road.								
Anglesey Abbey	Work with the National Trust to create a safer crossing of Quy								
	Road whilst not compromising safety at the entrance to Anglesey								
	Abbey.								
Stow-cum-Quy	Following the preferred routing of the path detailed in Stow-								
	cum-Quy Parish Council's consultation response. Segregated								
	cycle lanes achieved by realigning the carriageway and								
	reallocating some road space. A new field edge link between the								
	end of Orchard Street and the entrance to Quy Mill access road.								

Sawston

5.18 Sawston is located approximately 11km to the south of Cambridge across mostly flat terrain and for cyclists it is currently served by several route options of varying quality including some sections of off-road cycle track, some shared use paths of varying quality and widths adjacent to the carriageway, as well as some on-road cycle lanes. Sustrans NCN11 route also currently signposts cyclists along some sections of minor road around Shelford Station with no current cycle specific infrastructure. Parts of the route towards Sawston have already received significant investment and the percentage of residents that cycle to work is expected to have risen significantly since the 9% indicated by the 2011 census data. Interventions including widening, improving surfacing and incorporating solar lighting along the path have been popular with many pedestrians and cyclists. The resulting increase in pedestrian and cycle traffic has led to calls to prioritise improvements to the 'missing links' along the route.

- 5.19 In network terms the Sawston Greenway would link to the Trumpington section of the Busway via the Addenbrookes Busway spur. It would also connect to the Linton Greenway to the east (via a recently constructed path through the Ninewells development), as well as linking closely to Hills Road as a route towards the City. To the south, the Greenway links to the Babraham Road path in Sawston and the NCN11 route which continues south linking to Whittlesford Station and beyond.
- 5.20 During the community engagement sessions, multiple route options were considered for the Sawston Greenway. Significant levels of local support were identified for improvements to the path alongside Cambridge Road, to the north of Sawston which enabled well over 200 students a day to travel to Sawston Village College using active travel modes despite the substandard path provision. Improvements were subsequently delivered as part of a programme of 'quick win' schemes installed in 2018/19. There are however still a number of improvements, missing links to nearby local centres and attractive off-road alternatives along the route which form part of the proposals in this report. Delivery of these links was considered to be a more involved process and require significant further stakeholder engagement and consultation.
- 5.21 The public consultation suggested a number of options for improvements and still allowed for alternative routes to be suggested. The consultation leaflet can be viewed at this link: <u>https://www.greatercambridge.org.uk/transport/transport-projects/greenways/sawston-greenway</u>
- 5.22 The recommendation is to approve the final route as shown in **Appendix 4.**
- 5.23 The proposed £9m budget will be used to complete the detailed design of the scheme, statutory processes including planning permission, and land procurement. At this stage it is felt that is sufficient to cover the construction costs to deliver all elements of the scheme to a high standard of provision.
- 5.24 The table below sets out the proposed details for each section of the Sawston Greenway, though these are subject to landowner agreement, road safety audit, planning and other statutory processes.

SAWSTON GREENWAY								
SECTION	PROPOSED FORM OF GREENWAY							
A1301 Sawston Bypass	New 3m wide shared use path along the western side of the							
	A1301, separated from the road with a verge.							
Cambridge Road, Sawston	Using the recently upgraded path, enable use of the path by							
	equestrians by incorporating a new crossing facility over the							
	1301 from Cambridge Road							
A1301 to Shelford Station via	3m wide new shared use path with a 3m wide grassed area on							
Dernford Reservoir and a route	one side where possible (for horse riders, joggers and ramblers).							
adjacent to the railway track	Includes a new 4m wide bridge over the river Granta.							

Existing NCN11 route through Stapleford	Improvement to existing National Cycle Network route 11 to include widened path on London Road, Stapleford to connect to existing signalised crossing which can be converted to a 'toucan' crossing facility.
Shelford Station	Station forecourt improvement scheme to incorporate a better road crossing and a direct connection through Mill Court.
Genome path	Widened to 4m with a grass verge maintained to one side.
Francis Crick Avenue and Cambridge South Station	Coordinate with the CSET's project, Cambridge South Station project and CBC to create a wider path segregated from motor traffic along Francis Crick with priority over entrances and side roads wherever possible.
Robinson Way and Long Road junction	 4m wide segregated pedestrian and cycle paths along Robinson way, utilising Long Road College land to provide separation from the carriageway. A new roundabout at the Long Road junction to match the recently opened Fendon Road roundabout with prioritised and segregated crossings for pedestrians and cyclists.

6 Financial Implications

6.1 The current outline budget is summarised below.

Greenway Project	Outline Budget £'000	2020-21 Budget £'000
Barton	10,000	250
Bottisham	5,000	250
Horningsea	2,500	250
Sawston	9,000	250
Swaffhams	4,500	250
Total	31,500	1,250

6.2 The schemes will now be taken forward to the detailed design stage and final scheme proposals and budgets with be put before the Executive Board in 2021.

7 Citizen's Assembly

- 7.1 Citizens' Assembly members developed and prioritised their vision for transport in Greater Cambridge. The range of solutions being considered for the Greenways projects directly contributes to the delivery of a number of priorities highlighted in the Report, namely and in prioritised order:
 - Be environmental and zero carbon.
 - Be people centred prioritising pedestrians and cyclists.
 - Enable interconnection (e.g. north/south, east/west, urban/rural).
 - Have interconnected cycle infrastructure.
 - Provide safe layouts for different users.
 - Educate people about different options.
 - Provide transport equally accessible to all.

7.2 The Citizens' Assembly voted on a series of measures to reduce congestion, improve air quality and public transport. Of the other measures considered, Assembly members voted most strongly in favour of Closing roads to cars (restricting cars in certain lanes, roads or zones) and Restricting or removing parking (prohibiting parking and/or removing parking spaces). These will be considered further as the schemes develop.

8 Next Steps and Milestones

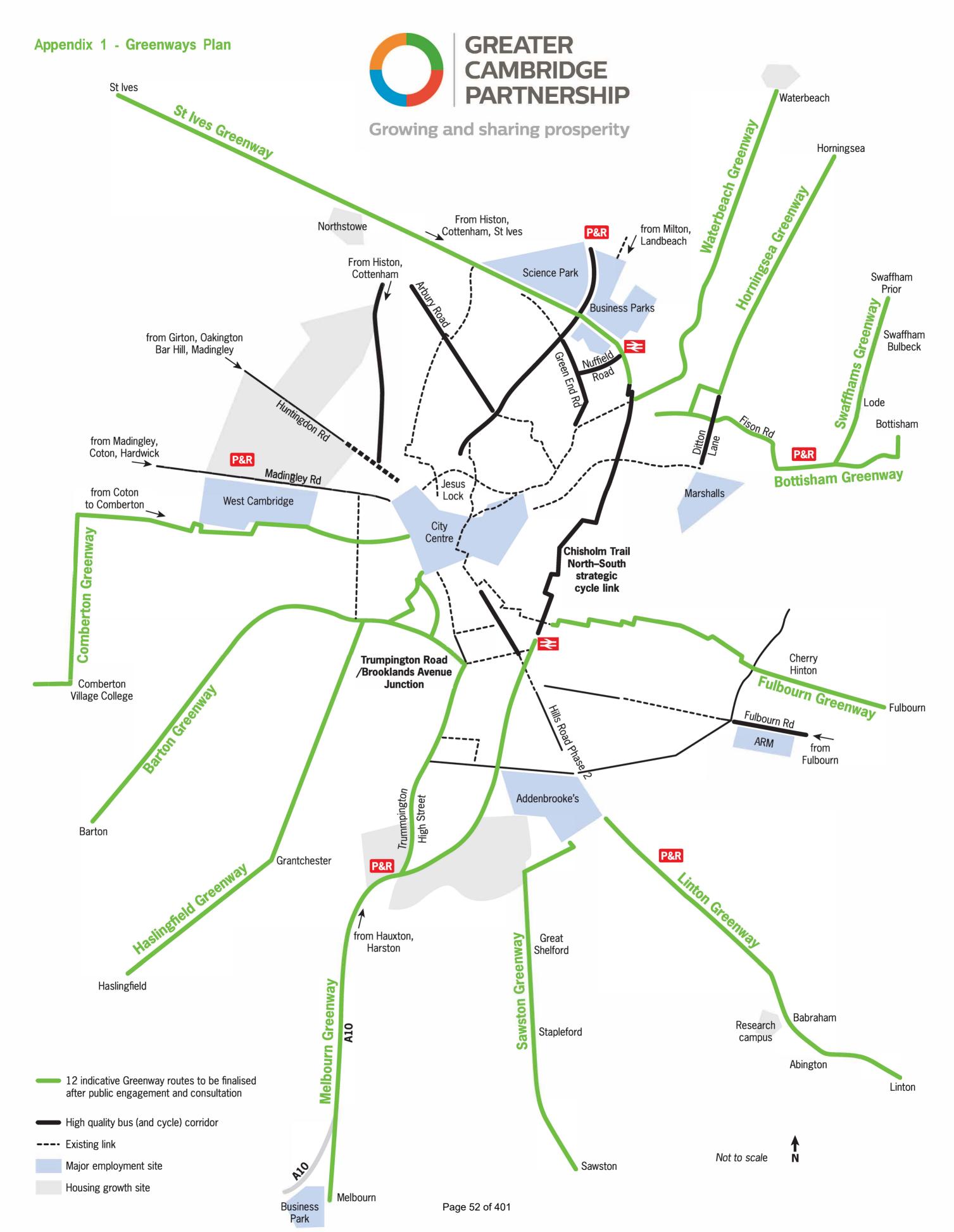
- 8.1. It is proposed to engage with statutory bodies, including Environment Agency, Historic England, Highways England and Network Rail along with stakeholders such as parish councils, Cambridge Past Present and Future (CPPF) and the Ministry of Defence (MOD) in readiness for statutory processes.
- 8.2. Land agents will be appointed to progress and complete land negotiations.
- 8.3. Consultants will be engaged to undertake detailed design and prepare packages for planning applications where required.
- 8.4. An indicative delivery timetable is outlined in **Appendix 5**. Officers continue to review the programme to reduce the delivery timelines where this is feasible.

List of Appendices

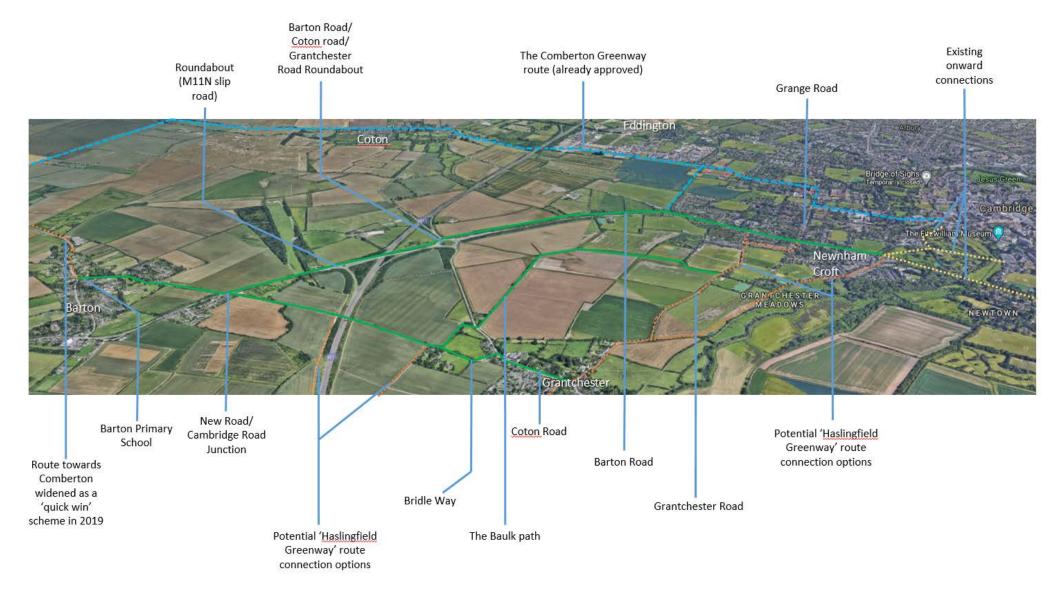
Appendix 1	Greenways Map
Appendix 2	Plan showing Barton Greenway, including key features, 'quick wins' already delivered and links to other routes.
Appendix 3	Plan showing Bottisham, Horningsea, The Swaffhams Greenway, including key features, 'quick wins' already delivered and links to other routes.
Appendix 4	Plan showing Sawston Greenway, including key features and 'quick wins' already delivered.
Appendix 5	Indicative High Level Delivery Timeline.

Background Papers

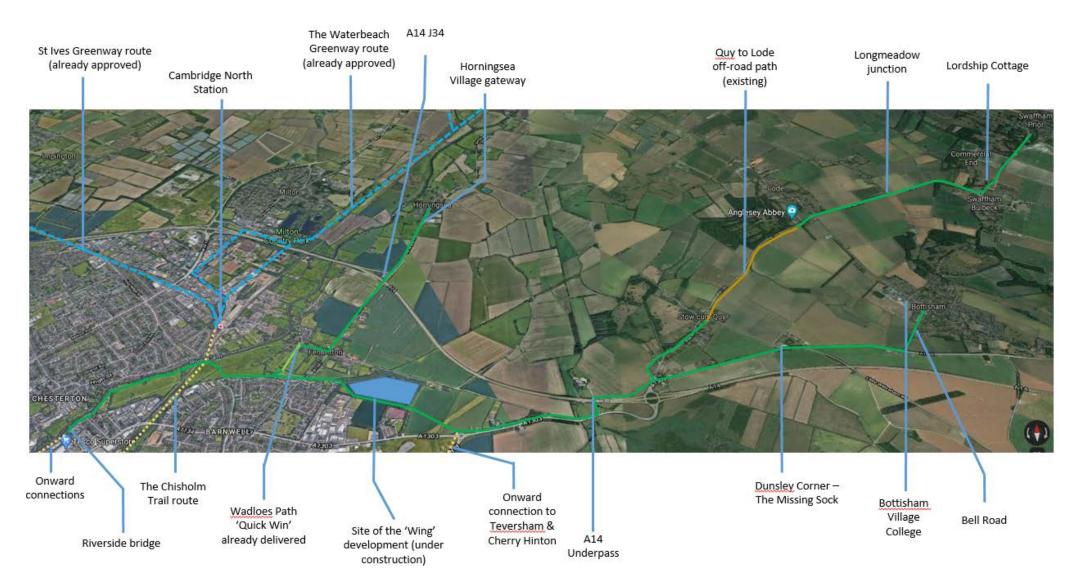
Greenways feasibility reports by Nigel Brigham and Associates, 2016	https://www.greatercambridge.org.uk/transport/transport- projects/greenways
Barton Greenways report	https://www.greatercambridge.org.uk/transport/transport- projects/greenways/barton-greenway
Bottisham Greenways report	https://www.greatercambridge.org.uk/transport/transport- projects/greenways/bottisham-greenway
Horningsea Greenways report	https://www.greatercambridge.org.uk/transport/transport- projects/greenways/horningsea-greenway
The Swaffhams Greenways report	https://www.greatercambridge.org.uk/transport/transport- projects/greenways/swaffhams-greenways
Sawston Greenways report	https://www.greatercambridge.org.uk/transport/transport- projects/greenways/sawston-greenway

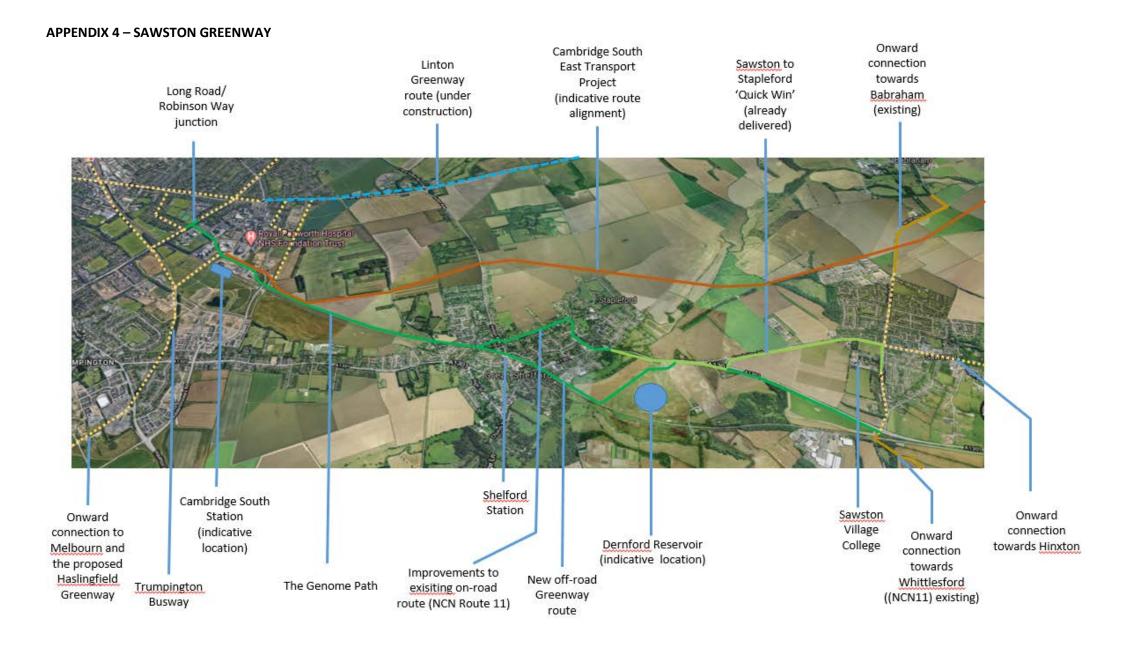


APPENDIX 2 – BARTON GREENWAY



APPENDIX 3 – BOTTISHAM, HORNINGSEA AND THE SWAFFHAMS GREENWAYS





APPENDIX 5 – INDICATIVE HIGH LEVEL DELIVERY TIMELINE

	Name	Start	Finish			202	21			2022				2023			202	4			2025
	Name	Start	FILISI	Q3	Q2	1 Q1	Q2	Q3	Q4	Q1 (Q2	Q3	Q4	Q1 Q2	Q3	Q4	Q1	Q2	Q3 (24	Q1 (
1	Project Set-up	01/07/20	30/10/20																		
2	Procurement of consultants	02/11/20	31/03/21																		
3	Develop detailed design	01/04/21	31/03/22				Č.]										
4	Land negotiations	01/04/21	31/03/23]			Ļ														
5	Network Rail planning and .	01/04/21	31/03/23				Ļ														
6	Env. surveys/ Impact Ass	01/04/21	31/03/23]																	
7	ECI Procurement	01/04/22	29/07/22							Ľ]		—				1			
8	Planning permission process	03/04/23	29/03/24									\downarrow						h			
9	Procurement of contractor	01/08/22	01/08/23]																	
10	Construction	01/04/24	28/03/25]																	
11	Completion	31/03/25	31/03/25																		ľ



Growing and sharing prosperity
Delivering our City Deal

Report to: Greater Cambridge Partnership Executive Board

1st October 2020

Lead Officer: Peter Blake – Transport Director, Greater Cambridge Partnership

BETTER PUBLIC TRANSPORT - WATERBEACH TO NORTH EAST CAMBRIDGE

1. Purpose

- 1.1. To provide an update on progress with the Waterbeach to North East Cambridge project, including feedback from pre-engagement with stakeholders.
- 1.2. To outline proposals for a series of integrated packages that will be the subject of consultation and further analysis and to seek approval for the proposed approach to deliver the project

2. Recommendations

- 2.1. The Executive Board is recommended to:
 - a) Note the outcome of pre-engagement activities (July/August 2020) and emerging stakeholder feedback.
 - b) Approve the Options Appraisal Report as the basis to formally consult on the proposed route options for a segregated public transport route.
 - c) Note the list of shorter term interventions that have been identified for further assessment, as set out in Section 7 of Appendix 1 of the report.

3. Officer Comment on Joint Assembly Feedback and Issues Raised

- 3.1. Details of feedback the Joint Assembly are set out in the report from the Joint Assembly Chairperson. This contains details of matters discussed at the recent Joint Assembly meeting and a summary of feedback.
- 3.2. The Joint Assembly discussed the issue of connectivity and set out the importance of demonstrating how this scheme will connect with existing public transport networks and how it will interchange with other transport modes. Officers agree that this will be of critical importance as the project moves forward, which are referenced in paragraph 5.2 below, and will ensure that these details are addressed.
- 3.3. The Joint Assembly also recognised the number of projects that are ongoing in this particular corridor and stressed the importance of linking in with these projects in order to ensure that we do not deliver our scheme in isolation. Officers agree with this point and will continue to engage with all stakeholders who are involved in delivering these other major projects in the area.

4. Background

- 4.1. The Waterbeach to North East Cambridge project was considered by the Executive Board at its meeting in February 2020. The Board recognised that the corridor is one of the key radial routes into Cambridge. It suffers considerably from congestion during peak times, particularly on the approach to Cambridge. There are also sites of planned or potential large development, such as Waterbeach barracks and Science Park expansion that will place considerable additional journey pressure on the corridor.
- 4.2. A previous study commissioned by the Greater Cambridge Partnership (GCP) looked at highlevel options for improving transport connections along the A10 between Ely and Cambridge. The Cambridgeshire and Peterborough Combined Authority (CPCA) is separately progressing a study focusing on highway improvements along the A10. The GCP work will focus on the requirement to undertake additional work on public transport and Non-Motorised Users (NMUs), including pedestrian, cycle and equestrian connections only.
- 4.3. The corridor has been identified as a priority project for developing public transport, walking and cycling improvements, linked to the development of proposals for a regional rapid mass transit solution. The scheme forms part of GCP's high quality public transport network and Phase One of the Cambridgeshire Autonomous Metro (CAM) as outlined in the Cambridgeshire and Peterborough Local Transport Plan. It is complimentary to planned upgrades of the railway infrastructure and also to the proposals to upgrade the A10 between Ely and Cambridge.
- 4.4. The options appraisal work that has been undertaken so far has identified a number of areas of search within the study area for new public transport and non-motorised links. These areas of search, as presented in the OAR in Appendix 1, formed the basis of a recent public engagement exercise. The feedback from this public engagement has led to a refinement of the options. Subject to approval by the Executive Board, it is planned to formally consult on the refined options, as presented in Appendix 4, in the autumn.

5. Key Issues and Considerations

- 5.1. The project is designed to develop measures to ensure that planned housing and employment growth can be accommodated without increasing levels of vehicular traffic on this northern approach to Cambridge by making public transport journeys more reliable and attractive. This is in line with the GCP's objectives, which include reducing congestion and encouraging people to use more sustainable forms of transport.
- 5.2. A new scheme could work in conjunction with other transport schemes and services to improve the connectivity between existing settlements in the surrounding area. The proposed scheme could feed into local links with adjacent settlements such as Horningsea, Cottenham and Histon, improving resident's connectivity to local high-quality public transport services. A scheme could also facilitate additional onward travel to and from Cambridge City Centre, areas of southern Cambridge including the Cambridge Biomedical Campus and further to the south, including London, via:
 - Existing railway services at Waterbeach and Cambridge North;
 - Existing bus services, such as the Stagecoach Citi 2, 9, Busway and Park and Ride service on Milton Road; and
 - The proposed CAM network.

- 5.3. The Waterbeach to North East Cambridge study area (see Appendix 2) forms part of the wider A10 Ely to Cambridge Corridor, which is one of the key radial routes into Cambridge from the north of the City. Existing congestion poses significant challenges in terms of future development along the corridor, in particular planned development to the north of Waterbeach and at North East Cambridge, located either side of Milton Interchange (see plan in Appendix 2) and as listed below:
 - a) New Town to the north of Waterbeach will include up to 11,000 new and other associated infrastructure and uses¹.
 - b) North East Cambridge has been identified for significant potential future development, including intensification of development at Cambridge Science Park and development of the land to the east of Milton Road, known as Cambridge Northern Fringe East, where HIF funding has been allocated for relocation of the existing sewage works. Between them these developments could provide up to 9,200 new homes and between 18,200 and 27,000 new jobs.
 - c) Alongside these major developments there are also a number of existing employment developments including Cambridge Research Park.
 - d) Cambridge Sport Lakes is planning a major development with rowing lakes and other public amenities. This covers a large area between Milton and Waterbeach.
 - e) Anglian Water is currently considering sites for the relocation of the wastewater treatment works in North East Cambridge. Two of their proposed options fall within our study area.
- 5.4. The options that have been investigated through the Options Appraisal stage include:
 - a) Segregated public transport rapid transit options (such as a transit way) with adjacent NMU/cycle/pedestrian track (route options need to consider cycle and equestrian needs along an adjacent track).
 - b) Integration with CAM.
 - c) On road bus priority options.
 - d) Connections for sustainable modes between Cambridge Northern Fringe East and Cambridge Science Park.
 - e) Cycle and pedestrian links including both strategic and local options (and consideration of other NMUs).
 - f) Measures to physically integrate into other City Deal proposals such as the Waterbeach Greenway and Chisholm Trail.
- 5.5. It is proposed to look at additional or relocated Park and Ride / Travel Hub capacity in a future stage of the project.
- 5.6. The options development has taken into consideration the work that is being undertaken by CPCA on developing options for upgrading the A10 between Ely and Cambridge.

6. Options

6.1. The options appraisal process is set out in detail in the OAR in Appendix 1 and is the first stage in developing the Strategic Outline Business Case (SOBC) for any transport intervention that is proposed.

¹ A Spatial Framework and Infrastructure Delivery Plan (SPD) for the site was adopted by South Cambridgeshire District Council in February 2019.

- 6.2 As part of the options appraisal work the consultants (Atkins) will also be reassessing the benefits of providing a segregated public transport route in this corridor rather than just enhancing existing on carriageway bus services. This is to confirm (or otherwise) that a segregated route remains the appropriate strategic approach to meeting the public transport challenges in this corridor.
- 6.3 The appraisal process that has been undertaken so far has identified 4 main areas of search for new segregated public transport and non-motorised links between the location of the new town at Waterbeach and North East Cambridge. These areas of search are shown in Appendix 4 and include East, West and Central options, as well as an option that closely follows the alignment of the A10.
- 6.4 In developing the SOBC further work will be undertaken to quantify the advantages and disadvantages of these 4 broad alignment options.
- 6.5 When looking at the 4 alignments it is worth breaking them down into the following sectors:
 - Northern Section (approach to the new town).
 - Mid Section (Journey between Waterbeach and the A14).
 - Southern Section (Crossing the A14 and Approach to North East Cambridge).
- 6.6 It is quite feasible that future analysis may lead us to replace a section from a given route option with that of one of the other options where it is shown to be advantageous to do so. The following paragraphs provide a brief summary of each of the 4 identified options and their relative advantages and disadvantages. The options are outlined in the Study Area Map in Appendix 2.

Western Option (green)

- 6.7 The western option originates adjacent to Cambridge North station and follows the Cambridge Guided Busway route under the A14 before turning north. The route would run roughly parallel to Mere Way and pass to the west of Landbeach before bearing east towards Waterbeach. It would need to cross the A10 before directly entering the New Town north of Waterbeach, terminating at the new railway station.
- 6.8 The southern section of the western option makes use of the existing Guided Busway infrastructure, most importantly, crossing under the A14. This section provides good access to North East Cambridge and Cambridge Science Park.
- 6.9 The section between the A14 and Waterbeach is very direct and is unconstrained but does not provide a good link with existing settlements. The non-motorised provision along this western route would be provided by an upgrade of the Mere Way path which is being planned and delivered by the developer Urban and Civic as part of their planning obligations in relation to the New Town at Waterbeach.
- 6.10 The approach to the New Town is relatively unconstrained although it requires a crossing of the A10 in the vicinity of the new roundabout that is proposed as part of the new town development.

Central Option (yellow)

6.11 The central option originates adjacent to Cambridge North station and follows the Cambridge Guided Busway route under the A14 before turning north east towards

Waterbeach. The route would cross the A10 to the south west of Waterbeach village before bearing north through to Denny End road, entering the new town from the south.

- 6.12 The southern section of this route makes use of the existing Guided Busway infrastructure, most importantly, crossing under the A14. This section provides good access to North East Cambridge and Cambridge Science Park.
- 6.13 The section between the A14 and Waterbeach would need to pass over or around Milton Landfill site. Early engagement with the landfill operators indicates that it is possible to pass over the Landfill but has raised a number of issues that would need to be considered and mitigated. There is potential for the central option to interact with the Milton Park and Ride site, and to pass close to the outskirts of Milton Village, thus improving links with the existing settlement. New cycling and pedestrian infrastructure would need to be considered alongside this route option.
- 6.14 The northern section of this route would cross the A10 near to Car Dyke Road. The route through Waterbeach provides a good link with the existing village and the Denny End industrial area, but the search area is relatively constrained.

A10 Option (orange)

- 6.15 The A10 option originates adjacent to Cambridge North station and follows the Cambridge Guided Busway route before turning north towards Cowley Road. The route would need to cross the A14 close to Jane Coston Bridge before turning west and crossing the A10 before bearing north along land to the west of the A10. We have proposed that this option crosses back over the A10 in the vicinity of Ely Road to the north of Milton before heading north to the west of the proposed sports lakes development. The route then reaches Waterbeach at Car Dyke Road to the south west of the village before bearing north through to Denny End Road, entering the new town from the south.
- 6.16 The southern section of this route offers excellent links to the North East Cambridge development and links to Cambridge Science Park. However, it is complex and may require demolition of several existing offices/warehousing as well as new crossings of both the A14 and the A10. There is potential for a more direct routing using a segregated alignment along Milton Road and through Milton Interchange; however, it is assumed that this would only be practical if there were separate proposals for major highway changes in this area and to the Milton interchange. This possibility will be reviewed as the current A10 study progresses.
- 6.17 The mid-section of the route would follow the route of the existing A10 and could be achieved through widening of the existing carriageway to provide space for a segregated route, or where this is not feasible, construction of a new route close to the A10 alignment. The route option would provide good links to both Milton Park and Ride, Milton village and the proposed sports lakes development. New cycling and pedestrian infrastructure would need to be considered alongside this route option.
- 6.18 The route north through Waterbeach provides a link with the existing village and with the Denny End industrial area, but the search area is relatively constrained.

Eastern Option (purple)

6.19 The eastern option originates at Cambridge North station and bears north through the eastern side of North East Cambridge, crossing the A14 south of Milton Country Park. The route traverses the borders of the Country Park on the eastern side, before heading north either to the east or west of the proposed sport lakes development. The route reaches

Waterbeach at Car Dyke Road to the south west of the village before bearing north through to Denny End Road, entering the new town from the south.

- 6.20 The southern section of this route would provide an excellent link to the North East Cambridge development, although would take up part of the valuable development area of the site. This option would require a new crossing of the A10; most likely a new underpass, although it shares this requirement with the proposed Waterbeach to Cambridge Greenway. A downside of this option is that it does not provide a good link with Cambridge Science Park.
- 6.21 The mid-section of the eastern route is very direct, and would enable future links with Milton County Park and the proposed sports lakes development.
- 6.22 The northern section of this route does not need to cross the A10, which is advantageous. The route north through Waterbeach provides a link with the existing village and the Denny End industrial area, but the search area is relatively constrained.

Public and Stakeholder Engagement

6.23 The engagement with key stakeholders has thus far been very positive with an acceptance that transport interventions are required along this corridor in order to facilitate the required growth. Likewise, the public engagement has been broadly positive and there appears to be a general understanding of the benefits that improving public transport could provide. Another key message that has come out of the public engagement is that it is imperative that we consider the walking and cycling infrastructure alongside any public transport improvements and that we also ensure that whatever is put in place provides good connectivity and interchange facilities.

7. Financial Implications

- 7.1 The project budget for 2020/21 is £236,000. This will cover all costs associated with the completion of the SOBC.
- 7.2 High level costs associated with the future development of the scheme will be developed within the SOBC. However, the total budget for the scheme is currently set at a figure of £52,600,000.

8. Citizen's Assembly

- 8.1 Citizens' Assembly members developed and prioritised their vision for transport in Greater Cambridge. The range of solutions being considered for Waterbeach to North East Cambridge directly contributes to delivery of 5 of the highest 7 scoring priorities, namely:
 - Provide affordable public transport (32).
 - Provide fast and reliable public transport (32).
 - Be environmental and zero carbon (28).
 - Be people centred prioritising pedestrians and cyclist (26).
 - Enable interconnection (e.g. north/south/east/west/urban/rural) (25).
- 8.2 In addition, the proposals have the potential to complement delivery of the other highest scoring priorities:
 - Restrict the city centre to only clean and electric vehicles (27).
 - Be managed as one coordinated system (e.g. Transport for Cambridge) (25).

8.3 The Citizens' Assembly voted on a series of measures to reduce congestion, improve air quality and public transport. Of the measures considered, Assembly members voted most strongly in favour of road closures, followed by a series of road charging options (clean air zone, pollution charge and flexible charge). These will be considered further as packages develop.

9. Next Steps and Milestones

- 9.1. This phase of the project culminates in the production of the SOBC for the scheme. The overall programme is shown in Appendix 5.
- 9.2. The next steps for this stage of the work are as follows:
 - Consultation November/December 2020.
 - SOBC finalised for consideration at the June 2021 Executive Board.
 - OBC to be finalised early 2022.

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Appendix 5	Programme

New Town North of Waterbeach to North East Cambridge Public Transport Study

Options Appraisal Report

Greater Cambridge Partnership

11 September 2020

Notice

This document and its contents have been prepared and are intended solely as information for Greater Cambridge Partnership and use in relation to New Town North of Waterbeach to North East Cambridge Public Transport Study.

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This document has 83 pages including the cover.

Document history

Document title: Options Appraisal Report Document reference: WTNECNTS

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
Rev 1.0	Issued for Comment	LB	SA	GH	GJ	20/12/19
Rev 2.0	Second Issue to Client	LI/LB	SA	GJ	GJ	19/08/20
Rev 3.0	Third Issue to Client	LB	AB	SA	GH	11/09/20

Client signoff

Client	Greater Cambridge Partnership
Project	New Town North of Waterbeach to North East Cambridge Public Transport Study
Job number	5192922
Client signature/date	

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1. Introduction

1.1. About the Study

Atkins has been commissioned by the Greater Cambridge Partnership (GCP) to undertake a study to explore the options to deliver the most effective public transport connections between the proposed New Town north of Waterbeach and North East Cambridge.

The aim of this study is to identify interventions in the corridor that contribute to local policy objectives to accommodate employment and residential growth without increasing motor traffic levels in Cambridge and the study area. In particular, the study seeks to identify a preferred transit corridor to integrate with the emerging Cambridge Autonomous Metro (CAM) proposals and to enhance walking and cycling infrastructure. The intention is to progress a Waterbeach to North East Cambridge Public Transport Scheme along this preferred corridor.

The study includes preparation of an Options Appraisal Report (OAR) (this document) which outlines the methodology of generating and assessing options for the route of this transport corridor.

1.1.1. Study Objectives

The study objectives set by GCP are as follows:

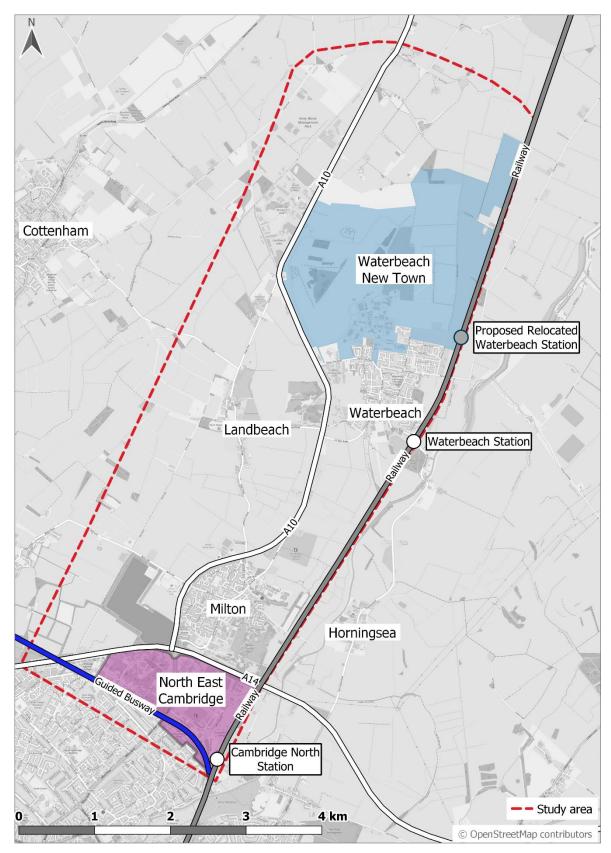
- 1. To identify a variety of deliverable options which will improve the reliability, safety, capacity and speed of sustainable transport connections between the proposed New Town north of Waterbeach and North East Cambridge. Measures should have the aim of reducing the number of vehicles driving into Cambridge and could include:
 - Segregated rapid transit options;
 - Bus priority measures;
 - Improvements to Park and Ride provision; and
 - Interchange capacity between car, bus, rail, CAM, walking and cycling.
- 2. To identify measures that allow for the relocation of Waterbeach rail station as part of the proposals for the New Town north of Waterbeach; however, the relocation of the station itself does not form part of the study;
- 3. To ensure provision for walking and cycling is inherent in all proposals;
- 4. To generate options that support the reduction of traffic levels in Cambridge to 10%-15% below 2011 levels, which equates to a 24% reduction from 2018 traffic levels;
- 5. To generate sustainable options that address transport demand from the proposed New Town north of Waterbeach and enable development at North East Cambridge to proceed;
- 6. To generate options for 'quick-wins' to address or resolve known problems to be deliverable over a period of one to two years; and
- 7. To improve connectivity between existing settlements and to work with Cambridgeshire County Council (CCC), Cambridgeshire and Peterborough Combined Authority (CPCA) and other stakeholders to identify the best package of measures aimed at ensuring connectivity is in place at the opening of new developments, thereby reducing the propensity for trips to be made by private car.¹

1.2. Study Area

The study area was determined by GCP and is shown in Figure 1-1. The study also takes account of schemes across a wider area where these could affect the selection of options for connections within the study area.

¹ Greater Cambridge Partnership (2019) New Town North of Waterbeach To North East Cambridge Public Transport Study Specification. [Pages 6 and 7]

Figure 1-1 - Study Area



1.3. Impacts of Covid-19

The Covid-19 pandemic has changed current travel behaviours, and as the UK comes out of lockdown some of these changes may continue into the future. Significant growth in the corridor is nevertheless still planned, which requires transport infrastructure to support increased travel. Therefore, there remains a need for a public transport solution that is accompanied by additional active travel infrastructure for the study area (see Chapter 2) in the longer term, irrespective of the short to medium term impacts of Covid-19 on travel demand.

Further technical development and assessment will continue to take account of the Covid-19 impacts, both as their eventual nature and scale become clearer, and by use of scenario testing to reflect any continuing uncertainties.

1.4. Structure of this Report

The remainder of this report is as follows:

- Chapter 2 describes the problems, challenges and need for intervention within the study area;
- Chapter 3 describes the future 'without scheme' case and potential scenarios;
- Chapter 4 describes the study objectives and intended outcomes;
- Chapter 5 describes the stakeholder engagement strategy;
- Chapter 6 describes commentary the option generation, sifting and assessment process;
- Chapter 7 identifies potential quick wins and complementary schemes; and
- Chapter 8 provides conclusions and recommendations.

This report shows the process leading to the recommendation on corridor options for further engagement with stakeholders and the public. That engagement, as anticipated in Chapter 5, subsequently took place in early and mid 2020. This report does not show the results of that engagement, which will be reported separately. However, Chapters 2 and 3 have been updated to reflect the main changes in the factual and policy context that have occurred in parallel with the engagement process.

2. Problems, Challenges and Need for Intervention

2.1. Introduction

This chapter outlines the existing and potential future transport issues and outlines the need for intervention within the study area, drawing on an evidence base consisting of previous studies and policy documents.

2.2. Existing Transport Networks

2.2.1. Local Highway Network

The local highway network includes the A10, which is the main highway connection between Waterbeach, the A14 and North East Cambridge. This route currently experiences considerable congestion during peak periods, particularly around Milton Interchange where the A10 and A14 converge.

The 2018 CCC Traffic Monitoring Report² reports a two-way traffic flow of 27,046 vehicles on Milton Road to the south of the A14 across a 12-hour period.

2.2.2. Local Bus Network

The main routes in the local bus network include:

- Stagecoach Citi 2, which during peak hours travels between Ely and Cambridge Biomedical Campus via Cambridge Research Park, Waterbeach, Cambridge Science Park and Cambridge City Centre.
- Stagecoach route 9, which travels between Ely and Cambridge City Centre, serving Cambridge Research Park, Waterbeach, Milton and Cambridge Science Park.
- The Milton Park and Ride service, which travels from Milton Park and Ride west of the A10 approximately 4km south of Waterbeach. The service operates with a 10 to 20-minute frequency and stops at Cambridge Science Park en route to Cambridge City Centre and at the Grafton Centre on the way back to Milton Park and Ride. After 18:30 any stop along the route can be requested, which includes local stops along Milton Road.

There is currently no bus priority infrastructure on the A10 to the north of the A14, although there are existing bus lanes on Milton Road. There are proposals to improve bus priority on Milton Road to the south of the study area as part of the GCP Milton Road project.

The Cambridgeshire Guided Busway (CGB) runs between St Ives and Cambridge North Station. It is currently used by busway services A, B and D which collectively serve Cambridge Science Park, Cambridge Business Park and Cambridge Regional College³.

2.2.3. Local Rail Network

Cambridge North and Waterbeach railway stations are located within the study area and provide connections to the wider UK rail network including London, Cambridge, Ely, Peterborough, Kings Lynn and Norwich. As part of the proposals for the New Town north of Waterbeach, the existing Waterbeach railway station is planned to be relocated further north to a site within the New Town. The full planning application⁴ for the new railway station was approved on 9th January 2020.

⁴ Planning application: S/0791/18/FL

² Traffic Monitoring Report 2018, Cambridgeshire County Council, <u>https://www.cambridgeshire.gov.uk/asset-library/imported-assets/Traffic%20Monitoring%20Report%202018.pdf</u>

³ Source: <u>https://www.thebusway.info/routes-times.shtml</u> and <u>https://www.thebusway.info/pdfs/tt/ABDR.pdf</u>. Correct at time of compilation.

2.3. Policy Background

A policy review has been conducted to understand the wider policy context and support for interventions within the study area. The policy documents that have been reviewed include:

- The South Cambridgeshire Local Plan (2018);
- The Cambridge Local Plan (2018);
- The Cambridgeshire and Peterborough Local Transport Plan (LTP) (2020);
- The Cambridgeshire LTP 2011-2031 (2015);
- The Cambridgeshire LTP 2011-2031: Long Term Transport Strategy (LTTS) (2015);
- The Transport Strategy for Cambridge and South Cambridgeshire (TSCSC) (2014);
- The Waterbeach Supplementary Planning Document (SPD) (2019); and
- North East Cambridge Area Action Plan (NECAAP) (2020).

Appendix A summarises the relevant policies.

The first key policy area of these documents is the extensive proposed growth in the study area. The Cambridge and South Cambridgeshire Local Plans identify a need for 33,000 homes and 44,000 jobs by 2031 and the study area has been identified as a key area in which to contribute towards this growth. The locations of these allocations and policies are shown in Figure 2-1. Key sites include:

- New Town north of Waterbeach (up to 11,000 homes⁵), identified under Allocation SS/6; and
- NEC (up to 17,000 new homes and 14,000 new jobs), identified under Allocation SS/4, Policy 15 and Policy E/1.

⁵ Urban and Civic website: <u>https://www.urbanandcivic.com/projects/strategic-sites/waterbeach-barracks/site-details</u> and RLW estates website: <u>http://www.waterbeach.co.uk/post.php?s=2018-06-05-planning-application-submitted-by-rlw-estates-for-up-to-4500-homes-at-waterbeach</u>

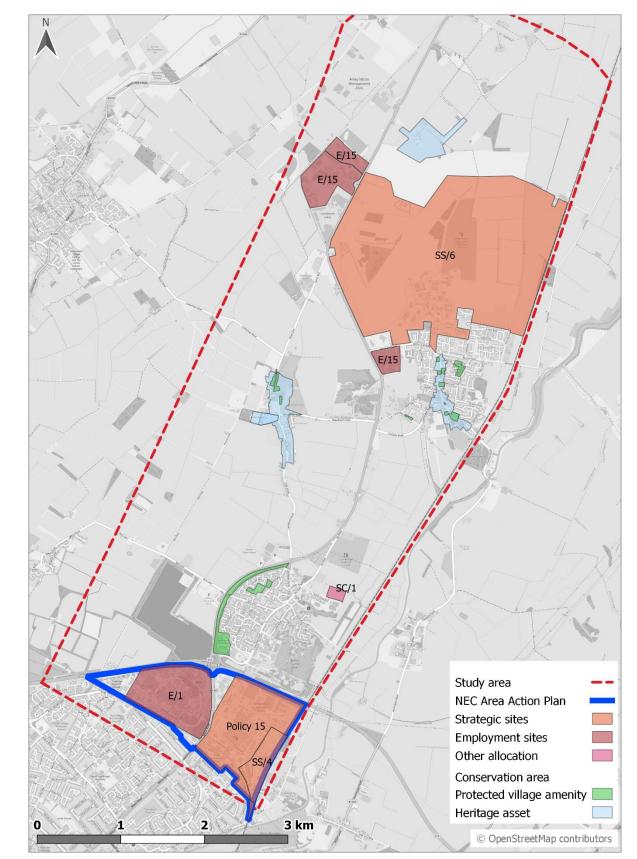


Figure 2-1 - Location of Key Allocation/Policy Sites

The second key policy area is the need for sustainable transport to address existing congestion and connectivity issues in the study area, and to enable this growth to occur. The CPCA LTP identifies that public transport, walking and cycling need to be enhanced to improve people's journeys into and around Greater Cambridge and reduce car dependency⁶. Figure 2-2 shows the key projects within Greater Cambridge from the CPCA LTP that aim to overcome the challenges faced by the Cambridge region.

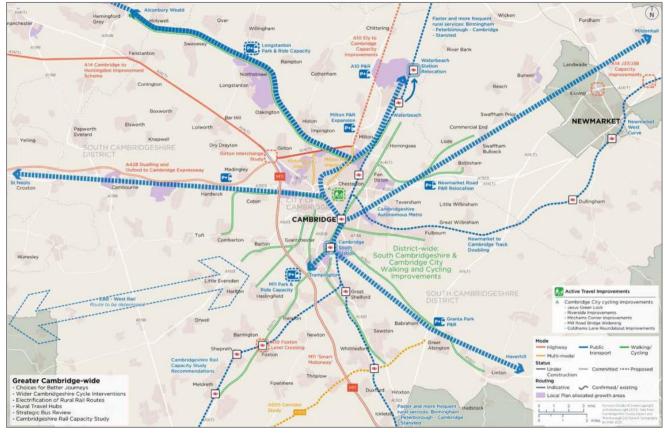


Figure 2-2 – Key Transport Projects in Greater Cambridge⁷

The public transport schemes represented in Figure 2-2 with the thick blue dashed line form the CAM network, one section of which will connect Waterbeach and Cambridge. A new Park and Ride on the A10 is also identified in the LTP, as is an expansion at the existing Milton Park and Ride site.

2.4. Evidence Base

Several previous studies have examined the constraints and potential transport options in this corridor. The previous studies that have been referred to are:

- Bus Strategy Bus Route Option Study (2009);
- A10 Transport Corridor Constraints Study (2012);
- Waterbeach Busway Options Study (2014);
- A10(N) Corridor Constraints Study (2016);
- Ely to Cambridge Transport Study Preliminary Strategic Outline Business Case (2018); and
- Ely to Cambridge Transport Study: Strand 2 New Town North of Waterbeach Transport Report (2018).

⁷ Cambridgeshire and Peterborough Combined Authority (2020) The Cambridgeshire and Peterborough Local Transport Plan [Page 95]

⁶ Cambridgeshire and Peterborough Combined Authority (2020) *The Cambridgeshire and Peterborough Local Transport Plan* [Page 94]

Appendix B summarises these studies, including the evidence base they provide and their findings.

2.4.1. Existing Corridor Constraints

Existing constraints in the corridor have been identified through assessment of previous studies. When considering potential transport options, the following main constraints need to be taken into account:

- Engineering constraints, including:
 - Any type of crossing over the A14, e.g. north of Cambridge Science Park or Cambridge Northern Fringe East;
 - Potential to fit through pinch-points such as the area north of Cambridge Road, Waterbeach;
 - Potential to accommodate a transit route to the east of Waterbeach alongside the railway without encroaching directly on local properties and the proposed sport lakes development;
 - The buildability of a transit route over the landfill site west of Milton; and
 - Any type of interaction with Milton Interchange, given the existing capacity issues experienced at the junction during peak periods.
- Environmental constraints, including the area south of Waterbeach being designated as green belt.
- A masterplan for North East Cambridge (NEC) is being developed and any option traversing the area will need to be coordinated with potential development proposals and existing buildings and transport infrastructure.

2.5. Summary of Problems, Challenges and Need for Intervention

This chapter has identified the problems, challenges and need for intervention within the study area, which are summarised in the following sections.

2.5.1. Existing Problems

There are three key challenges in the study area:

- **Proposed and allocated growth in the study area**: Local policies (including Local Plans) have identified a need for an additional 33,000 homes and 44,000 jobs by 2031, which would exacerbate transport capacity issues that are currently experienced during peak periods. Whilst it is recognised that there is a need for growth, the existing transport network is unlikely to be able to accommodate this without new sustainable transport infrastructure;
- **Congestion on A10 north of the A14 from Milton Interchange**: Current congestion on the A10 around Milton village causes journey time and reliability issues. The evidence base suggests that this issue is likely to be exacerbated when additional development (such as the New Town north of Waterbeach) is completed; and
- **Constraints on the eastern side of the study area**: Several previous studies (outlined in section 2.4) noted that the eastern side of the study area adjacent to the railway line has a number of constraints. These include the location of existing dwellings and proposed developments.

2.5.2. Need for Intervention

There is a clear need for intervention within the study area to:

- Accommodate additional growth: Additional growth proposed in the area is likely to result in worsened highway capacity issues in the future. To mitigate this, public transport infrastructure could provide faster and more reliable journeys for key travel markets along the A10 corridor and in north east Cambridge;
- Reduce dependency on private motor vehicles: There is little in the way of frequent, reliable and fast public transport links between Waterbeach and Cambridge and therefore there is currently a dependency on private motor vehicles to make these journeys. Interventions that increase north-south public transport links would reduce the dependency on private car for these trips; and
- **Supporting local policy and strategies**: Local plans and policies identify a need to reduce congestion and accommodate additional growth in the study area. The policies demonstrate that

the Waterbeach to Cambridge corridor is a key economic growth area and should be supported by the appropriate level of infrastructure.

2.5.3. Corridor Opportunities

To overcome the existing issues within the study area, there are opportunities to:

- Provide sustainable infrastructure directly servicing new developments and key travel markets;
- Encourage mode shift from private car to sustainable modes;
- Improve journey times and reliability within the study area corridor by public transport; and
- Accommodate growing transport demand in a sustainable way (via increased public transport and walking and cycling links).

2.5.4. Corridor Constraints

The main constraints are:

- Engineering constraints, including crossing the A14, and pinch points in existing built up areas;
- Environmental constraints, including use of green belt land; and
- Development constraints in planned layouts of NEC and the New Town north of Waterbeach.

3. Future 'Without Scheme' Case and Potential Scenarios

3.1. Introduction

This chapter sets out the future 'without scheme' case (Do Minimum scenario), which includes committed development and future development locations. Information in this chapter has been provided by GCP and outlines major aspirational, proposed and committed developments and transport schemes that will interact with the study area and any potential scheme.

3.2. Committed and Planned Developments

The New Town north of Waterbeach and North East Cambridge are two major mixed-used development sites located within the study area which would increase transport demand once constructed. These developments are set out in sections 3.2.1 and 3.2.2.

3.2.1. New Town North of Waterbeach

A proposed New Town north of Waterbeach, with up to 11,000 additional homes, is being delivered by two developers: Urban and Civic and RLW Estates.

Outline planning permission has been granted for the Urban and Civic site, comprising up to 6,500 dwellings in addition to business, retail, community, leisure and sports facilities, a hotel, new primary and secondary schools, and green spaces including parks, ecological areas and woodlands⁸. On 11th March 2020 a planning application for Key Phase 1, for the first 1,600 homes on the Urban and Civic site, was submitted⁹. A Design Code has also been approved for the development, which specifies the design requirements and guidelines for Key Phase 1¹⁰.

RLW Estates submitted a planning application on 30th May 2018 for a 4,500-dwelling development with business, retail, community, leisure and sports facilities, new primary and secondary schools and sixth form centre, and public open spaces including parks and ecological areas. This application is awaiting a decision¹¹.

The New Town north of Waterbeach will be serviced by transport links which have been considered within this study. Figure 3-1 shows the spatial framework for the New Town.

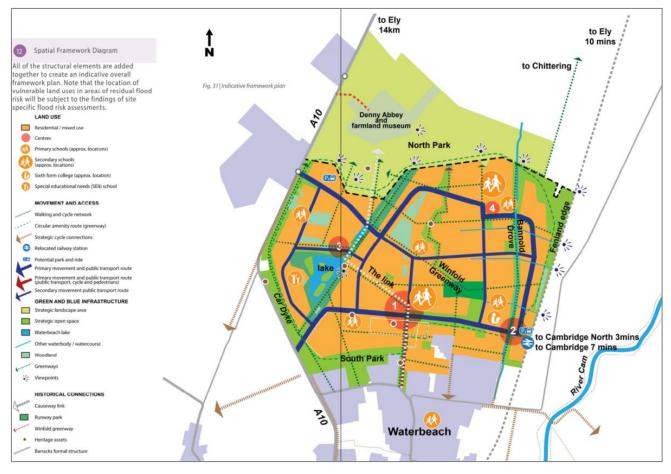
⁸ Planning application: S/0559/17/OL

⁹ Planning application: 20/01649/REM

¹⁰ Planning application: S/4383/19/DC

¹¹ Planning application: S/2075/18/OL

Figure 3-1 – Spatial Framework for the Proposed New Town North of Waterbeach¹²



3.2.2. North East Cambridge

NEC lies to the south of the A14 and comprises several sites, including (landowner or developer shown in brackets):

- Cambridge Science Park (Trinity College);
- Cambridge Business Park (The Crown Estate);
- Trinity Hall Farm Industrial Estate (Trinity Hall Farm / Dencora);
- St John's Innovation Park (St John's College);
- Chesterton Sidings (Network Rail / Brookgate / DB Schenker);
- Cambridge Regional College (Cambridge Regional College);
- Waste Water Treatment Plant (Anglian Water, plus some land owned by Cambridge City Council (CCiC); and
- Nuffield Road and Cowley Road Industrial Estates (various, including CCiC).

The Tarmac Aggregates facility also lies within the NEC boundary, but redevelopment is not anticipated due to its nature as a strategic freight handling location.

The existing site layout is shown in Figure 3-2.

¹² South Cambridgeshire District Council (2019) Waterbeach New Town: A Spatial Framework and Infrastructure Delivery Plan. Supplementary Planning Document [Page 72-73]

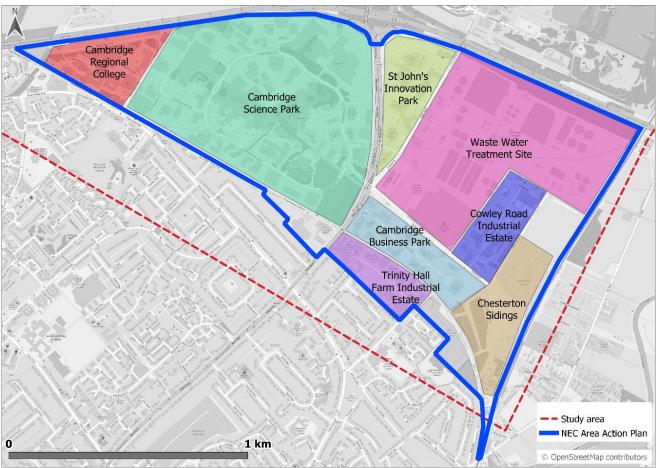
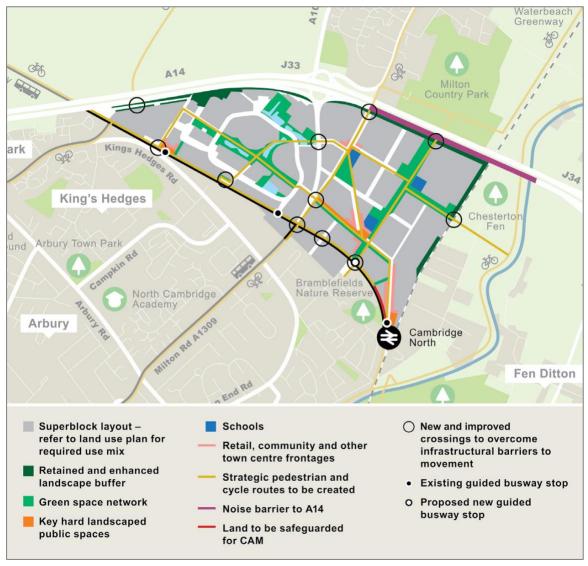


Figure 3-2 - Main Sites in NEC Proposals¹³

There are currently approximately 12,000 jobs across the existing sites. There are plans to intensify the area, providing an additional 18,200 to 27,000 jobs and between 5,500 and 9,200 dwellings. Despite this, the draft NECAAP states that there will be zero increase in traffic, which is being monitored by CCC officers.

The NEC area is currently served by local bus services, including the Milton Park and Ride service, and is proposed to be serviced by new transport links which have been considered within this study. Figure 3-3 shows the spatial framework plan, from the draft Area Action Plan published in June 2020.





3.3. Transport Demand

Whilst at this stage of the study the absolute transport demand for the corridor has not been quantified, it was important to consider the potential impact of future development on the existing transport network.

The scale of housing and employment for existing and future developments in the study area is shown in Table 3-1, and indicates the future broad level of demand for transport services. The figures provided in Table 3-1 have been obtained from a variety of sources including 2011 Census data and information provided by GCP.

¹⁴ Extract from Draft North East Cambridge Area Action Plan (2020) [Figure 10 on Page 39]

Development	Existing scale of development	Proposed scale of development
Waterbeach New Town ¹⁵		11,000 dwellings;
		25,500 sqm retail;
		39,800 sqm employment use;
		21,235 sqm leisure and
		community use
Waterbeach village ¹⁶	2,070 dwellings	
Milton village	1,765 dwellings (2011 census)	
Cambridge Research Park ¹⁷	41,660 sqm employment	315 sqm retail;
		27,885 sqm employment
Waste Water Treatment Plant	Approximately 44 ha	5,500 dwellings;
		3,700 sqm retail;
		23,500 sqm employment;
		5,700 sqm community use
Cambridge Science Park	160,000 sqm employment ¹⁸	1,000 sqm retail;
		109,969 sqm employment;
		100 sqm community use ¹⁹
St John's Innovation Park	24,137 sqm employment ²⁰	100 sqm retail;
		35,000 sqm employment
Cambridge Business Park	30,193 sqm employment ²¹	500 dwellings;
		1,500 sqm retail;
		68,000sqm employment
Trinity Hall Farm Industrial Estate and	22,443 sqm employment	550 dwellings;
Nuffield Road Industrial Estate		1,500 sqm employment
Chesterton Sidings		730 dwellings;
		1000 sqm retail;
		55,000 sqm employment;
		100 sqm community use
Cowley Road Industrial Estate		500 dwellings;
		17,500 sqm employment
Merlin Place and Milton Road Car Garage		220 dwellings

Table 3-1 – Levels of Housing and Employment in Existing and Future Developments

The residential developments alone could lead to an increased demand of around 17,000 person-trips in the AM and PM peak hours across all modes of transport²². Whilst not all these trips will be to or from Cambridge

¹⁶ Waterbeach Parish Council (2019) Waterbeach Neighbourhood Development Plan 2020 to 2031

¹⁷ Planning application S/4615/18/OL

- ¹⁸ Odyssey, on behalf of Trinity College Cambridge and Cambridge Science Park (2018) Cambridge Science Park Transport Strategy
- ¹⁹ Greater Cambridge Shared Planning (2020) North East Cambridge Draft Area Action Plan
- ²⁰ St John's Innovation Park (2020) St John's Innovation Park: Buildings <u>https://www.sjip.co.uk/buildings/</u> Site accessed 14th July 2020
- ²¹ Cambridge Business Park (2020) Cambridge Business Park <u>https://www.cambridgebusinesspark.co.uk/</u> Site accessed 14th July 2020

²² Based on estimates of trip rates from TRICS database, version 7.6.4

¹⁵ Planning applications S/0559/17/OL for Waterbeach New Town (west) and S/2075/18/OL for Waterbeach New Town (east)

or will use the full length of the corridor, a significant proportion are likely to do so. If no interventions are made, this will increase the demand in the corridor and could saturate areas of the existing transport network, such as the currently congested Milton Interchange. The relative scale of each development and the importance of being served by new transport infrastructure is discussed further in section 4.4, where the transport markets are considered.

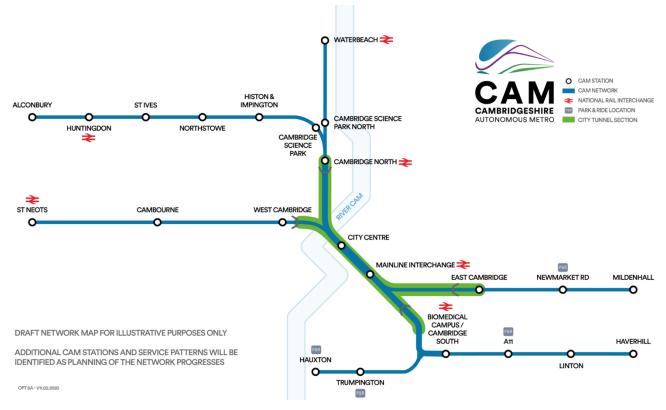
3.4. Transport Improvements

Several major transport schemes are proposed for the local area to improve transport connectivity in the study area and beyond. These are summarised in sections 3.4.1 to 3.4.5.

3.4.1. Cambridge Autonomous Metro

The Cambridge Autonomous Metro (CAM) is a CPCA project, set out in the LTP, that would provide highquality, high frequency services in the Cambridge region (including NEC). Delivery of CAM will be in collaboration with the GCP, with the first phase of CAM being high-quality, segregated public transport routes along key corridors, including between NEC and Waterbeach. This first phase of the CAM network will be served by electric vehicles, which will continue on-street into Cambridge City Centre prior to the opening of the tunnels under the City Centre. The proposed CAM network is shown in Figure 3-4.

Figure 3-4 - Proposed CAM Network²³



3.4.2. Committed S106 schemes

Following the grant of outline planning permission for 6,500 dwellings as part of the New Town north of Waterbeach, the Local Planning Authority and Urban and Civic agreed a Section 106 agreement for a number of transport improvements including:

- Milton: Advisory cycle lanes, signage and hatch markings on Cambridge Road in Milton;
- **Mere Way Cycleway Designs:** A shared use path will be built along Mere Way and the Roman Road, passing through Landbeach and on to the A10, where a walking and cycling bridge will cross

²³ CPCA (2020) What is CAM? https://cam.consultationonline.co.uk/the-proposals/ [Accessed: 02/09/2020]

the A10 and connect with a shared use path into the New Town and to the Greenway through the existing village of Waterbeach;

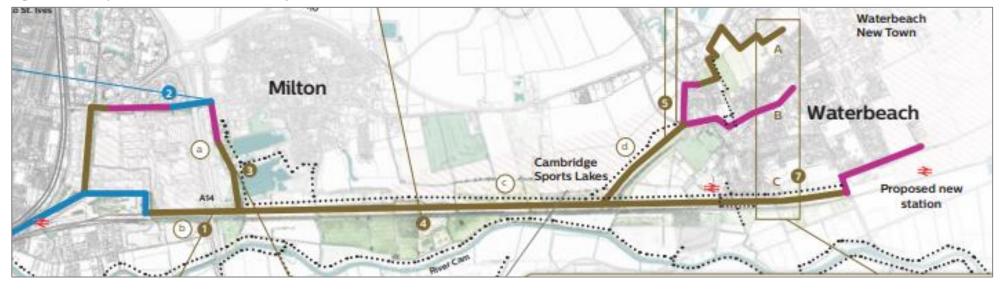
- **Bus services:** extension of the Milton Park and Ride bus service or a new service to link Waterbeach New Town and Cambridge, and a new bus service between Cambridge Research Park, Waterbeach Railway Station and Waterbeach New Town;
- A10 signalisation works (Landbeach Road/Humphries Way Junction): Traffic signals will be installed at the junction of the A10 with Landbeach Road and Humphries Road to manage demand. The A10 at the junction will also be widened to accommodate turning lanes; and
- **A10 Improvements at Butt Lane and Milton P&R Enhancements:** Widening the southbound lane on the A10 south of Butt Lane.

3.4.3. Greenways and Trails

There are two proposed Greenway and Trail Schemes that are within or connect to the study area:

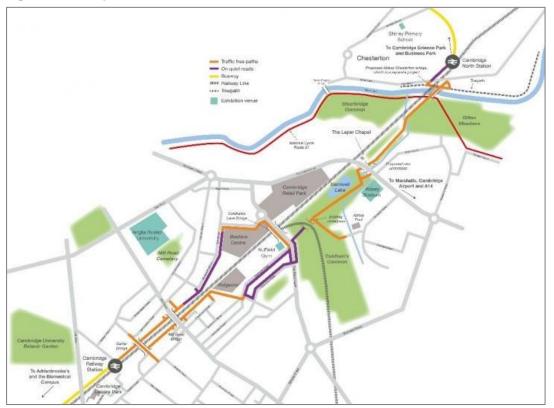
- Waterbeach Greenway: A paved shared use path with a grassed area to one side for horse riders, joggers or ramblers. The path will connect Waterbeach to NEC and run alongside the railway (Figure 3-5). A transit corridor option on the eastern side of the study area could tie in with the Waterbeach Greenway, with the greenway forming the parallel walking and cycling route; and
- **Chisholm Trail**: A committed walking and cycling route between Cambridge station and Cambridge North station which would improve the link between the proposed NEC area and Cambridge Biomedical Campus (Figure 3-6). The southern end of a sustainable transport corridor from Waterbeach to NEC would connect to the Chisholm Trail, extending the reach possible for people walking or cycling along either route. The section between Cambridge North Station and Newmarket Road is currently under construction and a new walking and cycling bridge across the River Cam is expected to be opened in Autumn 2020.

Figure 3-5 - Proposed Waterbeach Greenway Route²⁴



²⁴ Greater Cambridge Partnership (2019) Waterbeach Greenway Consultation Document

Figure 3-6 - Proposed Chisholm Trail Route²⁵



Other Greenway projects are being proposed, including the Horningsea and Swaffham Greenways. The Horningsea Greenway would start within 4km of Waterbeach and would be an alternative route to the east of Cambridge via Fen Ditton.

3.4.4. A10 Dualling

Several studies have considered dualling the A10 to the north of Cambridge to increase capacity and improve journey time reliability. Most recently the CPCA have commissioned a study on the A10, which is currently being undertaken in parallel to this study²⁶. The seven options presented in the first round of public consultation for the A10 study are:

- Predominantly online full length dualling, bypassing the key pinch points west of Milton and at Stretham (western bypass) and Little Thetford;
- Predominantly online full length dualling, bypassing the key pinch points west of Milton and at Stretham (eastern bypass) and Little Thetford;
- Offline dualling of the southern section to Cambridge Research Park in addition to the junction improvements;
- Full length, offline dualling;
- Maximise the extent of online dualling, whilst bypassing the key pinch points at Stretham (western bypass) and Little Thetford;
- Online dualling of the southern section to Cambridge Research Park in addition to the junction improvements; and
- Junction improvements only.

²⁵ <u>https://www.greatercambridge.org.uk/transport/transport-projects/chisholm-trail/</u>

²⁶ CPCA (2020) A10 <u>https://cambridgeshirepeterborough-ca.gov.uk/about-us/programmes/transport/a10/</u> Site accessed 14th July 2020

None of the options considered in this public transport study are dependent on any of the A10 dualling proposals, although there may be interfaces if both a public transport scheme and an A10 scheme come forward.

3.4.5. Rural Travel Hubs

Rural Travel Hubs (RTH) are proposed small, flexible interchanges located around South Cambridgeshire that would be connected to sustainable transport networks (public transport, walking and cycling), have cycle parking and a small amount of car parking. GCP and CPCA have agreed that RTHs are effective schemes that provide similar services to Park and Ride sites but on a smaller scale for surrounding villages.

3.4.6. Covid-19 Schemes

In response to the Covid-19 pandemic, GCP and CCC are currently implementing some experimental measures to support active travel and help meet transport demand while public transport capacity is reduced due to social distancing requirements²⁷. The measures currently planned within or near the study area are shown in Table 3-2.

Location	Measure
Ely Road, Milton	Prohibition of southbound motor vehicle movements from A10 to Ely Road to deter motor traffic routing through Milton village and provide better conditions for cyclists. Landbeach Road would remain available for local trips into Milton from the north.
Milton High Street	20mph speed limit, widened footway between White Horse and Lion and Lamb
Milton Park and Ride	Additional cycle parking spaces at the five Cambridge Park and Ride sites and the Longstanton Park and Ride site. This will allow for overnight parking of cycles used for Park and Cycle trips while social distancing limits Park and Ride capacity.
Butt Lane between Milton and Histon	Modal filter on Butt Lane to the west of entrance to Household Waste Recycling Centre
Cowley Road, Cambridge	Remove car parking on east side to segregated cycleway from shared use path allowing more space for social distancing.
Milton Road	Temporary on-road cycle lanes to encourage cycling on road rather than on narrow shared use path, facilitating social distancing. South of Gilbert Road: Modal filter, allowing bus / cycle / emergency services access.

Table 3-2 - Experimental Covid-19 Measures Located in or near the Study Area

Source: Online map by Cambridgeshire County Council (as at time of compilation, early August 2020)

3.5. Waterbeach Station / Development Alternative Scenario

There is uncertainty over the delivery and timing of RLW Estates' proposals and the relocation of Waterbeach railway station. To reflect this, an additional scenario, known as the Alternative Do Minimum scenario, will be assessed which assumes these proposals and the station relocation would not take place.

This alternative scenario does not affect the assessments described in this report but will be considered during the subsequent Strategic Outline Business Case (SOBC) stage of this study.

3.6. Summary

This chapter outlines the proposed developments within the study area that represent the 'without scheme' case (or Do Minimum scenario). This includes two major developments (New Town north of Waterbeach and NEC) and several transport schemes such as CAM, S106 improvements for the New Town north of Waterbeach development, the proposed Greenways schemes and A10 dualling. A summary of the Do Minimum scenario is shown in

²⁷ Proposed experimental measures shown in map form at: <u>https://www.google.com/maps/d/viewer?mid=1RJibWG1JzrKmsOnXITAyYSOE5GhEZaOl&utm_medium=email&utm_so_urce=govdelivery&ll=52.23109402854997%2C0.1585592859008278&z=13</u> Table 3-3.

Table 3-3 - Do Minimum Scenario

Intervention / assumption	In Do Minimum?
Waterbeach Greenway	Yes – preferred route approved by GCP
Approved Waterbeach development and its S106 commitments	Yes
A10 junction enhancement schemes	Yes – the Waterbeach Phase 1 development schemes (used as a proxy for final situation)
A10 dualling	No – but taking account of it as part of context
RLW development and Waterbeach station relocation	Yes, plus a sensitivity scenario with neither of these
NEC Area Action Plan	Yes, for its urban realm assumptions
Cambridge South station	Yes
Chisholm Trail	Yes
Bottisham / Swaffhams / Horningsea Greenways	Yes
Local Plan growth sites	Yes
Higher Growth Scenario	Yes – for numeric purposes. This scenario is being used to test all GCP schemes and CAM
Choices for Better Journeys	No specific assumption at this stage If required, use existing CSRM proxy test as a sensitivity test Revised CSRM Do Minimum scenario, with other GCP schemes in place, complete summer 2020
Bus network changes and policies	Liaison required with CPCA on future bus policy

4. Required Outputs and Outcomes

4.1. Introduction

This chapter sets out the scheme objectives and intended outcomes of the project, which have been agreed by GCP.

The scheme objectives set by GCP are as follows:

- 1. Provide additional sustainable transport capacity to provide for the transport demands of economic and housing growth;
- 2. More reliable journey times by public transport;
- 3. More journeys along the corridor being undertaken by public transport; and
- 4. More short journeys along the corridor being undertaken by walking and cycling (because people feel safer and have direct routes between origins and destinations).

For the purposes of assessing options for this study, these overarching objectives have been developed in more detail, into a set of outputs and a set of outcomes. These have been outlined in the following sections.

4.2. Transport Outputs

The agreed transport outputs were set out in the Appraisal Methodology Report (AMR) and represent the desired infrastructure capabilities. The transport outputs are:

- Sufficient **sustainable transport capacity** with appropriate frequencies to meet the additional demand for travel due to jobs and housing growth;
- High standards of public transport speed, reliability and safety between the New Town north of Waterbeach and NEC (and beyond); and
- High standards of **infrastructure for walking**, **cycling and other non-motorised modes** of travel between the New Town north of Waterbeach and NE Cambridge, including providing as direct routes as possible.

4.3. Transport Outcomes

The transport outcomes are the outcomes which any investment recommended by the study should seek to achieve. The outcomes agreed for this study, which reflect the 'study objectives' set in the brief, are:

- A higher share of journeys along the corridor being made by public transport;
- A higher share of short journeys being made by walking and cycling;
- A smaller share of journeys in the corridor being made by private car;
- Fewer vehicles driving into Cambridge (compared to 2011 levels); and
- Improved perceptions of safety.

4.4. Travel Markets

Several key travel markets have been identified. The main ones involve trips to or from the following key locations within the study area (listed from north to south):

- Waterbeach (including the proposed New Town north of Waterbeach);
- Milton village;
- The North East Cambridge area, including Cambridge Science Park; and
- Cambridge North station.

Figure 4-1 highlights the travel markets that will be serviced by new transport links proposed in this study and summarises onward travel links. It should be noted that:

- The central green line shows the overall improved connections required from the project. The black lines and text show the main types of trip that these connections aim to serve;
- Figure 4-1 does not necessarily imply a single, linear intervention. The requirements could potentially be met through a combination of sustainable travel corridors and does not imply a single public transport route covers all markets;
- Orange circles represent key areas to be connected and not individual 'stops' or entry/exit points; and
- Dotted lines and grey italic text show potential additional synergies to be considered.

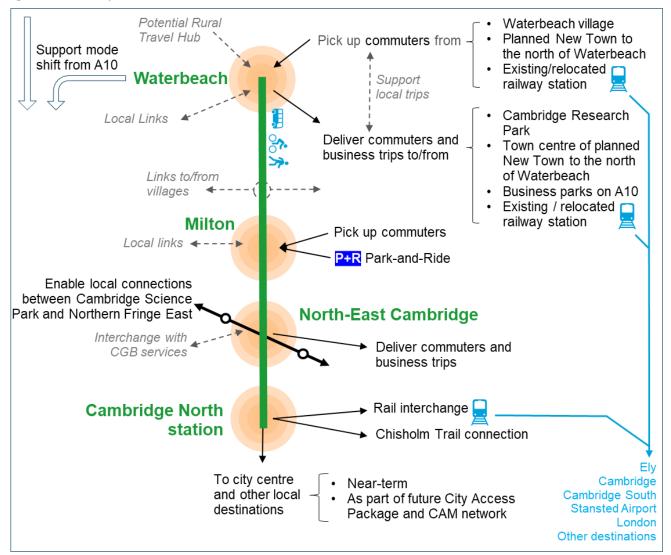


Figure 4-1 - Study Area Travel Markets

As shown in Table 3-1, the markets served by new transport links vary in size. The proposed New Town north of Waterbeach (11,000 dwellings and 40,000 sqm of employment use) and NEC area (8,000 dwellings and approximately 330,000 sqm of employment use) represent the largest markets within the area.

Whilst the existing Waterbeach and Milton villages represent smaller markets, they account for approximately 4,000 dwellings and therefore proposed transport schemes should aim to service these villages where possible.

4.4.1. Onward Travel and Wider Connectivity

A new scheme could work in conjunction with other transport schemes and services to improve the connectivity between existing settlements in the surrounding area. The proposed scheme could feed into local links with adjacent settlements such as Horningsea, Cottenham and Histon, improving resident's connectivity to local high-quality public transport services.

A new scheme could facilitate additional onward travel to and from Cambridge City Centre, areas of southern Cambridge including the Cambridge Biomedical Campus and further to the south, including London, via:

- Existing railway services at Waterbeach and Cambridge North;
- Existing bus services, such as the Stagecoach Citi 2, 9, Busway and Park and Ride service on Milton Road; and
- The proposed CAM network (see Section 3.4.1).

Links to the CGB and local railway networks also mean that commuters from Ely, St Ives, Peterborough, the wider Cambridgeshire area and Norfolk can access local employment sites, such as Cambridge Research Park and NEC.

5. Stakeholder Engagement Strategy

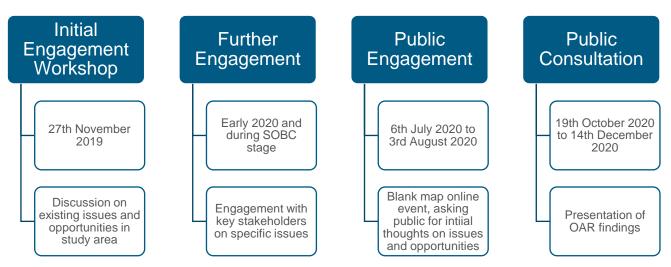
5.1. Introduction

This chapter sets out the stakeholder engagement strategy. It includes details of the first engagement workshop that took place on 27th November 2019 and further events that are due to take place over the course of the project. Stakeholders for the scheme are also identified.

5.2. Stages of Engagement

Figure 5-1 shows the completed and planned stages of engagement during the course of the study. GCP is preparing a full stakeholder engagement plan.

Figure 5-1 - Stakeholder Engagement Stages



Each engagement event will be tailored to those who are attending, and outcomes of those meetings will inform the SOBC assessments. Quick wins identified in the stakeholder engagement process to date have been noted and outlined in Chapter 6.

5.3. Summary of Stakeholder Engagement Workshop (27.11.19)

The first stakeholder engagement workshop was held on 27th November 2019 at Waterbeach Barracks. The purpose was to understand stakeholders' views on the existing issues, constraints and opportunities within the corridor. The stakeholders in attendance were:

- Milton Parish Council;
- Cambridge Area Bus Users;
- Greater Cambridge Shared Planning;
- South Cambridgeshire District Council;
- Ely Cycling Campaign;
- Waterbeach Parish Council;
- Cambridge Sport Lakes Trust;
- Camcycle;
- Milton and Waterbeach residents;
- Stagecoach;
- Waterbeach Cycling Campaign; and
- British Horse Society.

The key outputs from the stakeholder engagement event were:

Existing Challenges

- Congestion affecting not only car travel but also the reliability of buses;
- The limited frequency of local buses can be a barrier to travel;
- Some walking and cycling paths within the corridor have not been maintained well;
- The railway service between Waterbeach and Cambridge is considered to be under-exploited; and
- There are current issues around Waterbeach with informal parking.

Public Transport Opportunities

- There is currently no signage/real time passenger information at or around stops;
- There is a lack of bus priority within the corridor;
- There is a need for reliable and fast public transport through the corridor, requiring both an increase in overall service levels and segregation from traffic congestion;
- There are two distinct public transport needs: a 'core' transit service to/from Cambridge, on a rapid and segregated route, and a more localised service within the Waterbeach area to serve individual neighbourhoods;
- Public transport could be subsidised to encourage mode shift from private vehicles;
- Access to existing busway could be improved from Cambridge Science Park;
- Additional parking close to the busway could reduce car mode share within Cambridge City Centre; and
- Additional trains could alleviate congestion on inbound trains to Cambridge in the AM peak.

Opportunities for Walking and Cycling

- Segregated walking and cycling links are preferred if in close proximity to other infrastructure (to improve perceived levels of safety)
- Additional A10 crossing points to improve east-west links;
- Opportunities for improved walking and cycling routes between Horningsea and Waterbeach (outside the current study area);
- An overall need to improve walking and cycling access to/from Waterbeach in all directions; and
- Improve perceived safety levels between Cambridge North railway station and CGB.

5.4. Summary of Stakeholders, How Engaged and Their Role

Table 5-1 summarises the key stakeholders as identified by GCP and any areas where they have a particular role within this project.

Table 5-1 - Summary of Key Stakeholders

Stakeholder	Role within Project
A10 Ely to Cambridge project team	Potential synergies or conflicts between both studies. One project may be dependent on the other in some respects, depending upon options being taken forwards.
Bus operators	Existing and potential providers of services within study area Agreement to be sought regarding operations of potential scheme
Business organisations	
Cambridge Ahead	Stakeholder
CAM project team	The Waterbeach to North East Cambridge public transport corridor forms part of CAM network.
Cambridge North East Land Owner Forum	Stakeholder
Cambridge Northern Fringe East	Potential for transit route to traverse Cambridge Northern Fringe East land Agreement to be sought regarding operations of potential scheme through land
Cambridge Past Present and Future	Stakeholder
Cambridge Research Park	Potential service could originate/terminate in Cambridge Research Park Agreement to be sought regarding operations of potential scheme through land
Cambridge Science Park	Potential for transit route to traverse Cambridge Science Park land Agreement to be sought regarding operations of potential scheme through land
Cambridge University	Stakeholder
Cambridgeshire County Council (Local Highway Authority)	Statutory consultee with any proposed planning permission within the study area
Camsight and groups which represent people with limited mobility or a sensory impairment and wheelchair users	Stakeholder
Commuters	
Councillors (local)	Councillors to provide approval for scheme.
Councillors (wider)	Statutory consultee with any proposed planning permission within the study area
Cambridgeshire and Peterborough Combined Authority (Local Transport Authority)	Scheme will aim to satisfy key stakeholder policies Consultee with any proposed planning permission within the study area
Emergency services	Statutory consultee with any proposed planning permission within the study area
Environmental groups	Stakeholder
GCP Executive Board	Project to be approved by GCP Executive Board

GCP Officers for other GCP Schemes	Provision of wider GCP project information and tie in with parallel projects	
Greater Cambridge Planning Service	Consultee with any proposed planning permission within the study area	
Highways England	Statutory consultee with any proposed planning permission within the study area	
GCP Joint Assembly	Consultee with any proposed planning permission within the study area	
Landowners	Stakeholder Negotiations may be required for potential land take (subject to proposed routes)	
Local businesses		
Local campaign groups		
Local developers	Ctalcabaldar	
Local residents	Stakeholder	
Media		
MPs	1	
Network Rail	Statutory consultee with any proposed planning permission within the study area Potential interaction if any schemes involve or are close to the railway	
Derich Courseile	Statutory consultee with any proposed planning permission within the	
Parish Councils	study area	
Park and Ride		
Residents' Associations		
Schools		
Smart Cambridge	Stakeholder	
Technical consultants		
Transport user groups		
Utility companies		
Youth groups		

6. Option Generation, Sifting and Assessment Process

6.1. Introduction

This chapter outlines the methodology employed and the findings of the option generation, sifting and assessment processes. This phase of the study was broken down into three stages:

- 1. The option generation stage identified possible options that had the potential to meet the objectives and deliver the outcomes of the study. Option generation was not constrained by the findings of previous studies (see section 6.2).
- 2. Identified options went through a sifting stage, where each was evaluated using a specific set of criteria to ensure that the transport objectives of the study could be met. Options that were unable to meet these high-level criteria were discarded at this stage (see section 6.3).
- 3. The final stage was to undertake a more detailed assessment of the options remaining, assessing their fit against each transport objective and outcome, and engineering and environmental constraints. This assessment fed in to a Multi Criteria Assessment Framework (MCAF) to record the evidence and score each option against the criteria. From this, sets of options were considered in combination to provide corridor options for full connectivity to and from each end of the study area (see section 6.4).

6.2. Option Generation

6.2.1. Methodology

The initial option generation stage was informed by, but not constrained to, the previous studies outlined in section 2.4, proposed developments outlined in section 3 and driven by existing policy outlined in section 2.3. All options with the potential to meet the transport objectives were considered.

The option generation process adopted a link and node system due to the number of options. This enabled a clearer picture and assessment of each specific connection within the area. A series of links could then be connected to form an end-to-end route, whilst retaining a view of the specific limitations for each link. Key nodes were also identified, relating to key connections, intersections of links, or interaction with existing infrastructure.

Initial options were generated by the wider project team (including Atkins consultants and GCP officers), all of whom were familiar with the study area and the existing issues within it. Different concepts for connections were considered, such as maximising the use of existing infrastructure, connecting all possible markets together via an indirect route, or providing the most direct end-to-end connectivity.

Options that crossed known constraints that would be too difficult to mitigate or avoid were not progressed, as they were not considered feasible. For example, no option completely crosses Milton Country Park or the environmental (woodland) constraints to the west of Landbeach. It should be noted that at this stage it is assumed to be possible to provide an offline route over the landfill site west of Milton, but this would be subject to further investigation.

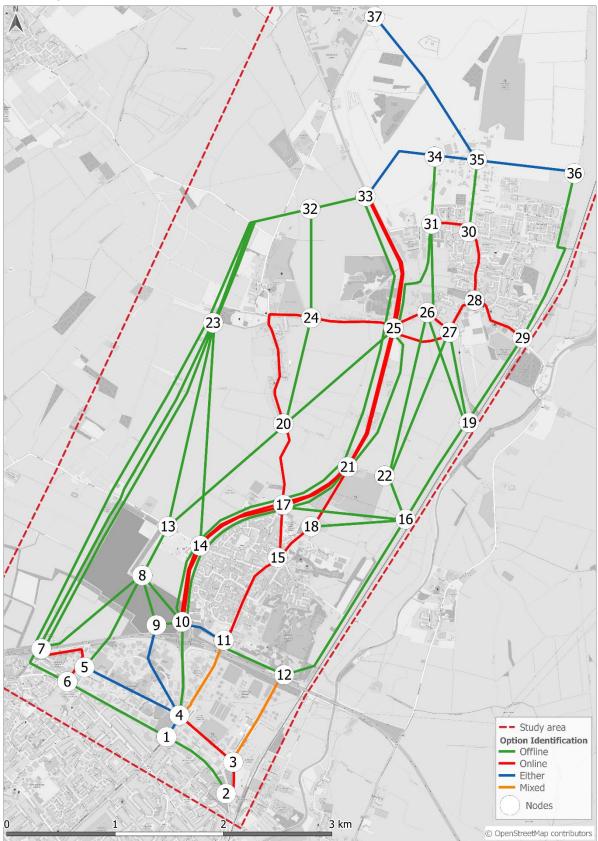
Throughout the option generation stage, quick wins were identified and have been discussed further in Chapter 7.

6.2.2. Options Generated

The approach above was used to generate a wide range of options, containing a variety of links, including offline, online and mixed (offline and online) options throughout the study area. Figure 6-1 shows the options generated by this process. During the 27th November stakeholder workshop, no further options were suggested beyond those that had already been identified.

At this stage it is considered that the links represent corridors or indicative alignments that would change as the project progresses and detailed assessment takes place. They do not represent any specific alignment or design.

Figure 6-1 - Options Generated²⁸



²⁸ Nodes represent where links meet and do not necessarily represent any infrastructure or stop location.

6.3. Option Sifting

6.3.1. Methodology

An option sifting process reviewed and sifted the identified options that had been generated in the previous stage. Each option was assessed against three overarching criteria of Effectiveness, Feasibility and Acceptability. The assessment used a Red, Amber, Green (RAG) approach as follows:

- Green represented meeting each criterion individually;
- Amber represented a challenge to meeting the criterion that could be mitigated or overcome; and
- Red represented options that were unfeasible, unreliable, ineffective or unacceptable on a particular criterion.

Table 6-1 outlines the sifting assessment criteria and the key issues considered under each criterion that reflect the transport objectives and outcomes.

Sifting Criteria	Elements Considered Within Each Criterion	
	Additional sustainable transport capacity	
Effectiveness	More reliable public transport journey times	
Ellectiveness	More public transport journeys in the corridor	
	More short journeys by walking and cycling	
	Engineering constraints	
Feasibility	Environmental constraints	
	Planning requirements	
Acceptability	Stakeholder views	
Acceptability	Alignment with local and regional policies	

 Table 6-1 - Sifting Assessment Criteria

GCP determined that that a reliable system was key and that if options could not improve reliability, then they should be discounted at this stage. If links were online (with traffic) and there was not an option to provide public transport priority, these were discounted as they could not guarantee reliability. Exceptions are very short sections of highway with low traffic volumes that connect two other key pieces of proposed infrastructure.

If an option received one red rating or three amber ratings, it would normally be discounted. However, this was not rigidly applied and certain options were retained where appropriate. For example, an online option using Milton Interchange was rated Red for feasibility due to engineering constraints. However it was retained at this stage as it was considered too early to remove options that used the existing main north-south transport infrastructure. It was also found that some options became redundant after other options were sifted out, so these were also removed at this stage.

Options that crossed environmental or heritage constraints, such as the Mere Way Roman Road and the Waterbeach Abbey site to the south of Waterbeach, were discounted as the potential negative impact would not be acceptable on planning and environmental grounds. Options on the eastern side of Waterbeach parallel to the railway were discounted due to the land constraints and the complexities of interaction with Clayhithe Road and its level crossing.

Following the sift, the Atkins project team reviewed each option and made a final recommendation based on the ratings for each criterion in Table 6-1. A workshop followed where the assessment was presented to GCP officers who provided feedback and approval on the process and outcomes.

6.3.2. Findings of Option Sifting

The full assessment of all links including the RAG assessment is provided in Appendix C. A plan of the results is shown in Appendix D.

6.3.2.1. Options Rejected

Table 6-2 presents the options that were rejected during the Option Sifting stage and the grounds for rejection.

Table 6-2 - Options Rejected During Option Sifting

Option ID	Option Description	Reason for Rejection
7-23b	Along Mere Way	Constrained by Mere Way Cycleway along existing alignment, with better alternatives either side
10-14b	Dependent on offline A10 dualling: old A10 gains public transport priority	Effectiveness: Online route cannot guarantee journey time reliability
10-14c	Bus priority on existing A10, with the assumption that there is either no dualling, or the dualling isn't offline	Effectiveness: Online route cannot guarantee journey time reliability
11-15	Cambridge Road/Milton High Street	Effectiveness: Online route cannot guarantee journey time reliability
14-17b	Link from Butt Lane to Landbeach Road: Dependent on offline A10 dualling: old A10 gains public transport priority	Effectiveness: Online route cannot guarantee journey time reliability
14-17c	Link from Butt Lane to Landbeach Road: Bus priority on existing A10, with the assumption that there is either no dualling, or the dualling isn't offline	Effectiveness: Online route cannot guarantee journey time reliability
15-17	Landbeach Road in Milton	Effectiveness: Online route cannot guarantee journey time reliability
15-18	Ely Road in Milton	Effectiveness: Online route cannot guarantee journey time reliability
16-17	Link from Greenway/railway to A10 at the Landbeach Road junction	Effectiveness: Not an effective connection as increasing journey time and connecting to ineffective adjoining link
16-18	Link from Ely Road at north end of Milton to Greenway/railway	Effectiveness: Not an effective connection as increasing journey time and connecting to ineffective adjoining link
17-20	Landbeach Road from A10 to just south of Landbeach village	Effectiveness: Online route cannot guarantee journey time reliability
17-21d	Link from Landbeach Road to Ely Road: aligned to A10 but offset to east Link also adjacent to A junction	
18-21	Along Ely Road between Milton and the A10	Effectiveness: Online route cannot guarantee journey time reliability
19-27	Alongside Greenway beside Car Dyke	Redundant due to alternative options
19-29	Alongside Greenway beside railway	Too many heritage and conservation constraints. Reliability also affected by interaction with Clayhithe Road

Option ID	Option Description	Reason for Rejection
20-24a	Route through Landbeach along Landbeach Road then Waterbeach Road	Effectiveness: Online route cannot guarantee journey time reliability
22-27	FootGolf course to Car Dyke Road/Cambridge Road junction	More effective alternatives exist
23-32b	Along Mere Way	More effective alternatives exist
24-25	Waterbeach Road to the A10	More effective alternatives exist
25-27	Car Dyke Road from A10 to Cambridge Road	More effective alternatives exist
25-33a	Link from Waterbeach Road/Car Dyke Road to WNT Access 2: aligned to A10 but offset to west	Feasibility/Acceptability: More effective alternatives exist
26-27	Cambridge Road from Glebe Road to Car Dyke Road	Effectiveness: Online route cannot guarantee journey time reliability
27-28	Cambridge Road to Chapel Street in Waterbeach	Effectiveness: Online route cannot guarantee journey time reliability
28-29	Station Road from existing Waterbeach station to Green Side	Effectiveness: Online route cannot guarantee journey time reliability
28-30	Green Side/High Street in Waterbeach	Effectiveness: Online route cannot guarantee journey time reliability
29-36	Alongside railway from existing station to new station including Bannold Drove	Adjoining links discounted

6.3.2.2. Options Retained

Links that were retained included the Green rated links, which are predominantly those links that have no or few constraints identified at this stage of the study. These links could provide the most effective service and be the most acceptable in terms of policy and stakeholders.

There are also several Amber rated links that are considered to be deliverable but may present potential issues, such as an online route on the A10 between Milton and Waterbeach, which currently is typically uncongested, but reliability cannot be guaranteed. Options such as the links within NEC are likely to be deliverable but are dependent on the NEC masterplan.

Figure 6-2 shows the links that were retained (in green) and those discounted (in grey).

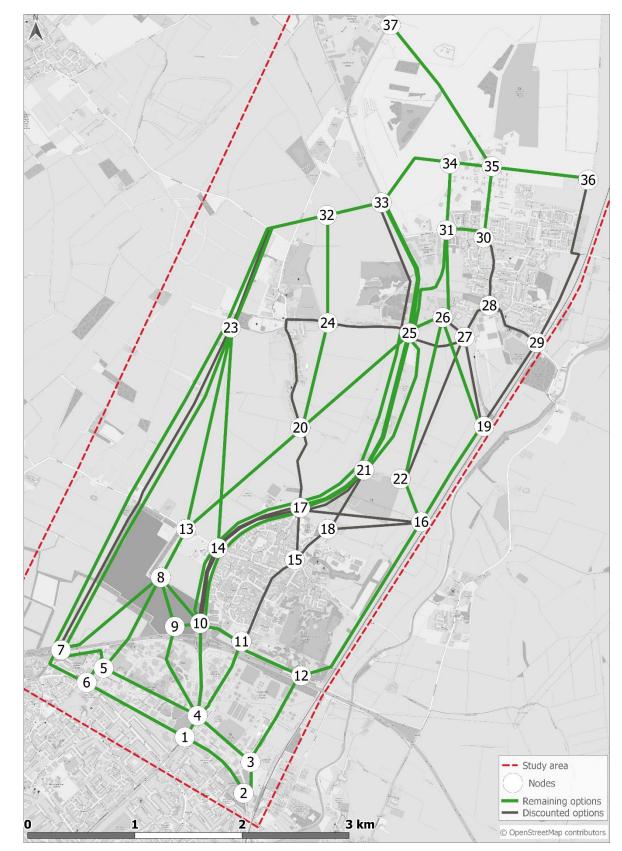


Figure 6-2 - Options Retained During Options Sifting²⁹

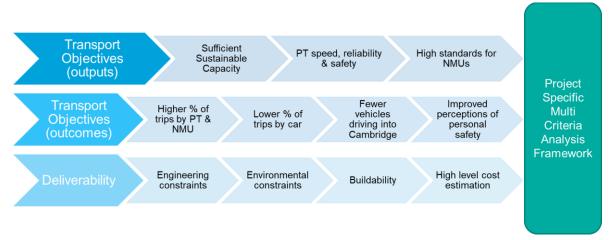
²⁹ Nodes represent where links are meet and do not represent any infrastructure or stop.

6.4. More Detailed Assessment

6.4.1. Methodology

The More Detailed Assessment (MDA) considered the options that were carried forwards from the previous stage (option sifting). A summary of the assessment criteria is provided in Figure 6-3.

Figure 6-3 - MDA Criteria



In Figure 6-3, "Higher % of trips by PT and NMU" are shown together for convenience but were treated as separate criteria. This means there were a total of twelve criteria.

Options were assessed using the criteria outlined in Figure 6-3 through desktop studies by specialists in each discipline who were as follows:

- Planning Lead: buildability;
- Environment Lead: environmental constraints;
- Highway Design Lead: engineering constraints, buildability and high-level cost estimation; and
- Transport Planning Lead: transport objectives (both outputs and outcomes).

As a summary of the assessments and to allow intuitive comparison of relative performance, each option was scored against the 12 criteria outlined in Figure 6-3 using a four-point scale (0 to 3). The scoring criteria were tailored to the specific assessment being undertaken and are detailed in Table 6-3. Scores from each criterion were combined to provide overall informative scores for:

- Transport planning (the eight criteria covering transport objectives);
- Deliverability (the four criteria in this area); and
- All criteria.

Scores were aggregated across the criteria for ease of assessment and followed by a sense-check.

Table 6-3 - MCAF Scoring Criteria

Assessment Criterion	Stage of Scoring (if applicable)	Scoring Guidelines
Sustainable Consider public transport capacity risks		 Plus 3 = No pinch-points likely to reduce capacity, no splits in service required, no reliance on CGB Plus 2 = One or two of the issues listed above, but overall major capacity increases Plus 1 = Several issues, overall small capacity increases 0 = Too many issues, few or no benefits
	Then consider additional capacity for walking and cycling	Add 1 to public transport score if a new walking and cycling corridor is created Take 1 off public transport score if there is significant disbenefit to walking and cycling capacity Otherwise adopt public transport score
Public transport speed, reliability and safety	n/a	 Plus 3 = Gets past all significant congestion. Creates no significant congestion of its own and offers significant safety benefits Plus 2 = Some issues e.g. limited on-street running where unavoidable Plus 1 = Quick but unreliable routing, OR reliable but slow routing 0 = No change Negatives: progressively making situation worse

Assessment Criterion	Stage of Scoring (if applicable)	Scoring Guidelines
High standards for walking and cycling	n/a	Plus 3 = Dedicated and segregated route, on the desire line, bypassing all main current problems, connecting to all the key locations Plus 2 = One significant issue from among those listed above Plus 1 = More than one significant issue, e.g. on desire lines but does not offer improvement
Higher share of journeys by Public Transport	Consider market catchment	 Plus 3 = Services Waterbeach New Town, Waterbeach village, Milton village, North East Cambridge on both sides of Milton Road and Cambridge City Centre Plus 2 = Services Waterbeach New Town, Waterbeach village, North East Cambridge on both sides of Milton Road and Cambridge City Centre but not Milton Plus 1 = Services miss out one of Waterbeach New Town, Waterbeach village or one side of North East Cambridge 0 = Services miss out more than one of Waterbeach New Town, Waterbeach village or one side of North East Cambridge
	Then consider level of impact - i.e. how effectively it serves the markets it does serve	Raise or lower the initial score, according to how effectively it serves the markets it does serve (e.g. convenience of stop location)

Assessment Criterion	Stage of Scoring (if applicable)	Scoring Guidelines
Higher share of short journeys	Consider market catchment	Plus 3 = Route connects Waterbeach New Town, Waterbeach village, Milton village, North East Cambridge on both sides of Milton Road and Cambridge City Centre
by walking or cycling		Plus 2 = Route connects Waterbeach New Town, Waterbeach village, North East Cambridge on both sides of Milton Road and Cambridge City Centre but not Milton
		Plus 1 = Route misses out one of Waterbeach New Town, Waterbeach village or one side of North East Cambridge
		0 = Route misses out more than one of Waterbeach New Town, Waterbeach village or one side of North East Cambridge
	Then consider level of impact - i.e. how effectively it serves the markets it does serve	Raise or lower the initial score, according to how effectively it serves the markets it does serve (e.g. convenience of stop location)
Lower share of	n/a	Plus 3 = Good result on higher mode shares criteria, plus good capture of external trips
journeys by private car		Plus 2 = Moderate result on higher mode shares criteria, plus good capture of external trips, or vice versa
pintato dal		Plus 1 = Moderate result on higher mode shares criteria, plus moderate capture of external trips, or one good and one poor
		0 = Poor result on higher mode shares plus poor capture of external trips
Fewer vehicles driving into	n/a	Plus 3 = Direct connection to Cambridge North. Large number of people that are captured by having that connection
Cambridge		Plus 2 = Less direct connection to Cambridge North, but still a large number of people that are captured by having that connection, OR vice versa
		Plus 1 = Circuitous connection to Cambridge North. Low numbers of people captured by having connection
Improved perceptions of	n/a	Plus 3 = Transit stops in busy, well-overlooked locations. Walking and cycling routes are well-overlooked with informal surveillance
safety		Plus 2 = Mostly as above
		Plus 1 = Mostly remote with little informal surveillance
Engineering	n/a	Plus 3 = No major issues
constraints		Plus 2 = Some key issues
		Plus 1 = Several key issues
		0 = Impossible, not feasible

Assessment Criterion	Stage of Scoring (if applicable)	Scoring Guidelines
Environmental constraints	n/a	 Plus 3 = No major issues Plus 2 = Some key issues Plus 1 = Several key issues 0 = Impossible, not feasible
Buildability	Governed by Planning constraints and then modified based on any specific issues relating to construction access	Plus 3 = No major issuesPlus 2 = Some key issuesPlus 1 = Several key issues0 = Impossible, not feasible
High level cost estimation	n/a	Plus $3 = \pounds 0m$ to $\pounds 5m$ Plus $2 = \pounds 5m$ to $\pounds 10m$ Plus $1 = \pounds 10m$ to $\pounds 15m$ $0 = \pounds 15m+$

6.4.2. Results

The full findings of the MDA are provided in Appendix E. Plans of individual link scores for Transport Planning, Deliverability and the Total Score are provided in Appendix F. The sections below provide some high-level commentary on the general findings of the assessment.

6.4.2.1. Options South of the A14

Figure 6-4 shows the options to the south of the A14 that were carried through to the MDA stage.

Figure 6-4 - MDA Options and Scores - South of A14



Links are shown diagrammatically and do not necessarily represent specific alignments. Nodes are locations where links meet and do not necessarily represent specific infrastructure or stop locations. Scores represent a summary of the relative performance of each option in the assessment; they are not in themselves the assessment.

Options to the south of the A14 scored well where the corridor serves NEC on both sides of Milton Road, as these options would be most effective in improving sustainable mode share to these destinations.

Options to the west are unlikely to serve Milton village, but services are more likely to run through the whole of NEC, via the Cambridge Guided Busway (CGB), Cowley Road or new routes through NEC.

Options that cross the A14 at Milton Interchange and further east are not likely to provide a direct connection to Cambridge Science Park, although interchange either at Milton Road or Cambridge North Station to CGB services would be possible, but less desirable than a direct service.

All connections cross the A14 and this is seen as a deliverability risk. The options using the existing structures under the A14 (CGB route and Mere Way route) have a lower deliverability risk, whereas other options crossing the A14 will require new structures over or under the highway which would be more challenging.

Milton Interchange is a significant constraint. Option 4-10 has scored poorly due to several limitations, including being able to deliver significant priority for services and the engineering challenges to delivering any required structures in this area. Any interaction with Milton Interchange represents a risk to achieving a reliable public transport service, as the junction is very congested at peak times and traffic in this area is expected to increase

in the future. Any option that lands to the north of the A14 on the landfill site may require excavation, depending on the relative elevation.

6.4.2.2. Options Between the A14 and Waterbeach

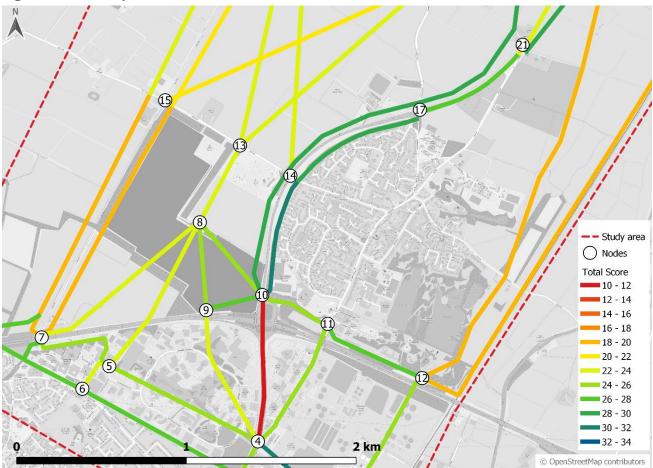
Figure 6-5 and Figure 6-6 shows the options between the A14 and Waterbeach that were carried through to the MDA stage.

The western options are unlikely to serve Milton and Waterbeach villages. However, these routes offer a direct route to the western side of NEC and the proposed New Town north of Waterbeach which are both key travel markets. The western routes (nodes 15, 7, 23 and 32) are also unlikely to be used by Park and Ride users at the existing site given the distance from the existing site and current lack of pedestrian connections along Butt Lane.

The central options (routes interacting with nodes 13, 14, 20 and 21), could serve some of Milton as they traverse the western perimeter of the village and would capture Park and Ride users. The central options could also serve Waterbeach village, should the route cross the current A10.

The eastern option (interacting with node 12 and 26) may serve a small portion of Milton, but would serve the existing Waterbeach village.

Figure 6-5 - MDA Options and Scores - A14 to Milton



Links are shown diagrammatically and do not necessarily represent specific alignments. Nodes are locations where links meet and do not necessarily represent specific infrastructure or stop locations. Scores represent a summary of the relative performance of each option in the assessment; they are not in themselves the assessment.



Figure 6-6 - MDA Options and Scores - Milton to Waterbeach

Links are shown diagrammatically and do not necessarily represent specific alignments. Nodes are locations where links meet and do not necessarily represent specific infrastructure or stop locations. Scores represent a summary of the relative performance of each option in the assessment; they are not in themselves the assessment.

Overall, all options will serve NEC which is the key travel market in the south of the study area. The central routes would serve Milton better than the eastern and western routes due to the proximity to the village, but Milton is a smaller travel market.

6.4.2.3. Options at Waterbeach

Figure 6-7 shows the options between the A14 and Waterbeach that were carried through to the MDA stage. **Figure 6-7 - MDA Options and Scores – Waterbeach**



Links are shown diagrammatically and do not necessarily represent specific alignments. Nodes are locations where links meet and do not necessarily represent specific infrastructure or stop locations. Scores represent a summary of the relative performance of each option in the assessment; they are not in themselves the assessment.

Whilst offline routes between Car Dyke Road and Denny End Road are considered possible at this stage, further investigation is required to understand whether a transit route could fit between properties and allotments. This presents a deliverability risk, although there are transport planning benefits offered by capturing the existing Waterbeach market. The ultimate feasibility and benefits of these routes would require a more detailed assessment in the next phase of the study.

6.4.3. Summary of Key Differentiators Between Options

The following items have been found to be the key differential factors between options:

- The extent to which they can serve all areas of NEC;
- The extent to which they provide additional walking or cycling capacity (some corridors have committed walking and cycling schemes and it is assumed that these would not be duplicated by new infrastructure in the same corridor);
- Journey speed and reliability;
- The level of potential interactions with any A10 proposals;
- Whether the alignment involves the landfill site;
- The requirement for a new structure to cross the A14; and
- The extent to which they serve the secondary markets of the existing Waterbeach and Milton villages.

6.4.4. Identification of Better-Performing Options

Following the MDA, corridors were identified holistically, drawing together appropriate combinations of betterperforming options and nodes in order to create coherent and mutually distinct corridors.

These better-performing options have been agreed with GCP as the ones to take forward to stakeholder and public engagement. They are outlined in Table 6-4 and shown in Figure 6-8. Other work will also take place to develop options for continuing the transitway from the centre of the New Town north of Waterbeach, including how to best serve the relocated Waterbeach Station and other areas. For this reason, the areas of interest shown in Figure 6-8 do not cover any areas beyond the centre of the New Town.

Option Name	Description	Key Option-Specific Issues
Western Option (Green)	The western option originates near Cambridge North Station and follows the CGB under the A14, then turns northeast and continues to the west of Mere Way. The route then bears east north of Landbeach and crosses the A10 at the proposed access roundabout to the New Town north of Waterbeach.	 Interaction with Mere Way Roman road Interaction with A10 at the access roundabout
Central Option (Yellow)	 Short Term Route The short-term option could be provided prior to the redevelopment of the NEC and would service the periphery of the CSP. This option originates near Cambridge North station and follows the CGB under the A14, where it then turns east and traverses the agricultural land between Landbeach and Milton. The route crosses the A10 southwest of Waterbeach at Cambridge Road, then bears north, crossing Denny End Road to the New Town north of Waterbeach. Long Term Route The long-term option could be provided following the redevelopment of the NEC, subject to agreement with the landowners. Instead of using the CGB, this route would use an offline route through the NEC, and would cross the A14 at a new crossing north of CSP. This would improve the route's ability to serve employees on site. 	 Interaction with allotments at Cambridge Road, Waterbeach Interaction with properties adjacent to allotments Interaction with the landfill west of Milton Interaction with A10 at staggered crossroads (A10, Car Dyke Road, Waterbeach Road), south west of Waterbeach
A10 Option (Orange)	The A10 option originates near Cambridge North station and travels along Cowley Road to Milton Road. From here, the route bears north and crosses the A14 at a new crossing near Jane Coston Bridge, then bears west to the south of Milton Tesco supermarket. The route crosses the northern arm of the Milton Interchange before bearing north to the west of the A10. The route crosses the A10 southwest of Waterbeach on Cambridge Road then bears north through to Denny End Road, and continues north to the New Town north of Waterbeach. There is potential for a more direct routing using a segregated alignment along Milton Road and through Milton Interchange. However, this is assumed to only be practicable if there were separate proposals for highway changes in this part of the A10 corridor that could enable such a routing. This possibility will be reviewed as the current A10 study progresses.	 Interaction with allotments at Cambridge Road, Waterbeach Interaction with A10 at staggered crossroads (A10, Car Dyke Road, Waterbeach Road), south west of Waterbeach Design of route where it crosses the A14 from the eastern side of NEC and A10 at Milton interchange

Table 6-4 - Corridor Options	Taken Forward to	Public Engagement

Option Name	Description	Key Option-Specific Issues
Eastern Option (Blue)	The eastern option originates near Cambridge North Station and bears north through the eastern side of NEC, crossing the A14 south of Milton Country Park. The route traverses the borders of the Country Park on the eastern side, before heading north to the west of the proposed sports lake development and east of the existing FootGolf area. The route reaches Waterbeach at Car Dyke Road, then continues through to Denny End Road, and continues north to the New Town north of Waterbeach.	 Interaction with NEC development Interaction with the proposed Waterbeach Greenway, including the Greenway underpass of the A14 Interaction with the sports lake complex Interaction with residential properties and allotments on Cambridge Road in Waterbeach

3rd July 2020 Study area A10 area of interest Central area of interest East area of interest West area of interest 3 km © OpenStreetMap contributors

Figure 6-8 - Plan of Corridor Options Taken Forward to Public Engagement



Table 6-5 compares the identified corridors against the key differentiators outlined in section 6.4.3. Whilst the table compares the route corridors, this is simply to help show the key differences between them. It does not

rank or assess the routes and therefore should not be considered as indicating any 'final preferred option'. A quantified comparison of options will be compared in the SOBC stage of this project and not in Table 6-5.

Table 6-5 - Corridors and Key Differentiators					
Koy Differentiatore	West Route (Green)	Centre Route (Yellow)		A10 Route	East Route
Key Differentiators		Short Term	Long Term	(Orange)	(Blue)
Serves Waterbeach village	×	\checkmark	\checkmark	\checkmark	\checkmark
Serves Milton village	×	\checkmark	\checkmark	\checkmark	\checkmark
Serves NEC	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Additional walking and cycling capacity	×	\checkmark	\checkmark	\checkmark	×
Interactions with A10 proposals	×	\checkmark	\checkmark	\checkmark	×
Journey speed/ reliability	\checkmark	\checkmark	\checkmark	×	\checkmark
Relationship with potential Waterbeach Rural Travel Hub	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Traversing landfill	×	\checkmark	\checkmark	×	×
New A14 crossing	×	×	✓	✓	✓

In this table, ticks and crosses denote 'yes' and 'no' respectively. They are coloured red and green to show whether this is seen as a positive or a neutral/negative feature of each option.

7. Quick Wins and Complementary Schemes

This chapter explores potential quick wins and complementary schemes to improve walking, cycling, equestrian and public transport connectivity within the study area. These have been identified during the policy review, in the stakeholder workshop held on 27th November 2019 and in the course of assessing options during the sifting and more detailed assessment phases by the study team.

Each potential quick win or complementary scheme has been summarised in Table 7-1. Each of these will require further analysis to demonstrate the associated benefits and to confirm the ability to deliver 'quickly'.

Potential intervention	Committed, quick win or complementary?	How identified	Comments
Mere Way Cycleway implementation (s106)	Committed	Policy Review	The scheme enables a connection between Waterbeach and CSP via Mere Way and will be constructed after 150 dwellings are occupied in the New Town
Waterbeach Greenway implementation	Committed	Policy Review	The proposed Greenways scheme will be an effective link between Waterbeach and the eastern area of NEC and has an estimated delivery of 2024
A10 Cycle Route Upgrades (part of Urban and Civic development)	Committed	Policy Review	Additional walking and cycling links to and from the A10 could enhance this route
East-west walking and cycling links across Milton Road between the two sides of NEC	Complementary	Stakeholder workshop	Increased walking and cycling links between the east and west side of NEC decrease severance caused by Milton Road
Provision of walking and cycling links between Waterbeach and Horningsea	Complementary	Stakeholder workshop	Stakeholders suggested improved links between Waterbeach and Horningsea for local trips and onward journeys to the east side of Cambridge
Provision of walking and cycling links between Waterbeach and Cottenham	Complementary	Stakeholder workshop	Stakeholders suggested a link between Waterbeach and Cottenham to improve connectivity
Implementation of Cambridge South Station	Complementary	In this study	The implementation of Cambridge South Station will provide links for CBC staff and patients living within the Waterbeach area (including but not limited to the relocated Papworth staff) and NEC
Ensure existing cycle routes are maintained	Quick win	Stakeholder workshop	Stakeholders noted some existing cycle routes (e.g. along the River Cam) need maintenance. Improving the quality of these routes could increase walking and cycling mode share

Table 7-1 - Potential Quick wins and Complementary Schemes

Potential intervention	Committed, quick win or complementary?	How identified	Comments
Bus and rail timetable coordination	Quick win	Stakeholder workshop	Stakeholders suggested a coordinated timetable to encourage public transport travel for onward/longer journeys
Direct buses to/from Cambridge Biomedical Campus until Cambridge South Station is built	Quick-win	Internal workshop	As above, whilst Cambridge South Station is being built, bus connections should serve the travel markets and Cambridge Biomedical Campus in the interim period
Bus services between Waterbeach and Milton to NEC and Cambridge North railway station	Quick-win	Internal workshop	The provision of a shuttle bus service will enable sustainable commuting to NEC
Securing passive provision for the operation of services within NEC	Quick-win	Internal workshop	As the NEC masterplan is developed, it is recommended that GCP negotiate passive provision of operations within NEC to secure effective operations throughout the site
Travel Planning within the corridor	Complementary	Internal workshop	Travel Planning for all individuals is recommended, especially new residents and employees whose travel patterns are likely to change when they move
Additional walking and cycling links between CSP and the CGB	Complementary	Internal workshop	Increasing the permeability between the existing CSP site and the CGB would make walking and cycling journeys more direct and therefore more attractive
Review of cycle parking provision in employment areas within study area	Complementary	Internal workshop	Additional secure cycle parking that is easy to find makes cycle journeys more accessible and attractive
Review standard of bus stops within study area	Complementary	Internal workshop	All bus stops should be of a good standard (Real Time Passenger Information provision, sheltered seating area etc.) to make this mode more attractive
New bridge between Milton village and Park and Ride to accommodate cycle trips	Complementary	Internal workshop	A new bridge over the A10 between Milton and Milton Park and Ride would enable cycling over the A10. This bridge should be investigated regardless of the public transport route selected as it would enable east-west connections to/from Waterbeach Greenway, Milton, Milton Park and Ride, Histon and Impington, and the public transport route.

8. Conclusions and Recommendations

8.1. Corridors for Further Assessment

Based on a robust identification, sifting and assessment process, the better-performing options that are recommended to be progressed to SOBC stage are shown in Figure 6-8 and outlined in Table 8-1.

Table 8-1 - Summary of Corridors Taken Forward for Further Consideration

Option Name	Description
Western Option (Green)	The western option originates near Cambridge North Station and follows the CGB under the A14, turning northeast to the west of Mere Way, then bearing east north of Landbeach and crossing the A10 at the proposed access roundabout to the New Town north of Waterbeach.
Central	Short Term Route
Option (Yellow)	The short-term option could be provided prior to NEC's redevelopment and intensification to service the periphery of CSP. This option originates near Cambridge North station and follows the CGB under the A14, where it then turns east and traverses the agricultural land between Landbeach and Milton. The route crosses the A10 southwest of Waterbeach at Cambridge Road, then bears north, crossing Denny End Road and continuing to the New Town north of Waterbeach.
	Long Term Route
	The long-term option could be provided following the NEC's redevelopment and intensification and subject to agreement with the landowners. Instead of using the CGB, this route would use a redeveloped offline route through the NEC, and would cross the A14 at a new crossing north of CSP. This would improve the route's ability to serve employees on site.
A10 Option (Orange)	The A10 option originates near Cambridge North station and travels along Cowley Road to Milton Road. From here, the route bears north and crosses the A14 at a new crossing near Jane Coston Bridge, then bears west to the south of Milton Tesco supermarket. The route crosses the northern arm of the Milton Interchange before bearing north to the west of the A10. The route crosses the A10 southwest of Waterbeach on Cambridge Road then bears north through to Denny End Road, and continues north to the New Town.
	There is potential for a more direct routing using a segregated alignment along Milton Road and through Milton Interchange. However, this is assumed to only be practicable if there were separate proposals for highway changes in this part of the A10 corridor that could enable such a routing. This possibility will be reviewed as the current A10 study progresses.
Eastern Option (Blue)	The eastern option originates near Cambridge North Station and bears north through the eastern side of NEC, crossing the A14 south of Milton Country Park. The route traverses the borders of the Country Park on the eastern side, before heading north to the west of the proposed sports lake development and east of the existing FootGolf area. The route reaches Waterbeach at Car Dyke Road, then continues across Denny End Road to the New Town.

8.2. Quick Wins and Complementary Schemes

A list of quick wins and complementary schemes should be considered in conjunction with this project and have been included within Table 7-1. A number of quick wins are focused on improving walking and cycling links between the travel markets and existing public transport services that enable mode shift from private vehicles prior to any potential transit scheme being implemented.

Additional links between Waterbeach and adjacent villages including Landbeach, Cottenham and Horningsea improve connectivity between these areas, which in turn increase the catchment of any new public transport scheme that serves the New Town.

It is recommended that GCP considers the potential quick-wins in further detail.

8.3. Next Steps and Recommendations

GCP is recommended to:

- Take forward, for further assessment, the four corridor options identified in Table 8-1 and Figure 6-8, on an in-principle basis subject to the further work identified below;
- Carry out the further work identified below, to better understand certain key uncertainties and their implications for the relevant corridors:
 - More detailed assessment of what is feasible in and around the landfill site. This will particularly help to understand the feasibility of the central (yellow) and A10 (orange) corridor options and the potential design options within each;
 - Continued engagement with North East Cambridge, to understand the potential (in the nearterm or the long-term) for a public transport corridor through the Science Park to maximise connectivity and attractiveness to users. This particularly affects the definition of the central (yellow) option, including whether both short-term and long-term options are required, and the potential design options available for each; and
 - Coordination with the work being undertaken in parallel on potential options for A10 highway enhancements, in order to understand both the potential interactions and any opportunities for synergy. This particularly affects the constraints and opportunities for the A10 (orange) option and the potential design options within it.
- In the light of the further work listed above, confirm or amend the four corridor options;
- Undertake further public and stakeholder engagement in July 2020 to gather views on the corridor options;
- Subject to the results of that engagement, develop a SOBC for the scheme; and
- In parallel with the above, consider further the potential quick wins and complementary measures identified in Chapter 7.

Appendix A. Summary of Policy Background

Relevant Policy	Key Developments/Schemes	Relevance to or potential impacts on corridor
South Cambrid	geshire Local Plan – September 2018	
SS/4: Cambridge Northern Fringe East and Cambridge North Railway Station	 Development of Chesterton sidings around Cambridge North station Redevelopment of employment centres 	 Housing, employment and community amenities in southern part of study area Demand generator for trips originating in Waterbeach New Town and from elsewhere on the corridor
SS/6: Waterbeach New Town	 Housing, employment and community amenities on previous barracks site north of Waterbeach Will include relocated railway station, Park and Ride on the A10, a new segregated bus link to Cambridge, cycling and walking routes within the development and direct and segregated routes to north Cambridge, surrounding villages and the Cambridge Research Park, and highway improvements 	 New development in northern part of study area Trip generator for travel along the corridor
CC/8: Sustainable Drainage Systems	 Development proposals must incorporate appropriate sustainable surface water drainage systems appropriate to the nature of the site 	 SuDS has been successfully incorporated into previous transport projects, such as Greener Grangetown in Cardiff and can form part of a network of green infrastructure
NH/6: Green Infrastructure	 Council will encourage proposals that reinforce, link, buffer and create new green infrastructure 	 Transit corridors can form a useful part of green infrastructure (wildlife/biodiversity corridor)
NH/11: Protected village amenity	 Protected Village Amenity Areas are identified on the Policies Map where development will not be permitted within or adjacent to these areas if it would have an adverse impact on the character, amenity, tranquillity or function of the village. 	There are some protected village amenity areas in the study area

Relevant Policy	Key Developments/Schemes	Relevance to or potential impacts on corridor
NH/14:	Development proposals will be supported when:	• There are some heritage assets that fall
Heritage assets	• They sustain and enhance the special character and distinctiveness of the district's historic environment including its villages and countryside and its building traditions and details;	under this policy in the study area
	• They create new high-quality environments with a strong sense of place by responding to local heritage character including in innovatory ways.	
E/1 New	Increasing densification of an employment area in the southern part of the study area	Demand generator for trips along the
employment provision near Cambridge - Cambridge Science Park	 Proposals will need to be compliant with this, particularly in relation to design and transport 	corridor
E/9 Promotion of clusters	 Employment land allocation for cluster development, including the Cambridge Science Park 	 Demand generator at the southern end of the study area
SC/1 Allocation for open spaces	• The following sites are allocated to meet local need for open space: Land north of former EDF site, Ely Road, Milton - 3.1ha	This site falls within the study area
TI/1 Chesterton	 Land safeguarded for development at Chesterton Sidings, near Cambridge North Railway Station 	Located at the southern end of the study area
Rail Station and Interchange		Demand generator
TI/2 Planning for sustainable	 Supports new cycling and walking routes that connect to the existing network to strengthen connections between villages, Cambridge and the wider countryside 	Guidance for sustainable travel in the corridor
travel	 Supports protection and improvement of existing cycling and walking routes 	
	Supports secure, accessible and convenient cycle parking	
	Supports improvements to public and community transport	

Relevant Policy	Key Developments/Schemes	Relevance to or potential impacts on corridor
Cambridge Lo	cal Plan – October 2018	
Policy 2: Spatial strategy for the location of employment development	 Proposals that help reinforce the existing high technology and research clusters of Cambridge will be supported 	 The Cambridge Science Park is designated as one of these clusters Demand generator for the corridor
Policy 5: Strategic transport	 Promoting greater pedestrian and cycle priority though and to the city centre, potentially incorporating public realm and cycle parking improvements Promoting sustainable transport and access for all to and from major employers, 	Guidance for strategic transport in the study area
infrastructure	education and research clusters	
Policy 7: The River Cam	 Enable and propose, where possible, opportunities for greater public access to the River Cam 	 The River Cam is just outside the study area but connections identified in this study could also offer further linkages with the River Cam
Policy 15: CNFE and new railway station	 Ensure that appropriate access and linkages, including for pedestrians and cyclists, are planned for in a high quality and comprehensive manner 	 Located at the southern end of the study area Demand generator for travel along the corridor
Policy 80:	Support public transport, walking and cycling to, from and within a development by:	Guidance for sustainable travel in the study
Supporting	 giving priority to these modes where there is conflict with cars 	area
sustainable access to development	 conveniently linking the development with the surrounding walking, cycling and public transport networks 	
development	• prioritising networks of public transport, pedestrian and cycle movement so these are the best and safest means of moving around Cambridge	
	 safeguarding existing and proposed routes for walking, cycling, and public transport, including the Chisholm Trail, from development that would prejudice their continued use and/or development 	

Relevant Policy	Key Developments/Schemes	Relevance to or potential impacts on corridor
Policy 82: Parking management	 Car-free and car-capped development is acceptable where there is good, easily walkable and cyclable access to a district centre, where there is high quality public transport accessibility and where the car-free status can be realistically enforced by planning obligations/on-street controls 	Parking (car and cycle) standards that apply in part of our study area are found in Appendix L of the Cambridge Local Plan
Cambridgeshi	e Local Transport Plan 2011-2031 – July 2015	·
Objective 3: Managing and	Discourage use of cars where alternatives exist and encourage use of sustainable means of transport such as walking, cycling and public transport	Objectives for developing sustainable communities within the study area
delivering the	 Facilitate active travel with investments in footpaths and cycleways 	
growth and development of sustainable communities	 Influence the design of new developments to promote road safety and encourage travel by foot and cycle 	
Cambridgeshi	e Local Transport Plan 2011-2031: Long Term Transport Strategy – July 2015	1
Page 3-2	• Extend the busway network to serve major new developments and employment sites	Public transport strategy within the study
J	 Develop high quality public transport corridors along key routes with priority at key junctions, helping to reduce journey times 	area
	• Implement new and improved passenger transport interchanges and hubs with parking, cycle parking, high quality waiting facilities, passenger information and facilities for local feeder services, and that are easily accessible by pedestrians and cyclists	
	• Build the case for opening new railway stations and railway lines, and for improvements to existing stations	
	 Support Network Rail / Department for Transport (DfT) plans for improved rail frequencies and faster journey times 	
	• Support new track infrastructure, electrification of existing railway lines and the provision of enhanced rolling stock	
	 Improve sustainable access to railway stations e.g. cycle routes, bus routes and cycle parking facilities 	

Relevant Policy	Key Developments/Schemes	Relevance to or potential impacts on corridor
Page 4-7	Schemes and programme for development of Waterbeach Barracks and associated transport infrastructure:	These are specific aspirations to be considered in this study
	Waterbeach Station relocation, £25m	
	• A busway link from Waterbeach Station and town centre to north Cambridge including a fully segregated crossing of the A14 Trunk Road, £32m	
	• A10 corridor P&R site, north of Waterbeach, served by new busway link to Cambridge. Alignment to be determined, £8m	
	 Additional capacity for general traffic between the northernmost access to the new town and the A14, £45M 	
	A14/A10 Milton interchange improvements £40M	
	 Delivery or funding of any measures required to mitigate the traffic impact of the new town on Horningsea, Fen Ditton, Milton and Landbeach, £TBD 	
	 A comprehensive network of high-quality pedestrian and cycle routes linking the town with key destinations in Cambridge and the surrounding villages, £12M 	

Relevant Policy	Key Developments/Schemes	Relevance to or potential impacts on corridor
Cambridgeshir	e and Peterborough Local Transport Plan – February 2020	
Local Transport	Housing: Support new housing and development to accommodate a growing population and workforce, and address housing affordability issues	The objectives for this study will support the objectives of the Local Transport Plan
Plan objective, pages 10-11	• Employment: Connect all new and existing communities sustainably so all residents can easily access a good job within 30 minutes by public transport, spreading the region's prosperity	
	 Business and tourism: Ensure all of our region's businesses and tourist attractions are connected sustainably to our main transport hubs, ports and airports 	
	 Resilience: Build a transport network that is resilient and adaptive to human and environmental disruption, improving journey time reliability 	
	 Safety: Embed a safe systems approach into all planning and transport operations to achieve Vision Zero – zero fatalities or serious injuries 	
	Accessibility: Promote social inclusion through the provision of a sustainable transport network that is affordable and accessible	
	 Health and wellbeing: Provide 'healthy streets' and high-quality public realm that puts people first and promotes active lifestyles 	
	 Air quality: Ensure transport initiatives improve air quality across the region to exceed good practice standards 	
	 Environment: Deliver a transport network that protects and enhances our natural, historic and built environments 	
	 Climate change: Reduce emissions to as close to zero as possible to minimise the impact of transport and travel on climate change 	
Local Strategies –	• Comprehensive and reliable public transport is key to building sustainable travel patterns and a successful thriving community in Waterbeach New Town	CPCA supports segregated public transport corridor, relocation of Waterbeach Railway
North towards Ely p.102	• CPCA will support the GCP in the delivery of a new segregated public transport corridor, integrated with a new travel hub with parking, to provide a genuine alternative to the private car	Station and Waterbeach Greenway
	• This will form first phase of the CAM network, operated by high quality electric vehicles, prior to the opening of tunnels under the city centre.	

 Principle/Issue Create walkable neighbourhoods Create an environment for cycling Create an environment for equestrians Provide access to high quality public transport facilities Promote residential access 	Relevant Policy	Key Developments/Schemes	Relevance to or potential impacts on corridor			
7: Supporting sustainable growth infrastructure to ensure that most people have the ability to travel by foot, bicycle or by passenger transport in line with specified modal split targets where relevant. the study area growth Access by walking, cycling and public transport will be maximised in all new developments, ensuring that planning contributions are sought for transport improvements where appropriate. the study area Waterbeach Supplementary Planning Document – February 2019 • Relevant Principle/Issue • A user hierarchy that prioritises sustainable modes of transport • Create an environment for cycling • • Create an environment for cycling • Provide access to high quality public transport facilities • Promote residential access	Transport Strat	egy for Cambridge and South Cambridgeshire – March 2014	·			
developments, ensuring that planning contributions are sought for transport improvements where appropriate.Waterbeach Supplementary Planning Document – February 2019Relevant Principle/Issue• A user hierarchy that prioritises sustainable modes of transport • Create walkable neighbourhoods • Create an environment for cycling • Create an environment for cycling • Create an environment for equestrians • Provide access to high quality public transport facilities • Provide access to high quality public transport facilities• These principles will be applied to sections of the public transport corridor that lie within the Waterbeach SPD area • See also the transport strategy diagram reproduced in the main body of the OAR	7: Supporting	infrastructure to ensure that most people have the ability to travel by foot, bicycle or by				
Relevant Principle/Issue• A user hierarchy that prioritises sustainable modes of transport• These principles will be applied to sections of the public transport corridor that lie within the Waterbeach SPD area• Create an environment for cycling • Create an environment for equestrians • Provide access to high quality public transport facilities • Promote residential access• These principles will be applied to sections of the public transport corridor that lie within the Waterbeach SPD area• See also the transport strategy diagram reproduced in the main body of the OAR	growth	developments, ensuring that planning contributions are sought for transport				
 Principle/Issue Create walkable neighbourhoods Create an environment for cycling Create an environment for equestrians Provide access to high quality public transport facilities Promote residential access 	Waterbeach Su	pplementary Planning Document – February 2019				
Minimise impact on the surrounding highway network		 Create walkable neighbourhoods Create an environment for cycling Create an environment for equestrians Provide access to high quality public transport facilities 	 of the public transport corridor that lie within the Waterbeach SPD area See also the transport strategy diagram 			

This document is not yet available but will provide guidance for the standards of public transport within NEC at the southern end of the study area and provide a spatial framework that the public transport corridor will connect with.

The accompanying Transport Evidence Base is also due to be published shortly.

This table was correct at the time of compilation. Key subsequent updates are provided in the main text of the report.

Appendix B. Summary of Previous Studies as Evidence Base

Year	Title and author	Evidence base	Key findings
2009	Bus Strategy – Bus Route Option Study (Capita Symonds)	 Denny St Francis Eco-town Transport Strategy Land ownership Site reconnaissance surveys, Ordnance Survey data, aerial photographs 	 Commissioned by RLW to assess the options for a busway between the new town of Waterbeach and Cambridge. The study area was divided into east-west tranches comprising different parts of Waterbeach and the area between Waterbeach and the A14 The preferred option was through the farm fields east of Denny End Industrial Estate, to the west of the Sport Lakes complex, across the A10 at the junction with Ely Road, and across the fields and restored landfill to the existing A14 underpass at Mere Way
2012	A10 Transport Corridor Constraints Study (LDA)	 GIS data, Tree Preservation Orders Heritage study Ecology study 	 Assessed constraints in the corridor between Waterbeach and Cambridge Built upon the 2009 Capita Symonds study, and also considered the realignment of the A10 Assessed an area 100m either side of the A10 and included the A14 underpass at Mere Way
2014	Waterbeach Busway Options Study (WSP / Clewlow)	 Land ownership records, including council owned lands and property 	 Further assessed the preferred busway option from the 2009 Capita Symonds study A larger study area was assessed than the 2009 study The preferred option from the 2009 study remained the highest scoring of the options assessed Slight changes were made to the alignment of the preferred option so that where possible the route passed through council land
2016	A10(N) Corridor Constraints Study (Mott MacDonald)	 Planning records Mapping of the following constraints: Green belt Agricultural land Heritage/archaeological Environmental and ecological designations Townscape and landscape impact Amenity considerations Flooding and drainage Physical considerations (eg. contamination, land stability) 	 Commissioned by Cambridgeshire County Council, South Cambridgeshire District Council and Cambridge City Council Assessed the existing environmental, physical and planning constraints within an adjacent to the Waterbeach to Cambridge corridor Assessed three corridors: west (covering Mere Way and the Roman Road), central (A10 corridor) and east (along the railway line and through Waterbeach) Constraints in the west and central corridor could be overcome through route alignment and detailed design incorporating mitigation measures, however the east corridor would require further investigation as there are more widespread constraints

2018	Ely to
	Cambridge
	Transport
	Study:
	Preliminary
	Strategic
	Outline
	Business Case
	(January 2018)
	(Mott
	MacDonald)

Evidence Base Report accompanies the Strategic Case, which includes evidence on:

- Populations commuting into Cambridge
- House price and sales trends in Cambridge
- Indices of multiple deprivation
- Rail passenger growth
- Existing peak period bus journey time delays
- Peal traffic flows
- Traffic delays during school term times
- Recent and forecast population growth
- Forecast traffic flow and junction delay changes resulting from development
- Forecast distribution of trips on A10 by origin, with and without development
- Forecast changes in traffic levels on routes parallel to A10, with development
- Forecast journey time changes on A10, with development
- Forecast changes in car mode share, with development
- Forecast traffic, mode share and journey time impacts of the modelled improvement packages

The Strategic Case set out the issues and opportunities in the study area that demonstrated a need for intervention. These included:

- Cambridge's role as the engine of the Cambridgeshire economy
- Escalating demand for housing and the city's growing labour catchment
- High and growing levels of rail demand, but with performance issues on key corridors
- Journey time delays for buses, particularly in the AM peak
- Relatively low, and declining, patronage at the Milton park-and-ride site
- Relatively high levels of cycle commuting, corresponding to locations where highquality infrastructure is provided, but the lack of cycle routes serving north-south journeys was a key weakness of the study corridor
- Very significant highway congestion, which can extend almost the full length of the A10 from Ely to Cambridge in the AM peak and vice versa in the PM peak.
- Key development areas included Cambridge Northern Fringe East, Cambridge Science Park, and north of Waterbeach.
- Traffic levels were anticipated to grow, thus exacerbating the existing issues. Travel demand on the A10 and surrounding corridors would increase.

A do-minimum scenario (2031, with developments, but without mitigation) was modelled. It found that:

- There would be further traffic growth on the A10 but the main impact would be an increase in traffic on nearby routes. This was because the effective capacity of the A10 had already been reached, even without the developments, and the new trips from the development sites would be at the expense of other existing traffic which would be displaced to other routes. (This also means some sections of the A10, north of Waterbeach, would see reduced traffic levels, as the longer-distance traffic would be displaced but the development traffic would not be primarily using those particular sections.)
- Journey times would increase on key routes
- Car mode share would fall within the study area, due to the concentration of developments in locations close to Cambridge with good public transport and walking and cycling access. However, there would still be net generation of traffic.

The study modelled the impact of five improvement packages for the corridor:

Year	Title and author	Evidence base	Key findings
		 Multi-criteria appraisal of the modelled improvement packages Other parts of the SOBC include: Cost estimates for the modelled improvement packages Economic appraisal of the modelled improvement packages 	 Mode-shift (DS1): Minimal highway network improvements, relocated Waterbeach station, segregated public transport links between the new town at Waterbeach and Cambridge, comprehensive pedestrian and cycle network, parking restraints and travel planning measures at major development sites Junction+ (DS2): Same as DS1, plus improvements to provide additional capacity at A10 junctions between Ely and Cambridge North-dual (DS3): Same as DS1 and 2, plus dualling the A10 north of Waterbeach to Ely South-dual (DS4): Same as DS1 and 2, plus dualling the A10 between Waterbeach and the A14 Milton interchange Full dual (DS5): DS1 and 2, plus dualling the A10 between Ely and the A14 Milton interchange Full dual (DS5): DS1 and 2, plus dualling the A10 between Ely and the A14 Milton interchange If found that while the mode-shift options without highway improvements provided additional travel capacity and had significant benefits, they did not substantially address the congestion and traffic displacement issues identified. Options with highway improvements were more effective in addressing these issues. The best value for money was found with DS2. However, none of the packages achieved the objectives to maintain traffic at or below 2011 levels. All five packages delivered a car mode share reduction, compared to the do-minimum, with the mode-shift package (DS1) delivering the greatest reduction, and the full-dual package (DS5) the least. The study recommended a three-stage strategy of: Policy, planning and regulation interventions, based around a demand- management approach and development trip budgets Delivery of multi-modal 'quick wins' comprising both non-car-based service / infrastructure enhancements and active parking restraint, plus a sequence of prioritised on and off-line localised carriageway improvements to create capacity for additional trips and manage potentia

2018	Ely to Cambridge Transport Study: Strand 2 New Town North of Waterbeach Transport Report (1 February 2018) (Mott MacDonald)	 Existing transport network in and around the new town location Existing highway congestion, in terms of percentage journey time increases compared to free-flow The proposed quantum of development Do-minimum (with development, no mitigation) traffic forecasts: Forecast development trip generation Forecast trips to/from the new town by mode and destination Distribution of development traffic Changes in traffic flow and junction delays Relative contribution of new town and CFNE/CSP development traffic to the overall level of development traffic, by link Journey times on the A10, comparing free-flow, without development and with development Do-something (with development traffic Changes in traffic flow and junction delays Journey times on the A10, comparing free-flow, without development and with development Do-something (with development traffic Changes in traffic flow and junction delays Journey times on the A10, comparing free-flow, without development and with development 	 This report focused on the transpinew town, in the context of other. The do-minimum traffic modelling development flow contributions of Development flows from CNFE at A14 and M11 and mostly within C between these, as it combined the The overall conclusion for the promeasures would be required to encausing undue impact on surroun. The study went on to look at the indevelopment travel behaviour and do-minimum, it forecast: A slight increase in person the into peak hours due to the at the decreased car mode shate. An increase in external cart the to the decreased car mode shate. An improvement in A10 journ journey times seen in the do Overall, the results suggested the impacts of the new town developments of the new town development. Given its proximity to the econom north of Waterbeach provides op car modes. However, with alread development in this location will key route. The study therefore should be implemented from the
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port needs, trip generation and impacts of the proposed major developments and the overall SOBC.

g found that the new town represented the majority of on the A10 and connecting routes to the north. and CSP represented the majority contribution on the Cambridge. Milton interchange was the connecting point ne impacts from each.

oposed new town was that significant mitigation enable the development to function effectively without nding transport networks.

impact of the South-Dual (DS4) package on nd surrounding network performance. Compared to the

- trips during peak periods due to trips being re-timed additional network capacity
- are
- trips, due to this increase in person trips. However, due share this increase in car trips was less than it . The study considered that this underlined the ons including a strong suite of non-car measures
- rney times, mitigating the majority of the increase in o-minimum.

e package tested would help to mitigate the main local oment. The greatest benefits to the development were and Milton Interchange, which would help to reduce on the A10 itself.

nically strong centre of Cambridge, the proposed new town pportunity for many new trips to be made in the area by nondy congested A10 being the only means of accessing the onetheless predicted that 10,000 new homes plus ancillary generate substantial flow and performance impacts on this shows that the non-car mode improvement options considered for the sustainable delivery of this development and that they e outset of development construction and completed before

Yea	r Title and author	Evidence base	Key findings
			more than 1,500 homes are built. It is proposed that these measures should be funded by the new developments which necessitate and benefit from them.
			However, the study also shows that these measures will not be sufficient in themselves to mitigate the full development's impact on the A10 and on parallel routes and that potentially significant highway intervention will also be required. This, as a minimum, should comprise improvements to existing junctions along the routes, including at Milton interchange, but in the longer term is likely to also involve dualling at least the southern section of the A10, while locking in traffic flow reductions on parallel routes. The funding for these measures will be drawn from multiple sources according to the range of beneficiaries, including new developments and wider public funding streams.
			Lastly, it is noted that these findings should be reviewed in the event that other schemes come forward that are not within the study area but which could affect it, such as a new highway link between the A47 and the M11. Testing shows that such schemes could potentially reduce the highway intervention requirement within the study area.

Appendix C. Option Sifting Table

	South of A14
New town North of Waterbeach to North of Cambridge public trans	A14 to north of Milton
Option long-list and sifting results	Milton to south of Waterbeach

Atkins ref: 519292 Atkins file location: P:\GBCBA\HandT\CQ\Projects\5192922 Waterbeach-Cambridge Through Waterbeach (or equivalent level)

<u>Optic</u>	on deta	uls				Sifting criteria					
D (see nap)	Offline / Online	Description	Integration of NMU	Benefits		Effectiveness - capacity - reliability - number of journeys - NMU journeys	Feasibility - engineering constraints - environmental constraints - planning requirements	Acceptability - stakeholder view - policy alignment	Initial sift outcome	Final decision (if different)	Overall Grade All green - Gree Mix of green & Amber Any red - Red
1-2		CGB from Cambridge North station to Milton Road	CGB bridleway	Existing infrastructure Allows a connection to Milton Road bus priority schemes to city centre	CGB capacity?				N/A	In	
1-4	Either	Milton Road from CGB to transport hub in centre of NEC	Space constrained on Milton Road, routes exist as SUP or buslane	Serves routes to city centre Serves centre of NEC including proposed transport hub Ties in with Milton Road bus scheme	Online solutions would be affected by congestion of Milton Road, but there is road space for continuing the Milton Road bus lanes in this section				In		
1-6	UTTIINE	CGB from Milton Road to existing A14 underpass	CGB bridleway	Existing infrastructure Allows a connection to Milton Road bus priority schemes to city centre	CGB capacity?				N/A	In	
2-3	Online	Along Cowley Road and Milton Avenue	Existing Milton Avenue cycleway	Cowley Road potentially main street in CFNE (awaiting AAP for confirmation of proposed urban design): would connect into this town centre	Cowley Road potentially mains street in CFNE: an online route through this area might suffer reliability issues			Would require a strong argument for duplicating CGB infrastructure	In		
2-6	Offline	CBG from near Cambridge North Station to east end of CSP	Existing CGB bridleway	Existing infrastructure	Is an east-west alignment through NEC, however does not pass through centre of CSP or CFNE				In		
3-4	Online	Along Cowley Road to Milton Road	Existing Milton Avenue cycleway	Cowley Road potentially main street in CFNE (awaiting AAP for confirmation of proposed urban design): would connect into this town centre	Cowley Road potentially main street in CFNE: an online route through this area might suffer reliability issues Any options parallel but not using the CGB would have to make a strong argument for new infrastructure			Would require a strong argument for duplicating CGB infrastructure	In		
3-12	Mixed	Online along Milton Avenue then offline alongside Waterbeach Greenway alignment	Proposed Greenway route	feasible, could be extended to transitway as well Serves NEC and is able to connect to Cambridge North	Alignment with railway potentially concentrates public transport corridors in too small an area Aggregates yard not being relocated as part of NEC development at this stage – could pose an issue with transport trucks along Milton Avenue This section of Greenway is designated "Phase 2" – not sure of timeline on that (may not know until February)		Coordinate with Greenway	Requires cooperation with CNFE and their emerging masterplan	In		
4-5	Either	Link through CSP: alignment unknown at this stage and will depend on emerging masterplan for regeneration of CSP. Could be on the loop road, on a segregated transitway, or on a realignment of the CGB, or a combination of the above		Puts transitway in the heart of the CSP, one of the major destinations and demand drivers	potentially unfavourable. Would require new infrastructure as opposed to using existing CGB just	Milton Road crossing would have to be a dedicated bus crossing		Requires cooperation with CSP and their emerging masterplan	In		
4-9	Either	Link from Milton Road to ex landfill site using a new crossing of the A14, through the CSP. Alignment in CSP yet to be determined and wil depend on emerging masterplan for regeneration of the site. Could be on the loop road, a segregated transitway, or a combination.	If online: use existing SUP around science park	Links directly to CSP	pipes, etc New crossing required, with associated costs and complexity	Milton Road crossing would have to be a dedicated bus crossing	Landfill Big bridge	Requires cooperation with CSP and their emerging masterplan	In		
4-10		Flyover Milton Interchange and use central reservation along Milton Road	Space constrained on Milton Road, but parallel route exists via JC bridge	Direct, passes between CSP and CNFE An on-road, in-corridor option needs to be considered at this stage	Would only be possible as an offline option as there is no capacity for any further online routes through MI. This may rule out this option based purely on feasibility. Does not link east-west in NEC, but can connect to schemes that do.		Agree that feasibility is an issue, however keep in for now	HE	Out	In	
4-11	Mixed	Link from Milton Road to Cambridge Road roundabout in Milton using a new crossing of the A14, potentially on the same alignment as the Jane Coston bridge Depends on proposals for CFNE	Chance to upgrade JC bridge at the same time to increase capacity on this route	Land between Cambridge Road and A14 is an A14 works compound, so potentially available as landing pad for new bridge Potential to increase capacity of JC bridge by making new bridge with C&W This route runs alongside Waterbeach Greenway Phase 1	Cambridge Road roundabout probably at or nearing capacity. Options from this point are constrained by Milton roads, MCP, the A10 and the A14 New crossing required, with associated costs and complexity Depends on proposals in CFNE				In		
5-6	Online	Link from CGB to east access of CSP along Kings Hedges Drive	Space on western verge for segregated path	Route accesses CSP	May suffer from congestion from traffic accessing CRC and CSP				In		
5-7	Online	Link from east access of CSP to existing A14 underpass using Kings Hedges Drive		Route accesses CSP Potential to be offline if parking configuration is changed for CRC	May conflict with parking for CRC, and uses an access to CSP that is congested				In		
5-8	Offline	Link from CSP to south of MPR via new A14 crossing (NC1)	Would include maintenance track	Direct access to CSP	Ex landfill land potentially a constraint, depending on contamination, gas pipes, etc New crossing required, with associated costs and complexity CSP attitude towards a transitway through their land is unknown				In		
6-7	Offline	Using CGB and Mere Way bridleway to access exiting A14 underpass	s Existing CGB bridleway, would need to upgrade Mere Way bridleway	Uses existing CGB	Would need to pave Mere Way bridleway Page 70 of 83				In		
7-8		Route from existing A14 underpass across fiel and ex landfill site to south of MPR	d Would include maintenance track	Uses existing underpass	Potentially less direct as the route is doubling back on itself Possible constraints from landfill site		Landfill		In		
7-23a		Parallel to Mere Way (Roman road, s106 cycleway) but offset to west	S106 Mere Way cycleway	Cycleway along Mere Way as part of the s106 agreement would provide NMU component Very straight route along a known corridor Avoids potential environmental constraints of Mere Way hedgerows	Isolated, and would not capture Milton market Potential site of archaeological significance (however paving of Mere Way for the cycleway indicates this may not be an issue) Farm access/severance would need to be considered	Any Mere Way option misses Milton, but Milton is not necessarily one of the markets - 'nice to have'			In		
7-23b	Offline	Along Mere Way	S106 Mere Way cycleway	Very straight route along a known corridor	Would potentially be constrained by hedgerows Mere Way s106 cycleway would need to be relocated Farm access/severance would need to be considered	Any Mere Way option misses Milton, but Milton is not necessarily one of the markets - 'nice to have'			Out		



				Cycleway along Mere Way as part of the s106 agreement would provide NMU component	Isolated, and would not capture Milton market Potential site of archaeological significance (however paving of Mere	Any Mere Way option misses				
7-23c	Offline	Parallel to Mere Way (Roman road, proposed s106 cycleway) but offset to the east	S106 Mere Way cycleway	Very straight route along a known corridor	Way for the cycleway indicates this may not be an issue)	Milton, but Milton is not			In	
		s rob cycleway) but onset to the east		Avoids potential environmental constraints of Mere Way	Farm access/severance would need to be considered	necessarily one of the markets - 'nice to have'				
		Link through ex landfill from south of MPR to		hedgerows	Ex landfill land potentially a constraint, depending on contamination, gas					
8-9	Offline	north of new A14 crossing	Would include maintenance track	Provides a direct link from MPR that avoids MI	pipes, etc		Landfill		In	
		Link through ex landfill from south of MPR to			Any MI option would need to be completely offline, with corresponding					
8-10	Offline	MI	Would include maintenance track	Link to MI that avoids A10	cost and complexity involved Ex landfill land potentially a constraint, depending on contamination, gas		Landfill		In	
					pipes, etc					
8-13	Offline	Link from Butt Lane down west side of MPR and relocated police station	Would include maintenance track	Avoids A10 and is closer to Milton and MPR than Mere Way	All options to the south would need to cross the ex landfill site, which may be a constraint		Landfill		In	
9-10	Offline	Link from A10/MI to point north of new A14	Would include maintenance track	Would allow travel along the A10 and associate directness	Still is close enough to MI that it would need to be completely offline. New		Landfill		In	
		crossing Link from MI to Cambridge Road roundabout,	Possibly space constrained, A14	without need to negotiate MI Land potentially available for offline option	slip lane from A14 to A10 would need to be considered This section of Cambridge Road may be congested, so best option would		Landfill			
10-11	Either	•	interchange poses a barrier	Accesses Milton and associated market	be offline, with corresponding cost and complexity.		Maize Maze access relocated	If offline	In	
10-14a	Offline	Link from MI to Butt Lane: aligned to A10 but offset to west	Would include maintenance track	Direct, close to Milton, accesses MPR	Landfill site a possible constraint, would need to interface with plans for new police station and would require reconfiguring of MPR		Landfill		In	
40.445	Outing	Dependent on offline A10 dualling: old A10	Possibly space constrained, there is	Binet dans to Million and MDD	Dependent on a) A10 dualling and b) new A10 alignment is different to				Out	
10-14b	Unline	gains bus priority	room on west side of A10	Direct, close to Milton, accesses MPR	existing A10				Out	
10-14c	Online	Bus priority on existing A10, with the assumption that there is either no dualling, or	Possibly space constrained, there is	Direct, close to Milton, accesses MPR	Capacity limits on existing A10, CPCA potentially concerned about				Out	
		the dualling isn't offline	room on west side of A10		increased capacity from dualling being given entirely to bus priority.					
			Possibly space constrained, there is	Direct, close to Milton, accesses MPR	Potential constraint with "village amenity" area in green space to east of					
10-14d	Offline	Link from MI to Butt Lane: aligned to A10 but offset to east	room on west side of A10 instead of	Corridor between housing and A10 is fairly wide, generally 35 45m, except one pinch point of 24m with culvert under A10	Could face opposition from residents who would back on to the		Buildability Services	Depending on rec ownership	In	
			using east side	on northeast side of Sycamores Rec	transitway, however they do currently back on to the A10 so adequate noise/lighting mitigation may be in place			ownerenip		
					Some constraints with industrial park on north side of A14 and east side					
11-12	Offline	Connection from Cambridge Road roundabout,		Generally ~18m wide, allows route to avoid central Milton but still accessing Milton market	•				In	
		Milton to railway line along south side of MCP	parallel routes exist through MCP	still accessing Milton market	A14 embankment may add to complexity					
			Space constrained. Below standard							
11-15	Online		cycle lanes currently in place, minor upgrades being made through s106		Would suffer from reliability issues due to congestion.				Out	
			agreement.							
					Alignment with railway potentially concentrates public transport corridors					
					in too small an area If alignment follows current Greenway alignment it will pass through a					
					corner of MCP, alignment may need to be modified depending on how					
				Could tie in with Greenway A14 underpass Greenway alignment beside the railway has been found to be	acceptable this is Having railway on one side and transit way on another will affect					
				feasible, could be extended to transitway as well	Greenway experience, will need to be sensitively incorporated so people		Greenway team is open to the idea of			
12-16	Offline	Link alongside Greenway and railway	Greenway	Could capture markets in Milton and Horningsea with appropriate cycle/local transport links (800m from Milton &	don't feel wedged between the two transport corridors. Crossing points (eg. Fen Road) will require thought		incorporating a transitway with their plans	MCP	In	
				Baits Bite Lock, 1.7km from Horningsea)	Any proposal alongside Greenway/railway would need to confirm status					
				This point of Greenway north is Phase 1 of scheme	of the development by the Sport Lakes Trust. Planning application S/0795/18/RM was withdrawn in 2018 but it appears they still plan to go					
					ahead with this development. They have said they will incorporate the					
					greenway into their plans, would have to work out if this extends to a transitway					
					Would require better cycling and local public transport links to serve					
13-20	Offline		Would include maintenance track	Offline route that accesses MPR	Milton				In	
13-23	Offline	South of Landbeach conservation area to MPR through the fields	Would include maintenance track	Offline route that serves MPR and potentially Landbeach	May conflict with Landbeach conservation area just north of the link				In	
			Would include maintenance track,							
14-17a	Offline	Link from Butt Lane to Landbeach Road: aligned to A10 but offset to west	possibly space constrained around	Avoids A10 impact and congestion	Possibly constraint with Maize Maze and Rectory Farm		Maize Maze access relocated		In	
			Maize Maze and Rectory Farm							
44471	Online	Link from Butt Lane to Landbeach Road:	Possibly space constrained, there is		Dependent on a) A10 dualling and b) new A10 alignment is different to				Out	
14-17D	Online	Dependent on offline A10 dualling: old A10 gains bus priority	room on west side of A10		existing A10				Out	
		Link from Butt Lane to Landbeach Road: Bus								
14-17c	Online	priority on existing A10, with the assumption that there is either no dualling, or the dualling	Possibly space constrained, there is room on west side of A10	⁵ Direct, serves Milton and MPR	Capacity limits on existing A10, CPCA potentially concerned about increased capacity from dualling being given entirely to bus priority.				Out	
		isn't offline								
			Possibly space constrained, there is		Potential constraint with "village amenity" area in green space to east of A10					
14-17d	Offline	I ink from Ruff I and to I andhoach Doad		f Direct, serves Milton and MPR (via A10) footbridge	Could face opposition from residents who would back on to the		Utility		In	
			using east side		transitway, however they do currently back on to the A10 so adequate					
14-23	Offline	P&R to Landbeach through the fields	Would include maintenance track	Serves Milton, MPR, while avoiding A10	noise/lighting mitigation may be in place Fairly large diversion compared to staying east of Landbeach				In	
		<u> </u>	Space constrained, some existing	Serves central Milton	Congestion, no space for segregated transitway				Out	
			infrastructure Space constrained, some existing							
15-18	Online	Ely Road in Milton	infrastructure	Serves central Milton	Congestion, no space for segregated transitway				Out	
		Link from Greenway/railway to A10 at the		Avoids the A10 for the section north of this point, but serves	Potentially quite a diversion if the route then heads west again as it approaches Waterbeach					
16-17	Offline	Landbeach Road junction	Would include maintenance track	Milton south of this point.	Links from this point south may be affected by A10 congestion	Not an effective connection			Out	
					Depends on status of the Lake					
16-18	Offline	Link from Ely Road at north end of Milton to	Would include maintenance track	Avoids A10 north of this point but serves Milton south of this	Potentially quite a diversion if the route then heads west again as it approaches Waterbeach	Not an effective connection			Out	
		Greenway/railway		point	Links from this point south may be affected by Milton congestion				100 million (100 m	
16-19	Offline	Alongside Greenway/railway	Greenway		Alignment with railway potentially concentrates public transport corridors		Greenway team is open to the idea of		In	
10 10				feasible, could be extended to transitway as well	in too small an area		incorporating a transitway with their plans			
<mark>16-22</mark>	Offline	Link from railway to northeast corner of FootGolf Centre	Would include maintenance track	Leaves railway alignment to head directly towards Waterbeach village					In	
	[1							



17-20	Online	Landbeach Road from A10 to just south of Landbeach village	Room on either side of Landbeach Road to include NMU infrastructure	Offline option parallel to Landbeach Road a possibility?	Is an online option that passes through a junction that is already congested.	Not an effective connection		Out	
<mark>17-21</mark> a	Offline	Link from Landbeach Road to Ely Road: aligned to A10 but offset to west	Would include maintenance track	Avoids A10 congestion	Potential dualling of A10 may be a constraint to this route			In	
<mark>17-21</mark> t	Online	Link from Landbeach Road to Ely Road: Dependent on offline A10 dualling: old A10 gains bus priority	Possibly space constrained, there is room on west side of A10	Uses existing infrastructure	Dependent on a) A10 dualling and b) new A10 alignment is different to existing A10			In	
17-210	Online	Link from Landbeach Road to Ely Road: Bus priority on existing A10, with the assumption that there is either no dualling, or the dualling isn't offline	Possibly space constrained, there is room on west side of A10	Uses existing infrastructure	Capacity limits on existing A10, CPCA potentially concerned about increased capacity from dualling being given entirely to bus priority.			In	
17-210	l Offline	Link from Landbeach Road to Ely Road: aligned to A10 but offset to east	Possibly space constrained due to allotments, there is room on west side of A10 instead of using east side	Avoids A10 congestion	Allotments to the north of Milton and A10/Ely Road junction are constraints		Equine land Allotments A10/Ely Road junction FootGolf land	Out	
<mark>18-21</mark>	Online	e Along Ely Road between Milton and the A10	Space constrained, limited existing infrastructure	Serves Milton	May suffer from congestion in and out of Milton If road widening required allotments to the west may be a constraint			Out	
19-26	Offline	Diverges from Greenay alongside railway but doesn't stay alongside Car Dyke	Greenway	Serves Waterbeach Avoids Car Dyke scheduled monument and online routes through Waterbeach			Greenway team is open to the idea of incorporating a transitway with their plans	In	
19-27	Offline	e Alongside Greenway beside Car Dyke	Greenway	Link towards centre of exiting Waterbeach village Heads towards a separate alignment to the railway, duplicating services Greenway alignment beside Car Dyke has been found to be feasible, could include transitway as well	Car Dyke is a heritage area, so the route alongside it would need to be sensitive to this		Sensitive to Car Dyke scheduled monument land	Out	
19-29	Offline	e Alongside Greenway beside railway	Greenway	Greenway alignment beside Car Dyke has been found to be feasible, could be extended to transitway as well	May be constrained toward northern end with housing beside railway Continuing along railway is potentially a duplication of services in close proximity, however if the existing Waterbeach station is located it does mean the new transitway will serve the old location. This location is perhaps worth revisiting anyway as it isn't in the centre of Waterbeach village Station Road area around Waterbeach Station is constrained, perhaps more room available with station relocation Passes through Car Dyke conservation area and Waterbeach Abbey conservation area, would have to be sensitively managed	Level crossing queues on Station Road	Crossing car Dyke Waterbeach Abbey heritage area	Out	
<mark>20-24</mark> a	Online	Route through Landbeach along Landbeach Road then Waterbeach Road	Space constrained and passes through a conservation area	Serves Landbeach village	Passes through Landbeach conservation area Constrained by space through Landbeach village Route is online – may experience congestion			Out	
<mark>20-24</mark> t	Offline	Through the fields from south of Landbeach to Waterbeach Road	Would include maintenance track	Serves Landbeach village (stops would be ~500m from village centre)	-			In	
20-25	Offline	Through the fields from Landbeach Road south of Landbeach to A10 at the Car Dyke Road/Waterbeach Road junction	N Would include maintenance track	Serves southern end of Landbeach village Avoids A10 Serves southern end of Waterbeach village and can tie in with routes that serve Waterbeach	Junction with A10 would be a constraint, grade separated crossing might be necessary			In	
21-25a	Offline	Link from Ely Road to Waterbeach Road/Car Dyke Road: aligned to A10 but offset to west	Would include maintenance track, some constraints from farm buildings	Avoids A10 congestion	Potential dualling of A10 may be a constraint to this route Some farm building and a caravan park on west side of the A10 along this section Historic milestone potentially a constraint		If buildings are avoided	In	
21-25b	Online	Link from Ely Road to Waterbeach Road/Car Dyke Road: Dependent on offline A10 dualling: old A10 gains bus priority	Possibly space constrained, there is room on west side of A10	³ Uses existing infrastructure	Dependent on a) A10 dualling and b) new A10 alignment is different to existing A10			In	
21-250	Online	Link from Ely Road to Waterbeach Road/Car Dyke Road: Bus priority on existing A10, with the assumption that there is either no dualling, or the dualling isn't offline	Possibly space constrained, there is room on west side of A10	³ Uses existing infrastructure	Capacity limits on existing A10, CPCA potentially concerned about increased capacity from dualling being given entirely to bus priority.			In	
21-250	l Online	Link from Ely Road to Waterbeach Road/Car Dyke Road: aligned to A10 but offset to east	Possibly space constrained, fewer buildings on west side of A10	Avoids A10 congestion	Would have to route around back of businesses to the east of the A10 to join up with Car Dyke Road at the north			In	
<mark>22-26</mark>	Offline	vvaterbeach	Would include maintenance track	Serves central Waterbeach village Avoids Waterbeach conservation area	-			In	
<mark>22-27</mark>	Offline	FootGolf course to Car Dyke Road/Cambridge Road junction	Would include maintenance track	Serves central Waterbeach village	Option to the north of the link are online only			Out	
23-32a	Offline	Parallel to Mere Way (Roman road, s106 cycleway) but offset to west	S106 Mere Way cycleway	Cycleway along Mere Way as part of the s106 agreement would provide NMU component Very straight route along a known corridor Avoids potential environmental constraints of Mere Way hedgerows	Isolated, and would not capture Milton market Potential site of archaeological significance (however paving of Mere Way for the cycleway indicates this may not be an issue) Farm access/severance would need to be considered			In	
23-32t	Offline	e Along Mere Way	S106 Mere Way cycleway	Very straight route along a known corridor	Would potentially be constrained by hedgerows Mere Way s106 cycleway would need to be relocated Farm access/severance would need to be considered			In	
23-320	Offline	Along Mere Way but offset to east	s106 Mere Way cycleway	Cycleway along Mere Way as part of the s106 agreement would provide NMU component Very straight route along a known corridor Avoids potential environmental constraints of Mere Way hedgerows	Isolated, and would not capture Milton market Potential site of archaeological significance (however paving of Mere Way for the cycleway indicates this may not be an issue) Farm access/severance would need to be considered			In	
24-25	Online		Fewer buildings on south side of road	Serves Landbeach and housing along Waterbeach Road	Online so affected by congestion Would need grade separated crossing of A10	Not an effective connection		Out	
24-32	Offline	Through the fields from Waterbeach Road to new link to WNT access roundabout	Would include maintenance track	Serves Landbeach	-			In	
25-26	Online	e Cambridge Road from the A10 to Glebe Road	Space constrained, quiet street due to modal filter at A10 end	Serves Waterbeach Low traffic road due to modal filter at Cambridge Road/A10 junction	Potentially constrained with drains on either side of the road and a conservation area for pollard willows to north side		Space constrained	In	
25-27	Online		Would need to be separate to carriageway as speed limit is high	Serves Waterbeach	Potential congestion from being online			Out	
25-31	Offline	Along the A10 from Cambridge Roadthen through the fields past Milton Business Park	Limited space alongside the A10, but it is parallel to the Greenway	More direct route into WNT that avoids continuing along A10 to the north of this point	Space constrained alongside A10.			In	

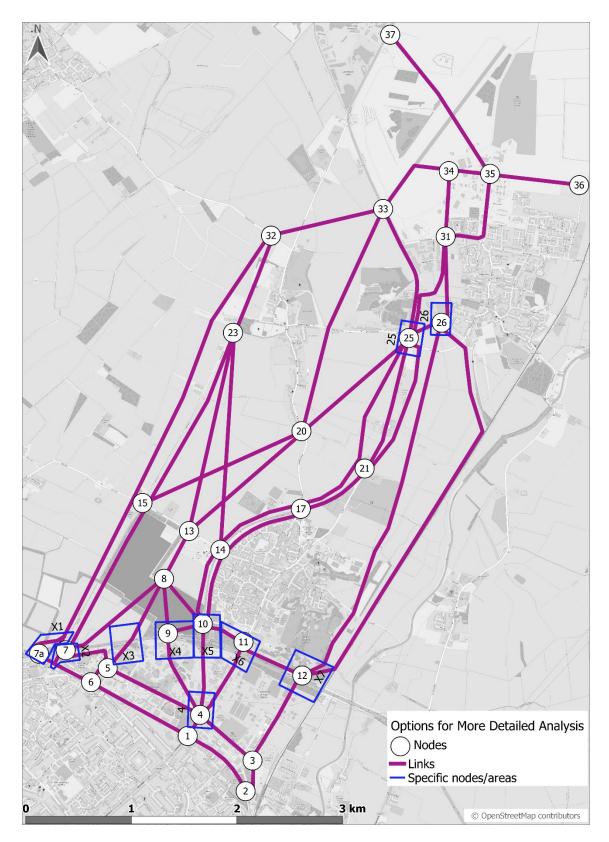


25-33a	Offline	Link from Waterbeach Road/Car Dyke Road to WNT Access 2: aligned to A10 but offset to west	Would include maintenance track, some constraints	Avoids A10 congestion	Potential dualling of A10 may be a constraint to this route This section has a lot of physical restraints: buildings and lakes to the west of A10 Historic milestone potentially a constraint				Out	
25-33b	Online	Link from Waterbeach Road/Car Dyke Road to WNT Access 2: Dependent on offline A10 dualling: old A10 gains bus priority	Possibly space constrained, buildings on both side of A10	Uses existing infrastructure	Dependent on a) A10 dualling and b) new A10 alignment is different to existing A10				In	
25-33c	Online	Link from Waterbeach Road/Car Dyke Road to WNT Access 2: Bus priority on existing A10, with the assumption that there is either no dualling, or the dualling isn't offline	Possibly space constrained, buildings on both side of A10	Uses existing infrastructure	Capacity limits on existing A10, CPCA potentially concerned about increased capacity from dualling being given entirely to bus priority.				In	
26-27	Online	Cambridge Road from Glebe Road to Car Dyke Road	Greenway	Serves Waterbeach	Potentially space constrained due to residences on either side Conservation areas on the north side of Cambridge Road on either side of Coronation Close	Not an effective connection			Out	
26-31	Offline	Link through the fields from Cambridge Road to Denny End Road	Would include maintenance track	Serves Waterbeach Offline route through the town that avoids the Waterbeach conservation area and any village congestion Serves employment centre on corner of Denny End Road and A10 Aligns with latest proposals for Waterbeach Greenway – potentially meaning land ownership/access issues can be arranged at the same time	Section 31 claim on a parcel of land on this route – not sure if this is an issue Access from Glebe Road would be through allotments				In	
27-28	Online	Cambridge Road to Chapel Street in Waterbeach	Space and conservation area constraints	Serves Waterbeach	Potential congestion from travelling through centre of Waterbeach village Potential space constraints Passes through Waterbeach conservation area				Out	
28-29	Online	Station Road from existing Waterbeach station to Green Side	Space and conservation area constraints	Serves Waterbeach, including site of existing station	Potential congestion from travelling through centre of Waterbeach village Potential space constraints Passes through Waterbeach conservation area	Level crossing congestion	Space constraints		Out	
28-30	Online	Green Side/High Street in Waterbeach	Space and conservation area constraints	Serves Waterbeach	Potential congestion from travelling through centre of Waterbeach village Potential space constraints Passes through Waterbeach conservation area				Out	
29-36	Offline	Alongside railway from existing station to new station including Bannold Drove	Greenway	Serves Waterbeach	Potential duplication of public transport services in close proximity Possible space constraints at southern end of link Bannold Drove potentially not suitable for transitway (currently designated as NMU route)				Out	
30-31	Online	Denny End Road from barracks access to proposed new WNT access	Space and conservation area constraints	Serves Waterbeach	Potential congestion from travelling through centre of Waterbeach village Potential space constraints			Depends on developers plans for entry to WNTW	In	
30-35	Offline	Link on proposed transitway from WNT to Waterbeach village	Would tie in with developers plans	Serves Waterbeach and town centre of WNT Currently proposed as transitway in WNT masterplan/SPD	Current constraints with buildings but will move over time as the WNT is built				In	
31-34	Offline	New link from new access off Denny End Road to proposed E-W transitway in WNT	Would tie in with developers plan (including new A10 bridge)	Serves Waterbeach and town centre of WNT	Not a route that appears on current masterplan/SPD so would require collaboration with developers to implement. Would be on a similar alignment to the s106 cycleway from the A10 bridge, so would need to coordinate to ensure no conflict		U&C haven't started designing land in this section yet, so opportunity to coordinate with them		In	
32-33	Offline	Link to WNT access roundabout 2	Would include maintenance track	Serves WNT through new access point	Doesn't serve Waterbeach village A10 junction may need to be grade separated				In	
33-34	Either	E-W transitway in WNT, appears in masterplans and SPD	Would tie in with developers plan	Serves WNT	Doesn't serve Waterbeach village A10 junction may need to be grade separated Would need to be offline to be effective, current proposals do not specify what form the transitway would take				In	
34-35	Either	E-W transitway in WNT, appears in masterplans and SPD	Would tie in with developers plan	Serves WNT	Doesn't serve Waterbeach village A10 junction may need to be grade separated Would need to be offline to be effective, current proposals do not specify what form the transitway would take				In	
35-36	Either	E-W transitway in WNT to relocated station, appears in masterplans and SPD	Would tie in with developers plan	Serves WNT and relocated station	Doesn't serve Waterbeach village A10 junction may need to be grade separated Would need to be offline to be effective, current proposals do not specify what form the transitway would take Serving relocated station may be redundant			Any route from the station may be challenged on the basis of duplicating services	In	
35-37	Either	SE-NW transitway in WNT between town centre and CRP/WNT Access roundabout 1	Would tie in with developers plan	Serves WNT town centre, secondary town centre by the lake and CRP/potential rural travel hub by the A10 Also serves large sections of WNT, including Key Phase 1	e Does not currently appear as a designated transitway in masterplan/SPD, so would need collaboration with developers to implement Would need to be offline to be effective			U&C have designed this stage, would need to coordinate to see where transitway fits into their plans	In	



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Appendix D. Map of Options Taken to More Detailed Appraisal



Appendix E. More Detailed Appraisal Table

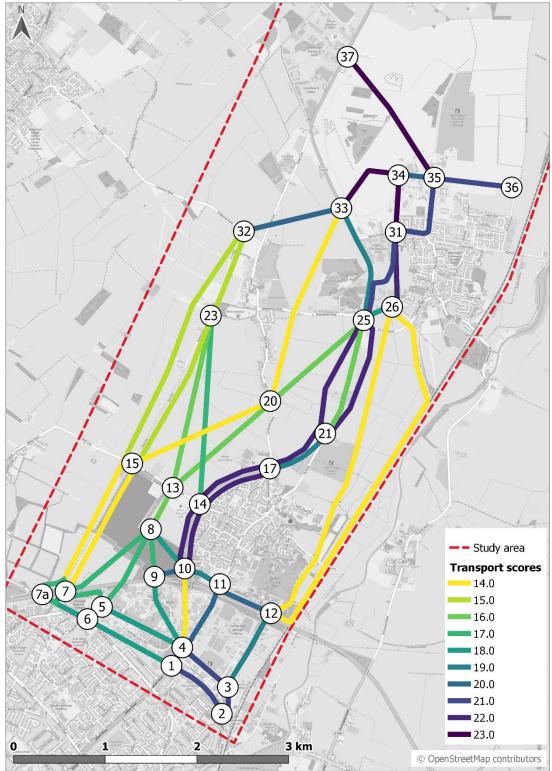
Atkins ref: 5192922 New town North of Waterbeach to North of Cambridge public transport study Options for More Detailed Assessment Option details	Assessment criterion 1: Sustainable transport capacity (gualitative)	Assessment criterion 2: PT speed, reliability & safety (gualitative)	Assessment criterion 3: High standards for NMUs (gualitative)	Assessment criterion 4: Higher share of journeys by public transport	Assessment criterion 5: Higher share of short journeys by non-motorised	Assessment criterion 6: Higher share of short journ	Assessment criterion 7: Fewer vehicles driving in	: Assessment criterion 8: nto Improved perceptions of	f Assessment criterion 9: Engineering constraints	Assessment criterion 10: Environmental constraints	Asses Note: this takes into account the construction acce	sment criterion 11: Buildability ss and timescales, the engineering constraints (as far as the	Round to millions Assessment criterion 12: High level cost estimation	Summary subtotal and total score	es for convenience only (see note at bottom of table)
ID Description Integration of Non-Motorised Users (NMU) Benefits Potential issues/constraints	PT Capacity Risks NMU Additional Capacity Se	Core Congestion Relief Concerns or Pinch Points Safety Improvement Safety Improvement	core Provision improvements Issues Alleviated Key Location Connections	Score Market Catchment Level of Impact Scor	ore Market Catchment Level of Impact Sco	core Lower Car Mode Share in Study Corridor	core Trips Terminating in Cambridge S	Score Overall Safety Improvement Sc	eore Engineering Risks and Score	Environmental Risks and Constraints Any Comments and assessments	affect buildability), and the planning/consents issues. issues and the corresponding scorScorePlanning Risks and ConstraintsConsents Required	The 'planning score' covers the planning/consents issues; the are one input to the overall buildability score.Additional commentsScoreTimescale for Delivery (months of construction)Score	Ore Cost Estimate (£ millions) Score	re TP critiera Total Score Del	All criteria total score
Links for more detailed assessment Lower detailed assessment I-2 Cambridgeshire Guided Busway (CGB) from Cambridge North station to Milton Road CGB bridleway Existing infrastructure Allows a connection to Milton Road PT priority schemes to city centre CGB capacity?	+2 as reliant on current CGB. No other issues 0 - no improvement to capacity expected.	2 Fully segregated CGB capacity limitation? No improvement over existing	2 Walking and cycling route separate to busway, but shared- use Standards remain the same (CNS), on to central Cambridge	3 Potential to service all markets within Study Area including Milton. Service will be on busway and will therefore be reliable and fast. Service will rely on CGB.	Potential to service all markets within Study Area including Milton.	 Link could capture external trips dependent on alignment of connecting links. PT mode share likely to increase due to reliability and speed of service. NMU route already exists so mode share unlikely to change significantly. 	3 Direct connection, potential to capture many markets	3 Informal surveillance from being a busy section of a walking, cycling and bus route. Some overlooking from employment centres either side.	³ Only significant risk is modifications at Milton Rd / CGB junction if required for additional transit movements or volumes. Movements currently not accommodated include north-to-east i.e. 4 -> 1 -> 2. Also need to establish the CGB capacity limit and whether any right turn pockets would be of value in accommodating additional volumes.	Eversden & Wimpole Woods Special Area of Conservation (SAC) (14km SW) - qualifying feature - barbastelle bats. Histon Road Site of Special Scientific Interest (SSSI) (2.4 km SW) - contact Local Planning Authority (LPA) for all planning applications. However, Histon Road SSSI separated from all proposed routes by urban development and infrastructure so unlikely to be affected by proposed works. Bramblefields Local Nature Reserve (LNR) - adjacent to the route to the S. Coldham's Common LNR (920 m S). Barnwell LNR (1.6 km SW) lie adjacent Coldham's Common. Three priority habitats - coastal floodplain grazing marsh (three parcels, closest parcel 60 m	 General comment applicable to all or most links (omitted from other links for brevity) Planning policies identifed from South Cambridgeshire Adopted Policies September 2018 NPPF 2018 -Green Belt Policy Proposals affecting the Green Belt When considering planning applications, local planning authorities give substantial weight to any harm to the Green Belt. 'Very special circumstances' will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm resulting from the proposal, is clearly outweighed by other considerations. Certain forms of development are not inappropriate in the General comment applicable to applications. 			22	8 30
1-4.Milton Road from CGB to transport hub in centre of North East Cambridge (NEC)Space constrained on Milton Road, routes exist as shared- use path (SUP) or shared bus priority lanesServes routes to city centre Serves centre of NEC including proposed transport hub Ties in with Milton Road bus schemeOnline solutions would be affected by congesti Milton Road, but there is road space for continu the Milton Road PT priority lanes in this section	tion of huing on +1 could be delivered by some form of widening in this location, but still likely to be subject to delays on Milton Road and the junctions at either end of the link.	1 Limited ability to improve on current congestion area Milton Road capacity issues and proximity to junctions No improvement over existing	OSegregation and protection would be an improvement over current route (mix of shared- use and on-road)Rationalising cycle infrastructure so it's not a confusing mix of shared-use and on-road. Safer and more direct crossings.NEC and on to central Cambridge	 Potential to service all markets well (dependant on onward route alignment). Link to Node 4 provides effective links to both CSP and CNFE. Any online option will be subject to congestion during peak periods and therefore slow and unreliable. 	Potential to service all markets within Study Area including Milton.	Link could capture external trips dependent on alignment of connecting links. PT mode share likely to increase due to reliability and speed of service if offline. NMU mode share could increase due to additional links on Milton Road.	3 Could facilitate connection	2 Well-lit, busy road with informal surveillance from road.	 Existing bus lane northbound only. This could be reallocated to free up southbound space, otherwise focus on coordination of southbound signals between Cowley Road and CGB. Routing via nodes 1 -> 4 -> 11 would require northbound PT to make RT onto Cowley Rd. Access at bus gate (north access to Cowley Rd) may have benefits by giving access to Science Park. TRO and signals work required. 	SE). lowland fens (one parcel - Eversden & Wimpole Woods SAC (14km SW) - qualifying feature - barbastelle bats. Histon Road SSSI (2.4 km SW) - (see proposed route 1-4, row 12). One priority habitat - deciduous woodland - (one parcel 430 m NW). Seven waterbodies - closest waterbody 240 m W.	Green Belt provided thevmaintenance and operation, land acquisition, rights over third party assets, powers to close or alter roads and for making bylaws.1Allocation Policy E/1 - Adjacent Cambridge Science Park Area of Major Change - Adjacent Proposal Site M1 - Adjacent Waste Consultation Area - Adjacent Mineral Safe Guarding Area - Adjacent Residential Area - Near Highways - Major Disruption/ Capacitymaintenance and operation, land acquisition, rights over third party assets, powers to close or alter roads and for making bylaws.1Mineral Safe Guarding Area - Adjacent Residential Area - Near Highways - Major Disruption/ CapacityOne of the benefits of a TWAO is that it can also grant compulsory purchase powers or temporary powers over land required to construt, operate or for maintenance of the scheme. In making a TWAO, the scheme's promoters would need to demonstrate a compelling case in the public interest for taking away a	2 6	£2	18	8 26
1-6 CGB from Milton Road to existing A14 underpass CGB bridleway CGB capacity? Existing infrastructure Allows a connection to Milton Road PT priority schemes to city centre CGB capacity?	+2 as reliant on current CGB. 0 - no improvement to capacity No other issues expected.	2 Fully segregated CGB capacity limitation? No improvement over existing Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated Image: Comparison of the segregated	2 Walking and cycling route separate to busway, but shared-Standards remain the same use CSP, King's Hedges, CRC, Milton Road, on to central Cambridge	3 Potential to service all markets apart from CNFE. 3 Potential to service all markets based of CSP and is approximately 700m south of northern businesses. Service unlikely to continue onto CNFE. Service will be on busway and will therefore be reliable and fast. Service will rely on CGB.	Link could service southern area of CSP and is approximately 700m south of northern businesses. Link unlikely to continue onto CNFE. NMU link already present on Busway so mode share unlikely to change. Links to Cambridge North already present so mode share unlikely to change.	Link could capture external trips dependent on alignment of connecting links. PT mode share likely to increase due to reliability and speed of service. NMU route already exists so mode share unlikely to change significantly.	2 Direct connection, potential to capture many markets	Informal surveillance from being a busy walking, cycling and bus route. Some overlooking from employment centres either side.	3 Similar to 1-2. RT west to south is an existing movement without RT pocket; would need to consider value of adding one.	Eversden & Wimpole Woods SAC (14km SW) - qualifying feature - barbastelle bats. Histon Road SSSI (1.6 km SW) - (see proposed route 1-4, row 12). One priority habitat - deciduous woodland (one parcel - 500 m N). Six waterbodies - closest waterbody - 80 m N.HRA screening of Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 habitat, badger, GCN, bats, bird, reptile and otter.Main considerations are potential impacts to Eversden & Wimpole Woods SAC, priority habitats and waterbodies.Eversden & Wimpole Woods SAC (14km SW) - qualifyingEversden & Wimpole Woods woods sAC (14km SW) - qualifyingHRA screening of Eversden & Wimpole Woods saceMain considerations are potential impacts to Eversden & Wimpole Woods sace	1Education (CRC) - Near Employment - Near Residential - NearA TWAO does not in itself grant planning permission for the scheme, but the scheme promoter can submit a request with the TWAO that the SoS grants deemed planning permission for any development described in the Order. The SoS would only grant planning permission if the	3 6	£0 5	19	9 28 2010
2-3 Along Cowley Road and Milton Avenue Existing Milton Avenue Cowley Road potentially main street in Cambridge Northern Fringe East (CNFE) (awaiting Area Action Plan for confirmation of proposed urban design): would connect into this town centre Cowley Road potentially main street in CFNE: a online route through this area might suffer reliad issues	ability +2 as running on a wide and uncongested road, but feeds in to a pinchpoint of jcts on Milton Rd. Potentially space to widen.	2 Online, but not a congestion problem None No improvement over existing 4 Image: State of the state	2 Walking and cycling route separate to busway, but shared- use CNS, CNFE, Cambridge Business Park	 Potential to service all markets well (dependant on onward route alignment). Offline route will be a fast and reliable service that could increase PT Capacity. Route will run in parallel to CGB. 	Potential to service all markets within Study Area including Milton.well (dependant on onward route alignment). NMU link already present adjacent to highway so mode share unlikely to change. Links to Cambridge North already present so mode share unlikely to change.3Potential to service marketsPotential to service markets	 trips dependent on alignment of connecting links. PT mode share likely to increase due to reliability and speed of service. NMU route already exists so mode share unlikely to change significantly. Link could capture external 	3 Direct connection, potential to capture many markets	 Informal surveillance from being a busy walking, cycling and bus route. Will have more overlooking with development of CNFE. 	Mixed-traffic link which is the main station access. Reliability will depend on the scale and nature of this other traffic.	feature - barbastelle bats.HRA screening of Eversden & Wimpole Woods SAC.Maln considerations are the potential impacts to Eversden & Wimpole Woods SAC.12). Bramblefields LNR - 85 mHRA screening of Eversden & Wimpole Woods SAC.Maln considerations are the potential impacts to Eversden & Wimpole Woods SAC,2). Bramblefields LNR - 85 mPotential surveys: Phase 1 Habitat - deciduous woodland (three parcels - closest parcel - 300 m NW). One pond - 90 m E. River Cam - 115 m SW.Potential surveys: Phase 1 Habitat, GCN, bats, bird, reptile and otter.Bramblefields LNR, priority habitats and waterbodies.Eversden & Wimpole Woods SAC. (14km SW) - qualifyingEversden & Wimpole Woods SAC. (14km SW) - qualifyingEversden & Wimpole Woods SAC	1Order was made (approved), in which case planning permission could be granted at the same time as the TWAO was determined. Usually any such decision notice would have conditions attached to it requiring further details or designs to be submitted to the local planning authority (LPA) for their approval. A TWAO is	3 6	3 £2 3	22	10 32
3-4 Along Cowley Road to Milton Road Existing Milton Avenue cycleway Cowley Road potentially main street in CNFE (awaiting AAP for confirmation of proposed urban design): would connect into this town centre Cowley Road potentially main street in CNFE (awaiting AAP for confirmation of proposed urban design): would connect into this town centre Cowley Road potentially main street in CNFE (awaiting AAP for confirmation of proposed urban design): would connect into this town centre Cowley Road potentially main street in CNFE (awaiting AAP for confirmation of proposed urban design): would connect into this town centre Cowley Road potentially main street in CFNE: a confirmation of proposed urban design): would connect into this town centre Cowley Road potentially main street in CFNE: a confirmation of proposed urban design): would connect into this town centre Cowley Road potentially main street in CFNE: a confirmation of proposed urban design): would connect into this town centre Cowley Road potentially main street in CFNE: a confirmation of proposed urban design): would connect into this town centre Cowley Road potentially main street in CFNE: a confirmation of proposed urban design): would connect into this town centre Cowley Road potentially main street in CFNE: a confirmation of proposed urban design): would connect into this town centre Cowley Road potentially main street in CFNE: a confirmation of proposed urban design): would connect into this town centre Cowley Road potentially main street in CFNE: a confirmation of proposed urban design): would connect into this town centre Cowley Road potentially main street in CFNE: a confirmation of proposed urban design): would connect into this town centre	ability +2 as running on a wide and uncongested road, but feeds in to a pinchpoint of jcts on Milton Rd. Potentially space to widen.	2 Online, but not a congestion problem None No improvement over existing 4 Image: State of the state	Widen existing shared-use path and upgrade to be separate for ped+cycles. Integrate with streetscape.	 Potential to service markets well (dependant on onward route alignment). Offline route will be a fast and reliable service that could increase PT Capacity. Route will run in parallel to CGB. 	well (dependant on onward route alignment).Potential to service all marketswithin Study Area includingMilton.within Study Area including	 trips dependent on alignment of connecting links. PT mode share likely to increase due to reliability and speed of service. NMU route already exists so mode share unlikely to change significantly. 	3 Direct connection, potential to capture many markets	3 Informal surveillance from being on proposed main street through CNFE and being a busy cycling and walking route.	3 As per 2-3 above. 3 Scope to form part of an	SAC (14km SW) - qualifying feature - barbastelle bats. Histon Road SSSI (2.5 km SW) - (see 1-4, row 12). Bramblefields LNR - 354 m SE of the route. One priority habitat - deciduous woodland (four parcels - closest parcel - 300 m NW). One pond - 360 m SE.HRA screening of Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 Habitat, badger, GCN, bats, bird, reptile and otter.Maln considerations are the potential impacts to Eversden & Wimpole Woods SAC, Bramblefields LNR, priority habitats and waterbodies.Eversden & Wimpole WoodsEversden & Wimpole Woods	1 Future office development near station Area of Major Change - within Highways - disruption/ capacity also likely to be accompanied by an EIA. Major Change - within Highways - disruption/ capacity Application for planning permission Where works are proposed within boundaries of the existing Highway, some works such as bus stop enhancements, public realm, carriageway revisions or	3 6	£4 5	22	10 32
3-12 Online along Milton Avenue then offline alongside Waterbeach Greenway alignment Proposed Greenway route Proposed Greenway route alignment Proposed Greenway route alignment Proposed Greenway route alignment Proposed Greenway route Proposed Greenway route Proposed Greenway route Serves NEC and is able to connect to Cambridge North Depends on coordination with CNFE and their emerging masterplan Aggregates yard not being relocated as part of development at this stage – could pose an issue with transport trucks along Milton Avenue This section of Greenway is designated "Phase not sure of timeline on that (may not know until February)	of NEC sue +3 as can be designed to work with the Masterplan as a 1 - new route dedicated route	3 Dedicated route None None New route to be built to latest standards and would run through the CNFE area so not far from population	3 Improvement provided by Greenway itself Connection between CNFE and Milton Country Park/Waterbeach CNFE, CNS, MCP, NEC, Milton	3 Potential to service all markets apart from CSP. Link will not service CSP and will service the eastern side of CNFE approximately 700m east of western businesses. Offline route will be a fast and reliable service that could increase PT Capacity. Route will run parallel to railway line.	Potential to service all markets apart from CSP. Link will not service CSP and will service the eastern side of CNFE approximately 700m east of western businesses. Link provides capacity for additional NMU infrastructure that is not currently provided. NMU links will provided as part of Greenways project.	Link could capture external trips dependent on alignment of connecting links. PT mode share likely to increase due to reliability and speed of service. NMU route already exists so mode share unlikely to change significantly.	2 Direct connection, potential to capture many markets, but may miss CSP	2 Informal surveillance from being on main street through CNFE and being a busy cycling and walking route (once CNFE is occupied and Greenway is constructed)	Such an eastern corridor could potentially offer higher speeds than alternatives which run through the heart of Northern Fringe East. Complicated bridge to build. However more construction space available here than at X3 or X4. Potential for excellent NMU network density in concert with Jane Coston bridge. Would need liaison with greenway proposals.	SAC (15.5 km SW) - qualifying feature - barbastelle bats. Histon Road SSSI (3 km SW) - (see proposed route 1-4, row 12). Two priority habitats - coastal floodplain grazing marsh (two parcels, closest parcel 250 m E) and deciduous woodland (four parcels - closest parcel within route option). Three waterbodies - closest waterbody 240 m SE. River Cam - 490 m east.	 Area of Major Change - within Waste Consultation Area - Within Mineral Safe Guarding Area - Adjacent Waste Water Treatment Works Safeguarding Area - Within Planning permission may be required for development proposals which are not classed as permitted development. Powers authorised via a planning application will confer 	Torking with any emerging asterplan for the Area of ajor Change to implement a ew route. Transit-oriented evelopment (TOD) oportunities?	2 £12	20	6 26
4-5 Link through Cambridge Science Park (CSP): alignment unknown at this stage and will depend on emerging masterplan for regeneration of CSP. Could be on the loop road, on a segregated transitway, or on a realignment of the CGB, or a combination of the above If online: use existing SUP around CSP If offline: incorporate new NMU route into design Puts transitway in the heart of the CSP, one of the major destinations and demand drivers CSP view towards a transitway through their la unknown. 4-5 Link from Milton Road to ex landfill site If online: use existing SUP around CSP Puts transitway in the heart of the CSP, one of the major destinations and demand drivers CSP view towards a transitway through their la unknown. Would require new infrastructure as opposed to using existing CGB just to the south Milton Landfill Site potentially a constraint:	and is to +3 if offline and worked into masterplan with dedicated crossing of Milton Road 1 - new route	3 Dedicated route None New route to be built to latest standards and would run through the CSP area so not far from population 4 Image: Comparison of the com	Assuming offline route, separate ped+cycle routes alongside transitway, with priority over side roads	3 Potential to service all markets apart from CNFE. Link unlikely to serve CNFE. Link will stop within centre of CSP. 2 0 Offline route will be a fast and reliable service that could increase PT Capacity. 2	Potential to service all markets apart from CNFE. Link will serve centre of CSP. Link will increase capacity of NMU infrastructure.	Link could capture external trips dependent on alignment of connecting links. PT mode share likely to increase due to reliability and speed of service. NMU network already exists so mode share unlikely to change significantly although may Link could capture external trips dependent on alignment of connecting links.	2 Direct connection, potential to capture many markets, but unlikely to provide connection to Milton	2 Overlooking from CRC and CSP during peak hours, less so after hours	CGB preferred from engineering point of view but will need to be balanced against the value of running through CSP rather than alongside it. Need to consider current and potential quality of pedestrian links between existing CGB stops and CSP Further comments to be	Eversden & Wimpole Woods SAC (14.5 km SW) - qualifying feature - barbastelle bats. Histon Road SSSI (1.7 km SW) - (see proposed route 1-4, row 12). One priority habitat - deciduous woodland (two parcels - closest parcel - 315 m N) Eight waterbodies - Eversden & Wimpole Woods SAC (14.5 km SW) - qualifying feature - barbastelle bats.	Allocation Policy E/1 - Within Cambridge Science Park potential loss of employment land Allocation Policy E/1 - Within Cambridge Science Park potential loss of employment land Allocation Policy E/1 - Within Cambridge Science Park potential loss of employment land Allocation Policy E/1 - Within Cambridge Science Park potential loss of employment land Allocation Policy E/1 - Within Cambridge Science Park potential loss of employment land Allocation Policy E/1 - Within Cambridge Science Park potential loss of employment land Allocation Policy E/1 - Within Cambridge Science Park potential loss of employment land Allocation vill not generally authorise powers for road or tramway schemes, nor will it confer powers for the compulsory acquisition of land. It is likely therefore that planning applications would be used for some works	romote intensification? eeds engagement with CSP n level of support for a route rough their estate	2 £7 2	19	7 26
4-9 4-9 4-9 4-9 4-9 4-9 4-9 4-9 4-9 4-9	ored +3 if offline and worked into masterplan with dedicated 1 - new route	3 Dedicated route None New route to be built to latest standards and would run through the CSP area so not far from population 4 Image:	3 Assuming offline route, separate ped+cycle routes alongside transitway, with priority over side roads Increase capacity, improved safety at junctions CSP, CNFE	 Potential to service all markets apart from CNFE. Link unlikely to serve CNFE. Link could stop within centre of CSP. Offline route will be a fast and reliable service that could increase PT Capacity. Potential to service markets well (dependant on onward route alignment). 		 PT mode share likely to increase due to reliability and speed of service. NMU network already exists so mode share unlikely to change significantly although may increase due to directness of route. Link could capture external trips dependent on alignment of 	2 Direct connection, potential to capture many markets, but unlikely to provide connection to Milton	2 Overlooking from CRC and CSP during peak hours, less so after hours	 provided. A14 bridge here would be long due to slip roads. At the landfill end of the link constraints are around geotechnics (more about long- term settlement than about pavement design) Grade-separation would be expensive and vertically awkward. Potential alternative 	feature - barbastelle bats. Histon Road SSSI (2 km SW) - (see proposed route 1-4, row 12). One priority habitat - deciduous woodland (four parcels - closest parcel - 100 m E). Seven waterbodies - closest waterbody within proposed route. Eversden & Wimpole Woods SAC (14.5 km SW) - qualifying feature - barbastelle bats.	1 potential loss of employment land highways boundaries - but not for the scheme in it's entirety. 0 the scheme in it's entirety. Allocation Policy E/1 - Within Allocation Policy E/1 - Within Permitted Development Schedule 2 of the Town & Country Planning (General Permitted Development) (England) Order 2015 (as the scheme in the scheme	romote intensification? eeds engagement with CSP n level of support for a route rough their estate	2 £16 0	19	5 24
4-10 Flyover Milton Interchange and continue along Milton Road (alongside or in central reservation) Space constrained on Milton Road, but parallel route exists is a constrained on Milton Road, but parallel route exists is a constrained on Milton An on-road, in-corridor option needs to be considered at this stage Direct, passes between CSP and CNFE An on-road, in-corridor option needs to be considered at this stage Does not link east-west in NEC, but can conner schemes that do.	s there ough ion poportunity for PT capacity is to remove from car. Still ect to pinchpoints at either end 0 - no improvement to capacity expected.	1 Inherent congestion area and limited scope to avoid Capacity on this section of highway. Blocking back from Milton Interchange None 1 Inherent congestion area and limited scope to avoid Capacity on this section of highway. Blocking back from Milton Interchange None	0 Assuming offline route, separate ped+cycle routes alongside transitway. Improved journey quality no safe cycling route north of Cowley Road on Milton Road. NEC, Milton	3 Potential to service all markets within Study Area including Milton. Link to Node 4 provides effective links to both CSP and CNFE. 2 Any online option will be subject to congestion during peak periods and therefore slow and unreliable. 2 Link unlikely to serve CSP. Link unlikely to serve CSP.	Potential to service all markets within Study Area including Milton. Potential to service markets well (dependant on onward route alignment). Some capacity issues on Milton Road for additional NMU links.	2 increase due to reliability and speed of service if offline. NMU mode share could increase due to additional links on Milton Road.	2 Direct connection, potential to capture many markets	3 Overlooking from CRC and CSP during peak hours, less so after hours	at-grade option using centre of A10 and of Milton Rd, with side- widening, plus 2-stage signals at roundabout arms and new transit bridge across A14 in centre of roundabout - would reduce structural and operational costs Main issue is getting transitway from the Jane Coston Bridge to	Histon Road SSSI (2.5 km SW) - (see proposed route 1-4, row 12). One priority habitat - deciduous woodland (four parcels - closest parcel - 130 m W). Seven waterbodies - closest waterbody adjacent to the proposed route to the west. Eversden & Wimpole Woods SAC (14.5 km SW) - qualifying facture - barbastelle bats. HRA screening of Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 Habitat, badger, GCN, bats, bird, reptile and otter. Main considerations are potential impacts to Eversden & Wimpole Woods SAC, priority habitats and waterbodies. Main considerations are potential impacts to Eversden & Wimpole Woods SAC, priority habitats and waterbodies.	 Allocation Policy E/1 - Within Cambridge Science Park potential loss of employment land Highways - disruption/ capacity Impact of new flyover on the landscape/ views Green Belt - Within Area of Major Change - adjacent Area of Major Change - adjacent Candidation Policy E/1 - Within (England) Order 2015 (as amended) (the GPDO) grants right to undertake certain works as 'permitted development' without the need to obtain formal planning permission from the LPA. Those provision, which may be relevant to the implementation of certain specified elements of the project include those under 	ross boundary LPAs 1 12	£16	15	3 18
4-11 Link from Milton Road to somewhere near Cambridge Road roundabout in Milton using a new crossing of the A14, potentially on the same alignment as the Jane Coston bridge Depends on proposals for CNFE	<pre>/ at or d the +3 if offline and worked into masterplan with dedicated 1 - new route and crossing of Milton Road</pre>	3 Dedicated route None New route to be built to latest standards and would run through the CNFE area so not far from population 4 Image: Comparison of the co	3 Increased ped+cycle capacity on this route Coston bridge, pinch point at Milton access, improve transition to Cowley Road, widen and separate ped+cycle route on Cowley Road	3 Potential to service all markets apart from CSP. Children apart from CSP. Children apart from CSP. Link could stop within centre of CNFE. Offline route will be a fast and reliable service that could increase PT Capacity. Online route may be subject to some congestion.	Potential to service all markets apart from CSP. Ink unlikely to servce CSP. Link will serve centre of CNFE. Link will increase capacity of NMU infrastructure.	 Connecting links. PT mode share likely to increase due to reliability and speed of service. NMU network already exists so mode share unlikely to change significantly although may increase due to directness of route. Link could capture external trips dependent on alignment of 	2 Direct connection, potential to capture many markets	Overlooking from proposed shop frontages in CNFE. Informal surveillance from being a busy cycling and waking route.	A new access onto the CGB	feature - barbastelle bats.Histon Road SSSI (2.5 km SW)- (see proposed route 1-4, row12). One priority habitat -deciduous woodland (fourparcels - closest parceladjacent to the route to the E).Seven waterbodies - closestwaterbody 400 m to the SW.Eversden & Wimpole WoodsEversden & Wimpole WoodsSAC (14 km SW) - qualifying	Waste Consultation Area - WithinSchedule 2 of the GPDO: •Part 8 Transport Related1Mineral Safe Guarding Area - Adjacent•Part 8 Transport Related1Adjacent Waste Water Treatment Works Safeguarding Area - Within Green Belt - Green Gap sites encraochement?•Part 18 Miscellaneous Development.1Minor Country Park•Part 18 Miscellaneous Development1Milton Country ParkHowever, certain restrictions apply to the use of permitted development under Parts 8 and 9 from Article 3(10) of the	Yorking with any emerging asterplan for the Area of ajor Change to implement a ew route. ToD opportunities? ross boundary LPAs	£17 (21	4 25
5-6 Link from CGB to east access of CSP along Kings Hedges Drive Space on western verge for segregated path Route accesses CSP May suffer from congestion from traffic accessis Cambridge Regional College (CRC) and CSP Image: Comparison of the compa	O limited space for any 0 - no improvement to capacity sing 0 - no improvement to capacity entrances nearby means that 0 - no improvement to capacity this would likely b busy/congested	0 Inherent congestion area and limited scope to avoid Capacity on this section of highway. Many adjacent accesses None 0 Inherent congestion area and limited scope to avoid Capacity on this section of highway. Many adjacent accesses None	Assuming offline route, separate ped+cycle routes alongside transitway, with priority over side roads CSP, CRC	3 Potential to service all markets apart from CNFE. Adajcent links could utilise busway or service the centre of CSP. 2 Offline route will be a fast and reliable service that could increase PT Capacity. 2 Link unlikely to serve CNFE. 2	apart from CNFE. exists therefore unlikely to increase mode share of NMU	 PT mode share likely to increase due to reliability and speed of service. NMU network already exists so mode share unlikely to change significantly although may increase due to directness of route. Link could capture external 	2 Direct connection, potential to capture many markets, but unlikely to provide connection to Milton	2 Overlooking from CRC and CSP during peak hours, less so after hours	east of CRC, near current stub end of access road and CGB stops, would resolve the interaction with general traffic at existing CRC access. Similar in principle to existing CGB Orchard Park T-junction.	 Histon Road SSSI (1.5 km SW) - (see proposed route 1-4, row 12). One priority habitat - deciduous woodland (one parcel 450 m NW). Two waterbodies - closest waterbody adjacent to the route to the W. Eversden & Wimpole Woods SAC (14 km SW) - qualifying 	 Education (CRC) - Within, loss of education land and car parking? Employment - Near Residential - Near GPDO, which removes permitted development rights for development that is Environmental Impact Assessment (EIA) development under the Town and Country Planning EIA Regulations 2017 (as amended). 	2 6	2 £1 3	14	9 23
5-7 Link from east access of CSP to existing A14 underpass using Kings Hedges Drive Space on southern verge for segregated path Route accesses CSP Potential to be offline if parking configuration is changed for CRC May conflict with parking for CRC, and uses an access to CSP that is congested Image: Constraint: Image: Constraint: Image: Constraint: Image: Constraint: Image: Constraint: Image: Constraint: Image: Constraint: Image: Constraint: Image: Constraint: Image: Constraint:		1 Subject to some congestion/interaction with the car park Car Park and its accesses, as well as building accesses from the read. Widening required, so could have safety improvements 1 Image: Car Park and its accesses, as well as building accesses from the read. Widening required, so could have safety improvements	Assuming offline route, separate ped+cycle routes alongside transitway, with priority over side roads Increase capacity, improved safety at junctions CSP, CRC	3 Potential to service all markets apart from CNFE. Adajcent links could utilise busway or service the centre of CSP. 2 Offline route will be a fast and reliable service that could increase PT Capacity. 2	Potential to service all markets apart from CNFE. Link unlikely to servce CNFE. Link will serve centre of CSP. Link will increase capacity of NMU infrastructure. 3 Link will increase capacity of NMU infrastructure. Link to provide new high quality 3	 3 PT mode share likely to increase due to reliability and speed of service. Additonal NMU infrastructure could increase mode share. Link should reduce car mode share as all markets but CNFE 	3 Direct connection, potential to capture many markets, but unlikely to provide connection to Milton	2 Overlooking from CRC and CSP during peak hours, less so after hours Overlooking from CRC and	As per 5-6 above, new access onto the CGB would resolve this Bridge over the A14 may have a significant impact on the CSP. All options via node 8 will	feature - barbastelle bats. Histon Road SSSI (1.4 km SW) - (see proposed route 1-4, row 12). One priority habitat - deciduous woodland - (two parcels - closest parcel 360 m NW). Two waterbodies - closest waterbody 170 m S. Eversden & Wimpole Woods SAC (15 km SW) - qualifying SAC (15 km SW) - qualifying	Education (CRC) - Within, loss of education land and car parking? Employment - Near Residential - Near Education (CRC) - Within, loss of education land, car parking, sports pitch? Employment - Within, loss of		£1 3	18	8 26
5-8 Link from CSP to south of Milton Park & Ride (MPR) via new A14 crossing Segregated NMU route Direct access to CSP Pipelines, 9m elevation above surrounding field leachate etc. Site is due to be completely restored by 2026 New crossing required, with associated costs a complexity CSP view towards a transitway through their la unknown	ored +3 as offline new route with no and pinchpoints 1 - new route	3 Dedicated route None New route to be built to latest standards and would run through the CSP area so not far from population 4 Image:	 with priority over side roads within CSP. Grade separated crossing of A14 to Dutch standards. 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle Increase capacity, improved journey quality, improved safety at junctions CSP, CRC 	3 CSP, WNT and Waterbeach Village serviced. CNFE and Milton not serviced. Link crosses A14 on western side of CSP. Link too far to effectively serve Milton. Link would provide a fast, reliable offline PT option. 2 4 Link could service southern 2	CSP, WNT and Waterbeach Village serviced. CNFE and Milton not serviced. CNFE and Milton not serviced. CNFE and Milton not serviced.	and Milton can be served. PT mode share likely to increase due to reliability and speed of service. New NMU route provided increasing mode share and lower car mode share.	2 Direct connection, potential to capture many markets, but unlikely to provide connection to Milton	2 CSP during peak hours, less so after hours. North of the A14 the route is remote, so would need lighting. Informal surveillance from people walking, cycling and in transit vehicles.	structure. Use of node 7a instead of 7 is	 feature - barbastelle bats. Histon Road SSSI (1.7 km SW) (see proposed route 1-4, row 12). One priority habitat - deciduous woodland - (five parcels - route passes through two parcels). Two waterbodies closest waterbody 170 m S. HRA screening of Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 habitat, badger, GCN, bats, bird, reptile and otter. 	employment land? 1 Residential - Near Waste Site - Within, loss of allocated waste land/ site? Working with any waste masterplan for the site and remediation Allocation Policy SS/1 - Adjacent		2 £14	18	5 23
6-7 Using CGB and new cut-thru alongside Mere Way bridleway to access exiting A14 underpass Existing CGB bridleway, s106 Mere Way cycleway Uses existing CGB Impact on CRC parking	+2 as reliant on current CGB and requiring new connection to the bridge 1 - would provide new or improved connection under the bridge	3 Dedicated route Width of existing structure to provide sufficient width for PT and NMU routes New route to be built to latest standards	Provision on CGB remains the same but is at a high level. From CGB to underpass will be provided under the s106 agreement CSP, CRC	3 Potential to service all markets apart from CNFE. 3 Potential to service all markets apart from CNFE. 3 Service will be on busway and will therefore be reliable and fast. 5 Service will rely on CGB.	Potential to service all markets apart from CNFE. Link could service southern area of CSP and is approximately 1km south west of north eastern businesses. Link unlikely to continue onto CNFE. New infrastructure could improve NMU mode share and provide links to CRC.	Link could capture external trips dependent on alignment of connecting links. PT mode share likely to increase due to reliability and speed of service. NMU route already exists so mode share unlikely to change significantly.	2 Direct connection, potential to capture many markets, but unlikely to provide connection to Milton	2 Informal surveillance from being a busy walking, cycling and bus route. Some overlooking from employment centres either side.	preferable from engineering point of view. Need to consider best ultimate location of transit stops in this area given the potential for multiple transit 3 routes to meet (with potential interchange opportunities) and any opportunities to improve access to CRC through additional or relocated stops.	Eversden & Wimpole Woods SAC (14.5 km SW) - qualifying feature - barbastelle bats. Histon Road SSSI (1.3 km SW) - (see proposed route 1-4, row 12). No priority habitats. Three waterbodies - closest adjacent to the route.	Local Green Space Policy NH/5 - Within Green Belt - Within Roman Road (Archaeology) - 1 Adjacent PRoW - Adajcent Mere Way Residential Area (travelers camp) - Adjacent plus road is main access to camp Education Use (CRC) - Adjacent Allocation Policy SS/1 -	1 6	£1 3	19	8 27
6-7a Using existing CGB A14 underpass, then new link along north side A14 to node 7 Existing CGB bridleway Uses existing CGB and A14 underpass Would need to cross CGB bridleway Farm access/severance (however route would very corner of field so potentially not an issue)		2 Dedicated route None No improvement over existing 4 Image: Image	Provision on CGB remains the same but is at a high level. Ped+cycle route would be on s106 cycleway route. Provision remains the same CSP, CRC	3 Potential to service all markets apart from CNFE. 2 Potential to service all markets apart from CNFE. 2 Service will be on busway and will therefore be reliable and fast. 3 Service will rely on CGB.	Potential to service all markets apart from CNFE.Link could service southern area of CSP and is approximately 1km south west of north eastern businesses. Link unlikely to continue onto CNFE. New infrastructure could improve NMU mode share and provide links to CRC.	Link could capture external trips dependent on alignment of connecting links. PT mode share likely to increase due to reliability and speed of service. NMU route already exists so mode share unlikely to change significantly.	2 Direct connection, potential to capture many markets, but unlikely to provide connection to Milton	 Informal surveillance from being a busy walking, cycling and bus route. Some overlooking from employment centres either side. 	Would involve transit crossing the existing CGB bridleway at what in effect would be a new T- junction. Similar situations exist elsewere on CGB. Bridleway impacts and connectivity between all NMU corridors would need to be worked through.	Eversden & Wimpole Woods SAC (14.5 km SW) - qualifying feature - barbastelle bats. Histon Road SSSI (1.2 km SW) - (see proposed route 1-4, row 12). One priority habitat - deciduous woodland - (one parcel 370 m NW). Three waterbodies - closest adjacent to the route.	Adjacent Local Green Space Policy NH/5 - Within Green Belt - Within Roman Road (Archaeology) - 1 Adjacent PRoW - Adajcent Mere Way Residential Area (travelers camp) - Adjacent plus road is main access to camp Education Use (CRC) - Adjacent Local Green Space Policy NH/5	3 6	3 £0 3	18	10 28
7-8 Route from existing A14 underpass across field and ex landfill site to south of MPR Segregated NMU route Uses existing underpass Potentially less direct as the route is doubling to on itself Milton Landfill Site potentially a constraint: pipelines, 9m elevation above surrounding field leachate etc. Site is due to be completely restored by 2026	+3 as offline new route with no Ids, pinchpoints	3 Dedicated route None Limited improvement as through rural area	 Separate ped+cycle route: S.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle No current cycling and walking cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle 	3 CSP, WNT and Waterbeach Village serviced. CNFE and Milton not serviced. Link too far to effectively serve Milton. Link would provide a fast, reliable offline PT option.	CSP, WNT and Waterbeach Village serviced. CNFE and Milton not serviced. CNFE and Milton not serviced.	Link should reduce car mode share as all markets but CNFE and Milton can be served. PT mode share likely to increase due to reliability and speed of service. New NMU route provided increasing mode share and lower car mode share.	2 Direct connection, potential to capture many markets. Could connect Milton via PnR Site	 Remote, so lighting would be necessary on ped+cycle route. Informal surveillance from people walking, cycling and in transit vehicles. 	All options via node 8 will have similar issues on alignment and geotechnics (more to do with long-term settlement than pavement design). Ground settlement issues would need to be mitigated via the pavement structure.	Eversden & Wimpole Woods SAC (14.5 km SW) - qualifying feature - barbastelle bats. Histon Road SSSI (1.4 km SW) - (see proposed route 1-4, row 12). One priority habitat - deciduous woodland - (five parcels - route passes through one parcel). Three waterbodies.	Green Belt - Within Roman Road (Archaeology) - Adjacent PRoW - Adajcent Mere Way Residential Area (travelers camp) - Adjacent plus road is main access to camp Lordsbridge Consultation Area 2 Policy TI/7 - Within Waste Consultation Area - Within, would ahev to work within any waste masterplan for the site Existing Waste Site - Within Education Use (CRC) - Near Local Green Space Policy NH/5	2 12	2 £6 2	18	6 24
7-15aParallel to Mere Way (Roman road, s106 cycleway) but offset to west, from A14 to Butt LaneS106 Mere Way cyclewayVery straight route Avoids potential environmental constraints of Mere Way hedgerowsIsolated, and would not capture Milton market Potential site of archaeological significance (however paving of Mere Way for the cycleway) indicates this may not be an issue) Farm access/severance would need to be considered	y +3 as offline new route with no pinchpoints 0 - assumed use of Mere Way route with no new infrastructure	3 Dedicated route None Limited improvement as through rural area	2 s106 Mere Way cycleway Inaccessible cycling and walking route currently exists CRC, CSP	3 CSP, WNT and Waterbeach Village serviced. CNFE and Milton not serviced. Link crosses A14 on far western side of CSP (College) so may be too far for eastern businesses. Link too far to effectively serve Milton. Link would provide a fast, reliable offline PT option.	CSP, WNT and Waterbeach Village serviced. CNFE and Milton not serviced. Link to provide new high quality NMU route although likely to be used more by cyclists. Potential to link with Milton Park and Ride which could be utilised as a 'Park and Cycle' or 'Park and Walk'. Link crosses A14 on far western side of CSP (College) so may be too far for eastern businesses.	Link should reduce car mode share as all markets but CNFE and Milton can be served. PT mode share likely to increase due to reliability and speed of service. New NMU route provided increasing mode share and lower car mode share.	Direct connection, potential to capture many markets, but unlikely to provide connection to Milton	Remote, so lighting would be necessary on ped+cycle route. Some informal surveillance from people walking, cyling and in transit vehicles	Would need to resolve interaction of transitway and existing / upgraded Mere Way.	Eversden & Wimpole Woods SAC (14.5 km SW) - qualifying feature - barbastelle bats. Histon Road SSSI (1.5 km SW) - (see proposed route 1-4, row 12). One priority habitat - deciduous woodland - (two parcels - closest parcel lies adjacent the route). Four waterbodies - closest waterbody 50 m N.	Local Green Space Policy NH/5 - Within Green Belt - Within Roman Road (Archaeology) - Adjacent/ runs alongside Residential Area (travelers camp) - Adjacent plus road is main access to camp Lordsbridge Consultation Area 2 Policy TI/7 - Within Waste Consultation Area - Adjacent, would have to work within any waste masterplan for the site Existing Waste Site - Within Education Use (CRC) - Near Local Green Space Policy NH/5	2 18	£10	14	6 20
7-15b Parallel to Mere Way (Roman road, s106 cycleway) but offset to the east, from A14 to Butt Lane S106 Mere Way cycleway Butt Lane S106 Mere Way cycleway Butt Lane S106 Mere Way cycleway Butt Lane S106 Mere Way cycleway Way hedgerows S106 Mere Way for the cycleway indicates this may not be an issue) Farm access/severance would need to be considered	y +3 as offline new route with no 0 - assumed use of Mere Way pinchpoints route with no new infrastructure	3 Dedicated route None Limited improvement as through rural area	2 s106 Mere Way cycleway Inaccessible cycling and walking route currently exists CRC, CSP	3 CSP, WNT and Waterbeach Village serviced. CNFE and Milton not serviced. Link crosses A14 on far western side of CSP (College) so may be too far for eastern businesses. Link too far to effectively serve Milton. Link would provide a fast, reliable offline PT option.	CSP, WNT and Waterbeach Village serviced. CNFE and Milton not serviced. 1 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 4 3 3 3 3	Link could capture external trips dependent on alignment of connecting links. PT mode share likely to increase due to reliability and speed of service. New NMU route provided increasing mode share and lower car mode share.	Direct connection, potential to capture many markets, but unlikely to provide connection to Milton	Remote, so lighting would be necessary on ped+cycle route. Some informal surveillance from people walking, cyling and in transit vehicles	1 As per 7-15a 2	Eversden & Wimpole Woods SAC (14.5 km SW) - qualifying feature - barbastelle bats. Histon Road SSSI (1.5 km SW) - (see proposed route 1-4, row 12). One priority habitat - deciduous woodland - (two parcels - closest parcel lies adjacent the route). Four waterbodies - closest waterbody 50 m N.	 Within Green Belt - Within Roman Road (Archaeology) - Adjacent/ runs alongside Residential Area (travelers camp) - Adjacent plus road is main access to camp PRoW - Adajcent Mere Way Lordsbridge Consultation Area 2 Policy TI/7 - Within Waste Consultation Area - Adjacent, would have to work within any waste masterplan for the site 	1 18	£10	14	5 19
A.9Link through ex landfill from south of MPR to north of new A14 crossingSegregated NMU routeProvides a direct link from MPR that avoids Milton InterchangeMilton Landfill Site potentially a constraint: pipelines, 9m elevation above surrounding field leachate etc. Site is due to be completely resto by 2026	lds, +3 as offline new route with no ored pinchpoints	3 Dedicated route None Limited improvement as through rural area	2 Separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle No current cycling and walking No current cycling and walking Separate ped+cycle route: Separate ped-cycle route: Se	3 CSP, WNT and Waterbeach Village serviced. CNFE and Milton not serviced. Link would provide a fast, reliable offline PT option. Adjacent link effectively serve markets it serves	CSP, WNT and Waterbeach Village serviced. CNFE and Milton not serviced. CNFE and Milton not serviced.	 Link could capture external trips dependent on alignment of connecting links. PT mode share likely to increase due to reliability and speed of service. New NMU route provided increasing mode share and lower car mode share. 	2 Direct connection, potential to capture many markets. Could connect Milton via PnR Site	3 Remote, so lighting would be necessary on ped+cycle route. Some informal surveillance from people walking, cyling and in transit vehicles	All options via node 8 will have similar issues on alignment and geotechnics. Ground settlement issues would need to be mitigated via the pavement 1 structure. This link would have gradient issues and may be better to go around edge of landfill instead	Eversden & Wimpole Woods SAC (14.5 km SW) - qualifying feature - barbastelle bats. Histon Road SSSI (1.8 km SW) - (see proposed route 1-4, row 12). One priority habitat - deciduous woodland - (five parcels - route passes through one of the parcels). One waterbody 415 m SW.HRA screening of Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 habitat, badger, GCN, bats, bird, reptile and otter.Main considerations are potential impacts to Eversden & Wimpole Woods SAC, priority habitats and waterbodies.	Existing Waste Site - Within Education Use (CRC) - Near Allocation Policy E/1 - Adjacent Cambridge Science Park, provides direct route to Green Belt - Within Lordsbridge Consultation Area 2 Policy TI/7 - Within Waste Consultation Area - Adjacent, would have to work within any waste masterplan for the site Existing Waste Site - Within	2 6	£4	18	7 25
8-10 Link through ex landfill from south of MPR to Milton Interchange Period Milton Interchange option would need to be complexity involved Milton Interchange Milton Interchange option above surrounding field leachate etc. Site is due to be completely restored by 2026	lds, '	3 Dedicated route None Limited improvement as through rural area	2 Separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle No current cycling and walking NEC, can go on to serve CSP/CNS	 Potential to service all markets within Study Area including Milton (depending on adjacent links) Pedestrians will need to cross A10 to utilise stop. Link would provide offline route that is fast and reliable. Link is west of A10 so may not be attractive to Milton Users. 	Potential to service all markets within Study Area including Milton (depending on adjacent links) Pedestrians will need to cross A10 to utilise new NMU infrastructure.Route would improve NMU mode share with new infrastructure. Link unlikely to attract vast numbers of new trips due of Milton users due to proximity of village. Potential to link with Milton Park and Ride which could be utilised as a 'Park and Cycle' or 'Park and Walk'.	Link could capture external trips dependent on alignment of connecting links. PT mode share likely to increase due to reliability and speed of service. NMU route could increase slightly although hindered by position in relation to A10.	2 Direct connection, potential to capture many markets. Could connect Milton via PnR Site	 Remote, so lighting would be necessary on ped+cycle route. Some informal surveillance from people walking, cyling and in transit vehicles 	All options via node 8 will have similar issues on alignment and geotechnics. Ground settlement issues would need to be mitigated via the pavement 1 structure. This link would have gradient issues and may be better to go around edge of landfill instead	Eversden & Wimpole Woods SAC (15.5 km SW) - qualifying feature - barbastelle bats. Histon Road SSSI (2 km SW) - (see proposed route 1-4, row 12). One priority habitat - deciduous woodland - (five parcels - route passes through one of the parcels and adjacent to two others). One waterbody 415 m SW.HRA screening of Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 habitat, badger, GCN, bats, bird, reptile and otter.Main considerations are potential impacts to Eversden & Wimpole Woods SAC, priority habitats and waterbodies.	Allocation Policy E/1 - Near Cambridge Science Park Green Belt - Within Lordsbridge Consultation Area 2 Policy TI/7 - Within Waste Consultation Area - Adjacent, would have to work within any waste masterplan for the site Existing Waste Site - Within Highways - Major Disruption at Milton Junction/ Capacity	2 12	2 £6 2	19	6 25
8-13 Link from Butt Lane down west side of MPR and relocated police station Segregated NMU route Segregated NMU route Avoids A10 and is closer to Milton and MPR than Mere Way Milton Landfill Site potentially a constraint: pipelines, 9m elevation above surrounding field leachate etc. Site is due to be completely restored by 2026	lds, +3 as offline new route with no ored pinchpoints	3 Dedicated route None New route to be built to latest standards and would run close to A10 and current PnR Site	 Separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle No current cycling and walking Can connect with links serving CSP/NEC 	3 CSP, WNT and Waterbeach Village serviced. CNFE and Milton not serviced. Link could provide additional routes for Milton Park and Ride.	CSP, WNT and Waterbeach Village serviced. CNFE and Milton not serviced. CNFE and Milton not serviced.	Link could capture external trips dependent on alignment of connecting links. PT mode share likely to increase due to new infrastructure. NMU mode share could increase slightly, dependant on onward links to CSP/A10.	2 Direct connection, potential to capture many markets. Could connect Milton via PnR Site	Remote, so lighting would be necessary on ped+cycle route. Some informal surveillance from people walking, cyling and in transit vehicles	All options via node 8 will have similar issues on alignment and geotechnics. Ground settlement issues would need to be mitigated via the pavement structure.	Eversden & Wimpole Woods SAC (15 km SW) - qualifying feature - barbastelle bats. Histon Road SSSI (2.1 km SW) - (see proposed route 1-4, row 12). One priority habitat - deciduous woodland - (three parcels - route passes through one of the parcels). Two waterbodies - closest waterbody 60 m NW.	Green Belt - Within Lordsbridge Consultation Area 2 Policy TI/7 - Within Waste Consultation Area - Adjacent, would have to work 1 within any waste masterplan for the site Existing Waste Site - Within Milton P&R - Adjacent, opportunity to tie in Agricultural land - loss of Allocation Policy E(1 - Noor	2 12	£6 2	17	6 23
9-10 Link from A10/MI to point north of new A14 crossing Segregated NMU route Segregated NMU route Would allow travel along the A10 and associate directness without need to negotiate Milton Interchange that would need to be completely offline. New slip is from A14 to A10 currently under construction, we need to be considered Milton Interchange to be considered Milton Interchange to be considered with the construction above surrounding field leachate etc. Site is due to be completely restored by 2026	lane would +3 as offline new route with no pinchpoints Ids,	3 Dedicated route None Limited improvement as through rural area	 Separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle No current cycling and walking can connect with links serving CSP/NEC 	 CSP, WNT, Waterbeach Village and Milton serviced. CNFE not serviced. Milton (dependant on adjacent links). 	CSP, WNT, Waterbeach Village and Milton serviced. CNFE not serviced. C	Link could capture external trips dependent on alignment of connecting links. PT mode share likely to increase due to reliability and speed of service. New NMU route provided increasing mode share and lower car mode share.	3 Direct connection, potential to capture many markets. Could connect Milton via A10 routes	 Remote, so lighting would be necessary on ped+cycle route. Some informal surveillance from people walking, cyling and in transit vehicles 	Need to review final A14 slip alignment. Constraints here have been a factor in the current A14 work - potential to benefit from the understanding they have already achieved in this area. Combination of landfill and A14 is a significant constraint for this study.	Eversden & Wimpole Woods SAC (15 km SW) - qualifying feature - barbastelle bats. Histon Road SSSI (2.5 km SW) - (see proposed route 1-4, row 12). One priority habitat - deciduous woodland - (seven parcels - closest parcel adjacent to the route to N). Eight waterbodies - closest waterbody 100 m S.	Allocation Policy E/1 - Near Cambridge Science Park Green Belt - Within Lordsbridge Consultation Area 2 Policy TI/7 - Within Waste Consultation Area - Adjacent, would have to work within any waste masterplan for the site Existing Waste Site - Within Highways - Major Disruption at Milton Junction/ Capacity	2 12	2 £6 2	21	6 27

ID Description Integration of Non-Motorised Users (NMU) Benefits	Potential issues/constraints PT Capacity Risks NMU Additional Capacity State	Score Congestion Relief	Concerns or Pinch Points	Safety Improvement Se	core Provision improvements Issues Alleviated Key Location Connections	Score Market Catchment	Level of Impact S	core Market Catchment Level of Impact S	Score Lower Car Mode Share in Study Corridor S	core Trips Terminating in S Cambridge	Score Overall Safety Improvement Sc	core Engineering Risks and Sco Constraints	Environmental Risks and Constraints Likely scope of environmental investigations and assessments	ore Planning Risks and Consents Required	Additional comments Score Timescale for Delivery (months of construction) Score	e Cost Estimate (£ millions)	Score TP critiera Total Score	iverability criteria total score
10-11 Link from Milton Interchange to Cambridge Road roundabout, Milton Road roundabout, Road roundabout, Milton Road roundabo	site of This section of Cambridge Road may be congested, so best option would be offline, with corresponding cost and complexity. +3 as offline new route with no pinchpoints 1 - new route	3 Dedicated route	None	imited improvement as hrough rural area	 Separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle Current cycling and walking route is limited: cycling on road, walking on pavement on one side of road. Can connect with links serving CSP/NEC 	3 Potential to service all markets within Study Area including Milton. Dependency on adjacent links.	Link provides route between A10 junction and Milton village. Link would provide offline route that is fast and reliable. Link could service all markets dependent on adjacent routes.	3 Potential to service all markets within Study Area including Milton. Dependency on adjacent links. Link would provide additional NMU infrastructure between Milton and A10 junction. Link could service all markets dependent on adjacent routes.	Link could capture external trips dependent on alignment of connecting links. PT mode share likely to increase due to reliability and speed of service. New NMU route provided increasing mode share and lower car mode share.	3 Direct connection, potential to capture many markets, but may miss CSP	 Remote, so lighting would be necessary on ped+cycle route. Some informal surveillance from people walking, cyling and in transit vehicles 	As with 4-11, main issue is getting transitway from the Jane Coston Bridge to the north side of Cambridge Rd. Consider realigning Cambridge Rd to new alignment including transitway grade-separation to be built first. From 10 northwards, a route on east side of the A10 would provide good access to corridor from Milton and would avoid the landfill.	Eversden & Wimpole Woods SAC (15.5 km SW) - qualifying feature - barbastelle bats. Histon Road SSSI (2.7 km SW) - (see proposed route 1-4, row 12). Stow-cum-Quy Fen SSSI (3.3 km NW) - separated from all proposed routes by River Cam and agricultural land so unlikely to be affected by proposed works. Two priority habitats - coastal and floodplain grazing marsh - (one parcel 500 m W) and deciduous woodland - (five parcels - closest parcels adjacent to the route to the N and S). Eight waterbodies -	Green Belt - Within, potential encorachment into the gap sites however, site by A14 was advertised for sale/ strategic development cicra 2015 Protected Village Amentiy Area Policy NH/11 - Near Milton Playing Fields Lordsbridge Consultation Area 2 Policy TI/7 - Within Waste Consultation Area - Adjacent Existing Waste Site - Within Highways - Major Disruption at Milton Junction/ Capacity		£5	2 20	6 26
10-14a Link from Milton Interchange to Butt Lane: aligned to A10 but offset to west Segregated NMU route Direct, close to Milton, accesses MPR	Milton Landfill Site potentially a constraint: pipelines, 9m elevation above surrounding fields, leachate etc. Site is due to be completely restored by 2026 Would need to interface with plans for new police station and may require reconfiguring of MPR access	3 Dedicated route	None None	New route to be built to latest tandards and would run close to A10 and current PnR Site	3 Grade separated crossing of A14 to Dutch standards. North of the A14, 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle. No current ped+cycle route alongside A10 Milton Road, NEC	3 Potential to service all markets within Study Area including Milton.	Link would provide offline route that is fast and reliable. Link is west of A10 so may not be attractive to Milton Users. Link next to A10 so could attract trips during operation.	A10 to utilise new NMU Potential to link with Milton	 Link should reduce car mode share as all markets could be serviced. PT mode share likely to increase due to reliability and speed of service. NMU route could increase slightly although hindered by position in relation to A10. 	3 Direct connection, potential to capture many markets	3 Informal surveillance limited to people walking, cycling, in transit vehicles and on highway	 Existing transport corridor. Key considerations are (i) potential synergy/overlap with any A10 online or offline dualling or junction proposals, and (ii) options for the east-to-west arrangement of each element of the corridor. On (ii), links with Milton village will need to be accommodated which implies east of A10. Consider having NMU route on east (village) side of A10 and transit route on west side. 	closest waterbody 110 m SW.Eversden & Wimpole Woods SAC (15.5 km SW) - qualifying feature - barbastelle bats. Histon Road SSSI (2.7 km SW) - (see proposed route 1-4, row 12). One priority habitat - deciduous woodland - (eight parcels - closest parcels adjacent to the route to the E and W). Five waterbodies - closest waterbody 50 m W.HRA screening of Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 habitat, badger, GCN, bats, bird, reptile and otter.Main considerations are potential impacts to Eversden & Wimpole Woods SAC, priority habitats and waterbodies.	Green Belt - Within Protected Village Amentiy Area Policy NH/11 - Adjacent Waste Consultation Area - Within, would have to work within any waste masterplan for the site Existing Waste Site - Adjacent Highways - Major Disruption at Milton Junction/ Capacity Milton P&R - Within, opportunity to tie in easily Residential - Near Green Belt - Within Protected Village Amentiy Area		£6	2 2 3	7 30
10-14c Link from Milton Interchange to Butt Lane: aligned to A10 but offset to east Possibly space constrained, there is room on west side of A10 instead of using east side Direct, close to Milton, accesses MPR Corridor between housing and A10 is fairly wid generally 35-45m, except one pinch point of 24 with culvert under A10 on north-west side of Sycamores Rec	de, green space to east of A10 Could face opposition from residents who would back on to the transitway, however they do currently back on to the A10 so adequate noise/lighting mitigation may be in place Acceptability may depend on rec ownership+3 as offline new route with no pinchpoints1 - new route	3 Dedicated route	None St to	lew route to be built to latest tandards and would run close o A10 and current PnR Site	3 Grade separated crossing of A14 to Dutch standards. North of the A14, 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle. Mo current ped+cycle route alongside A10 Milton Road, NEC	Potential to service all markets within Study Area including Milton.	Link would provide offline route that is fast and reliable. Link next to A10 so could attract trips during operation.	 Potential to service all markets within Study Area including Milton. Route would improve NMU mode share with new infrastructure. Link adjacent to Milton village. Potential to link with Milton Park and Ride which could be utilised as a 'Park and Cycle' or 'Park and Walk'. 	 Link should reduce car mode share as all markets could be serviced. PT mode share likely to increase due to reliability and speed of service. New NMU route provided increasing mode share and lower car mode share. 	3 Direct connection, potential to capture many markets	3 Informal surveillance limited to people walking, cycling, in transit vehicles and on highway. Depending on layout, may have some overlooking from houses in Milton	2 As per 10-14a above, plus see comments on 10-11 above. 2	As 10-14a HRA screening of Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 habitat, badger, GCN, bats, bird, reptile and otter. Main considerations are potential impacts to Eversden & Wimpole Woods SAC, priority habitats and waterbodies.	Protected Village Amentiy Area Policy NH/11 - Within Milton Playing Fields and screening along A10 likely to be significant objection to the loss of this Waste Consultation Area - Within Existing Waste Site - Adjacent Highways - Major Disruption at Milton Junction/ Capacity Milton P&R - Adjacent, need to cross A10 or seperate stop? Residential - Adjacent Green Belt - Within Employment Land - Within Crane Lane light industrial		£4	3 23	8 31
11-12 Connection from near Cambridge Road roundabout, Milton to railway line along south side of MCP Possibly space constrained but parallel routes exist through MCP Generally ~18m wide, allows route to avoid ce Milton but still accessing Milton market	Some constraints with industrial park on north side of A14 and east side of Jane Coston bridge. A14 embankment may add to complexity I - new route 1 - new route	3 Dedicated route	None St	New route to be built to latest tandards and would run close to A10 and current PnR Site	3 Separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle Current cycling and walking route is circuitous and through MCP Can connect with links serving CSP/NEC	3 Potential to service all markets within Study Area including Milton. Dependency on adjacent links.	Link would provide offline route that is fast and reliable. Link could service all markets dependent on adjacent routes.	3 Potential to service all markets within Study Area including Miton. Dependency on adjacent links.	3 Link could capture external trips dependent on alignment of connecting links. PT mode share likely to increase due to reliability and speed of service. New NMU route provided increasing mode share and lower car mode share.	3 Direct connection, potential to capture many markets, but may miss CSP	2 Remote, so lighting would be necessary on ped+cycle route. Some informal surveillance from people walking, cyling and in transit vehicles	1 Consider use of reinforced earth 3	Eversden & Wimpole Woods SAC (15.5 km SW) - qualifying feature - barbastelle bats. Stow- cum-Quy Fen SSSI (3.2 km NW) - (see proposed route 10- 11, row 33). Two priority habitats - coastal and floodplain grazing marsh - (two parcels - closest parcel 300 m W) and deciduous woodland - (five parcels - closest parcels adjacent to the route to the N and S). Three waterbodies - closest waterbody 200 m N.	estate, potential for redevelopment intesification maybe bring forward with the gap site advertised for sale/ strategic development cicra 2015 for something bigger ToD? Protected Village Amentiy Area Policy NH/11 - Near Milton Playing Fields Lordsbridge Consultation Area 2 Policy TI/7 - Within Waste Consultation Area - Within Mineral Safe Guarding Area - Adjacent Waste Water Treatment Works Safeguarding Area - Within NMU/ Cycle Route - Disruption Country Park (Milton) - Within potential disruption Green Belt - Within		£5	2 21	7 28
Link following alignment of Greenway but going on west side of Sport Lakes development Greenway development Cauld capture markets in Milton and Horningss appropriate cycle/local transport links (800m fr Milton & Baits Bite Lock, 1.7km from Horningss This point of Greenway north is Phase 1 of scf Sport Lakes site plan shows a P&R on their development, the transitway could serve this	vorating lea with rom ea)Would pass through a section of MCP, would need to be sensitive to environment Would need to be carefully incorporated with Greenway, e.g. if a crossing is required Cooperation with Sport Lakes Trust: they have said they will incorporate the greenway into their plans, would have to work out if this extends to a transitway+3 as offline new route with no pinchpoints1 - new route	3 Dedicated route	None	imited improvement as hrough rural area	2 Waterbeach Greenway No current cycling and walking route here: this option enables cycling and walking Horningsea depending on links	3 CNFE, WNT and Waterbeach Village serviced. Potential for Milton to be services depending on stop south of the village. CSP not serviced.	Link directly links CNFE and Waterbeach Village. Link could also connect with routes abutting the south of Milton. Link would provide offline route that is fast and reliable.	1 CNFE, WNT and Waterbeach Village serviced. Potential for Milton to be services depending on stop south of the village. CSP not serviced. 1 Kikely to be used by cyclists more often than pedestrians due to distance between Waterbach and Cambridge.	Some markets are being serviced. T mode share likely to increase due to reliability and speed of service. New NMU route provided increasing mode share.	1 Direct connection, potential to capture many markets, but may miss CSP	2 Remote, so lighting would be necessary on ped+cycle route. Some informal surveillance from people walking, cyling and in transit vehicles. Accessible to Milton and Waterbeach.	level crossings (Fen Rd and agricultural). Potential grade- separation of transit corridor	Eversden & Wimpole Woods SAC (15.5 km SW) - qualifying feature - barbastelle bats. Stow- cum-Quy Fen SSSI (2.4 km W) (see proposed route 10-11, row 33). Two priority habitats - coastal and floodplain grazing marsh - (three parcels - closest parcel 110 m W) and deciduous woodland - (eight parcels - route passes through one parcel). Seven waterbodies - closest waterbody 20 m W.	Flood Zone - Within Flood Zone 2/3 mitigation might be required Schedule Ancient Monuments Policy NH/14 - within/ adjacent Multi-phased settlement east of Milton and Car Dyke likely impact Local Green Space Policy NH/5 - Within Waste Consultation Area - Within Mineral Safe Guarding Area - Within NMU/ Cycle Route - Proposed Greenway Disruption/ impact, slightly less if GBR is alongisde railway line rather than NMU route? Country Park (Milton) - Within potential disruption/ impact on country park Railway Line - Near, potential future to tie in with a new station at Milton when the need arises? Acricultural land - loss of Crean Bolt - Within		£25	0 15	5 20
appropriate cycle/local transport links (800m fr Milton & Baits Bite Lock, 1.7km from Horningse	If alignment follows current Greenway alignment it will pass through a corner of MCP, alignment may need to be modified depending on how acceptable this is Having railway on one side and transit way on another will affect Greenway experience, will need to be sensitively incorporated so people don't feed wedged between the two transport corridors. Could relocate Greenway west of both transitway and railway Cooperation with Sport Lakes Trust: they have said they will incorporate the greenway into their plans, would have to work out if this extends to a transitway	3 Dedicated route	None	imited improvement as hrough rural area	2 Waterbeach Greenway No current cycling and walking route here: this option enables cycling and walking	3 CNFE, WNT and Waterbeach Village serviced. Potential for Milton to be services depending on stop south of the village. CSP not serviced.	Link directly links CNFE and Waterbeach Village. Link could also connect with routes abutting the south of Milton. Link would provide offline route that is fast and reliable.	1 CNFE, WNT and Waterbeach Village serviced. Potential for Milton to be services depending on stop south of the village. CSP not serviced. 1 Route would improve NMU mode share with new infrastructure. Link unlikely to attract vast numbers of new trips due of Milton users due to proximity of village. Link likely to be used by cyclists more often than pedestrians due to distance between Waterbach and Cambridge.	<text><text></text></text>	1 Direct connection, potential to capture many markets, but may miss CSP	2	2 As per 12-26a above, but runs alongside railway for greater proportion of link	Eversden & Wimpole Woods SAC (15.5 km SW) - qualifying feature - barbastelle bats. Stow- cum-Quy Fen SSSI (2.2 km W) (see proposed route 10-11, row 33). Two priority habitats - coastal and floodplain grazing marsh - (nine parcels - passes through one parcel and) and deciduous woodland - (eight parcels - route passes through one parcel and three parcels immediately adjacent to the W). Six waterbodies - closest waterbody 160 m W. Route runs adjacent to Car Dyke Roman Canal. Runs parallel to River Cam - closest point - 70 m E of route.	Flood Zone - Within Flood Zone 2/3 mitigation might be required Schedule Ancient Monuments Policy NH/14 - within/ adjacent Multi-phased settlement east of Milton and Car Dyke likely impact Local Green Space Policy NH/5 - Within Waste Consultation Area - Within Mineral Safe Guarding Area - Within NMU/ Cycle Route - Proposed Greenway Disruption/ impact, main driver of the greenways are NMU routes or ways to enjoy countryisde? will inform arrnagment with GBR Country Park (Milton) - Within potential disruption/ impact on country park Railway Line - Near, potential future to tie in with a new station at Milton when the need arises?			0	
13-20 Milton Park-and-Ride to Landbeach Road south of Landbeach Segregated NMU route Offline route that accesses MPR	Would require better cycling and local public +3 as offline new route with no pinchpoints 1 - new route	3 Dedicated route	None Li	imited improvement as hrough rural area	2 Separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle	CSP, WNT and Waterbeach Village serviced. CNFE unlikely to be serviced with route alignement but could if routes interact with A10. Milton not serviced.	Link would provide offline route that is fast and reliable. Link could provide additional routes for Milton Park and Ride.	 CSP, WNT and Waterbeach Village serviced. CNFE unlikely to be serviced with route alignement but could if routes interact with A10. Milton not serviced. Link to provide new high quality NMU route although likely to be used more by cyclists. Potential to link with Milton Park and Ride which could be utilised as a 'Park and Cycle' or 'Park and Walk'. 	Link could capture external trips dependent on alignment of connecting links. PT mode share likely to increase due to new infrastructure. NMU mode share could increase slightly, dependant on onward links to CSP/A10.	2 Direct connection, potential to capture many markets. Could connect Milton via PnR Site	 Remote, so lighting would be necessary on ped+cycle route. Some informal surveillance from people walking, cyling and in transit vehicles 	No specific engineering comments on this link, but is affected by the issues relating to the landfill and node 8.	Eversden & Wimpole Woods SAC (15.5 km SW) - qualifying feature - barbastelle bats. One priority habitat - deciduous woodland - (two parcels - closest parcel immediately to the S). Two waterbodies - closest waterbody immediately to the S.	Agricultural land - loss of Green Belt - Within Local Green Space Policy NH/5 - Within Waste Consultation Area - Within Agricultural land - loss of Highways - Crossses Landbeach Road Reservoir - Near Cemetery - Near	1 12 1	£8	2 17	7 24
13-23 South of Landbeach conservation area to MPR through the fields Segregated NMU route Offline route that serves MPR and potentially Landbeach	May conflict with Landbeach conservation area just north of the link 1 - new route	3 Dedicated route	None Li th	imited improvement as hrough rural area	 Separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle No current cycling and walking Milton P&R, can connect with links serving CSP/NEC 	CSP, WNT and Waterbeach Village serviced. CNFE unlikely to be serviced with route alignement but could if routes interact with A10. Milton not serviced.	Link would provide offline route that is fast and reliable. Link could provide additional routes for Milton Park and Ride.	 CSP, WNT and Waterbeach Village serviced. CNFE unlikely to be serviced with route alignement but could if routes interact with A10. Milton not serviced. Link to provide new high quality NMU route although likely to be used more by cyclists. Potential to link with Milton Park and Ride which could be utilised as a 'Park and Cycle' or 'Park and Walk'. 	Link could capture external trips dependent on alignment of connecting links. PT mode share likely to increase due to new infrastructure. NMU mode share could increase slightly, dependant on onward links to CSP/A10.	Direct connection, potential to capture many markets. Could connect Milton via PnR Site	Remote, so lighting would be necessary on ped+cycle route. Some informal surveillance from people walking, cyling and in transit vehicles	No specific engineering comments on this link, but is affected by the issues relating to the landfill and node 8.	Eversden & Wimpole Woods SAC (15.5 km SW) - qualifying feature - barbastelle bats. Worts Meadow LNR - immediately adjacent to north end of route. One priority habitat - deciduous woodland - (three parcels - closest parcels immediately to the N and S). Three waterbodies - closest	Green Belt - Within Local Green Space Policy NH/5 - Within Waste Consultation Area - Within Agricultural land - loss of	1 18 1	£11	1 17	6 23
14-17a A10: Link from Butt Lane to Landbeach Road: aligned to A10 but offset to west Segregated NMU route, possibly space constrained around Maize Maze and Rectory Farm Avoids A10 impact and congestion	Possibly constraint with Maize Maze and Rectory +3 as offline new route with no 1 - new route Maize Maze access would need to be relocated to pinchpoints 1 - new route	3 Dedicated route	None No	New route to be built to latest tandards and would run close to A10	3 Separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle No current ped+cycle route alongside A10 Milton Road, NEC, Milton P&R	3 Potential to service all markets within Study Area including Milton.	Link would provide offline route that is fast and reliable. Link is west of A10 so may not be attractive to Milton Users. Link next to A10 so could attract trips during operation.	3 Potential to service all markets within Study Area including Milton. Pedestrians will need to cross A10 to utilise new NMU infrastructure. 2 Potential to link with Milton Park and Ride which could be utilised as a 'Park and Cycle' or 'Park and Walk'.	Link should reduce car mode share as all markets could be serviced. PT mode share likely to increase due to reliability and speed of service. NMU route could increase slightly although hindered by position in relation to A10.	3 Direct connection, potential to capture many markets	3 Informal surveillance limited to people walking, cycling, in transit vehicles and on highway	2 Similar issues to 10-14a and 10- 14c above. 3	waterbody immediately to the S.Eversden & Wimpole Woods SAC (15.5 km SW) - qualifying feature - barbastelle bats. Stow- cum-Quy Fen SSSI (3.2 km W) (see proposed route 10-11, row 33). One priority habitat - deciduous woodland - (five parcels - closest parcels immediately adjacent to the E and W). Three waterbodies - closest waterbody 100 m SW.HRA screening of Eversden & Wimpole Woods SAC. Potential surveys: PPhase 1 habitat, badger, GCN, bats, bird, reptile and otter.Main considerations are potential impacts to Eversden & Wimpole Woods SAC, priority habitats and waterbodies.	Green Belt - Within Local Green Space Policy NH/5 - Within Waste Consultation Area - Within Agricultural land - loss of, Within Rectory Farm loss of car boot site? loss of amusement site/ maze? Highways - Crossses Landbeach Road Reservoir - Near Cemetery - Adjacent, sensitive receptor use NMU - Disrution to footbridge Green Belt - Within		£7	2 23	7 30
14-17c A10: Link from Butt Lane to Landbeach Road: aligned to A10 but offset to east Possibly space constrained, there is room on west side of A10 instead of using east side Direct, serves Milton and MPR (via A10 footbrid)	Potential constraint with "village amenity" area in green space to east of A10, utilities and Butt Lane ped+cycle bridge Could face opposition from residents who would back on to the transitway, however they do currently back on to the A10 so adequate noise/lighting mitigation may be in place	3 Dedicated route	None st to	New route to be built to latest tandards and would run close to A10	 Separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle No current ped+cycle route alongside A10 Milton Road, NEC, Milton P&R 	Potential to service all markets within Study Area including Milton.	Link would provide offline route that is fast and reliable. Link next to A10 so could attract trips during operation.	3 Potential to service all markets within Study Area including Milton. Route would improve NMU mode share with new infrastructure. Link adjacent to Milton village. Potential to link with Milton Park and Ride which could be utilised as a 'Park and Cycle' or 'Park and Walk'.	Link should reduce car mode share as all markets could be serviced. PT mode share likely to increase due to reliability and speed of service. New NMU route provided increasing mode share and lower car mode share.	3 Direct connection, potential to capture many markets	3 Informal surveillance limited to people walking, cycling, in transit vehicles and on highway. Depending on layout, may have some overlooking from houses in Milton	2 Similar issues to 10-14a and 10- 2 14c above.	See 14-17a above. HRA screening of Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 habitat, badger, GCN, bats, bird, reptile and otter. Main considerations are potential impacts to Eversden & Wimpole Woods SAC, priority habitats and waterbodies.	Local Green Space Policy NH/5 - Within Protected Village Amentiy Area Policy NH/11 - Within Milton Playing Fields and screening along A10 likely to be significant objection to the loss of this Waste Consultation Area - Within Highways - Crossses Humphries Way Cemetery - Near, sensitive receptor use Residential - Adjacent NMU - Disrution to footbridge	2 12 1	£7	2 23	6 29
14-23 MPR to Landbeach through the fields Segregated NMU route Serves Milton, MPR, while avoiding A10	Additional length/journey time compared to staying +3 as offline new route with no east of Landbeach pinchpoints 1 - new route	3 Dedicated route	None Li th	imited improvement as nrough rural area	 Separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle No current cycling and walking Milton P&R, can connect with links serving CSP/NEC 	CSP, WNT, Waterbeach Village and Milton serviced. CNFE unlikely to be serviced with route alignement but could if routes interact with A10.	Link would provide offline route that is fast and reliable. Link could provide additional routes for Milton Park and Ride.	 CSP, WNT, Waterbeach Village and Milton serviced. CNFE unlikely to be serviced with route alignement but could if routes interact with A10. Link to provide new high quality NMU route although likely to be used more by cyclists. Potential to link with Milton Park and Ride which could be utilised as a 'Park and Cycle' or 'Park and Walk'. 	Link could capture external trips dependent on alignment of connecting links. PT mode share likely to increase due to new infrastructure. NMU mode share could increase slightly, dependant on onward links to A10.	2 Direct connection, potential to capture many markets	Remote, so lighting would be necessary on ped+cycle route. Some informal surveillance from people walking, cyling and in transit vehicles	Limited engineering issues but would need a rationale for crossing from one corridor to another.	Eversden & Wimpole Woods SAC (15.5 km SW) - qualifying feature - barbastelle bats.HRA screening of Eversden & Main considerations are potential impacts to Eversden & Wimpole Woods SAC.Worts Meadow LNR - immediately adjacent to north end of route. One priority habitat - deciduous woodland - (three parcels - closest parcels) immediately to the N and S).HRA screening of Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 habitat, badger, GCN, bats, bird, reptile and otter.Main considerations are potential impacts to Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 habitat, badger, GCN, bats, bird, reptile and otter.	Green Belt - Within Local Green Space Policy NH/5 - Within Waste Consultation Area - Within Agricultural land - loss of	1 18 1	£12	1 18	6 24
15-20 Link from Roman Road to Landbeach Road Segregated NMU route Avoids landfill if that turns out to be a constrain south of Landbeach, across the fields	nt Isolated, and would not capture Milton market Is less direct than options going over landfill site pinchpoints 1 - new route	3 Dedicated route	None Li th	imited improvement as hrough rural area	 Separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle No current cycling and walking can connect with links serving CSP/NEC 	CSP, WNT and Waterbeach Village serviced. Milton and CNFE not serviced.	Link would provide offline route that is fast and reliable.	2 CSP, WNT and Waterbeach Village serviced. Milton and CNFE not serviced.	Link could capture external trips dependent on alignment of connecting links. PT mode share likely to increase due to new infrastructure. NMU mode share could increase slightly, dependant on onward links to CSP	Direct connection, potential to capture many markets, but unlikely to provide connection to Milton	 Remote, so lighting would be necessary on ped+cycle route. Some informal surveillance from people walking, cyling and in transit vehicles 	Limited engineering issues but would need a rationale for crossing from one corridor to another.	waterbody 80 m SW.Eversden & Wimpole Woods SAC (15.5 km SW) - qualifying feature - barbastelle bats. One priority habitat - deciduous woodland - (one parcel immediately south). Four waterbodies - closest waterbody 80 m NW.HRA screening of Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 habitat, badger, GCN, bats, bird, reptile and otter.Main considerations are potential impacts to Eversden & Wimpole Woods SAC, priority habitats and waterbodies.	Green Belt - Within Waste Consultation Area - Within Agricultural land - loss of, Within Sunclose Farm loss of greenhouses? loss of holiday caravans? Highways - Crossses Butt Lane Roman Road (Archaeology) - Adjacent PRoW - Adaicent Mere Way	1 18 1	£9	2 15	7 22
15-23a Parallel to Mere Way but offset to west from Butt Lane to Bourne Wood S106 Mere Way cycleway Very straight route along a known corridor Avoids potential environmental constraints of NWay hedgerows	Mere Isolated, and would not capture Milton market Potential site of archaeological significance (however paving of Mere Way for cycleway indicates this may not be an issue) Farm access/severance would need to be considered 0 - assumed use of Mere Way route with no new infrastructure	3 Dedicated route	None	imited improvement as nrough rural area	2 s106 Mere Way cycleway Inaccessible cycling and walking route currently exists Can connect with links serving CSP/NEC	3 CSP, WNT and Waterbeach Village serviced. Milton and CNFE not serviced.	Link would provide offline route that is fast and reliable.	2 CSP, WNT and Waterbeach Village serviced. Milton and CNFE not serviced.	Link could capture external trips dependent on alignment of connecting links. PT mode share likely to increase due to new infrastructure. NMU mode share could increase slightly, dependant on onward links to CSP	2 Direct connection, potential to capture many markets, but unlikely to provide connection to Milton	2 Remote, so lighting would be necessary on ped+cycle route. Some informal surveillance from people walking, cyling and in transit vehicles	Likely to be workable. As per 7- 15a, would need to resolve interaction of transitway and existing / upgraded Mere Way	Eversden & Wimpole Woods SAC (15.5 km SW) - qualifying feature - barbastelle bats. Worts Meadow LNR - immediately adjacent to north end of route. One priority habitat - deciduous woodland - (three parcels - closest parcels) immediately to the N and S). Two waterbodies - closest waterbody 30 m W.HRA screening of Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 habitat, badger, GCN, bats, bird, reptile and otter.Main considerations are potential impacts to Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 habitat, badger, GCN, bats, bird, reptile and otter.	Green Belt - Within Waste Consultation Area - Within Agricultural land - loss of, Within Sunclose Farm loss of greenhouses? Adjacent sheds/ storage? Highways - Crossses Butt Lane Roman Road (Archaeology) - Adjacent PRoW - Adajcent/ Follows Mere Way Local Nature Reserve - Adjacent Worts Meadow Schedule Ancient Monument - Near Shrunken medieval village of Landbeach Residential - Adjacent/ within the rear to scattered properties	2 18 2	£10	1 1 6	7 23
15-23bParallel to Mere Way but offset to east from Butt Lane to Bourne WoodS106 Mere Way cyclewayVery straight route along a known corridor Avoids potential environmental constraints of N Way hedgerows	Mere Isolated, and would not capture Milton market Potential site of archaeological significance (however paving of Mere Way for cycleway indicates this may not be an issue) Farm access/severance would need to be considered 0 - assumed use of Mere Way route with no new infrastructure	3 Dedicated route	None	imited improvement as hrough rural area	2 s106 Mere Way cycleway Inaccessible cycling and walking route currently exists Can connect with links serving CSP/NEC	3 CSP, WNT and Waterbeach Village serviced. Milton and CNFE not serviced.	Link would provide offline route that is fast and reliable.	2 CSP, WNT and Waterbeach Village serviced. Milton and CNFE not serviced. Link to provide new high quality NMU route although likely to be used more by cyclists.	Link could capture external trips dependent on alignment of connecting links. PT mode share likely to increase due to new infrastructure. NMU mode share could increase slightly, dependant on onward links to CSP	2 Direct connection, potential to capture many markets, but unlikely to provide connection to Milton	2 Remote, so lighting would be necessary on ped+cycle route. Some informal surveillance from people walking, cyling and in transit vehicles	Likely to be workable. As per 7- 15b, would need to resolve interaction of transitway and existing / upgraded Mere Way	Eversden & Wimpole Woods SAC (15.5 km SW) - qualifying feature - barbastelle bats. Worts Meadow LNR - immediately adjacent to north end of route. One priority habitat - deciduous woodland - (three parcels - closest parcels immediately to the N and S). Two waterbodies - closest waterbody 30 m W.	Green Belt - Within Waste Consultation Area - Within Agricultural land - loss of, Within Sunclose Farm loss of greenhouses? Highways - Crossses Butt Lane Roman Road (Archaeology) - Adjacent PRoW - Adajcent/ Follows Mere Way Local Nature Reserve - Within Worts Meadow likley to be issues with this maybe re provision elsewhere nearby Schedule Ancient Monument - Adjacent Shrunken medieval village of Landbeach Residential - Near scattered properties	1 18 1	£10	1 16	6 22
17-21a Link from Landbeach Road to Ely Road: aligned to A10 but offset to west Segregated NMU route Avoids A10 congestion	Potential dualling of A10 may be a constraint to this route with no pinchpoints +3 as offline new route with no pinchpoints 1 - new route	3 Dedicated route	None St to	New route to be built to latest tandards and would run close o A10	3Separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angleNo current ped+cycle route alongside A10Milton Road, NEC, Milton P&R	3 within Study Area including Milton.	Link would provide offline route that is fast and reliable. Link is west of A10 so may not be attractive to Milton Users. Link next to A10 so could attract trips during operation.	 Bottom Study Area including Milton. Pedestrians will need to cross A10 to utilise new NMU infrastructure. Bottom MU infrastructure. Control Milton Milton	 Link should reduce car mode share as all markets could be serviced. PT mode share likely to increase due to reliability and speed of service. NMU route could increase slightly although hindered by position in relation to A10. 	3 Direct connection, potential to capture many markets	3 Informal surveillance limited to people walking, cycling, in transit vehicles and on highway	2 Similar issues to 10-14a and 10- 14b above. An offline A10 dualling could allow the existing 3 A10 carriageway to be converted to a transit corridor	Eversden & Wimpole Woods SAC (15.5 km SW) - qualifying feature - barbastelle bats. Stow- cum-Quy Fen SSSI (2.8 km W) (see proposed route 10-11, row 33). One priority habitat - deciduous woodland - (three parcels - closest parcel 215 m SW). Two waterbodies - closest waterbody 230 m NE.	Green Belt - Within Local Green Space Policy NH/5 - Within Highways - Crossses Landbeach Road Agricultural Land - Loss of Cemetery - Adjacent, sensitive receptor use	1 12 1	£5	2 23	7 30
17-21bLink from Landbeach Road to Ely Road: PT priority on A10Possibly space constrained, there is room on west side of A10Main transport corridor in study area	Space constraints for adding PT priority lanes +2 as would have some interaction with general traffic due to online running 1 - assumed PT priority would also build in NMU provision	2 Inherent congestion area which online priority is only likely to partially resolve	ch Inherent congestion on A10 st to	lew route to be built to latest tandards and would run close o A10	1 Separate ped+cycle route: 3.5m wide two-way cycleway No current ped+cycle route alongside with 25mm curb with No current ped+cycle route alongside with 25mm curb with Milton Road, NEC, Milton P&R	3 within Study Area including	Link would provide offline route that is fast and reliable. Link next to A10 so could attract trips during operation.	 Potential to service all markets within Study Area including Milton. Route would improve NMU mode share with new infrastructure. Link adjacent to Milton village. Potential to link with Milton Park and Ride which could be utilised as a 'Park and Cycle' or 'Park and Walk' 	 Link should reduce car mode share as all markets could be serviced. PT mode share likely to increase due to reliability and speed of service. New NMU route provided increasing mode share and lower car mode share. 	3 Direct connection, potential to capture many markets	3 Informal surveillance limited to people walking, cycling, in transit vehicles and on highway.	2 As per 17-21a above 3	HRA screening of Eversden & Wimpole Woods SAC. Main considerations are potential impacts to Eversden &	Green Belt - Within Local Green Space Policy NH/5 - Within Highways - Within A10 disruption/ capacity Cemetery - Near, sensitive receptor use Residential - Near Allotments - Adjacent	2 12 2	£5	2 20	8 28
20-25 Through the fields from Landbeach Road south of Landbeach to A10 at the Car Dyke Road/Waterbeach Road junction Segregated NMU route Serves southern end of Waterbeach village and tie in with routes that serve Waterbeach	nd can Junction with A10 would be a constraint, grade +3 as offline new route with no pinchpoints 1 - new route	3 Dedicated route	None Li th	imited improvement as nrough rural area	2 Separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle	CSP, WNT and Waterbeach Village serviced. CNFE unlikely to be serviced with route alignement but could if routes interact with A10. Milton not serviced.	Link would provide offline route that is fast and reliable.	 CSP, WNT and Waterbeach Village serviced. CNFE unlikely to be serviced with route alignement but could if routes interact with A10. Milton not serviced. Link to provide new high quality NMU route although likely to be used more by cyclists. 	Link could capture external trips dependent on alignment of connecting links. PT mode share likely to increase due to new infrastructure. NMU mode share could increase slightly, dependant on onward links to CSP/A10.	2 Direct connection, potential to capture many markets. Could connect Milton via PnR Site	 Remote, so lighting would be necessary on ped+cycle route. Some informal surveillance from people walking, cyling and in transit vehicles 	Could become less easy if any future offline A10 dualling wished to use this area too. At A10 crossing, consider grade separation options and potential for offline build. The approaches will be the challenge - could be mitigated by moving node 25 southwards.	SAC (16.5 km SW) - qualifying feature - barbastelle bats. Stow- cum-Quy Fen SSSI (3.3 km W) (see proposed route 10-11, row 33). One priority habitat - deciduous woodland - (four parcels - closest parcels immediately adjacent to the E and W). Nine waterbodies - closest waterbody 120 m NE. Eversden & Wimpole Woods	Green Belt - Within Local Green Space Policy NH/5 - Within Highways - Crossses Landbeach Road Agricultural Land - Loss of Grade II Listed building - Adjacent	2 12 2	£8	2 17	7 24
Through the fields from south of Landbeach to Waterbeach New Town (WNT) access roundabout 2 Segregated NMU route from village centre)	00m Does not serve Waterbeach village +3 as offline new route with no pinchpoints 1 - new route	3 Dedicated route	None Li th	imited improvement as nrough rural area	 Separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle No current cycling and walking Can connect with links serving CSP/NEC 	 CSP and WNV serviced. Milton and Waterbeach New Village not serviced. CNFE unlikely to be serviced with route alignment 	Link would provide offline route that is fast and reliable.	CSP and WNV serviced. Milton and Waterbeach New Village not serviced. CNFE unlikely to be serviced with route alignment	Link could capture external trips dependent on alignment of connecting links. PT mode share likely to increase due to new infrastructure. NMU mode share could increase slightly, dependant on onward links to CSP/A10.	Direct connection, potential to capture many markets. Could connect Milton via PnR Site	Remote, so lighting would be necessary on ped+cycle route. Some informal surveillance from people walking, cyling and in transit vehicles	separation.	 Eversiden & Wimpole Woods SAC (17 km SW) - qualifying feature - barbastelle bats. Worts Meadow LNR - immediately adjacent. Two priority habitats - one parcel coastal and floodplain grazing marsh immediayely adjacent and deciduous woodland - (three parcels - closest parcel 200 m east). Seven waterbodies - closest waterbody 100 m E. 	Green Belt - Within Local Green Space Policy NH/5 - Within Sand and Gravel - Within Highways - Crossses Waterbeach Road Agricultural Land - Loss of Grade II Listed building - Adjacent	2 24 2	£14	1 15	7 22

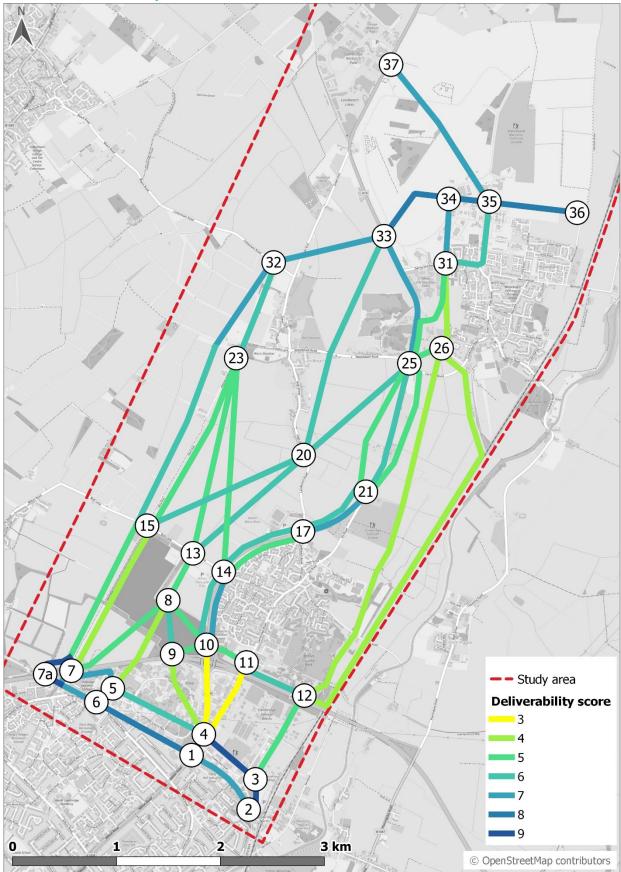
ID Description	Integration of Non-Motorised Users (NMU)	Benefits	Potential issues/constraints	PT Capacity Risks NMU Additional Capacity	Score Congestion Relief Concer	ns or Pinch Points Safety Improvement	Score Provision improvements Issues Alleviated Key Location Co	nections Score Market Catchment Level of Impact	Score Market Catchment Level of Impact	Score Lower Car Mode Share in Study Corridor	Score Trips Terminating in Cambridge	Score Overall Safety Improvement S	Score Engineering Risks and Constraints	Score Environmental Risks and Constraints Likely scope of environmental investigations and assessments Any Comments	Score Planning Risks and Constraints	Consents Required Additional comments	Score Timescale for Delivery (months of construction)	core Cost Estimate (£ millions)	Score TP critiera Total Sco	re Deliverability criteria tot score	al All criteria total score
Link from Ely Road to Waterbeach 21-25a Road/Car Dyke Road: aligned to A10 bu offset to west	but Segregated NMU route, some Main tr constraints from farm buildings Avoids	ransport corridor in study area A10 congestion	Potential dualling of A10 may be a constraint to route Some farm building and a caravan park on west side of the A10 along this section Historic milestone potentially a constraint	this +3 as offline new route with no pinchpoints 1 - new route	3 Dedicated route None	New route to be built to latest standards and would run close to A10	 Can use proposed shared use path alongside A10 or have separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle Substandard ped+cycle route alongside A10 	Iilton P&R3Potential to service all markets within Study Area including Milton.Link would provide offline re that is fast and reliable. Link is west of A10 so may be attractive to Milton and Waterbeach Users. Link next to A10 so could attract trips during operation	ute ot 3 Potential to service all markets within Study Area including Milton.	Link should reduce car mode share as all markets could be serviced. PT mode share likely to increase due to reliability and speed of service. NMU route could increase slightly although hindered by position in relation to A10.	3 Direct connection, potential to capture many markets	 Informal surveillance limited to people walking, cycling, in transit vehicles and on highway. Some buildings overlooking section. 	2 Similar comments to 10-14a above.	Eversden & Wimpole Woods SAC (17 km SW) - qualifying feature - barbastelle bats. Stow- cum-Quy Fen SSSI (2.8 km W) (see proposed route 10-11, row 33). One priority habitat - deciduous woodland - (four parcels - closest parcel 180 m NW). Nine waterbodies - closest waterbody 25 m W. Eversden & Wimpole Woods	Green Belt - Within Highways - A10 disrutpion Grade II Listed building - Adjacent Residential - Adjacent, probably more visible to front of Agricultural Land - Loss of	of	1 18	1 £9	2 23	6	29
21-25b Link from Ely Road to Waterbeach Road/Car Dyke Road: PT priority on A1	Possibly space constrained, there is room on west side of A10 A10	ransport corridor in study area	Space constraints for adding PT priority lanes	+2 as would have some interaction with general traffic due to online running	Inherent congestion area which online priority is only likely to partially resolve	ongestion on A10 to A10	1 Can use proposed shared use path alongside A10 or have separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle Substandard ped+cycle route alongside A10 Milton Road, NEC, I	Iilton P&R3Potential to service all markets within Study Area including Milton.Link on A10 so may get stu congestion during peak per (although early assessment assume no congestion on the part of A10).	k in ods 2 within Study Area including Milton. Reduced capacity for NMU links could reduce attractiveness.	Link should reduce car mode share as all markets could be serviced. PT mode share likely to increase due to reliability and speed of service. NMU route could increase slightly although hindered by position in relation to A10.	2 Direct connection, potential to capture many markets	Informal surveillance limited to people walking, cycling, in transit vehicles and on highway. Some buildings overlooking section.	2 Similar comments to 10-14a above.	 SAC (17 km SW) - qualifying feature - barbastelle bats. Stow-cum-Quy Fen SSSI (2.8 km W) - HRA screening of Eversden & Wimpole Woods SAC. 2 33). One priority habitat - deciduous woodland - (four parcels - closest parcel 180 m NW). Nine waterbodies - closest waterbodies adjacent to the route to the E and W. Eversden & Wimpole Woods 	Green Belt - Within Highways - A10 disrutpion/ capacity Grade II Listed building - Adjacent Residential - Adjacent		2 18	2 £9	2 17	7	24
Link from Ely Road to Waterbeach 21-25c Road/Car Dyke Road: aligned to A10 bu offset to east	Possibly space constrained, fewer buildings on west side of A10	ransport corridor in study area A10 congestion	Would have to route around back of businesses the east of the A10 to join up with Car Dyke Roa the north	to d at pinchpoints 1 - new route	3 Dedicated route None	New route to be built to latest standards and would run close to A10	 Can use proposed shared use path alongside A10 or have separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle Substandard ped+cycle route alongside A10 	lilton P&R 3 Potential to service all markets within Study Area including Milton. Link next to A10 so could attract trips during operation	ute 3 Potential to service all markets within Study Area including Milton. Route would improve NMU mode share with new infrastructure.	Link should reduce car mode share as all markets could be serviced. PT mode share likely to increase due to reliability and speed of service. New NMU route provided increasing mode share and lower car mode share.	3 Direct connection, potential to capture many markets	Informal surveillance limited to people walking, cycling, in transit vehicles and on highway. Some buildings overlooking section.	If running east of the properties on east side of A10, 21-26 would be a more logical connection	 SAC (17 km SW) - qualifying feature - barbastelle bats. Stow-cum-Quy Fen SSSI (2.7 km W) (see proposed route 10-11, row 33). One priority habitat - deciduous woodland - (four parcels - closest parcels 200 adjacent to the route to the E and W). Nine waterbodies - closest waterbody 85 m to the W. HRA screening of Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 habitat, badger, GCN, bats, bird, reptile and otter. 	Green Belt - Within Highways - A10 disrutpion Grade II Listed building - Adjacent Residential - Adjacent, Better screened from Agricultural Land - Loss of		1 18	1 £9	2 23	6	29
23-32a Parallel to Mere Way (Roman road, s10 cycleway) but offset to west	106 S106 Mere Way cycleway Cyclew agreer Very s Avoids Way h	vay along Mere Way as part of the s106 nent would provide NMU component traight route s potential environmental constraints of Me edgerows	Isolated, and would not capture Milton or Waterbeach markets Potential site of archaeological significance (however paving of Mere Way for cycleway indicates this may not be an issue) Farm access/severance would need to be considered	+3 as offline new route with no pinchpoints 0 - assumed use of Mere Way route with no new infrastructure	3 Dedicated route None	Limited improvement as through rural area	2 s106 Mere Way cycleway Inaccessible cycling and walking route currently exists CSP/NEC	cs serving 3 CSP, WNT and Waterbeach Village serviced. Milton and CNFE not serviced.	ute 2 CSP, WNT and Waterbeach 2 Village serviced. Milton and CNFE not serviced. Used more by cyclists.	Link could capture external trips dependent on alignment of connecting links. PT mode share likely to increase due to new infrastructure. NMU mode share could increase slightly, dependant on onward links to CSP	2 Direct connection, potential to capture many markets, but unlikely to provide connection to Milton	Remote, so lighting would be necessary on ped+cycle route. Some informal surveillance from people walking, cyling and in transit vehicles	1 Similar to 15-23 above	 Eversden & Wimpole Woods SAC (17.5 km SW) - qualifying feature - barbastelle bats. Stow- cum-Quy Fen SSSI (4.5 km SW) - (see proposed route 10- 11, row 33). Worts meadow LNR - adjavent to the route to the E. Three priority habitats - good quality semi-improved grassland (one parcel 120 m E), deciduous woodland - (one parcel - adjacent to the route to E) and traditional orchard (two parcels - closest parcel 260 m E). Four waterbodies - closest waterbody 190 m to the E. HRA screening of Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 habitat, badger, GCN, bats, bird, reptile and otter. Main considerations are potential impacts to Eversden & Wimpole Woods SAC, priority habitats and waterbodies. 	Green Belt - Within Agricultural land - loss of Highways - Crossses Cockfen Lane Roman Road (Archaeology) - Adjacent PRoW - Adajcent Mere Way Local Nature Reserve - Adjacent Worts Meadow Schedule Ancient Monument - Near Shrunken medieval village of Landbeach Residential - one scattered farm further from rear of properties on green end which are Grade II Listed appears to potentially be outside their land Green Belt - Within	d	2 12	2 £8	2 16	8	24
23-32b Along Mere Way but offset to east	s106 Mere Way cycleway Very si Avoids Way h	vay along Mere Way as part of the s106 nent would provide NMU component traight route s potential environmental constraints of Me edgerows	Isolated, and would not capture Milton or Waterbeach markets Potential site of archaeological significance (however paving of Mere Way for cycleway indicates this may not be an issue) Farm access/severance would need to be considered	+3 as offline new route with no pinchpoints 0 - assumed use of Mere Way route with no new infrastructure	3 Dedicated route None	Limited improvement as through rural area	2 s106 Mere Way cycleway Inaccessible cycling and Can connect with lir walking route currently exists CSP/NEC	cs serving 3 CSP, WNT and Waterbeach Village serviced. Milton and CNFE not serviced.	ute 2 CSP, WNT and Waterbeach Village serviced. Milton and CNFE not serviced. Used more by cyclists.	Link could capture external trips dependent on alignment of connecting links. PT mode share likely to increase due to new infrastructure. NMU mode share could increase slightly, dependant on onward links to CSP	Direct connection, potential to	 Remote, so lighting would be necessary on ped+cycle route. Some informal surveillance from people walking, cyling and in transit vehicles 	1 Similar to 15-23 above	 Eversden & Wimpole Woods SAC (17.5 km SW) - qualifying feature - barbastelle bats. Stow- cum-Quy Fen SSSI (4.5 km SW) - (see proposed route 10- 11, row 33). Worts meadow LNR - adjavent to the route to the E. Three priority habitats - good quality semi-improved grassland (one parcel 120 m E), deciduous woodland - (one parcel - adjacent to the route to E) and traditional orchard (two parcels - closest parcel 260 m E). Four waterbodies - closest waterbody 190 m to the E. 	Agricultural land - loss of Highways - Crossses Cockfen Lane Roman Road (Archaeology) - Adjacent PRoW - Adajcent Mere Way Local Nature Reserve - Within Worts Meadow likley to be issues with this maybe re provision elsewhere nearby Schedule Ancient Monument - Adjacent Shrunken medieval village of Landbeach Residential - closer to rear of properties on green end which are Grade II Listed and so setting might be issue as route is within their land potentially		1 12	1 £8	2 16	7	23
Cambridge Road from the A10 to Glebe 25-26 Road, or offline equivalent to south of Cambridge Road	be Space constrained, quiet Serves street due to modal filter at Low tra A10 end Road/A	s Waterbeach affic road due to modal filter at Cambridge A10 junction	Potentially space constrained with drains on eith side of the road and a conservation area for poll willows to north side	her ard +1 little space to widen, so only opportunity for PT capacity is to remove from car. Still pinchpoints at either end	1 Limited existing congestion, but limited space for priority Limited ex	isting capacity none over existing road	Where possible given space constraints: separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle	As serving 3 Potential to service all markets within Study Area including Milton. Link could provide offline ro that is fast and reliable. Additional route provides additional PT capacity.	Potential to service all markets within Study Area including Milton.	Link should reduce car mode share as all markets could be serviced. PT mode share likely to increase due to reliability and speed of service. New NMU route provided increasing mode share and lower car mode share.	3 Direct connection, potential to capture many markets	Overlooking from houses on Cambridge Road, light traffic, some informal surveillance from people walking, cycling and in transit vehicles.	This road is not connected to the current A10. Potential for re- connection if there is a new separate A10 alignment.	Eversden & Wimpole Woods SAC (17.5 km SW) - qualifying feature - barbastelle bats. Stow- cum-Quy Fen SSSI (4.5 km SW) - (see proposed route 10- 11, row 33). Two priority habitats - coastal and floodplain grazing marsh (one parcel 340 m SE) and deciduous woodland - (six parcels - closest parcel 210 m NW). Six waterbodies - closest	Green Belt - Within Highways - A10 disrutpion/ capacity to open up Cambridge Road junction Residential - Adjacent, what happens to residents access along this road is it shared? Agricultural Land - Potetnial Loss of if needed to be widended	e	1 6	1 £2	3 19	6	25
Along the A10 from Cambridge Road the 25-31 through the fields south and east of the industrial estate	then Limited space alongside the A10, but it is parallel to the Greenway	direct route into WNT that avoids continuir A10 to the north of this point	ng Space constrained alongside A10.	+2 as would have some interaction with general traffic due to online running, but also lengthy segregated section	3 Dedicated route for most of the length Limited on northern e	street running and apacity pinchpoint at nd of the link. New route to be built to latest standards and would run close to A10 or Waterbeach residential area	 Where possible given space constraints: separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle. Will also overlap with Waterbeach Greenway at northern end of link Substandard ped+cycle route alongside A10, no link through to Waterbeach village along same alignment 	As serving 3 Potential to service all markets within Study Area including Milton. Link could provide offline route provides additional route provides additional PT capacity.	Jte Potential to service all markets within Study Area including Milton. Link to provide new high quarkets NMU route although likely to used more by cyclists.	ality 2 Link should reduce car mode share as all markets could be serviced. PT mode share likely to increase due to reliability and speed of service. New NMU route provided increasing mode share and lower car mode share.	3 Direct connection, potential to capture many markets	3 Some overlooking from buildings on A10, light traffic, some informal surveillance from people walking, cycling and in transit vehicles.	Generally a difficult section from Car Dyke Rd to Denny Lane. Recent residential development (Cooke's Field). Transit corridor options would benefit from any potential new offline A10 route here as the existing route could become more of a transit corridor. Alternatively coordination with any potential online A10 dualling could assist in creating	closest parcel 50 m S). Seven waterbodies - closest	Allocation Policy E/15 - Adjacent Green Belt - Within Highways - A10 disrutpion/ capacity to open up new junction Residential - loss of land and trees Agricultural Land - Loss of Allotements - Within Roman Canal (Archaeology) - Adjacent		1 12	1 £7	2 22	6	28
25-33b Link from Waterbeach Road/Car Dyke Road to WNT Access 2: PT priority on A	e Possibly space constrained, n A10 buildings on both side of A10 Main tr	ransport corridor in study area	Space constraints for adding PT priority lanes	+2 as would have some interaction with general traffic due to online running	Inherent congestion area which online priority is only likely to partially resolve	ongestion on A10 New route to be built to latest standards and would run close to A10	Can use proposed shared use path alongside A10 or have separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angleSubstandard ped+cycle route alongside A10Milton Road, NEC, I	lilton P&R 3 Potential to service all markets within Study Area including Milton. Link could provide offline route provides additional route provides additional PT capacity.	Potential to service all markets within Study Area including Milton.	ality Display by the service of the		3 Some overlooking from buildings on A10. Informal surveillance limited to people walking, cycling, in transit vehicles and on highway.	Southern part of link has similar Southern part of link has similar issues as per 25-31 above. Northern part is less constrained.	 Eversden & Wimpole Woods SAC (17.5 km SW) - qualifying feature - barbastelle bats. One priority habitat - deciduous woodland - (four parcels - closest parcels adjacent to the route to E and W). Seven waterbodies - closest waterbody 60 m E. HRA screening of Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 habitat, badger, GCN, bats and reptiles. Main considerations are potential impacts to Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 habitat, badger, GCN, bats and reptiles. 	Allocation Policy E/15 - Adjacent Green Belt - Within Highways - A10 disrutpion/ capacity Residential - Adjacent		2 12	2 £8	2 20	8	28
26-31 Link through the fields from Cambridge Road to Denny End Road	Water	s Waterbeach route through the town that avoids the beach conservation area and any village stion s employment centre on corner of Denny B and A10 with latest proposals for Waterbeach way – potentially meaning land ship/access issues can be arranged at the time	Section 31 claim on a parcel of land on this route not sure if this is an issue Access from Glebe Road would be through allotments	e – +3 as offline new route with no pinchpoints 1 - new route	Limited on Dedicated route potential on northern e	street running and apacity pinchpoint at nd of the link. New route to be built to latest standards and would run close to A10 or Waterbeach residential area	2 Waterbeach Greenway No current cycling and walking route here: this option enables Waterbeach cycling and walking	Potential to service all markets within Study Area including Milton. Link could provide offline ro that is fast and reliable. Additional route provides additional PT capacity.	Potential to service all markets 3 within Study Area including Milton. NMU route although likely to used more by cyclists.	Link should reduce car mode share as all markets could be serviced. PT mode share likely to o be 3 increase due to reliability and speed of service. New NMU route provided increasing mode share and lower car mode share.	3 Direct connection, potential to capture many markets	Overlooking from houses and industrial park in Waterbeach. Informal surveillance from people walking, cycling and in transit vehicles	As per 25-31 above. Allotments are a sensitivity.	Eversden & Wimpole Woods SAC (17.5 km SW) - qualifying feature - barbastelle bats. One priority habitat - deciduous woodland - (four parcels - closest parcels adjacent to the route to E and W). Seven waterbodies - closest waterbody 180 m SW.	Allocation Policy E/15 - Adjacent Green Belt - Within Residential - loss of land and trees Agricultural Land - Loss of Allotements - Within Roman Canal (Archaeology) - Adjacent		2 12	1 £5	2 23	5	28
New link from new access off Denny En 31-34 Road to proposed east-west transitway WNT	End Would tie in with developers plan (including new A10 bridge)	s Waterbeach and town centre of WNT & Civic (U&C) haven't started designing I section yet, so opportunity to coordinate v	Not a route that appears on current masterplan/s so would require collaboration with developers to implement. with Would be on a similar alignment to the s106 cycleway from the A10 bridge, so would need to coordinate to ensure no conflict	SPD o +3 as offline new route with no pinchpoints 1 - new route	3 Dedicated route None	New route to be built to latest standards and would run through development area	 Depends on U&C plans, ideally separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle No current cycling and walking voue here: this option enables cycling and walking 	n 3 Potential to service all markets within Study Area including Milton. Link could provide offline route provides additional route provides additional PT capacity.	Potential to service all markets within Study Area including Milton.	Link should reduce car mode share as all markets could be serviced. PT mode share likely to increase due to reliability and speed of service. New NMU route provided increasing mode share and lower car mode share.	3 Direct connection, potential to capture many markets	Overlooking from houses and businesses in Waterbeach new town. Informal surveillance from people walking, cycling, in transit vehicles, and in town	3 Constraints relate more to the issues south of node 31	 Eversden & Wimpole Woods SAC (17.5 km SW) - qualifying feature - barbastelle bats. One priority habitat - deciduous woodland - (one parcel - closest parcel 170 m N). Nine waterbodies - closest waterbody 220 m N. HRA screening of Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 habitat, badger, GCN, bats, bird, reptile and otter. Main considerations are potential impacts to Eversden & Wimpole Woods SAC, priority habitats and waterbodies. 	1 WNT Need to work closely with developers masterplan	h opportunities to engage with developers?	2 6	2 £3	3 24	8	32
31-35 From Denny End Road to proposed WN town centre via existing barracks access	Space and conservation area Constraints, but Greenway and internal WNT NMU infrastructure is an alternative	s Waterbeach	Potential congestion on Denny End Road Potential space constraints Depends on developers plans for entry to WNT	+2 as would have some interaction with general traffic due to online running	2 Mixture of online running road and o levels	estriction of existing current/future traffic standards and would run through development area	Depends on U&C plans, ideally separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle	n 3 Potential to service all markets within Study Area including Milton. Link could provide offline route provides additional route provides additional PT capacity.	ate 3 Potential to service all markets within Study Area including Milton. Link to provide new high quadratic service all markets NMU route although likely to used more by cyclists.	Iower car mode share. Link should reduce car mode share as all markets could be serviced. ality PT mode share likely to increase due to reliability and speed of service. New NMU route provided increasing mode share and lower car mode share. Link should reduce car mode		Overlooking from houses and businesses in Waterbeach new town. Informal surveillance from people walking, cycling, in transit vehicles, and in town	3 Constraints relate more to the issues south of node 31	 Eversden & Wimpole Woods SAC (17.5 km SW) - qualifying feature - barbastelle bats. One priority habitat - deciduous woodland - (one parcel 500 m N). Three waterbodies - closest waterbody 310 m W. HRA screening of Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 habitat, badger, GCN, bats, bird, reptile and otter. Main considerations are potential impacts to Eversden & Wimpole Woods SAC, priority habitats and waterbodies. 	WNT Need to work closely with developers masterplan Highways - Constraints/ Capacity on existing network	h opportunities to engage with developers?	1 6	1 £4	3 22	7	29
32-33 Link from top of Roman Road to WNT access roundabout 2	. Segregated NMU route Serves	s WNT through new access point	Doesn't serve Waterbeach village A10 junction may need to be grade separated	+3 as offline new route with no pinchpoints	3 Dedicated route None	Limited improvement as through rural area	 Separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle No current cycling and walking can connect with line cycling and walking 	As serving 3 Potential to service all markets within Study Area including Milton. Link could provide offline route and reliable. Additional route provides additional PT capacity.	Potential to service all markets within Study Area including Milton.	ality PT mode share likely to p be 3 increase due to reliability and speed of service. New NMU route provided increasing mode share and lower car mode share.	3 Direct connection, potential to capture many markets	Remote, so lighting would be necessary on ped+cycle route. Some informal surveillance from people walking, cyling and in transit vehicles	Grade-separation of A10 (including both transit and NMU) would also serve the Mereway NMU corridor. Fine- tuning of crossing location to be resolved.	 SAC (17.5 km SW) - qualifying feature - barbastelle bats. One priority habitat - coastal and floodplain grazing marsh - (one parcel 500 m SE). Nine waterbodies - closest waterbody adjacent to route to the W. Eversden & Wimpole Woods 	Agricultural land - loss of Sand and Gravel Safguard Area - Within Grade II Listed Building - Adjacent Highways - Needs to cross A10	0	2 12	2 £5	2 21	8	29
E-W transitway in WNT, appears in 33-34 masterplans and Waterbeach Supplementary Planning Document (SP	Would tie in with developers SPD)	s WNT	Doesn't serve Waterbeach village A10 junction may need to be grade separated Would need to be offline to be effective, current proposals do not specify what form the transitwa would take	+3 as offline new route with no pinchpoints	3 Dedicated route None	New route to be built to latest standards and would run through development area	 Depends on U&C plans, ideally separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle No current cycling and walking No current cycling and walking 	n, new 3 Potential to service all markets within Study Area including Milton. Link could provide offline route provides additional route provides additional PT capacity.	Potential to service all markets within Study Area including Milton.	Link should reduce car mode share as all markets could be serviced. PT mode share likely to increase due to reliability and speed of service. New NMU route provided increasing mode share and lower car mode share.	3 Direct connection, potential to capture many markets	Overlooking from houses and businesses in Waterbeach new town. Informal surveillance from people walking, cycling, in transit vehicles, and in town	See comments on 32-33 re A10 crossing. Integration with masterplan is key and needs to be resolved quickly.	 SAC (18 km SW) - qualifying feature - barbastelle bats. One priority habitat - deciduous woodland - (fifteen parcels - closest parcel adjent to the route to the S). Twelve waterbodies - closest waterbodies - closest waterbody adjacent to route to the S. HRA screening of Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 habitat, badger, GCN, bats, bird, reptile and otter. 	WNT Need to work closely with developers masterplan 1 Grade II Listed Building - Adjacent Highways - Needs to cross A10	h opportunities to engage with developers?	2 6	2 £4	3 24	9	33
34-35 E-W transitway in WNT, appears in masterplans and SPD	Would tie in with developers Serves	s WNT	Doesn't serve Waterbeach village A10 junction may need to be grade separated Would need to be offline to be effective, current proposals do not specify what form the transitwa would take	+3 as offline new route with no pinchpoints	3 Dedicated route None	New route to be built to latest standards and would run through development area	 Depends on U&C plans, ideally separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle No current cycling and walking waterbeach new to cycling and walking 	n 3 Potential to service all markets within Study Area apart from Waterbeach Village Link could provide offline route provides additional route provides additional PT capacity.	Potential to service all markets within Study Area apart from Waterbeach Village	Link should reduce car mode share as all markets could be serviced. PT mode share likely to increase due to reliability and speed of service. New NMU route provided increasing mode share and lower car mode share.	2 Direct connection, potential to capture many markets	Overlooking from houses and businesses in Waterbeach new town. Informal surveillance from people walking, cycling, in transit vehicles, and in town	3 See comments on 32-33 re A10 crossing. Integration with masterplan is key and needs to be resolved quickly.	 Eversden & Wimpole Woods SAC (18 km SW) - qualifying feature - barbastelle bats. One priority habitat - deciduous woodland - (two parcels - closest parcel 160 m E). Ten waterbodies - closest waterbody 35 m N. HRA screening of Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 habitat, badger, GCN, bats, bird, reptile and otter. Main considerations are potential impacts to Eversden & Wimpole Woods SAC, priority habitats and waterbodies. 	1 WNT Need to work closely with developers masterplan	h opportunities to engage with developers?	2 6	2 £3	3 21	9	30
35-36 E-W transitway in WNT to relocated station, appears in masterplans and SP	Would tie in with developers SPD plan	s WNT and relocated station	Doesn't serve Waterbeach village A10 junction may need to be grade separated Would need to be offline to be effective, current proposals do not specify what form the transitwa would take Any route from the station may be challenged or basis of duplicating services	y +3 as offline new route with no pinchpoints 1 - new route	3 Dedicated route None	New route to be built to latest standards and would run through development area	 Depends on U&C plans, ideally separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle No current cycling and walking No current cycling and walking 	An, Sh station 3 Potential to service all markets within Study Area including Milton. Additional route provides additional PT capacity.	Jule Potential to service all markets Link to provide new high qua 3 Within Study Area including NMU route although likely to used more by cyclists.	Link should reduce car mode share as all markets could be serviced. PT mode share likely to o be 3 increase due to reliability and speed of service. New NMU route provided increasing mode share and lower car mode share.	3 Only connection to relocated railstation.	Overlooking from houses and businesses in Waterbeach new town. Informal surveillance from people walking, cycling, in transit vehicles, and in town	3 See comments on 32-33 re A10 crossing. Integration with masterplan is key and needs to be resolved quickly.	 3 Eversion & Wimpole Woods SAC (18 km SW) - qualifying feature - barbastelle bats. One priority habitat - deciduous woodland - (three parcels - closest parcel adjent to the route to the N). Thirteen waterbodies - closest waterbody 35 m N. 4 RA screening of Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 habitat, badger, GCN, bats, bird, reptile and otter. 4 Main considerations are potential impacts to Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 habitat, badger, GCN, bats, bird, reptile and otter. 	1 WNT Need to work closely with developers masterplan	h opportunities to engage with developers?	2 6	2 £4	3 22	9	31
SE-NW transitway in WNT between tow 35-37 centre and Cambridge Research Park (CRP)/WNT Access roundabout 1	own Would tie in with developers plan Also se Phase	s WNT town centre, secondary town centr a and CRP/potential rural travel hub by th erves large sections of WNT, including Ke 1	re by he Would need to be offline to be effective U&C have designed this stage, would need to coordinate to see where transitway fits into their plans	+3 as offline new route with no pinchpoints	3 Dedicated route None	New route to be built to latest standards and would run through development area	 Depends on U&C plans, ideally separate ped+cycle route: 3.5m wide two-way cycleway with centre line, 2m footpath alongside with 25mm curb with forgiving angle No current cycling and walking No current cycling and walking 	yn, CRP, 3 Potential to service all markets within Study Area including Milton. Link could provide offline ro that is fast and reliable. Additional route provides additional PT capacity.	Potential to service all markets within Study Area including Milton.	Link should reduce car mode share as all markets could be serviced. PT mode share likely to increase due to reliability and speed of service. New NMU route provided increasing mode share and lower car mode share.	3 Direct connection, potential to capture many markets	Overlooking from houses and businesses in Waterbeach new town. Informal surveillance from people walking, cycling, in transit vehicles, and in town	3 See comments on 32-33 re A10 crossing. Integration with masterplan is key and needs to be resolved quickly.	 3 SAC (18.5 km SW) - qualifying feature - barbastelle bats. Two priority habitats - coastal and floodplain grazing marsh (one parcel 500 m N) and deciduous woodland - (nine parcels - closest parcel 20 m N). Seventeen waterbodies - closest waterbody 30 m E. 4 RA screening of Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 habitat, badger, GCN, bats, bird, reptile and otter. 	WNT Need to work closely with developers masterplan 1 Grade II Listed Building - Adjacent Highways - Needs to cross A10	h opportunities to engage with developers?	2 12	2 £9	2 24	8	32
Specific nodes and other areas for more detailed as Intersection of Milton Road, Cowley Roa and the CSP access road. Proposed as 'transport hub' of the NEC (awaiting emerging masterplan to confirm this state	assessmentload as the tatus)Existing SUP should be replaced an upgraded alongside any transitway/transit lanes in this areaServes with pr	s NEC market (includes CSP) and interact	ts Milton Road is wide at this point but also conges especially for traffic accessing CSP.	ated, 1 - major reconfiguration would be required. Severe congestion area with PT likely to get caught up in.	1 Priority could help, but likely Milton Roa still issues many junc	ad and proximity to so tions is a concern	1 Improve crossing of Milton 1 Road and access to CSP and CNFE Increase capacity and improve CNFE	Potential to service all markets within Study Area including Milton. Node to provide offline links which provide fast and relia PT.	e ing 3 Potential to service all markets within Study Area including Milton. Node provides additional NM links between links.	MU 3 Link should reduce car mode share as all markets can be served. PT mode share likely to increase due to reliability and speed of service. New NMU route provided increasing mode share and lower car mode share.	3 Good central hub	3 Informal surveillance during the day, but limited overlooking and would feel isolated outside peak hours	2 Potential for the east-west movement between CSP and Cowley Road to become transit/NMU only. Would require further design consideration and optioneering if taken forward, but not likely to be a showstopper. Consider also in wider context of AAP aspirations.	Versden & Wimpole Woods SAC (14.5 km SW) - qualifying feature - barbastelle bats. Histon Road SSSI (1.7 km SW) - (see proposed route 1-4, row 12). No priority habitats. Two waterbodies - closest waterbody 230 m NW.HRA screening of Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 habitat, badger, GCN, bats, bird, reptile and otter.Main considerations are potential impacts to Eversden & Wimpole Woods SAC, priority habitats and waterbodies.	Allocation Policy E/1 - Adjacent Cambridge Science Park Area of Major Change - Adjacent Proposal Site M1 - Adjacent Waste Consultation Area - Adjacent Mineral Safe Guarding Area - Adjacent Residential Area - Near Highways - Major Disruption	ToD opportunity if tied in with Proposal Site M1	2 6	2 £2	3 19	7	26
Intersection of A10, Cambridge Road, C Dyke Road and Waterbeach Road Node 25 (staggered junction). Cambridge Road currently has a modal filter at the A10 er (no motor vehicle access)	Car d Segregated NMU route Potent end	ially allows access to Waterbeach market	Congested crossing point with a pattern of collis (six from 2013-2017) If on-street, modal filter at Cambridge Road wou need to be reconfigured to allow transit vehicles access this road (may further complicate junction Potential offline alignment south of Cambridge R instead. Potential transitway bridge over A10.	ion Id to n) Road 2 - would require PT priority for any crossing here N Road 1 - new structure or crossing would increase capacity	Priority for crossing will reduce congstion for PT, but not free flow	es from A10 and affic volumes are a New crossing would help safety	2 Improve crossing of A10 and Increase capacity and improve access to Waterbeach journey quality Waterbeach	3 Potential to service all markets within Study Area including Milton. Node to provide offline links which provide fast and relia PT.	e ing 3 Potential to service all markets within Study Area including Milton. Node provides additional NM links between links.	MU 3 Link should reduce car mode share as all markets can be served. PT mode share likely to increase due to reliability and speed of service. New NMU route provided increasing mode share and lower car mode share.	3 Direct connection, potential to capture many markets	3 Some overlooking from houses on Cambridge Road, light traffic, some informal surveillance from people walking, cycling and in transit vehicles.	Would require further design consideration and optioneering if taken forward. Numerous possibilities, eg jug-handle from south. Consider adding an east- west NMU route to Waterbeach Lane.	 Eversden & Wimpole Woods SAC (17.5 km SW) - qualifying feature - barbastelle bats. Stow- cum-Quy Fen SSSI (4.5 km SW) - (see proposed route 10- 11, row 33). One priority habitat - deciduous woodland - (four parcels - closest parcel 100 m NW). Nine waterbodies - closest waterbody 60 m E. HRA screening of Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 habitat, badger, GCN, bats, bird, reptile and otter. Main considerations are potential impacts to Eversden & Wimpole Woods SAC, priority habitats and waterbodies. 	Green Belt - Within Local Green Space - Within Settlement Boundary Policy S/7 - Outside Residential Area - Near Highways - Major Disruption Water Infrastructure - Pumping Station Grade II Listed building - Adjacent	7 As above	2 6	2 £2	3 22	8	30
Node 26 Intersection of Glebe Road and Cambrid Road in Waterbeach	oridge Greenway Provid alongs	s Waterbeach market es direct route to WNT for options that go side Greenway	Space is constrained here so any transitway alignment may either require housing demolition would encroach on allotments. Passes close to houses and may face opposition from residents.	or 2 - difficult geometry for bus movements could hinder reliability 1 - new structure or crossing would increase capacity	3 Limited Limited	Limited	2 Waterbeach Greenway Current cycling route is on road, walking route is footway on one side of the road Waterbeach	 Potential to service all markets within Study Area including Milton. Node allows all markets to l served (dependent on ajdoi links). Node to provide offline links which provide fast and reliae PT. 	e ing 3 Potential to service all markets within Study Area including Milton. Node provides additional NM links between links.	UU 3 Link should reduce car mode share as all markets can be served. PT mode share likely to increase due to reliability and speed of service. New NMU route provided increasing mode share and lower car mode share.	3 Direct connection, potential to capture many markets	Overlooking from houses on Cambridge Road/Glebe Road, light residential traffic, some informal surveillance from people walking, cycling and in transit vehicles.	The local built environment will have a significant constraint on the CAM - given that there is likely to be either running with traffic or a changes access for Glebe Road; which is a cul-desac. This would potentially be Cambridge Road further east or north via Mill Street altogh thast wouild require a significant diversion for residents. It seems simpler to keep the CAM as close as possible to the A10 corridor wherever possible.	 Eversden & Wimpole Woods SAC (17.5 km SW) - qualifying feature - barbastelle bats. Stow- cum-Quy Fen SSSI (3 km SW); (see proposed route 10-11, row 33). One priority habitat - deciduous woodland - (four parcels - closest parcel 120 m NW). Three waterbodies - closest waterbody 170 m W. HRA screening of Eversden & Wimpole Woods SAC. Potential surveys: Phase 1 habitat, badger, GCN, bats, bird, reptile and otter. 	Green Belt - Within Improved Landscaping - Adjacent Settlement Boundary Policy S/7 - Outside Residential Area - Adjacent Highways - Major Disruption Roman Canal Car Dyke (archaeology) - Adjacent	7	2 6	2 £1	3 23	8	31

Appendix F. Maps of Option Appraisal Results for Individual Links

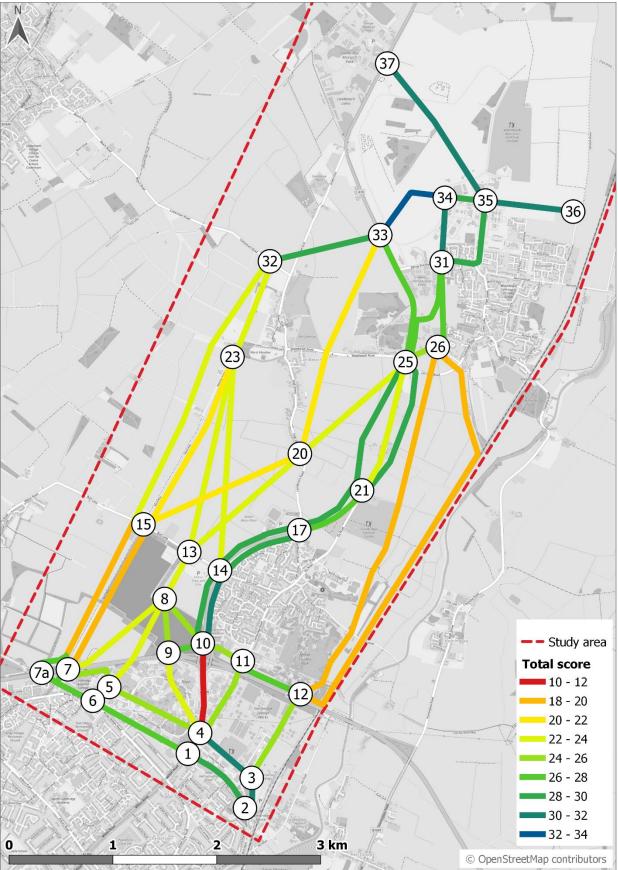
F.1. Transport Planning Scores



F.2. Deliverability Scores



F.3. Total Scores

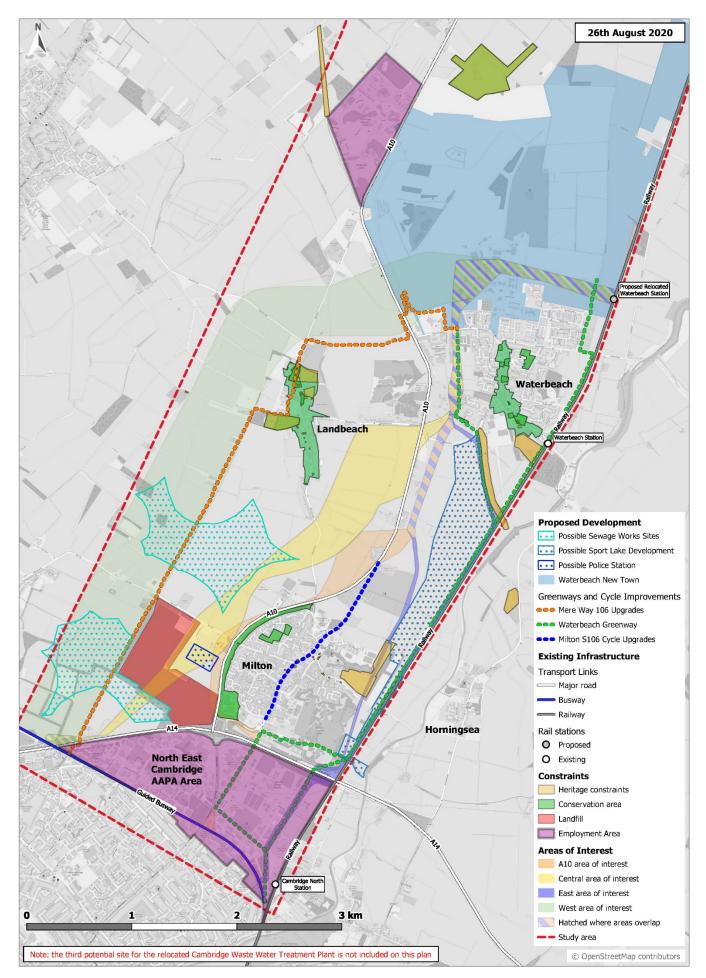


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APPENDIX 2 – STUDY AREA CONSTRAINTS MAP



New Town North of Waterbeach to North East Cambridge Public Transport Study

Pre-Consultation Public and Stakeholder Engagement Analysis

Greater Cambridge Partnership

26 August 2020

Engagement Report

Notice

This document and its contents have been prepared and are intended solely as information for Greater Cambridge Partnership and use in relation to Engagement Report.

Atkins Limited assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

This document has 60 pages including the cover.

Document history

Document title: Pre-Consultation Public and Stakeholder Engagement Analysis

Document reference: Engagement Report

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
Rev 1.0	First Issue to Client	LB	AB	SA	GJ	21/08/2021
Rev 2.0	Final Issue	LB	AB	SA	GH	26/08/2020

Client signoff

Client	Greater Cambridge Partnership
Project	New Town North of Waterbeach to North East Cambridge Public Transport Study
Job number	5192922
Client signature/date	

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1. Introduction

Atkins has been commissioned by the Greater Cambridge Partnership (GCP) to undertake a study to explore the options to deliver the most effective public transport connections between the proposed New Town north of Waterbeach and North East Cambridge. The Waterbeach to North East Cambridge corridor is going to experience significant growth and public transport solutions are currently being explored to ensure that employment and residential growth can be accommodated without increasing congestion on the road network within Cambridge and the study area. In particular, the study seeks to identify a preferred transit route corridor to integrate with the emerging Cambridge Autonomous Metro (CAM) proposals and to enhance walking and cycling infrastructure. The intention is to progress a Waterbeach to North East Cambridge Public Transport Scheme along this preferred corridor.

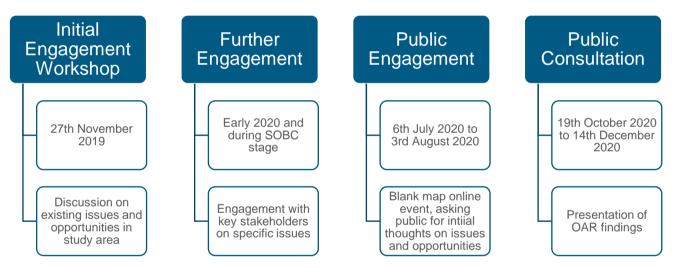
1.1. Public and Stakeholder Engagement

A programme of public and stakeholder engagement has been undertaken since the project inception to support the option identification process, and to inform and coordinate with key stakeholders.

1.1.1. Engagement Programme

Figure 1-1 shows the completed and planned stages of engagement during the course of the study.

Figure 1-1 - Stakeholder Engagement Stages



Initially, a stakeholder engagement workshop was held in November 2019, which was undertaken to understand stakeholders' views on the existing issues, constraints and opportunities within the corridor. The details are provided in Appendix A. This was supplemented by further one-to-one engagement meetings with stakeholders during the first half of 2020, to further discuss issues specific to individual stakeholders.

Pre-consultation engagement was held from 6th July 2020 to 3rd August 2020 (four weeks). The engagement was held virtually on the ConsultCambs web-tool¹, as a result of the Coronavirus outbreak restricting face-to-face engagement. The engagement consisted of a map-based tool that allowed respondents to drop comments about a specific area on a map, and a survey. Additional comments were also received via social media and directly to the Greater Cambridge Partnership email address. To ensure data privacy, GCP redacted personal data before the results were supplied to Atkins.

A public consultation period is planned to take place towards the end of 2020, subject to Board approval. This will look to consult on the shortlisted options assessed in the Options Appraisal Report (OAR) as revised following engagement to date.

1.1.2. Engagement Strategy

The engagement strategy for this stage of the study was designed by GCP with input from Atkins. During the design process, reference was made to Cambridgeshire County Council's Consultation Guidelines², in particular taking into account the following:

- The engagement is taking place at a time when proposals are at a formative stage;
- Sufficient information and reasoning is provided to permit an intelligent response from the public to the proposals;
- Adequate time given for consideration and response given the significance of the decision being taken; and
- Plans are in place for full analysis of the results and for these to be presented at a senior level to enable the consultation to be conscientiously taken into account in finalising proposals.

1.2. Structure of Report

The remainder of this Report is structured as follows:

- Chapter 2 sets out the findings of the pre-consultation public engagement including
 - ConsultCambs Survey responses;
 - ConsultCambs Map comments;
 - Social Media responses; and
 - Email responses.
- Chapter 3 sets out the stakeholder engagement undertaken to date, including a stakeholder engagement workshop and one-to-one meetings.
- Chapter 4 summarises how the areas of interest have been amended following the engagement.

2. Pre-Consultation Public Engagement Findings

2.1. Engagement Strategy

This section sets out the strategy for the pre-consultation engagement.

Identification of Audience

The engagement was open for anyone to contribute to. The key target audience was identified as commuters who use the Waterbeach to Cambridge corridor as well as local residents. The understanding of the audience was used as a basis upon which to design the engagement materials, questions and communication strategy.

Design of Materials

At this stage of the study, the key aim of the engagement was to understand stakeholders' views on the existing issues, constraints and opportunities within the corridor. Therefore, materials were kept deliberately minimal to allow for a free flow of comments and considerations. The map was left blank, and open-ended questions allowed for respondents to include a wide range of comments. However, as broad corridors or 'areas of interest' had already been identified, these were included on the engagement website page (and referred to as the 'Atkins Map') so that comments on these could be sought.

Design of Questions

The engagement survey questions were designed to be neutral, clear to understand and were structured to allow people to comment on all areas of the scheme.

The first half of the survey included open-ended questions aimed at gaining opinion on the existing issues and opportunities to travel on the corridor. The second half of the survey included tick-box questions which aimed to capture how people currently use the corridor in terms of frequency and mode and also the impact of the Coronavirus pandemic on travel patterns.

The tool for gathering comments was an online survey. It is recognised that online engagement, whilst in theory is available to all, could potentially exclude those without easy access to the internet. During the Coronavirus pandemic it was not possible undertake face-to-face engagement, but if government guidelines allow it, GCP will consider holding face-to-face events as part of the forthcoming formal consultation.

Other forms of response including detailed written submissions via email and social media posts were also received and have been incorporated into the analysis.

Diversity and Protected Characteristics

A complete set of questions designed to monitor equality status (gender, ethnicity, sexuality etc) were not included within the direct questions on the survey. This was because previous feedback from the public has suggested that these questions were overly intrusive given the context of providing comments on strategic aspects of a new transport corridor. Previous consultation has highlighted the importance of taking into account accessibility at the detailed design stage. Information on matters pertinent to travel will be collected through formal consultation including age, employment status and disability (although not the specific nature of disability).

Analysis

The strategy for the analysis of engagement responses was as follows:

- An initial quality assurance review of the data was conducted by GCP and a review with the engagement team carried out to identify any issues or challenges that occurred during the engagement process;
- The points on the map were analysed by Atkins and categorised according to their:
 - Geographical area;
 - Mode of Travel; and
 - Key Themes (which are tailored to the responses given for each question).
- The survey was analysed as follows:

- Tick box questions were analysed using quantitative methods which are then presented in the final report as charts and descriptions of headline numerical information; and
- Open questions were analysed using qualitative methods, namely through thematic analysis.
- The social media and email responses were analysed on a response by response basis; and
- This report was written to summarise the results.

Quality Assurance

To ensure data integrity was maintained, the following checks were performed on the data:

- A visual check of the raw data to check for unusual patterns checks to ensure that responses appear genuine, i.e. information is useful for the project / there are no direct repetition in answers (bulk responses) / responses do not include information that is not yet in the public domain.
- Text analysis to check for duplicate text checks undertaken to ensure no bulk entry of responses by an automated process, thus altering the weighting of some options; and
- Time stamp checks to check for unusual patterns checks undertaken to ensure no bulk entry of
 responses by an automated process, thus mis-representing public opinion.

These checks were completed manually by Atkins.

2.2. Survey

In total, 108 responses were received for the online survey. The survey contains responses from a small sample of the total population within the study area and was self-selecting. It should therefore be considered that the responses within this report may not be statistically significant, but are representative of the views of those who chose to respond to the engagement exercise.

The following sections summarise responses on a question by question basis.

Every response has been categorised by Atkins according to whether it was a substantive answer or not. Some respondents did not provide applicable answers, for example, 'Not sure' or 'I cannot think of anything'. These answers have been omitted from the analysis.

For the purposes of this report, all the substantive answers are grouped into key themes that are based on the responses given to each question.

In addition, the frequency of comments may sum to more than the total respondents, as some responses cover multiple themes.

Question 1: Please tell us any problems that you encounter or have encountered using public transport between Waterbeach and Cambridge

There were 84 substantive responses and most respondents provided multiple issues with public transport. These are summarised in a number of key themes, as shown in Table 2-1. It is clear that there is a desire for a more frequent service between Waterbeach and Cambridge, with 51 of the 84 substantive responses commenting on this. Moreover, 25 of the 84 substantive responses noted that the service between Waterbeach and Cambridge can get crowded. Responses that note frequency and capacity issues, were typically noted in the same response.

Table 2-1 – Problems encountered using Public Transport

Theme	Frequency of Comment
Frequency	51
Crowded service	25
Reliability	10
Cost	9
Lack of cycle routes ³	9

³ It is noted that although question 1 was about public transport, a key theme was the lack of cycle routes between Waterbeach, Milton, Landbeach and Cambridge.

Theme	Frequency of Comment
Traffic congestion	9
Accessibility	3
Connectivity	3
Parking provision	3
Security and station car parks	1
Lack of information provision	1

Question 2: Please tell us any problems that you encounter or have encountered cycling, walking or using other forms of active travel between Waterbeach and Cambridge: By active travel we are thinking of other forms of transport such as horse riding or e-scooter where physical activity is key to the form of transport

There were 86 substantive responses to question 2. Table 2-2 presents the main problems that respondents reported encountering when cycling or walking. The lack of suitable path along the A10 was a major issue, with users not feeling safe and commenting that it was too narrow for pedestrians and cyclists to share and cross each other. It was also highlighted in the comments that the riverside path is not suitable in winter due to the surface of the path.

The issue highlighted regarding lack of crossing was mainly due to cyclists and pedestrians being unable to cross the A10 safely towards Landbeach.

Theme	Frequency of Comment
Width of path along A10	38
Lack of path	31
Poor road/footway surface	22
Lack of visibility	15
Poor conditions in winter	14
Lack of pedestrian crossing on A10	10
Width of path along River Cam	6
Poor cycle route along A10	4
Fast moving traffic through Waterbeach centre	3
Poor signage	2
Lack of space for equestrian users	1

Table 2-2 – Problems encountered Walking or Cycling

Question 3: Please tell us the best route you feel public transport, cycling, walking and active travel improvements between Waterbeach and Cambridge could take. This could be improving existing routes or developing new routes

There were 105 substantive responses to question 3. As shown in Table 2-3, most of the respondents focused on improving cycle and walking routes to and from Cambridge, due to the proximity of Milton and Waterbeach to Cambridge. The main suggestions for ways to improve public transport, cycling and walking were:

- To improve the A10 path, either in situ or by creating a new one alongside, to provide a segregated cycling and walking link from Cambridge to Waterbeach and Cambridge Research Park; and
- Providing a new cycleway alongside the railway line, creating a fast cycle route that is more direct than the current cycle routes.

Table 2-3 – Ways to Encourage Public Transport use, Cycling and Walking

Theme	Frequency of Comment
A10 cycle path	52
Footpath/cycleway alongside railway line	33
Improved riverside cycle path	12
Greenway routes	11
Increase bus services	5
Waterbeach to Horningsea crossing	4
Improve current surfaces	3
Roman road cycle route	3
Additional Park and Ride connection to/from Waterbeach	2

Question 4: What do we need to avoid between Waterbeach and Cambridge when we are looking at potential improvements to public transport? This may be historic landmarks, landscape that is important to you or other constraints

There were 59 substantive responses on what should be avoided when considering improvements between Cambridge and Waterbeach.

The most frequently raised theme was related to not damaging the environment and adversely affecting wildlife. Table 2-4 summarises the main themes identified from the responses to question 4.

Table 2-4 – What should be avoided to Encourage Public Transport

Theme	Frequency of Comment
Damaging environment	23
Increasing traffic volume	10
Unnecessary bus lanes	8
Not connecting villages	4
Horningsea bypass	3
Disrupting current traffic flow	3
Avoid any housing	2
Avoid local footpaths	1

Question 5: What do we need to avoid between Waterbeach and Cambridge when we are looking at potential improvements to cycling, walking and active travel? This may be historic landmarks, landscape that is important to you or other constraints

There were 53 substantive responses for question 5. The most frequently raised theme was ensuring the environment is not damaged. Another key theme was to ensure that shared or segregated paths allow enough room for cyclists and pedestrians as respondent feel the current paths are not wide enough for both to safely use. Table 2-5 summarises the main themes identified from the responses to question 5.

Table 2-5 – What should be avoided to Encourage Walking and Cycling

Theme	Frequency of Comment
Damaging environment	18
Narrow shared paths	7
On road cycling	5
Existing infrastructure	3
Existing highways (particularly A10)	3
Increasing traffic volume	2
Not connecting villages	2

Question 6: Please outline any features you would like to see as part of any transport improvements between Waterbeach and Cambridge

There were 94 substantive responses to this question. The most frequent comment was that by increasing the frequency of public transport service it would become more desirable to use. This referred equally to bus and rail services. A number of respondents who made these suggestions also commented that increasing capacity would also improve usage (referring mainly to rail capacity). Table 2-6 summarises the main themes identified from the responses to question 6.

Theme	Frequency of Comment
Increased public transport service frequency	33
Segregated paths	18
Improved A10	9
Connectivity to villages	6
Increase capacity on public transport	6
Improved paths	5
Integrated ticketing and information	3
Reliable services	2
Horningsea Road improvements	2
Better connections to Milton Country Park	2
Bus priority	1

Table 2-6 – Features to improve Public Transport between Waterbeach and Cambridge

Question 7: Please outline any features you would like to see as part of any cycling, walking and active travel route improvements between Waterbeach and Cambridge

A total of 82 substantive responses were provided on this question. The most frequent comment related to the provision of new, and maintenance of existing, segregated paths for active travel users. Table 2-7 summarises the main themes identified from the responses to question 7.

Table 2-7 – Features to improve Public Transport between Waterbeach and Cambridge

Theme	Frequency of Comment
Segregated paths	32
Maintenance	17
Improved routes	16
Path width	11
Improved path surface	9
Pedestrian and cycle crossing	8
Traffic calming	4
A10 improvements	3
Improved access to heritage features (e.g. Denny Abbey)	2
Improved safety features on routes (e.g. more lighting)	2
Improved landscaping along footway/cycleways	2

Question 8: Please outline any features you would like to see as part of any other transport improvements between Waterbeach and Cambridge

There were only 41 substantive responses for question 8. The most frequent answers related to connectivity to Cambridge and surrounding areas and improvements to the A10, particularly dualling and/or widening the existing routes. Table 2-8 shows the key themes to come out of the responses to question 8.

Table 2-8 – Features that respondents would like to see as part of transport improvements between Waterbeach and Cambridge

Theme	Frequency of Comment
Improvements to the A10 – dualling, widening, reducing congestion, improving safety	7
Connections to other areas in Cambridge e.g. CBC, East Cambridge, Travel Hubs	7
Connections to and improvement within villages	6
Segregation of modes	5
Design of transport services	3
Integrated ticketing	2
Improvements to Milton Interchange	2
Earlier and later buses and rail services	2
Public transport modes e.g. light rail, tram	2

Within the responses related to 'connections to and improvements within villages', individual comments were as follows:

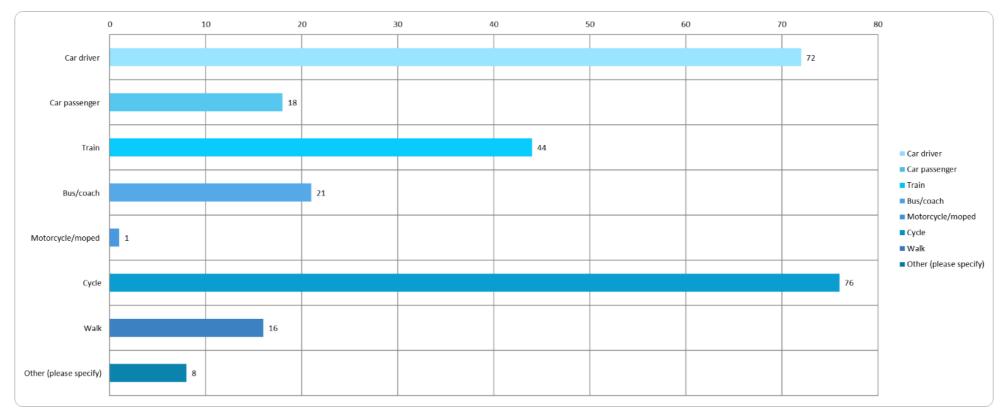
- Improvements to the safety of cycling and walking with and between villages;
- Importance of new developments having walking cycling and public transport connections to existing villages;
- Restricting through traffic,
- Surfacing of roads, cycleways and footpaths,

- Public transport, foot and cycleways serving Landbeach and Milton; and
- Parking management.

Individual comments in relation to the design of future public transport were as follows:

- Planting of trees along new routes;
- Early planning for disabled accessibility;
- Improved lighting; and
- Sufficient width to allow travellers of different speeds to safely pass.

Question 9: Prior to the Coronavirus outbreak how did you travel between Waterbeach and Cambridge? Figure 2-1 - Question 9 Results⁴

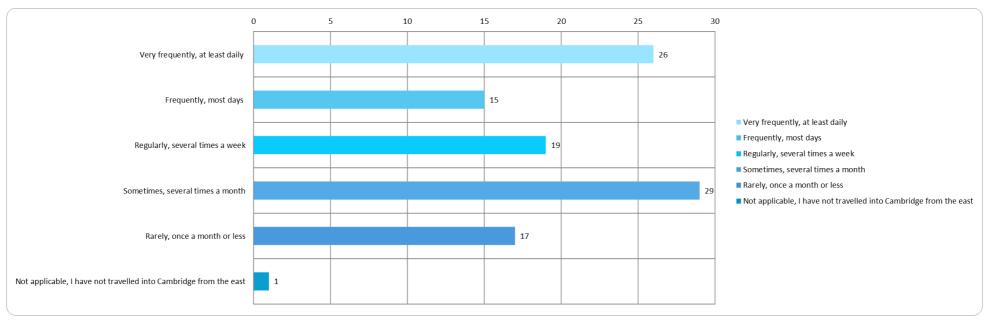


Note that Figure 2-1 shows total responses and not percentages. Respondents were allowed to choose multiple responses.

Figure 2-1 shows the typical mode of travel before the Coronavirus outbreak. The majority of the 106 respondents who answered this question travel on the corridor by car or cycle. The next most common mode for travel between Waterbeach and Cambridge is rail. Smaller proportions of respondents travel as car passengers or by bus and foot. Of the 8 respondents that answered 'other', four stated that they ran or jogged between Waterbeach and Cambridge, one used the Cambridge Research Park Shuttle Bus, one used Park and Ride, one used electric bike and one used all modes.

⁴ Note: The phrasing used in Figure 2-1 to Figure 2-8 has been directly taken from the GCP survey.

Question 10: Prior to the Coronavirus outbreak, how frequently did you travel between Waterbeach and Cambridge? Figure 2-2 - Question 10 Results

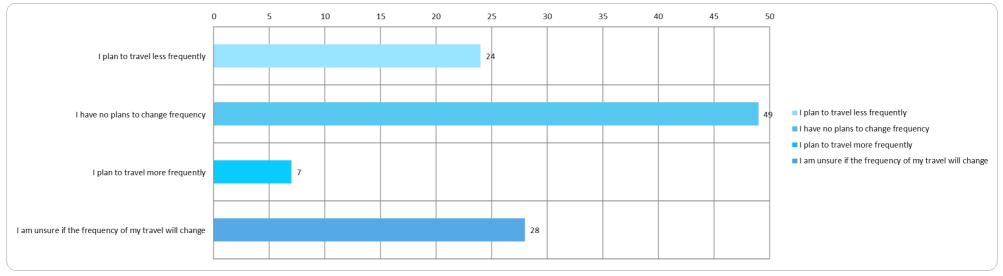


Note that Figure 2-2 shows total responses and not percentages.

Figure 2-2 shows how frequently users travelled along the Waterbeach and Cambridge corridor. The results vary which suggests that there a number of different types of users who answered this survey.

Question 11: As a result of the Coronavirus outbreak, do you plan to permanently change your travel habits between Waterbeach and Cambridge with regards to frequency?





Note that Figure 2-3 shows total responses and not percentages.

Figure 2-3 shows that as a result of the Coronavirus outbreak the highest proportion of respondents have no plans to change their travel patterns with regards to frequency. However, 24 respondents, out of the 108 respondents who answered the question, stated that they planned to travel less frequently with a further 28 respondents (out of 108) being unsure whether their frequency would change.

Question 12: As a result of the Coronavirus outbreak, do you plan to permanently change your travel habits between Waterbeach and Cambridge with regards to mode?

The answers provided for question 12 are split into five sub-section: car travel, bus travel, rail travel, cycle travel and walking. The results of these sub-sections are provided in Figure 2-4 to Figure 2-8. A total of 105 respondents provided an answer to Question 12.

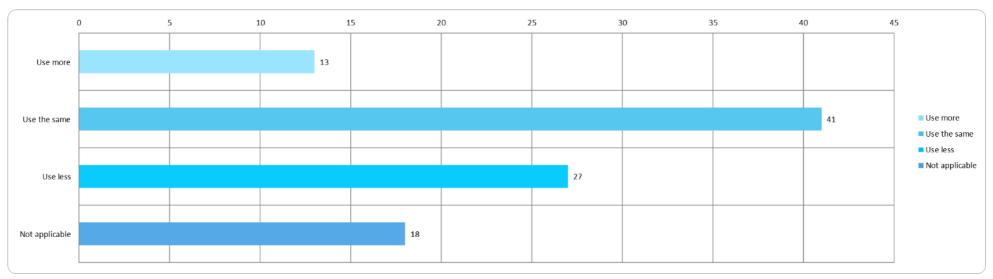
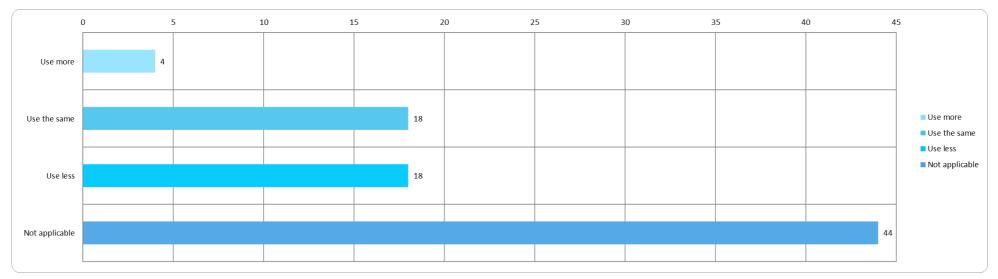


Figure 2-4 - Question 12 Results: Car Travel

Note that Figure 2-4 shows total responses and not percentages.

Figure 2-4 shows that, of those respondents who travel by car in the corridor, 41 out of the 99 respondents who answered this question plan to use the car the same amount as they did prior to the outbreak, which represents the largest proportion of the answers. However, 27 respondents stated that they would use the car less than they did before the outbreak.

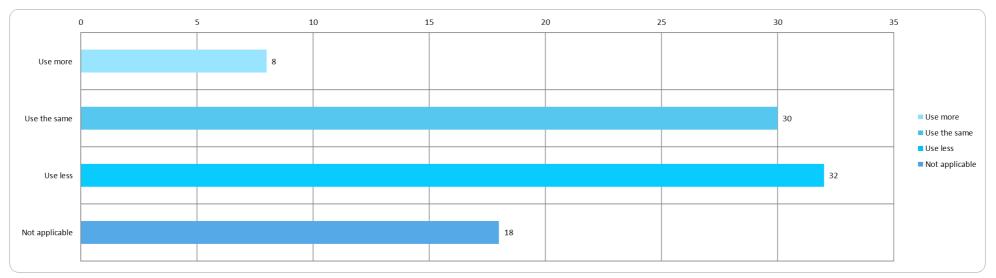
Figure 2-5 - Question 12 Results: Bus Travel



Note that Figure 2-5 shows total responses and not percentages.

Figure 2-5 shows that respondents who travel by bus in the corridor predominantly planned to do so as much as, or less than, before the outbreak. There was an even split between these two categories. Only a small proportion of respondents planned to travel by bus more than before.

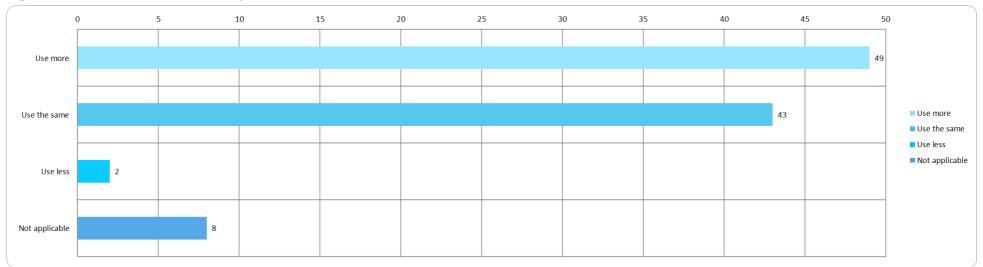
Figure 2-6 - Question 12 results: Rail Travel



Note that Figure 2-6 shows total responses and not percentages.

Figure 2-6 shows a broadly even split of respondents planning to use rail the same or less in the future. As with buses, relatively few respondents planned to use rail services more in the future.

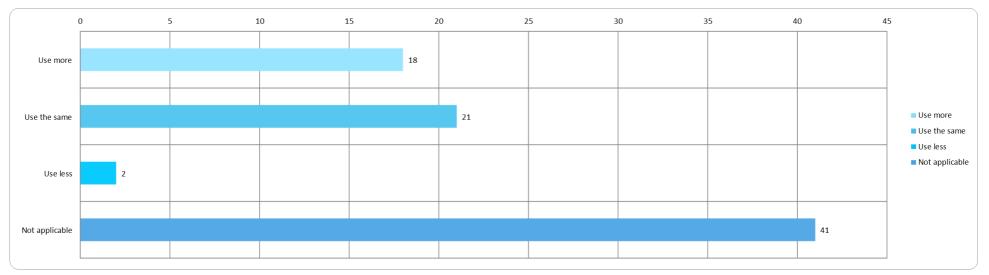
Figure 2-7 - Question 12 Results: Bicycle Travel



Note that Figure 2-7 shows total responses and not percentages.

Figure 2-7 shows that 49 out of the 102 respondents plan to cycle more in the future, with 42 respondents travelling by bicycle the same. A very small proportion of respondents stated that they plan to use their bicycle less in the future.

Figure 2-8 - Question 12 Results: Walking



Note that Figure 2-8 shows total responses and not percentages.

Figure 2-8 shows that 18 out of the 82 who responded to this question plan to walk more in the future, with 21 respondents planning on walking the same amount as they did before the Coronavirus outbreak. A very small proportion of respondents stated that they plan to walk less in the future.

Question 13: If you currently travel by car, either as a driver or as a passenger, what would make it more attractive for you to travel by public transport, walk or cycle?

There were 82 substantive responses provided on what would make public transport, walking or cycling more attractive than using a car. The most common responses related to cycle routes and infrastructure and the frequency of public transport services. Table 2-9 shows the key themes that arose out of the responses to Question 13.

Table 2-9 – Features that respondents feel would make public transport, walking and cycling more	
attractive than car	

Theme	Frequency of Comment
Better ⁵ cycle routes and infrastructure	24
Frequency of public transport services	21
Cheaper public transport	14
Public transport, walking and cycling connectivity to villages	8
Segregated cycle routes	7
Rail capacity	7
Safer cycle routes (better lighting etc)	5
Later/earlier public transport services	4
Connectivity	4
Integrated ticketing	3
Cycle racks on buses	2
Segregated public transport (i.e. segregated from other modes)	2
Travel Hub connections including Foxton and Park and Ride sites	2

Within the responses related to 'cycle paths', individual comments were as follows:

- Improving the safety of cycle connections;
- Increase lighting (linked to the safety in many cases);
- Increasing the width of cycle paths;
- Surfacing of cycle paths; and
- Segregated cycle paths.

In relation to the 'public transport, walking and cycling connectivity to villages', individual comments were as follows:

- Restricting the through-flow of traffic through villages;
- Parking management; and
- Cycle routes through and to/from Landbeach.

Lastly, comments relating to 'Connectivity' were as follows:

- To/from and between villages for the first/last mile of journeys;
- Connection to West Cambridge;
- Connections to Addenbrooke's;
- Connections to the Research Park; and

⁵ The most common response mentioned 'better' cycle routes but did not necessarily specify the type of improvement required.

• Connections through and to/from Landbeach.

2.3. Map Pin Findings

In total, 173 comments were raised through pins on the interactive map. Respondents dropped pins at the locations they wanted to comment on. A screenshot of the map is shown in Figure 2-9. Individual pin locations are not visible until the map is zoomed in, so a map with each pin location is shown in Figure 2-10. A full list of comments and locations is provided in Appendix B.

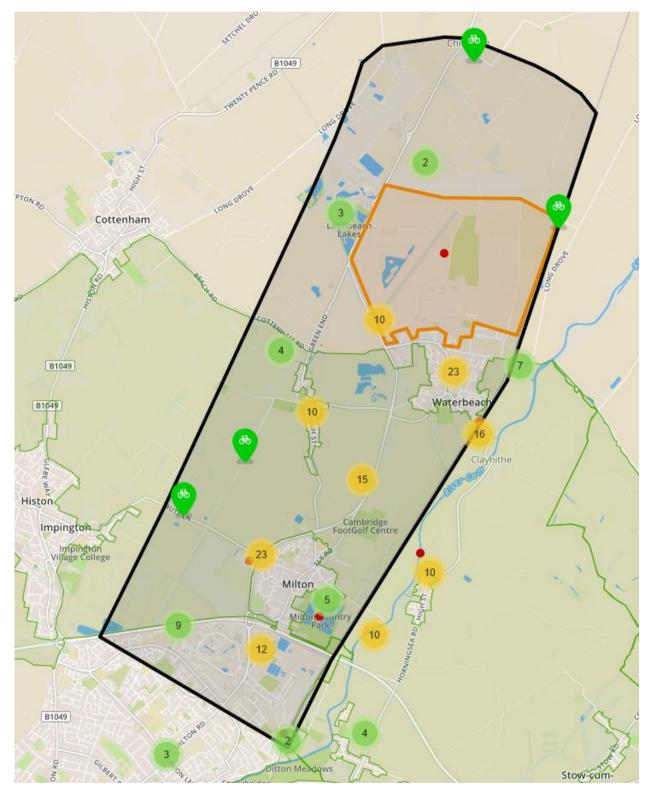
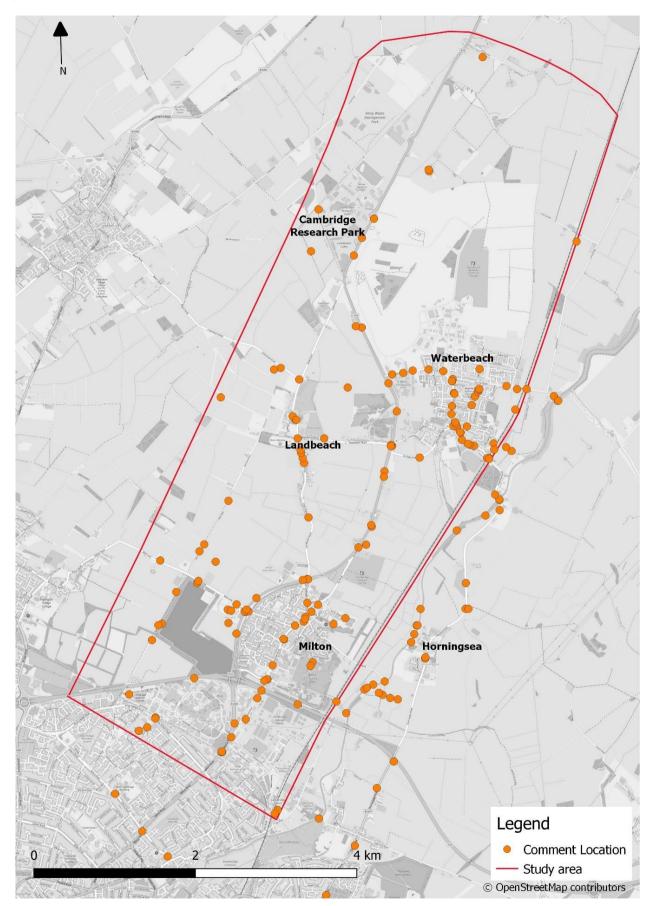


Figure 2-9 - ConsultCambs Waterbeach to North East Cambridge Engagement Map⁶

*This plan shows a screenshot of the interactive map on ConsultCambs as produced by Cambridgeshire County Council

⁶ https://consultcambs.uk.engagementhq.com/waterbeach-to-cambridge/maps/waterbeach-map

Figure 2-10 - Map Pin Locations



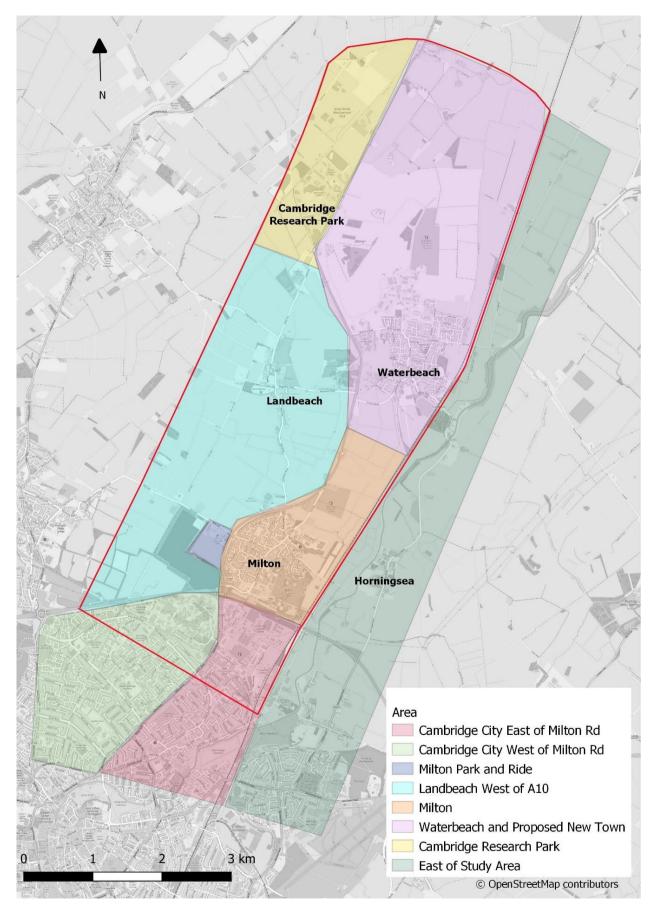
To analyse the dataset, Atkins divided the area into eight locations, broadly representing villages or employment areas.

Some pins were dropped outside the study area. Those within Cambridge (south of A14) but outside the study area were included with those within the study area for ease of assessment. A large number of pins (21% of responses) were dropped around the Fen Ditton, Horningsea and Clayhithe areas, and these were analysed separately as a location in their own right.

The areas are shown in Figure 2-11 and the percentage of responses within each area was as follows:

- Waterbeach 28%;
- Milton and eastern study area- 18%;
- Milton Park and Ride 3%;
- Cambridge City west of Milton Road 4%;
- Cambridge City east of Milton Road 8%;
- Cambridge Research Park 3%;
- Landbeach and western study area 16%; and
- Out of study area 21%.
- The distribution of comments by mode was:
- Walking and cycling 65%;
- Car 17%;
- Bus 6%;
- Rail 3%; and
- Non-mode related (developments, environment or multi-modal comment) 9%.

Figure 2-11 - Area Locations



2.3.1. Key Findings

The following themes have been derived from a review of the pins. They have been set out in order of frequency mentioned by respondents, i.e. Theme 1 was mentioned the most, followed by Themes 2 and 3:

- Theme 1 Safety;
- Theme 2 Pedestrian and Cycle Connectivity; and
- Theme 3 Public Transport Provision;

These themes are summarised further in the following sections.

Theme 1 - Safety

There were a number of comments where respondents felt that the safety of pedestrians, cyclists and other users could be improved. This theme can be split into sub-themes which are outlined below.

Junction Design

A number of responses suggested that redesigning junctions to prioritise cyclists and pedestrians could improve safety. For example, respondents commented that there could be advance cycle stop lines or early-release signals. Many of these comments were recorded in Milton village or on Milton Road.

Traffic Calming

Respondents felt that introducing traffic calming measures would reduce traffic through Milton and Waterbeach to increase safety for cyclists and pedestrians. A number of respondents proposed a limit on street parking as this reduces visibility and causes a build-up of traffic. Other respondents raised concerns about vehicle speed through surrounding villages, commenting that traffic calming measures would make journeys safer.

Provision of Pedestrian and Cycle Crossings

There is a concern over the lack of crossings at particular junctions, making journeys feel unsafe or undesirable to users.

There was also concern about crossings of the River Cam. A number of respondents raised concerns about the safety of the crossing at Baits Bite Lock and how the design of the crossing seems dangerous to those using it. Furthermore, a number of respondents suggested an additional, safer crossing over the River Cam providing access to Fen Ditton and Horningsea; respondents recorded feeling unsafe when using other existing crossings (For example, Baits Bite Lock). Providing an additional crossing over the River Cam would help reduce reliance on using Baits Bite Lock or by using Clayhithe Road to access Horningsea, another route that respondents can feel unsafe using.

Segregation of Footways / Cycleways

A number of respondents who discussed this theme felt that cyclists and pedestrians should have footways / cycleways segregated from motorised traffic for safety reasons, given the speed of the vehicles. Respondents also suggested a need to segregate pedestrians and cyclists as existing active travel routes are too narrow to accommodate both types of user, making it feel unsafe.

Respondents reported issues with cars parking along Station Road, Chapel Street and High Street in Waterbeach causing a build-up of traffic, further adding to safety concerns and support for cycle lanes or segregated infrastructure. Respondents suggested double yellow lines on these roads to reduce the number of parked cars.

Cycle Route Conditions

It was suggested that existing cycle route conditions could be improved for a safer experience. For example, the placement of street furniture, such as bollards and railings, can cause obstructions for cyclists increasing safety risks.

In addition, respondents commented on the poor surface condition of paths or lack of visibility due to limited lighting.

Theme 2 – Pedestrian and Cycle Connectivity

Respondents who mentioned pedestrian and cycle connectivity felt that the cycle routes needed to remain consistent, as they felt current routes ended abruptly or required difficult to manage changes at junctions. These respondents also felt they needed to connect to other routes to allow continuous travel from Cambridge to the east. and in particular two main cycle connections were commented with the desire for connectivity

between Milton and Horningsea, and Milton and Waterbeach. Respondents also sought a continuous cycle and pedestrian path from Cambridge along the A10 to Waterbeach and Cambridge Research Park.

Other suggestions include:

- Having a segregated cycle path along the A10 from Cambridge to Cambridge Research Park, due to vehicle speeds on the A10 making cyclists feel unsafe;
- Improving the cycle link between Waterbeach and Fen Ditton and the routes towards north-east Cambridge;
- Increasing the width of current shared-use paths; and
- Improve the overall conditions of cycleway / footway routes as some are well maintained whereas others are not.

Theme 3 – Public Transport provision

Respondents who mentioned public transport provision commented on how the low frequency of services in the area makes using public transport unappealing. This particularly related to the number 9 bus service.

Some respondents sought improved bus links between Waterbeach and Cambridge by either providing a bus from Waterbeackh to Milton Park and Ride (connecting with the existing Park and Ride bus service) or relocating the current Milton Park and Ride to Waterbeach.

A number of respondents requested timetable coordination between rail and bus services at Cambridge North railway station.

2.4. Social Media

An engagement event was also held on Twitter on 29 July when GCP officers were available to answer live questions. There were five direct-reply Tweets at this event or at other times during the engagement period, which are shown below:

- "Not sure why the #Waterbeach Horningsea Fen Ditton route into Cambridge wasn't marked as part of the project despite being heavily used and plenty of suggestions submitted already"
- "Ban bikes? Would create space for pedestrians."
- "How will you make the new route safe so that people women in particular feel confident enough to use the new route? Thinking Dr [Redacted] research on new cycling infrastructure."
- "Worth consulting with @CWRCPhoenix (https://cwrc.org.uk) to get their views."
- "Hi [Redacted] my question is about the much needed A14 underpass by the Regional College Will you
 include space for electric mobility scooters among the cyclists, pedestrians, equestrians and P&R bus? In
 the cycle lane? or bus lane?"

2.5. Additional Feedback

Additional responses to the engagement were provided to the GCP directly via email. These responses were primarily raised by organisations as opposed to individuals who commented on the ConsultCambs portal. The overall view in this feedback is positive about the scheme in principle. The individual points are as follows:

- Support for connecting North East Cambridge, in particular the expanding Cambridge Science Park, and Cambridge Research Park with Northstowe. An interchange point could be implemented on the Cambridgeshire Guided Busway (CGB) to the north of the A14 underpass by Mere Way, to allow passengers to interchange between routes;
- A potential public transport route that directly services the expanding Cambridge Science Park would provide an alternative to car use and would serve a different market to the existing heavy rail service between Waterbeach and Cambridge;
- Proposals that further improve access to local National Trust sites (Wicken Fen and Anglesey Abbey) and enhance Public Right of Ways were supported. In addition, schemes that improve public access to Wicken Fen, align with the National Trusts Wicken Fen 100 Year Vision Area policy;
- Potential for a non-motorised link between Bannold Road and Burgess Road in coordination with a
 potential development. This link could create a circular equestrian route as part of a residential
 development scheme;
- A connection to Denny Abbey via a route in line with the remains of the medieval causeway from Denny Abbey, through the New Town north of Waterbeach to Waterbeach village. This could also provide access to the Research Park and further to Chittering;

- Increased rail capacity and a rail service between Ely-Waterbeach-Cambridge South;
- Support for improving cycle connectivity from Cambridge Research Park to Waterbeach. Consider whether there is potential for Waterbeach New Town developers to deliver early as part of their development proposals;
- The scheme should seek to coordinate with the A10 highway scheme to maximise synergies;
- A potential quick win could be to introduce a new direct public transport service between Milton Park and Ride and Cambridge Biomedical Campus; and
- GCP should consider how a Sunday service will be viable to operate and how frequent the service could be.

3. Stakeholder Engagement

3.1. Introduction

Atkins and GCP hosted an initial stakeholder workshop and a series of engagement meetings with stakeholders of the scheme.

As described earlier, the details of the stakeholder workshop are provided in Appendix A.

The engagement meetings have typically taken the form of tele-conference calls and/or face-to-face meetings which have been arranged as the project progresses. There has been an emphasis on two-way communication, with stakeholders, GCP and Atkins providing updates to emerging plans, as it is recognised that there are a number of schemes being proposed within the project study area. The meetings are tailored to the understanding and the needs of each stakeholder, but they all included a brief overview of the project to inform discussions.

This Chapter summarises the stakeholder meetings to date and provides a log of the discussions.

3.2. Stakeholder Engagement Activities

Table 3-1 summarises the one-to-one stakeholder engagement activities that have taken place to date (up to 21/08/2020) and the outcomes of these. It does not represent a full log of meeting minutes. Some information discussed at the meetings was presented by stakeholders on a confidential basis and this confidence has been respected.

Table 3-1 ·	 Stakeholder 	Engagement Log
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Stakeholder	Discussions	Outcomes	Meeting Dates
Cambridge Project betwee Team Identif project What a	Understanding potential synergies and overlap between the two projects Identification of any dependencies between the two projects	The A10 project team have been challenged by the Department for Transport to show an integrated solution with public transport and non-motorised user enhancements south of Waterbeach. This study covers that need and emphasises the need for coordination	11/02/2020
	What assumptions are the two projects using in their assessments	The A10 dualling options would require junction work, and therefore this study could tie into those designs	
	Whether there is any suitable data that can be shared	The optioneering process in both studies was similar	
	Whether the two projects have similar methodologies	All current options are likely to go through Milton Interchange and therefore would interact with this project if a central option was taken forward	
Plant relocation proposals	Understand Cambridge Waste-Water Treatment Plant relocation proposals	Anglian Water have similar timescales to the Waterbeach to North East Cambridge project team and have two proposals	18/08/2020
	Identify potential synergies and overlap between two proposals	that are located within the study area	
Autonomous Metro (CAM) TeamthinkingIn terms of routing and design, there is little or between the two projects but they will need to	Mutual project updates, timescales and emerging thinking	Discussions were held and emerging design ideas were shared.	11/12/2019
	In terms of routing and design, there is little overlap between the two projects but they will need to connect at the Cambridge North tunnel portal		
Cambridge City Council: North Area Committee	Knowledge sharing and project updates	Discussions were held and emerging considerations were shared	27/02/2020
Eastern Corridor	Project coordination	The two projects had similar but slightly different Although	21/04/2020
given that they are similar in nature an	No direct interaction between the two projects, but given that they are similar in nature and adjacent to one and other, it is appropriate to coordinate approaches	different, this was appropriate given the different nature of the two corridors	22/07/2020
Fen Road Project Team	Project coordination	Awareness of emerging proposals for both project teams. It is unlikely that there will be direct interaction between the two schemes	07/04/2020

Stakeholder	Discussions	Outcomes	Meeting Dates
GCP Executive Board	Knowledge sharing and project updates	Emerging considerations were shared	19/05/2020 25/06/2020
Highways England	Understand requirements for any crossing of A14 Future plans for the field south of Milton Tesco (current A14 worksite), confirm ownership, appetite for transit use Appetite for transit corridor interaction with Milton interchange	Discussions were held and emerging considerations were shared.	11/02/2020
∟andfill Stakeholders	Technical feasibility and practical deliverability of using the landfill site What is in the landfill? How does its operation constrain us?	The landfill is currently owned by three parties who own permits for different parts of the site It is technically feasible to build over the site, although detailed work will need to be undertaken	28/07/2020
North East Cambridge (NEC) Area Action Plan (AAP) Planners	Thoughts on the different corridor options Issues and opportunities on each corridor Understanding of development timescales	Discussions were held and emerging development aspirations were shared. The planners anticipated the transit corridor using the existing CGB rather than going through the site itself. There were constraints to the latter. There is a need for density on the old sewage works site. The space required for the eastern route, in addition to the Waterbeach Greenway, would require a trade-off against this. Hence the eastern route was not favoured	04/03/2020
Northern Fringe East Landowners Forum	Understand deliverability of A10 and East routes through/alongside their site How NEC land is tying in with the Waterbeach Greenway Factors which would particularly encourage future tenants to use public transport	A new public transport scheme is supported, as it would contribute to achieving the allocated 'trip budget' for the site, i.e. reducing the vehicle demand	06/05/2020
Cambridge Science Park	Understand appetite for routes through CSP, preferred alignment(s), potential timescales for alignment(s) to become available Understand opportunities for making better use of existing CGB	Discussion with transport consultants representing CSP, who support proposals for a transitway servicing the site	13/01/2020 31/03/2020 01/05/2020

Stakeholder	Discussions	Outcomes	Meeting Dates
Sports Lake Trust (including Milton Country Park)	Understand their site layout and aspirations, to feed into whether the blue (East) corridor routing and stop location(s)	The Sport Lake Trust (Milton Country Park) are supportive of the eastern routes if they service the sport facilities. The Sport Lake proposals are not final and could accommodate a public	25/06/2020 23/07/2020
	Understand the deliverability of blue route taking a corner of country park, and potential mitigation / replacement land strategy	transport scheme	
Waterbeach Forum	To understand the forum's aspirations for public transport	The forum have more information on the scheme including programme and emerging options	26/02/2020
	To understand what schemes are acceptable to the forum		
Waterbeach Parish Council	To understand what the parish council want in terms of public transport.	The parish council have more information on the scheme including programme and emerging options	05/07/2020
	To understand what schemes are acceptable to the parish council.		
Vaterbeach New	Confirm deliverability of segregated corridors and	The developers of Waterbeach New Town are supportive of a	18/02/2020
Town Developers	potential additional corridor between the new town centre and Cambridge Research Park	public transport scheme which would contribute to planning conditions associated with the site	09/07/2020
	Role of the temporary Park and Ride and its operating arrangements		
	Appetite for providing space for a Rural Travel Hub alongside A10		

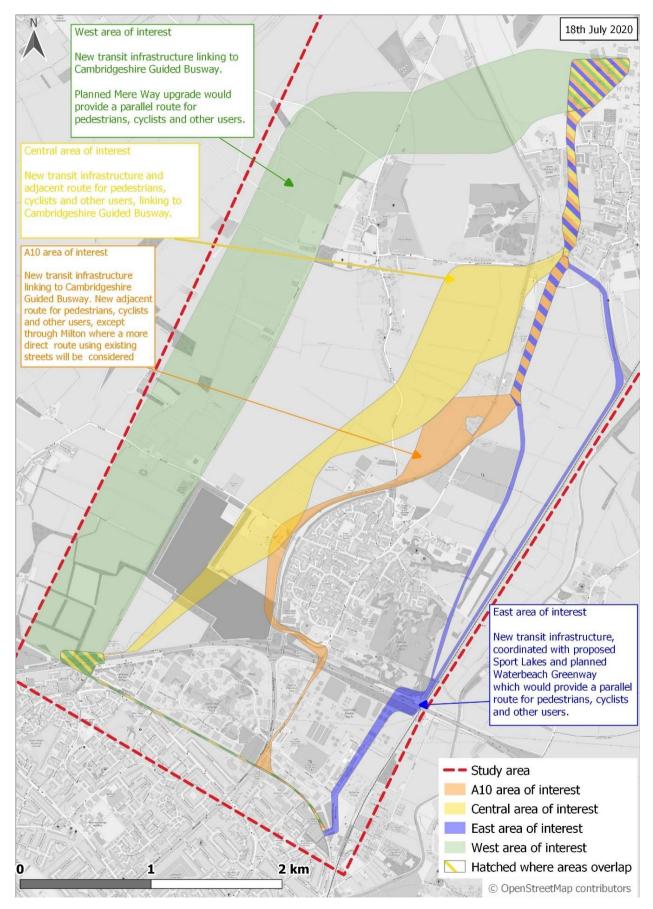
4. Post-Engagement Updates

This Chapter outlines the amendments made to the emerging areas of interest, in the light of the preconsultation engagement with the public and stakeholders.

Figure 4-1 shows the updated corridor plan. All four areas of interest have been taken forward, but with amendments to reflect the feedback. The following changes have been made:

- The eastern (blue) area of interest now specifically reflects the potential to run along either the eastern or the western edge of the Sport Lakes Trust site between Milton Country Park and Car Dyke Road. This reflects discussions with the Trust;
- The A10 (orange) area of interest now links with the Cambridgeshire Guided Busway at/near Milton Road, rather than using Cowley Road between Milton Road and Cambridge North Station. This reflects feedback on the anticipated future role of that part of Cowley Road;
- The A10 (orange) area of interest has been expanded to show the potential for crossing the A10 north of Milton to join with the eastern (blue) area of interest. This reflects the potential for the A10 area of interest to serve the northern end of the proposed Sport Lakes. This is in addition to the potential for staying west of the A10 at this point as previously shown.

Figure 4-1 - Updated Corridor Plan Following Engagement



Appendix A. Stakeholder Engagement Workshop

The first stakeholder engagement workshop was held on 27th November 2019 at Waterbeach Barracks. The purpose was to understand stakeholders' views on the existing issues, constraints and opportunities within the corridor. The stakeholders in attendance were:

- Milton Parish Council;
- Cambridge Area Bus Users;
- Greater Cambridge Shared Planning;
- South Cambridgeshire District Council;
- Ely Cycling Campaign;
- Waterbeach Parish Council;
- Cambridge Sport Lakes Trust;
- CamCycle;
- Milton and Waterbeach residents;
- Stagecoach;
- Waterbeach Cycling Campaign; and
- British Horse Society.

The key outputs from the stakeholder engagement event were:

Existing Challenges

- Congestion affecting not only car travel but also the reliability of buses;
- The limited frequency of local buses can be a barrier to travel;
- Some walking and cycling paths within the corridor have not been maintained well;
- The railway service between Waterbeach and Cambridge is considered to be under-serviced; and
- There are current issues around Waterbeach with informal parking.

Public Transport Opportunities

- There is currently no signage/real time passenger information at or around stops;
- There is a lack of bus priority within the corridor;
- There is a need for reliable and fast public transport through the corridor, requiring both an increase in overall service levels and segregation from traffic congestion;
- There are two distinct public transport needs: a 'core' transit service to/from Cambridge, on a rapid and segregated route, and a more localised service within the Waterbeach area to serve individual neighbourhoods;
- Public transport could be subsidised to encourage mode shift from private vehicles;
- Access to existing busway could be improved from Cambridge Science Park;
- Additional parking close to the busway could reduce car mode share within Cambridge City Centre; and
- Additional trains could alleviate congestion on inbound trains to Cambridge in the AM peak.

Opportunities for Walking and Cycling

- Segregated walking and cycling links are preferred if in close proximity to other infrastructure (to improve perceived levels of safety)
- Additional A10 crossing points to improve east-west links;
- Opportunities for improved walking and cycling routes between Horningsea and Waterbeach (outside the current study area);
- An overall need to improve walking and cycling access to/from Waterbeach in all directions; and
- Improve perceived safety levels between Cambridge North railway station and CGB.

Appendix B. Map Pin Comments

Title	Latitude	Longitude	Area	Main Theme	Sub-Theme	Comment
1	52.24365	0.183892	Out of Study Area	Cycling	Width of Path Improvements	Cycle path between Cambridge and Waterbeach would be much improved if it was widened and replaced with a smoother surface. It currently feels dangerously narrow when two cyclists are passing
2	52.25756	0.198934	Out of Study Area	Car	Safety	Clayhithe Bridge is not suitable for the increased traffic which will be generated by the new town getting from Waterbeach to Marshalls and ARM to the south and east of the city using the B1047. A cycle path is needed from Waterbeach to Horningsea where there is a cycle path. An alternating traffic light controlled one-way system on Clayhithe Bridge would allow for one lane vehicular traffic and one lane cycle and pedestrian
3	52.28517	0.164759	Cambridge Research Park	Walk	Continuous cycle/walk route	There is a public bridleway here that ends before it reaches anywhere useful. This should be extended to a point on Long Drove so that there is access between Waterbeach and Cottenham
4	52.27223	0.159259	West Area of Interest	Walk	Segregated Path	There is currently no footpath between Landbeach and Cottenham and walking alongside the road is dangerous. The best solution would be a new public footpath though the fields
5	52.23592	0.177734	Out of Study Area	Cycling	Continuous cycle/walk route	Desperate need for improved cycle connectivity between Horningsea and Milton (and on to Lode/Quy/Bottisham without going along A14 or most of the way into Cambridge). An upgraded bridge at Baits Bite Lock and track beside the footpath to Horningsea is the obvious and cheapest thing to do, but a bridge at Fen Road and a track going more directly into the village centre could be a higher-quality option
6	52.25261	0.174751	Milton	Cycling	Segregated Path	Put a good separated cycle path along the A10
7	52.28624	0.212889	Waterbeach	Cycling	Ped/Cycle Crossing	New Rly Sta will presumably have a cycle-friendly bridge for southbound journeys. This facility can provide access to Long Drove for future contact with Upware and Stretham (and all points north). Avoids the block that we have on current NCN11 route
8	52.30669	0.195866	Waterbeach	Cycling	Safety	Take into account the Plan for a cycle route between Ely and Cambridge. This route will need to cross the proposed development between Chittering and Waterbeach Village
9	52.26075	0.178064	Waterbeach	Cycling	Segregated Path	Make a segregated cycle path from Waterbeach to Cambridge along the A10. Current path is share with pedestrians and very narrow

Title	Latitude	Longitude	Area	Main Theme	Sub-Theme	Comment
10	52.29403	0.186167	Waterbeach	Walk	Continuous cycle/walk route	Create footpath(s) from Waterbeach through the old barracks sites to Denny Abbey so that people can access the site without needing to use a car
11	52.29422	0.186065	Waterbeach	Cycling	Continuous cycle/walk route	Create a cycle route from Waterbeach to Denny Abbey through the old barracks sites so people can access it without needing to use a car
12	52.26858	0.209491	Out of Study Area	Cycling	Continuous cycle/walk route	Fix the gap in NC11 cycle route at this point so that there's a cycling route from Waterbeach to Ely. (Or find a different route, if fixing this gap isn't possible.)
13	52.25644	0.198956	Out of Study Area	Car	Segregated Path	Car drivers go very fast round here: a segregated cycle lane (and a pedestrian foot path) would provide access from Waterbeach to Horningsea, and a route into the east of Cambridge via Fen Ditton
14	52.25748	0.149775	West Area of Interest	Cycling	Maintenance	This cycle path is very handy for commuting to the west of Cambridge (i am on the university site) during summer, but is impassable on a bike in the winter. A lit tarmac cycle path would make a huge difference to this journey and allow residents of Landbeach and Waterbeach to commute by cycle throughout the year
15	52.2488	0.164065	Milton	Cycling	Safety	This crossing has been improved for cyclists and pedestrians but at peak times e.g. during morning commute it is still very dangerous for children. Either the junction could be improved further e.g. lights or if mere way was upgraded residents of Landbeach could use the mere way, butt lane route to Milton school which already has a bridge over the A10
16	52.26356	0.179472	Waterbeach	Cycling	Ped/Cycle Crossing	A cycle/pedestrian bridge over the A10 will be key to enabling Landbeach residents to make full use of the new Waterbeach facilities and train station etc
17	52.25763	0.19888	Out of Study Area	Car	Safety	Clayhithe Bridge is not fit for purpose: it is extremely narrow for cars, cyclists and pedestrians alike; it has a very dangerous approach angle with reduced visibility making fast approaching traffic potentially hazardous to cyclists
18	52.2676	0.201788	Waterbeach	Cycling	Segregated Path	Additional cycling route alongside the railway from the new train station location to the old/current train station and Clayhithe Road

Title	Latitude	Longitude	Area	Main Theme	Sub-Theme	Comment
19	52.26358	0.194328	Waterbeach	Car	Maintenance	This stretch of road is very narrow and on-street parking is the cause of a lot of frustration and delays
						In fact I had a motorcycle accident here because of this
						Suggest double yellow lines throughout, no access for through traffic, or a new alternative road from A10 Research Park to Clayhithe
20	52.23742	0.178109	Out of Study Area	Walk	Ped/Cycle Crossing	Suggest a pedestrian and cycling bridge over the Cam river for connecting the existing cycling route along the river to Horningsea/Fen Ditton
21	52.24365	0.184067	Out of Study Area	Cycling	Width of Path Improvements	Widening the existing cycling path along the river, new smoother tarmac and lighting would make it a lot more appealing. The area is extremely beautiful to cycle through, it's a shame
22	52.23995	0.185439	Out of Study Area	Car	Redesign of Junction	The road through Horningsea is extremely narrow and can't be improved any further due to proximity of the historic buildings. This route would never be quick or safe for both car drivers and cyclists. An alternative car and public transport route around Horningsea would hugely benefit all users
23	52.24834	0.192819	Out of Study Area	Cycling	Width of Path Improvements	Widening the road to accommodate cycling lanes would improve safety for cyclists as well as the occasional pedestrian that ventures to walk along this high-speed road
24	52.2767	0.173966	Waterbeach	Cycling	Segregated Path	Segregated cycling path along the A10 is desperately needed
						I cycle along this stretch of road and it is extremely dangerous
						Frequently I also see pedestrian along here which is a suicide wish
25	52.27151	0.179459	Waterbeach	Car	Traffic Calming Measures	Restrict through traffic coming from A10 through Waterbeach towards Fen Ditton
26	52.22558	0.176683	Out of Study Area	Cycling	Continuous cycle/walk route	The existing Horningsea cycling lane, which is wide and illuminated, abruptly ends here and the Cambridge cycling lane (good, but not as great) starts some distance further Why can't these two be properly joined?

Title	Latitude	Longitude	Area	Main Theme	Sub-Theme	Comment
27	52.21369	0.167507	Out of Study Area	Cycling	Segregated Path	Add cycling path along Ditton Lane
28	52.22853	0.17975	Out of Study Area	Car	Redesign of Junction	Access from A14 West bound to B1047 towards Horningsea and Waterbeach
29	52.21918	0.172706	Out of Study Area	Cycling	Width of Path Improvements	While the footpath/cycling path was improved recently, it is not wide enough for safe walking or cycling, especially at rush hour or when children go to and from school
30	52.23543	0.180481	Out of Study Area	Cycling	Segregated Path	This path is not safe for cycling but it offers the most direct route from Waterbeach to Fen Ditton
31	52.22219	0.166193	Out of Study Area	Cycling	Ped/Cycle Crossing	A light bridge for cyclists would reduce travel time to Fen Ditton area
32	52.2454	0.149661	P&R	Bus	Public Transport Provision	Make park and ride / park and cycle free to encourage Cambridge visitors to ditch their cars
33	52.23123	0.150303	Camb E of Milton Rd	Cycling	Safety	This is a difficult junction to go through for cyclists traveling to Cambridge
34	52.23276	0.150887	Camb E of Milton Rd	Cycling	Safety	This is a difficult junction to go through for cyclists traveling to Cambridge
35	52.24548	0.19277	Out of Study Area	Cycling	Safety	This bend is extremely dangerous for cyclists with limited visibility and cars changing direction and speed of travel
36	52.25584	0.196375	Out of Study Area	Other	Ped/Cycle Crossing	Since the existing Clayhithe Bridge probably can't be widened or upgraded, I suggest building a new one up the river for a more direct route and angle, as well as a wider safer road for cars and cyclists
37	52.26943	0.190655	Waterbeach	Cycling	Segregated Path	Cars overtaking parked vehicles never give way to incoming cycling in my experience Introduce cycle lane markings and limit parking to only one side of the road. The road is wide enough for this

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38	52.26903	0.194492	Waterbeach	Car	Safety	Cars dropping and picking up children from school can cause significant traffic issues and risks to children's safety. Either create parking bays or restrict stopping there altogether
						Also, road surface is terrible in this area
39	52.27097	0.190448	Waterbeach	Car	Maintenance	High risk bend for cyclists and car drivers alike. Narrow road and very limited visibility mean vehicles traveling too fast for this road sector can be surprised by incoming cyclists
40	52.27186	0.188737	Waterbeach	Car	Maintenance	High risk bend for cyclists and car drivers alike because of the narrow road
41	52.26573	0.193005	Waterbeach	Cycling	Traffic Calming Measures	On-street parking restrictions or speed reduction measures on this high-risk bend would help increase cyclists' safety as cars overtake parked vehicles at speed and with limited visibility
42	52.26565	0.191242	Waterbeach	Cycling	Segregated Path	Create a better, segregated cycling connection between the two green spaces
43	52.26576	0.190548	Waterbeach	Cycling	Maintenance	High risk bend for cyclists due to narrow road and limited visibility
44	52.25816	0.198126	Out of Study Area	Other	Safety	High risk bend for cyclists and car drivers alike due to the high speed of travel of the vehicles and the narrow road and limited visibility
45	52.22078	0.134161	Camb E of Milton Rd	Cycling	Redesign of Junction	Add cyclist box at the junction and cycle lane between left-turn and forward car lanes
46	52.26599	0.191014	Waterbeach	Cycling	Maintenance	Cycle parking near the main road for people visiting the local shop there
47	52.26424	0.192111	Waterbeach	Car	Maintenance	Parked cars create a bottle neck for traffic traveling North
						Combine this with the bottleneck created by cars parked on the other side of the road further towards the train station slowing the traffic in the opposite direction, means this section of road can grind to a halt at rush hour
48	52.27021	0.200199	Waterbeach	Cycling	Segregated Path	Hopefully the move of the train station in this area will also mean introduction of more cycling lanes on roads to and from the station

Title	Latitude	Longitude	Area	Main Theme	Sub-Theme	Comment
49	52.23955	0.16501	Milton	Cycling	Maintenance	Milton Park is amazing, but if you're in a rush trying to cycle through it as fast as possible, it can be a bit of a maze to navigate Would be nice to see improved and simple signage for direct routes from North to South or North to East (e.g. "Red Route" and "Blue Route") that would clearly be explained at the entrance and would be easy to follow through the park
50	52.23519	0.169363	Milton	Cycling	Ped/Cycle Crossing	A link between Milton Country Park with Cam river cycling path
51	52.23652	0.174431	Out of Study Area	Cycling	Ped/Cycle Crossing	Baits Bite lock is not fit for cycling. Quite dangerous actually, or at least it definitely feels very unsafe
52	52.26301	0.2011	Out of Study Area	Car	Continuous cycle/walk route	Link Clayhithe Road to Burgess Drove and Long Drove, parallel to the railway and river, in order to create a faster direct link from Waterbeach New Town (North) to Horningsea which avoids going through Waterbeach
53	52.26167	0.163507	West Area of Interest	Cycling	Segregated Path	Please make cycling through Landbeach safer. currently no designated cycle lane in village
54	52.26222	0.163234	West Area of Interest	Bus	Public Transport Provision	Have a decent serve through village. currently only 9 buses a day. 4 in morning to city and 5 back on evening. Nothing during the day. Also maybe a shuttle bus around the northern villages and train stations
55	52.26281	0.162939	West Area of Interest	Car	Traffic Calming Measures	Traffic calming throughout village. Currently a rat run
56	52.27005	0.171404	West Area of Interest	Car	Redesign of Junction	I know you're not looking for road schemes, but if you built a road across here from Cottenham Road to Denny End Road, most of the traffic through Landbeach would disappear and make the village much more attractive for cyclists and walkers
57	52.26646	0.161984	West Area of Interest	Cycling	Continuous cycle/walk route	This blind double bend is dangerous for cyclists. A short off-road cycle path here would make a big difference
58	52.26384	0.197853	Waterbeach	Other	Maintenance	The boundary line here is not correct - this area is part of the properties in Adams Court

Title	Latitude	Longitude	Area	Main Theme	Sub-Theme	Comment
59	52.22957	0.14849	Camb E of Milton Rd	Cycling	Redesign of Junction	It's not pleasant to join or leave the Guided Bus cycleway here. There should be cycle-sensitive traffic lights, as on Gonville Place
60	52.23765	0.156844	Milton	Cycling	Ped/Cycle Crossing	The access to the bridge should have priority over the side road, or the sight lines should be improved to avoid forcing cyclists to stop
61	52.23922	0.157777	Milton	Cycling	Segregated Path	Proper cycleways on both sides of the road, not clumsy dotted paint with cars parked in it
62	52.24011	0.185504	Out of Study Area	Car	Traffic Calming Measures	Have a 20mph safety camera installed to keep vehicle speed within the existing limit. Perhaps double-yellow lines to prevent car parking on the road?
63	52.24201	0.135922	West Area of Interest	Other	Continuous cycle/walk route	As [redacted] says, this route could provide access to the north of Cambridge and connect to the guided busway. Could also have a side branch to the P&R, to the south of the recycling centre
64	52.25563	0.164301	West Area of Interest	Car	Traffic Calming Measures	Traffic calming into and out of the image
65	52.23707	0.176033	Out of Study Area	Cycling	Maintenance	This bit of road is so full of potholes that it's easily the worst part of the towpath to ride along, even compared to the narrow bits closer to Waterbeach
66	52.2696	0.195061	Waterbeach	Car	Maintenance	The road surface down Way Lane is terrible for bikes (and cars)
67	52.2691	0.20877	Out of Study Area	Cycling	Continuous cycle/walk route	There's a bridleway sign here which implies you can get to Clayhithe along the river - however subsequent signs in all directions seem to be for footpaths, and anyway it's mostly unrideable
						It would be great to be able to cycle around here, both to get to Clayhithe or even up to Lug Fen Droveway and Bottisham.
68	52.24512	0.152859	Milton	Cycling	Safety	The low railings on this bridge make it quite scary for less confident cyclists
69	52.24363	0.161855	Milton	Cycling	Continuous cycle/walk route	Cycle path keeps disappearing/changing sides through Milton, as well as losing priority at junctions - a proper segregated one (Arbury Road style) would be awesome

Title	Latitude	Longitude	Area	Main Theme	Sub-Theme	Comment
70	52.22313	0.158701	Camb E of Milton Rd	Walk	Continuous cycle/walk route	Would be really useful if there was a way to get into Cambridge North from the tow path on this side, going round via the tiny cut through onto Fen Rd is kind of a pain
						Less of an issue if the proposed Greenway is on the west side of the track though
71	52.26227	0.18445	Waterbeach	Cycling	Continuous cycle/walk route	Getting to the A10 this way is much quicker than taking the quieter detour on Cambridge Rd - a cycle path down here would be awesome (or another nicer way to get to the A10 cycle route)
72	52.2681	0.193892	Waterbeach	Cycling	Safety	Way lane is well used by families cycling to school and also on route to nurseries. It is currently dangerous with narrow pavements that sometimes just stop, too fast cars with no traffic calming measures and many vans and commercial vehicles also using this route
73	52.26371	0.193527	Waterbeach	Cycling	Traffic Calming Measures	Narrow pavements, blind corners, parked cars and lack of traffic calming measures mean this is a dangerous street for cyclists who have no other option to access Waterbeach station
74	52.26987	0.203842	Waterbeach	Walk	Continuous cycle/walk route	Add a dedicated foot/cycle path from the village to the river, so the people can safely get to the towpath without walking on the road
75	52.24835	0.14411	West Area of Interest	Bus	Public Transport Provision	If you extended this map just a little further to the west to include Histon, Impington and Cottenham, it looks like an ideal location for a trial of a demand-responsive minibus service like Arriva Click. Would help improve access to Cambridge North and the Science Park, and maybe allow the existing 9 service to run faster into Cambridge
76	52.2674	0.180298	Waterbeach	Walk	Maintenance	Wide paths here are overgrown and never trimmed back
77	52.23617	0.177061	Out of Study Area	Cycling	Ped/Cycle Crossing	Baits Bite lock is currently impassable by bike if you are unable to dismount and carry your bike across the concrete bridge and the lock bridge. The concrete bridge could have a small ramp either side to allow cycling across. The lock bridge is downstream of the lock and does not need to be as high. 2.5 metres is an average for bridges in this area (rarely would boats need more than this). This bridge is over 4 metres from the river level. So lowering the bridge would make ramps possible on the middle island and the downstream riverbank

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78	52.23914	0.164666	Milton	Walk	Continuous cycle/walk route	Fast cyclists are a menace to walkers In Milton Country Park and it should not in general be a through route. A dedicated north/south cycle path on the east side which went to Waterbeach would let fast cyclists have a route through
79	52.23488	0.162338	Camb E of Milton Rd	Other	Segregated Path	A tunnel under the A14 in this vicinity is on the NE Cambridge plans; could this be for cycles pedestrians and buses?
80	52.24405	0.163422	Milton	Car	Traffic Calming Measures	Traffic is often fast and we need effective calming measures. Near the Lion and Lamb the High Street is narrow and on-road parking is the only option for some residents. Cycle lane options are poor
81	52.25084	0.137423	West Area of Interest	Cycling	Continuous cycle/walk route	A maintained wide cycle lane and footpath along Butt Lane from Impington which linked up with the new cycle paths to Cambridge would be great
82	52.2452	0.153423	Milton	Cycling	Redesign of Junction	As well as improving the bridge itself to make it safe for cycling and walking (higher sides, wider deck) the approach ramp on the east side needs to have the awkward right angle turns removed to make it usable by cargo bikes and bikes pulling trailers
83	52.24274	0.151236	Milton	Car	Redesign of Junction	Create dedicated left turn only lane from A14 roundabout to Milton Park and Ride
84	52.24208	0.15987	Milton	Bus	Public Transport Provision	Bus services to/from Milton village have been repeatedly cut from every 20 mins (citi2) to the current once an hour if you are lucky. The lack of a bus service makes using a car essential if you want to go out in the evening as taxi costs are considerably more than parking. There are many people who due to disability, age etc cannot cycle and another large number who don't want to. The cost of bus tickets, the lack of zoning in prices - for example the price of return ticket (dayrider) to Cambridge North station from the village is the same as a ticket to the city centre. A comprehensive look needs to be taken at public transport provision including prices rather than the fixation on cycling as the only option
85	52.2546	0.17576	Milton	Cycling	Width of Path Improvements	Wider cycle lane with streetlights all the way from Milton to Denny End road would be great

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86	52.24383	0.137715	West Area of Interest	Cycling	Maintenance	The ancient route of Mere Way could be upgraded to a tarmac cycleway to allow access to the Guided Busway - also a short hop to the east side of Impington Village College would mean hundreds of schoolkids do not have to cross the B1049 each day to access the Busway
87	52.24366	0.137072	West Area of Interest	Cycling	Continuous cycle/walk route	Turning Mere Way into a tarmacked cycle path would provide a great alternative to going up the A10
88	52.23599	0.131793	Camb W of Milton Rd	Other	Continuous cycle/walk route	Streamlining access to Mere Way from King's Hedges Road, including better signage, would provide a great alternative to going up the A10
89	52.25418	0.191188	Out of Study Area	Cycling	Maintenance	Widening and improving drainage/potholes on the existing National Cycle Route 11 (along the river) is the obvious way to connect Waterbeach to Cambridge via Chisholm Trail Bridge. Other route would be the ancient Mere Way
90	52.24548	0.193296	Out of Study Area	Cycling	Maintenance	Some place to lock up bikes, so we can walk around the Quy Fen would be really good. At the moment the lay-by is only good for cars and there is nowhere secure to lock up bikes
91	52.26859	0.209569	Out of Study Area	Cycling	Ped/Cycle Crossing	Proper cycle access across the lock and bridleways/cycle paths that allow access to the quiet road network to the east of the river would provide a virtually traffic free route to the centre of Cambridge from the villages to the east of the river
92	52.24391	0.149775	P&R	Walk	Ped/Cycle Crossing	It's a long way round through Milton to get from the park and ride to the bridge over the A14 and avoid the A10, especially if you work on the Science Park, or Kings Hedges area. Could there be a more direct link from here over the A14 to the west of the Milton junction?
93	52.25264	0.14539	West Area of Interest	Walk	Maintenance	it would be good to tarmac this mere way, as its heavily used by cyclists and walkers for access to Cambridge and Histon
94	52.2847	0.17252	Cambridge Research Park	Cycling	Safety	The stretch of the A10 between Green End and the Cambridge Research Park roundabout is dangerous to cyclists (who also hold up traffic). A cycle path on that short stretch of road would give cyclists working at the Research Park a route into the city which completely avoids the A10

Title	Latitude	Longitude	Area	Main Theme	Sub-Theme	Comment
95	52.26798	0.190324	Waterbeach	Other	Traffic Calming Measures	Idea – Bollards Try and stop cars doing 50mph through the High street and possibly Way Lane. Access is available but out of the village and along the A10 a bit further Could also encourage people to walk/cycle to the shops rather than driving 400/500 metres
96	52.28664	0.173979	Cambridge Research Park	Cycling	Segregated Path	Adding a segregated cycle path by the A10 between the Research Park and Green End would allow cyclists commuting from Cambridge or Waterbeach to avoid this very busy stretch of road where there is currently no alternative route
97	52.23672	0.174891	Out of Study Area	Cycling	Ped/Cycle Crossing	Having to dismount and carry your bike over the bridge here is a disincentive to cycling. The bridge is very narrow, so can only be used by one person at a time if carrying a bike. An improved bridge here would make cycling easier, and would provide a more accessible crossing point between the existing bridges at Clayhithe and Chesterton
98	52.23559	0.179113	Out of Study Area	Cycling	Maintenance	The path here is narrow and unlit, and the surface isn't really suitable for cycling, especially in winter when the ground is wet. Having a proper hard surface would open up routes using the river crossing at Baits Bite Lock
99	52.22493	0.12924	Camb W of Milton Rd	Cycling	Redesign of Junction	Modal filter to prioritize cycling and walking on this very narrow, dangerous and polluted major cycling route
100	52.22275	0.158181	Camb E of Milton Rd	Cycling	Continuous cycle/walk route	Straight connection from North station to new cycle bridge. (I.e. not via the cumbersome route via fen road and Moss bank)
101	52.21797	0.138774	Camb E of Milton Rd	Walk	Redesign of Junction	This is actually quite a large junction and can be hard to cross by foot as cars are racing into/from Scotland road (rat run to avoid the High Street). If the entry to Scotland road was narrowed for cars (i.e. only allow 1 in / 1 out at the same time) or have an isle in the middle so pedestrians had a halfway point that would improve safety

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102	52.22959	0.148643	Camb E of Milton Rd	Other	Redesign of Junction	Guided busway & cycle path needs an underpass here: would improve traffic flow in all ways, get rid of a set of traffic lights and therefore improve life for all
103	52.23556	0.155015	Camb E of Milton Rd	Cycling	Maintenance	When you come down from the cycle bridge you inevitable built up speed, and then you have to go through the "wiggle" at the bottom. When this junction is redeveloped, can that be taken into account please? You spend all your energy getting "up" the bridge from Milton and then can't properly use that energy when coming "down". :-(
104	52.23769	0.156754	Milton	Cycling	Maintenance	Same as on the other side of the cycle bridge: you spend all your energy going up, then want to use that energy by freewheeling down but you can't, because you have to stop as you can't see if any vehicles are coming from the side road
105	52.23391	0.171136	Out of Study Area	Walk	Maintenance	Towpath not wide enough. Also useful to have a cut through to MCP from the towpath
106	52.23778	0.14359	Camb W of Milton Rd	Car	Redesign of Junction	There is an option here for a quick win, by providing access to / from the south bound lane of the A14 to/from the science park. It would reduce traffic on the nearby roundabout
107	52.24877	0.164229	Milton	Car	Safety	The design of the junction is really bad. Drivers from Milton and Landbeach are looking left and then accelerate hard towards pedestrians and cyclists. They do not see or consider other junction users so it can take ages to get across
108	52.24594	0.166031	Milton	Other	Redesign of Junction	Pinch point. A pedestrian/cycle crossing restricts the road size. Car drivers never allow the room to overtake cyclists.
109	52.24214	0.159755	Milton	Other	Redesign of Junction	Pinch point. The pedestrian crossing restricts the road size almost 100% of car drivers fail to leave any space when overtaking people on bikes
110	52.24597	0.151255	P&R	Cycling	Maintenance	There is a cycle path here but is so poor quality and narrow that it's unusable. Further up on the new path it's better but too narrow for two people to pass each other
111	52.2364	0.155761	Camb E of Milton Rd	Cycling	Maintenance	The bollards and the railings at the bottom of the bridge are pretty dangerous. Everything too close

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112	52.23322	0.152913	Camb E of Milton Rd	Other	Maintenance	The road surface here is a mess. Also priority should be given to people on the shared use path
113	52.24178	0.182917	Out of Study Area	Walk	Segregated Path	Towpath between Waterbeach and Milton is narrow to be shared between cyclists and walkers. As a walker, it's often not enjoyable trying to get out of the way of cyclists passing at full speed
114	52.24459	0.163748	Milton	Bus	Public Transport Provision	No 9-bus service is now so infrequent that it deters use unless one has no alternative. In the later afternoon, there is about 90 minutes between buses to Milton
115	52.27167	0.181473	Waterbeach	Cycling	Continuous cycle/walk route	No cycle lane available to get to A10 and cycle to Cambridge. Problem gets worse with the amount of cars parked in Denny End Rd
116	52.24528	0.150276	P&R	Bus	Public Transport Provision	Relocate the park & ride to Waterbeach or have a frequent service from the village to Milton P&R
117	52.27053	0.178785	Waterbeach	Cycling	Segregated Path	Improve cycle lane from Denny End Road to Cambridge. Lane needs to be wider, have lights and ideally have separate lane for pedestrians
118	52.27206	0.186049	Waterbeach	Cycling	Ped/Cycle Crossing	Cycle lane across Waterbeach to the new Rail station
119	52.26987	0.20211	Waterbeach	Other	Continuous cycle/walk route	An opportunity exists to link Banned Road with Burgess Road over land that I have assembled on behalf of my company (Landhold Capital). If provided the link will create one of the few circular equestrian routes in the parish. We could achieve a gallop between these two roads and a cycleway. Both of these can be achieved at nil cost to. the public as they could be provided by a residential development scheme that is being promoted between these two roads
120	52.2638	0.19323	Waterbeach	Car	Maintenance	Add double yellow lines along the whole of station road to avoid bottlenecks and dangerous overtaking by cars
121	52.2662	0.1909	Waterbeach	Car	Traffic Calming Measures	Add parking restrictions to avoid train station commuter parking e.g. max 4 hours parking between 8am-6pm
122	52.2319	0.13355	Camb W of Milton Rd	Other	Redesign of Junction	Underpass for P&R buses, cyclists, scooters, pedestrians and equestrians to avoid congestion at the Milton Junction 33

Title	Latitude	Longitude	Area	Main Theme	Sub-Theme	Comment
123	52.2622	0.19705	Out of Study Area	Cycling	Continuous cycle/walk route	Develop cycle route adjacent to rail line similar to the route connecting Shelford to Addenbrookes
124	52.265	0.19188	Waterbeach	Car	Maintenance	Double yellow lines around this junction to alleviate dangerous parking
125	52.2707	0.19035	Waterbeach	Car	Maintenance	double yellow lines at the end of Bannold Road to alleviate dangerous parking
126	52.2622	0.19667	Waterbeach	Train	Public Transport Provision	Work with national rail to increase the number of trains stopping at Waterbeach when platform extension is completed. The trains stopping at Waterbeach particularly in the evening are crammed and are significantly emptier after the Waterbeach stop suggesting this is a major pinch point in the network
127	52.2719	0.18319	Waterbeach	Car	Traffic Calming Measures	Traffic calming measures such as speed bumps down Denny End Road and the High Street would discourage drivers using the village as a rat run to get to Fen Ditton

Title	Latitude	Longitude	Area	Main Theme	Sub-Theme	Comment
128	52.269	0.14838	West Area of Interest	Other	Maintenance	There is many scenarios that I can imagine but a plausible one and I think in term of beneficial long term vision surrounding of course, Innovation, Science and Technology to create a mix and just a little oriented on the human side since right now, we will need less operation involving human because with Artificial Intelligence, IoT world and Multi-platform connectivity, the city of North Cambridge will not be the same and will probably be seen as the best human wellbeing around. The idea is to build to Ouest side and North, South but Ouest direction, doing this, we can keep a lot of agricultural that is currently used and is good for import export, while to the Ouest there is some room to reach Cambridge Research Park and to the Ouest You can join Cottenham (Not Right now but it will surely happen) and to the South you join Histon and Milton with the same proportion in time than Cottenham. This will attract a great generation of informed human since they will be aware of Cambridge plan in term of expansion and price of the house, condominium, will gain a positive leverage. In a more affirmative expression directly in Waterbeach, we really need to put the emphasis on the attraction of the human and build more wellbeing structure like futurist pedestrian allocated area and within these projects, others projects will be created to involve the community and people will get involved, doing so will be profitable in many ways, for the crown, but for the consumer also, we can collect impressive amount of Data and concentrate the research in real time with what people really want in their city, with limitation, :) Artificial Intelligence will take place in many projects with automation, from there we can build more habitations for resident. The spectrum is pretty short as an idea but this is also a must do or use, new products and is the right time to do so, involving recycled plastics modules for example with a complete draining system where this use overtime, would put Cambridge in the top position around Carbon Emi

Title	Latitude	Longitude	Area	Main Theme	Sub-Theme	Comment
129	52.2632	0.19797	Out of Study Area	Cycling	Ped/Cycle Crossing	It's proposed the level crossing will be replaced by full barriers which will be down for 20 mins at a time, or eventually closed with vehicular access via a bridge on Bannold Road; this would be a good location for a foot/cycle route under the railway with fewer steps / shorter ramps than a bridge over the railway would have
130	52.2507	0.14746	West Area of Interest	Cycling	Continuous cycle/walk route	Mere Way is an excellent choice for a cycling route into north Cambridge provided it is adequately surfaced. It needs to cross Butt Lane and continue through to CRC though
131	52.2334	0.13657	Camb W of Milton Rd	Cycling	Maintenance	The barriers at the busway path in this area need removing, it is difficult or impossible to negotiate them with considerable load on the bike
132	52.2333	0.13653	Camb W of Milton Rd	Cycling	Ped/Cycle Crossing	A controlled crossing of Kings Hedges Road in needed here for pedestrians and cyclists, to allow easy access between the busway and Kings Hedges. There is a quiet route across Nun's Way Recreation Ground that is currently difficult to access at busy times
133	52.2323	0.13507	Camb W of Milton Rd	Cycling	Width of Path Improvements	The access point from Kirkwood Rd to Nun's Way needs widening and resurfacing for pedestrians/cyclists
134	52.2296	0.14859	Camb E of Milton Rd	Cycling	Ped/Cycle Crossing	A bridge or underpass on the busway cycle route here to avoid the long wait at the traffic lights on Milton road would be valuable for accessing Cambridge North
135	52.2709	0.16261	West Area of Interest	Cycling	Segregated Path	Off road cycle path to Cottenham and Village College, linking with Urban&Civic's cycle path from Waterbeach New Town
136	52.2669	0.1614	West Area of Interest	Cycling	Segregated Path	Upgrade present pavement on east side to dual cycle/pedestrian path from proposed Urban&Civic cycle path to High Street at Abrahams Close
137	52.2631	0.16286	West Area of Interest	Cycling	Segregated Path	White line cycle path on east side from Abrahams Close southwards to start of cycle path at end of village
138	52.2487	0.16326	Milton	Cycling	Continuous cycle/walk route	Cycle path on north side of A10 from Landbeach Road junction to Butt Lane to give connection to Park & Ride

Title	Latitude	Longitude	Area	Main Theme	Sub-Theme	Comment
139	52.2467	0.15485	Milton	Cycling	Continuous cycle/walk route	Off road cycle path on north side of A10 from Landbeach Road to Butt Lane to give connection to Park & Ride
140	52.2644	0.16716	West Area of Interest	Cycling	Segregated Path	Designate pavement on north side to dual cycle / pedestrian path from village crossroads to A10
141	52.2637	0.17927	Waterbeach	Cycling	Ped/Cycle Crossing	Make a proper and safe crossing for cyclists and pedestrians from Waterbeach Road to Cambridge Road
142	52.2721	0.1953	Waterbeach	Cycling	Segregated Path	Cody Road will be an important access road following the development of the Waterbeach New Town and will probably see a significant increase in traffic Dedicated cycle lanes will become essential then
143	52.2548	0.17567	Milton	Cycling	Safety	Please provide safe cycle route lit at night and segregated from the road
144	52.2474	0.14032	West Area of Interest	Cycling	Continuous cycle/walk route	Excellent idea to create a tarmacked cycle walking route. It has to be sufficiently wide and lit if CCC is serious about getting people out of cars and into sustainable transport modes throughout the year
145	52.2486	0.14435	West Area of Interest	Cycling	Safety	The current cycle route from P&R to NEC is poor, due to A10 bridge. Create a new cycle path adjacent to Butt Lane to link into Mere Way route. It needs to be lit
146	52.2601	0.17796	Waterbeach	Cycling	Segregated Path	Segregated cycle route along the A10 please!
147	52.2438	0.16881	Milton	Cycling	Segregated Path	Create a path between North Lodge Park and Fen Road. If were mixed use for pedestrians and cyclists it would encourage active travel, especially for cycling into Cambridge along the riverside path
148	52.2444	0.17099	Milton	Cycling	Continuous cycle/walk route	If a new cycle route is created between Waterbeach and Cambridge running to the west of the railway it would be useful to have a connecting cycle path to North Lodge Park. This would avoid having to cycle through the road in Milton village

Title	Latitude	Longitude	Area	Main Theme	Sub-Theme	Comment
149	52.2461	0.16409	Milton	Car	Safety	Poor sight lines when turning right from High Street (section running east-west) into Landbeach Road. Consider changing priorities so that give way lines are on the north-south section of High Street, which would mean all turning traffic would have good sight lines
150	52.2452	0.16483	Milton	Walk	Width of Path Improvements	Widen mixed use pathway, as it is currently too narrow for two-way cycling and pedestrian traffic. Social distancing cannot be achieved without moving onto the verge
151	52.2444	0.16367	Milton	Walk	Safety	This is a dangerous corner for pedestrians coming from Fen Road pavement turning right onto Fen Road. There is no way of seeing any cyclists until the last moment
152	52.2523	0.17336	Milton	Walk	Segregated Path	Close the short stretch of one-way road and convert to separate cycle path and pedestrian path. Motorists can use the junction a short distance south, which will also help prevent speeding along Ely Road further south
153	52.272	0.15804	West Area of Interest	Cycling	Continuous cycle/walk route	The absence of a safe cycle route from Cottenham and Waterbeach and no public transport means there is no alternative but to drive when travelling between the two villages
154	52.2635	0.17921	Waterbeach	Cycling	Ped/Cycle Crossing	Safe crossing (Bridge) of A10 for cyclists and pedestrians
155	52.2898	0.16611	Cambridge Research Park	Cycling	Continuous cycle/walk route	Cycle route from Cottenham to Science Park
156	52.2888	0.17617	Cambridge Research Park	Cycling	Ped/Cycle Crossing	Cycle bridge over A10 to access new Station location
157	52.2452	0.15273	Milton	Walk	Ped/Cycle Crossing	New bridge needed here with wider track for both pedestrians and 2- way cycling and shallower ramps without tight bends
158	52.2621	0.19705	Out of Study Area	Bus	Public Transport Provision	Properly integrated public transport would mean the bus and train connections would coincide making it a more viable option especially for those who live furthest away from the station or who have mobility problems that prevent them walking to the station. Integrated ticketing would also help

Title	Latitude	Longitude	Area	Main Theme	Sub-Theme	Comment
159	52.2768	0.17286	Waterbeach	Cycling	Segregated Path	A segregated cycle way and footpath to Emmaus and the research park would provide alternatives to the car
160	52.2634	0.20011	Out of Study Area	Walk	Continuous cycle/walk route	if there was a decent footway to the north of the village along the rail line this could make a lovely walk - more direct and avoiding the Station Rd bottleneck
161	52.2427	0.18345	Out of Study Area	Walk	Segregated Path	I like the walk down the towpath but would prefer to see cyclists segregated further to the west as you do feel you are in danger of getting mown down at times
162	52.2519	0.14454	West Area of Interest	Other	Segregated Path	Existing equestrian route (on grass) must be kept when hard surface cycleway added
163	52.2454	0.15305	Milton	Cycling	Ped/Cycle Crossing	The current bridge is not good enough for cyclists, and might appear unsafe at night (poor sightlines, hemmed in by barriers and obscured by trees). Rather than providing a new bridge, it would be both better, and cheaper, to provide a toucan crossing on the south arm of the junction
						At the same time, there is scope for improving bus services to Milton. The Milton side of Butt Lane could be linked up to this junction, with access for buses and cycles only, and no access to/from the A10. This would allow buses to serve both the P&R site and Milton itself. Extending the P&R service to run into Milton along Butt Lane (with one stop near 33 Butt Lane and terminus at the existing stop at the Ely Road/High Street junction) would add less than 10 minutes to the route running on uncongested roads. This would restore a frequent bus service to Milton at little extra cost - it would be both cheaper to operate and faster than an extension of the Citi 2 (which used to serve Milton every 10 minutes)
						These two provisions should have a very small impact on the capacity of the junction for traffic on the A14, which could be entirely resolved as part of planned upgrades of the A10 Cambridge-Ely route

Title	Latitude	Longitude	Area	Main Theme	Sub-Theme	Comment
164	52.2375	0.15629	Milton	Bus	Public Transport Provision	If a new bridge is built here (as in Atkins' "A10 area of interest), then this should be suitable for all buses to use, and should provide a link to the existing roundabout for local buses to use between Cambridge and Milton. The access to the county park could then join this link at a T-junction, with cycle priority across the side road
165	52.2455	0.18461	Out of Study Area	Cycling	Ped/Cycle Crossing	As recommended in the Greenway consultation reports, a new Cam crossing somewhere between Baits Bite and Bottisham locks with a good cycle path to Lode village and to join up with NCN11 somewhere near White Fen drove would be a valuable addition to cycling infrastructure servicing the Eastern villages and also fill in the longstanding gap in NCN11 at this point
166	52.2698	0.19514	Waterbeach	Bus	Public Transport Provision	Secondary School buses using this narrow road at primary school pick-up time create congestion and cause danger to pupils. They should be re-routed!
167	52.2699	0.19525	Waterbeach	Car	Safety	Primary school has highlighted major issues on Way Lane re: drop- off/pick-up. See statement submitted to Parish Council
168	52.2693	0.19077	Waterbeach	Walk	Ped/Cycle Crossing	School children crossing here, very congested in morning/evening. Reduce traffic speeds and provide permanent crossing facility?
169	52.2671	0.19021	Waterbeach	Car	Maintenance	As in many places around the village, double-yellow lines completely warn out, and now routinely ignored. Parking here obstructs view turning from Vicarage Close, very dangerous at when school children using High St.
170	52.2651	0.1918	Waterbeach	Walk	Safety	Width of junction and parking of cars makes crossing on foot towards station very dangerous. Cars turning left onto St Andrew's Hill do not need to slow down, pedestrians are badly exposed
171	52.2708	0.19029	Waterbeach	Walk	Safety	Dangerous junction for anyone walking or cycling, as cars coming from Denny End & turning left are not visible. Wide junction takes long time to cross increasing exposure. Incredibly dangerous!
172	52.2644	0.16233	West Area of Interest	Cycling	Traffic Calming Measures	Reduce rat-running down High St and make it safer for cyclists and pedestrians. Use some method of flow control
173	52.2665	0.1621	West Area of Interest	Other	Safety	Provide at least one safe drop-off space for elderly/disabled people visiting the church

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West area of interest

New transit infrastructure linking to Cambridgeshire Guided Busway.

Planned Mere Way Greenway would provide a parallel route for pedestrians, cyclists and other users.

Central area of interest

New transit infrastructure and adjacent route for pedestrians, cyclists and other users, linking to Cambridgeshire Guided Busway.

A10 area of interest

0

1

New transit infrastructure linking to Cambridgeshire Guided Busway. New adjacent route for pedestrians, cyclists and other users, except through Milton where a more direct route using existing streets will be considered

East area of interest

New transit infrastructure, coordinated with proposed Sport Lakes and planned Waterbeach Greenway which would provide a parallel route for pedestrians, cyclists and other users.

- Study area
- A10 area of interest
- Central area of interest
- East area of interest
- West area of interest
-] Hatched where routes run together

2 Ref 208 of 401

18th July 2020

Appendix 5 - Programme

Better Public Transport

Waterbeach to North East Cambridge

	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Sep-21	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22	Jun-23	Dec-23	Jun-24	Dec-24	
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KD2: Approval to consult on Intitial Options		
Public and stakeholder consultation		
Analysis of feedback		
technical appraisal		
SOBC report		
KD3: Preferred option approval		
Public consultation on preferred option		
Prelimary design		
OBC report		
Planning application and statatory consents		
KD4: Approval of preliminary design		
Detailed design		
FBC Report		
KD5: Approval to implement		



Growing and sharing prosperity
Delivering our City Deal

Report to: Greater Cambridge Partnership Executive Board

1st October 2020

Lead Officer: Peter Blake, Transport Director, Greater Cambridge Partnership

BETTER PUBLIC TRANSPORT - CAMBRIDGE EASTERN ACCESS PROJECT

1. Purpose

- 1.1 The Cambridge Eastern Access (CEA) project is looking at access to and from the city from the east to enable people to get around more easily by public transport, cycle or on foot.
- 1.2 The purpose of this report is to provide an update on progress with the project, including feedback from pre-engagement with stakeholders, and outline proposals for a series of integrated packages which will be the subject of consultation and further analysis.

2. Recommendations

- 2.1. The Executive Board is recommended to:
 - (a) Note the outcome of pre-engagement activities (July/August 2020) and emerging stakeholder feedback.
 - (b) Approve the Options Appraisal Report as the basis to formally consult on the proposed route options for a segregated public transport route.
 - (c) Agree that packages of options should be presented in two phases:
 - Phase 1: improvements to the Newmarket Road corridor to address existing problems and issues relating to committed development.
 - Phase 2: longer term strategy to address the requirements of the Greater Cambridge Local Plan and delivery of CAM Phase 1.

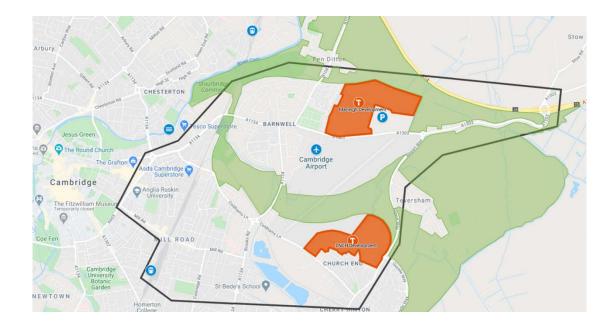
3. Officer Comment on Joint Assembly Feedback and Issues Raised

- 3.1. Details of feedback from the Joint Assembly are set out in the report from the Joint Assembly Chairperson. This contains details of matters discussed at the recent Joint Assembly meeting and a summary of feedback.
- 3.2. Specific matters identified were as follows:
 - It was noted that the volume of traffic on Coldhams Lane was similar to that on Newmarket Road and that the study should not simply focus on Newmarket Road. Officers agreed and confirmed that they would be engaging with the local Residents Association. Members also asked that issues relating to Mill Road and the impact of closure on Cherry Hinton Road be considered.

- Officers were asked why widening Newmarket Rd between the Leper Chapel and Barnwell was ruled out because of land-take and whether that was a policy decision. It was confirmed that the Executive Board had previously directed against avoidable take of domestic land.
- Inclusion of double-tracking of the Newmarket Line was noted but concern expressed that the Cambridge Corridor Study estimated this at £140M. Officers agreed that this was beyond the GCP budget but that rail should be one of the options considered on the basis that delivery might sit with Network Rail or East West Rail.
- A number of members expressed concern that issues beyond the immediate study area should be considered. This was noted by officers with the proviso that matters relating to the trunk road network lie outside the remit of GCP.
- A number of issues were raised regarding consultation and were noted by officers. These include the number of interdependencies and importance of them, the need to capture wider participation beyond the core study are and the need to avoid over-representation by cyclists.

4. Background

- 4.1 The Cambridge Eastern Access (CEA) project was considered by the Executive Board at its meeting in February 2020. The Board recognised that the corridor is one of the key radial routes into Cambridge. It suffers considerably from congestion during peak times, particularly at the Cambridge end. There are also sites of planned or potential large development that will potentially place considerable additional pressure on the corridor.
- 4.2 The corridor has been identified by the Greater Cambridge Partnership's (GCP's) Executive Board, as a priority project for developing public transport, walking and cycling improvements, linked to the development of proposals for a regional rapid mass transit solution. The scheme forms part of GCP's high quality public transport network and Phase One of the Cambridgeshire Autonomous Metro (CAM) network as outlined in the Cambridgeshire and Peterborough Local Transport Plan.
- 4.3 The CEA project is looking at access to and from the city from the east to enable people to get around more easily by public transport, cycle or on foot.
- 4.4 The study area, for the purposes of pre-engagement, was defined as shown in the map below. It is bounded in the north by Newmarket Road, and to the east by Airport Way, although extending along Newmarket Road to the Quy Interchange. To the west the study area extends as far as the Railway Station, whilst to the south it extends past Mill Road.



5. Key Issues and Considerations

- 5.1 The land designated as Marleigh and Land North of Cherry Hinton, which are under development and approved for development respectively will place further pressure on this corridor.
- 5.2 The implications of the CAM are particularly significant for Eastern Access. As CAM is not as yet a committed proposition in terms either of consents or finance, the core SOBC will need to include solutions which might be based on the following, in addition to consideration of the CAM tunnel option:
 - Access to City Centre via the Tins Path and Mill Road.
 - Access to City Centre via Coldhams Lane and onwards via Newmarket Road or Brooks Road and Mill Road.
 - New Cambridge East Rail station on the Newmarket Line, with possible future transit access to Airport site.
- 5.3 Given the recognised constraints in East Cambridge, neither of the first two options is entirely attractive, whilst the third will depend on agreement with Network Rail and is constrained by capacity issues at Cambridge station.
- 5.4 There has been a suggestion from some stakeholders of a realignment of the Newmarket Line through the Airport site and back onto its original alignment at Fulbourn. This would be a major undertaking requiring Network Rail buy-in, but would bypass four Level Crossings, eliminate a corridor of severance in Cherry Hinton and significantly improve access to the Airport site. The need for this is wholly dependent on a choice, still to be made, whether or not the Airport site will be approved for development in the next Joint Local Plan and the planning authorities are not yet at the stage of making that choice. Such an investment would only be practical once the Airport is non-operational. It would have a significant impact on Coldhams Common but removal of the existing line may create new leisure opportunity to enhance the Common as a whole and create a high grade non-motorised route connecting Fulbourn and Cherry Hinton to the Chisholm Trail. There are also operational issues to consider at Cambridge Station.

- 5.5 In order to comply with DfT guidance we will test options with different levels of development, and will test off-line options against the best performing on-line option and a high-cost option with CAM tunnels. For the purposes of an SOBC this should help to establish the potential case for investment. As clarity emerges with regards to CAM and decisions still to be made in the emerging Joint Local Plan there may be scope to refine the off-line options if this scheme progresses to Outline Business Case (OBC).
- 5.6 The pre-engagement process has been delayed by Covid-19. As such the proposed timescale for consultation following the October Executive Board and delivering an SOBC for the June 2021 Executive Board meeting is still achievable but there is no remaining flexibility in the programme.
- 5.7 Place-based consultation has been put in place and is feeding option development and appraisal. A pre-engagement exercise has been undertaken and a first consultation phase will be undertaken prior to SOBC.
- 5.8 Proposals for the regeneration of East Barnwell promoted by the City Council are likely to go to consultation on a timescale similar to Eastern Access in October/November if agreed by its members at committee on 23rd September. In general the projects should be complementary with a desire to improve the urban realm and provide for active travel modes on Newmarket Road, working predominantly within the existing highway boundaries to enable early delivery.
- 5.9 Pre-engagement on the study took place from July 6th to August 3rd 2020. In all 112 questionnaires were completed and 299 pins placed on the study area map with comments. In addition, Zoom workshops took place with elected members and other stakeholders, and 1-1 discussions were held with key consultees such as Network Rail and Highways England. A number of issues raised from initial pre-engagement activities are also worth consideration:
 - There is clear concern about potential impacts on Ditton Meadows. Whilst a corridor skirting the north of East Barnwell has been considered as part of long-listing, the initial conclusion is that there should be a commitment to avoid incursion onto Ditton Meadows.
 - A suggestion with regards to Newmarket Road would be the reduction is the quantity of low density retail activity. Relocation of some or all of the non-food retail, and perhaps some food retail, to a site in the vicinity of Airport Way would reduce car-based activity in the city. There is some merit in the suggestion but land-use changes may be better considered as part of the Greater Cambridge Local Plan process.
 - Rail: a couple of people have suggested new stations to the east of Cambridge (i.e. Fulbourn). Moving the railway line and using the existing line for bus lanes/light rail gets a mention as does increasing the number of services to Newmarket/Bury St Edmunds.
 - Mill Road/Mill Road bridge: there is support for maintaining the bridge closure as well as closing the whole road to make it more pleasant for active travel. Conversely, there is also opposition to the closures and support for reopening the bridge to all traffic.
 - There are concerns about the quality of the urban realm and the land-use mix along the Newmarket Road, and specifically a desire to improve the urban environment at Elisabeth Way.
 - Segregated cycleways/safety: there is support for having wide segregated cycleways away from motor traffic and pedestrians to help keep users safe.
 - Public transport: several respondents would like more frequent and more reliable public transport from villages in the east into Cambridge as well as along Coldhams Lane and

along Mill Road; and buses that go destinations such as Addenbrooke's without going to the city centre.

- Some respondents have said to be mindful that some people still want and need to use a car to get around and to get shopping etc.
- 5.10 A full report on the pre-engagement activity is attached at Appendix 1.

6. Options

6.1 A wide range of on-line and off-line options have been considered in the OAR (Appendix 2). Those for which there is a clear showstopper have been sifted in accordance with DfT major scheme appraisal criteria, whilst the remainder have been assembled into a series of integrated packages which will be presented for consultation and further analysis. A map illustrating possible options for improvement in East Cambridge is attached at Appendix 3.

6.2 The proposed packages are:

- Package 1.1. On-line improvements to Newmarket Road to improve bus operations and facilities for active travel through traffic management and intelligent transport systems. Complementary measures to improve the urban environment, and manage car access to Newmarket Road. Agreement will be needed as the Package develops on the balance of roadspace between traffic, public transport and active travel modes.
- Package 1.2. As Package 1.1 but relocating and enlarging the Newmarket Road Park and Ride site. Consideration was given to the idea of a Bus Gate to further enforce the option but it was felt that this could not be developed in isolation from the wider City Access strategy: this will not be assessed as part of Package 1.2 but may be revisited if aligned with City Access.
- Package 2.1/2.2. As Package 1.2 but with a new High Quality Public Transport route from the new Newmarket Road Park and Ride site through the land safeguarded for development on the Marshalls site to Coldhams Lane via a potential portal entrance to the CAM network. In the interim prior to opening of the CAM, the route would proceed into Cambridge either via existing roads or potentially a new route/access arrangements.
- Package 2.3. As Package 1.2, but with a new Cambridge East rail station providing increased frequency of services on the Cambridge to Newmarket Line, details including location dependent on Joint Local Plan choices.
- 6.3 Over the coming months, subject to Executive Board agreement, the intention is to subject these packages to public consultation, and to undertake further analysis which would lead to the production of a SOBC which will be brought back to the Executive Board for further consideration.

7. Financial Implications

7.1 The current budget allocation is summarised below. This is more than ample for completion of a draft SOBC by the end of 2020 to be taken to Executive Board for approval in March or June 2021, depending on the outcome of public consultation.

Project Description	Total Budget £'000	2020-21 Budget £'000	2020-21 Expenditure to Jul 20 £'000	2020-21 Forecast Spend - Outturn £'000	2020-21 Forecast Variance - Outturn £'000
Eastern Access	50,500	532	39	532	0

7.2 The intention is that a provider under the new Professional Services Framework should be in place by late 2020 to start preparation for development of OBCs for Phases 1 and 2. This may include items such as Ecological Surveys and other data collection. Once this contract has been agreed the budget will be revisited but the anticipation is that any variance would be a modest underspend.

8. Citizen's Assembly

- 8.1 Citizens' Assembly members developed and prioritised their vision for transport in Greater Cambridge. The range of solutions being considered for CEA directly contributes to delivery of 5 of the highest 7 scoring priorities, namely:
 - Provide affordable public transport (32).
 - Provide fast and reliable public transport (32).
 - Be environmental and zero carbon (28).
 - Be people centred prioritising pedestrians and cyclist (26).
 - Enable interconnection (e.g. north/south/east/west/urban/rural) (25).
- 8.2 In addition, CEA has the potential to complement delivery of the other highest scoring priorities:
 - Restrict the city centre to only clean and electric vehicles (27).
 - Be managed as one coordinated system (e.g. Transport for Cambridge) (25).
- 8.3 The Citizens' Assembly voted on a series of measures to reduce congestion, improve air quality and public transport. Of the measures considered, Assembly members voted most strongly in favour of road closures, followed by a series of road charging options (clean air zone, pollution charge and flexible charge). These will be considered further as packages develop.

9. Next Steps and Milestones

- 9.1 The next steps for this stage of the work are as follows:
 - Consultation November/December 2020.
 - SOBC finalised for consideration at the June 2021 Executive Board.
- 9.2 Thereafter it is likely that work could continue on twin tracks as set out below:
 - An OBC for Phase 1 improvements might be prepared in a further year. There would be a need for Environmental Impact Assessment and other supporting documents, but these measures would be delivered under local powers through the Highways Act/Town and Country Planning Act. The majority of Phase 1 could be delivered on highway land, the main exception being the potential enlargement of the Newmarket Road Park and Ride site which would probably require planning consent and land acquisition.
 - An OBC would also be required for Phase 2, but it is envisaged that the economic case for a more substantial intervention would need to be informed by the emerging Local Plan and the development of the CAM. The publication of a Preferred Option in 2021 will provide the guidance needed to refine the assessment. The OBC would be finalised early 2022.

List of Appendices

Appendix 1	Pre-Engagement Report
Appendix 2	Option Assessment Report
Appendix 3	Illustration of possible options for improvement in East Cambridge



CAMBRIDGE EASTERN ACCESS ENGAGEMENT SUMMARY REPORT





27 August 2020

Document Control

Document:	Engagement Summary Report
Project:	Cambridge Eastern Access Public Transport Study
Client:	Greater Cambridge Partnership
Job Number:	A081175-146
File Origin:	

Revision:	Draft			
Date:	te: 12 August 2020			
Prepared by:		Checked by:		Approved By:
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Description of revision:				

Revision:	Final		
Date: 27 August 2020			
Prepared by:		Checked by:	Approved By:
Ben King / Ben Green		Alistair Gregory	Alistair Gregory
Description of revision:			
Changes following GCP comments.			

Revision:			
Date:			
Prepared by:	Checked by:	Approved By:	
Description of re	vision:		

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1 | Background

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1.0 Background

1.1 Overview

- 1.1.1 In November 2019, WYG were commissioned by the Greater Cambridge Partnership (GCP) to explore the options through which to develop a high-quality sustainable transport corridor into Cambridge from the east, addressing current inadequacies in provision in the short term, and providing the longer term capacity and connectivity to facilitate housing and economic growth within the city.
- 1.1.2 This Engagement Summary Report forms one of a suite of documents which together comprise the Cambridge Eastern Access Study (see <u>Figure 1.1</u>). It summarises the first and informal stage of the engagement process and the feedback received from stakeholders and the general public.

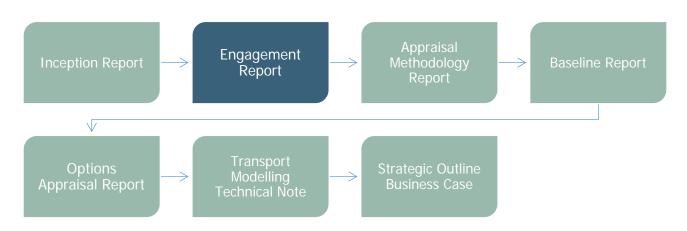


Figure 1.1: Cambridge Eastern Access Study Documents

1.2 Location

- 1.2.1 The study broadly covers the Newmarket Road corridor and the surrounding area, from Mill Road and Coldham's Lane in the south to the A14 and Ditton Lane in the north, and from the Quy Interchange on the A14 in the east to the Elizabeth Way roundabout in the west.
- 1.2.2 The area is subject to high volumes of traffic and is the location for significant growth proposals which could see the expansion of the city to the east with the redevelopment of the airport site. In the longer term it is anticipated that the Cambridgeshire Autonomous Metro (CAM) will serve the area via a route extending to Mildenhall.
- 1.2.3 The corridor forms the main gateway into the city from the east, and whilst it accommodates many eastwest movements into and out of the city centre, it also forms an important leg for strategic trips between the north and south of the city, particularly for those wishing to access employment opportunities within the science park to the north and at the Biomedical Campus to the south.
- 1.2.4 The mix of land uses along Newmarket Road ensures that it remains busy throughout the day and Abbey Stadium, home of Cambridge United Football Club, represents a significant trip generator and destination on match days throughout the football season.
- 1.2.5 A map of the study area is provided in <u>Figure 1.2.</u>

1.3 Challenges and Opportunities

- 1.3.1 Cambridge is facing a series of challenges in terms of maintaining strong economic growth whilst ensuring that housing supply keeps pace with job creation. At the same time environmental concerns are at the forefront as a result of needing to plan for more people, more jobs and more demand to travel across the city. In recent months, the Covid-19 pandemic has emerged as another challenge the city faces and improving the provision of sustainable travel options will help support the recovery of the local economy from this crisis.
- 1.3.2 These pressures are felt on access into the city from the east as strongly as anywhere else. Whilst there has been investment in encouraging travel by bus and by bike along Newmarket Road, the provision does not match that of a city aspiring to be a world leader in many areas, including sustainable transport.
- 1.3.3 As such a series of options will be explored and a Strategic Outline Business Case generated to provide a step-change in provision which makes the bus and active travel options such as walking and cycling, the mode of choice for the vast majority of those travelling into Cambridge from the east.

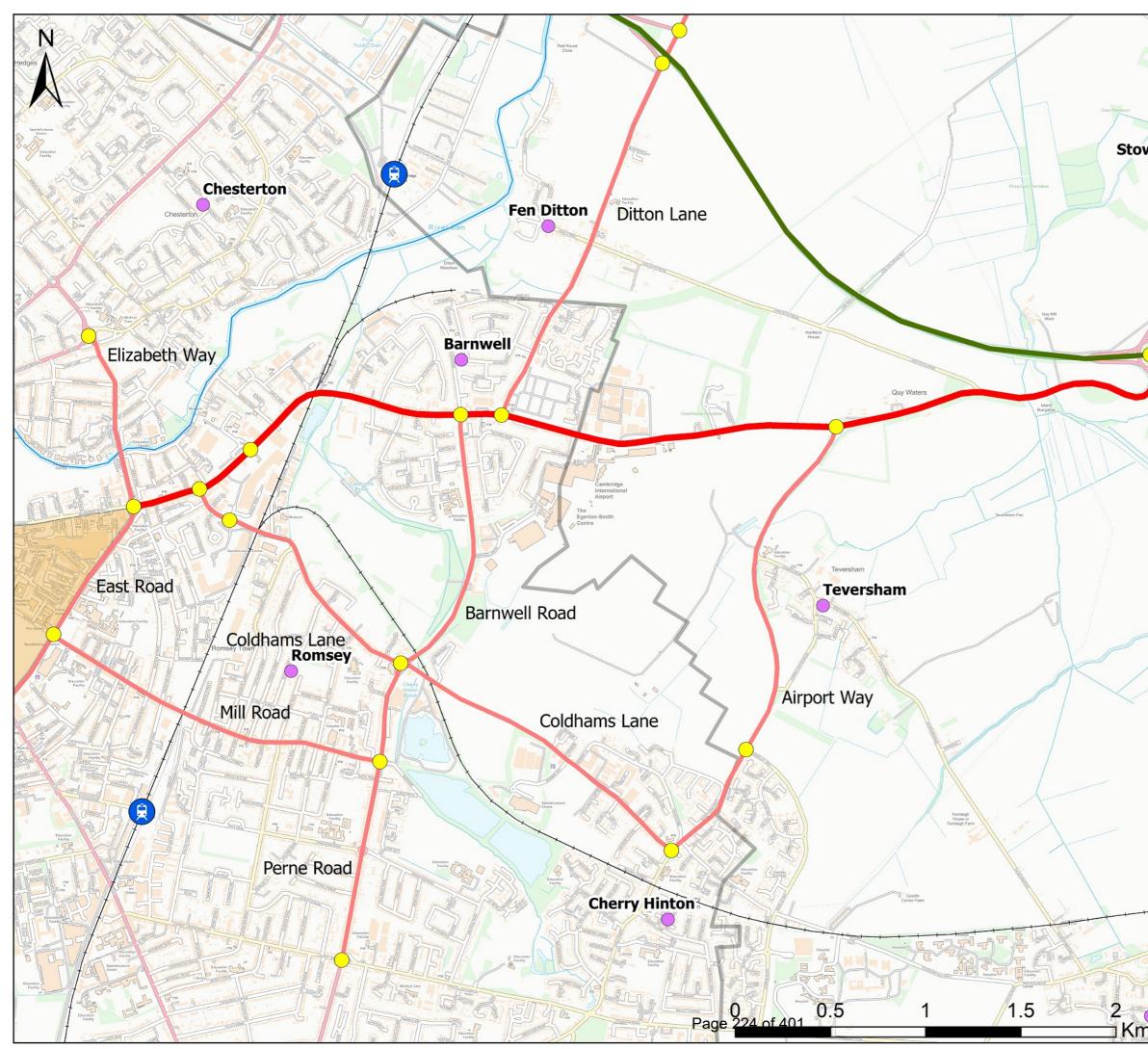
1.4 Structure of the Report

- 1.4.1 The report provides a review of the need for engagement, the activities undertaken to maximise feedback and the qualitative and quantitative responses from stakeholders and the general public. The report is structured around the following chapters:
 - Chapter 2 | Structure of Engagement Summarises the need for engagement and the various stages and actitivies which will be undertaken throughout the study.
 - Chapter 3 | Feedback from Stakeholders Draws out the sailient points from the discussions held with different stakeholder groups, with an emphasis on the qualitative responses provided.
 - Chapter 4 | Feedback from the General Public Quantifies the feedback from the general public via the ConsultCambs consultation and engagement platform in terms of the number of responses and the broad attitudes and perceived priorities.
 - Chapter 5 | Park & Ride User Survey Summarises the feedback from users of the Newmarket Road Park & Ride service.
 - Chapter 6 | Summary Provides some high level conclusions in terms of the direction in which to take the study and opportunities to be explored.

1.5 More Information

1.5.1 If more information is required, please contact the Greater Cambridge Partnership, via:

Telephone: 01223 699906 Email: <u>contactus@greatercambridge.org.uk</u>



	Legend
Gay Rail	—— A14
Dear Partaton	Newmarket Road
	Other Eastern Distributor
Stow cum Quy	Major Junction
	Railway Station
Stow cum Quy	Railway Line
-	——— River Cam
	Cambridge City Centre
17	Settlement / Residential Area
	Cambridge City Boundary
J 21	
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2 | Structure of the Engagement Process

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2.0 Structure of the Engagement Process

2.1 Overview

2.1.1 The Greater Cambridge Partnership has sought to engage with stakeholders and the general public early and throughout the study process. To achieve this, several co-ordinated activities were programmed through which to capture the views, opinions and perceptions of interested parties. The need for this engagement and the activities and timing of the activities undertaken is set out below.

2.2 Need for Engagement

- 2.2.1 The engagement process has been undertaken to meet a number of objectives, as follows:
 - To provide all relevant stakeholders with clear, well-structured details of the GCP vision, project objectives and possible options, as well as being clear about what this project will not cover.
 - To create opportunities for stakeholders to express their opinions and encourage the opportunity to impact the outcomes of the project freely and openly.
 - To use an appropriate methodology for collecting the stakeholder responses and analyse them.
 - To ensure wide feedback from the public and stakeholders across the relevant areas to assist in decision making.
 - To create a consistent message across all projects to ensure stakeholders are aware that the access to Cambridge from the east is part of a wider vision set forward by the GCP.
 - To identify advocates for the project.
 - To manage any reputational risks associated with the project.
 - To raise the profile of the GCP and its work.

2.3 Activities

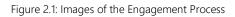
- 2.3.1 Engagement and consultation to inform the study will be undertaken in two main parts:
 - Part 1: Informal Engagement (between January 2020 and August 2020).
 - Part 2: Formal Consultation (potentially between October 2020 and December 2020).
- 2.3.2 The specific activities undertaken as part of the informal engagement are listed in <u>Table 2.1</u> below.

Date	Activity
January 2020	One to One Meetings with Stakeholders
31 January 2020	Park & Ride User Survey
11 March 2020	Accompanied Cycle Ride / Site Visit with Cambridge Cycling Campaign
1 July 2020	Interactive Online Workshop with Members and Parish Councils
2 July 2020	Interactive Online Workshop with Stakeholders
July 2020	One to One Meetings with Stakeholders
6 July to 3 August 2020	Four Week Informal Online Engagement Process Commences via ConsultCambs consultation and engagement platform
6 July to 3 August 2020	Promotional social media campaign on Twitter, Facebook and LinkedIn

Table 2.1: Informal Engagement Activities

2.3.3 The ConsultCambs consultation and engagement platform ¹ formed the focal point of the engagement activity with regular updates provided, including a promotional video. Images of the engagement process are highlighted in Figure 2.1.







¹ <u>https://consultcambs.uk.engagementhq.com/cambridge-eastern-access</u>



3 | Feedback from Stakeholders

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3.0 Feedback from Stakeholders

3.1 Overview

- 3.1.1 A series of events were held with key stakeholders through which to ascertain the priorities of elected members, parish councils, transport providers and interest groups in relation to investment in transport improvements in the corridor.
- 3.1.2 This included one to one meetings via Microsoft Teams, and Zoom workshops, to ensure that we adhered to restrictions associated with the Covid-19 social distancing regulations during spring and summer 2020. The respective thoughts of the individual stakeholder groups are summarised herein.
- 3.1.3 Feedback from the Zoom workshops with members and stakeholders is included within Appendix A.

3.2 Local Authorities

- 3.2.1 The Greater Cambridge Partnership works closely with the Cambridgeshire and Peterborough Combined Authority (CPCA), Cambridge City Council, South Cambridgeshire District Council and Cambridgeshire County Council in the development of planning and transport proposals.
- 3.2.2 As the local transport authority, the Cambridgeshire and Peterborough Combined Authority provided their views from a network management perspective. Key areas of concern were highlighted as:
 - The need for bus lane enforcement due to the number of infringements along the corridor.
 - A recognition that the number of side roads undermined the effectiveness of the existing bus lanes.
 - The potential demand for an orbital bus service between the north and south of the city.
 - The implications of a relocation of the Park & Ride site.
- 3.2.3 Local councillors expressed concerns regarding the need to protect the Meadows, whilst feedback was also received from local authority officers and parish councils.
- 3.2.4 Discussions with these partner organisations have emphasised the need for the continued alignment of investment, and any measures to be taken forward through the Cambridge Eastern Access Study should complement the emerging Cambridgeshire Autonomous Metro proposals.
- 3.2.5 The local authorities are partners in the East-West Rail Consortium which has commissioned a review of the potential to upgrade the Cambridge to Newmarket railway line.

3.3 Highway Authorities

- 3.3.1 Highways England and Cambridgeshire County Council are the strategic and local highway authorities respectively and have a duty to maintain the safe and efficient operation of their networks. This remit formed the basis to both organisations' input to the engagement process.
- 3.3.2 With regard to Highways England, the nationally important A14 runs parallel to Newmarket Road and skirts the northern edge of the study area. It was stated that any interventions within the study area need to ensure that the functioning of neither J34 nor J35 is impeded, whilst any measures which can be demonstrated to reduce pressure on the network would be welcomed.

3.4 Bus Operators

- 3.4.1 The main bus operator along Newmarket Road, including the provider of the Park & Ride services, is Stagecoach and they provided an insight into operational issues along Newmarket Road supplemented by data of journey times from their scheduled services.
- 3.4.2 Specific areas of discussion focused upon:
 - The piecemeal approach to bus priority along the corridor.
 - Service timings and areas of delay.
 - The appropriateness of the location for the Park & Ride.

3.5 The Rail Industry

- 3.5.1 The potential role of rail in a multi-modal approach to accommodating travel demand into Cambridge from the east was explored with representatives from key players at Network Rail, train operating company Greater Anglia, the East-West Rail Consortium, the East-West Rail Company and interest group Rail Futures.
- 3.5.2 Key issues highlighted in the discussions focused upon:
 - The scope for additional line capacity.
 - The scope for additional platform capacity at Cambridge Station.
 - The ability to increase service frequencies with and without the additional capacity.
 - The strategic benefits of improvements to the east of the city.
 - The local benefits of improvements to the east of the city.
 - The potential for new stations between Cambridge and Newmarket.
 - The ability to access Cambridge Station (on foot and by bus/bike).
 - Linkages to Cambridge North Station.
 - The implications for the study area of the opening of Cambridge South Station.
 - The implications of new development on the future demand for rail-based travel, and
 - The implications of East-West Rail.
- 3.5.3 These wide-ranging discussions demonstrate the potential benefits of a fit-for-purpose rail connection between Cambridge, Newmarket, Bury St Edmunds and Ipswich, but that the complexities and hurdles which must be overcome at both a local and strategic level would be significant and potentially expensive.
- 3.5.4 Notwithstanding such concerns, it was clear that there was broad support for further exploring the opportunities within the study and as part of the wider East-West Rail Consortium's remit.

3.6 Developers

- 3.6.1 In advance of the adoption of the emerging Greater Cambridge Local Plan, there are several large-scale development opportunities within the east of the city and further afield which are under consideration.
- 3.6.2 To provide due diligence, but without compromising the planning process, discussions were held with the Marshall Group which owns and operates Cambridge Airport and L&G Estates, which has an interest in a strategic site at Six Mile Bottom, to understand how their aspirations may influence the future travel patterns and demand in the study area.
- 3.6.3 Whilst both sites are very different in nature, both promoters see the opportunities presented by investment in sustainable mass transit improvements to the east of Cambridge, in the form of either the Cambridgeshire Autonomous Metro and/or rail-based enhancements to the Newmarket to Cambridge line.

3.7 Transport Interest Groups

- 3.7.1 Cambridge benefits from several very active transport orientated interest groups and both the Cambridge Cycling Campaign and Smarter Cambridge Transport were engaged as part of the early and informal engagement process.
- 3.7.2 A number of themes emerged from these discussions, with the most substantive points being:
 - A recognition that the Newmarket Road corridor is the least well catered for route into the city from a sustainable transport perspective.
 - As well as the corridor in general, key junctions are poor in terms of their provision for pedestrians and cyclists, not least the Elizabeth Way roundabout and Barnwell Road roundabout.
 - Cyclists should be segregated from both general traffic and buses where possible. An attractive cycle corridor along the River Cam does not compensate for the inadequacies and lack of safety on Newmarket Road itself.
 - Given the lack of physical space to accommodate all modes of transport safely and effectively, demand management techniques should be explored to better regulate flow and enable a reallocation of road space to sustainable transport users where possible.
 - The current location of the Park & Ride is inappropriate and there is the scope to consider locating it further east and closer to the junction with the A14.
 - The future operation of Mill Road should be explored. It is a destination in its own right and is not appropriate for large buses. Priority should be given to pedestrians and cyclists.
 - The opportunities presented by a realignment of the Cambridge to Newmarket line, not just from a rail perspective but in terms of localised walking and cycling improvements and the removal of the existing level crossings.
- 3.7.3 Encouragingly, both groups committed to working with the GCP in the development of the optimum solution for the corridor.

3.8 Other Interest Groups

- 3.8.1 During the informal engagement period representations were submitted by other interest groups with an interest in the future of the Newmarket Road corridor and wider study area. Both Cambridge Past, Present and Future (CPPF) and the National Trust are landowners and property owners who value the heritage of the city.
- 3.8.2 Both parties indicated an understanding of the current pressures the highway network is subject to and a desire to see improvements in terms of the provision of realistic alternatives to the car, albeit in a way which does not compromise key landscape and built heritage assets of the city. CPPF also highlighted that:
 - Two significantly important green corridors in the study area: (1) The River Cam corridor, which includes Stourbridge Common, Ditton Meadows and the village of Fen Ditton, and (2) The green corridor that runs from the River Cam, Ditton Meadows, Coldham's Common, Cambridge Airport and into the fens on the western edge of Cambridge. CPPF would be opposed to the development of large and damaging engineering schemes in these corridors, however they consider there are opportunities for these green corridors to provide better facilities for walkers and cyclists.
 - Little Wilbraham Fen Site of Special Scientific Interest and surrounding wetland is a nationally important wildlife site which is a site for one of the rarest breeding birds in the UK (and one that is prone to disturbance and requires large areas of undisturbed space). CPPF would be strongly opposed to any developments which would have direct or indirect impacts on this important site. For example, the location of a Park & Ride facility nearby. Any such development may also face opposition from government agencies and the local planning authority.
- 3.8.3 Responses were also submitted by Fen Ditton Parish Council, the British Horse Society and Historic England.

3.9 Internal Discussions

- 3.9.1 The Cambridge Eastern Access Study will influence and will be influenced by several other ongoing studies within the Cambridge area and as such regular internal discussions have been held to align thinking and in helping to understand the wider implications of changes to transport provision in the broad corridor.
- 3.9.2 This has included engagement with:
 - The Cambridgeshire Autonomous Metro Study
 - The Waterbeach to Cambridge Corridor Study
 - The East Barnwell Regeneration Study
 - The City Access project
 - The Chisholm Trail programme of works
 - North-East Cambridge Area Action Plan

3.10 Summary

- 3.10.1 Despite the diverse perspectives and interests of the stakeholders engaged as part of this stage of the process, there is consensus in terms of:
 - The need for intervention.
 - The need to focus on alternatives to the car and provide real and attractive travel choices.
- 3.10.2 It is clear that there are many complex issues to be addressed within the area and that whilst the opportunities are there for a step-change in the sustainable transport offer, compromises may well have to be sought, particularly in terms of the movement of general traffic across the network.



4 | Feedback from the General Public

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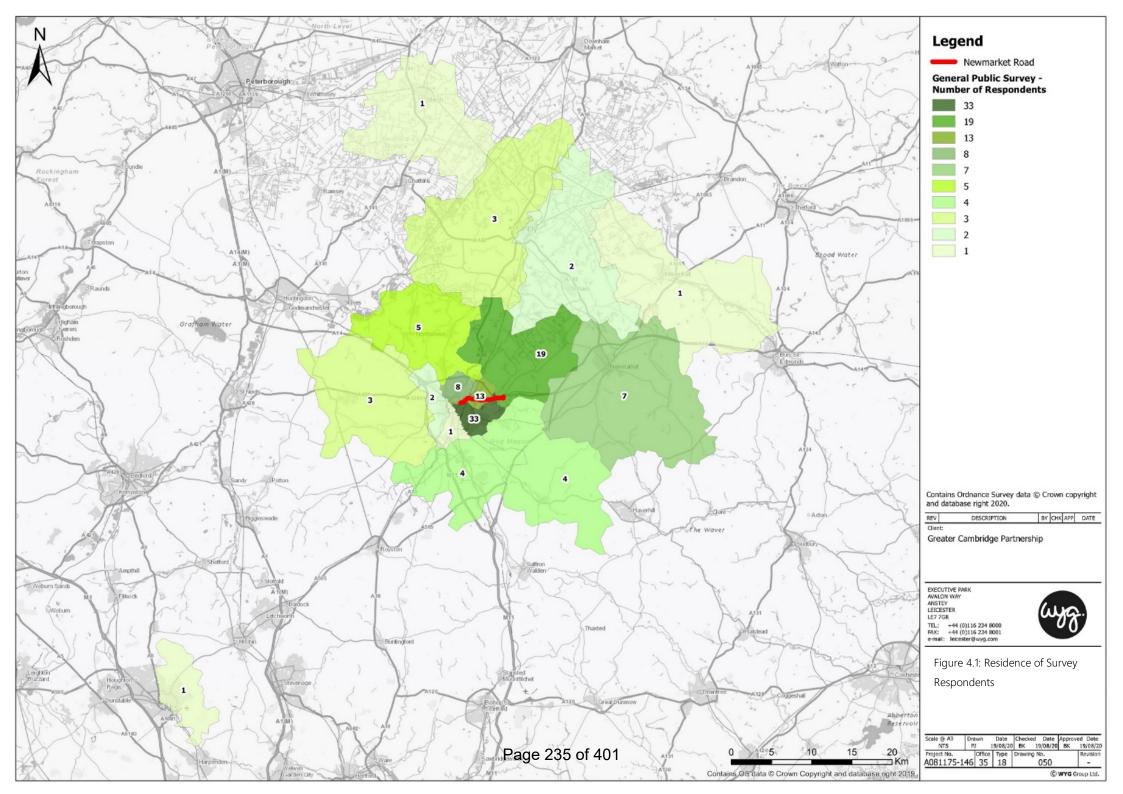
4.0 Feedback from the General Public

4.1 Overview

- 4.1.1 A four-week informal engagement period commenced on 6 July and concluded on 3 August 2020 during which time the general public could provide their first thoughts on the issues and opportunities within the study area. The location of the respondents is illustrated in <u>Figure 4.1</u>. It highlights how around 72% of respondents who provided their postcode live either in the study area or to the east of Cambridge. In total:
 - **1,172** People visited the project website. Of these, 55% of visitors (643 people) visited more than one page, viewed the Frequently Asked Questions (FAQ) section or contributed to the mapping tool.
 - **136** Participants who either filled in a survey or used an interactive map to place pins with their comments and suggestions.
 - **299** Individual comments made utilising the interactive mapping function on the website, with 'pins' dropped in the appropriate locations for which issues were a concern.
 - **112** Survey responses were received in relation to questions posed on the ConsultCambs website, focusing on issues and constraints in the study area, as well as features individuals would like to see improved.
- 4.1.2 The engagement period was promoted on the Greater Cambridge Partnership's website, with links to the ConsultCambs engagement portal. It was accompanied by a social media campaign that ran throughout the four-week period via the GCP's Twitter, Facebook and LinkedIn accounts and included paid-for boosted posts on Facebook and Twitter to reach a wider audience.
- 4.1.3 A press release was issued to local media on the first day of the engagement period and paid for adverts appeared in the Cambridge News and the Cambridge Independent. In addition to this, an e-bulletin was sent out to stakeholders via the GovDelivery mailing platform which was followed up with a reminder during the third week of the engagement which included an offer to attend virtual parish council meetings.
- 4.1.4 This section provides a quantitative and qualitative analysis of this feedback with a view to understanding the main concerns and opportunities to benefit all modes of travel within the study area.

4.2 Locations of Interest

- 4.2.1 Several locations within the study area provided the focus for feedback through the ConsultCambs map and survey. Newmarket Road itself, unsurprisingly, generated the most comments, followed by Coldham's Lane, Barnwell Road and Mill Road, as illustrated in Figure 4.2.
- 4.2.2 Almost one in four comments received online made reference to Newmarket Road, with the section between Elizabeth Way roundabout and the Leper Chapel, and issues connected to the Barnwell roundabout receiving the most comments, along with several references to the Park & Ride site.
- 4.2.3 With regards to comments received about Coldham's Lane, many of the comments related to the Sainsbury's roundabout. Comments were mixed in terms of their positivity, acknowledging that the existing provision is undesirable for many modes of travel but that there were opportunities for improvement.
- 4.2.4 Many comments were also received about the Sainsbury's roundabout along Barnwell Road and access to Coldham's Common as well as better crossing facilities for pedestrians, equestrians and cyclists at the side road junctions between the two roundabouts.
- 4.2.5 Comments regarding the status of the railway bridge dominated the focus of the feedback received along Mill Road, reflecting recent changes in access and extensive local media attention. Comments were expressed in favour of both sides, either supporting a closure of the bridge to general traffic or keeping the bridge open to all road users. However, there were more comments in favour of the closure.



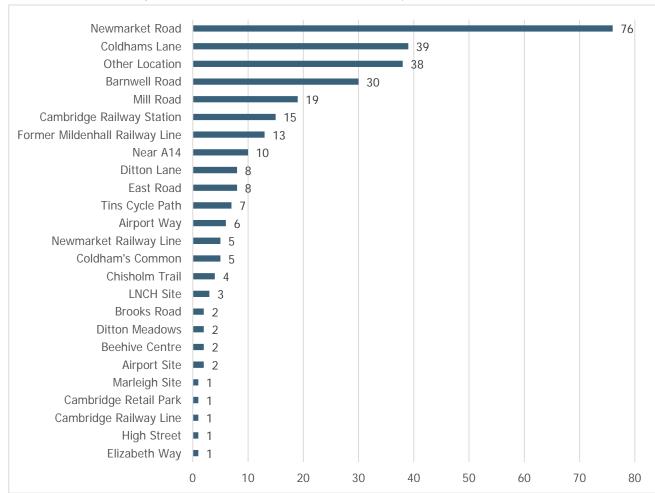
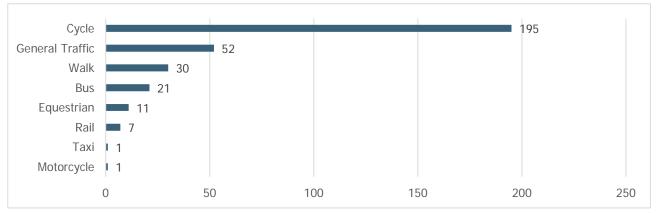


Figure 4.2: Location of Interest of Feedback Responses (by number of respondents)

4.2.6 Other comments of a strategic nature included providing new bridges over the Cambridge railway line in close proximity to the main station, as well as improvements to Carter Bridge and the Station Square. A new eastern station entrance was also suggested.

4.3 Mode of Travel

4.3.1 In terms of the modes of travel, far and away the majority of comments were received in relation to cycling, as illustrated in <u>Figure 4.3</u>. This demonstrates the importance of ensuring enhancements to the cycle network are integral to any investment package within the corridor.





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4.3.2 Comments made in relation to bus and rail were comparatively low when compared with cycling. More comments were made on general traffic (20%) and walking (16%), with both receiving many comments that referenced the latter as a secondary mode of transport. Other modes of travel referred to cars more specifically, as well as specific mentions of motorcycles and taxis.

4.4 Objectives

- 4.4.1 Whilst the feedback received was wide ranging, the comments received could be categorised within the three broad objectives of the study, namely:
 - **Capacity** Provide the public transport capacity to accommodate the projected increase in travel demand associated with housing and employment growth.
 - Connectivity Improve accessibility to jobs and opportunities by public transport and active travel
 modes through a reduction in journey times and increased ease of interchange and align with the
 emerging Cambridgeshire Autonomous Metro.
 - **Communities** Contribute towards the creation of safe and attractive communities by reducing emissions and the dominance of traffic, particularly in residential areas.
- 4.4.2 The comments provided by the general public on ConsultCambs targeted all three objectives, with 'pins' in relation to creating safe and attractive communities the most prevalent (192 comments), followed by those in relation to connectivity (125 comments) and capacity (71 comments).
- 4.4.3 There were other comments however that critiqued the existing provision within the study area and as such these things hindered capacity, connectivity and community. There were 37 comments that noted that the existing provision had a negative impact on community, whilst connectivity and capacity both received 20.

4.5 Qualitative Feedback

- 4.5.1 With regards to the more specific detail of the comments received, there were many areas of focus that were discussed. For simplification, these areas of focus have been divided into three sub-sections:
 - Existing Issues and Concerns
 - Scope to Improve Existing Provision
 - Potential for New Infrastructure and Facilities
- 4.5.2 The full list of 299 comments is provided in <u>Appendix B</u> for reference.

Existing Issues

4.5.3 Some 61 comments made online provided a critique of existing provision within the study area. These comments mostly focused on the inadequacy of infrastructure, such as cycle paths, bridges, junction arrangements or pedestrian crossing facilities. Other issues that were raised included overgrown vegetation, flooding, parking and safety. The number of comments received in relation to existing issues are highlighted in Figure 4.4, whilst the geographic spread of these perceived issues is shown in Figure 4.7.

Scope to Improve Existing Provision

- 4.5.4 In terms of the scope to improve existing provision, 107 comments were received associated with infrastructure and services within the study area. In a similar fashion to the critiques made, many of the comments focused on improving infrastructure such as cycle lanes, carriageway surfacing and junction arrangements.
- 4.5.5 The redesign of two junctions in particular featured heavily within the online comments. These comments related to the Elizabeth Way roundabout and the Barnwell roundabout. It became apparent through the comments that neither of these junctions were beneficial for non-motorised users.

- 4.5.6 As such, comments received focused on providing better crossing and cycling facilities at and through these junctions, with some comments expressing a desire to reconfigure the roundabout altogether, into a 'Dutch-style' roundabout or 'Cyclops' junction.
- 4.5.7 The number of comments received in relation to improving existing provision is highlighted in <u>Figure 4.5</u>, whilst the geographic spread of these perceived issues is shown in <u>Figure 4.8</u>.
- 4.5.8 There were more comments in this section that focused on more detailed solutions, such as fixing a barbed wire fence and trimming back overhanging vegetation within particular areas of the study boundary. A desire to see improved access for equestrians was also apparent through the designation of new bridleways and improved access within the vicinity of the Marleigh development.

Potential for New Infrastructure and Facilities

- 4.5.9 Comments made with regards to new solutions were dominated by pedestrian-cycle infrastructure, with 70 out of the 129 comments received making reference to new cycle lanes/paths, new pedestrian-cycle crossings, or new pedestrian-cycle routes.
- 4.5.10 Bus and rail received a combined total of 20 comments, with references to new bus services to the Abbey Stadium, the Land North of Cherry Hinton site and Addenbrooke's Hospital and the Cambridge Biomedical Campus as well as new rail stations located along the Newmarket railway line corridor between the Sainsbury's roundabout and Fulbourn.
- 4.5.11 Desire was expressed to see new stations at Capital Park, Cherry Hinton and south of Coldham's Lane in the vicinity of the two existing lakes, and whilst five comments were made with regards to a new P&R site, it should be noted these were not all positive.
- 4.5.12 The number of comments received in relation to potential new infrastructure and facilities is highlighted in <u>Figure 4.6</u>, whilst the geographic spread of these opportunities is shown in <u>Figure 4.9</u>.

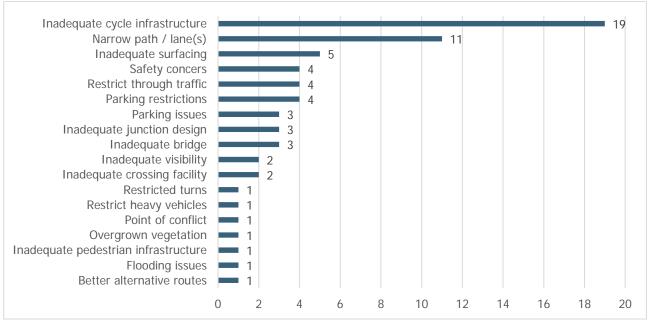


Figure 4.4: Most Commonly Cited Existing Issues (by number of respondents)

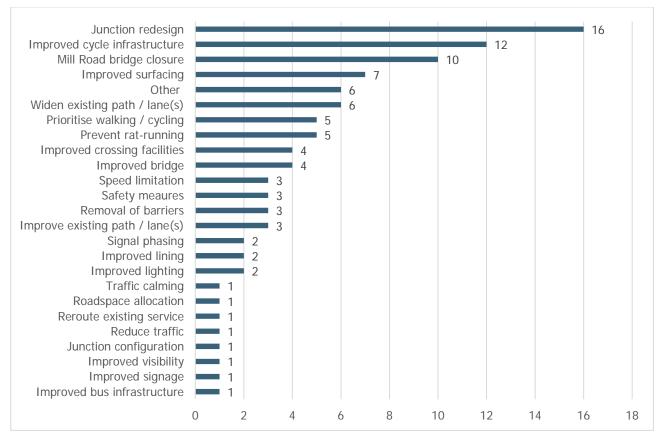
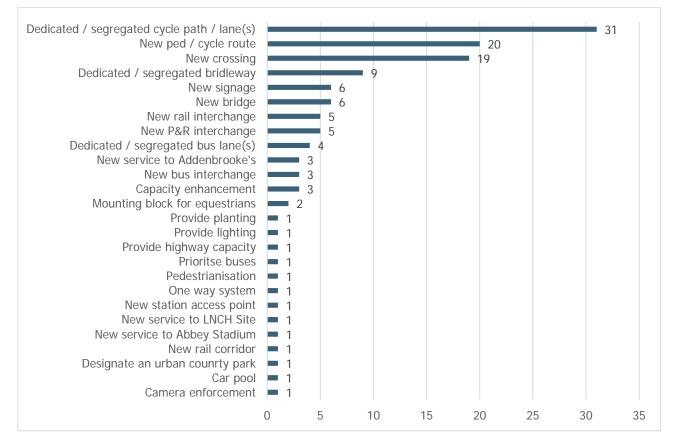
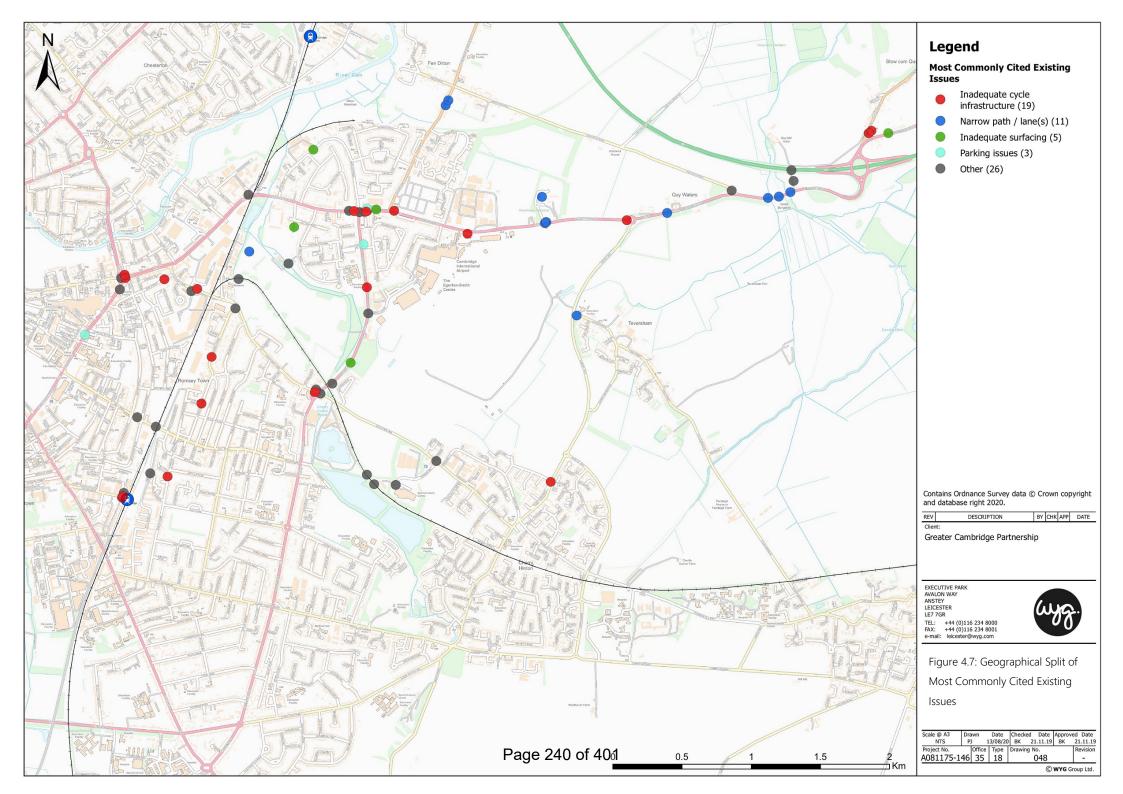
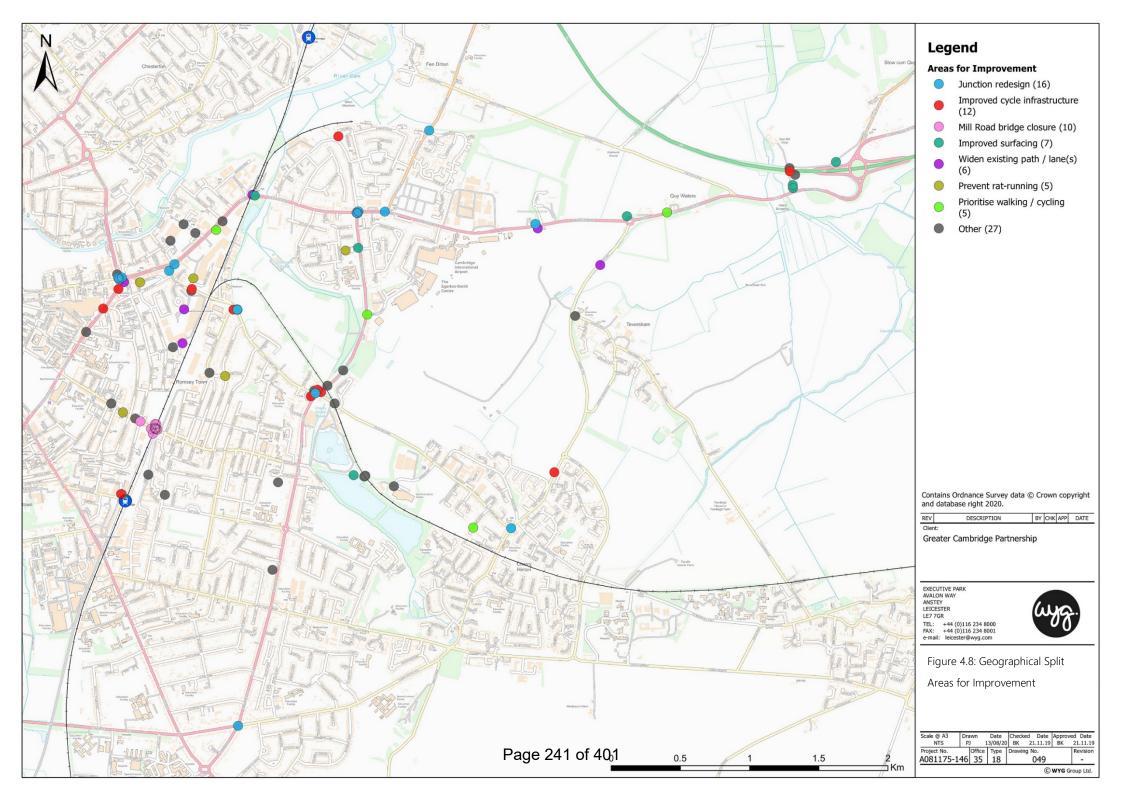


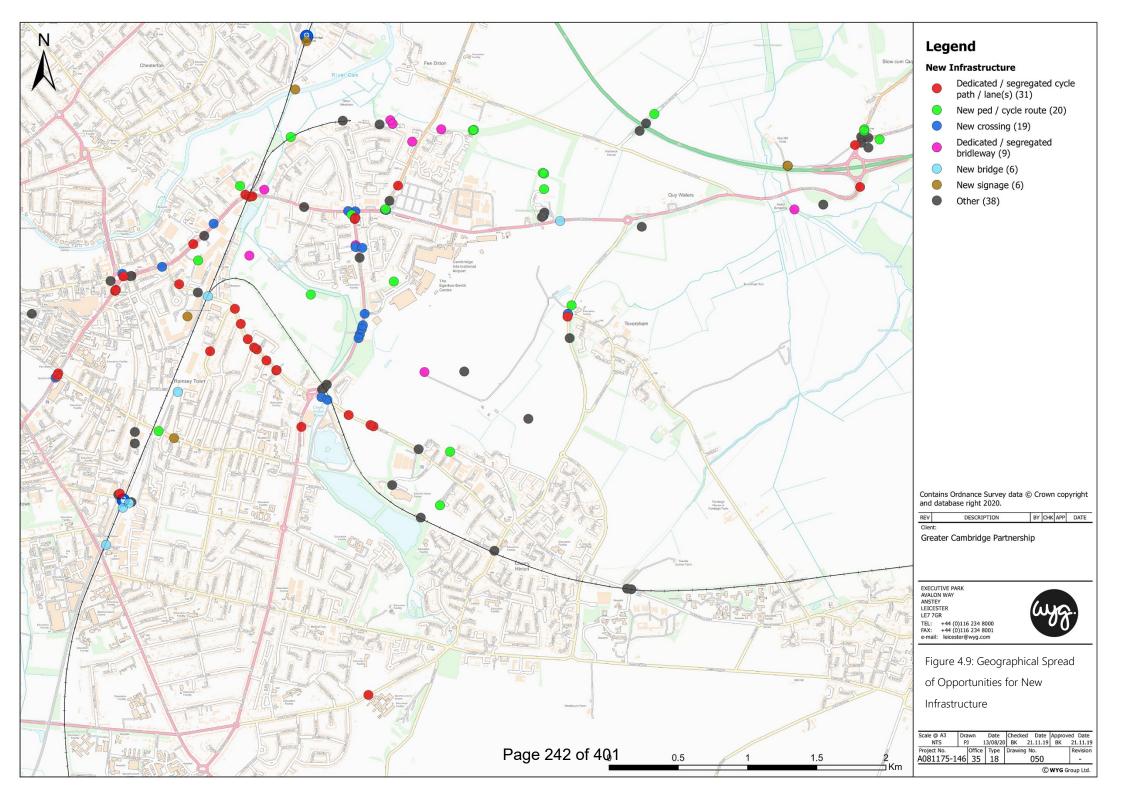
Figure 4.5: Areas for Improvement (by number of respondents)

Figure 4.6: Opportunities for New Infrastructure (by number of respondents)









4.6 Responses to the Survey

4.6.1 To supplement the mapping function on the ConsultCambs website, the opportunity was provided to respond to a series of set questions and was duly completed by 112 respondents. The following sections summarise the feedback.

Who are we listening to?

4.6.2 The breakdown of those responding to the survey based upon their typical mode of travel into Cambridge is highlighted in <u>Figure 4.10</u>. Most respondents usually travel into Cambridge either by car (31%) or they cycle (29%) and walk (18%). Around 20% use public transport (bus, coach or train).

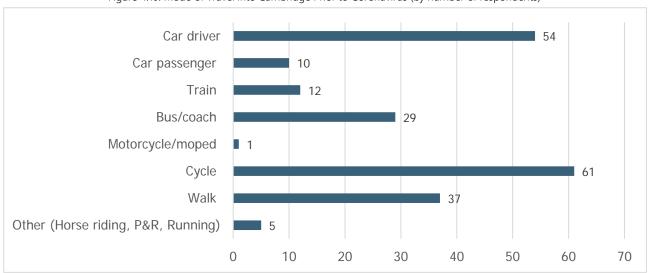
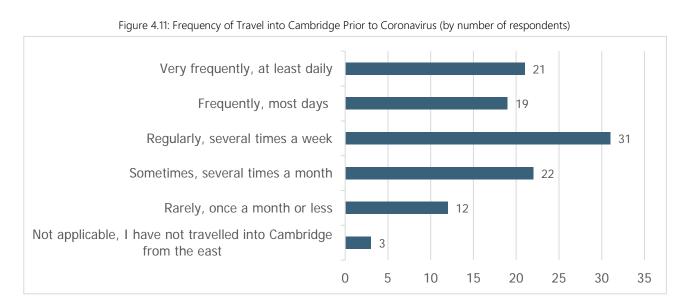


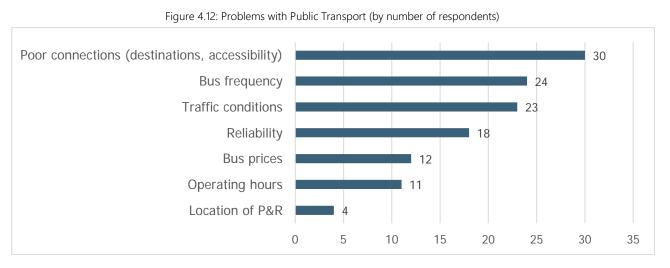
Figure 4.10: Mode of Travel into Cambridge Prior to Coronavirus (by number of respondents)

4.6.3 <u>Figure 4.11</u> details the frequency with which respondents travel into the city. Some 66% classed themselves as regular commuters who travel into Cambridge at least several times a week. Another 20% identified themselves as occasional travellers and only 14% responded that they travel into the city either once a month or less.



Public Transport Problems

- 4.6.4 The most commonly expressed concern of respondents in terms of using public transport is the lack of convenient connections (see Figure 4.12). Poor accessibility to a bus and no direct route to their destination was mentioned 30 times (34% of people answering the question) in the feedback received.
- 4.6.5 Complaints about bus frequency were the second most common complaint (24 comments, 28%). Some 26% of respondents suggested that traffic conditions were impacting on bus journey times and contributing to the poor reliability of the services (21%). People also criticised bus prices as being too expensive and that the hours of operation were too limited.
- 4.6.6 Many people are unhappy that there is no late bus back home, no Sunday service, and those who start work early in the morning are left with no option but too drive. People living in villages to the east of Cambridge particularly feel disconnected.



Active Travel Problems - Cycling, Walking and Horse Riding

4.6.7 Figure 4.13 highlights how most of the comments expressed about active travel focused on safety concerns. People don't feel comfortable cycling in heavy traffic, with fast vehicles passing them, and they have concerns about conflicts between pedestrians and cyclists. Many people are disappointed by the quality of surfacing and the poor maintenance of both cycleways and footways. Some people mentioned the importance of a fully connected cycle network with no gaps. Several horse riders, who feel overlooked, also expressed their concerns regarding problems for equestrians.

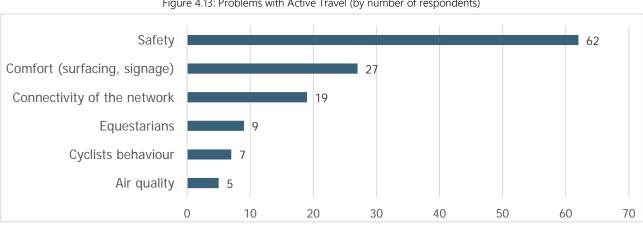
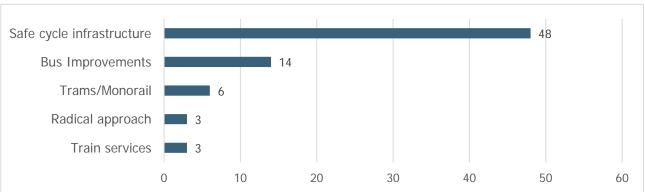


Figure 4.13: Problems with Active Travel (by number of respondents)

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Improvements for Public Transport and Active Travel

- 4.6.8 There was an almost equal split between people who think existing routes should be improved (37 respondents) and people who think that developing new routes is the way forward (35 respondents).
- 4.6.9 About half of the respondents want to see safe cycle infrastructure as a priority, as shown in <u>Figure 4.14</u>. Bus improvements, such as bus gates, better bus lanes and more convenient bus routes, were mentioned by 14 people (14%). Only six respondents expressed support for a tram network or monorail, whilst there were views that a radical rethink of the entire transport system is needed.





Constraints, Threats and Risks

- 4.6.10 When asked about what should be avoided or treated with caution in terms of areas of investment, concerns associated with the negative impact on the environment were raised on several occasions. Most people mentioned this vaguely and said that the green belt must remain intact, felling trees should be avoided and any green areas and countryside should be protected.
- 4.6.11 Those who articulated more specific concerns said that the following locations must be protected: Coldham's Common (mentioned 3x), Gog Magogs (2x), Barnwell East nature reserve, Riverside route, Horningsea, Wandlebury, and Snakey Path.
- 4.6.12 Amongst other issues to ensure, respondents referred to concerns associated with poor bus provision (7x), not to be anti-car as it should be respected that some people still need to drive (5x), or in creating more congestion and worsening the already poor traffic conditions (4x). Some people, on the other hand, warned against being focused on cars and improving the situation for them (4x).
- 4.6.13 Specifically, with regards to active travel, it was felt that combined bus and cycle lanes should be avoided as well as shared use paths. Cycle lanes which are only 'painted' on the road were also viewed in a negative light. Whilst some warn against 'incomplete' routes, others argue that if any further delay is caused by something not being 100% perfect, it should be avoided. Those who ride horses said that they don't want to be overlooked again.
- 4.6.14 It should be noted that despite these concerns, other respondents expressed an opinion that the approach should be exactly the opposite that the new routes shouldn't be avoiding the precious or protected locations, but actually take in any landmarks along the way, with local information about routing options across green areas appreciated.

Public Suggestions – Public Transport

- 4.6.15 Most respondents felt that there is a big opportunity to improve bus services in the area (see Figure 4.15). Included within the feedback was a suggestion that more direct/orbital services could be provided so that passengers wouldn't always have to go to the city centre first. Suggestions to increase frequency and introduce early/late/weekend services were mentioned multiple times as well as measures to improve reliability. Cheaper/subsidised buses and greener/electric buses would be welcome too.
- 4.6.16 Comments were made in terms of support for and against the reopening of Mill Road bridge to traffic despite no direct prompt within the questioning, highlighting the level of interest in this particular corridor.
- 4.6.17 Eight comments were received about train services. Some focused on the inadequate connection between Cambridge and Newmarket, whilst others would like to see a stop in Cherry Hinton/Teversham to allow local residents to travel into the city easily. The reopening of the line to Haverhill was also cited.
- 4.6.18 Other comments of note focused upon improvements to the Cambridge Station access from the east either in a form of extension of the existing footbridge to the cycle park or by a provision of a new eastern access near Royal Mail with direct access to the platforms.
- 4.6.19 It was felt that apart from the convenience of this for thousands of people in east Cambridge, this would help to mitigate the impact of all the planned housing developments taking place to the east of the city which would otherwise put more pressure on Hills Road bridge, Station Road and Mill Road.

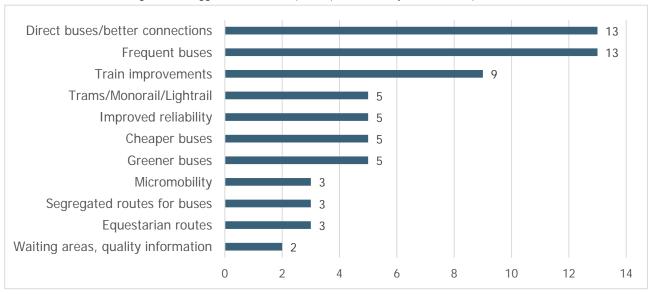
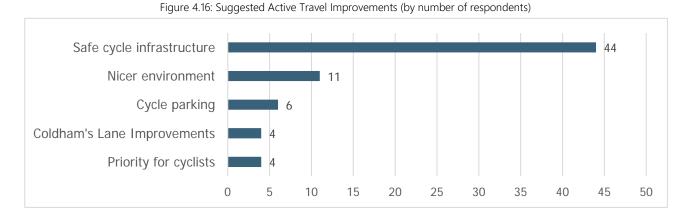


Figure 4.15: Suggested Public Transport Improvements (by number of respondents)

Public Suggestions – Active Travel

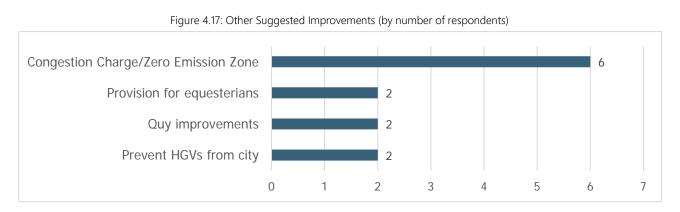
- 4.6.20 The public's suggestions regarding active travel improvements were dominated by calls for safe cycle infrastructure which were mentioned by half of the respondents (see <u>Figure 4.16</u>). This was felt to be in the form of wide lanes, fully segregated from traffic, buses and pedestrians. They should form a connected network without exposing riders to dangerous situations at junctions. The need for a pleasant environment and smooth surfacing were also stipulated.
- 4.6.21 Only a few comments were received regarding cycle parking provision throughout the whole survey which could suggest that people are generally happy with current provision. However, the parking at Cambridge North station is not perceived as safe. It is also understood though that some commuters would appreciate more bicycle spaces on trains, especially from Newmarket.

4.6.22 Those who live on or around Coldham's Lane want to see a change in its character, emphasising its nature as a residential street and not a busy road used for rat-running.



Public Suggestions – Other

4.6.23 In this section many people reiterated their concerns and suggestions discussed in previous questions. Some people would like to see the Council taking action to discourage car use by introducing a congestion charge, zero emission zone or limit access to the city in the morning peak hour for non-residents (see Figure 4.17). A possible relocation of the Newmarket Road Park & Ride further to the east and improvements to the A14 Quy junction were also mentioned.



Motivation for a Modal Shift

- 4.6.24 A third of respondents suggested that a better quality, safer cycle network and infrastructure would make cycling more attractive for them (see Figure 4.18). About 27% of respondents would like to see bus timetables suited to their needs whether it be more frequent buses in general on the key services or expanding the currently limited operating hours. About 27% would use buses more often if they are fast, reliable and provide a time advantage over use of a car (in the case of Park & Ride services).
- 4.6.25 A number of respondents (12%) lack convenient bus services whether it be no access to a good bus service in their village or no direct route to their destination meaning that they have to travel through the city centre and their journey becomes very long.
- 4.6.26 About 10% of respondents find the buses too expensive (with suggestions that it can be cheaper for a family of four to take a taxi, for example) and claim they would be using them more often if cheaper.

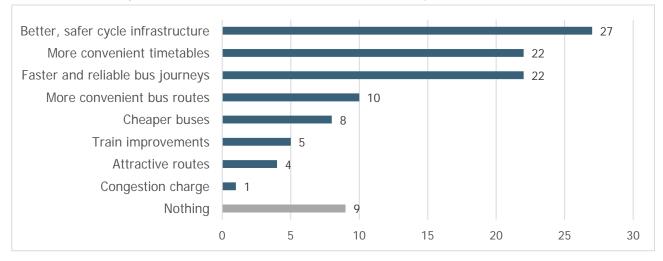
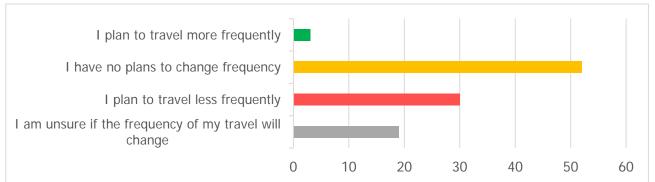


Figure 4.18: Factors to Make Sustainable Travel More Attractive (by number of respondents)

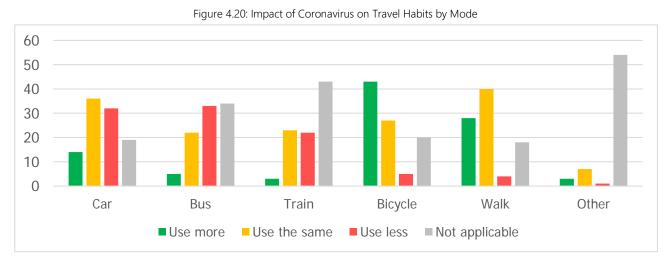
Effect of the Coronavirus Outbreak

4.6.27 The final two questions of the survey focused on the impacts of the Covid-19 virus and the resultant restrictions and lockdown on their travel patterns and behaviours. Figure 4.19 highlights how around a third of the respondents stated that they might travel less frequently in the future because of the outbreak.





4.6.28 When this feedback is broken down by mode of transport, it highlights how this might manifest itself through a decrease in car use and public transport in the future (see <u>Figure 4.20</u>). Conversely, many people are planning to be more active and cycle and walk more than before the pandemic.



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4.7 Summary

- 4.7.1 The level of feedback received in response to the informal four-week engagement period demonstrates that there is considerable public interest in seeing improvements made in the Cambridge Eastern Access study area. The qualitative nature of the feedback has provided a broad spectrum of ideas and interests which will be used to inform the development of options for future consideration.
- 4.7.2 In seeking to draw some conclusions from the feedback, a number of points emerge:
 - There is a desire for safe cycle infrastructure which the vast majority of respondents agree on.
 - Cyclists should have comfortable, direct, segregated cycleways. They should not mix with traffic, buses, pedestrians, and horse riders.
 - There are locations where cyclists are put on busy roads with inadequate cycle infrastructure.
 - Quality of cycle lane surfaces and their poor maintenance is often criticised. This applies to some footways too.
 - The most problematic roads in the area are Newmarket Road, Coldham's Lane and Mill Road.
 - There are mixed opinions about Mill Road and the reopening of the Mill Road bridge.
 - People are generally rather unhappy about the current bus provision as it doesn't suit their needs.
 - Buses are seen as unreliable, slow and expensive.
 - Those in more remote areas don't have access to a bus out of regular business hours and can't enjoy a night in the city or get to work if they start early in the morning (common amongst the NHS staff).
 - People want to see frequent, reliable buses.
 - There is scope to improve trains and access to them.
 - A new station in Cherry Hinton would help the residents.
 - Eastern access to Cambridge station would help those living locally as well as release some pressure on the network in other places.
 - There is a vocal group of horse riders who feel that their needs have been constantly neglected.
 - Respondents want to protect as much greenery as possible, especially Coldham's Common.
 - Some are open to the option of considering a congestion charge or restricting car access to the city.
 - The recent coronavirus pandemic might result in an overall trip reduction, but some people are planning to cycle and walk more than before.



5 | Park & Ride User Survey

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5.0 Park & Ride User Survey

5.1 Overview

5.1.1 In January 2020, WYG undertook a survey of Newmarket Road Park & Ride users to ascertain their rationale behind using the service and to understand their perceptions in terms of the quality of provision and how the offer could be improved. Feedback was received from over 60 users during the morning peak period and, whilst not a statistically robust sample size, it nevertheless provides a feel for how the service is received by those who use it.

5.2 Satisfaction

5.2.1 In terms of overall satisfaction with the Park & Ride, the vast majority of users were satisfied with the service and facilities on offer, as highlighted in <u>Figure 5.1</u>. Almost 70% of respondents expressed that they were either quite or very satisfied.

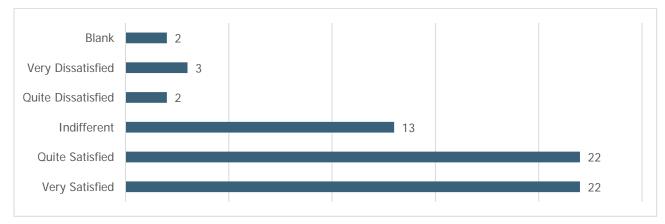


Figure 5.1: Newmarket Road Park & Ride User Satisfaction (by number of respondents)

5.3 Service Frequency

5.3.1 In terms of service frequency, respondents were also broadly supportive of the levels of provision as indicated in <u>Figure 5.2</u>. However, with only 14 of the 64 respondents suggesting it was 'high quality' there appears to be room for improvement in the eyes of current users.

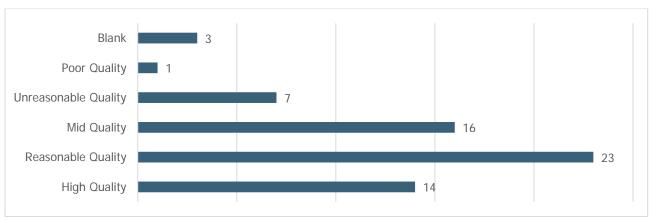
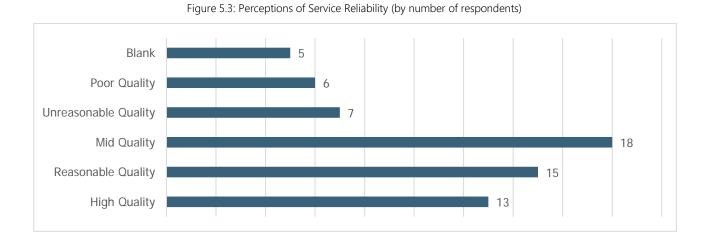


Figure 5.2: Perceptions of Service Frequency (by number of respondents)

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5.4 Reliability

5.4.1 With regard to the reliability of service provision, it was clear that there was concern amongst users. Whilst <u>Figure 5.3</u> highlights broad satisfaction with reliability, conversations with respondents drew out large differences in terms of inbound trips in the morning peak and the return outbound trips in the evening peak, with the latter being the cause of significant levels of dissatisfaction.



5.5 Journey Times

- 5.5.1 The journey times from the Park & Ride site to the city centre are generally seen as reasonable by users as shown in <u>Figure 5.4</u> with 46 of the 66 responses to the question considering it to be of reasonable or high quality.
- 5.5.2 The qualitative feedback received in response to this question however, again highlighted differences in the inbound and outbound journey experience, with return trips to the Park & Ride site in the evening peak considered to be longer and subject to more delays.

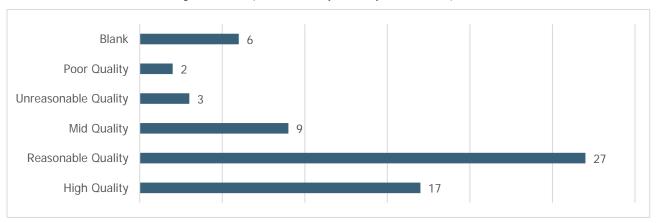


Figure 5.4: Perceptions of Journey Times (by number of respondents)

5.6 Effectiveness of Bus Lanes

- 5.6.1 Users were broadly of the view that the bus lanes in place were effective as shown in <u>Figure 5.4</u>. However, the qualitative feedback received suggested that the lack of continuous bus lanes impacted upon their effectiveness, particularly in terms of outbound trips in the evening peak.
- 5.6.2 Conversely it was also stated that outside of the peak periods the bus lanes were largely redundant, with buses preferring to remain in the general traffic lanes, creating doubt in the minds of users in terms of their overall suitability.

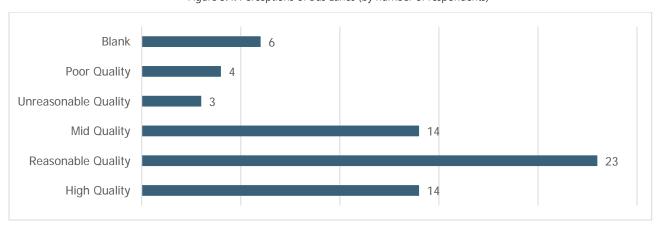
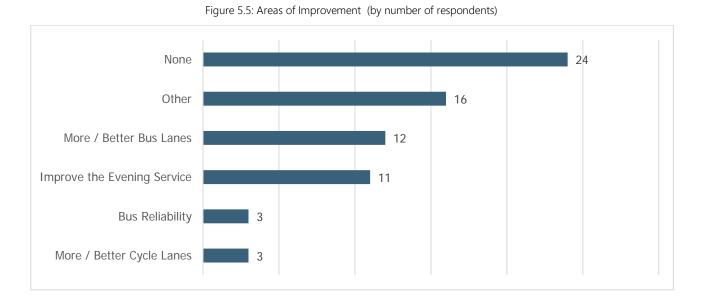


Figure 5.4: Perceptions of Bus Lanes (by number of respondents)

5.7 Areas of Improvement

- 5.7.1 At the conclusion of the survey, respondents were asked an open question in terms of how they thought the Park & Ride provision along Newmarket Road could be improved. The lack of options to pick was intended to enable individuals to think for themselves and not be led to conclusions.
- 5.7.2 However, it became apparent that many felt that authorities had done everything possible to provide an efficient service. Whilst noting the discontinuous bus lane provision, many realised that this was as a result of the nature of the corridor. Where improvements could be made, improvements to the evening service and the quality of the bus lanes were the most popular suggestions.



5.8 Summary

- 5.8.1 The survey of existing Park & Ride users provides a snapshot of the views of those who use the service despite the small sample size. Unsurprisingly, given the fact that those questioned are current users, the general feedback was positive.
- 5.8.2 Notwithstanding this, there are clear areas for improvement with qualitative responses consistently highlighting different users' experiences between the morning peak period trips into the city centre, which were broadly seen as very efficient, and the return trips in the evening peak, which were often highlighted as being slow and unreliable.
- 5.8.3 When pressed in terms of how the service could be improved however, many respondents struggled to suggest a solution with a feeling that the authorities had done 'all they could' given the nature of the corridor. Where ideas were offered, improvements to the bus lanes and the evening service provision were those which emerged as the most popular.



6 | Conclusions

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6.0 Conclusions

- 6.1.1 The four-week informal engagement process between 6 July and 3 August 2020 forms the first part of an ongoing conversation with stakeholders and the general public through which to understand the issues and opportunities for sustainable transport improvements in the study area.
- 6.1.2 Despite the diversity of perspectives and interests, one of the most striking findings from the feedback has been the consensus and shared view that the Cambridge Eastern Access study area is in need of investment, that sustainable transport should be prioritised and that the potential is there to make things better, but that there will be a number of challenges and constraints through which such aspirations can be achieved.
- 6.1.3 The next stage of the process will see the generation of a long list of options based upon the feedback from the engagement process and analysis of current provision and practice. The options will then be assessed and reduced to a short list of measures to be included in alternative packages of intervention that present distinctly different approaches to delivering sustainable transport improvements.
- 6.1.4 Subject to GCP Executive Board approval to proceed, the packages will go out to public consultation in October 2020.



| Appendices

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Appendix A – Zoom Workshops Feedback

Wednesday 1 July 6pm-7.30pm Notes of meeting

Buses

- The P&R, Citi 3, 11 and 12 bus services use Newmarket Rd; c14 buses per hour. It's really hard for buses to run on time.
- P&R because of congestion on Newmarket Rd the service isn't 6 buses an hour. That tells you we need a better service to the east. Due to unreliability of the service the facilities at the P&R hub are insufficient, especially in winter. Congestion makes the service unreliable. Traffic backs up to Quy junction roundabout. Most difficult route into Cambridge.
- Recognise all the comments and the unreliability of services. There is lots of space and a good opportunity to have a really good service on Newmarket Rd which could be really special. This is a good project to look at that. Carriageway gets very tight and bus priority is piecemeal.
- Agree with points about reliability. In order to combat congestion, make it attractive to travel by bus i.e. fares, improve reliability. It's a vicious cycle because you can't have one without the other.
- It's a fair point. The trouble is that the majority of the services in Cambridge are run commercially; operators have to make a commercial decision based on whether there will be future growth in the area where passenger numbers are currently low. They will invest but it's a challenge.
- For the Milton Road project bus lanes were on the wrong side of the road i.e. not where they were needed to get maximum benefit. The scheme now is making sure that the bus lanes lead up to the junctions with the hope that buses can go in ordinary traffic until they get near traffic lights and then can move into the bus lane.
- When you're thinking about the buses, think about cyclists alongside. Doing so without thinking about cyclists is unhelpful. Some feel very exposed. Sharing road space is a big issue. You need bus lanes alongside cycle lanes; think multi-modal options.
- Cyclists on Newmarket Road sometimes hold the buses up because the buses can't overtake. There's green space on the other side of the busway that's totally unutilised. If you want to speed up traffic, we should encourage more modal shift from cars to unclog the road and have bus/cycle lanes that aren't shared. If you look at the front of Marleigh where the cycle lanes are segregated that works quite well.

Rail

- It's tricky trying to connect rail to everyone else. Trains are quite unreliable and often congested in the carriages themselves. Looked at CAM proposals and thought they'd help to join everything up but they're a long way away. It's about connecting up rail with other modes.
- What's the timing of EWR from Cambridge east to Ipswich and how does it fit with Eastern Access schemes?
- Agree about connectivity. The photographs make clear that it can only be a single-track service because of the nature of it. The crossings, including at Cherry Hinton, gum up the traffic. Doing something with the crossings is important.
- There's an issue around capacity. We've all seen the trains completely full. Any proposal that doesn't link up with trains/provide an interchange is a missed opportunity. That line suffers problems all the way out to Bury St Edmunds with no way for people to access it unless they

live right near the train line. Consider where new stations could be put or where existing stations could be moved to.

- Frequency is an issue. Can we learn lessons from the Exeter to Exmouth line? They call it the 'Devon Metro' and have added stations; they've been able to do it because the frequency of trains into Exeter station is less than in Cambridge. It's not clear what the study means in terms of increasing capacity. If we put extra track in we still need to get it in and out of Cambridge; dualling of the track is not necessary.
- In Truro there's a well-used single track line to Falmouth. Capacity has been increased by making passing places; you don't need to dual the line to increase capacity. Rail is a good green form of transport and we need to make it as much of a priority as we can.
- Perhaps that's what we need rather than a grandiose scheme next to Cambridge. The cost is likely to be higher at Cambridge than further along the line.

Active travel

- Barnwell Rd roundabout to Ditton Lane is challenging for cyclists and where some feel most vulnerable on Newmarket Rd.
- Queen Elizabeth Way is bad for cyclists and condition of carriageway is poor. Connectivity is
 poor. There's a quite good segregated cycleway up to Teversham. Segregated cycleways are
 needed for safety, especially for children/vulnerable cyclists. Also need to think about how to
 make the Barnwell Rd area permeable to pedestrians too.
- There's a sign on your photo that says it's 2/3 miles to Bottisham but that's only the first turning. It would be helpful to improve that cycleway all the way to Newmarket. There's no cycle route at the moment.
- Support what *name* said improved cycle infrastructure further out would make a difference, even if people don't use it everyday. It's important to remember you don't have to get far off Newmarket Rd to find nice places to cycle. It would be good to make those places more accessible from Newmarket Rd. At the moment it's not easy to find those routes; make it obvious what those routes up and down are. The junction to the river near Tesco doesn't make it easy for cyclists.
- What's already being done is bitty (like near Marleigh development); it's a compromise situation where you'll have two-way cycling on one side of Coldham's Lane towards the railway bridge and people then having to deviate to get past the railway line. You've also got the greenway coming along. Agree the need to look at segregated solutions away from the road but if we're not putting the money in we're not using this big opportunity. People won't want to cycle up Coldham's Lane towards town. There needs to be a co-ordinated approach.
- There's been talk about greenways for a long time. Let's get started on them i.e. the one between Fulbourn and the city. Local residents say they like some parts of the cycleway, but decide to drive in to Cambridge because it's safer in some parts. You can't start linking up the smaller villages until the Greenways are in i.e. Wilbrahams could link to Fulbourn greenway. Need to get on and deliver.
- A lot of residents cycle along Newmarket Rd to work. Desire lines are important: going along a major road is quicker than the prettier routes. It feeds into the notion that cycling is a leisure activity and that real travel is to go by car. Pedestrians: in Petersfield there's a lot of traffic across from the riverside area into the Petersfield area. It's pretty awful for pedestrians. There are railings around and not many places to cross. That's one of the tensions there are going to be encouraging pedestrians or is it a bus priority route? It'll be important to consult with local residents from along different parts of Newmarket Road as they'll have different requirements etc. Wilbrahams small connecting routes required to make a big difference.
- It's important to provide small connecting routes to villages. They'll make a huge difference in joining up the bigger routes.

- I cycle along the river into town from Fen Ditton. It's my main mode of transport. It would be great if more people cycled along the river rather than getting in their cars. Even along the river there can be tensions between pedestrians and cyclists. That could be a problem that gets worse along the route.
- Been doing some work round Newmarket Rd/Barnwell Rd junction, there's been a lot of feedback about how hard it is for cyclists and pedestrians. It's a hostile environment for both and it has a big impact on the area.
- We've got this opportunity now at the planning stage. I'd like to see in the approach to planning for active travel a 'no compromise' approach to make it beneficial for cyclists and pedestrians. Why don't we be bolder now that we've got this opportunity to start on the eastern corridor planning rather than fitting in improvements in a piecemeal way. Is it possible to step back and move up the active travellers ahead of the other road users?
- This is an opportunity to start from scratch. Appreciate that Newmarket Rd isn't the only area we're talking about. Publicly owned land along Newmarket Road is extensive and there's an opportunity to start from one end of the road and work to the other.

General traffic

- This highlights the opportunity for really good interchanges. Airport Way is effectively the ring road for Cambridge and the only access to Addenbrooke's from the east side. We need to recognise and build that in and use influence on highways people to make sure we create a proper ring road round the east side of Cambridge.
- Quy roundabout is another very congested area. Traffic goes into a single lane at one point. If we're looking at the bigger picture we need to do something about the roundabout and the roads leading off it. We also need to do something about the P&R move it further out.
- Support the point about moving the P&R out as far as possible. Re *name* point about making
 car the last resort: make it less attractive and get people into other modes of transport as far out
 of the city as possible otherwise it'll continue to be dominated by car traffic.
- Milton Rd some residents were very against the plans and some of their feeling was around them feeling that it was a residential road and not a traffic corridor, which is how it was being described. We got the residents on side by i.e. planting trees, public realm. Whatever we do we have to make it a nicer entrance to Cambridge and better for local residents in particular.

Other modes

- Absolutely should be part of the study. Aligning with other schemes such as CAM and possibly lightrail is important.
- There have been some crazy notions about electric cars being really good and electric vehicles being able to go in bus lanes. Studies have shown that if you have a 10 min bus service and fares are low, people will use it. That's the kind of service we need along this road. Don't need other transport clogging up the road on the grounds that it's environmentally friendly.
- Agree that while we need to take account of the all the possible things that might happen in the
 future we need to get on with making space for the technologies we have now and that we
 know people are going to use. Agree with *name* about electric cars they are still cars and
 will still cause problems. We need to prioritise active travel and buses and we need to get on
 with it as quickly as possible.
- In Australia there are lots of electric scooters and it seems to work well.
- Could buses be replaced with electric buses?
- Autonomous vehicles, like electric vehicles, don't cut congestion. If the airport is developed for housing and employment it could make a big difference to the requirements. How are you

factoring it into your plans? Is there a danger we don't look for the big picture and deliver short and medium term solutions that then need to be replaced?

• Agree with what said about electric vehicles. Air quality would improve but we'd still have congestion.

Any other business

- Could we have a timeline for the longer term and the shorter term schemes? What could be done in the short term to improve things?
- At the start there was a map of the area/where the focus was going to be. The conversation
 points were mainly made around Newmarket Road but the map included Coldham's Lane and
 Mill Road. In future sessions it would be good to have the conversation about other roads.
 Some residents are concerned about Coldham's Lane and what could happen there. It would
 be useful to bring in the other main routes as well.
- Building on point and the original purpose of City Deal being connectivity; connections between home and work as well as between places of work. No-one knows what will happen post-Covid but connecting people will still be a big part of what Cambridge does. Asking for consideration to be given to destinations to i.e. sixth form students from the east, Cambridge Lakes, Cherry Hinton Hall, Science/business parks. Journeys people want to make aren't necessarily into the centre of Cambridge. Potential developments will enhance the number of people who want to move to different destinations.

Thursday 2 July 6pm-7.30pm Notes

Agenda

- Welcome
- Introduction to project aims and objectives, the stage and what follows
- Summary of ideas and issues to date
- Open floor to questions and comments
- Wrap up and reminder of next steps, including engagement period opening on Monday 6 July
- Thank you and close

Welcome

- Start of pre-consultation, states that workshops will be via digital avenues and not in person. Normal rules apply. Technical issues may arise.
- Asks attendees to raise hand if they have a question when we get to that section.
- 'Aims of project to identify options which will improve transport connections, improvement connectivity with rest of Cambridge.
- Why do we need to act? Congestion is getting worse.
- Transport projects in consideration and development: Greenways, Chisholm Trail, Coldham's lane improvements, Newmarket Cambridge railway.
- Shows initial thinking of study area, and we recognise that access to centre are primary objectives but areas further out are important.
- We welcome comments.
- Short to medium term measures Tackle gridlock, help to recover from Covid.
- Improve public transport, walking and cycling routes, reduce pollution.
- Medium to long term Develop dedicated transport route for east Cambridge. Contribute to CAM.
- Potential features we are looking at, although nothing is on the table officially atm. Public transport routes, travel hubs, active travel improvements.
- Next steps are engagement period. Leave your views at Consultcambs. Survey and map on there. Members are very welcome to contribute.
- May lead to wider consultation later in the year."
- WYG commissioned by GCP at the end of last year.
- Overarching objective of study how can we approve connectivity, capacity and what we can do for active travel users?
- Process Understand issues and produce baseline report, generate list of options of how the issues can be addresses, undertake assessment of ideas and producing a package to be assessed in transport model. Finally a business case will be generated by March next year.
- We will produce a baseline report to discover the key issues using policy, provision, practice, proposals and perceptions.
- The conversation is planned to be mode by mode, but we can interchange between.
- Topics of conversation from presentation Modes are bus, rail, active travel, general travel and other.
- What are people's thoughts on buses services, infrastructure, and journey times P&R, information, and ticketing/fares.'
- No mention in the priorities of decarbonisation or the environment. That's quite a major thing and one of the stated objectives of the GCP. It needs to be said.

Bus

- There's a regular service for P&R which is well supported. The issue for us and Stagecoach is lack of bus priority. It's patchy; there are parts of bus lane but it's a very busy commuter route and there are big issues with sticking to timetable there. Current site is c900 spaces which is ok for the present it doesn't get full but re future development i.e. Wing being built at the moment, in the near future the site will need to be bigger and probably further out but with combined bus priority measures to make up the distance and stick to timetable.
- Newmarket Rd P&R there's congestion in the morning peak and it's not predictable. It doesn't take a lot to cause delays and a bad service for the public. Agree re patchy bus priority. Key to providing a decent bus service is having reliable journey times. Active and public transport should be viewed as the same thing; they need to be viewed as compatible. (He undertook a study about a year ago) each site has different characteristics which impacts reliability. Need smart technology so buses don't get caught in traffic at roundabouts then you can consider moving the site closer to the A14.
- People travelling from the east the city centre isn't the only location people want to go to. Do we have an idea of what the demand is to travel to and through the city especially as we start to close off routes through the city? What impact does that have on a good public transport offer and what does a good public transport offer look like. If we were to achieve current journey times in the future compared to pre-Covid how do we go about achieving that?
- Worry that we talk too much about P&R as the public transport solution; it isn't because people need a car to get to the site to catch the bus. We have to be looking at end to end active and public transport, not just the last few miles. East of the city is relatively poorly served by public transport i.e. Burwell, Wilbrahams don't have frequency or hours of service to allow people to use them as an alternative to driving. It's not enough to get a modal shift there. P&R is an interim solution and we shouldn't be looking to expand it. Need high quality services for the villages.
- Newmarket Rd has a lot of attractors i.e. retail parks. Anything we do has to look at that; it has free parking which inevitably will attract a lot of traffic. If we're only looking at putting in bits of bus lane we're tackling the symptoms of the problem, not the root cause. And the P&R doesn't serve the retail parks.
- Agree with points. Local bus service is key and helps people who don't have cars. Looking at the photo with the queues: enable people to get on buses more quickly buses with more doors, off bus ticketing will help services to be more reliable
- P&R: there's a major block at A14 roundabout. Will consideration be given to moving the P&R or establishing a new one to the east of the A14? Not sure if it should replace or be in complement to existing services. Current service is ok but it's so slow it's not great for people who value their time.
- Want to echo point about the P&R and the free parking on Newmarket Rd at the retail parks. If there's a restriction/charge for traffic going into the centre there would be an impact on levels of traffic entering the city. Bus priority lights: there's a set of lights near B&Q but I've seen buses there stopped as the lights there change if there's no traffic it does the opposite of what it's supposed to achieve.
- There is a need for greater services from the outlying villages but they'll still need bus priority when they get to Cambridge so would still benefit from any measures installed. Moving the P&R probably will be required but would need to look carefully at which side of the A14 you put it – would need A14 traffic to be able to access it quickly.

Rail

 With a more frequent service on that line there'll be more patronage from Bury St Edmunds and Newmarket. Also more potential for services at Kennett and Dullingham. Some upgrade work will be done as part of EWR but need to also look at local opportunities; obvious one is a station for Fulbourn, Cherry Hinton at Fulbourn Old Drift (for business parks, ARM). Further opportunity to intercept longer distance traffic with P&R at Six Mile Bottom – believe it's on the Mayor's radar and possible site for housing – also a link between A11 and A14 to go west; if that junction was put in that would be an accessible site to get to the rail line assuming there's a high quality service. Tie in with airport development site and opportunity to reroute the railway line out of Cambridge through the airport site with a station of its own, that line could reconnect to the existing line to east of Fulbourn. Would release the existing line for i.e. light rail or some other form of transport on a segregated route.

- Clarification please: any significant rail comments would be fed into the appropriate organisation? It's not a GCP project. Need for good interchange and integrated multi modal ticketing (pick up *name* points re boarding times and reliability). Says there is a need for a good interchange and improving ticketing.
- Newmarket: people would use the train but don't because the service is too infrequent. One of the problems with drawing a boundary around Cambridge is it doesn't solve problems further out that prevent people making journeys sustainably. Include people further out in your consultation. Maybe GCP should consult with Newmarket residents. *name* integrated transport and ticketing: we have an opportunity and are lucky to have a railway line here at all. It might require realignment to the airport site. With railways you have to think 100 years ahead; don't know if GCP is prepared to do that but they should. That's the way the Dutch think about it. So railway needs to be double tracked, integrated and connected to surrounding services.

Active Travel

- High level view: the idea of a network is missing. With all active travel modes you have to think about 'what's the network you're trying to design?' That guides your investment, planning etc.
- How does this fit with the wider strategy for the city? It has to link with the wider city, homes to jobs, it needs to be integrated and not a piecemeal approach. What's the vision of Cambridge as an excellent place for cycling?
- Please remember that active travel includes equestrians. People are going to want to access the countryside. Please remember us.
- Some cyclists going past the P&R aren't aware of some of the safer and more pleasurable routes that go down Newmarket Rd. Maybe an issue about people understanding some of the quieter routes they could use as an alternative.
- With walking, infrastructure is pretty bad. Crossing the road at Elizabeth Way is not great for pedestrians or general traffic. There's a high footfall of walking in the area and provision is poor.
- Think we can all agree Newmarket Rd is a hideous road to walk along highly polluted, hard to cross. But there's lots of space to create a boulevard i.e. develop Elizabeth Way roundabout to be an attractive space. A trade off we have to keep in mind when creating dedicated bus lanes means taking some of that space; there needs to be some green space/human space. Need to think carefully about balance of use – bus priority or public realm. There needs to be an honest debate.
- Agree that there are some wide areas of that road; it looks great for bus lanes but I like the idea of public space. It's more a trade off with getting the cars out of the area and looking at greener forms of transport to reduce carbon footprint. There's a major cycling route at the back of the P&R; agree with *name* that people don't know it's there. Part of the issue for cyclists and buses is that we put a bus lane in and say it's a bus lane buses and cyclists don't want to share it because it's inconvenient for both groups. Need take the chance for separation it's a priority for me.
- Marshall has a lot of sympathy and is a strong advocate of a boulevard into Cambridge. A lot of existing parts of get taken out by transport engineers because they just want to get planning permission for the scheme. You end up not getting the greening you could have with a scheme. How do we get County to have those conversations that greening is also important in transport schemes?
- People have been saying great things. If we could get County to think about place like that it would be great! The cycle route is inconvenient because the underpass is closed at the moment. There will always be a network for active travel modes in the vicinity of Newmarket Rd.

General traffic

- Point is very valid. If we dealt with all the other modes we wouldn't have to deal with general traffic because there wouldn't be any. How that's dealt with at planning is probably the issue; it seems to be about how much traffic you can get through each junction and not how many people you can move in a sustainable way.
- What *name* says is right: look at moving people not vehicles. We have lots of data on vehicles but little data on the people in those vehicles where they're coming from, why they're coming by car, why they choose certain routes etc. More fundamentally we need to abandon the planning process of looking at where we are and projecting forward to accommodate future growth. Future developments needn't increase congestion; need to start with a vision of what the road and use of the road will create rather than what gets forced upon us. Get the public involved in designing what they want rather than foisting on them what they don't want. Free parking needs to be phased out on Newmarket Rd; Workplace Parking Levy: tools and levers we need to use but we have no justification for using them at the moment. We need to start with a zero carbon future and work backwards.
- Agree with *name* and others. Issue is the type of retail that's been allowed to develop on Newmarket Rd. In a post-Covid world that could change. Have seen signs of change recently: hotels there have little parking but that educates people using those hotels that there are other ways of getting here. People will still come if other modes are provided even if obvious ways like driving aren't there. Agree with *name* re Workplace Parking Levy and road pricing. At Christmas it's quicker to walk along Newmarket Rd to the P&R than it is to wait for the P&R bus because of the volumes of traffic from the retails parks.
- Reiterate *name* point about active travel and creating a network. Also need to deal with residual traffic in the city. There will be residents in these areas that want to own a private car into the future. Need to design Cambridge so that through traffic is prevented and that as much traffic is directed out of the city on radial routes and only sustainable modes are able to travel through the city.
- We haven't talked about freight and deliveries. Given the concentration of detail it seems sensible to plan in some kind of delivery hub in that location. Covid has enabled some shops to explore making deliveries by i.e. cargo bike in the city. It could reduce people's need to bring a car into the city if there's a delivery system.
- Everything people have said is great. Dutch principles of sustainable safety deal with road traffic too. Stop planning for more traffic and start planning for the future we want. The Transport for New Homes report on garden villages and garden towns includes how land is being turned into big car parks and is damning of the planning system.
- Residual traffic: do we know what traffic would have no impact on buses or other modes. We must be collecting data that would help to inform that so we can understand how much traffic we could allow in.
- Residents wouldn't sensibly try to take their car through town; they would go out and round. People in the Beehive regularly drive from one end of the car park to other to get to shops at either end. That's the degree of car dependency we're up against.

Other modes:

- When you talk about light rail there's an interesting scheme being developed in Coventry. Look at it it's so light it's compatible with existing schemes and is cheaper to implement.
- E-scooters: seen them going down Newmarket Rd at night with no lights. There's currently a health and safety issue.
- What are *name* views on e-scooters and their use on cycle routes? It's for road use only, not footpaths. Does it include road?
- It includes road. Camcycle wrote a response to the consultation last month and are accepting that they're going to be there; we have electrically assisted pedal cycles and see no problem with them using cycleways. Don't want to mix them with heavy traffic they have the same footprint as cycles. Basically, we are accepting of them being there, we already have electric assisted bikes, as long they are the same

characteristics as them, I see no problem in people using them. They shouldn't be mixed with heavy traffic. Concerns me that they have legalized 500 watt bikes.

- Use of e-scooter a significant issues for pedestrians and is one of concern especially if they're on routes that are pedestrian and cyclist shared.
- It would be great if we could get some of the basics in place first innovation for Cambridge might mean getting the basics in place before i.e. e-scooters
- We're very concerned re e-scooters being used on paths and wouldn't want to see that. Many shared use paths are not well designed even for cycling and that needs to be fixed first. Scooters can be a mobility aid in the same way as cycles. *name* had the idea of light rail on Birdwood Road; if there's CAM or light rail provisions it might pop up in the east of Cambridge near the airport or Birdwood Road.
- Deliveries: provision for the different types of cycles especially if freight becomes more prevalent. How they can move with ease.

Appendix B – Map Based Comments

Note: Duplicate entries have been removed.

- Mill Road railway bridge MUST remain open to all traffic. Closing it to cars will kill off the local shops and businesses and just move any traffic to other routes making it even worse elsewhere.
- A proper cycle path should be put on this part of Coldham's Lane but by using the verge, not narrowing the road in any way shape or form.
- Remove these traffic lights, they are completely unnecessary and cause hours of pointless delays, possible replace with a mini roundabout.
- Remove these traffic lights, they are completely unnecessary and cause pointless delays.
- Change the timings on these traffic lights, they always turn to green on Langdale Close even when nothing is waiting to come out, the amount of traffic that uses this is minimal (1 car an hour) yet every time the lights change everyone is held up for 15 seconds longer than necessary adding to unnecessary delays.
- Improve the cycle paths on both sides of the road so that cyclists actually use them occasionally but do so by using some of the verge, do not narrow the road under any circumstances.
- Scrap the "Dutch" roundabout, this will be a death trap for cyclists and cause numerous accidents involving both cyclists and cars. The whole concept is ill thought out and a waste of money, it should be scrapped before you have blood on your hands. And finish the work...
- Please accept that some people have no choice but to use a car and therefore put proper vehicle access in and improve the surrounding roads as they struggle already with the amount of traffic and traffic lights.
- The ramp between the cycle path and the road here needs to be significantly wider and ideally further away from the roundabout. At the moment you need to check for traffic coming from the bridge behind you and traffic on the roundabout while aiming for a ramp which is about 60cm wide.
- The existing station square is a disaster for cycling (and not great for pedestrians or vehicles either). There needs to be a clear cycle route between the cycle park, across the square and into the bus station and onwards to the guided busway to the south.
- The transition from the Tins path to the road here is awkward as you turn left and immediately end up on a roundabout where you move left again, so are effectively doing a U turn. A bit more tarmac would ease this.
- The existing bridge over the railway is dangerous to both cycles and pedestrians as it is narrow, has sharp bends, poor sightlines and steep ramps.
- The tunnel under the A14 here is adequate (and any improvements would not be cost effective), but has sharp turns either side that could be opened out. There are bollards at the ends of the tunnel that also make turning into it difficult.
- This junction has poor sightlines, and it can be difficult to be sure that it is safe to cross even when stopped.
- There is a disused railway line here that is used as an informal walking and cycling path. With improved access at each end and a little tidying up it could be a useful alternative to the path which now goes through the Marleigh development, e.g connecting to High Ditch Road and the Low Fen Drove Way bridge over the A14 to provide an alternative route towards Stow (place name censored by dumb computer) Quy.
- There is a wide verge along this side of Barnwell Road with a tree line between the path and the road that could easily be designated as a Bridleway and could give access to Coldham's Common.
- Chisholm Trail needs to be opened up to equestrians this would give access to Coldham's Common and Ditton Meadows.
- Equestrians to be given "walk only" access to Wadloes Footpath.
- Equestrians to be given "walk only" access to this footpath, which will connect to the new footpath due to be created around the edge of the Marleigh Development.
- this is due to become a bridleway as part of the Marleigh Development. I'd be grateful if someone could contact me with the timeline for this.
- Mounting block on each side of bridge over A14 parapet is too low to be safe to ride over riders need safe place to remount after leading across.
- Possible to make this footpath into a bridleway?
- If the footpath directly North is deemed to narrow for walk-only equestrian access, make this little cut-through accessible to equestrians, to connect horse riders from Fen Ditton to the Marleigh bridleway.
- A bridleway around Coldham's Common, please, with a surface suitable for cantering. Or... here's a novel idea... how about a community arena 20 x 40m doesn't need to be fenced, just an area with drainage and an all-weather surface. Like a community tennis court, but for horse-riders.
- I don't know what this green space is could it have a bridleway across it, to connect the city and Fen Ditton with Teversham?
- New railway station serving adjacent business parks and hospitals, Peterhouse Technology Park (home to ARM), Fulbourn, Cherry Hinton and Teversham.
- Longer-term idea as part of airport redevelopment: re-route the railway line to the north, through the airport site to re-join existing line east of Fulbourn. This could avoid four level crossings and allow for faster running of trains. The existing line would then be released for a light rail service, running more frequently with more stops.
- The Chisholm Trail may cross Coldham's Lane here. Perhaps a Dutch Roundabout should be considered?
- "Bridge clearance is 4.2m (13'9"") Scania Enviro 400 MMCs are 4.2m (13' 9"") to 4.3m (14'1"") Not sure if (eg) Stagecoach's 15291 YN17ONA 2017 76-seater vehicle would fit.
- Could the road be excavated to give the necessary clearance for a high-capacity bus route?"
- Coldham's Lane could provide a fast, direct bus service to the city centre. This will be needed with the LNCH development. It currently has a minimal service.

- Use New Square as a terminus for guided and P&R buses from all directions, forget about the using the Backs except for tourist coaches.
- "Could a rail station be built at this point, with a bus interchange?
- (Without felling the trees.)"
- "Could a bus pull-in, for services in both directions, be created at this point?
- This would reduce service times by approximately 8 mins."
- Could the dual-carriageway from the railway line to East Road be re-purposed with the current city-bound side assigned to two-way bus operation with adjacent segregated cycle provision and the current out-bound side carrying all other traffic?
- Make Mill Rd Bridge closure to cars permanent cycling over the bridge feels much safer and has a knock-on effect of making Mill Road quieter and more pleasant to walk and shop on.
- Cycle lanes here too narrow and not properly segregated. There is space to install a Hills Road type lane here, which would improve safety and enable more people to cycle.
- Agree entrances to underpass (and the approach path from the south) need improving. Also the lighting in the tunnel needs to be brighter.
- Why has the rising bollard that was here been removed? Needed to stop rat-running between Newmarket Rd and Coldham's Lane
- Cycling provision along the Newmarket Road between East Rd and Airport Way is patchy and inconsistent. The development of housing on the Marshalls site will mean 100s of people travelling along this road; a safe and segregated cycleway along it will enable far more people to use it than just the minority of cyclists currently able and confident enough to battle through the traffic.
- The east-bound provision for cycling here is awful cyclists are directed to a lane squeezed between cars or HGVs. It's not safe for children or other vulnerable cyclists.
- Even as a confident cyclist I find heading westbound here difficult there are no cycle lanes and you need to move to the centre of the road to avoid being hooked by traffic turning left into Barnwell Rd. This junction is a major obstacle to safe cycling provision in this part of Cambridge.
- Cycle provision southbound along East Road between here and Mil Road is inconsistent and patchy. A mix of mandatory and advisory cycle lanes (both far too narrow and unsafe) and no lanes where motor traffic is given priority. It is not a safe environment for cycling and needs to be improved.
- The cycle lane here ends and places cyclists in the path of left-turning cars here. The junction would be improved if the path was more clearly marked and/or raised to give cyclists clear priority and make cars slow down.
- Very few cyclists use the underpasses here. Perhaps this is because of the barriers that make getting started up the slopes difficult; perhaps because it takes much longer than risking riding on the roads; perhaps because people feel unsafe using it. It would be better to have safe cycling provision at surface level to get round in the same time as you would if driving a car.
- The mini-roundabout here is often blocked by cars and taxis in all directions; it's a danger to cyclists coming to or from the cycle park.
- There is no safe or clear cycle route for those riding from the south via the Guided busway to get to the cycle park. The whole layout of the station square is a mess.
- Cycle crossing facilities needed here from the cycle path on the west side of Airport Way to Church Road. At present, cyclists coming southbound have a crossing about 200 m north of here to a narrower pathway on the west of the road, but it turns into Church Lane on the pavement and into a double-fenced barrier; cyclists coming from the south are expected to join a 60mph road and move across it to a right hand filter lane (photo). Not safe for children or vulnerable riders.
- The chicane barriers on this cycle path make it hard for non-standard cycles (cargo bikes, trailers, tricycles etc) to use this cycle path. It is unnecessary and should be removed.
- This roundabout is totally unsuitable for cyclists. There are many ways in which it could be improved picture illustrates proposed new Lea Bridge Rd Roundabout in east London which is a similar size.
- The speed cushions along Cromwell road are not protecting cyclists from traffic. There isn't a designated cycling lane, vehicles swerve into cyclists in order to straddle the speed cushions.
- The speed bumps are very unpleasant to cycle over. This street as well as Catherine street have the raised brick type of speed bump across the whole street which causes a teeth jarring impact for cyclists plus all your shopping gets thrown out of your basket of panniers. The rat running motorists who use these roads to cut through have suspension in their cars and vans. Maybe some kind of flat space in the centre for cyclists?
- Close Mill road to all traffic except bus and cycles. It's so much better now. I don't feel anxious crossing this bridge anymore.
- After negotiating the width barriers cars and vans accelerate wildly down Cromwell road before encountering the first set of speed bumps which are 100 metres down from the roundabout. Can we have some extra traffic calming here? A big slow sign, speed bump or a 20mph that isn't the size of a saucer.
- A segregated cycle lane along Cromwell road would be beneficial. Maybe some trees in an avenue along here too. It's wide enough, Ridgeons have gone now is there any reason to have such a wide road just for just cars and lorries? It's on the Chisholm trail but this road is so poorly laid out for cyclists.
- This is just awful for cyclists. This is an embarrassment for any visitors to our city arriving by train. No idea where to go and no marked cycle paths anywhere to be seen. Good luck negotiating the taxi rank and half finished car park if you need to go north. The cycle park would be great if there was a functioning security system and the racks weren't easily dismantled by thieves.
- Surface here is very poor please consider re-surfacing
- Very narrow cycle path, barely wide enough for two cycles to pass, especially if either one is a cargo bike. Needs widening!
- This is dual carriageway, yet the inside lane could easily be a cyclepath
- Wouldn't it be nice to have a cycleway through Stow-cum-Quy, to link up the existing cycleways?
- Cycleway should have priority over side access to garden centre, but oddly doesn't.
- Ridiculously narrow cycleway here, without even enough width for cycle symbol. Need joined-up full-width cycleways along Newmarket Road.
- Dual carriageway here, yet cars soon hit the pinch-point just before Burleigh St, so why not make the inner lane a cyclepath?

- Gonville Place needs cycleways on both sides of the road for the whole length. Set a speed limit of 20mph for motorised vehicles and reduce lane-width to get more room for cycleways
- The Carter Bridge is a disgrace. It looks awful, and is likely a health hazard. The Perspex covering should be removed.
- The turn from the path to Ditton Meadows towards Ditton Walk is tight, has a badly profiled ramp and no visibility. Moving the path between Howard Road and Ditton Walk a metre or two to the south would help.
- There is a disused railway line here with part of the track still in situ. This could be used to provide a link between the existing paths to the east and the Chisholm Trail.
- Add a 20 mile an hour limit, traffic regularly speeds on this residential road which has a park and school (not to mention homes).
- Prevent lorries/heavy goods vehicles from using Coldham's Lane as a shortcut (there is a turning circle here for this purpose).
- Encourage use of the ring road, Coldham's Lane is currently used as a cut through by large quantities of traffic (cars and heavy goods vehicles), for example the proposed filter. Reducing traffic would allow better for a better bus service, more cyclist/pedestrian use and improved accessibility for residents who need to use cars. It would also improve air quality/pollution levels.
- Widening the road to two lanes for traffic approaching Newmarket Road will significantly improve traffic flow at the junction and reduce congestion.
- Add cycling path along Ditton Lane.
- While the footpath/cycling path was improved recently, it is not wide enough for safe walking or cycling, especially at rush hour or when children go to and from school.
- "Make Park & Ride / park and cycle free in order to further encourage visitors to Cambridge city centre to use public transport or cycle.
- Move the Park & Ride closer to A14 and link as much as possible via bus lane (most Newmarket Rd is) to improve traffic into town."
- "Perceived safety is equally important if we want to encourage more people to cycle. Directing cyclist along a narrow cycle lane squeezed between to fast moving car lanes feels very unsafe.
- Some cyclist actually stay in the car lane when turning left either because they don't know or because they don't feel safe having a car at speed on their left."
- "Segregate the direction of traffic to prevent cars from Barnwell Rd heading North towards the Newmarket Rd roundabout to turn right to get to the shops there.
- It is not safe"
- Indeed, this roundabout is dangerous to cyclist and no provisions are made for them
- "Coldham's Lane railway bridge is too narrow.
- Building an adjacent bridge of the same dimensions to handle one direction of traffic would allow the necessary width for safe provisions for pedestrians and cyclists"
- "This bridge is too narrow to feel safe as a cyclist or pedestrian.
- Closing Mill Road to cars would be ideal. Alternatively introduce wide segregated cycle lanes and make the road for cars narrower by introducing traffic lights on each end of the bridge."
- Link the guided busway to Clifton Way via a bridge
- Ending the cycle path from the bridge here at a T junction after a seriously steep decline means you must really trust your brakes.
- "Prevent cars from parking on the green space. Some nearby businesses use this patch of grass as their personal parking lot.
- Plant more trees if you must
- I agree with [redacted], very few people use the underpass. I don't
- "Discourage through traffic on Mill Road, but add cheap or free short stay parking on adjacent roads to serve clients visiting the shops there.
- Mill Road is a beautiful lively place that would be even nicer if it had wider pedestrian areas.
- Restricting all traffic except cyclist wouldn't be a bad idea"
- "Widen the approach to the roundabout sooner and make two full-width lanes.
- Most cars go straight or turn left at the roundabout, very few turn right, so making the left lane left-turn only would improve the flow of traffic."
- Cycle path surface is in disarray: full of cracks and terribly bumpy to ride on, which is why some cyclists prefer to ride on the road despite the dangers from the fast moving traffic
- "Why are cyclists forced to take this awkward detour around this narrow path along a brick wall?
- Remove the fencing and create a direct cycle path crossing over Peverel Rd."
- Could we widen the road in order to introduce a buss lane on this section to continue the existing bus lane west bound?
- Allow the use of these parking bays to motorcycles for unlimited time period.
- Direct incoming P&R buses along Newmarket Road instead of East Road and use the current car parking area as a dropping off point.
- I work at the Railway Station and have to cross Mill Road here every day please please please keep the bridge closure permanent! It's
 so much safer for pedestrians and cyclists, the buses can run more reliably, and I'm much more inclined to use the shops here now that
 the traffic isn't so atrocious!
- The two retail parks create an obscene amount of road traffic perhaps a bus route linking Newmarket P&R with Addenbrookes, calling at Coldham's Lane and Brooks Rd could be looked at?
- Zebra crossing needed at the entrance to ALDI this side of Newmarket Rd would be a good candidate to have segregated bus and cycle lanes, with all other traffic using the other carriageway in both directions
- Residents parking zone failed here, but maybe consider double yellowing a longer stretch of the road leading up to the traffic lights?
- The cycle route east of here seems to be fairly decent, but to the west it's very poor. Keep the cyclists segregated from everybody else, and everyone wins!
- Great that there's a cycle-only entrance to New Street facing west, but what's the point if you immediately face a line of parked cars and have to ride into oncoming traffic?
- Turn the zebra crossing into a pelican crossing I've nearly been run over here on several occasions!

- Counter point to [redacted] the evidence from the previous closure is clear that the effect on traffic elsewhere is marginal at best. Pedestrianisation is generally good for businesses, and people who live along Mill Road who don't have a car have suffered for far too long with the Citi2's traffic-induced poor timekeeping.
- The proportion of journeys to this area by taxi must be tiny in comparison to every other mode so why does the taxi rank have such prominence? Why should it be allowed to take up so much space? Why couldn't this be a cycle park, or even just a nice plaza space?
- Mill road bridge closure is killing mill road and all the eclectic shops, FACT!. Last year the traders were down 20% on revenue and that was just 6 weeks. The traffic went to other roads thus moving the pollution and not addressing it FACT. The stats that the council hold are not fit for purpose and these cannot be used to judge what will happen this year. Coldham's Lane now has 3 x times the traffic it had before the bridge closure. Complete madness!
- The current location of Newmarket Road Park & Ride is bringing cars into the city. Locating it further out and close to a junction will help ease the traffic continuing to use the A1303. More people would be likely to use the Park & Ride here as it would be more effective.
- Cycle route needed through Quy to join up with cycle path to Lode at the end of the village. Road is very busy at peak times, and turning right to get onto cycle path not pleasant
- Junction improvement urgently needed to let buses through at peak. Buses from Burwell and Newmarket get stuck here for ages in the morning so no one uses them.
- Park & Ride needs to be here not near airport, but junction MUST be improved to let buses through. Would massively speed up getting into town at peak times
- Bike tunnel is good but needs better lighting and entrances straightening out. Surface is in a bad way and needs repairing as far as the T with the main road
- Reopen the station and improve the service from Newmarket. It is hopelessly infrequent during peak hours
- Improve cycle route from here to Tins cycle path and avoid right turn at traffic lights.
- Need frequent direct busses to the station and on to Addenbrookes
- This roundabout is dangerous for cyclists crossing from east to west or vice versa. I avoid it! Improvement needed.
- Create Park & Ride in this area (quicker access from A14 West bound)
- Tunnel regularly floods and approach from south surface is terrible.
- No formal cycle paths through Quy village to link up with the network either side. Particularly difficult in rush hour as queuing traffic makes on road use dangerous
- Improve traffic flow (bus priority please) through this roundabout. Rush hour queue bad and getting much worse. Including the A14 slip three busy roads into Cambridge merge here.
- Another call for a much wider bridge separating cyclists from pedestrians, widening the approach path, and clearing back the vegetation while providing proper street lighting so that it is more accessible and feels safer for cyclists and pedestrians.
- Re-route the existing very narrow path round the back and onto Railway Street and High St (as per red line)
- Another call for a rail stop heavy or light, at Fulbourn/Capital Park. Invite firms to contribute.
- Rail/Light Rail stop assuming the Lakes are opened and the Airport site becomes available for development/urban country park
- Add cycle bridge over Newmarket Road so pedestrians and cyclists coming from Teversham & Cherry Hinton can access the ice rink without disrupting traffic. Far safer for children.
- Segregated footpath and separate cycleway a safe gap from motor traffic linking Teversham & Cherry Hinton to the Ice Rink.
- Reroute the Citi3 bus route so it stops outside Tesco supermarket more accessible for people with mobility limitations.
- Improve and landscape the footpath & cycle path towards the CamTechMuseum & Bar. Esp given completion of Lottery-funded £1m upgrade.
- Once Chisholm Bridge is complete, cycle and walking signs to the Abbey Stadium (Cambridge United) & Abbey Pools/Leisure Centre.
- Once Chilsholm Trail is complete, cycling/walking signs to Cambridge United FC/Abbey Stadium and Abbey Pool/Leisure Centre
- Electric bus shuttle on match days for Cambridge United football matches from P&R Newmarket Rd.
- When the airport moves, a large portion of land needs to be an urban country park keeping open one of Cambridge's green lungs. On tree planting, plant bee-friendly trees, not wind-pollenating ones. (Hay fever!)
- New pedestrian & cycle bridge linking the two new housing developments and their community facilities (Ridgeons & the Iron Works).
- Make taxis all electric, 2) bury the taxi rank under ground, and pedestrianise the station square.
- If/when Travis Perkins move out, set up a car pool/share service. Then ban car parking on Devonshire Road.
- Rename Rustat Road Rustat of Jesus College made his fortune from the Slave Trade.
- Add an Eastern Entrance to the railway station first proposed as early as 1906
- Footbridge from student accommodation to Coleridge Rec deals with complaints about ball games.
- Footbridge/cycle bridge plan from Cambridge Development Plan 1950.
- Repurpose and redesign site of pub and Lichfield Hall, and upgrade the very narrow passage to Perne Rd from Lichfield Rd. Create a bigger community hall and pub building, and bigger green space.
- Upgrade, improve cycle path from Burnside & Cherry Hinton to the Carter Bridge/Railway Station.
- Removing the pram arms here and replacing them with a gate would make it easier for walking.
- There are no crossings for pedestrians at this roundabout, meaning they have to make long detours to cross any of these roads. Could pedestrian crossings be added?
- As others said, both lanes should be better defined earlier as we approach the roundabout from the north. They also need to be correctly marked, as most people respect that left lane either turns or goes straight and tight lane turns west on Coldhams's lane, but various don't respect that. As a result of cars on the right lane trying to go straight, there is an accrual at the roundabout as the second exit gets busy due to both traffic and the pedestrian crossing in front of Sainsbury's.
- Stop the use of the greenspace here as a match day car park for the football
- Somewhere between Rayson Way & Whitehill Road, restrict [private motor traffic to remove the use of the estate as a cut through
- Change the junction from a roundabout to a signalised crossroads- adding in separated cycle lanes and pedestrian crossings on every
 arm on the desire lines. A "Cyclops" type junction could help to regulate traffic in all directions

- replace the junction with a "Cyclops" type cross roads
- The Park & Ride should not be put near here. It is too close to the city centre. This location would not be practical as service users would be coming this far into Cambridge when they may as well continue and park at the retail park for free. This location would not help solve the serious congestion problem.
- "Proper segregation of cycle and motor traffic is needed in both directions.
- Through cycling needs to have priority across side streets."
- A modal filter from here to Sainsbury's roundabout to restrict through traffic would make this residential section of road a safer healthier place to live.
- A Modal Filter from here to Asda Roundabout to restrict through traffic would make this residential section of Coldhams Lane a safer place to live.
- Provide a clearly segregated cycle lane and move back stop line to reduce cycle/ car conflicts here
- I support the 40mph introduction on this section of the road but it is almost universally ignored. Speed camera opportunity?
- Provide a clearly segregated cycle lane and move back stop line to reduce cycle/ car conflicts here
- Provide a safe cycle route here to avoid conflicts with cars and pedestrians
- Adding a crossing here would make this junction easier to negotiate for pedestrians, and would avoid having to detour to use the crossing on the other side of the roundabout
- Visibility on this roundabout is bad, as the roundabout and the greenery planted on top of it make it impossible to see traffic entering the roundabout from the opposite side. Clearing off the greenery and making the roundabout flatter would improve visibility and give cyclists more confidence in using this junction.
- Many cyclists use the footpath down Ditton Lane from/to the cycle path on Newmarket Road. Could wide Ditton Lane path be turned into an off-road shared cycle path (particularly as Ditton Lane is so narrow in places)?
- This triangular area between footpaths feels very much like a dead-space with a sad-looking bench. Potential for improvement through planting etc.
- Make Devonshire Road one-way. It is so narrow in places that it is a one-way street masquerading as a main thoroughfare.
- Many problems with this roundabout. The entrance here from Coldham's Lane (East) is awful far too close to entering traffic from Barnwell Road *and* trees/bushes on roundabout island obscure view of traffic coming round from Coldham's Lane (West).
- This cycle/pedestrian interchange creates lots of conflict between users with cycle markings often ignored by cyclists coming off the bridge and continuing along Newmarket Road towards Tesco.
- Possibility for sunken lights in footpath/cyclepath to gently illuminate the route across the Meadows in the dark? This is done well on nearby Wadloes Footpath. Issue of navigating in dark likely to increase with new bridge to Cambridge North station.
- Crossing Newmarket Road as a pedestrian is very difficult here, with no options between Starbucks entrance to Retail Park and cross opp. Abbey Lane. Many just dash across the carriageway. Possibility of creating pedestrian crossing opportunities in the River Lane junction area?
- There needs to be a clearer end/start to the cycle lane here. Bikes often come down the slope from the railway bridge at speed and continue around the corner to Cromwell Road on the pavement, coming into conflict with pedestrians.
- The pavement on the northbound side of Ditton Lane is so narrow that a pram barely fits down the pavement, and it is impassable as a pedestrian when bins are out for collection.
- Provide a clearly segregated cycle lane and move back stop line to reduce cycle/ car conflicts here
- Clearer signposting for cars exiting the junction would be helpful here as many swerve across to avoid entering the bus lane on Elizabeth Way bridge.
- No regular/semi-regular bus route down A1134. The 'hub and spoke' model of taking routes into Emmanuel Street (via Newmarket Road, Coldham's Lane, Mill Road) means connections between eastern areas are minimal. A route from East Barnwell to Addenbrookes would be helpful and unlock travel options in this growing part of the city.
- Bridge across Brook is not smoothly connected to road surface, creating substantial 'step' up and down when crossing the bridge. Imagine it is a noticeable bump for a car too.
- The bridge under the railway is very narrow, if it is to be part of the Chisholm Trail it needs to be wider so 2 bikes can pass
- The proposed exit from the Chisholm Trail bridge is a tight u turn back onto the level crossing. Could it be safer/better?
- Needs an improved safe cycle crossing for accessing teversham primary. Existing pedestrian refuge won't accommodate tandems/cargo bikes etc. Toucan crossing would be good.
- Cycle path joining mill drive here is entirely blind for bikes and cars on the drive way. A short section of railing and path parallel to the drive along its edge (say 20') would make this junction much safer.
- Very unclear that this is actually a road not a cycle way where traffic on the driveway has priority as you come out of the tunnel on to the mill drive. Having just come out of a dark tunnel in to the light, if you don't know the route, it's really easy to miss the very fade give way on the ground. Some sort of eyelevel signage on the fence opposite would be good.
- Please change the light phasing and/or add a sign that cyclists can cross straight over. Car drivers turning right from St Barnabas Road usually don't realise that people cycling are allowed to ride ahead out of Gwydir Street. I have had several near misses here and have seen people being forced off their bikes by drivers.
- We need a segregated cycle lane here. This stretch is currently horrendous.
- We couldn't use the underpass with the Cargobike and are struggling with the tandem because of the barriers. Also the sight lines are poor and it is not woman-friendly at night.
- The pedestrian crossing phasing needs to change to allow a swift crossing in one movement.
- This junction needs improving, allowing segregated space for people walking or cycling. The shared use path is very narrow and hence people often walk in the cycle lane.
- The cycle lane needs to continue onto the roundabout to allow smooth continuous movement. There is plenty of space in the verge. The existing merge point is dangerous. People have to join from a right angle into two lanes of moving car traffic.

- I know it is outside the remit of this consultation, but This road is in urgent need to become cycling (and walking)-friendly. To start, please reduce the speed limit.
- "This junction needs massive improvement. We need a traffic light phase for Northbound cyclist turning right onto Stourbridge Common, and as stipulated by other commenters more space is needed to avoid conflict with other road users.
- Secondly, there needs to be a clear uninterrupted movement onto the cycling bridge. If you don't know it is there, it is easily missed."
- Minor issue, but additional signage would help here, and/or improved entrances to the underpass.
- Add signage for drivers to indicate the road is two-way for cycling. I have had numerous drivers trying to intimidate me, or even shouting at me for legally cycling contraflow.
- Improve facilities for cyclists going straight ahead towards Barnwell Road.
- Improve facilities for cyclists going straight ahead.
- This cycle lane needs moved so it starts right at the exit of the roundabout. On a bicycle you need to approach the dropped kerb at the right angle to avoid skimming, so you need to move out a bit, but cars are speeding up (it is a 40mph lane) as they leave the roundabout, hence this creates a conflict.
- Reduce turning radius and slip way into petrol station. It's a huge expanse to cross on foot/bike and encourages high speed turns into petrol station.
- Houses here treat pavement as personal driveway, forcing pedestrians into cycle path and increasing risks for all.
- "Cars and delivery vans continually double park on yellow lines and cycle lane on this section. Forcing cyclists into conflict with main traffic flow. Complete lack of enforcement.
- (outside KFC/kebab shop/tesco)"
- Cycle lane needs repainting at a minimum on the bend after pedestrian crossing. It is driven over so frequently that you can no longer see paint. Segregated path all down East Rd would be feasible and desirable.
- Shape of roundabout encourages high speed traffic making it worth avoiding in a car or on a cycle.
- Trimming greenery back from bridge would make for less conflict when crossing. Currently, pedestrian side is usually overgrown.
- Disallow parking on forecourt of Papa John's. Delivery drivers frequently reversing onto pedestrian crossing and using pedestrian phase to enter traffic.
- Build out/protect cycle lane on this exit corner. Cars always cut the corner, and drive over cycle lane. Very uncomfortable as a cyclist.
- Trim vegetation along this shared path or widen area around trees and reduce parking. Very narrow for number of users cycles and pedestrians.
- During the temporary partial bridge closure to help social distancing and before considering making it permanent for different reasons, enforce 20mph speed limits but allow electric powered vehicles to cross the bridge to encourage cleaner vehicles. Remove the build-outs until permanent ones are democratically considered after the emergency.
- Could the cycle route to Bottisham VC cut across the fields at the Missing Sock junction? It would be much better if it avoided Bell Road and the tight junction with the High Street.
- This path would be safer with a properly segregated cycle lane. Cars accessing Quy Mill Hotel can be travelling at speed and the path is quite narrow near the tunnel.
- Coldham's Lane is only going to get busier with the new development north of CH. Getting an off-road cycle lane (if need widen the road) so important here
- Repair barbed wire fence that's bowing into cycle cut through
- Provide cycle/pedestrian access into council units from Peveral road to avoid the need to use busy Barnwell Drive
- Provide link across Coldham's common between Barnwell Rd (near Barnwell Dr) and the Chisholm trail. This would connect the
- employment centre at Cambridge airport and nearby offices to the traffic free routes to Cambridge North
- Add controlled crossing on Barnwell Rd, for cyclists and pedestrians to ease access from Barnwell Dr to Coldham's Common
- Resurface cycleway along Barnwell Rd give priority over Rayson Way
- Have cycle route bypass roundabout and smoothly connect Barnwell Road to Newmarket Rd
- Instead of running a national cycle route across a car park, through a heavily pedestrianised zone, along a narrow pavement and with a sharp blind bend before having to give way at several intersections, run this along the edge of the fields all the way to Newmarket Road.
- This needs a sane controlled pedestrian/cycle crossing.
- Pedestrians should not have to stop twice to cross one road.
- "Move the crossing to where it might actually get used.
- Remove the silly railing install some bollards if you want to pretend something is needed to protect pedestrians."
- Give priority for crossing.
- Give priority for pedestrian/cycle crossing,
- "Since vegetation along this side is not being maintained, about half the width of the existing shared cycle/pedestrian route is lost.
- Clear all trees/shrubs 3m back from path."
- Priority should be for pedestrian/cycle crossing, not hotel visitors.
- Give priority to pedestrian/cycle crossing.
- The Dutch roundabout is long overdue very glad to see the county finishing this, which is a considerable improvement on safety, and will enable traffic to flow just as easily as before.
- "Mill Road is *SO* much safer now. The bridge closure really needs to stay.
- The backwards view of the two other commenters, that Mill Road could only survive with vast amounts of polluting traffic, is ridiculous.
- The County Council should now be investing in the street, e.g. adding planting areas, parklet seating, delivery bays, parking, cycle parking, etc. There is no reason the street cannot thrive."
- Segregated cycle route needed in Quy to link with NCN 51 and Quy-Lode cycleway
- Surface improvement needed
- Fix drainage problems N end of underpass
- Surface improvements needed

- Too narrow, overgrown on bend and poor drainage
- 2-way cycling on narrow path with blind bend by P&R entrance rather dangerous
- Cycle route through parking area crosses traffic streams with visibility blocked by planting in places; better to route cyclists around a perimeter path.
- Needs surface repairs here; path humps and cracks from tree root heave
- Hazardous crossing for cyclists and pedestrians with no phase in the traffic lights; needs a full signalised crossing.
- The cycle lane between vehicle lanes approaching the roundabout here is potentially deadly-1 know, I was once sandwiched between a bus and an HGV and I will NEVER cycle through here again.
- Barnwell Road needs a continuous dedicated cycle lane or path on its eastern side to facilitate access to key destinations such as Rutland cycles or Sainsbury's without having to cross a busy road twice. Resurfacing needed on existing cycle paths especially approaching Coldham's Lane roundabout.
- Cycle link between Tins path and Airport Way missing. Possible cycle way through 'LNCH development' from Rosemary Lane?
- This (photo) is an all too common example of why many cyclists don't use so-called cycle paths; it's narrow and shared with pedestrians, so unsuitable for anyone riding at more than about 10mph, and does not have priority over even a small side-road. If you want to encourage and enable more cycling, cycleways need to be segregated from pedestrians and have priority over side roads.
- Great need for proposed new bridge; wider track, shallower ramps and elimination of blind bends.
- Surface repairs to path needed; humps and cracks from tree roots
- Difficult to cross from Barnwell Road cycle path to Brookes Road path to get to Sainsbury's or Mill Road through fast / heavy traffic; needs a signalised crossing.
- On-road cycle lane in bad condition; coloured tarmac always seems to break up prematurely. Repair with something more durable?
- Suggest upgrade to Retail Park access here to permit both pedestrians and cyclists to use it, rather than cyclists sharing space with motor traffic at main access.
- Provide a signalised crossing for cyclists to pass from Mill Road to Parkside and vice versa using off road paths, to avoid the busy
 junction.
- Unnecessary width restriction.
- Barriers on island just pointless and push users to wait on the road beside the island when crossing.
- There should be a segregated two way cycle route across the full length of the retail park by the shops to allow safe access by bike
- There should be a segregated two way cycle route across the full length of the retail park by the shops to allow safe access by bike
- Junction needs fully protected cycle lanes at surface level e.g. Dutch roundabout or cyclops style.
- Rat runs through Harvest Way / New Street need closing.
- Please make sure any new cycle infrastructure connects with Abbey Road (links to popular riverside cycle route)
- Add cycle lanes to Gonville Place.
- Remove barriers on cycle path on Tesco site which are difficult to use on a cargo bike or other non-standard cycle.
- It would be really useful if Swann's Road could allow counterflow cycle journeys. It's an incredibly wide one-way street and it would connect up with the path over the bridge better
- The shared use path over the bridge is very narrow for several tens of metres and there's often lots of stopping to wait here. There's loads of road space that could be given to widening it
- It's not fun trying to ride through the middle of the Park & Ride. It's busy, the path is narrow, there are blind corners and people don't expect bikes. I usually take the road to get out of here, but then there's no easy way to connect back to the Newmarket Road cycleway
- This is not a nice crossing on a bike. The traffic is very fast. There must be a better solution to the current on-grade crossing
- The cycleway along here would be fantastic if it were a bit wider. There is space for this
- This link is very useful, but the path is too narrow and very accurate cycling is required for two people to pass.
- This path is useful, but the surface is breaking up with tree routes in places and width could be better.
- This section of Newmarket Road is one of the worst places to cycle in the city. The road is busy, but cycle provision is unhelpful and poor quality
- The link from Coldham's Lane to York Street is really useful, but very poor, particularly toward the roundabout. It needs to be much wider and have a much better start and interface with the roundabout
- Cycling along Mill Road is much more stressful than it used to be. I've avoided it for ages for this reason. It now make using Snakey Path etc. a nicer way from Cambridge to Cherry Hinton
- This cut through has no dropped kerb and also has chicanes, making it useless as a way of making the logical connection from Teversham Drift to the cycleway
- The crossing from Burleigh St to Norfolk St can be busy and it mixes up pedestrians and cyclists. Needs to be widened (particularly access crossing into Norfolk St) and cyclists and pedestrians segregated.
- Coldham's lane needs good quality cycling provision in view of the increased housing developments here. A good cycle lane is likely to generate high demand and should not be shared with pedestrians, who should have separate provision. Any new walking and cycling facilities should follow the design principles of the Dept of Transport's new LTN1/20 and avoid "shared use" provision along this major road.
- Convert the width restriction filters here (and either side at Cromwell Rd & Ross St) into full modal filters to prevent cars rat-running between Mill Rd and Coldham's Lane
- I work at the Railway Station and have to cross Mill Road here every day please please please keep the bridge closure permanent! It's so much safer for pedestrians and cyclists, the buses can run more reliably, and I'm much more inclined to use the shops here now that the traffic isn't so atrocious!
- There is a need for some control of taxis. Tenison Road and Mill Road have become a rat run for Taxis.
- If there is no traffic (except buses) over the bridge, this junction with the Ironworks may not be a problem. Other wise it may become dangerous, especially with westbound traffic turning right

- I hope there is going to be a decent link between Mill Road and the Chisholm Trail, in particular for east bound cycles wanting to get to the station
- There is conflict between pedestrians coming from the Beehive site, pedestrians at the crossing and cycles trying to use the new bridge. More space is needed.
- It is difficult for cyclists to cross from the cycle path on the west of the Beehive access road and the path over the new cycle bridge
- The cycle lane between the two lanes of traffic is particularly horrible due to the pot holes in the red tarmac. Improving access to the foot path would be a better option.
- This junction could be improved for cyclist moving between the path to the Fen Estate and Fison Way
- Junction here is narrow and tortuous for cyclists and there is conflict between pedestrians and cyclist in the opposite direction
- Ensure new development includes a good cycle link to Low Fen Drove Way
- This could be part of a brilliant route from Cambridge to the Loades Way.
- Consider changing speed limit from 40 to 30 here as encourages speeding near edges of a residential area and makes active travel more dangerous for this stretch.
- Existing tarmacked paths are narrow and crumbling, and very well used by pedestrians and cyclists. Assume these will be widened and segregated as part of the Chisholm trail?
- Lots of pot holes here and gravel need paving.
- Crumbling pavements need resurfacing
- Need a dropped pavement here so can cross the road to access the park with a pushchair
- Anti-pedestrian railing makes it difficult to cross here without a long detour down the road. Please remove the railing and move the crossing to the junction.
- Roundabout is designed for cars, discouraging active travel and making active travel dangerous. A complete redesign is essential here and needs careful thought and discussion with stakeholders.
- This path is boxed in and narrow, making it dangerous for pedestrians and bicycles to navigate. Needs widening and made segregated
- This turn is very difficult with a cargo bicycle, especially with the bollard. Need more space for turning here any removal of the bollard
- The eastbound lane here has a central cycle feeder lane. According to the new LTN1/20 [10.6.47] such a lane is "not usually considered safe by less confident riders and people with younger children" and if one is to be used it should be "at least 2.0m wide". Any improvements to this junction should aim to avoid the central lane, e.g., by a cycle lane that has priority (possibly signalled) over the left turn or if the central feeder lane is retained it should be widened to 2.0m.
- The bridge is so much safer closed to car and taxi traffic. Keep it like this!
- Improvements to make cycling safer across this roundabout should be in accordance with new LTN 1/20, section 10.7.6, taking account of the relatively high traffic flows across here (i.e, a "compact roundabout" is unlikely to be an appropriate solution.
- The grade separation provided under this roundabout miserably fails to meet any of the requirements of the new DoT's LTN 1/20 (see 10.8 in particular). It is not coherent (the entrances to the ramps are poorly sited and don't join clear cycle paths); not direct (the total travel distance is much further than using the road); safe, & it is not safe nor attractive. The use of chicane barriers at the foot of the ramps is another major failing (see LTN 1/20- Summary principles, 1.6 (16)). The roundabout should be improved in accordance with the principles of LTN 1/20.
- I can only assume the sign here is some sort of joke.
- The mouth of the junction into a minor dead end side road should be remodelled to be narrower and provide safe passage for cyclists and pedestrians using the cycle path, in accordance with the criteria of LTN 1/20, 10.5.7 "In urban areas, where protected space separate from the carriageway is provided for cycling, it is important to design priority junctions so that wherever possible cyclists can cross the minor arms of junctions in a safe manner without losing priority. This enables cyclists to maintain momentum safely, meeting the core design outcomes of safety, directness and comfort."
- "No cycle lanes and no cycling boxes at the junction makes it very unfriendly for cycling. Junction needs redesign to facilitate cycling help pedestrians have space to cross"
- Cycling west down Newmarket Road, you need to cross traffic from the leftmost bus lane to the middle car lane to continue travelling west down Newmarket road. Is a tricky and dangerous manoeuvre. Junction needs redesign to make space for cycling

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CAMBRIDGE EASTERN ACCESS TRANSPORT STUDY OPTIONS APPRAISAL REPORT





PART 1: LONG LIST, SIFTING AND PACKAGES 26 August 2020

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Document Control

Document:	Options Appraisal Report		
Project:	Cambridge Eastern Access Transport Study		
Client:	Greater Cambridge Partnership		
Job Number:	A081175-146		
File Origin:			

Revision:	Second Draft			
Date: 20 August 2020				
Prepared by: Ben King Ben Green		Checked by: Steve Boden	Approved By: Alistair Gregory	
Description of re				

Revision:				
Date:				
Prepared by:	Checked by:	Approved By:		
Description of revision:				

Revision:				
Date:				
Prepared by:		Checked by:	Approved By:	
Description of revision:				

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1 | Background

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1.0 Background

1.1 Overview

- 1.1.1 This document forms the Options Appraisal Report (OAR) for the Cambridge Eastern Access Study. It details the need for investment in public transport improvements and supporting active travel measures in the east of the city, the areas of intervention through which this need could be addressed, the process through which these options have been evaluated and the outputs of the assessment of alternative packages of investment.
- 1.1.2 The OAR forms one of a suite of documents which together comprise the Cambridge Eastern Access Study (see <u>Figure 1.1</u>). It builds upon the findings and recommendations of the Baseline Report which should be read in conjunction with this report and aligns with similar studies commissioned by the Greater Cambridge Partnership (GCP) across the city on corridors to Cambourne, Haverhill and Waterbeach

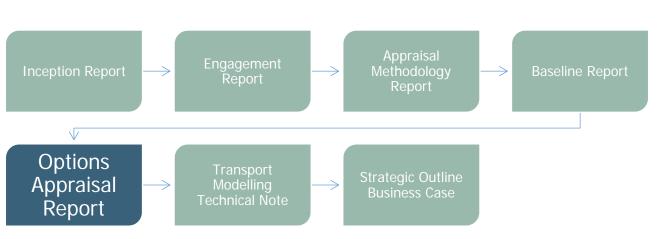


Figure 1.1: Cambridge Eastern Access Study Documents

1.2 Objectives

- 1.2.1 The study has been undertaken to identify measures to address existing shortcomings in sustainable transport provision in the east of the city and capitalise upon extensive opportunities for housing and jobs growth. In this context, three clear objectives were identified at the conclusion of the Baseline Report to provide a structure and framework to help shape the option identification and appraisal process. These objectives are as follows:
 - **Capacity** Provide the public transport capacity to accommodate the projected increase in travel demand associated with housing and employment growth, prior to the opening of the Cambridgeshire Autonomous Metro.
 - **Connectivity** Improve accessibility to jobs and opportunities by public transport and active travel modes through a reduction in journey times in the short to medium term.
 - **Communities** Contribute towards the creation of safe and attractive communities by reducing emissions, the divisive impact of major roads through residential areas and the dominance of traffic.
- 1.2.2 Together it is felt that these objectives reflect the current and future requirements of transport provision along Newmarket Road and more broadly across the east of the city, with supporting criteria through which to measure the respective contribution of future scheme option.

1.3 Study Area

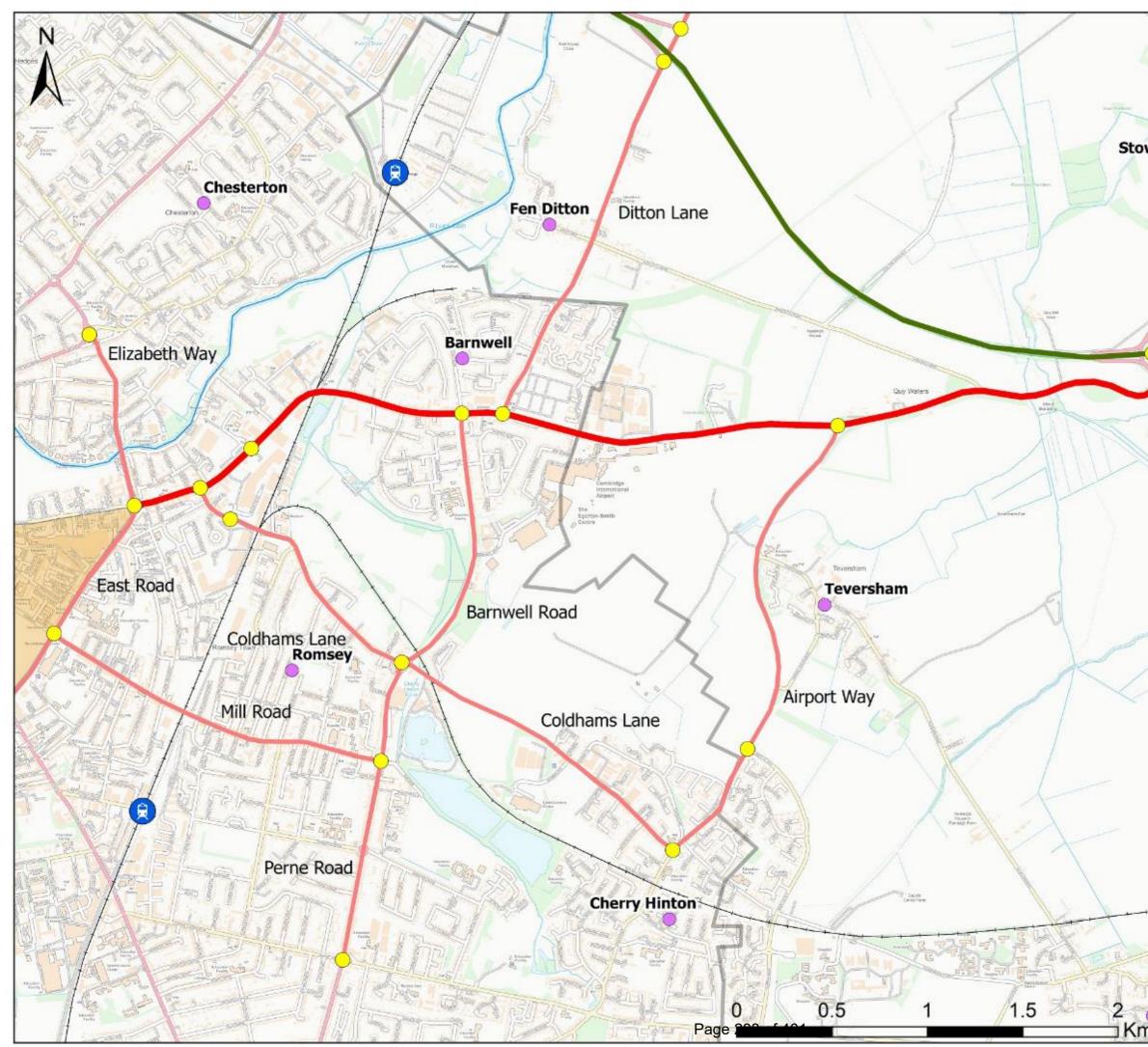
- 1.3.1 The study broadly covers the Newmarket Road corridor and the surrounding area, from Mill Road and Coldham's Lane in the south to the A14 and Ditton Lane in the north, and from the Quy Interchange on the A14 in the east to the Elizabeth Way roundabout in the west.
- 1.3.2 The area is subject to high volumes of traffic and is the location for significant growth proposals which could see the expansion of the city to the east with the redevelopment of the airport site. In the longer term it is anticipated that the Cambridgeshire Autonomous Metro will serve the area via a route extending to Mildenhall.
- 1.3.3 The corridor forms the main gateway into the city from the east, and whilst it accommodates many eastwest movements into and out of the city centre, it also forms an important leg for strategic trips between the north and south of the city, particularly for those wishing to access employment opportunities within the science park to the north and at the Biomedical Campus to the south.
- 1.3.4 The mix of land uses along Newmarket Road ensures that it remains busy throughout the day and Abbey Stadium, home of Cambridge United Football Club, represents a significant trip generator and destination on match days throughout the football season. A map of the study area is provided in <u>Figure 1.2</u>.

1.4 Policy Context

- 1.4.1 The Cambridgeshire and Peterborough Local Transport Plan (LTP) provides the long-term vision and strategic framework for investment in shaping the travel choices and the role of transport in the years to come. This study aligns with the high-level goals of the LTP in seeking to:
 - Economy: Deliver economic growth and opportunity for all our communities.
 - Society: Provide an accessible transport system to ensure everyone can thrive and be healthy.
 - Environment: Protect and enhance our environment and tackle climate change together.
- 1.4.2 The study has also sought to identify solutions to address current issues within the Newmarket Road corridor and through which to provide a step-change in the look and feel of the transport offer, and provide the capacity and connectivity to facilitate sustainable growth, echoing the thrust of the overarching vision of the LTP.
- 1.4.3 In terms of growth, the emerging Greater Cambridge Local Plan will detail the scale, nature and location for housing and employment provision to come forward. Whilst the study could not be informed by the decisions on these allocations, it was progressed in a way which will embed flexibility in the options taken forward, future proofing the findings of the study to the Local Plan approval process.
- 1.4.4 At a local level, the study has also been developed to support the aspirations of the East Barnwell Regeneration Study, and at a more strategic level, address the salient points of the Cambridgeshire and Peterborough Independent Economic Review.

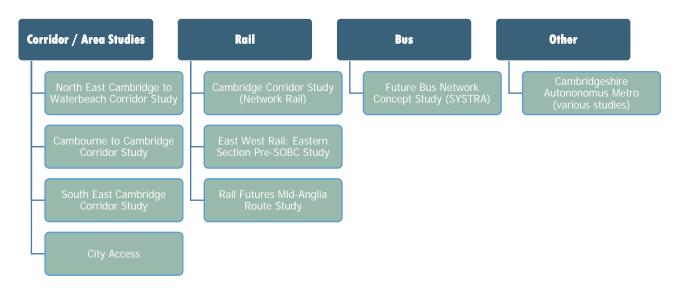
1.5 Alignment with Other Transport Studies

- 1.5.1 The study is one of a series of projects through which the Greater Cambridge Partnership is seeking to better understand the need, shape and future direction of transport investment across the city. It has sought to reflect and complement interventions identified by the GCP through other corridor studies and align with more strategic assessments and initiatives being led by a variety of partners within the sub-region and beyond, as illustrated in Figure 1.3.
- 1.5.2 Furthermore, the Cambridgeshire and Peterborough Independent Economic Review (CPIER) commissioned and funded by Cambridgeshire and Peterborough Combined Authority in 2017, suggested that the level of investment in transport infrastructure has been inadequate for too long. The report suggests that unless urgently addressed, inadequate transport could become a hindrance to growth. Intelligently planned transport links are required to avoid worsening of congestion.
- 1.5.3 The study investigates how this can be addressed in the east of the city.



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Figure 1.3: Alignment with Other Studies



1.6 Guidance on the Appraisal Process

- 1.6.1 This OAR follows the guidance provided by the Department for Transport (DfT) entitled 'The Transport Appraisal Process', which details the process to be undertaken in the appraisal of transport interventions¹.
- 1.6.2 The Report is structured to adhere to this and highlight the necessary steps which have been undertaken from the initial understanding of issues and option development, through to the detailed appraisal that supports the preparation of a business case, to subsequent approval stages and post implementation evaluation.
- 1.6.3 The three stages in the DfT's transport appraisal process are illustrated in <u>Figure 1.4</u> and comprise:
 - Stage 1 Option Development. This involves identifying the need for intervention and developing options to address a clear set of locally developed objectives which express desired outcomes. These options are then sifted for the better performing options to be taken on to further detailed appraisal in Stage 2.
 - Stage 2 Further Appraisal. Requires the assessment of a small number of better performing options in order to obtain sufficient information to enable decision makers to make rational and auditable decisions about whether or not to proceed with an intervention. The focus of analysis is on estimating the likely performance and impact of intervention(s) in sufficient detail.
 - Stage 3 Implementation, Monitoring and Evaluation. Focuses on the identification of indicators to verify whether implementation is 'on track', and to what extent the intervention is achieving its intended objectives.
- 1.6.4 This OAR covers Stage 1 and Stage 2 of the DfT's process and will inform the development of a Strategic Outline Business Case (SOBC). In turn it is consistent with Green Book guidance, the basis upon which Central Government develop transparent, objective, evidence-based appraisal and evaluation of proposals to inform decision making².

¹ <u>https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/712965/webtag-transport-appraisal-process-may-2018.pdf</u>

² <u>https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/685903/The_Green_Book.pdf</u>

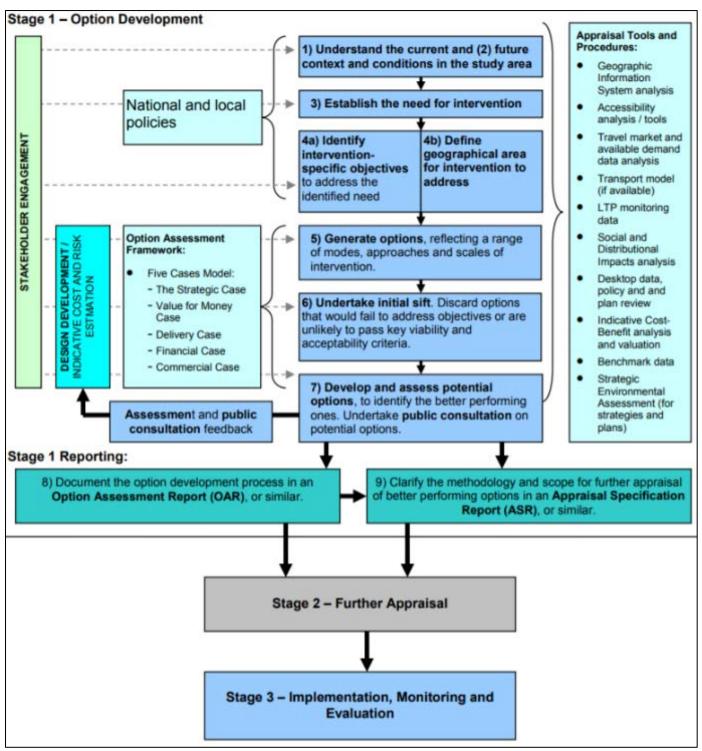


Figure 1.4: The Transport Appraisal Porcess

1.7 Structure of the Report

- 1.7.1 The OAR provides a step by step overview of the process through which ideas and options have been identified and considered to address current sustainable transport requirements on Newmarket Road and in the broader eastern access corridor, together with catering for future need in the period up until 2036. The Report is structured around the following chapters.
 - Chapter 2 | The Need for Intervention Summarisies the findings of the Baseline Report which makes the case for investment in Newmarket Road, detailing the current and future issues expected to be experienced by road users in the corridor.
 - **Chapter 3** | **The Long List** Sets out the Long List of schemes considered to provide potential mitigations to the issues on the corridor, providing an overview of each area of intervention and location plans highlighting each individual option.
 - Chapter 4 | Sifting of the Long List Details the sifting framework upon which the Long List of schemes has been assessed and the outcomes of this process, concluding with the identification of a Short List of schemes to be considered within packages to be considered in more detail within the transport model.
 - **Chapter 5** | **Packaging of the Options** Presents the alternative packages of schemes and approaches through which to meet the objectives for the study, and the rationale behind the scenarios.
 - Chapter 6 | Next Steps Sets out the next steps in the progression of the study and taking the options forward to develop a Strategic Outline Business Case.

1.8 More Information

1.8.1 If more information is required, please contact the Greater Cambridge Partnership, via:

Telephone: 01223 699906 Email: <u>contactus@greatercambridge.org.uk</u>



2 | The Need for Intervention

2.0 The Need for Intervention

2.1 Overview

2.1.1 This section summarises the need for intervention and investment in sustainable transport on Newmarket Road and across the wider network, to improve both access into Cambridge City Centre from the east, and other orbital movements which avoid the city centre. It highlights the key findings of the Baseline Report³ in terms of the current and future pressures the corridor is anticipated to face in the coming years.

2.2 Current Provision

- 2.2.1 Newmarket Road is around 5.5km in length and connects the city centre from the Elizabeth Way roundabout to the A14 at the Quy Interchange (J35). The nature of the corridor changes as it heads from east to west, evolving from a fast, rural road dominated by the car, to an urban thoroughfare accommodating a mix of road users serving a mixture of residential areas, retail parks and businesses, albeit still heavily trafficked.
- 2.2.2 The quality of travel choices differs both by mode and location along the corridor and on the wider network:
 - **General Traffic** The Newmarket Road corridor is predominantly a single carriageway highway, characterised by several major at-grade junctions with important north-south routes such as Airport Way, Ditton Lane, Barnwell Road and Coldham's Lane. It is also punctuated by many smaller, signalised junctions, particularly between the Elizabeth Way roundabout and the Leper Chapel, providing access to the retail park and residential areas. The route provides access onto the A14 at both J34 (via Ditton Lane) and J35, emphasising its strategic importance to the city as a whole.
 - **Buses** Buses predominately operated by Stagecoach run relatively frequently along the corridor, including the Newmarket Road Park & Ride service. The service provision is supported by around 1km of inbound bus lane and several junctions with bus priority, whilst there is some 400m of bus lane catering for outbound trips.
 - **Park and Ride** The Park and Ride site accommodates around 850 spaces with real time information provided along the corridor. The quality of the waiting facilities (away from the Park and Ride site) is however, poor. Where shelters are provided, they are often in a poor state of repair.
 - **Cyclists** Cycle provision along Newmarket Road is variable with some sections of on-road cycle lanes and some shared use paths. The lack of provision at the major junctions and volume of general traffic however makes it an unattractive route for many, with alternative parallel routes more attractive options.
 - **Pedestrians** Whilst footpaths are in place along both sides of the majority of Newmarket Road, in several prominent locations there are no dedicated crossing facilities. The Elizabeth Way roundabout also provides a significant physical barrier between the corridor and the city centre, with pedestrians forced into unattractive, inconvenient and perceived unsafe subways to navigate the junction.
 - **Rail** Access into Cambridge from the east is poor. The line to Newmarket is single track in places, with the lack of capacity this provides limiting the frequency with which trains can operate between these towns and the city. Cambridge Station itself is also extremely congested with regard to timetable scheduling and platform availability.
- 2.2.3 The overall picture is of a corridor that is busy for most of the day and throughout the week as a result of commuting, retail and visitor trips. However, it fails to balance the movement and place functions successful corridors of this nature are expected to perform it is heavily trafficked, engineered towards the needs of the car, and lacks a sense of place and quality in the public realm.

³ Eastern Access Public Transport Study Baseline Report; WYG for the Greater Cambridge Partnership, February 2020

2.3 Current Practice – General Traffic

Volume of Traffic

- 2.3.1 Newmarket Road is a heavily trafficked corridor. In a typical morning peak hour (between 8am and 9am) over 1,500 vehicles head towards the city from the Quy Interchange (A14 J35), whilst in excess of 1,100 vehicles travel along the section between Coldham's Lane and the Elizabeth Way roundabout⁴. To put that in perspective, that is around 25 vehicles and 18 vehicles per minute respectively (see Figure 2.1).
- 2.3.2 In the evening peak hour (between 5pm and 6pm) the volume of traffic is even greater, with almost 1,300 vehicles per hour heading away from the city between Coldham's Lane and the Elizabeth Way roundabout and 1,500 vehicles approaching the Quy Interchange within a typical peak hour (see <u>Figure 2.2</u>).
- 2.3.3 Whilst the rest of Newmarket Road does not experience these volumes, the section between the Barnwell Road roundabout and Ditton Lane sees almost 1,200 vehicles in the evening peak hour. By comparison the section to the north of the airport accommodates around 850 outbound vehicles in the hour.
- 2.3.4 In the wider study area, the A14 is subject to the highest flows, with some 2,800 vehicles travelling east to west between J35 and J34 in the morning peak (equating to 47 vehicles per minute), and a similar number travelling in the opposite direction in the evening peak.
- 2.3.5 Elsewhere Coldham's Lane close to the retail park sees inbound (northbound) flows of around 600 vehicles in the morning peak and 750 vehicles travelling outbound (southbound) in the evening peak. Ditton Lane immediately north of Newmarket Road is also notable, with similar flows of around 600 vehicles heading in each direction northbound and southbound from the junction with Newmarket Road in the morning peak.
- 2.3.6 In the evening peak however, almost 800 vehicles head northbound towards the A14, with around 500 heading southbound towards Newmarket Road.

Journey Times

2.3.7 Journey times for general traffic are significantly impacted by queues and delays in the morning and evening peak periods, as illustrated in <u>Table 2.1.</u>

Time	Direction	Time
Am peak	Inbound (westbound)	13 mins 28 secs
Am peak	Outbound (eastbound)	9 mins 57 secs
Inter-peak	Inbound (westbound)	9 mins 21 secs
Inter-peak	Outbound (eastbound)	9 mins 32 secs
Pm peak	Inbound (westbound)	10 mins 27 secs
Pm peak	Outbound (eastbound)	11 mins 44 secs

Table 2.1: Journey Times for General Traffic along Newmarket Road in 2017

Source: Cambridge Paramics Model

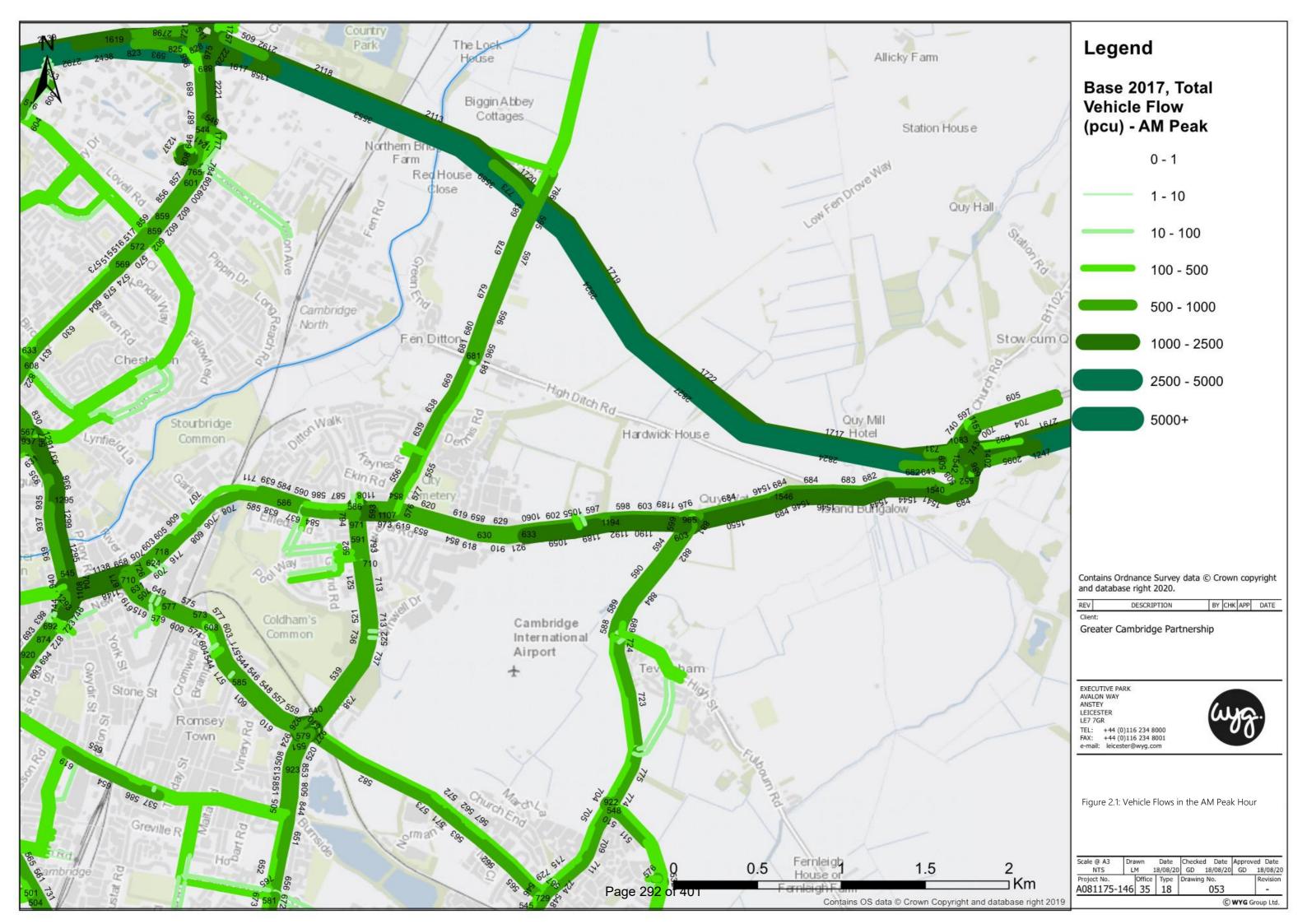
- 2.3.8 Delays materialise as a result of demand (vehicle flow) outstripping supply (capacity) on sections of the network. This is represented in <u>Figure 2.3</u> and <u>Figure 2.4</u> in terms of the respective levels of stress across the study area in the morning and evening peak periods. The key findings of this assessment demonstrate:
 - In the morning peak period, inbound traffic on Newmarket Road can be delayed by around four minutes when compared to journey times outside of the peak periods. This is predominantly as a result of queuing on the approach to the Airport Way roundabout, the junction with Ditton Lane and in travelling through the junctions immediately adjacent to the retail park.

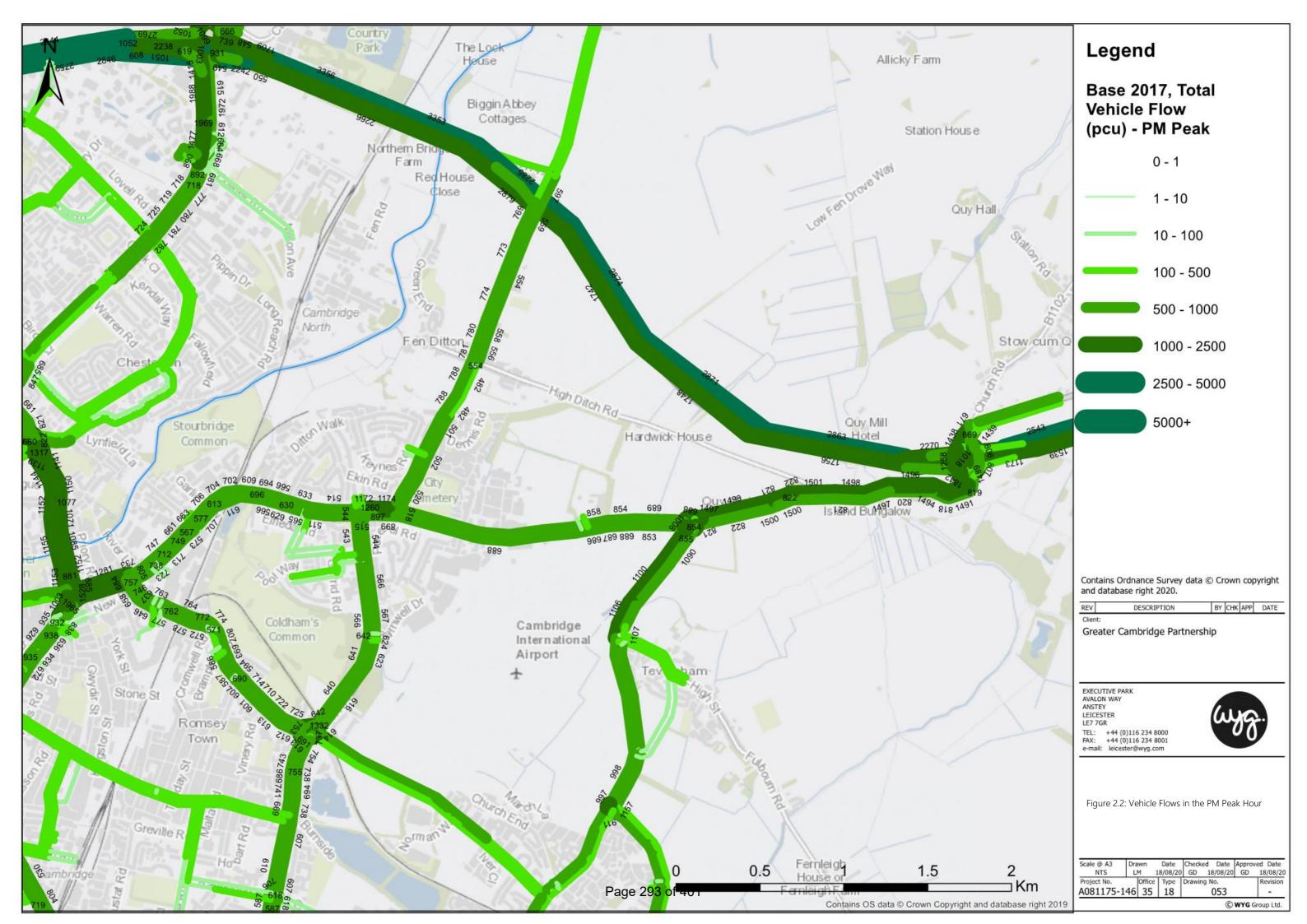
⁴ Cambridge Paramics Model, 2017 base year outputs

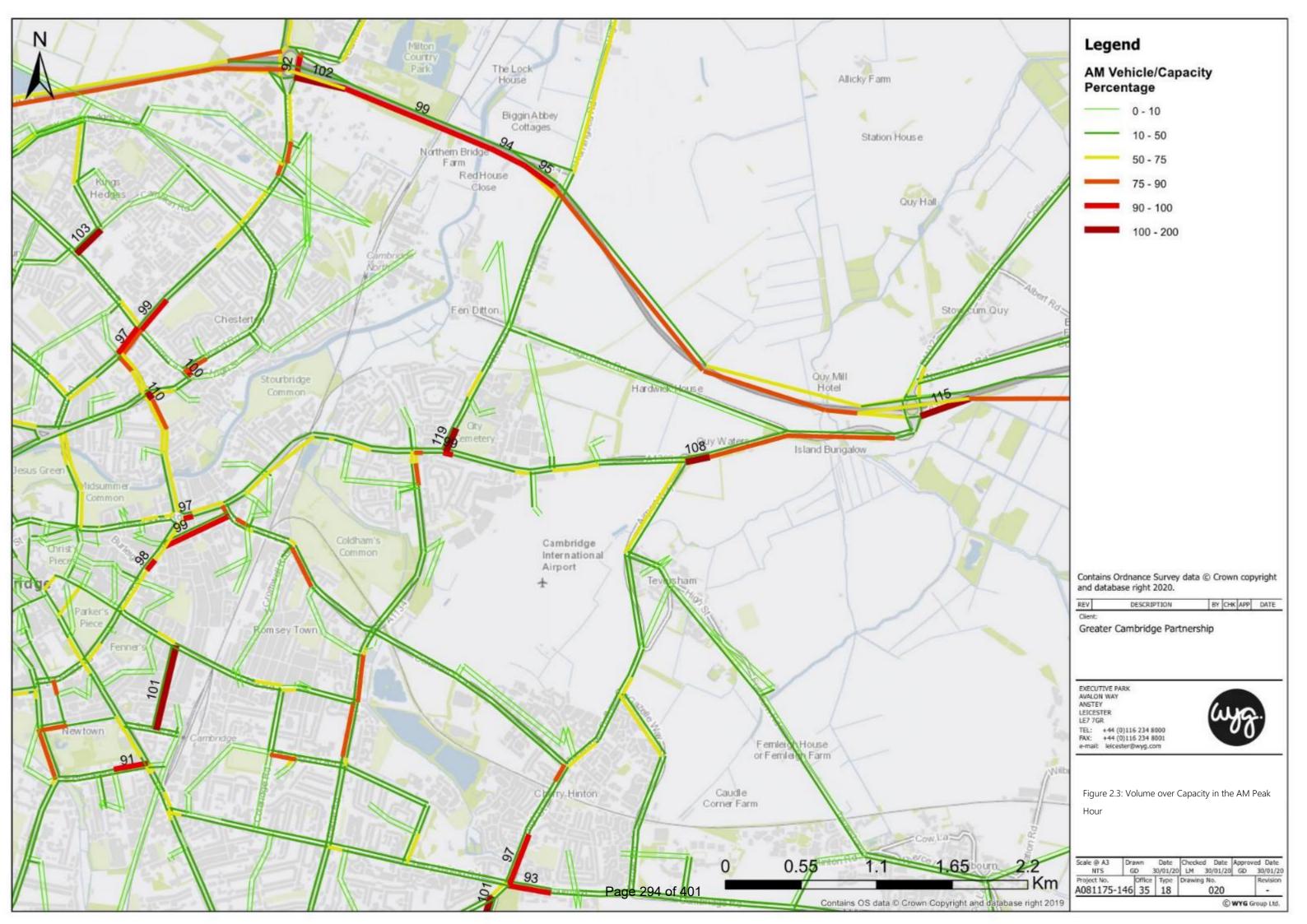
- In the evening peak period, outbound traffic on Newmarket Road can be delayed by around two minutes when compared to journey times outside of the peak periods. This is predominantly as a result of queuing on approaches to the A14 Quy Interchange (J35), the Airport Way roundabout and, as with the morning peak, associated with the junctions adjacent to Cambridge Retail Park.
- 2.3.9 Outside of the traditional peak periods during the working week, it is also recognised that congestion and delays occur when Cambridge United Football Club is playing home games at the Abbey Stadium on Newmarket Road, typically on a Saturday afternoon or Tuesday evening. This is typified by short, sharp peaks in the hour leading up to the game and around half an hour after its conclusion.

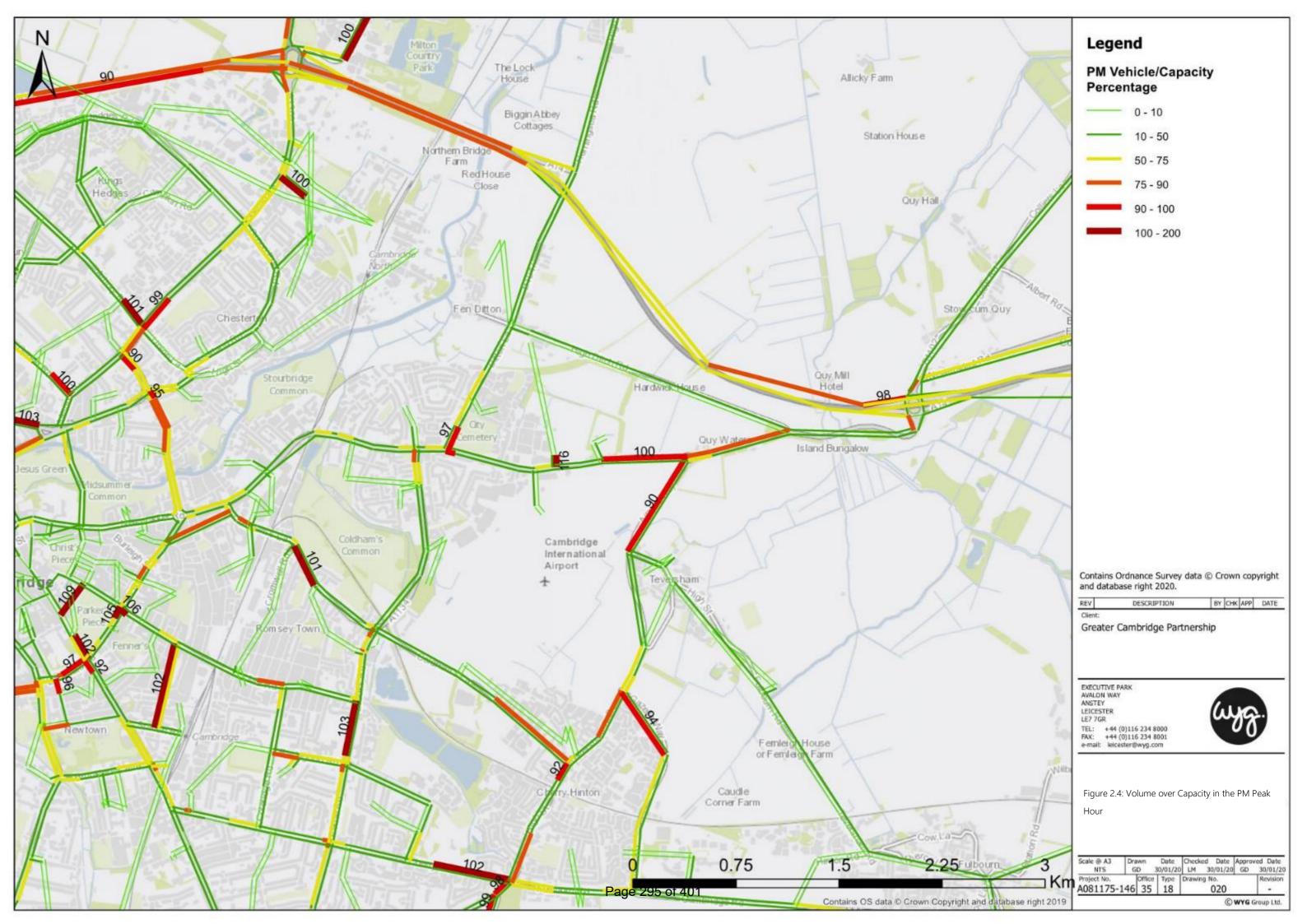
Routing

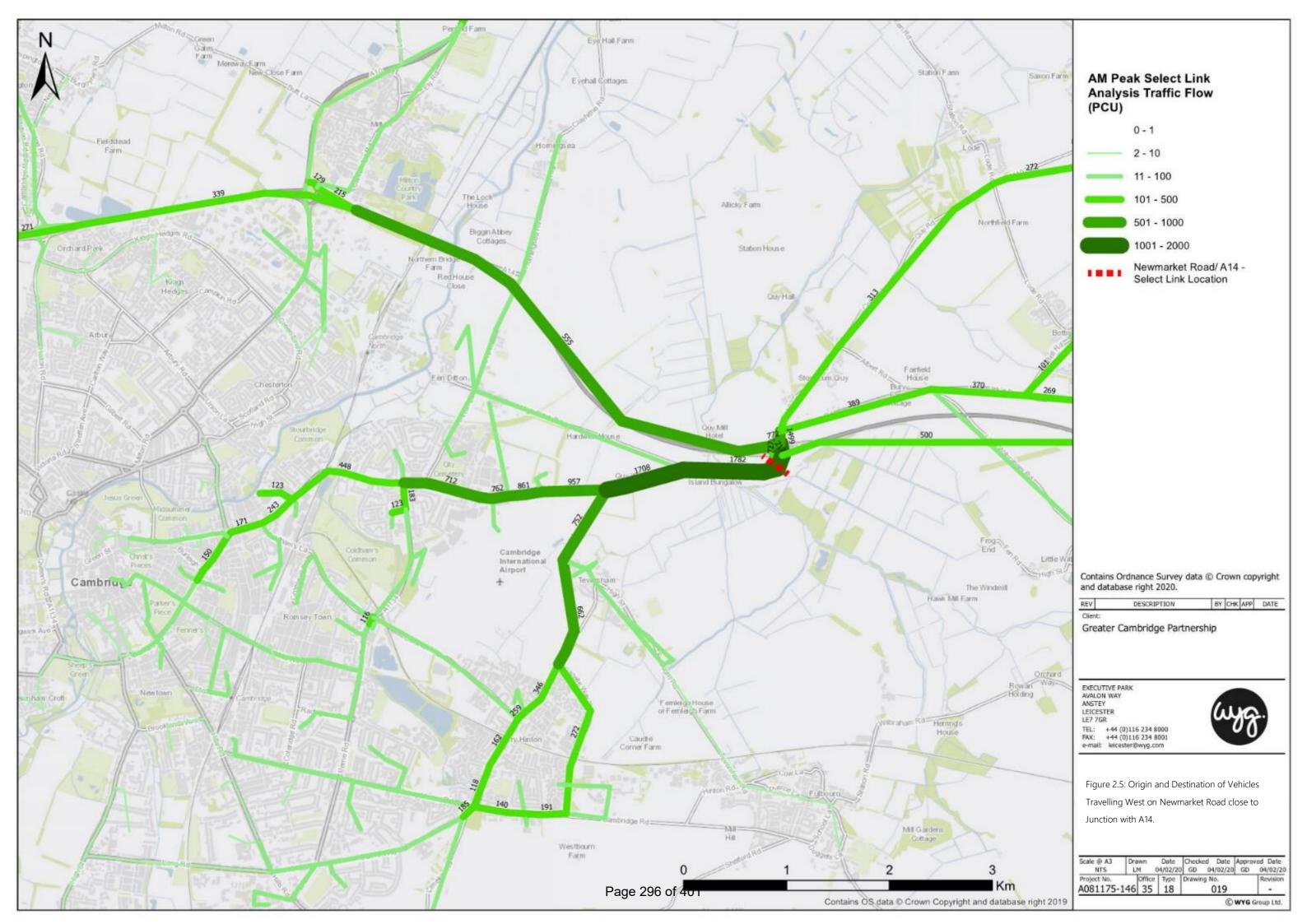
- 2.3.10 A more nuanced understanding of the operation of Newmarket Road is possible through a select link analysis of the corridor within the Cambridge Sub-Regional Transport Model, providing an understanding as to where corridor users start and finish their journeys.
- 2.3.11 <u>Figure 2.5</u> highlights how only a relatively small proportion of the vehicles which enter the corridor at the Quy Interchange on the A14, travel the complete length of Newmarket Road to the Elizabeth Way roundabout.
- 2.3.12 A large proportion of the vehicles head south down Airport Way, towards Addenbrooke's Hospital and the other employment opportunities to the south of the city, whilst it appears that the Park and Ride site has some success in intercepting vehicles before they head into the city from the east.
- 2.3.13 In terms of trips heading away from the city centre in the evening peak, Coldham's Lane carries around the same number of vehicles as Newmarket Road from those joining the corridor from the inner ring road (see <u>Figure 2.6</u>). Both links provide access to the retail parks however, which appear to account for a high proportion of all trips entering Newmarket Road from Elizabeth Way.
- 2.3.14 In this respect it may reflect that the evening peak congestion delays are not merely as a result of commuter trips, but generated by a trips associated with a variety of journey purposes.

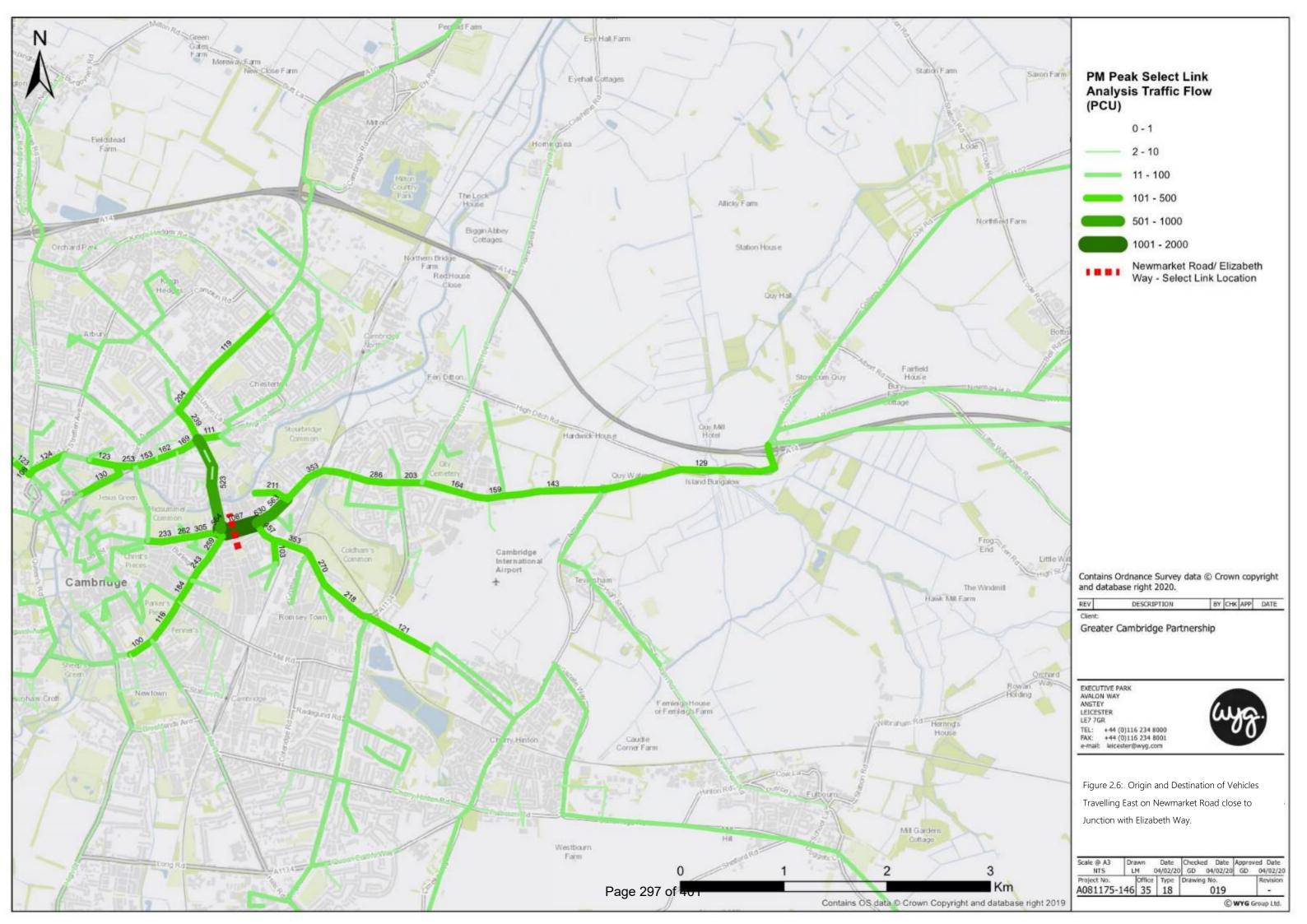












2.4 Current Practice – Buses

Journey Times

- 2.4.1 In terms of bus journey times, the inbound bus lanes in the morning peak appear to alleviate the problems of congestion with faster journey times than at other times of the day. However, outbound journeys in the evening peak are significantly impacted with services typically experiencing delays of five to seven minutes, as illustrated in Figure 2.5 and Figure 2.6.
- 2.4.2 It should be noted that the general traffic and bus journey times detailed previously are not directly comparable. The model draws out journey speeds for general traffic between the Quy Interchange and Elizabeth Way Roundabout whilst the bus journey times are derived from Stagecoach data from its buses operating between the city centre and the Park and Ride.

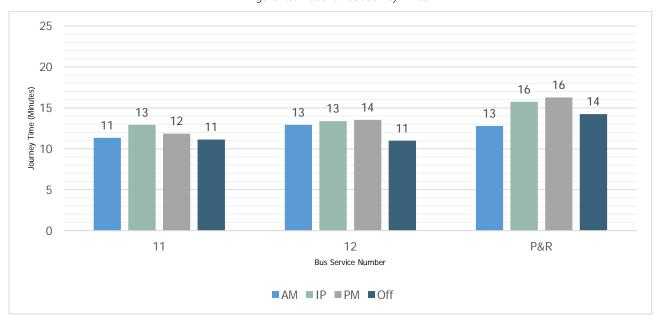
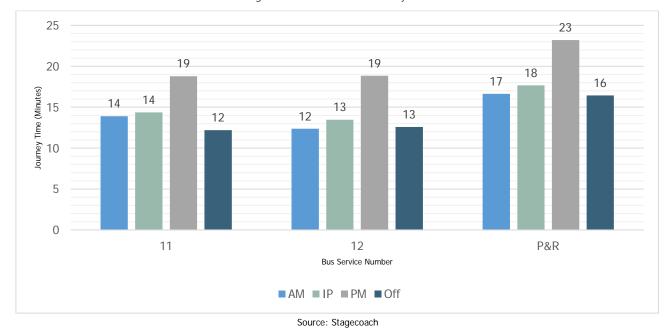


Figure 2.5: Inbound Bus Journey Times

Figure 2.6: Outbound Bus Journey Times



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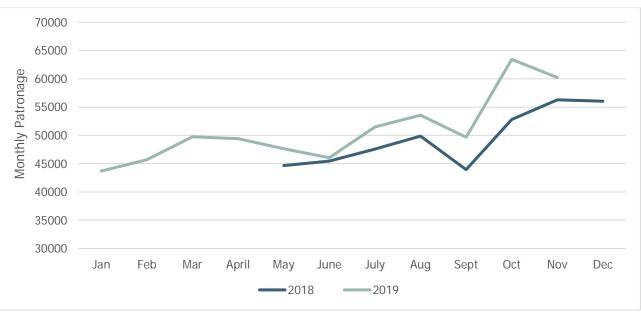
Patronage

2.4.3 Patronage data provided by Stagecoach in relation to their services operating along Newmarket Road demonstrates a significant decline in the popularity of bus service provision along the corridor in the last five years which, in part, may be a reflection of the impact of poor punctuality on bus use. The number of passengers declined by 20% between 2015 and 2019 (see Table 2.2).

Year	Patronage	Annual Change	Cumulative % Change
2015	893,059	-	-
2016	863,316	-29,743	-3%
2017	776,115	-87,201	-13%
2018	723,059	-53,056	-19%
2019	711,424	-11,635	-20%

Table 2.2: Total Passenger	Boardings on	Newmarket Road
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- 2.4.4 Conversely the popularity of the Park and Ride service is increasing. The popularity of the Newmarket Road Park and Ride is captured in data collected by Cambridgeshire County Council. The data focuses on the number of cars using the site and so it is not a direct reflection of patronage of the services as car occupancy is not reflected in the figures. Park and Cycle is a popular form of travel into the city centre from Newmarket Road, given the direct access onto the off-road cycle path running alongside the River Cam.
- 2.4.5 Notwithstanding this, <u>Figure 2.7</u> highlights how the popularity of the site grew on a month by month basis between 2018 and 2019, peaking at over 63,000 vehicles using the site in October 2019, up from almost 53,000 in the same month in 2018.





2.4.6 To provide some context for these figures, nationally (outside London) the number of bus trips declined from 2.215 billion trips in 2015/16 to 2.121 billion trips in 2018/19, a 4% decrease in patronage over four years.

Source: Stagecoach

Source: Cambridgeshire County Council

2.5 Summary

- 2.5.1 Newmarket Road is not fit for purpose in terms of providing a fast and efficient sustainable transport connection into the centre of Cambridge. The lack of high quality and comprehensive bus and cycle infrastructure fosters a reliance on the car, which in turn generates queuing, congestion and delays. There is a need for these concerns to be addressed in the short term if the city is to move towards achieving its ambitious traffic reduction targets and the benefits this will provide to the quality of life of those living along the corridor.
- 2.5.2 It is also apparent that despite these shortcomings, development pressure in the corridor and further afield remains high. Significant growth is anticipated to come forward through the Greater Cambridge Local Plan. This will exacerbate the increases in journey times caused by background growth in traffic, and developments already committed to come forward by 2036.
- 2.5.3 To ensure that congestion doesn't stifle the housing and economic opportunities along Newmarket Road, and to make sure that it comes forward and can be delivered sustainably, a longer term emphasis needs to be placed on providing the sustainable transport capacity and connectivity to facilitate the aspirations of the Local Plan.



3 | The Long List

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3.0 The Long List

3.1 Overview

- 3.1.1 There is a clear need for significant investment in Newmarket Road and the surrounding transport network to address both the current issues facing the corridor, and to help to facilitate the significant level of proposed growth in the east of Cambridge.
- 3.1.2 The Eastern Access Baseline Report identified the problems and constraints associated with travelling into the city from the east and has formed the evidence upon which potential solutions have been identified to transform the corridor into a high-quality sustainable travel route.
- 3.1.3 This assessment, together with input from a programme of extensive engagement activities⁵ including with elected members, transport providers and the public, has generated a series of potential areas of intervention and, within these, individual schemes which could address the overarching objectives of the corridor.
- 3.1.4 Some 59 schemes have been identified in total, as listed in <u>Table 3.1</u> below and depicted in <u>Figure 3.1</u> to <u>Figure 3.10</u>.
- 3.1.5 Between them these measures could potentially help to both improve the current sustainable transport offer along Newmarket Road and provide the capacity and connectivity to facilitate housing and employment provision within the adopted Local Plans for both Cambridge and South Cambridgeshire.
- 3.1.6 However, not all of the options present viable solutions and the process through which these have been identified is detailed within later sections of this Report.

Ref.	Scheme Options
Busways	
BW.01	Online - full length of Newmarket Road.
BW.02	Online - between Elizabeth Way Roundabout and Leper Chapel.
BW.03	Online - between Leper Chapel and Park and Ride.
BW.04	Online - between Park and Ride and A14.
BW.05	Offline (north) - between Leper Chapel and Quy Water via former rail line and High Ditch Road.
BW.06	Offline (north) - between Cambridge North Station and former rail line.
BW.07	Offline (south) - between Leper Chapel and Barnwell Road via Coldham's Common.
BW.08	Offline (south) - between Barnwell Road and P&R via Cambridge Airport (west of runway).
BW.09	Offline (south) - between East Road and Brookfields via Mill Road.
BW.10	Offline (south) - between Brookfields and Coldham's Lane via a new bridge over the rail line.
BW.11	Offline (south) - between Coldham's Lane and P&R via Cambridge Airport (east of runway).
BW.12	Offline (south) – Coldham's Lane between Newmarket Road and south of runway.
Bus Lane	25
BL.01	Extend inbound bus lanes to provide continuous link between P&R and city centre.
BL.02	Remove inbound bus lanes.
BL.03	Remove outbound bus lanes.
BL.04	Extend outbound bus lanes to provide continuous link between city centre and P&R.

Table 3.1: Long List of Interventions

⁵ Eastern Access Study – Engagement Summary Report; WYG, August 2020.

Ref.	Scheme Options
BL.05	New outbound bus lane between Elizabeth Way and the Leper Chapel.
BL.06	New tidal bus lane (or busway) between Elizabeth Way and the Leper Chapel.
BL.07	Conversion of the Cambridge to Newmarket Rail Line into a two-way bus lane.
Bus Serv	ices
BS.01	Increase the frequency of existing P&R services.
BS.02	New bus service between the station, Mill Road, Cambridge East and the Park and Ride.
BS.03	Provide new service from P&R to Addenbrooke's hospital and the Biomedical Campus.
Park and	Ride
PR.01	Expansion of current Park and Ride site.
PR.02	Relocation of Park and Ride to south of Newmarket Road and east of Airport Way.
PR.03	Relocation of Park and Ride to north of Quy Interchange (A14 Junction 35).
PR.04	New Park and Ride site to the north of Fen Ditton.
Bus Gate	'S
BG.01	Bus Gate on Newmarket Road.
BG.02	Bus Gate on Mill Road (at bridge over rail line).
Rail	
RA.01	Reinstate the Cambridge to Mildenhall Line.
RA.02	Double track the Cambridge to Newmarket Line.
RA.03	Realignment of the Cambridge to Newmarket Line to the north of Cherry Hinton.
RA.04	Provide new station at 'Cambridge East'.
RA.05	Provide new station at Cherry Hinton.
RA.06	Provide new station at Barnwell.
RA.07	Provide a new Parkway Station at Six Mile Bottom.
RA.08	Provide a passing point near Fulbourn on the Cambridge to Newmarket Line.
Junctions	5
JC.01	Reconfiguration of Elizabeth Way Roundabout, including the removal of subway (higher capacity).
JC.02	Reconfiguration of Elizabeth Way Roundabout, including the removal of the subway (lower capacity).
JC.03	Reconfiguration of the Newmarket Road & Coldham's Lane junction.
JC.04	Signalisation and reconfiguration of the Newmarket Road & Barnwell Road junction (higher capacity).
JC.05	Signalisation and reconfiguration of the Newmarket Road & Barnwell Road junction (lower capacity).
JC.06	Reconfiguration of the Newmarket Road & Ditton Lane junction (higher capacity).
JC.07	Reconfiguration of the Newmarket Road & Ditton Lane junction (lower capacity).
JC.08	Reconfiguration of A14 Junction 34 (with Ditton Lane) to remove slips.
JC.09	Signalisation of the junction of Newmarket Road and Airport Way.
JC.10	Signalisation and Reconfiguration of Quy Interchange
Highway	S
HW.01	Additional lane(s) on Newmarket Road to east of Airport Way junction.
HW.02	One-way traffic on Newmarket Road, Coldham's Lane and Barnwell Road to form gyratory.
1100.02	

Ref.	Scheme Options
HW.04	Removal of two lanes (one inbound, one outbound) between Elizabeth Way and Coldham's Lane.
HW.05	Carriageway widening along Coldham's Lane south of the airport, with a left turn filter lane for buses at the Sainsbury's roundabout.
Intellige	nt Transport Systems
ITS.01	Reconfiguration of all signals to manage/control flow along Newmarket Road and wider network.
Active Tr	avel
AT.01	Provision of continuous segregated inbound cycle lane along Newmarket Road.
AT.02	Provision of continuous segregated outbound cycle lane along Newmarket Road.
AT.03	Promotion of Park and Cycle from the P&R site.
AT.04	Provide a new shared use pedestrian/cycle bridge(s) over the rail line and Coldham's Lane to link the existing 'Tins' cycle path with the airport site.
AT.05	Provide new dedicated cycle lanes along Brookfields / Mill Road.
AT.06	Provide new cycle lanes along Coldham's Lane between the airport site and the Sainsbury's roundabout and enhance existing cycle provision along Brooks Road.
AT.07	Provide a new off-carriageway pedestrian-cycle link from the airport site to connect into the Chisholm Trail via Barnwell Road and Coldham's Common.

- 3.1.7 These areas of intervention are detailed within this chapter, providing reference to the individual scheme options identified. It should be noted that for each scheme, there are potentially numerous variations and sub-options. For example, the provision of a bus lane could vary in terms of its length, hours of operation, nature of vehicles permitted to use it, or if it catered for inbound or outbound buses.
- 3.1.8 We have therefore sought to strike a balance between the detail of each option and not overwhelming the assessment process with every possible permutation. The level of detail associated with each scheme is commensurate with the development of a Strategic Outline Business Case. Refinement of the final schemes' parameters and design will be undertaken at a later stage of the process.
- 3.1.9 Several areas of intervention were omitted from the assessment, including light rail, personal rapid transit and monorails for example. This was on the basis that any measures brought forward would be required to fit the local context and be compliant with the emerging Cambridgeshire Autonomous Metro.

Cambridgeshire Autonomous Metro

3.1.10 The Long List focuses on measures to improve the provision of surface level transport which could either complement the Cambridgeshire Autonomous Metro (CAM) or form part of Phase 1 of the network. None of the options within the Long List are considered to be alternatives to the CAM, or to preclude CAM, but conversely none are reliant on the CAM being delivered in full or part. This is an important distinction and should inform the context when considering the listed options.

3.2 Busways

- 3.2.1 Busways provide fully segregated lanes upon which buses, and buses alone, can operate. They enable the buses to operate at high speed, often on a semi-automated basis providing fast and unhindered travel for compatible vehicles. They offer more flexibility than a tram or heavy rail solution as the buses can divert off the busway onto the wider road network.
- 3.2.2 There is local precedent in the use of busways in Cambridge, with 16 miles of provision in two sections between the city and St Ives to the north, and to Addenbrooke's Hospital to the south. Busways have also been provided further afield such as between Luton and Dunstable. Guidance may be physical as in the existing Cambridge Busway, or technological.

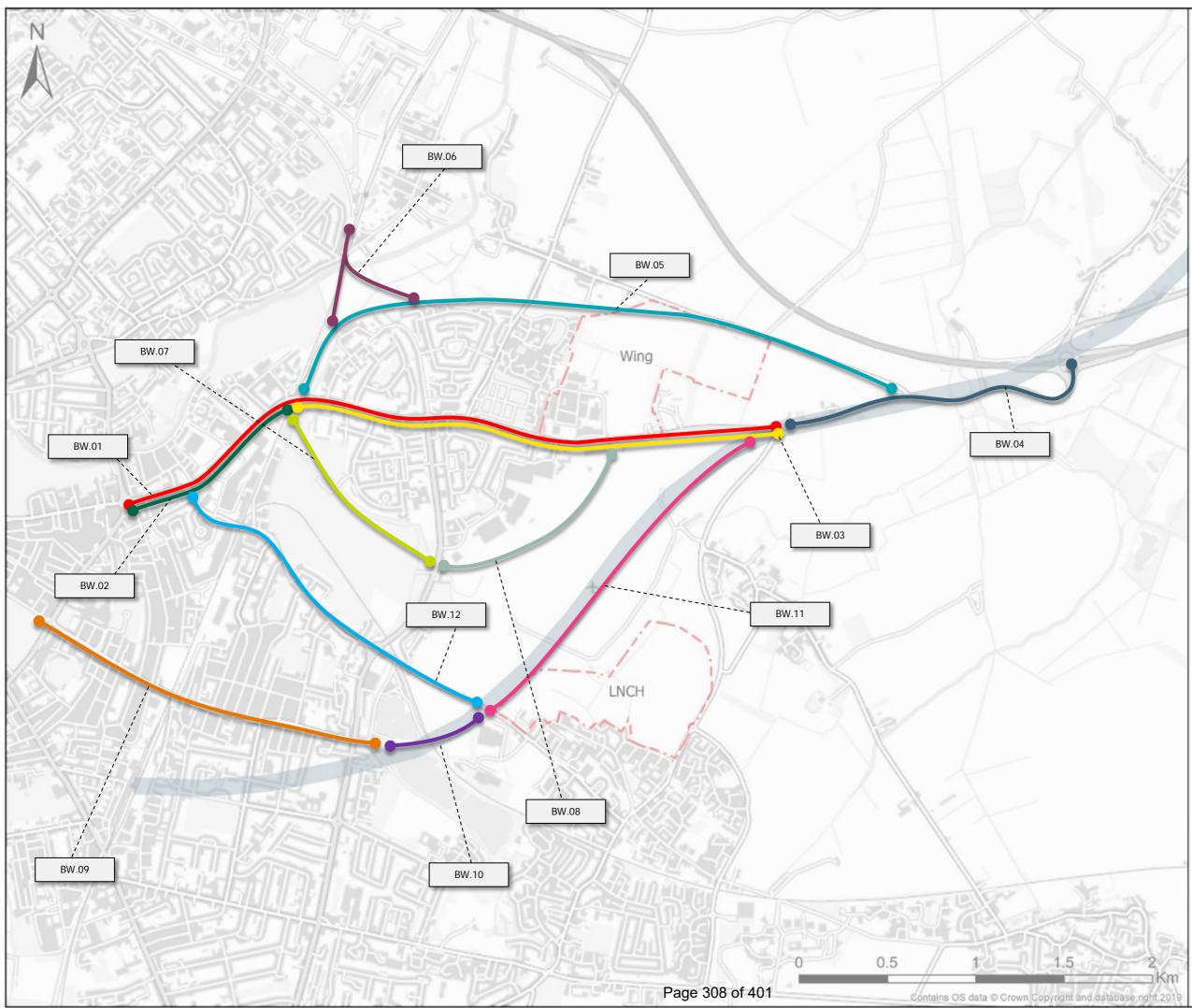


Image credits: Greater Cambridge Partnership

3.3 Bus Lanes

- 3.3.1 Bus lanes provide a flexible, relatively low-cost bus priority intervention which are popular throughout the country. Their versatility is one of their biggest attributes, in that they can operate all day or just for parts of the day when the need is greatest.
- 3.3.2 They can also be operated with various restrictions, in some places permitting any of taxis, high occupancy vehicles, two-wheelers, and ultra-low emission vehicles to also used them.
- 3.3.3 Compliance amongst general traffic users can sometimes be an issue but the use of Automatic Number Plate Recognition (ANPR) technology can alleviate these concerns.





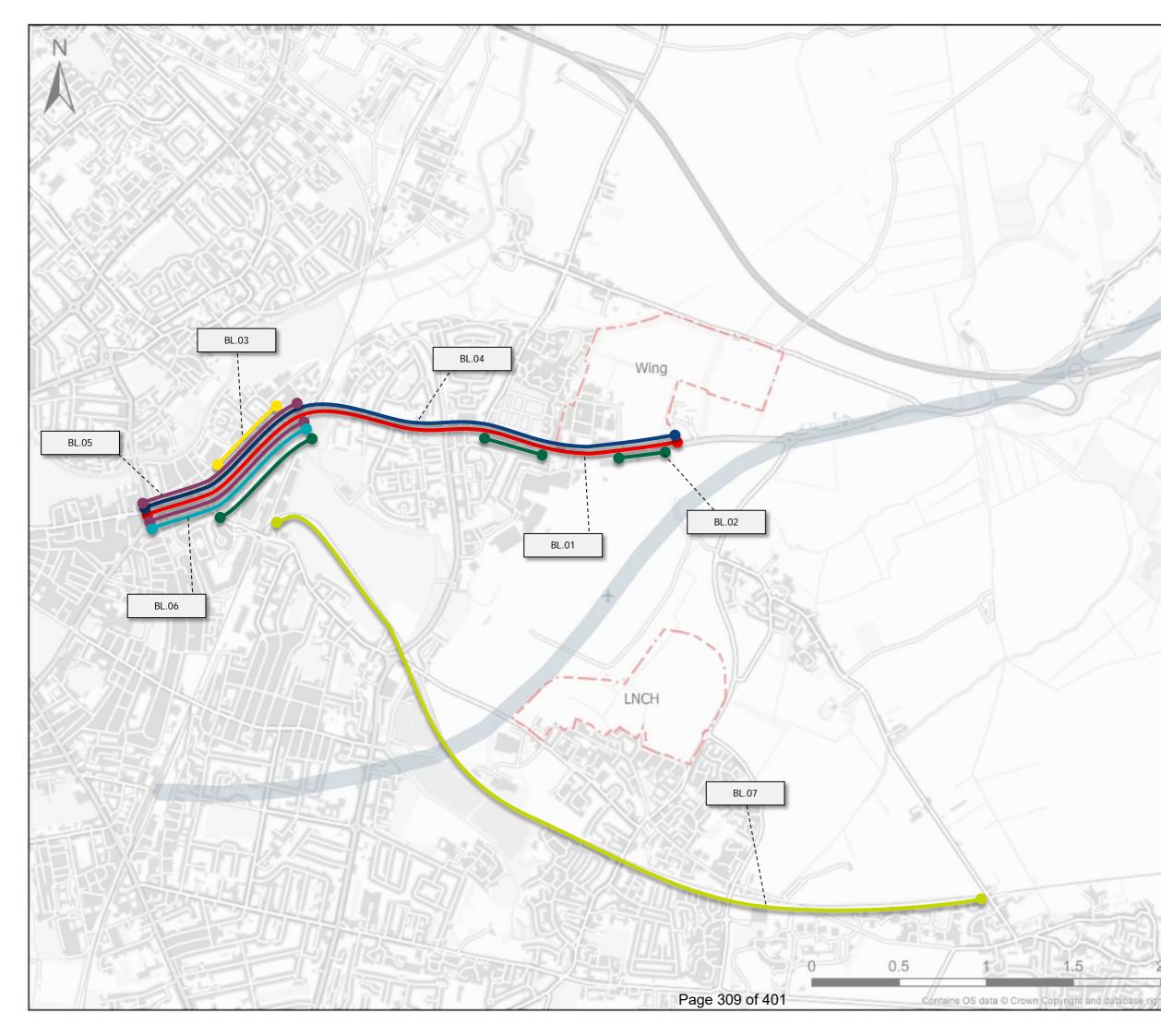
<u>KEY:</u>

- **BW.01** Online full length of Newmarket Road.
- **BW.02** Online between Elizabeth Way Roundabout and Leper Chapel.
- **BW.03** Online between Leper Chapel and Park and Ride.
- **BW.04** Online between Park and Ride and A14.
- **BW.05** Offline (north) between Leper Chapel and Quy Water via former rail line and High Ditch Road.
- BW.06 Offline (north) between Cambridge North Station and former rail line.
- BW.07 Offline (south) between Leper Chapel and Barnwell Road via Coldham's Common.
- BW.08 Offline (south) between Barnwell Road and P&R via Cambridge Airport (west of runway).
- **BW.09** Offline (south) between East Road and Brooklands via Mill Road.
- **BW.10** Offline (south) between Brookfields and Coldham's Lane via a new bridge over the rail line.
- **BW.11** Offline (south) between Coldham's Lane and P&R via Cambridge Airport (east of runway).
- **BW.12** Offline (south) Coldham's Lane between Newmarket Road and south of runway.

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Figure 3	3.1: Guided Busway C	Options			

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<u>KEY:</u>

- **BL.01** Extend inbound bus lanes to provide continuous link between P&R and City
- ٠
- continuous link between P&R and City Centre. BL.02 Remove inbound bus lanes. BL.03 Remove outbound bus lanes. BL.04 Extend outbound bus lanes to provide continuous link between City Centre and P&R. BL.05 New inbound (outbound bus lanes ٠ •
- **BL.05** New inbound/outbound bus lanes between Elizabeth Way and the Leper ٠
- Chapel.
- **BL.06** New tidal bus lane (or busway) between Elizabeth Way and the Leper •
- **BL.07** Conversion of Cambridge to Newmarket Line as a two-way bus lane. ٠

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Figure 3	Cester@wyg.com 3.2: Bus Lane Option: Drawn Date Ch BG 09.03.20 B	ecked Date App

3.4 Bus Services

- 3.4.1 For all the supporting infrastructure in place, it is the actual bus services which connect people to places. The frequency of provision and the destinations served are at the heart of making bus based travel an option for many, and whilst Newmarket Road is well served by existing bus services, with the anticipated increase in demand along the corridor, there is scope for it to be improved.
- 3.4.2 Given the commercial nature of service provision however, changes in operation are often hard to secure without bus franchising or local authorities tendering for specific routes. Such issues with the delivery of services are excluded from this appraisal for ease of analysis.





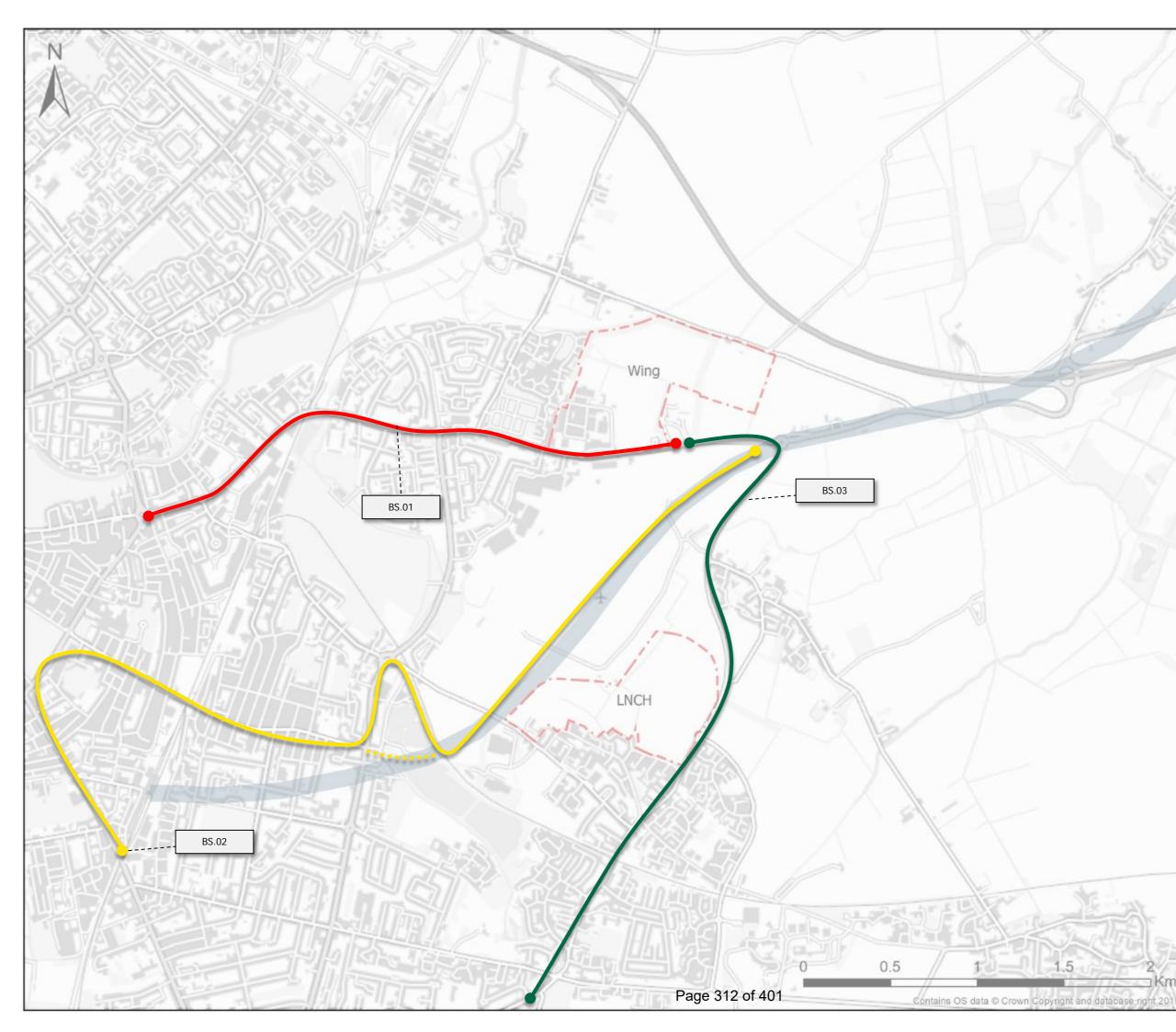
3.5 Park and Ride

- 3.5.1 Park and Ride sites enable car-based commuters to travel the final stages of their journey by bus or tram, avoiding congestion and parking charges in city centres. They enable the interception of vehicles before they contribute towards delays on the network, often catering for large catchment areas where bus provision may be less attractive.
- 3.5.2 Park and Ride is a popular measure already in use in the Cambridge area, including on Newmarket Road itself, and potentially an important ingredient in any package of measures which are taken forward.









<u>KEY:</u>

- **BS.01** Increase frequency of existing P&R service.
- BS.02 New bus service between the station, Mill Road, Cambridge East and the Park and Ride.
- BS.03 Provide new service from P&R to Addenbrookes hospital and the Biomedical Campus.

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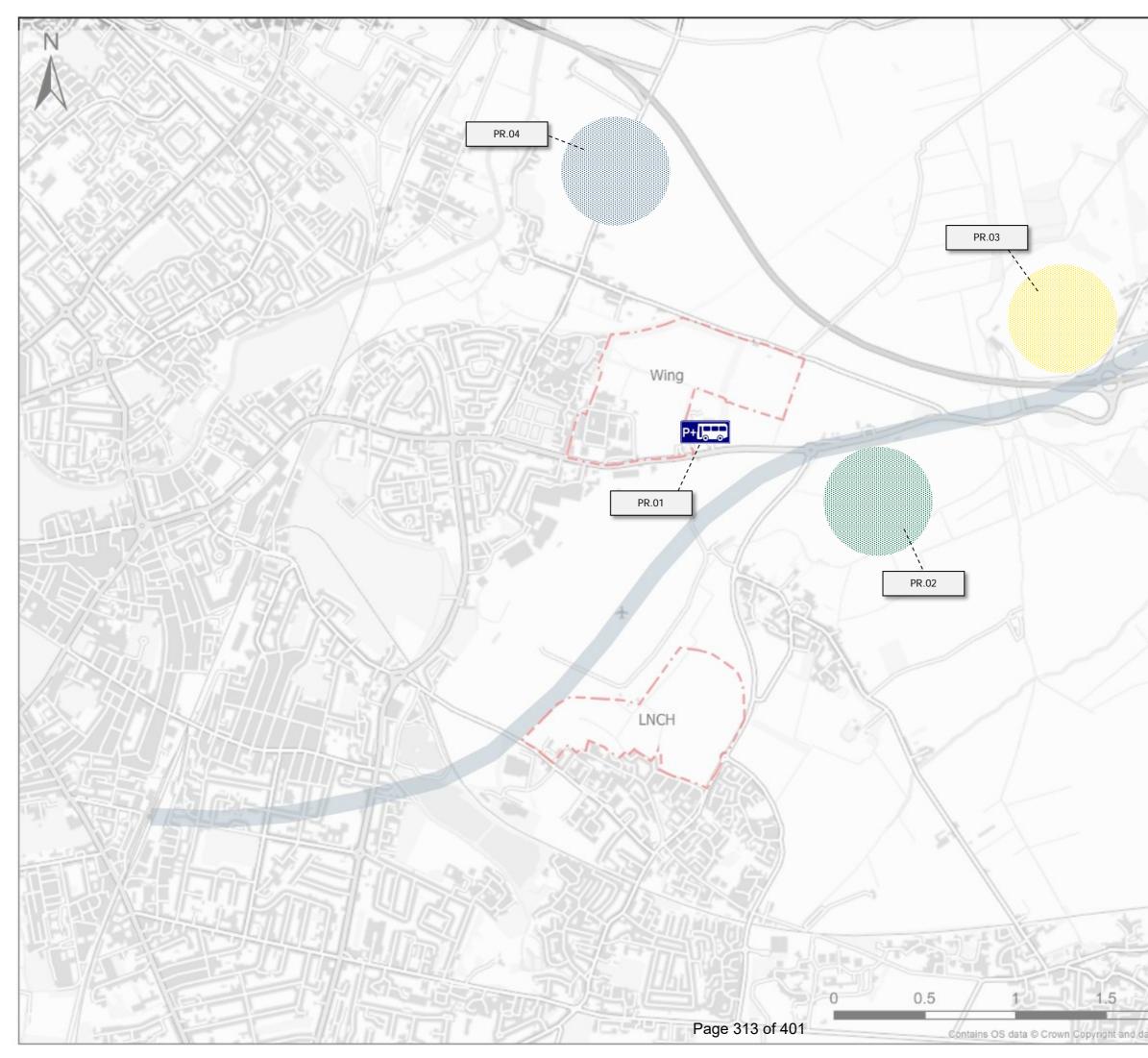
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Figure 3.3: Bus Service Options

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	 KEY: PR.01 Expansion of current site. PR.02 Relocation to south of Newmarket Road and east of Airport Way. PR.03 Relocation to north of Quy Interchange (A14 Junction 35). PR.04 New P&R site to the north of Fen Ditton.
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à.	Figure 3.4: Park and Ride Options
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3.6 Bus Gates

- 3.6.1 Bus gates restrict use of a road to buses and active travel users only. As such they are a cost-effective measure when seeking to reduce the volume of traffic in an area or along a corridor, although to ensure their effectiveness, they need to be supported by physical barriers or ANPR enforcement.
- 3.6.2 Bus gates have the potential to displace a lot of traffic which will reassign elsewhere on the network but provide a strategic advantage to buses as a result of the more competitive journey times they can subsequently offer.



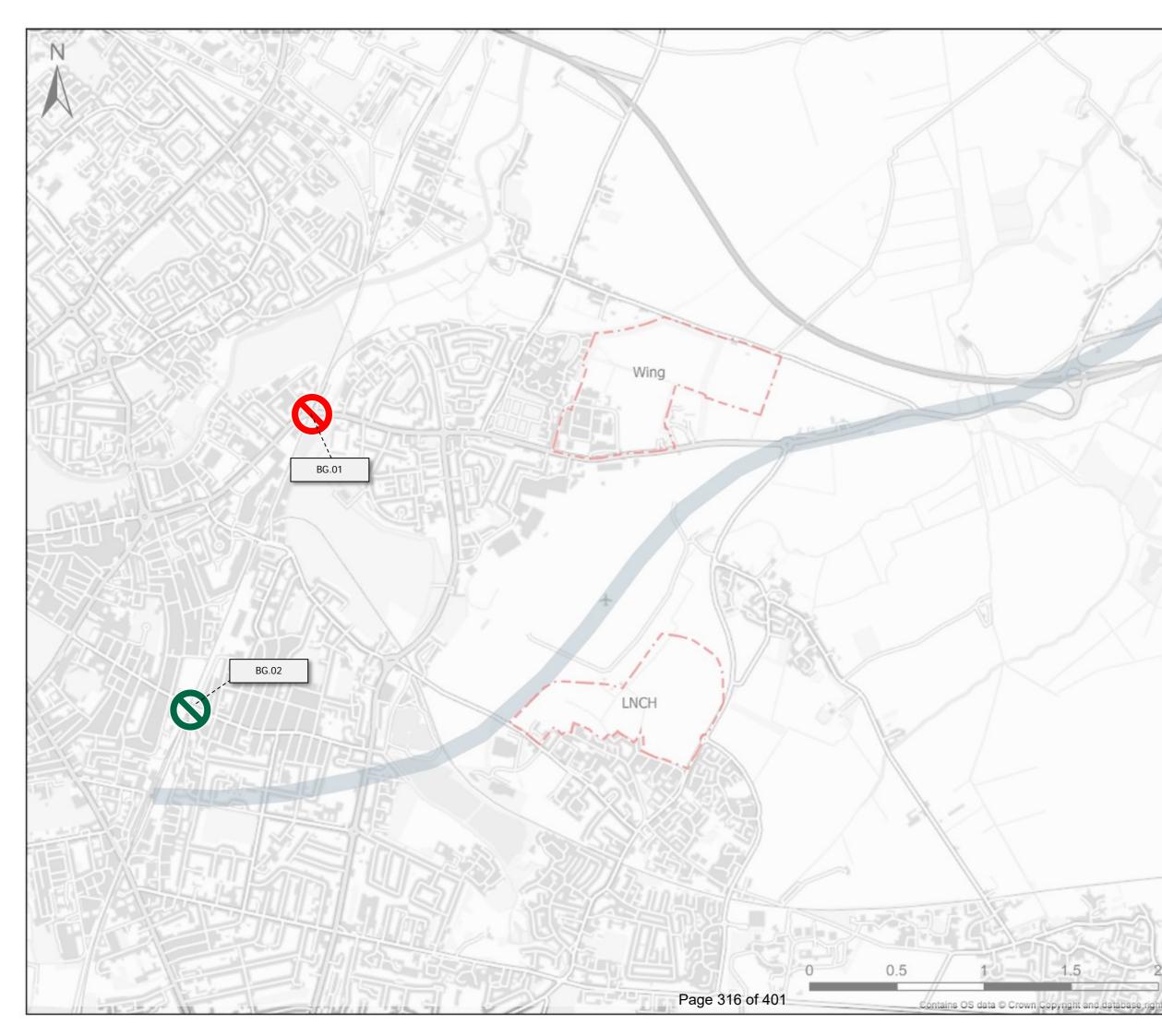


3.7 Rail

- 3.7.1 The scope exists within the east of Cambridge to utilise two heavy rail lines through which to provide a mass transit alternative to the car. The Cambridge to Newmarket Line runs parallel to Coldham's Lane to the south of the airport, before passing through Cherry Hinton, whilst the broad alignment of the former Cambridge to Mildenhall Line is still intact, notwithstanding the fact that sections around the northern edge of Barnwell have been built upon.
- 3.7.2 Both lines provide direct access into Cambridge Station and the onward interchange opportunities it presents. Heavy rail can accommodate significantly higher passenger volumes than other modes, and is not impeded by traffic, but is less flexible as an option.







KEY:

- BG.01 Newmarket Road (at the Leper Chapel).
 BG.02 Mill Road (at bridge over rail line).

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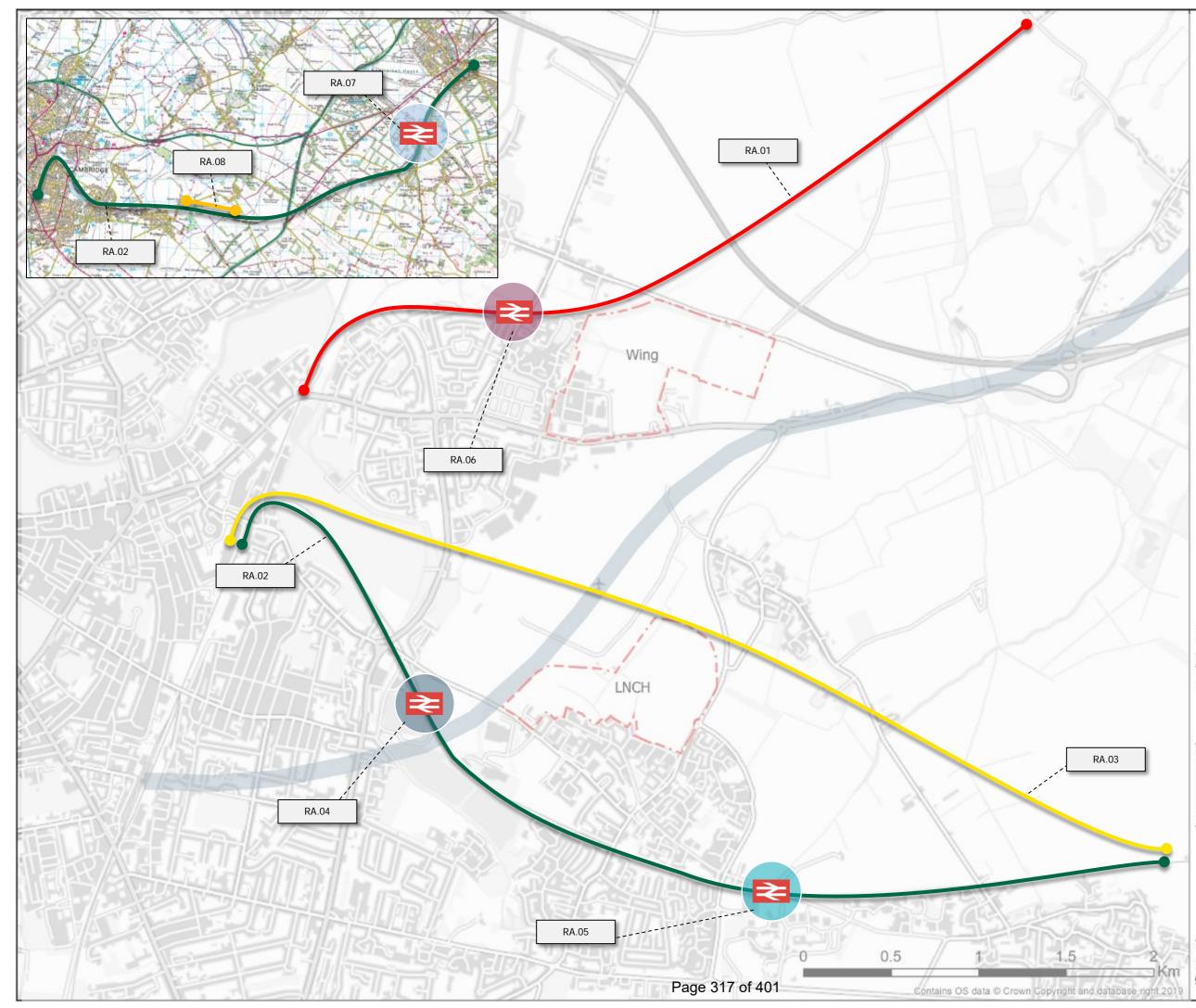
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Figure 3.5: Bus Gate Options

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<u>KEY:</u>

- **RA.01** Reinstate the Cambridge to Mildenhall Line.
- **RA.02** Double track the Cambridge to Newmarket Line.
- RA.03 Realignment of the Cambridge to Newmarket Line to the north of Cherry Hinton.
- **RA.04** Provide new station at 'Cambridge East'.
- **RA.05** Provide new station at Cherry Hinton.
- **RA.06** Provide new station at Barnwell.
- **RA.07** Provide a new station at Six Mile Bottom.
- RA.08 Provide a passing loop near Fulbourn on the Cambridge to Newmarket Line.

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Figure 3.6: Rail Options

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3.8 Junctions

- 3.8.1 Junctions are often the locations along a corridor where delays occur and accidents tend to happen. Changing their design can therefore have a significant impact upon the capacity of a corridor, the priority given to public transport and active travel users, and the actual and perceived safety of a route.
- 3.8.2 Whilst changes to individual junctions can make a difference to the operation of a whole corridor, a strategic approach which targets all junctions has the potential for more comprehensive management of traffic flow.

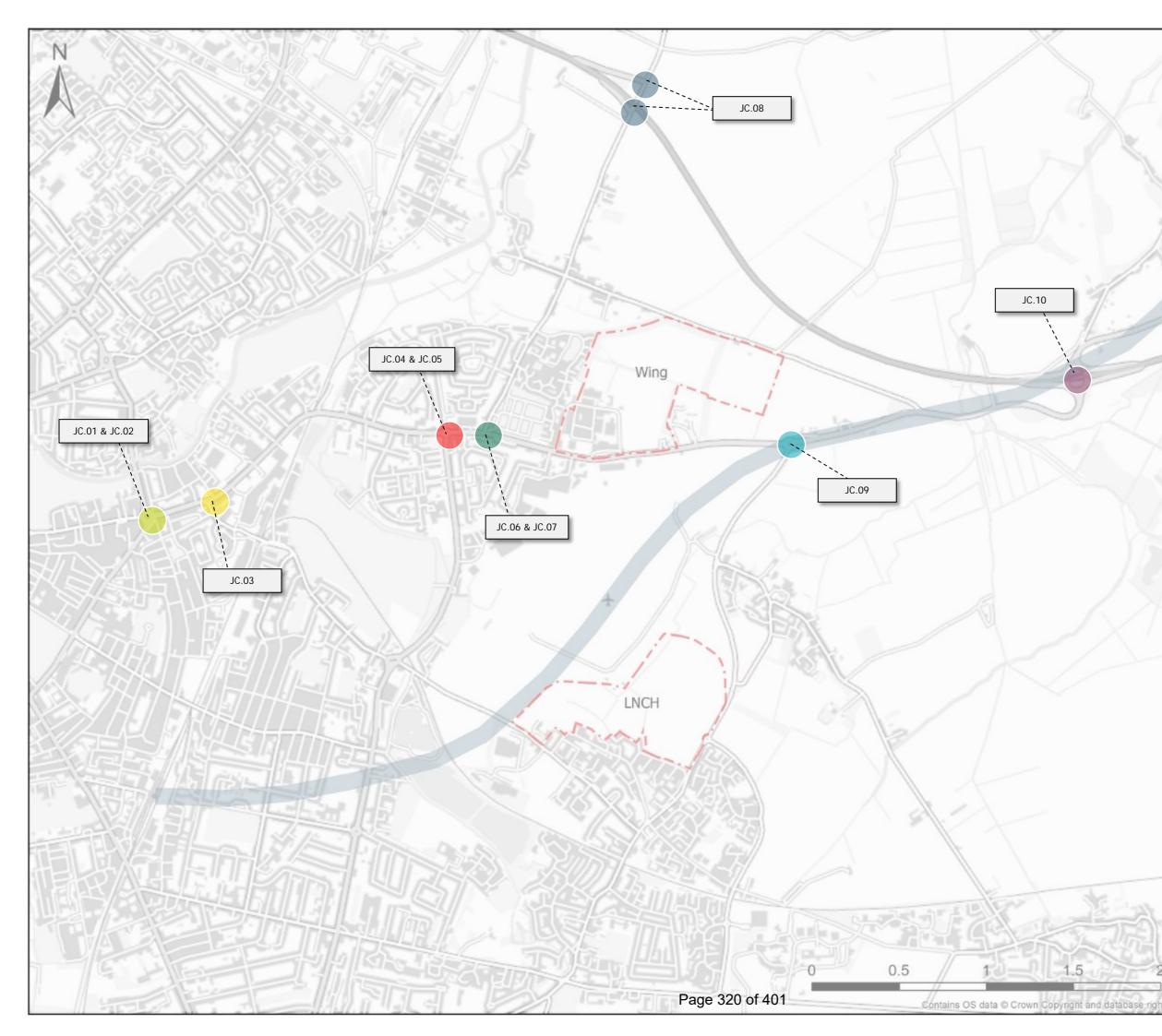




3.9 Highways

- 3.9.1 Where there is a disconnect between the characteristics of the highway network and the local area it serves, all road users can suffer. Insufficient capacity, poor route choice and conflicting movements can result in delays, raise safety concerns and stifle the delivery of growth.
- 3.9.2 The section of Newmarket Road between Barnwell Road and the Elizabeth Way roundabout forms part of the designated ring road for the city and as such has a strategic role to play in enabling traffic to circulate effectively within the urban area. Given the limited physical road space in the study area however, it is important that options are explored through which to optimise its utilisation.





KEY:

- JC.01 Reconfiguration of Elizabeth Way Roundabout, including the removal of Subway (higher capacity).
- JC.02 Reconfiguration of Elizabeth Way Roundabout, including the removal of Subway (lower capacity).
- **JC.03** Reconfiguration of the Newmarket Road & Coldham's Lane junction.
- **JC.04** Signalisation and reconfiguration of the Newmarket Road & Barnwell Road junction (higher capacity).
- JC.05 Signalisation and reconfiguration of the Newmarket Road & Barnwell Road junction (lower capacity).
- JC.06 Reconfiguration of the Newmarket Road & Ditton Lane junction (higher capacity).
- JC.07 Reconfiguration of the Newmarket Road & Ditton Lane junction (lower capacity).
- JC.08 Reconfiguration of A14 Junction 34 (with Ditton Lane) to remove slips.
- JC.09 Signalisation of the junction of Newmarket Road and Airport Way.
- JC.10 Signalisation and Reconfiguration of Ouy Interchange

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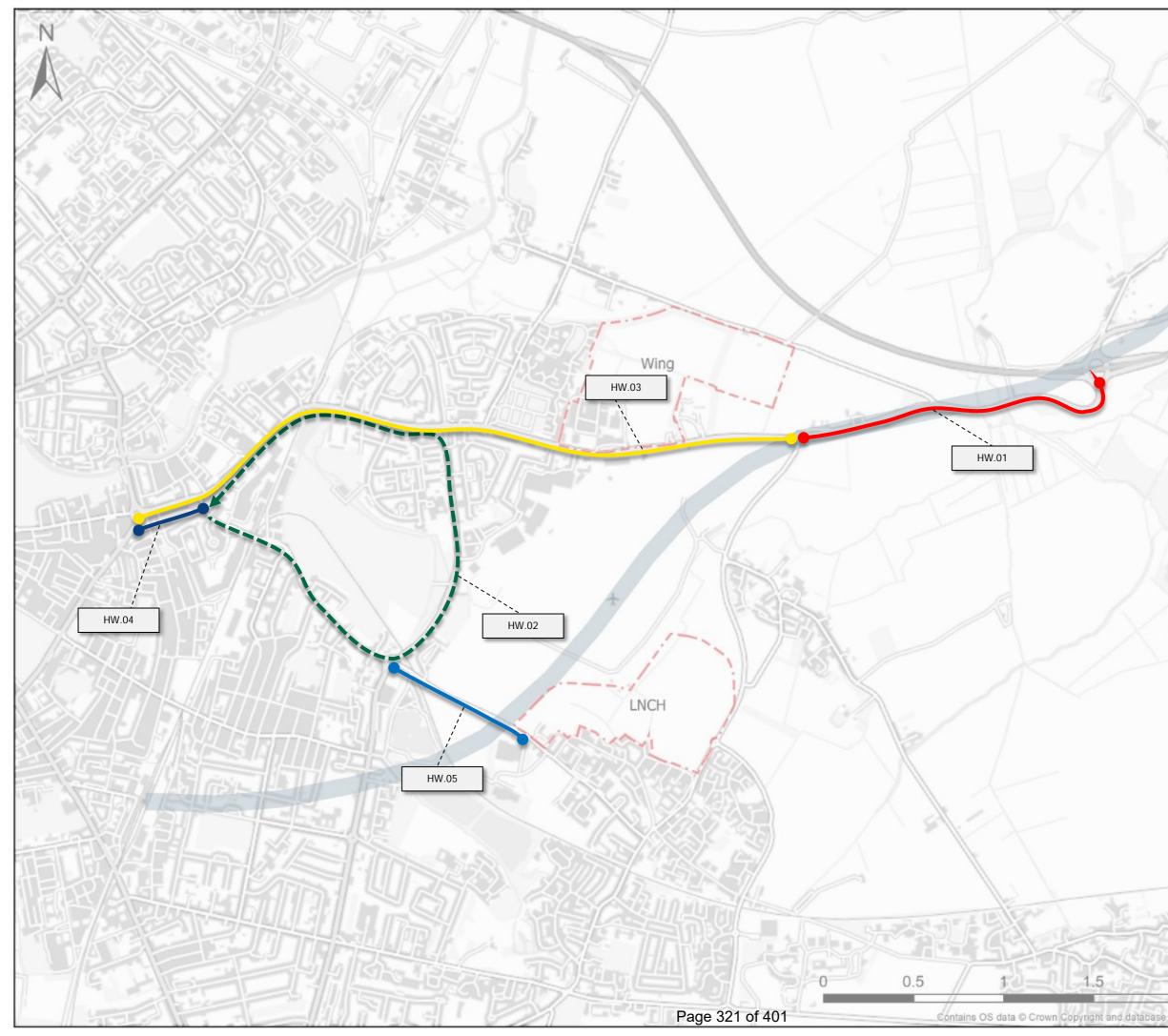
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Figure 3.7: Junction Improvement Options

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KEY:

- HW.01 Additional lane(s) on Newmarket Road to east of Airport Way junction.
 HW.02 One-way traffic on Newmarket Road, Coldham's Lane and Barnwell Road to form gyratory.
 HW.03 Priority lane for Ultra Low Emission Vehicles on Newmarket Road.
 HW.04 Removal of two lanes (one inbound, one outbound) between Elizabeth Way and Coldham's Lane.
 HW.05 Carriageway widening along Coldham's Lane south of the airport, with a left turn filter lane for buses at the Sainsbury's roundabout.

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Figure 3.8: Highway Options

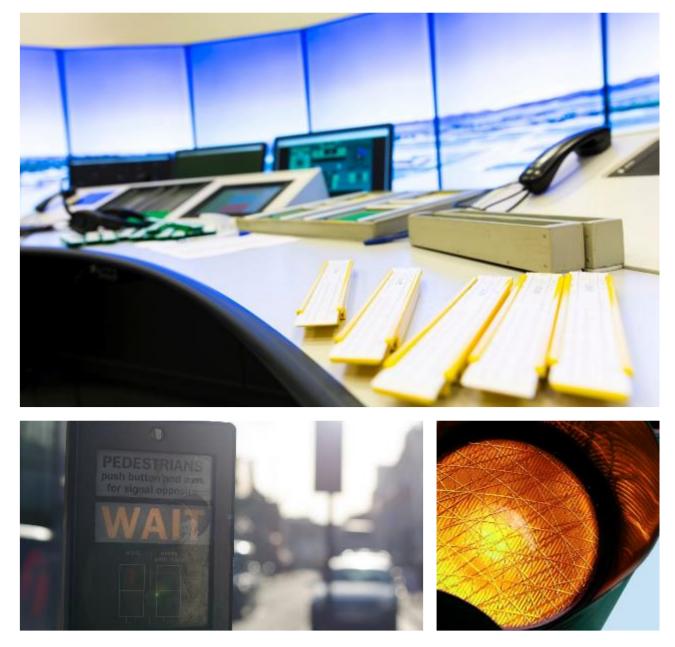
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3.10 Intelligent Transport Systems

- 3.10.1 The use of technology provides the scope to maximise the efficiency of highway capacity through better management of traffic flows. Signalised junctions can be fitted with cameras, sensors and other monitoring equipment to help regulate the flow along a corridor, only allowing through demand which would not result in queues and delays further downstream.
- 3.10.2 The technology can be applied to a single corridor or a much wider network and can be applied to give priority to buses and other vehicle types if required.

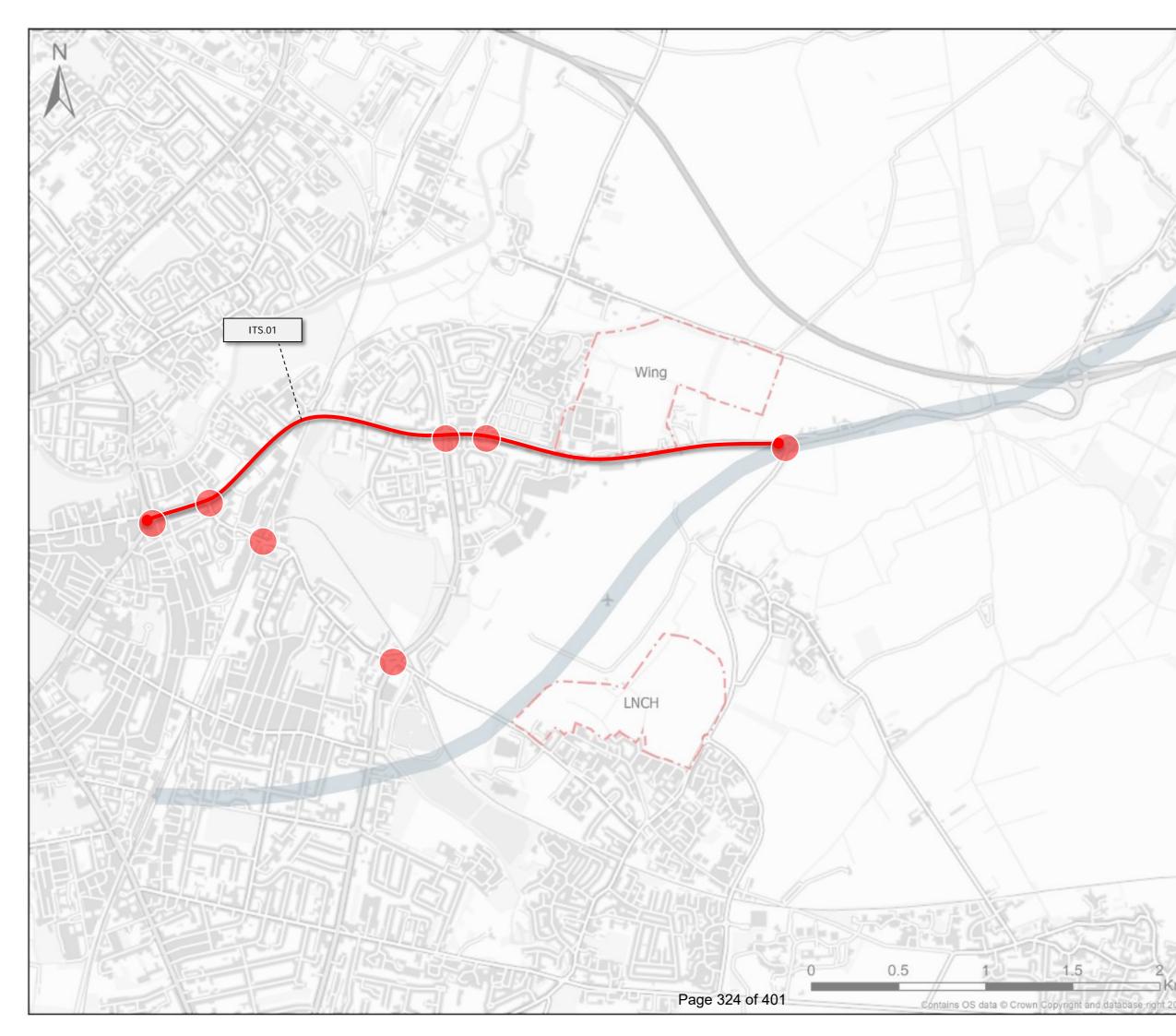


3.11 Active Travel

- 3.11.1 Measures to cater for those travelling by bike, on foot or equestrians not only help to provide attractive alternatives to the car for short trips, but also have the ability to improve the public realm and social cohesiveness of an area, and as such, can help meet priorities far beyond transport itself.
- 3.11.2 In addition, the city's cycling culture provides some assurances that if high quality infrastructure is provided, then it will be utilised and provide the additional capacity and connectivity to meet the needs of many in the local area.







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 ITS.01 Reconfiguration of all signals to manage/control flow along Newmarket Road & wider network.

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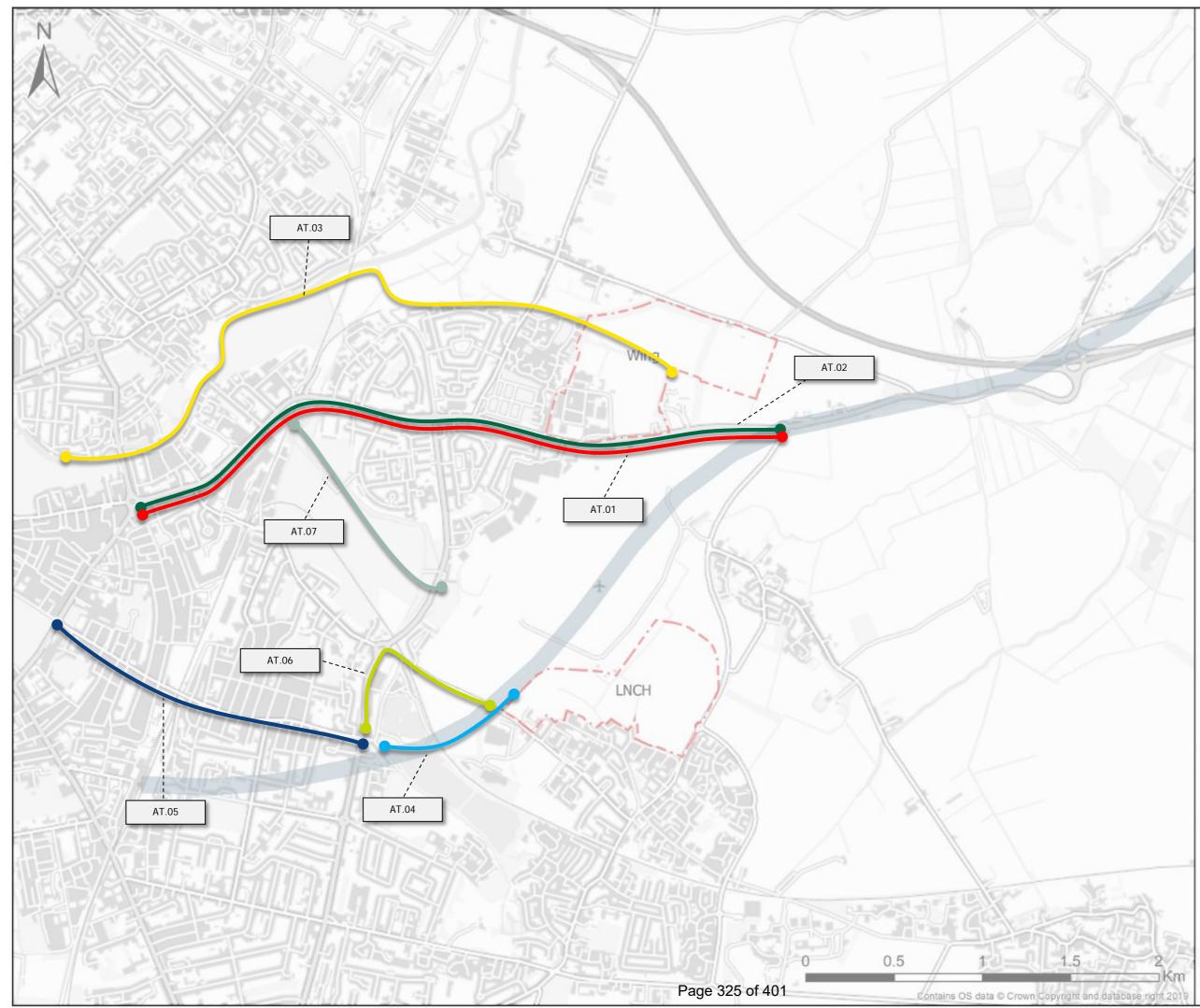
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Figure 3.9: Intelligent Transport System Options

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KEY:

- AT.01 Provision of continuous segregated inbound cycle lane along Newmarket Road.
 AT.02 Provision of continuous segregated
- AT.02 Provision of continuous segregated outbound cycle lane along Newmarket Road.
- **AT.03** Promotion of Park and Cycle from the P&R site.
- **AT.04** Provide a new shared use ped/cycle bridge(s) over the rail line and Coldham's Lane to link the existing 'Tins' cycle path with the airport site.
- AT.05 Provide new dedicated cycle lanes along Brookfields / Mill Road.
- AT.06 Provide new cycle lanes along Coldham's Lane between the airport site and the Sainsbury's roundabout and enhance existing cycle provision along Brooks Road.
- AT.07 Provide a new off-carriageway pedcycle link from the airport site to connect into the Chisholm Trial via Barnwell Road and Coldham's Common.

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Project

Figure 3.10: Active Travel Options

3.12 Summary

- 3.12.1 The option generation process and long listing exercise has sought to provide an exhaustive list of all realistic ideas and initiatives which could contribute towards the overarching objectives of the study and provide the step-change in public transport provision required in the east of the city.
- 3.12.2 The Long List itself reflects many different areas of intervention in this regard, ranging from high cost heavy infrastructural improvements, to smaller scale, lighter touch measures, although it does not incorporate travel demand management measures, as these are beyond the scope of the study and are part of a more strategic assessment of the needs of the Greater Cambridge area as a whole, and are addressed within the City Access study.
- 3.12.3 What it does show however, is that despite the complexity and constraints of the study area, there remains scope for significant levels of investment, some of which would provide localised improvements, and others which would see a more strategic shift in the nature of travel patterns.

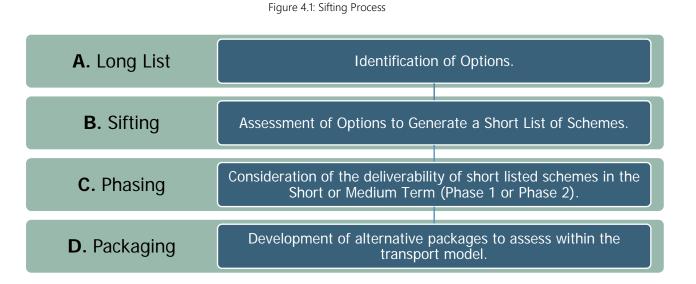


4 | Sifting of the Long List

4.0 Sifting of the Long List

4.1 Overview

4.1.1 Following the identification of the Long List of potential measures to improve the capacity and connectivity of sustainable transport provision in the east of the city, a sifting process was undertaken through which to filter out those schemes which would not meet the overarching objectives of the study or which were deemed unrealistic from a deliverability perspective (see Figure 4.1).



4.1.2 A staged approach was adopted though which to refine, phase and package the schemes prior to their assessment within the Cambridge Paramics Model. This chapter details the process and outputs of the sifting and assessment, together with the rationale behind the phasing and packaging of interventions.

4.2 Assessment Criteria

- 4.2.1 The sifting process focused on the ability of each measure to address locally specific objectives and deliverability issues which could form showstoppers preventing the options from having any realistic chance of implementation.
- 4.2.2 Schemes were expected to meet at least one of the objectives and present no major deliverability issues to be taken forward to the second stage of the sifting process based upon a qualitative evaluation undertaken by an experienced panel of transport professionals.
- 4.2.3 The assessment criteria which formed the basis to the assessment are contained within <u>Table 4.1</u>, together with the rationale behind their use and suitability. Cumulatively they reflect aspects of the overarching objectives for the study identified at the conclusion of the Baseline Report.
- 4.2.4 The criteria also cover the key factors which will determine if the schemes are realistic and deliverable, and correlate with the broad framework of the Department for Transport's Early Assessment and Sifting Tool (EAST).

Table 4.1: Assessment Criteria

Area	Criteria	Rationale
Objectives		
-	Increase in Public Transport Capacity	The ability of the intervention to enable more people to travel to and from the city using public transport at any given time. This could be related to additional seating on existing services, increased frequency of existing services or entirely new services. Whilst not directly affecting these, various interventions could allow for the potential for any of these to be increased.
Capacity	Ability to contribute to 24% reduction in traffic levels	Actively discourages travel by car to help reduce traffic in Cambridge by 24% according to GCP goals. This could comprise reducing lane and junction capacity as well as closing off direct through-routes for general traffic. These interventions then detract from the attractiveness of the car when compared to other modes of travel.
	Propensity to Reduce Congestion / Delay	The extent to which the intervention will alleviate or bypass pinch points in the network.
	Reduced Journey Time for Public Transport	Enables people to be able to travel to and from the city quicker using public transport when compared to the existing situation. What is also key is the competitiveness of public transport journey times against that of the car.
	Increased Reliability for Public Transport	Enables public transport vehicles to better serve their designated stops as timetabled and displayed. Interventions will also minimise risk of unannounced delay to public transport. This will also help to change public perceptions of lateness and 'four at once'.
	Ease of Interchange	Facilitates enhanced transfer between different modes of public transport whilst including provision for cycling. This enlarges the jobs market catchment for residents looking to travel by sustainable modes of transport whilst also encouraging those in cars to make a switch should no direct public transport service between their origin and destination be available to them.
Connectivity	Benefits to Active Travel	Supports the attractiveness of walking, cycling and other active travel modes along the corridor. Benefits could be realised by interventions in various ways, including connectivity – facilitating more direct routes, permeability – allowing ease of crossing major junctions and safety.
	Supports the Cambridgeshire Autonomous Metro	Interventions that complement (or do not compromise or compete against) the delivery of CAM through providing early infrastructure for the CAM itself to utilise or by strengthening the public transport offer along the Eastern Corridor.
	Scale of Catchment (Housing/Jobs)	The size/population of existing residential and employment areas that any particular intervention could serve, based upon the 400m and 800m distances widely acknowledged as being the thresholds for which people will walk to a bus stop or station.
	Ability to Unlock Growth	Strengthens the case to develop currently undeveloped land in the vicinity of the intervention proposed that would otherwise be inappropriate from a traffic and highways perspective, and/or helps to connect different areas of growth within the city.
	Road Safety	Potential to reduce the number and severity of collisions upon implementation. This considers the safety of pedestrians and cyclists as well as general traffic.
	Protection of Green Spaces	Land comprising green space would remain at its current extent with the community value of these spaces potentially enhanced.
Communities	Environment, Air Quality and Carbon	Contributes to the ambition of national and local policy objectives to mitigate against the adverse impacts of climate change. Implementation could have long term benefits to nature and to people's health.
	Quality of the Public Realm	Ability of the intervention to enhance the setting of key landmark features along the corridor, such as water courses, public art, streetscape and listed buildings.
	Severance	Produces an unwelcome disconnect between neighbouring places and spaces through the physical intrusion of hard engineering works which results in some form of metaphorical barrier that becomes more difficult to cross for various users.
Deliverability		
	Engineering Constraints	The apparent difficulty of delivering a particular intervention in its proposed location due to level differences, land availability and competing infrastructure.
Physical	Environmental Constraints	The apparent difficulty of delivering a particular intervention in its proposed location due to local sensitivities in the natural environment which can include impacts upon green spaces, water courses and habitats.

Area	Criteria	Rationale
Legal	Landownership	Considers the availability of land, the potential need to purchase land, the supportiveness of landowners, and the complexity of multiple landowners. Schemes score better when there are no land take requirements, land is under the control of the local authority, or where there is a commitment from a landowner to be supportive of any works.
	Planning	The extent to which the scheme is likely to require planning permission and the likelihood of planning permission being granted.
Current	Political / Public	The apparent difficulty of delivering a particular intervention in its proposed location due to local opposition from council members or the general public – including local residents and business owners.
Support	Stakeholders	The apparent difficulty of delivering a particular intervention in its proposed location due to local opposition from council members or the general public – including local residents and business owners.
Financial	Capital Costs	Provides an indicative high-level estimate in terms of the relative costs of the scheme options.
Phasing	Deliverable in the Short Term (0-5 years)	Indicates if a scheme can be implemented in the short term
	Deliverable in the Medium Term (5-10 years)	Indicates if a scheme can be implemented in the medium term.

4.3 Phasing

- 4.3.1 The overarching objectives of the commission are to develop improvements in the capacity and connectivity of sustainable transport to the east of Cambridge, together with benefits to local communities through a reduction in the impacts of travel through the area. Within this overall remit, there are two distinct time-based elements which have shaped the nature of the schemes taken forward and the packages within which they sit.
- 4.3.2 In the short term there is a requirement to improve the current transport offer along Newmarket Road. Relatively quick wins are required in the next five years to address the current inadequacies in provision and the lack of real travel choice for many, together with a need to kick start the economy following the impacts of the Covid-19 lockdown from March 2020.
- 4.3.3 In the medium term (5-10 years) there is the need to facilitate housing and jobs growth within the corridor, not least the opportunities presented in the emerging Greater Cambridge Local Plan. Potential measures should be free-standing but have the potential to form a pre-cursor to the implementation of the Cambridgeshire Autonomous Metro either as an initial, early deliverable of the CAM, or a complementary measure to support its operation once in place.
- 4.3.4 On this basis, it was determined which schemes should be taken forward, and if they should be considered as a short term or medium term measure, or both at the conclusion of the sifting process.

4.4 Results of the Assessment

- 4.4.1 The assessment of the Long List was based upon the qualitative judgement of a panel of transport experts from the public and private sectors. Each scheme was considered in terms of the extent to which it would make a major or minor positive or negative impact on the criteria, or if the impact would be neutral. Cost bandings were identified in terms of the high-level assessment of potential financial implications.
- 4.4.2 The results of the assessment determined that 38 schemes should be taken forward and 21 rejected, of the 59 schemes initially identified. In terms of phasing, it was concluded that 12 schemes should be considered in terms of Phase 1 interventions, 14 schemes should be considered as part of a second phase of measures, and a further 12 schemes should be considered for both.
- 4.4.3 The results of the assessment are summarised in <u>Table 4.2</u>, whilst details of the scoring of each scheme against the criteria are provided in <u>Appendix A</u>.

Ref.	Scheme Options
Pass	Phase 1
BL.05	New outbound bus lane between Elizabeth Way and the Leper Chapel.
BL.06	New tidal bus lane (or busway) between Elizabeth Way and the Leper Chapel.
BG.01	Bus Gate on Newmarket Road.
JC.03	Reconfiguration of the Newmarket Road and Coldham's Lane junction.
JC.04	Signalisation and reconfiguration of the Newmarket Road and Barnwell Road junction (higher capacity).
JC.05	Signalisation and reconfiguration of the Newmarket Road and Barnwell Road junction (lower capacity).
JC.06	Reconfiguration of the Newmarket Road and Ditton Lane junction (higher capacity).
JC.07	Reconfiguration of the Newmarket Road and Ditton Lane junction (lower capacity).
JC.09	Signalisation of the junction of Newmarket Road and Airport Way.
AT.01	Provision of continuous segregated inbound cycle lane along Newmarket Road.
AT.02	Provision of continuous segregated outbound cycle lane along Newmarket Road.
AT.03	Promotion of Park and Cycle from the P&R site.
Pass	Phase 2
BW.04	Online - between Park and Ride and A14.
BW.10	Offline (south) - between Brookfields and Coldham's Lane via a new bridge over the rail line.
BW.11	Offline (south) - between Coldham's Lane and P&R via Cambridge Airport (east of runway).
BS.02	New bus service between the station, Mill Road, Cambridge East and the Park and Ride.
RA.02	Double track the Cambridge to Newmarket line.
RA.04	Provide new station at 'Cambridge East'.
RA.07	Provide a new Parkway Station at Six Mile Bottom.
RA.08	Provide a passing point near Fulbourn on the Cambridge to Newmarket line.
JC.08	Reconfiguration of A14 Junction 34 (with Ditton Lane) to remove slips.
JC.10	Signalisation and Reconfiguration of Quy Interchange.
HW.05	Carriageway widening along Coldham's Lane south of the airport, with a left turn filter lane for buses at the Sainsbury's roundabout.
AT.04	Provide a new shared use pedestrian/cycle bridge over the rail line and Coldham's Lane to link the existing 'Tins' cycle path with the airport site.
AT.06	Provide new cycle lanes along Coldham's Lane between the airport site and the Sainsbury's roundabout and enhance existing cycle provision along Brooks Road.
AT.07	Provide a new off-carriageway pedestrian-cycle link from the airport site to connect into the Chisholm Trail via Barnwell Road and Coldham's Common.
Pass	Both
BW.02	Online - between Elizabeth Way Roundabout and Leper Chapel.
BL.02	Remove inbound bus lanes.
BL.03	Remove outbound bus lanes.
BS.01	Increase the frequency of existing P&R services.
BS.03	Provide new service from P&R to Addenbrooke's hospital and the Biomedical Campus.
PR.01	Expansion of current Park and Ride site.
PR.02	Relocation of Park and Ride to south of Newmarket Road and east of Airport Way.
BG.02	Bus Gate on Mill Road (at bridge over rail line).
JC.01	Reconfiguration of Elizabeth Way Roundabout, including the removal of the subway (higher capacity).
JC.02	Reconfiguration of Elizabeth Way Roundabout, including the removal of the subway (lower capacity).
HW.01	Additional lane(s) on Newmarket Road to east of Airport Way junction.
ITS.01	Reconfiguration of all signals to manage/control flow along Newmarket Road and wider network.

Table 4.2: Scoring of Long List Options

Ref.	Scheme Options
Rejected	
BW.01	Online - full length of Newmarket Road.
BW.03	Online - between Leper Chapel and Park and Ride.
BW.05	Offline (north) - between Leper Chapel and Quy Water via former rail line and High Ditch Road.
BW.06	Offline (north) - between Cambridge North Station and former rail line.
BW.07	Offline (south) - between Leper Chapel and Barnwell Road via Coldham's Common.
BW.08	Offline (south) - between Barnwell Road and P&R via Cambridge Airport (west of runway).
BW.09	Offline (south) - between East Road and Brookfields via Mill Road.
BW.12	Offline (south) – Coldham's Lane between Newmarket Road and south of runway.
BL.01	Extend inbound bus lanes to provide continuous link between P&R and city centre.
BL.04	Extend outbound bus lanes to provide continuous link between city centre and P&R.
BL.07	Conversion of the Cambridge to Newmarket rail line into a two-way bus lane.
PR.03	Relocation of Park and Ride to north of Quy Interchange (A14 Junction 35).
PR.04	New Park and Ride site to the north of Fen Ditton.
RA.01	Reinstate the Cambridge to Mildenhall Line.
RA.03	Realignment of the Cambridge to Newmarket line to the north of Cherry Hinton.
RA.05	Provide new station at Cherry Hinton.
RA.06	Provide new station at Barnwell.
HW.02	One way traffic on Newmarket Road, Coldham's Lane and Barnwell Road to form gyratory.
HW.03	Priority lane for Ultra Low Emission Vehicles only on Newmarket Road.
HW.04	Removal of two lanes (one inbound, one outbound) between Elizabeth Way and Coldham's Lane.
AT.05	Provide new dedicated cycle lanes along Brookfields / Mill Road.

4.5 Rejected Schemes

- 4.5.1 The majority of those schemes rejected at this stage were as a result of deliverability concerns, particularly environmental constraints such as loss of sensitive public open space, the physical ability to accommodate the schemes within a tight carriageway without significant disbenefits to many local residents, and the timeframe it would take to deliver major infrastructure despite in some instances being very credible schemes in their own right.
- 4.5.2 <u>Table 4.3</u> summarises the rationale behind the rejection of the 21 discounted options.

Table 4.3: Basis for the Rejected Lor	ig List Schemes
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Ref.	Scheme Options	Rationale for Rejection
BW.01	Online - full length of Newmarket Road.	Providing a busway along large parts of Newmarket Road would be extremely difficult, or arguably, impossible given the road widths, severance, frontage access issues and mature trees. This would have to be at the expense of general traffic (which would be re-routed), footpaths and cycle lanes, and even residents' properties in some cases. It would also have a severing impact on the local community given the design requirements limiting crossing points. It was therefore concluded that in several respects the option would undermine the overarching objectives we are trying to achieve, whilst deliverability would also be extremely problematic and unpopular.
BW.03	Online - between Leper Chapel and Park and Ride.	Providing a busway along large parts of Newmarket Road would be extremely difficult given the land required (to the east of the Leper Chapel). This would have to be at the expense of general traffic (which would be re-routed), footpaths and cycle lanes, and even residents' properties in some cases. It would also have a severing impact on the local community given the design requirements limiting crossing points. It was therefore concluded that in several respects the option would undermine the overarching objectives we are trying to achieve, whilst deliverability would also be extremely problematic and unpopular.
BW.05	Offline (north) - between Leper Chapel and Quy Water via	Provides a relatively direct, segregated link into the city centre. The additional distance buses would have to travel on the alignment could be offset by the faster speed at which they could operate and the removal of buses from Newmarket Road would present an opportunity to prioritise provision for pedestrians and cyclists. However, there are concerns in terms of the

Ref.	Scheme Options	Rationale for Rejection
	former rail line and High Ditch Road.	additional mileage impacting upon bus operators' costs and that services would be removed from Newmarket Road, which could affect revenue. The ability to accommodate a new junction on Newmarket Road to the east of the Leper Chapel, the impact on the setting of the Chapel, on the alignment of the Chisholm Trail, and to the open space to the north of Barnwell together provide too many concerns to make this a suitable option.
BW.06	Offline (north) - between Cambridge North Station and former rail line.	This intervention has the potential to supplement other measures in terms of benefits to orbital movements and direct access to Cambridge North Station. It would also enable better connectivity between jobs and growth in the north and east of the city, and as such take pressure of capacity in the city centre. A bridge alignment adjacent to the existing could minimise the visual intrusiveness of the scheme, although the need to traverse the popular open space to the south of the river could be difficult to mitigate, particularly where the original track bed has been encroached upon.
BW.07	Offline (south) - between Leper Chapel and Barnwell Road via Coldham's Common.	Whilst this alignment could provide improved bus access to the Marshall's site, the impacts on Coldham's Common and the brook would be significant and detrimental. There is likely to be little public or political support and engineering difficulties in terms of managing the watercourse and providing a new junction on Newmarket Road would add further complications to delivery. Diversion of the Newmarket Road services via this route would add mileage and costs for the bus operator, and potentially could lose passengers who currently board on Newmarket Road.
BW.08	Offline (south) - between Barnwell Road and P&R via Cambridge Airport (west of runway).	The alignment would be such that it could serve both existing communities and new development on the Marshall's site, whilst the impact on the current network and key environmental assets would be minimal. However it would not be deliverable whilst the airport is operational as it would sever the airport buildings from the runway and as such could not be in place within the timescale required. Diversion of the Newmarket Road services via this route would add mileage and costs for the bus operator, and potentially could lose passengers who currently board on Newmarket Road.
BW.09	Offline (south) - between East Road and Brookfields via Mill Road	A busway along Mill Road would require extensive property acquisition and demolition, the removal of traffic and its re-routing within the wider network, restrictions on pedestrian and cycle access, and severance issues. It could be considered that this section of route is totally unsuitable for high frequency bus operation. The alignment between the lakes and bridging the rail line would add further complications to a scheme which would provide a very poor fit in terms of meeting the range of objectives required from investment in public transport in the east of the city. The provision of a busway on a single track, or operating in one direction would still fail to mitigate many of its drawbacks.
BW.12	Offline (south) – Coldham's Lane between Newmarket Road and south of runway.	The lack of carriageway width, impact on general traffic, particularly the complexity of movements associated with the retail park and the significant pinch points along Coldham's Lane, would make it extremely difficult to provide a busway along the corridor. In addition, the potential negative impacts it would have on the common, and walking and cycling movements make this an unpalatable option.
BL.01	Extend inbound bus lanes to provide continuous link between P&R and City Centre.	This is an excellent option in terms of the objectives of the study. However, there is not the width to deliver a continuous bus lane (in either direction) without significant compulsory purchase of properties and loss of pedestrian and cycle facilities along the corridor. Whilst less intrusive than a busway and having the ability to be used more flexibly in terms of permitted vehicles and hours of operation, a bus lane would require the widening of the carriageway, unless general traffic was prohibited completely.
BL.04	Extend outbound bus lanes to provide continuous link between City Centre and P&R.	There is not the width to deliver a continuous bus lane (in either direction) without significant compulsory purchase of properties and loss of pedestrian and cycle facilities along the corridor. Whilst less intrusive than a busway and having the ability to be used more flexibly in terms of permitted vehicles and hours of operation, a bus lane would require the widening of the carriageway, unless general traffic was prohibited. This could possibly accompany a Bus gate option on Newmarket Road.
BL.07	Conversion of the Cambridge to Newmarket Rail Line into a two-way bus lane.	The replacement of the rail line between Cambridge and Newmarket with a two way bus only link would provide fast and direct access into the city not only from Newmarket town centre but other towns and villages within the broad corridor, providing greater public transport connectivity. However, the scheme would see the rail link between Cambridge, Newmarket and the ports lost with huge implications for strategic public transport capacity and the ability to move freight sustainably. On this basis alone, it is considered inappropriate to take forward.
PR.03	Relocation of Park and Ride to north of Quy Interchange (A14 Junction 35).	Both in terms of the provision of the infrastructure and operation of the supporting services, the site would present problems. Located in the green belt it would have an impact on the environment and landscape. Perceptually it could be unappealing for users, in being cited further away from the city centre, and operationally there would be issues in terms of increased costs and travel times (including negotiating the Quy Interchange). Whilst it would intercept many vehicles sooner, those travelling from the south via Airport Way would have further to travel.
PR.04	New Park and Ride site to the north of Fen Ditton.	The site offers potential to support a northern route realignment and intercept traffic travelling towards the busy Ditton Lane junction with Newmarket Road, catering for traffic exiting the A14 at J34 and utilising existing service provision. However measures to be introduced as part

Ref.	Scheme Options	Rationale for Rejection
		of the Cambridge North to Waterbeach Study are likely to cater for any demand from further north in places such as Horningsea, and given the limitations on demand and impact of works on the Green Belt, it is not recommended that it is taken forward.
RA.01	Reinstate the Cambridge to Mildenhall Line.	The principle of reinstating a heavy rail link to serve large new developments in Mildenhall is undermined by the practical realities. Much of the original alignment has been sold and developed and the cost and timescales for delivery would be significant. There is also the danger that it could duplicate the service to be provided by CAM and compete for the same market of commuters, and damage areas of open space popular with local residents.
RA.03	Realignment of the Cambridge to Newmarket Line to the north of Cherry Hinton.	The realignment of the existing Cambridge - Newmarket line could generate significant benefits, for all modes of travel. Rail journey times and capacity would both benefit, as would the potential for the provision of East-West Rail in the future. At a more local level, the realignment would enable the removal of the level crossings which currently cause delays to general traffic and a safety concern for all road users. However the costs and timeframe to implement, the impact on Coldham's Common and the complex planning and legal requirements to be met make it an unrealistic proposition for taking forward within this study.
RA.05	Provide new station at Cherry Hinton.	Local growth and the lack of attractive alternative travel options for existing Cherry Hinton residents, could provide sufficient demand for the new station. Concerns persist with regards to the capacity of the current line to accommodate a level of service frequency that would make the station viable, but as part of a wider scheme which would see capacity enhancements, it could provide excellent strategic connectivity for the area. However, a train station at Cherry Hinton could not be justified in addition to a station at Cambridge East.
RA.06	Provide new station at Barnwell.	The station would be dependent on the Cambridge to Mildenhall line being reinstated to be considered a possible option (and this is unrealistic). However in its own right, the scheme has significant shortcomings, not least the impact on the open space in which it would be located, in terms of operational issues as a result of its proximity to Cambridge Station, and due to the lack of local growth opportunities and catchment it could serve.
HW.02	One way traffic on Newmarket Road, Coldham's Lane and Barnwell Road to form gyratory.	Whilst this could free up highway capacity for sustainable transport measures, it could see a large increase in vehicle miles and become an inconvenience for many, particularly local residents (as well as buses themselves). One way systems often see increases in vehicle speeds with the subsequent road safety connotations, and it is unlikely to be popular with the public or stakeholders, particularly the emergency services.
HW.03	Priority lane for Ultra Low Emission Vehicles only on Newmarket Road.	There is not the width to deliver a continuous ULEV lane (in either direction) without significant compulsory purchase of properties and loss of pedestrian and cycle facilities along the corridor. Whilst less intrusive than a busway and having the ability to be used more flexibly in terms of permitted vehicles and hours of operation, a ULEV lane would require the widening of the carriageway.
HW.04	Removal of two lanes (one inbound, one outbound) between Elizabeth Way and Coldham's Lane.	The removal of capacity for general traffic would provide scope for sustainable travel improvements and would be relatively straight forward in engineering terms. The question is, would the traffic just disappear with motorists switching to other modes, would it seek alternative routes, or would queues lengthen and delays increase. There is likely to be an element of all three, but as a result bus journey times are likely to suffer to the extent that the public realm and active travel benefits cannot be deemed to outweigh the impact.
AT.05	Provide new dedicated cycle lanes along Brookfields / Mill Road.	There is insufficient carriageway width to deliver segregated cycle lanes along Mill Road. In order to pass cyclists safely, vehicles would have to cross onto the other side of the carriageway creating a road safety risk. Vehicles could also end up queuing to overtake cyclists increasing the likelihood of delays, particularly for buses.

- 4.5.3 Whilst the above schemes have been discounted, it is not to suggest that they do not have merit in their own right. A number of the options could prove to be effective strategic interventions when considered within a city wide or sub-regional context.
- 4.5.4 Likewise, the removal of highway capacity between Elizabeth Way and Coldham's Lane could facilitate the transformation of the public realm and create an attractive gateway into the city. However, given the balance which has had to be struck between managing the movement and place functions of Newmarket Road, the decision was taken to reject the scheme at this stage. Such an option might be revisited in due course to complement the City Access Strategy.

4.6 Summary

4.6.1 A robust and transparent critique of the Long List has been undertaken which aligns with the requirements of the Transport Appraisal Process guidance issued by the DfT. An assessment framework was devised to be bespoke to the study area and as such draw out the most appropriate interventions which to take forward for more detailed consideration.



5 | Packaging of the Options

5.0 Packaging of the Options

5.1 Overview

- 5.1.1 Improving the capacity and connectivity of public transport along the Newmarket Road corridor and the surrounding area would not be achieved through the piecemeal implementation of individual measures. An integrated multi-modal package based approach is required to provide a step-change in the quality of provision, the journey experience and the travel choices available to all users.
- 5.1.2 Such an approach also reflects the complexities of the network, and the need for comprehensive route treatment. The current sustainable transport offer along Newmarket Road highlights the shortcomings of incremental investment. The packaging of the short-listed options will avoid such pitfalls.
- 5.1.3 Within this context, there are two distinct requirements to make the sustainable transport offer fit for purpose. Firstly, immediate improvements are required to the operation of Newmarket Road and as such alternative short-term 'Phase 1' packages have been identified.
- 5.1.4 These will be complemented by more medium-term improvements through which to open up growth opportunities to the east of Cambridge, with alternative 'Phase 2' packages detailed herein which would build upon the short-term interventions.

5.2 Phase 1 (Short Term) Packages

5.2.1 Two distinct packages were identified through which improvements to sustainable transport could be achieved along Newmarket Road in the short term, considered to be the next five years. These consisted of:

Package 1.1: Newmarket Road Intelligent Traffic Management

- 5.2.2 This forms a light touch approach to maximise the efficiency with which buses can operate along Newmarket Road based upon the management of traffic flow via sensors in the road to detect queuing and signal timings to respond accordingly.
- 5.2.3 The technology will hold traffic back at strategic junctions on all major roads feeding into Newmarket Road so that at no point are there excess vehicles to cause delays to buses downstream. The buses themselves will be given priority at the junctions with Selective Vehicle Detection (SVD) technology designed to give them a 'green wave' along the corridor.
- 5.2.4 This will require the reconfiguration of all junctions and their signalisation, with traffic 'held' on approaches away from residential areas. As traffic can't be held back within the city centre for outbound movements, bus priority measures will be 'switched' to cater for eastbound services. All works will be deliverable within the existing highway boundary.
- 5.2.5 It is felt that the package would make more effective use of the existing road space, see journey time benefits for buses, remove the need for dedicated bus lanes allowing space to be reallocated to pedestrians and cyclists, and improve safety and reduce severance at major junctions. The schemes contained within this package are detailed in <u>Table 5.1</u> and illustrated in <u>Figure 5.1</u>.

Ref	Schemes
ITS.01	Reconfiguration of all signals to manage/control flow along Newmarket Road & wider network.
PR.01	Expansion of current Park and Ride site.
JC.01	Reconfiguration of Elizabeth Way Roundabout, including the removal of Subway (higher capacity).
JC.03	Reconfiguration of the Newmarket Road & Coldham's Lane junction.
JC.04	Signalisation and reconfiguration of the Newmarket Road & Barnwell Road junction (higher capacity).

Table 5.1: Package 1.1 Component Schemes

Ref	Schemes
JC.06	Reconfiguration of the Newmarket Road & Ditton Lane junction (higher capacity).
JC.09	Signalisation of the junction of Newmarket Road and Airport Way.
JC.10	Signalisation and Reconfiguration of Quy Interchange
BL.02	Remove inbound bus lanes.
BL.05	New outbound bus lanes between Elizabeth Way and the Leper Chapel.
AT.01	Provision of continuous segregated inbound cycle lane along Newmarket Road.
AT.02	Provision of continuous segregated outbound cycle lane along Newmarket Road.
AT.03	Promotion of Park and Cycle from the P&R site.

Package 1.2: Newmarket Road Intelligent Traffic Management

- 5.2.6 This approach builds upon Package 1.1 by providing a greater degree of physical intervention to support the technology and management of traffic flow along Newmarket Road.
- 5.2.7 The new infrastructure will see more significant changes made to key junctions in the corridor and the surrounding network, the relocation of the existing Park and Ride site to an extended location more suitable to intercepting vehicles before they enter the city, and an additional lane for general traffic between Airport Way and the Quy Interchange to accommodate queuing traffic.
- 5.2.8 The package has the potential to further reduce the dominance of traffic on Newmarket Road with the closure of A14 J34 and reconfiguration of other major junctions creating a safer and more sustainable transport corridor, and more convivial and civilised public realm. The schemes contained within this package are detailed in <u>Table 5.2</u> and illustrated in <u>Figure 5.2</u>.

Ref	Schemes
ITS.01	Reconfiguration of all signals to manage/control flow along Newmarket Road & wider network.
HW.01	Additional lane(s) on Newmarket Road to east of Airport Way junction.
JC.02	Reconfiguration of Elizabeth Way Roundabout, including the removal of Subway (lower capacity).
JC.03	Reconfiguration of the Newmarket Road & Coldham's Lane junction.
JC.05	Signalisation and reconfiguration of the Newmarket Road & Barnwell Road junction (lower capacity).
JC.07	Reconfiguration of the Newmarket Road & Ditton Lane junction (lower capacity).
JC.08	Reconfiguration of A14 Junction 34 (with Ditton Lane) to remove slips.
JC.09	Signalisation of the junction of Newmarket Road and Airport Way.
JC.10	Signalisation and Reconfiguration of Quy Interchange
BL.02	Remove inbound bus lanes.
BL.05	New outbound bus lanes between Elizabeth Way and the Leper Chapel.
PR.02	Relocation of Park and Ride to south of Newmarket Road and east of Airport Way.
AT.01	Provision of continuous segregated inbound cycle lane along Newmarket Road.
AT.02	Provision of continuous segregated outbound cycle lane along Newmarket Road.
AT.03	Promotion of Park and Cycle from the P&R site.

5.3 Phase 2 (Medium Term) Packages

5.3.1 In terms of measures to be delivered within the medium term as a pre-cursor to the opening of the CAM and in seeking to maximise housing and economic development opportunities within the east of the city, a further three packages were identified, two bus-based and a third rail based.

Package 2.1: Southern Busway (via Coldham's Lane and Brooks Road)

- 5.3.2 The provision of a continuous busway from a new Park and Ride facility, to the east of Airport Way, through the current airport site to Coldham's Lane would provide a fast and unhindered link to the edge of the urban area. From here buses would utilise Coldham's Lane and Brooks Road to connect into Mill Road, a destination in its own right, and travel inbound to the city centre.
- 5.3.3 This new corridor would open up the airport site for possible redevelopment and, located to the east of the current runway, could be delivered whilst the airport is still operational. The package is future proofed in that in the longer term it could form part of the eastern arm of the Cambridgeshire Autonomous Metro.
- 5.3.4 A bus gate on Mill Road would reduce the volume of general traffic on Mill Road freeing up capacity for bus service provision whilst complementary cycle infrastructure improvements would also help in increasing the connectivity of the airport site by sustainable modes. The schemes contained within this package are detailed in <u>Table 5.3</u> and illustrated in <u>Figure 5.3</u>.

Ref	Schemes
BW.04	Online - between Park and Ride and A14.
HW.05	Carriageway widening along Coldham's Lane south of the airport, with a left turn filter lane for buses at the Sainsbury's roundabout.
BW.11	Offline (south) - between Coldham's Lane and P&R via Cambridge Airport (east of runway).
BG.02	Bus Gate on Mill Road (at bridge over rail line).
BS.02	New bus service between the station, Mill Road, Cambridge East and the Park and Ride.
PR.02	Relocation of Park and Ride to south of Newmarket Road and east of Airport Way.
AT.04	Provide a new foot-cycle bridge(s) over the rail line and Coldham's Lane to link the existing Tins cycle path with the airport site.
AT.06	Provide new cycle lanes along Coldham's Lane between the airport site and the Sainsbury's roundabout and enhance existing cycle provision along Brooks Road.
AT.07	Provide a new off-carriageway foot-cycle link from the airport site to connect into the Chisholm Trial via Barnwell Road and Coldham's Common.

Table 5.3: Package 2.1 Component Schemes

Package 2.2: Southern Busway (via Bridge over Rail Line)

- 5.3.5 Differs from Package 2.1 through the provision of a bridge from the south of the airport site, spanning Coldham's Lane and the Cambridge to Newmarket rail line, before running along the Tins between the two lagoons and joining Mill Road via Brookfields.
- 5.3.6 Whilst a more expensive option than Package 2.1, it would provide a more direct connection into Mill Road and then on to the station and the city centre. The bridge could be converted into a pedestrian and cycle link as and when the Cambridgeshire Autonomous Metro becomes operational. The schemes contained within this package are detailed in <u>Table 5.4</u> and illustrated in <u>Figure 5.4</u>.

Ref	Schemes
BW.04	Online - between Park and Ride and A14.
BW.10	Offline (south) - between Brookfields and Coldham's Lane via a new bridge over the rail line.
BW.11	Offline (south) - between Coldham's Lane and P&R via Cambridge Airport (east of runway).
BG.02	Bus Gate on Mill Road (at bridge over rail line).
BS.02	New bus service between the station, Mill Road, Cambridge East and the Park and Ride.
PR.02	Relocation of Park and Ride to south of Newmarket Road and east of Airport Way.
AT.04	Provide a new foot-cycle bridge(s) over the rail line and Coldham's Lane to link the existing Tins cycle path with the airport site.
AT.06	Provide new cycle lanes along Coldham's Lane between the airport site and the Sainsbury's roundabout and enhance existing cycle provision along Brooks Road.
AT.07	Provide a new off-carriageway foot-cycle link from the airport site to connect into the Chisholm Trial via Barnwell Road and Coldham's Common.

Table 5.4: Package 2.2 Component Schemes

Package 2.3: Rail

- 5.3.7 Provides a step change in rail capacity to the east of the city through the double tracking of the line between Cambridge and Newmarket, coupled with the provision of new stations at a site to serve the southern edge of the airport site, 'Cambridge East', and in the Six Mile Bottom area which could serve development aspirations in that part of South Cambridgeshire and also operate as a Parkway Station given its proximity to the A11 and A14.
- 5.3.8 This package provides potential benefits above and beyond this study. The enhancements would seek to reflect the wider aspirations of the East-West Rail Consortium to improve the capacity and connectivity of rail service between the Haven ports, Ipswich, Cambridge and beyond. That said, the benefits that might be delivered by the package would be limited because of constrained capacity in Cambridge station the alignment traversing Coldham's Common and the multiple level crossings in Cherry Hinton and Fulbourn.
- 5.3.9 The schemes contained within this package are detailed in <u>Table 5.5</u> and illustrated in <u>Figure 5.5</u>.

Ref	Schemes			
	As Package 2.2 plus:			
RA.02	Double track the Cambridge to Newmarket Line.			
RA.04	Provide new station at 'Cambridge East'.			
RA.07	Provide a new Parkway Station at Six Mile Bottom			

Table 5.5: Package 2.3 Component Schemes

5.4 Omitted Schemes

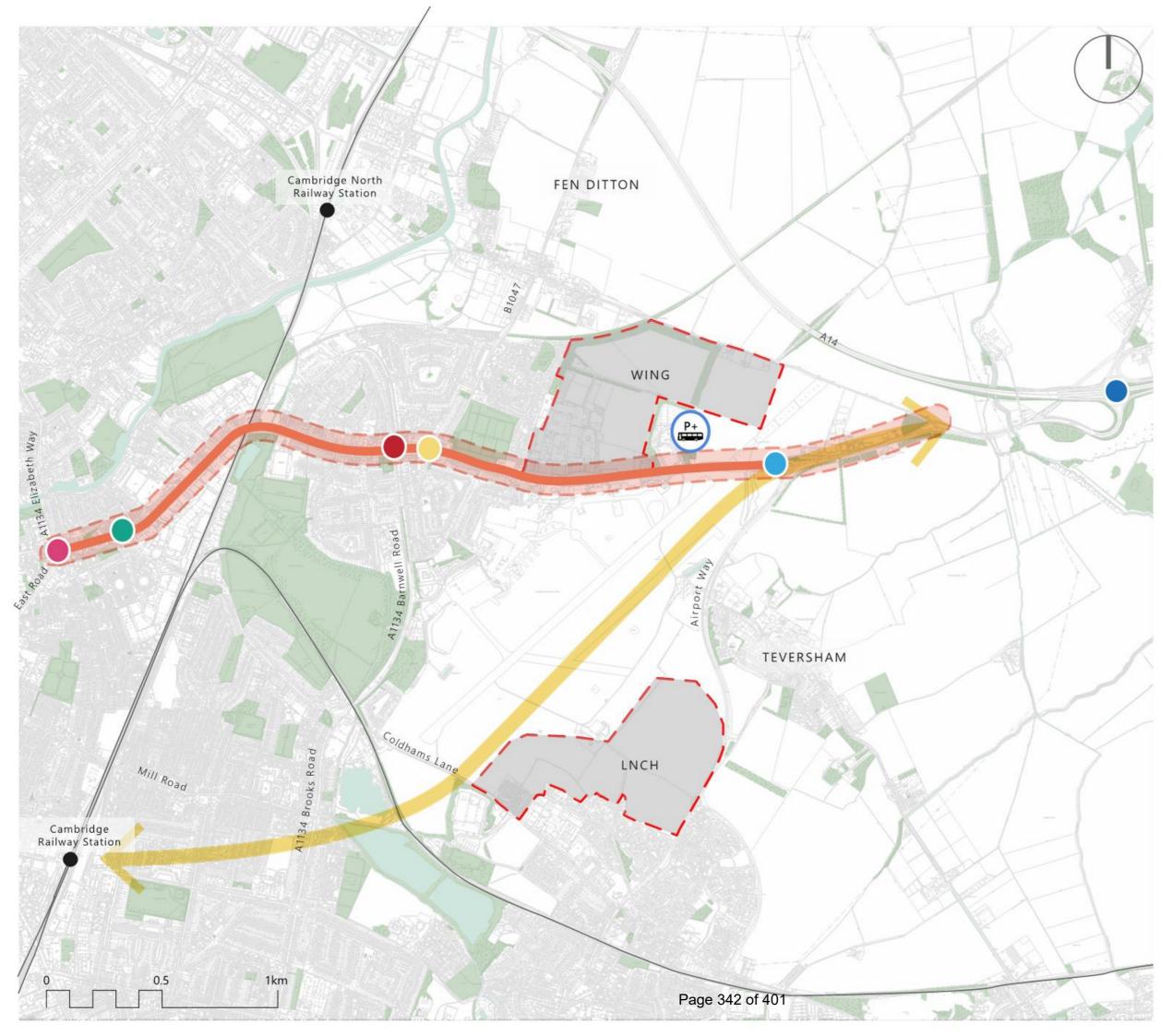
5.4.1 Despite being considered suitable for delivery in either the short term or medium term, several of the shortlisted options were not included in any of the packages to be modelled. The explanation for each of these omissions is contained within <u>Table 5.6</u>.

Intervention	Ref	Scheme	Rationale
Busway	BW.02	Online - between Elizabeth Way Roundabout and Leper Chapel.	 Use of ITS would in many ways negate the need for dedicated lanes for buses enabling the road space to be used more efficiently and where possible reallocated to pedestrians and cyclists. Such a short section of busway would not provide strategic benefits if implemented in isolation and not form part of a corridor length scheme.
Bus Lanes	BL.05	New outbound bus lane between Elizabeth Way and the Leper Chapel.	• Use of ITS would in many ways negate the need for dedicated lanes for buses enabling the road space to be used more efficiently and where possible reallocated to pedestrians and cyclists.
Bus Lanes	BL.06	New tidal bus lane (or busway) between Elizabeth Way and the Leper Chapel.	• Use of ITS would in many ways negate the need for dedicated lanes for buses enabling the road space to be used more efficiently and where possible reallocated to pedestrians and cyclists.
Bus Gate	BG.01	Bus Gate on Newmarket Road.	 An effective Intelligent Traffic Management System would negate the need for a bus gate and provide a more nuanced approach to the management of general traffic flows.
Rail	RA.08	Provide a passing point near Fulbourn on the Cambridge to Newmarket Line.	 A passing point would provide an incremental approach in providing more rail capacity. However, it was felt that an intervention which could provide greater strategic benefit in the long term (double tracking) would present a more comprehensive approach. The use of passing loops so close to Cambridge station where there is a high risk of delay can lead to significant downstream delay.

Table 5.6: Rationale for Omission of Short-Listed Schemes

5.5 Summary

- 5.5.1 The packaging process has enabled the identification of alternative approaches to meet the short-term needs of the Newmarket Road corridor and the longer term requirement to provide the capacity and connectivity to facilitate housing and economic growth in the city.
- 5.5.2 Whilst there are a multitude of permutations and combinations of schemes which could be assessed in more detail, those identified provide distinctly different approaches within the confines of a heavily urbanised study area.







Indicative CAM alignment

P*

Major development sites

PR.01 Expansion of current Park and Ride site

ITS.01- Reconfiguration of all signals to manage/control flow along Newmarket Road & wider network. BL.02 - Remove inbound bus lanes. BL.05 - New outbound bus lanes between Elizabeth Way and

the Leper Chapel.

JC.01 - Reconfiguration of Elizabeth Way Roundabout, including the removal of Subway (higher capacity).

JC.03 - Reconfiguration of the Newmarket Road & Coldhams Lane junction.

JC.04 - Signalisation and reconfiguration of the Newmarket Road & Barnwell Road junction (higher capacity).

JC.06 - Reconfiguration of the Newmarket Road & Ditton Lane junction (higher capacity).



JC.09 - Signalisation of the junction of Newmarket Road and Airport Way.

JC.10 - Signalisation and Reconfiguration of Quy Interchange

AT.01 & AT.02 - Provision of continuous segregated inbound & outbound cycle lane along Newmarket Road.

Greater Cambridge Partnership

Figure 5.1: Package 1.1 Intelligent Traffic Management

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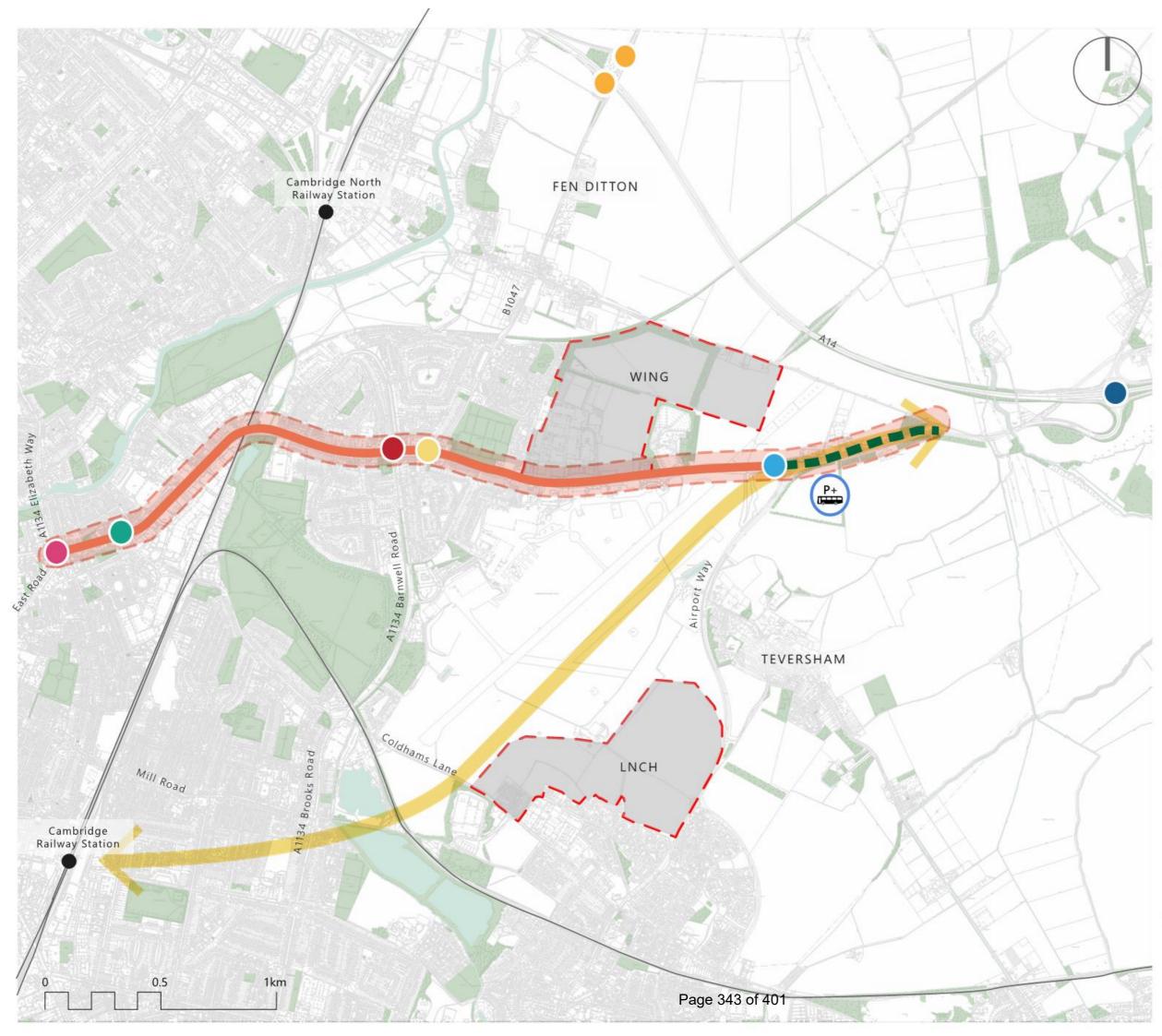
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Indicative CAM alignment



KEY

Major development sites

PR.02 - Relocation of Park and Ride to south of Newmarket Road and east of Airport Way.

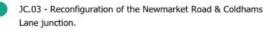
ITS.01- Reconfiguration of all signals to manage/control flow along Newmarket Road & wider network. BL.02 - Remove inbound bus lanes.

BL.05 - New outbound bus lanes between Elizabeth Way and the Leper Chapel.



HW.01 - Additional lane(s) on Newmarket Road to east of Airport Way junction.

JC.02 -Reconfiguration of Elizabeth Way Roundabout, including the removal of Subway (lower capacity).



JC.05 - Signalisation and reconfiguration of the Newmarket Road & Barnwell Road junction (lower capacity).

JC.07 - Reconfiguration of the Newmarket Road & Ditton Lane junction (lower capacity).

JC.08 - Reconfiguration of A14 Junction 34 (with Ditton Lane) to remove slips.

JC.09 - Signalisation of the junction of Newmarket Road and Airport Way.

JC.10 - Signalisation and Reconfiguration of Quy Interchange

AT.01 & AT.02 - Provision of continuous segregated inbound & outbound cycle lane along Newmarket Road.

Greater Cambridge Partnership

Figure 5.2: Package 1.2 Intelligent Traffic Management

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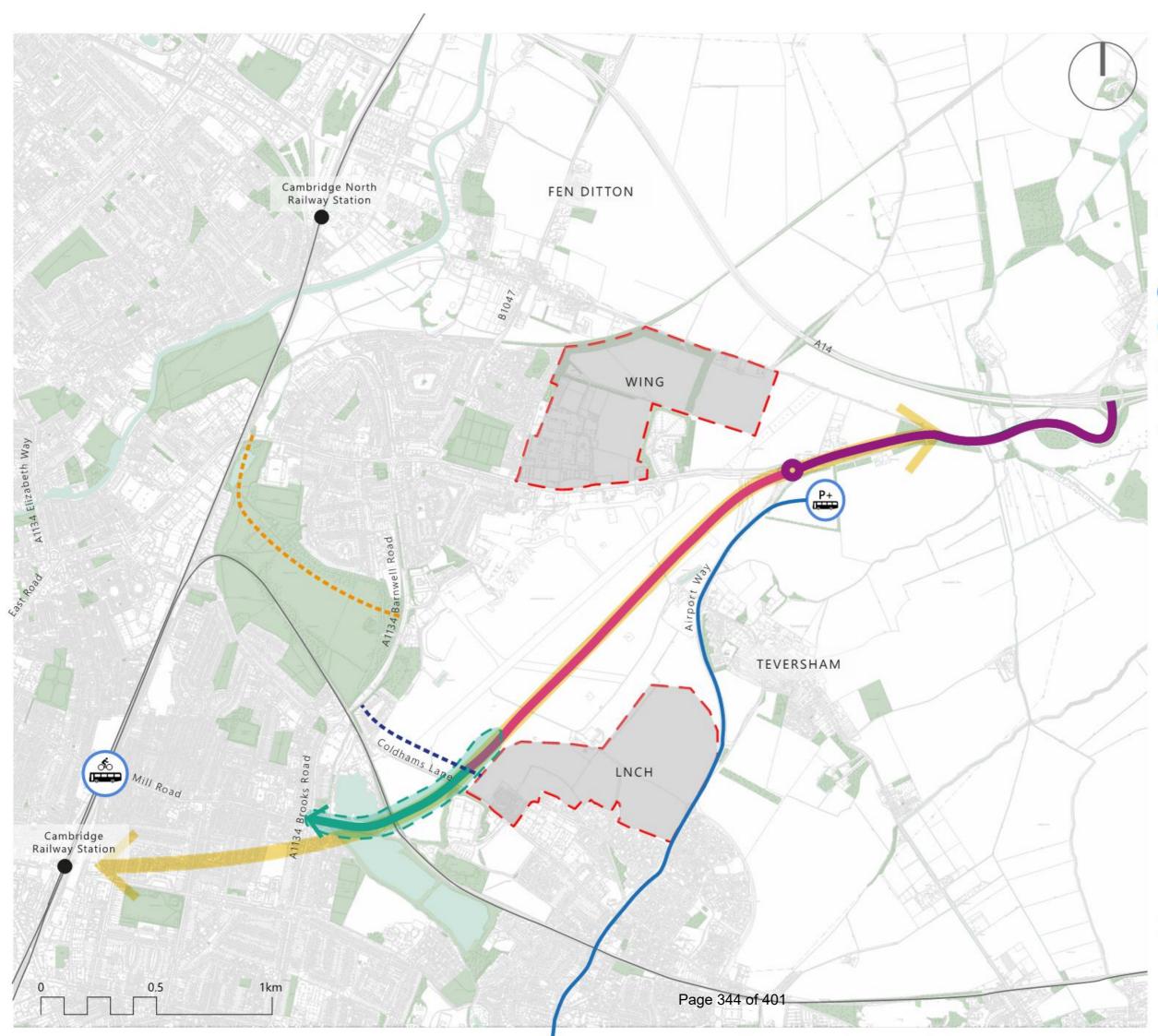
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Indicative CAM alignment

Major development sites

P+

PR.02 - Relocation of Park and Ride to south of Newmarket Road and east of Airport Way.



BG.02 - Bus Gate on Mill Road (at bridge over rail line).

BW.04 - Online - between Park and Ride and A14.

BW.11 - Offline (south) - between Coldhams Lane and P&R via Marshall's Airport (east of runway).

BS.02 - New bus service between the station, Mill Road, Cambridge East and the Park and Ride.

 AT.04 - Provide a new foot-cycle bridge(s) over the rail line and Coldhams Lane to link the existing Tins Cyclepath with the airport site.

AT.06 - Provide new cycle lanes along Coldhams Lane between the airport site and the Sainsbury's roundabout and enhance existing cycle provision along Brooks Road.



AT.07 - Provide a new off-carriageway foot-cycle link from the airport site to connect into the Chisholm Trial via Barnwell Road and Coldham's Common.

BW.10 - Offline (south) - between Brookfields and Coldhams Lane via a new bridge over the rail line.

Greater Cambridge Partnership

Figure 5.3: Package 2.1 Southern Busway (via Coldham's Lane and Brooks Road)

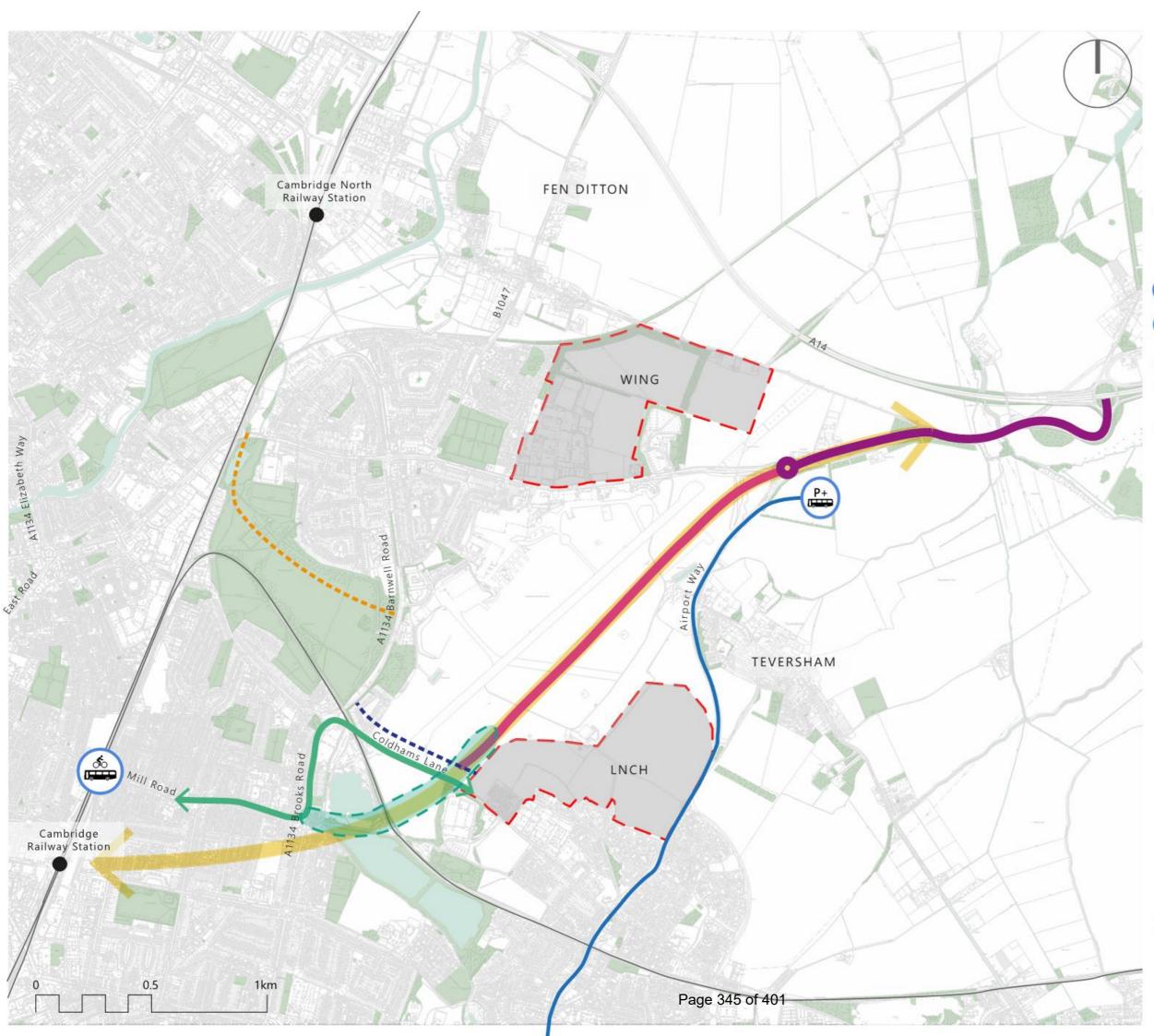
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Indicative CAM alignment

- Major development sites
- P+

- PR.02 Relocation of Park and Ride to south of Newmarket Road and east of Airport Way.

BG.02 - Bus Gate on Mill Road (at bridge over rail line).

- BW.04 Online between Park and Ride and A14.
- BW.11 Offline (south) between Coldhams Lane and P&R via Marshall's Airport (east of runway).
 - BS.02 New bus service between the station, Mill Road, Cambridge East and the Park and Ride.
- AT.04 Provide a new foot-cycle bridge(s) over the rail line and Coldhams Lane to link the existing Tins Cyclepath with the airport site.
- AT.06 Provide new cycle lanes along Coldhams Lane between the airport site and the Sainsbury's roundabout and enhance existing cycle provision along Brooks Road.
- AT.07 Provide a new off-carriageway foot-cycle link from the airport site to connect into the Chisholm Trial via Barnwell Road and Coldham's Common.
- ↔ HW.05 Carriageway widening along Colhams Lane south of the airport, with a left turn fileter lane for buses at the Sainsbury's roundabout.

Greater Cambridge Partnership

Figure 5.4: Package 2.2 Southern Busway (via Bridge over Rail Line)

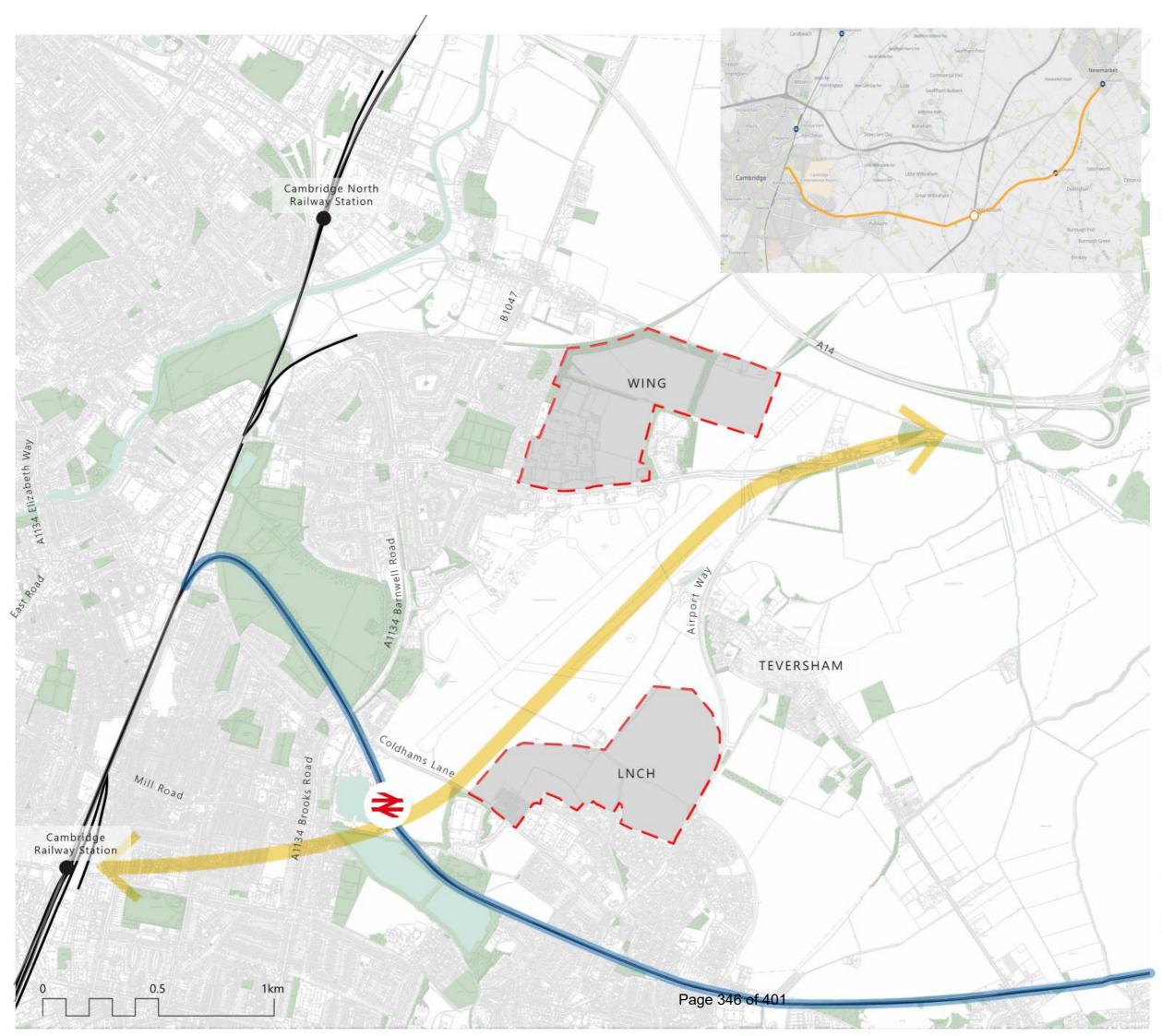
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- Indicative CAM alignment
- Major development sites
- RA.02 Double track the Cambridge to Newmarket Line.
- RA.04 Provide new station at 'Cambridge East'.
- RA.07 Provide a new Parkway Station at Six Mile Bottom ()



Greater Cambridge Partnership

Figure 5.5: Package 2.3 Rail

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6 | Next Steps

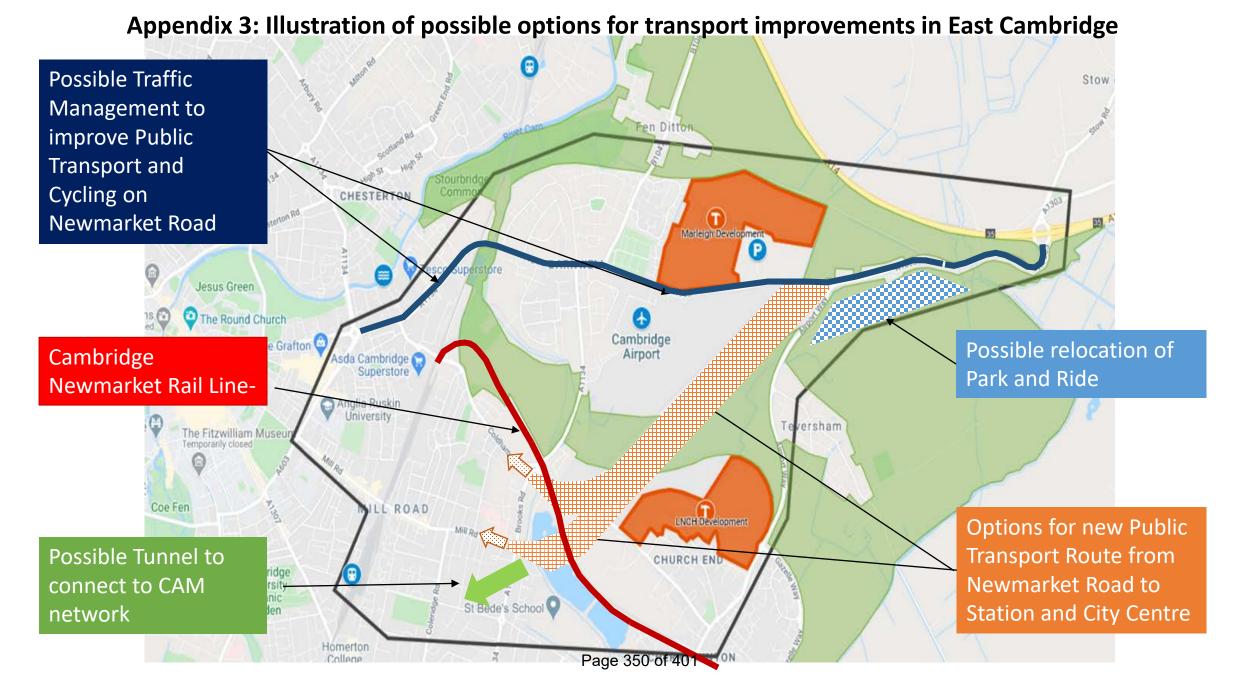
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6.0 Next Steps

- 6.1.1 Following the identification of the packages, they will now be taken forward for assessment within the Cambridge Paramics Model, in line with the approach detailed within the Appraisal Specification Report.
- 6.1.2 The subsequent findings of the assessment will accompany an eight-week period of formal consultation between October and December 2020, following which a Strategic Outline Business Case will be produced.

For more information contact:

Telephone: 01223 699906 Email: contactus@greatercambridge.org.uk





Growing and sharing prosperity
Delivering our City Deal

Report to:Greater Cambridge Partnership Executive Board01st October 2020

Lead Officer: Niamh Matthews – Head of Strategy and Programme, Greater Cambridge Partnership

COVID-19 - SKILLS AND EMPLOYMENT - PROPOSAL TO ADDRESS ANTICIPATED IMPACT(S)

1. Purpose

1.1. To highlight the impact that Covid-19 is likely to have on the local skills base and labour market and to propose a package of measures to address those impacts.

2. Recommendations

- 2.1. The Executive Board is recommended to:
 - a) Approve the scope for a new skills work package that seeks to directly address the likely impact of Covid-19 on the local skills base and labour market.
 - b) Approve the proposal to procure a new Skills contract, over four years, from April 2020, worth up to £2m.

3. Officer Comment on Joint Assembly Feedback and Issues Raised

- 3.1. Details of feedback the Joint Assembly are set out in the report from the Joint Assembly Chairperson. This contains details of matters discussed at the recent Joint Assembly meeting and a summary of feedback.
- 3.2. Members of the Joint Assembly were generally supportive of the proposals, recognising that there is an obvious and urgent need to provide further support to those looking to train and re-train, in light of the impact of Covid-19.
- 3.3. Some members questioned whether the list of proposed activities was overambitious given the budget allocated and whether further funding should therefore be allocated to these proposals.
- 3.4. In addition, members sought reassurance that GCP is the right body to be delivering these activities. On balance, members recognised the clear link with the essence of the City Deal as well as the GCP's ability to deliver these interventions more urgently than other bodies and were therefore supportive of the intervention.
- 3.5. Further, members noted the need to identify and address areas of deprivation and exclusion which exist within Greater Cambridge and to ensure that interventions make a tangible impact in these areas.

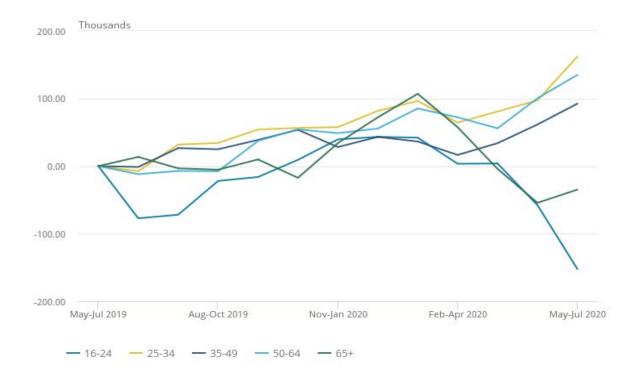
4. Background – Pre Covid 19

- 4.1. The Skills workstream has been part of the GCP programme from its outset in 2015. The work has focused on increasing apprenticeship starts, particularly in strategic growth sectors, in order to achieve the target set out in the City Deal.
- 4.2. Over the last five years the GCP has achieved significant success in raising the profile of apprenticeships, both with employers and job seekers. The GCP has met its target of new starts and continues to make good progress with additional starts.
- 4.3. The GCP's current contract has enabled it to build a programme of delivery focused around those apprenticeship targets that has enabled all 23 local secondary schools and colleges to offer students additional careers advice and education. As referenced in paragraph 9.2 of the Quarterly Progress Report (agenda item 12), a recently commissioned RAND Europe report, highlighted careers advice provision as needing significant attention locally.
- 4.4. The GCP Skills programme has made significant progress since 2015; particularly since the establishment of Greater Cambridge Apprenticeships in March 2019. More detail is reported in section 8 of the Quarterly Progress Report but the current contract has consistently met or exceeded its targets to date.
- 4.5. Although we can demonstrate significant progress across the Skills workstream, the anticipated impact of Covid-19 on the local skills base and labour market is likely to be significant. Any new work on skills needs to consider this issue at the heart of its scope.

5. Key issues and Considerations

- 5.1. The economic damage from Covid-19 is likely to hit the younger generation very hard and will leave very many adults with significant retraining needs.
- 5.2. March to May 2020 saw the largest quarterly decrease to the vacancies total since the current ONS data period started in 2001 and the highest number of job losses since the 2009 financial crisis. The end of the furlough scheme may generate many more. There were 156,000 fewer young people aged 16-24 in employment in the three months to July compared to the previous quarter, whilst employment of all other age ranges (bar 65+) increased in the period, as shown in the graph below.¹ Further, 700,000 young people will leave education this year and go into competition with more experienced workers for scarce jobs.

¹ Office for National Statistics



UK change in employment level by age (16 years and over), seasonally adjusted, between May to July 2019 and May to July 2020

Source: Office for National Statistics - Labour Force Survey

- 5.3. Sales, hospitality, catering, administration, consultancy, HR and recruitment remain the areas with the largest falls, reflecting the areas of the economy most affected by the 'shut down'². These are the sectors that students often work in to support themselves through Higher and Further Education.
- 5.4. There is clear evidence that young people who have repeated and/or long-terms spells of unemployment are much more likely to be out of work later in life, to be in poor quality work and have lower earnings. ³ Young people with a disadvantaged family background are 50% more likely not to be in education, employment or training (NEET). Young people with lower qualifications (less than 5 GCSE passes) are nearly twice as likely to be NEET compared to those with 5 GCSE passes: 29% compared to 15%. People with A-Levels or Level 3 vocational qualifications experience the lowest NEET rates (8%).⁴
- 5.5. Future and more intensive work to support the economy and to ensure companies are attracted to and remain in Greater Cambridge because of a high-quality workforce, is essential to address the issues set out above. The Executive Board is recommended to approve proposals for a new skills work package designed to address this.

² Institute for Employment Studies

³ Institute for Fiscal Studies

⁴ National Institute of Economic and Social Research

6. Scope

- 6.1. To significantly increase the GCP's work on skills and address these issues for the longer term, officers have carried out extensive engagement with private sector partners and providers to draw up a scope of targeted activities that could be delivered locally. From that work, four broad themes have been identified as key areas for intervention:
 - Supporting young people into employment;
 - Support for adults who need to retrain;
 - Preventing NEETs creating opportunities for all; and
 - Ensuring employers can find the skills and talent they need locally.
- 6.2. To support these core themes, a number of activities have been identified. As the proposal is further refined, each of these activities will be further developed and assigned a set of KPIs. Impact data will be collected to track activities to outcomes so we can learn what the most effective interventions are. As the activities are further refined it may be helpful to group them to ensure they are deliverable as a rounded package. The suggested activities are as follows:
 - 1. Development of a "Cambridge Curriculum" that prepares students for work opportunities within the sectors important to the Greater Cambridge economy;
 - 2. Intensive careers advice and guidance in schools and in the community for adult jobseekers or career changers;
 - 3. Intensive support for adults with skills and retraining needs;
 - 4. A significant increase in careers education in schools and post-16 education, with special support for promoting technical education;
 - 5. Intensive and targeted support for employers to help navigate funding opportunities and to offer increased progression routes (e.g. apprenticeships) to young people;
 - 6. Increased support for employers and prospective employees, apprentices and retrainees that will act as a bridge between the two;
 - 7. Primary school careers activities;
 - 8. A significantly increased mentoring programme that will target students;
 - 9. An additional mentoring programme that will provide mentoring training for employers;
 - 10. A significant uplift in the provision of work experience and industry placements;
 - 11. Increased support for Science, Technology, engineering and math (STEM) outreach activities; and
 - 12. A significant increase in employer engagement to support careers education and work opportunities.
- 6.3. Where possible, activities will be targeted to address areas of deprivation. Should the procurement exercise be successful, officers will work with the successful supplier to understand how this can be delivered.
- 6.4. Officers have sought feedback on the above proposal and associated activities from colleagues at the Cambridgeshire and Peterborough Combined Authority (CPCA). CPCA and GCP officers worked with business stakeholders at a joint session to start to develop the proposals during the summer this year. Feedback from CPCA colleagues has helped to shape these proposals and officers will continue to work with CPCA colleagues, to maximise interventions and avoid duplication, as work to deliver the CPCA's Growth Service progresses.

7. Financial Implications

- 7.1. To significantly increase the GCP's current work on skills and to deliver the scale of activities set out in section 6, officers are suggesting a budget uplift for the skills programme of c£1.2m over a four year period. Including the current budget profile for skills (c£800k), this would enable the development of a contract for up to £2m over four years.
- 7.2. The current GCP Apprenticeship service contract is worth £250k per annum. The suggested uplift would in effect double the capacity and delivery of the GCP's skills programme.

8. Next Steps and Milestones

- 8.1. The current GCP Apprenticeship Service contract, delivered by Form the Future and Cambridge Regional College, is due to end in March 2021. In order to build on this successful work, to offer the intensive support that will be required locally and to ensure that there is no gap in skills provision when the existing contract comes to an end, delivery of any additional targeted work needs to be underway by the beginning of April 2021.
- 8.2. To meet these timescales, officers will need to carry out a procurement exercise starting October 2020.
- 8.3. Given the likely doubling in efforts required and the need to establish a robust service that can be given some level of funding certainty, officers suggest securing any new service over a four year period. Starting in April 2021, four years would bring the GCP to its next Gateway Review period.



Growing and sharing prosperity
Delivering our City Deal

QUARTERLY PROGRESS REPORT

Report To: Greater Cambridge Partnership Executive Board 1st October 2020

Lead Officer: Niamh Matthews – Head of Strategy and Programme

1 Purpose

- 1.1 To update the Executive Board on progress across the Greater Cambridge Partnership (GCP) programme, including updates on:
 - Proposals to fund Skills interventions to provide immediate support in light of Covid-19 (section 9 and 10);
 - A proposal to progress to the next stage of the ongoing project to increase the capacity of the energy grid in the Greater Cambridge area (section 18); and
 - Our strategic approach to supporting the local economic recovery from Covid-19, including a proposal to fund quarterly analysis specifically focused on the strength of the Greater Cambridge economy (section 19).

2 Recommendations

- 2.1 The Executive Board is recommended to:
 - (a) Note progress across the GCP programme;
 - (b) Approve expenditure of £75k, to enable the provision of two new careers advisors for a 12 month period through the Greater Cambridge Apprenticeship Service, as set out in section 9;
 - (c) Approve expenditure of £181k to enable delivery of skills interventions led by the New Meaning Foundation, as set out in section 10;
 - (d) Approve expenditure of up to £100k, to progress to the scoping stage of the ongoing project to increase the capacity of the energy grid in the Greater Cambridge area, as set out in section 18; and
 - (e) Approve a proposal to allocate up to £36k to fund the Centre for Business Research at the University of Cambridge to provide three sets of quarterly analyses of the strength of the Greater Cambridge economy in light of the current economic crisis, as set out in section 19.

3 Officer Comment on Joint Assembly Feedback

3.1 Details of feedback from the Joint Assembly are set out in the report from the Joint Assembly Chairperson. This report also details matters discussed at the recent Joint Assembly meeting and a summary of feedback.

- 3.2 On Skills, there was widespread endorsement for the proposal to invest in the provision of two new careers advisors for a 12 month period. Officers reassured members that there is the right capacity in the labour market to recruit to these posts at the current time.
- 3.3 On Transport, officers addressed member queries in relation to monitoring the impact of the Histon Road works on student journeys from north of the A14 to education establishments in Cambridge, and progress on City Access and Cambourne to Cambridge.
- 3.4 On Economy & Environment, members expressed general support for the proposal to invest in the next stage of the energy grid capacity project. Members were keen to understand further how we ensure we recover all of our costs in light of energy demand increasing due to enlarged usage, as well as new developments. It is noted that this issue will be one which should be addressed during the next phase of the work, if approved by the Executive Board.

4 2020/21 Programme Finance Overview

4.1 The table below gives an overview of the 2020/21 budget and spend as of 31 August 2020:

					Status*		
Funding Type	**2020/21 Budget (£000)	Expenditure to Aug 20 (£000)	Forecast Outturn (£000)	Forecast Variance (£000)	Previous	Current	Change
Infrastructure Programme	20 726	10 602	42.660	12.024			
Operations Budget	39,726	10,602	43,660	+3,934			▼

* Please note: RAG explanations are at the end of this report.

** 2020/21 Budget includes unspent budget allocations from the 2019/20 financial year, in addition to the allocations agreed at the February 2020 Executive Board.

5 Impact of Covid-19 on the GCP Programme

- 5.1 As discussed by the Joint Assembly and Executive Board in June 2020, it is difficult to predict the full impact that Covid-19 will have on delivery of the GCP programme, as significant uncertainties remain e.g. around the impact that any further social distancing measures may have on scheme delivery.
- 5.2 However, the table overleaf identifies emerging impacts (e.g. delays, e.g. anticipated changes) on the programme and provides references to further discussion throughout this paper, where applicable.

Workstream	Project	Impacts	Paragraph Reference
Housing	n/a	n/a	n/a
Skills	Greater Cambridge	Risks around job market	8.6
	Apprenticeship Service	stability, student	
		disengagement in career	
		planning activities,	
		collecting destination	
		information for 2020	
		school leavers.	
		Proposed extension to	9
		service delivery to	
		improve candidates'	
		ability to navigate	
		unstable labour market.	
	New work package being	-	11
	developed to directly		
	address impacts		
Smart	T-CABS (C-CAV3	3 month delay to project	13.1
	Autonomous Vehicle	end date; decrease in	
	Project)	number of vehicles	
		being manufactured;	
		relocation of vehicle	
		trials.	
	Covid-19 Data	Ongoing development of	13.8
	Dashboard	data dashboard;	
		additional sensor	
		deployment to monitor	
		impacts of ETROs.	
Transport	Waterbeach to	Pre-consultation	15.5
	Cambridge	engagement conducted	
		virtually.	
	Eastern Access	Pre-consultation	15.6
		engagement conducted	
		virtually.	
	City Access	Budget revision to	15.10
		account for	
		experimental measures.	
	Chisholm Trail	Work continues but	15.13
		completion delays likely.	
	Histon Road	Work continues.	15.9
		Potential delays if	
		measures tightened.	
Economy & Environment	Covid-19 Economic	Ongoing development of	19.2-19.5
	Monitoring	monitoring approach	
		including proposals for	
		in-depth sectoral	
		insights.	

Housing and Strategic Planning "Accelerating housing delivery and homes for all"

					Status	
Indicator	Target	Timing	Progress/ Forecast	Previous	Current	Change
Housing Development Agency (HDA) – new homes completed	250	2016 - 2018	301	Scheme Complete		-
Delivering 1,000 additional affordable homes**	1,000	2011- 2031	840 (approx.)			1

** Based on housing commitments as included in the Greater Cambridge Housing Trajectory (April 2020) and new sites permitted or with a resolution to grant planning permission at 31 July 2020 on rural exception sites, on sites not allocated for development in the Local Plans and outside of a defined settlement boundary.

6 Housing Development Agency (HDA) Completions

- 6.1 The indicator for "Housing Development Agency (HDA) new homes completed" has now been marked as complete. This reflects that the new homes directly funded by the Greater Cambridge Partnership have all been completed. 301 homes were completed across 14 schemes throughout Greater Cambridge.
- 6.2 Both Cambridge City Council and South Cambridgeshire District Council are continuing to deliver more new homes in Greater Cambridge over the next five years. This delivery is funded by various sources, including £70m funding via the Cambridgeshire & Peterborough Devolution Deal for the City Council programme. The GCP will continue to work with partners to explore additional opportunities to unlock further affordable housing.

7 Delivering 1,000 Additional Affordable Homes

- 7.1 The methodology, agreed by the Executive Board for monitoring the 1,000 additional homes, means that only once housing delivery exceeds the level needed to meet the Cambridge and South Cambridgeshire Local Plan requirements (33,500 homes between 2011 and 2031) can any affordable homes on eligible sites be counted towards the 1,000 additional new homes.
- 7.2 The Greater Cambridge housing trajectory published in April 2020 shows that it is anticipated that there will be a surplus, in terms of delivery over and above that required to meet the housing requirements in the Local Plans, in 2021-2022. Until 2021-2022, affordable homes that are being completed on eligible sites are contributing towards delivering the Greater Cambridge housing requirement of 33,500 dwellings.
- 7.3 Eligible homes are "all affordable homes constructed on rural exception sites, and on sites not allocated for development in the Local Plans and outside of a defined settlement boundary".
- 7.4 The table above shows that on the basis of known sites of 10 or more dwellings with planning permission or planning applications with a resolution to grant planning permission by South Cambridgeshire District Council's Planning Committee, approximately

840 eligible affordable homes are anticipated to be delivered between 2021 and 2031 towards the target of 1,000 by 2031. In practice this means that we already expect to be able to deliver 84% of the target on the basis of currently known sites.

- 7.5 Anticipated delivery from the known sites has been calculated based on the affordable dwellings being delivered proportionally throughout out the build out of each site, with the anticipated build out for each site being taken from the Greater Cambridge Housing Trajectory (April 2020) or from the Councils' typical assumptions for build out of sites (if not a site included in the housing trajectory). When actual delivery on these known sites is recorded more or less affordable dwellings could be delivered depending on the actual build out timetable of the affordable dwellings within the overall build out for the site, and also depending on the actual delivery of the known sites compared to when a surplus against the housing requirements in the Local Plans is achieved.
- 7.6 Although anticipated delivery is below the target of 1,000 affordable dwellings by 2031, the latest housing trajectory shows that 37,970 dwellings are anticipated in Greater Cambridge between 2011 and 2031, which is 4,470 dwellings more than the housing requirement of 33,500 dwellings. There are still a further 11 years until 2031 during which affordable homes on other eligible sites will continue to come forward as part of the additional supply, providing additional affordable homes that will count towards this target. Historically there is good evidence of rural exception sites being delivered (around 40 dwellings per year), and therefore we can be confident that the target will be achieved.

Skills

"Inspiring and developing our future workforce, so that businesses can grow"

	Torgot			Status	
Indicator	Target (to March 2021)	Progress (31/07/20)	Previous	Current	Change
Number of people starting an apprenticeship as a result of an Apprenticeship Service intervention.	420	310			<->
Number of new employers agreeing to support an apprenticeship scheme.	320	327	Met ┥		••
Number of schools supporting new, enhanced apprenticeship activity.	18	25	Met 🗲		~
Number of students connected with employers.	7,500	9,355 Met		et	$ \bullet $

Progress data from the start of the contract in March 2019, up to 31st July 2020.

8 Update on the GCP Apprenticeship Service

- 8.1 The GCP Apprenticeship Service, delivered over two years, has now been operating for six quarters.
- 8.2 Monitoring data for the four service KPIs is outlined in the table above, accurate as of 31 July 2020. It shows that:
 - Three targets for the whole contract have been met within the first 16 months of delivery.
 - The service has delivered 74% of its target for people starting an apprenticeship as a result of its interventions.
- 8.3 Despite the ongoing disruption to education caused by Covid-19, Form the Future (FtF) were able to adapt services, with the support of school careers leads, to meet the needs of apprenticeship candidates, running 41 online one-to-one sessions with candidates. Whilst concerns remain about the capacity for career events in the new school year, FtF have built a new programme of events and resources to enhance in-lesson and individual careers learning, as well as continuing to develop their online offer, including on social media platforms.
- 8.4 Throughout May, June and July, the Service held 129 remote meetings with potential apprentice employers. Despite an initial reduction in interest in apprenticeships, FtF are now reporting an increase in interest in apprenticeships as Covid-related restrictions have started to be lifted. Looking forward, the Service will deliver a range of engagement activities from August to October, including an employer webinar discussing apprenticeships and staff training more broadly.
- 8.5 The Service is currently working with 25 schools who have agreed to support enhanced apprenticeship activity. Between May and July, it met with 18 partner schools to discuss careers provision and start to plan for next year where possible. All potential school

partners have received a brochure of events outlining the Service offer, receiving positive feedback.

8.6 Officers understand many employers have pulled vacancies or are offering delayed start dates. Furthermore, risks remain around the stability of the job market (particularly with the full impact of the pandemic on employment levels yet to be felt), re-engaging students at risk of disengaging in career planning activities due to the impact on their education and collecting destination information for 2020 school leavers. Therefore, officers have been working intensively with Form the Future and Cambridge Regional College, the business community and members of the Skills Working Group, to develop a response to these impacts and risks.

9 Proposed Extension to GCP Apprenticeship Service Offer

- 9.1 To immediately address some of these issues, the GCP Skills Working Group asked officers to explore what immediate and urgent support could be put in place to respond to the impact that the pandemic is likely to have on the local skills base.
- 9.2 Working with private sector partners, providers and local experts it became clear that there is an immediate need to quickly increase careers advice provision. This is further backed up by a July 2020 RAND Europe report, part funded by the GCP¹, which identified a significant shortage of careers advisors in the local area. This shortage is likely to exacerbate the risks identified in paragraph 8.6, particularly given the increasing challenge to identify opportunities for school leavers in the face of job market uncertainty.
- 9.3 To address this immediate need, working through the GCP's current skills provider (Form the Future), officers suggest extending the scope of the current GCP Apprenticeship Service to provide two new careers guidance professionals, in addition to the existing provision. The purpose of this new resource will be to offer intensive one-to-one support to young people leaving education, who need guidance and support to keep going during the downturn. Support will include careers interviews, help with searching and applying for vacancies, action plans (including steps to upskill or gain experience) and motivation to keep going during a difficult time.
- 9.4 Officers suggest that the additional support is put in place for a period of one year and regularly kept under review, with the impact of the additional intervention tracked closely. This level of additional support is likely to be able to target over 2,000 individuals to find employment, or acquire additional training.
- 9.5 In order to provide the additional support described above, officers recommend that the Executive Board approves a one-off increase in the Skills Budget of £75k, which would enable Form the Future to provide two new careers guidance professionals for a period of one year.
- 9.6 In addition to recruiting two extra advisors, through the GCP Apprenticeship Service contract, Form the Future and Cambridge Regional College are also intensifying the way they work with employers to ensure they can be fully supported to navigate national initiatives to support the labour market.

¹ https://www.rand.org/pubs/research_reports/RR4491.html

9.7 Working with employers is likely to become increasingly important and may require further support to more fully respond to the impact of the pandemic on the labour market. Officers are in active discussions with Form the Future and Cambridge Regional College about whether an immediate support package could be developed to intensify this element of their work. Officers will come back to the Skills Working Group, Joint Assembly and Executive Board as soon as a proposal has been developed.

10 Proposed Investment in Skills Projects Led by the New Meaning Foundation

- 10.1 In addition to the proposal set out at section 9 of this report, officers have received a proposal from the New Meaning Foundation that has been developed to help address some of the immediate challenges facing local skills provision. Due to the timing of the proposal and the urgent nature of skills issues, the Skills Working Group have been consulted virtually ahead of this meeting to seek their views and provide the opportunity for feedback. The Skills Working Group asked for clarity on a number of details and, following that clarification, are supportive of the proposal. Given the narrow focus of the proposal the group were keen to make sure the deliverables are genuinely achievable. Officers will ensure that any funding agreement with New Meaning Foundation is very clear on delivery expectations and timescales.
- 10.2 The GCP previously invested in two modern method of construction (MMC) units for the homeless/formally homeless, placed at Christ the Redeemer Church on Newmarket Road, which were constructed by Allia and the New Meaning Foundation. The assembly and fit-out of the units was completed by 12 trainees, 8 of whom are now employed or have been offered employment in some form by the New Meaning Foundation.
- 10.3 Following the success of the training programme that delivered the MMC units, the New Meaning Foundation are now looking to create a permanent presence in Greater Cambridge, enabling the delivery of specialist training supporting those who otherwise would not be ready for work. This would build on an existing presence in Buckinghamshire.
- 10.4 The focus of the Greater Cambridge training hub would be to support people who are at a very high risk of not being able to enter the labour market. These are likely to include young people with special educational needs, those with mental health difficulties, the homeless and formerly homeless and those who have served in the armed forces. Potential trainees would be referred through locally led referral teams, hostels and care networks. Targeted skills and training of this nature is not currently available within Greater Cambridge.
- 10.5 The proposal from the New Meaning Foundation asks for support in two areas:
 - Firstly, to enable the immediate training (starting October 2020), in Waterbeach, of 12 trainees in basic construction skills, with the potential to gain qualifications in English, Maths, ICT and Employability, up to Level 2;
 - Secondly, to provide start-up funding to set up a dedicated training centre in Greater Cambridge. The purpose of the funding is to ensure the training model remains sustainable and can continue to be rolled out following the initial 12 trainees. The training centre would have capacity to support 24 trainees per annum. After start-up costs are met, the training centre would be sustainably funded through the production and sale of the MMC units, as well as other local projects currently underway.

10.6 The cost associated with the proposal as detailed above is £181k. The costs are split as follows: £76k to cover the immediate training of 12 trainees (this will grow to 24 per year when the training centre is delivered) and £105k to provide start-up funding to set up a dedicated training centre in greater Cambridge. Based on these costs and the proposal set out above, officers recommend that the Executive Board approves expenditure of £181k.

11 Proposed New Skills Work Package

- 11.1 The immediate actions being suggested in sections 9 and 10 will only skim the surface of the impact that Covid-19 is likely to have on the labour market. A longer term and more intensive package of interventions is required, to address the likely impacts on young people, those requiring retraining and the labour market more widely. In effect, a doubling of efforts is likely to be needed.
- 11.2 To significantly increase the GCP's work on skills and address these issues for the longer term, officers have carried out extensive engagement with private sector partners and providers to draw up a scope of targeted activities that could be delivered locally.
- 11.3 An outline scope of activities, timescale and cost is proposed in a separate report under item 12 for consideration by the Executive Board.

Smart Places

"Harnessing and developing smart technology, to support transport, housing and skills"

12 Smart Programme and Finances for 2020-21

- 12.1 A programme of work for the Smart workstream for 2020-21 is underway, and has now been finalised following uncertainty caused by the outcomes of the Future Mobility Zone bid and the Gateway Review, and the impact of the Covid-19 pandemic. The work and projects outlined in the programme have been selected to meet the following objectives:
 - **Support**: Support the GCP and other partners to respond to, and recover from, Covid-19;
 - **Continuity**: Ensure continuity for the projects, projects and insight established to date;
 - **Planning**: Build a comprehensive programme of deliverables for the next phase (starting in 2021) based on our extensive learning and experience from phase one (April 2017 to March 2020).
- 12.2 Costs for 2020-21 will be covered using funds carried forward of £413,000, which remain from the first phase of funding. No additional funding is being sought in this year. A programme of work (and associated budget request) to support a second phase of GCP deliverables (beginning in 2021) is being developed and will be put forward through the Future Investment Strategy (FIS) review process, which was agreed by the Executive Board in June 2020.

13 Smart Programme Overview

				Statu	S
Project	Target Completion Date	Forecast Completion Date	Previous	Current	Change
T-CABS (CCAV3 Autonomous Vehicle Project)	Dec 2020	Mar 2021			$ \bullet \bullet$
Digital WayFinding – Phase 3 (Development)		Complete			
Digital Wayfinding – Procurement & Installation	Jun 2021	Jun 2021			-
ICP Development – Building on the Benefits	Mar 2021	Mar 2021			$ \bullet $
Mill Road Bridge Closure: Ongoing Data Analysis	Oct 2020	Oct 2020			$ \bullet \bullet$
Data Visualisation – Phase 2	Mar 2021	Mar 2021			-
Digital Twins Phase One	Mar 2020	Aug 2020			
New Communities Phase One (Extended)	Jun 2020	Mar 2021			$ \bullet \bullet$
Covid-19 Data Dashboard	Complete				

Progress reported up to 31st July 2020

13.1 T-CABS (C-CAV3 Autonomous Vehicle Project)

The quarterly project review was held with InnovateUK at the start of July. This confirmed proposed changes to both the project scope and timeline, as a result of the impact of the Covid-19 pandemic, particularly on the vehicle manufacturer. As suggested in the last report, the end date has been moved from December 2020 to March 2021 and funding will continue until the revised date.

Two significant changes to scope have been agreed. The first is that three vehicles will be produced (rather than six). The second is that the trials will no longer take place on the Guided Busway, but will be focused on the West Cambridge site. While this will not be as extensive a trial as we had previously hoped, officers remain positive that we are still able to deliver a smaller trial that will offer valuable insight into the deployment of AVs as part of the local transport offering.

Also within the quarter, site visits were completed for the GCP model safety case work. As a result, the final draft of this document is now being updated and reviewed for sign-off in September. The vehicle manufacturer will provide their own vehicle and domain safety cases to be reviewed against the model safety case as soon as they are available (expected to be at the start of September), before any trials will be permitted to take place. This process will continue to involve consultation with the Risk Management Group established earlier this year, as well as the Safety Committee responsible for West Cambridge. The current expected start date for vehicle trials is 1st October this year.

13.2 Digital Wayfinding – Phase 3 (Development)

As reported last quarter, a soft market testing exercise has been successfully completed and we are now preparing procurement specifications and identifying 'quick win' solutions. Procurement is anticipated in the autumn and, once completed, a clearer timeline for delivery will be available. A meeting was held in mid-August to finalise this approach In order to utilise s106 funding, final solutions at Cambridge Station must be in place prior to July 2021.

Engagement with Cambridge Biomedical Campus regarding wayfinding remains a topic of work as the delivery of their services begins to stabilise. Work will be re-established as and when it is appropriate via the Travel & Transport group.

13.3 ICP Development – Building on the Benefits

The team continue to review and undertake a range of activities to build on the benefits of the ICP Development, including:

- Exploring the possibility of Smart Panels being available via the desktop.
- Extension of APIs to accommodate future datasets.
- Investigation of the energy panel.
- Improving quality of bus data and journey time predictions.
- Continuing the support and maintenance of Smart Panels and the Pocket Panel.

13.4 Mill Road Bridge Closure – Traffic Flow and Air Quality Monitoring

Traffic data analysis has been carried out as part of our collaboration with GeoSpock. Visualisation of air quality data has been initiated and the first review by the team was

completed at the end of June 2020. The visualisations appear to support the expectation that the road closure would have a positive impact on air quality (in this case, NO2 levels). The effect of this is clearest during commuter periods on Tenison Road and Mill Road. However, it should be noted that the closure took place in the summer, when traffic volumes would already be less during commuter periods, and also that there are a large number of factors which affect air quality. Feedback has been provided and updated versions of the visualisations will be included in the final report, expected in October 2020.

In the meantime, data from the traffic sensors continues to be made available on Cambridgeshire Insights for interested parties and work is also in progress to install additional sensors to monitor the impacts of the Emergency Traffic Regulation Orders (ETROs) implemented as part of the Covid-19 response and recovery.

13.5 Data Visualisation – Phase 2

As mentioned above in section 13.4, GeoSpock have worked on air quality visualisations in relation to the Mill Road Bridge Closure. Further work has also been discussed to identify and understand the 'biting point' at which an increase in traffic volumes begins to negatively impact the timely running of bus services in the city. A work package based around this is being developed and the evidence gathered will be used to guide future interventions.

The GeoSpock platform has been upgraded, with a number of interfaces being more readily available. In order to achieve the best value from this, training in PowerBI is being arranged for officers (including colleagues in the Cambridgeshire County Council Business Intelligence team) to ensure they are able to analyse, visualise and share insights from our data more effectively.

13.6 Digital Twins Phase One

As reported last quarter, the report summarising the findings from our study and secondment with the Centre for Smart Infrastructure and Construction (CSIC) has been delayed a result of limited access to stakeholders during the lockdown. However, the latest draft of the document has been reviewed and remains on track to be delivered by the end of August 2020.

In addition to the report, the project has produced an early digital tool, which has been used to better understand the ANPR data collected in the vicinity of the CBC. Analysis of the data has allowed us to gain greater insight into how the site is accessed, and may in future support the tailoring of specific interventions to support a reduction in congestion and an increase in sustainable travel choices.

13.7 New Communities Phase One (Extended)

The goal of the New Communities Phase One has been to develop the topic papers to feed into local planning documentation. This has been achieved as reported last quarter, but has also led to a higher level of engagement with major developers and planning teams in the area. Rather than begin a new phase of work, the current phase will be extended until March 2021, at which point the next steps will be agreed and put forward within the Smart Programme Strategy for the next period. As the original scope has been completed, the status of the work remains green for the extension period. We have built on our earlier engagement with Urban & Civic, agreeing to work with them to develop their sustainable travel options for new developments. This is anticipated to cover a number of mobility options for future residents as well as the monitoring of transport movements throughout the development phases. This work will carry on until the end of the financial year, but is closely linked to progress of the development at Waterbeach.

13.8 Covid-19 Data Dashboard

Smart officers will continue to contribute to the development of a PowerBI version of this dashboard (led by the Cambridgeshire County Council Business Intelligence team) which will allow officers to access the data more easily and efficiently. Throughout work on data collection, analysis and use, officers have identified a number of use cases across GCP and Cambridgeshire County Council teams, where access to this data will be beneficial to support decisions and impact assessments. Furthermore, Smart officers are supporting the rollout of additional sensors to monitor the impact of the Emergency Traffic Regulation Orders (ETROs) being deployed across Cambridge as part of the Covid-19 response and recovery, as mentioned in section 13.4.

Transport

"Creating better and greener transport networks, connecting people to homes, jobs, study and opportunity"

14 Transport Delivery Overview

14.1 The table below gives an overview of progress for ongoing projects. For an overview of completed projects, including their relation to ongoing projects, please refer to Appendix 1.

Project							Statu	IS
		Current Delivery Stage	Target Completion Date	Forecast Completion Date	Previous	Current	Change	
Cambridge South (formerly A1307		ort Study	Construction / Design	2024	2024			+ >
Cambourne to C	ambridge / A	428 Corridor	Paused	2024	2024			↓
Waterbeach to C	Cambridge		Early Design	2027	2027			-
Eastern Access			Early Design	2027	2027			-
Milton Road			Design (Reprofiled)	2023	2023			1
City Centre Acce	ss Project		Design	2020	2021 (Design only)			~ >
Chickeley Tesil C			Construction	2020	2021			←→
Chisholm Trail Cy	ycie Links	Phase 2	Construction	2022	2022			~
Cross-City	Fulbourn / C Eastern Acc	Cherry Hinton ess	Construction / Complete	2019	2020			←→
Cycle Improvements	Links to Eas NCN11/ Fer	t Cambridge & Ditton	Construction / Complete	2019	2020			• •
Histon Road Bus	Priority		Construction	2022	2021			••
West of Cambrid	lge Package		Design	2021	2022			↓
Residents Parkin	g Implement	ation	Implementation / Paused	2021	2021			↓
Waterbeach Gre	enway		Project Initiation	2024	2024			-
Fulbourn Greenway		Project Initiation	2024	2024			-	
Comberton Greenway		Project Initiation	2025	2025			-	
Melbourn Greenway		Project Initiation	2025	2025			-	
St Ives Greenway	y		Project Initiation	2023	2023			-
Madingley Road	(Cycling)		Design	2022	2022			-

14.2 Whilst the forecast completion dates captured above include the likely impacts of Covid-19 to the extent which they are currently known, it should be noted that considerable uncertainty

remains e.g. over the length and extent of social distancing measures over the rest of 2020 and the impact of those on construction works.

15 2020/21 Transport Finance Overview

15.1 The table below contains a summary of the expenditure to August 2020 against the budget for the year.

			2020.21	2020-21	2020-21	L Budge	t Status
Project	Total Budget (£000)	2020-21 Budget (£000)	2020-21 Forecast Outturn Aug 20 (£000)	Forecast Variance Aug 20 (£000)	Previous	Current	Change
Cambridge Southeast Transport (formerly A1307)	147,935	12,945	15,640	+2,695			$ \longleftrightarrow $
Cambourne to Cambridge / A428 corridor	157,000	4,500	2,500	-2,000			\blacklozenge
Waterbeach to Cambridge	52,600	236	236	0			
Eastern Access	50,500	532	532	0			
West of Cambridge Package	42,000	1,817	4,817	+3,000			↓
Milton Road	23,040	116	300	+184			↓
Histon Road	10,000	7,209	7,209	0			
City Centre Access Project	9,888	2,290	2,290	0			•
Travel Hubs	700	100	50	-50			+
Residents Parking Implementation	1,191	350	150	-200			$ \bullet $
Chisholm Trail	14,269	3,710	3,710	0			
Greenways Quick Wins	3,079	0	0	0			• •
Developing 12 Cycling Greenways*	37,611	1,993	1,993	0			• •
Cross-City Cycle Improvements	11,266	306	306	0			$ \longleftrightarrow $
Madingley Road (Cycling)	170	170	475	+305			~
Cambridge South Station	1,750	749	749	0			~
Programme Management and Scheme Development	3,350	343	343	0			+ >
Total	566,349	37,366	41,300	+3,934			

*Figures include budget and spend for Waterbeach, Fulbourn, Comberton, Melbourn and St. Ives Greenways. Further Greenways projects will be included as approved by the Executive Board.

15.2 The explanation for any variances is set out in the following paragraphs.

15.3 Cambridge South East Transport Study (A1307)

The current overall planned spend for 2020/21 for Cambridge South East is £15.64m, exceeding the in-year budget of £12.945m. Expenditure for Phase 2 is expected to increase further, as detailed below.

Phase 1

Forecast 2020/21 spend for Phase 1 is £13.49m, compared with an in-year budget of £10.52m. The increase in spend is due to a combination of additional and associated costs for, that include the enhancement of the scheme as a result of stakeholder feedback and engagement, plus:

- Road Safety Audit (RSA) and Covid-19;
- Babraham Park & Ride extension and Wandlebury foot crossing design and build;
- Average speed camera installation.

<u>Phase 2</u>

In June 2020, the GCP Executive Board agreed to increase the overall budget for Phase 2 by £7.2m, to a total of £132.2m.

The in-year budget for Phase 2 is £2.43m, with a forecast spend £2.15m. However, overall budget and forecast outturn for 2020/21 will be revised to reflect forecasts from consultants for significant work expected this year.

15.4 Cambourne to Cambridge (A428)

The project is currently on hold. A report on it was withdrawn from the GCP Executive Board meeting for 25th June 2020, to give more consideration to an alternative route alignment as suggested by the Cambridgeshire and Peterborough Combined Authority. As a result of this pause, an underspend of £2m is forecast this year.

15.5 Waterbeach to Cambridge

The Strategic Outline Business Case for Waterbeach to Cambridge will be considered by the GCP Executive Board in June 2021. Current work involves identifying and evaluating options. Pre-consultation engagement has now commenced and it is planned to formally consult in Autumn 2020. The spend profile is currently on target.

15.6 Eastern Access

The Strategic Outline Business Case for Eastern Access is currently due to be completed by the end of March 2021, with a view to consideration by the GCP Executive Board in June 2021. Current work involves identifying and evaluating options. Pre-consultation engagement has now commenced. Further planning work is ongoing and once this has been completed, the spend profile will be updated.

15.7 West of Cambridge Package

The forecast variance in project spend is due to the GCP Projects Board's decision (on the 28th August 2019) to purchase the land required to deliver the Cambridge South West Travel Hub earlier in the project than initially planned. As previously reported, this spend

was expected to occur in 2019/20; however, the exchange of funds was in fact completed in June 2020.

The scheme submitted a planning application in June. A decision is expected by the end of 2020. Workload associated with the project will increase as it progresses towards procurement of detailed design and construction.

15.8 Milton Road

To manage network capacity, construction of Milton Road has been delayed to coincide with the completion of Histon Road works. The scheme remains in Detailed Design stage. Coring surveys and Ground Penetrating Radar (GPR) surveys have been brought forward, thus the outturn spend for this financial year is expected to be higher than originally forecast.

15.9 Histon Road

The scheme on Histon Road is under construction and is due to be completed in Summer 2021. The project remains on schedule to meet this timeline and therefore on target to spend against the budget profile for this year.

15.10 City Centre Access Project

This year's City Centre Access budget is being revised to take account of the experimental traffic management measures that are to be delivered by GCP in response to the Covid-19 pandemic. These will be funded from within this year's budget allocation.

15.11 Travel Hubs

Initial work on designing better bus access to Whittlesford Station has been paused until the initial findings from the strategic review of the A505 (Royston to Granta Park) study are available later in the year. Consequently, expenditure this year is expected to be concentrated in the second half of the financial year.

15.12 Residents' Parking Implementation

As the implementation of further Residents' Parking Schemes has currently been suspended, the focus this year is on the implementation of schemes approved prior to this suspension, and reviewing previously installed schemes.

As a result of the suspension, an underspend of £200k is forecast this year.

15.13 Chisholm Trail

GCP officers are working with County Council officers to finalise apportionment costs associated with both Phase One of the project and the Abbey Chesterton Bridge. The outcome of this exercise will inform the forecast for the current financial year, future financial years and the outturn spend.

15.14 Greenways Quick Wins

The programme of works for Greenways Quick Wins is substantially complete, with some minor works (at Rampton and Stourbridge Common/Riverside) due for completion as soon as possible within current government guidelines.

15.15 Developing 12 Cycling Greenways

The development work for the 12 Cycling Greenways is substantially complete. All consultations have been completed and no further spend is expected in the development phase. As noted, financial information as detailed in the overview table includes spend on the substantive Waterbeach and Fulbourn Greenways as agreed by the Executive Board in February 2020.

The status of the 12 Cycling Greenways that have been developed through this work is as follows:

Status	Greenway	Agreed Budget (Overall)
Agreed February 2020	Waterbeach	£8m
	Fulbourn	£6m
Agreed June 2020	Comberton	£9m
	Melbourn	£6.5m
	St Ives	£7.5m
In Forward Plan – October	Sawston; Barton; Swaffhams; B	ottisham; Horningsea
2020		
In Forward Plan – December	Haslingfield	
2020		
Progressed Through CSETS	Linton	

15.16 Cross-City Cycle Improvements

The 2020/21 budget for this project is £306k, for completion of works in Fen Ditton and on Fulbourn Road. The expenditure is anticipated to be on target.

15.17 Madingley Road

The 2020/21 budget for this project is £170k. Due to pre-design work on this scheme progressing quicker than originally expected, the outturn spend for this financial year is expected to be higher than originally forecast. An update will be provided to the December Executive Board meeting.

In June 2020, the Executive Board approved Option 2 through design. A brief is currently being agreed for this stage and estimated costs are based upon an assumption of the required work, as agreed with Skanska in March 2020, which will help inform the future cost profile and overall project budget. The Transport Director will keep the future cost profile, in light of this brief and the forecast outturn for this year, under review.

15.18 Cambridge South Station

The 2020/21 budget for Cambridge South Station is £749k. The Department for Transport will draw down this contribution to the development phase within their project timescales.

16 Cambridge Biomedical Campus (CBC) Transport Needs Review – Update

Despite the significant impact of the Covid-19 outbreak on the campus, progress continues on the implementation of the measures identified in the Cambridge Biomedical Campus (CBC) Transport Needs Review, as outlined in February 2020. Progress is reported in Appendix 3.

17 Professional Services Framework Contract

The award of the new Professional Services Framework is expected to be approved at the Cambridgeshire County Council Highways Committee in October 2020. The GCP Executive Board will be kept informed of progress.

15.19 Programme Management and Scheme Development

The 2020/21 budget for this project is £343k and the expenditure is anticipated to be on target.

Economy and Environment

18 Local Grid Constraints

- 18.1 In order to progress the ongoing work on local power network capacity constraints in Greater Cambridge, an indicative business case (included in full in Appendix 4) has been prepared which considers options and outlines the role the GCP could take to remove a significant barrier to growth and enable both renewables projects and the electrification of transport. This indicative business case includes next steps to progress this piece of work, as outlined in paragraphs 18.11-18.13.
- 18.2 As has been previously reported, the GCP Economy and Environment Working Group commissioned Asset Utilities to undertake a local electricity network analysis. A key finding of the report produced in February 2019 was that "it is clear that the electricity network as designed, is unable to meet the future electrical demand requirements or the changing face of technology (EV connections) in Greater Cambridge." The implications of this are that without action there is a risk that growth will be inhibited and partners' net zero commitments will be jeopardised.
- 18.3 UKPN, the Distribution Network Operator for the Greater Cambridge area, were commissioned to conduct an engineering feasibility study, which considered different demand growth scenarios and potential interventions to address capacity issues. The feasibility study which reported in October 2019 identified three linked interventions, which are currently unfunded and which are needed in any of the growth scenarios:
 - East Cambridge Grid substation
 - Trumpington Primary and new East Cambridge interconnector
 - West Cambridge Grid substation
- 18.4 Officers propose that the GCP should allocate investment to proactively increase the capacity of the electricity grid in the Greater Cambridge area in order to achieve the following objectives:
 - To ensure that growth in Greater Cambridge is not delayed due to limitations in the electricity grid, and that costs for new connections are not prohibitive;
 - To contribute to a net zero economy by ensuring that there is adequate headroom in the electricity grid to enable take-up of renewable technologies and electric vehicles, as well as enabling reductions in dependence on gas for domestic power supply.
- 18.5 Land acquisition and planning permission are key considerations for this project, which are discussed in detail in the indicative business case. UKPN have identified sites that would be optimal from an engineering standpoint, but these lie in the Green Belt. Sites further away from the areas that UKPN have identified could also be considered, but will bring increased costs and potentially increased risks. Whilst challenging, the project is now considerably better placed to commission further works on identifying viable sites.
- 18.6 The case for public funding is based upon how the electricity supply market operates. Utility providers have a statutory duty to deliver required upgrades and reinforcements within their networks to support the delivery of growth. However, they are regulated by OFGEM and constrained to operate reactively to demand. They are only able to commit

to designing upgrades on their networks when outline planning consent is available and they have been approached by developers and are certain that development will come. This can create significant delays in housing and commercial developments and it can take several years to deliver power infrastructure, thereby delaying growth, renewables projects and the electrification of transport. Furthermore, any single developer who applies for power at the point where capacity is not available would be quoted for the full cost of reinforcement, which can impact development viability.

- 18.7 The GCP Executive Board has already agreed the principle of investing in grid reinforcement, and the Future Investment Strategy agreed in March 2019 provisionally allocated funding for the project. Should the GCP proceed with this project, contributions can be recouped from developers using the energy capacity provided, for the first 10 years from activation of each substation. There is also a possibility of obtaining a contribution from UKPN as part of their 2023-2028 business investment planning, but this is by no means certain.
- 18.8 Cambridgeshire County Council's finance department have prepared an indicative investment appraisal, containing: 1) a scenario which assumes rapid take up of substation capacity, and; 2) a second scenario in which take-up is slower. The indicative investment appraisal assumes no UKPN contribution and a loan over 25 years. Both scenarios show positive NPVs.
- 18.9 The indicative business cases considers a number of key risks, including failure to gain planning permission, lower demand than anticipated and failure to recover costs. All risks will be significantly mitigated by continued close working with other local authorities who are further advanced with their plans, in particular Ebbsfleet and Central Bedfordshire.
- 18.10 In addition to the considerations outlined in the preceding paragraphs, it should be emphasised (as stated in paragraph 18.2) that if the GCP does not proceed with this project, there is a risk that growth will be inhibited and partners' net zero commitments will be jeopardised. There is now a degree of urgency in proceeding to the next stage of work, given the complexities associated with land acquisition and planning.
- 18.11 Given the above considerations, subject to Executive Board approval, it is proposed that a scoping stage is conducted to:
 - Develop a commercial approach
 - Develop a set of options for land and engage specialist skills to assess acquisition costs and consider what is required to submit compelling planning applications
 - Form an initial view of demand impact as a result of Covid-19 and other changes since the Asset Utilities analysis in early 2019
 - Procure appropriate technical consultants to undertake the above and to produce the business case in the next stage
 - Finalise the approach and provide firm cost and time estimate for the business case stage.
- 18.12 The cost estimate for the scoping stage is £100k, with the aim to complete this in time for the March 2021 Executive Board cycle. A subsequent business case stage would build on the scoping stage to deliver an outline business case for approval. It is anticipated that this would be ready for the September/October 2021 Executive Board Cycle. A final business case would follow once all consents were in place. The timetable will be confirmed during the scoping stage.

18.13 In sum, officers recommend that the Executive Board, noting the indicative business case included in Appendix 4, approve expenditure of up to £100k to deliver the scoping stage of this project, as outlined in paragraph 18.11.

19 Recovery Strategy and Understanding the Local Economic Impacts of Covid-19 – Centre for Business Research

- 19.1 Since the onset of the Covid-19 pandemic, the GCP has been working closely with partners to understand and address the economic impact of Covid-19. This includes significant work in partnership with the Cambridgeshire and Peterborough Combined Authority (CPCA). The GCP is currently working with the CPCA and other partners to develop a Covid-19 recovery strategy, which the CPCA aim to approve in September. Once approved, officers will work with partners to identify Greater Cambridge elements of the strategy and implement actions to address emerging challenges.
- 19.2 In addition to supporting the regional recovery strategy as discussed above, the GCP has undertaken a number of further activities to understand and respond to the economic crisis caused by the pandemic:
 - Commissioning, in partnership with the CPCA, economic development consultancy Hatch Regeneris to undertake work to understand the impact of Covid-19 on the local economy. The report, produced in June 2020, gives an early indication of the economic impact of the pandemic, including high level projections (based on national-level Office for Budget Responsibility estimates) of the impact on GVA this year on various sectors;
 - Developing, with colleagues in the Cambridgeshire County Council Business Intelligence team, an approach to monthly data collection, to provide up to date evidence on the state of the Greater Cambridge economy.
- 19.3 Recognising the unique strengths, weaknesses and mix of sectors present in Greater Cambridge, and the challenge this poses for any analysis of sectoral impact and resilience based on national estimates, officers have engaged with the Centre for Business Research (CBR) at the University of Cambridge (which played a guiding role in the approaches used by the CPIER) and Cambridge Ahead to scope an approach to produce localised analysis on the sectoral impact of Covid-19.
- 19.4 The approach proposed by the CBR would involve the team producing analysis on a quarterly basis, using employment and turnover data to give a detailed insight into the strength of Greater Cambridge's unique local sectors. To make the approach viable, the CBR would require a commitment to fund three quarters of analysis (to October 2020, April 2021 and July 2021, with data to January 2021 picked up within the CBR's annual work capture in the Cambridge Cluster Insights project²). As part of its reporting, the CBR will present findings (virtually) to the GCP Executive Board and other key stakeholders each quarter, in addition to its quarterly reports.
- 19.5 The approach proposed above is required to ensure the GCP is able to effectively understand, represent and address the challenges posed to specific sectors within the local economy on an ongoing basis, at a depth that far exceeds national-level projections. Crucially, it will deliver insight that would otherwise not exist into the impacts of Covid-19 on key sectors that are of both local and national importance, such as Technology and Life

² https://www.cambridgeahead.co.uk/cambridge-cluster-insights/

Sciences. This data will therefore strengthen recovery strategy activities with local and national stakeholders. Therefore, officers recommend that the Executive Board approves spend up to £36,000 to fund analysis of the Greater Cambridge economy to July 2021, as scoped above. Officers are in active and positive dialogue with private sector partners to understand if a portion of the overall costs can be shared.

Note to reader – RAG Explanations

Finance Tables

- **Green**: Projected to come in on or under budget
- **Amber**: Projected to come in over budget, but with measures proposed/in place to bring it in under budget
- **Red**: Projected to come in over budget, without clear measures currently proposed/in place

Indicator Tables

- Green: Forecasting or realising achieving/exceeding target
- Amber: Forecasting or realising a slight underachievement of target
- Red: Forecasting or realising a significant underachievement of target

Project Delivery Tables

- **Green**: Delivery projected on or before target date
- **Amber**: Delivery projected after target date, but with measures in place to meet the target date (this may include redefining the target date to respond to emerging issues/information
- **Red**: Delivery projected after target date, without clear measures proposed/in place to meet the target date

Project		Completed	Output	Related Ongoing Projects	Outcomes, Monitoring & Evaluation
Ely to Cambridg	e Transport Study	2018	Report, discussed and endorsed by GCP Executive Board in February 2018.	Waterbeach to Cambridge	
A10 Cycle Route Melbourn)	e (Shepreth to	2017	New cycle path, providing a complete Cambridge to Melbourn cycle route.	Melbourn Greenway	
Cross-City Cycle Improvements	Hills Road / Addenbrookes Corridor	2017	Range of improvements to cycle environment including new cycle lanes.	Cross-City Cycling	
	Arbury Road Corridor	2019	Range of improvements to cycle environment including new cycleway.	Cross-City Cycling	Impact evaluated by SQW in 2019 as part of GCP Gateway Review.
	Links to Cambridge North Station & Science Park	2019	Range of improvements to cycle environment including new cycle lanes.	Cross-City Cycling	Impact evaluated by SQW in 2019 as part of GCP Gateway Review.
Greenways Quio	ck Wins	2020	Range of cycle improvements across Greater Cambridge e.g. resurfacing work, e.g. path widening etc.		
Greenways Dev	elopment	2020	Development work for 12 individual Greenway cycle routes across South Cambridgeshire.	All Greenways routes	
Cambridge Sout Study (Cambrid Corridor Study)	-	2019	Report forecasting growth across local rail network and identifying required improvements to support growth.	Cambridge South Station	
Travel Audit – S Biomedical Cam	outh Station and pus	2019	Two reports: Part 1 focused on evidencing transport supply and demand; Part 2	Cambourne to Cambridge; CSETS; Chisholm Trail; City Access;	

APPENDIX 1: GCP COMPLETED TRANSPORT PROJECTS

	considering interventions to address	Greenways (Linton, Sawston,	
	challenges.	Melbourn)	

APPENDIX 2: EXECUTIVE BOARD FORWARD PLAN OF KEY DECISIONS

Notice is hereby given of:

- Decisions that that will be taken by the GCP 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 to:

- a) 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; and/or
- b) Be significant in terms of its effects on communities living or working in the Greater Cambridge area.

Executive Board: 1 st October 2020	Reports for each item to be published 21 st September 2020	Report Author	Key Decision	Alignment with Combined Authority
Greenways Schemes: Swaffhams, Bottisham, Horningsea, Sawston and Barton	To consider plans for the next phase of Greenway Schemes.	Peter Blake	Yes	CA LTP Passenger Transport / Interchange Strategy
Better Public Transport: Waterbeach to North East Cambridge Project	To receive an update on the project and agree the next steps, including an options appraisal and proposals for formal public consultation.	Peter Blake	Yes	CA LTP Passenger Transport / Interchange Strategy
Better Public Transport: Eastern Access Project	To receive an update on the project and agree the next steps, including an options appraisal and proposals for formal public consultation.	Peter Blake	Yes	CA LTP Passenger Transport / Interchange Strategy
Skills	To consider a proposal to develop a new skills work package in response to the impact of Covid-19 on the labour market.	Niamh Matthews	No	N/A
GCP Quarterly Progress Report	To monitor progress across the GCP work streams, including financial monitoring information and proposed additional skills intervention(s).	Niamh Matthews	No	N/A

Executive Board: 10 th December 2020	Reports for each item to be published 30 th November 2020	Report Author	Key Decision	Alignment with Combined Authority
GCP Quarterly Progress Report	To monitor progress across the GCP work streams, including financial monitoring information.	Niamh Matthews	No	N/A
Public Transport Improvements and City Access Strategy	To provide an update on the city access project, and to consider options for long-term packages of measures in the post-covid context.	lsobel Wade	Yes	CA LTP Passenger Transport / Interchange Strategy
Citizens' Assembly	To consider a report on the GCP's response, one-year-on from receiving the Citizens' Assembly report.	lsobel Wade	No	CA LTP Passenger Transport / Interchange Strategy
Greenways Schemes: Haslingfield	To consider plans for the next phase of Greenway Schemes.	Peter Blake	Yes	CA LTP Passenger Transport / Interchange Strategy
Whittlesford Station Transport Infrastructure Strategy	To receive an update on further stakeholder engagement, early outcomes from the A505 multi-modal study and discussions on future bus services, and consider initial design work and costings for improved bus access infrastructure.	Peter Blake	Yes	CA LTP Passenger Transport / Interchange Strategy
Future Investment Strategy	To consider a revised Future Investment Strategy.	lsobel Wade	Yes	CA LTP Passenger Transport / Interchange Strategy

Executive Board: 19 th March 2021	Reports for each item to be published 8 th March 2021	Report Author	Key Decision	Alignment with Combined Authority
GCP Quarterly Progress Report	To monitor progress across the GCP work streams, including financial monitoring information.	Niamh Matthews	No	N/A
Cambridge South West Travel Hub	To consider the full business case and request permission to progress to the construction phase.	Peter Blake	Yes	CA LTP Passenger Transport / Interchange Strategy
Better Public Transport: Waterbeach to North East Cambridge Project	To note consultation feedback, consider and approve a Strategic Outline Business Case and agree to commence the Outline Business Case process.	Peter Blake	Yes	CA LTP Passenger Transport / Interchange Strategy
Better Public Transport: Eastern Access Project	To note consultation feedback, consider and approve a Strategic Outline Business Case and agree to commence the Outline Business Case process.	Peter Blake	Yes	CA LTP Passenger Transport / Interchange Strategy
Executive Board: 1 st July 2021	Reports for each item to be published 21 st June 2021	Report Author	Key Decision	Alignment with Combined Authority
GCP Quarterly Progress Report	To monitor progress across the GCP work streams, including financial monitoring information.	Niamh Matthews	No	N/A
Cambridge South East Transport Scheme	To endorse the Environmental Impact Assessment and proposed planning and consents process for the scheme and agree to submit the relevant applications.	Peter Blake	Yes	CA LTP Passenger Transport / Interchange Strategy

Corresponding Meeting Dates

Executive Board meeting	Reports for each item published	Joint Assembly meeting	Reports for each item published
1 st October 2020	21 st September 2020	10 th September 2020	28 th August 2020
10 th December 2020	30 th November 2020	19 th November 2020	9 th November 2020
19 th March 2021	8 th March 2021	24 th February 2021	12 th February 2021
1 st July 2021	21 st June 2021	3 rd June 2021	21 st May 2021

APPENDIX 3: CAMBRIDGE BIOMEDICAL CAMPUS (CBC) TRANSPORT NEEDS REVIEW – AUGUST 2020 UPDATE

Despite the significant impact of the Covid-19 outbreak on the campus, progress continues on the implementation of the measures identified in the Cambridge Biomedical Campus (CBC) Transport Needs Review. Progress is reported as of 14th August 2020.

Delivery Capacity

The Campus Delivery Group (CDG) has approved the appointment of a full time manager-level resource, and it has been agreed that 60% of their time will be dedicated to supporting the campus Travel and Transport Group with the remainder dedicated to the CDG itself. This is a significant milestone and it is anticipated that the post holder will support the implementation of the campus Travel Strategy and (where funding permits) the delivery of interventions identified within the Transport Needs Review that are within the gift of the campus. The project manager will report to the chair of the Travel and Transport Group and will support the chair as required to work with the GCP and its partner organisations to help to achieve transport infrastructure improvements. The job description is being finalised and it is hoped that the successful candidate will be in post within three months.

In addition to the Travel and Transport Group meeting, a monthly CBC Strategic Transport Projects Group has been established, which brings together project managers from all the main transport projects affecting the campus, including GCP cycling and public transport schemes, rail schemes and the CAM. This is proving extremely effective in fostering collaboration and ensuring that the campus has a more unified view of changes in the short, medium and long term.

Cycling and Walking

Progress includes:

- Early work to improve provision for cyclists in the Car Park 6 area and the Adrian Way exit. Work to conduct topographical surveys and produce general arrangement drawings is underway. These will enable stakeholder sign-offs before proceeding to the next stage, which will include the generation of target costs.
- Traffic management measures are being implemented using emergency orders in the vicinity of CBC, including at Nightingale Avenue and Luard Road, aiming to create more space for walking and cycling. Measures are expected to come into effect in mid-August, before a period of engagement and consultation which will help to determine whether they should be made permanent.
- Improved walking and cycling facilities from Babraham Road Park & Ride to the campus are being progressed as part of Cambridge South East Transport (CSETS) Phase 1.
- Those Greenways already approved by Executive Board are moving to detailed design stage, with further Greenways being considered in October. These include Sawston Greenway, which is of particular interest to the campus.
- Cambridge University Hospitals are working on a plan for new and replacement cycle parking, and the University is reassessing cycle parking needs in light of Covid-19. It plans to implement a number of facilities (including a cycle repair stand) within the new few months.
- Although not identified in the Review, the opening of the Dutch-style roundabout at Fendon Road by Cambridgeshire County Council offers significantly improved provision for both pedestrians and cyclists travelling to the campus.

Public Transport

Progress includes:

- Increased Park & Ride capacity at Trumpington (additional 279 spaces) and the start of preliminary works at Babraham Road, anticipated to provide approx. 160 additional spaces (subject to detailed design). Further, the planning application for the Cambridge South West Travel Hub has been submitted with a decision expected by the end of 2020.
- The Universal bus service funded and managed by the University has extended its weekend route, to continue to the campus at weekends (having previously stopped at the rail station). It has been possible for the University to achieve this without increasing costs, because reduced congestion has meant the service can operate with a smaller fleet. If congestion returns, this change will need to be reviewed.
- The Universal bus services review was completed recently; the University are currently procuring a new contract for the services for the period beyond 2021, which includes options for electric bus services.
- The CPCA, supported in this financial year by campus partners, are planning to fund an hourly X3 service from 31st August, going via Papworth to the campus.
- The provision of other bus services is being monitored and adjusted on an ongoing basis in response to Covid-19.
- The Campus Travel and Transport team are actively involved with the detailed design of Cambridge South Station.

Early work to procure a CBC Bus Strategy had started prior to Covid-19, but has paused. The Travel and Transport sub-group (including GCP and Cambridgeshire County Council officers) will discuss appropriate timing and approach, given the drop in public transport patronage and the upcoming CPCA Bus Review. It is proposed that this work will now be integrated into the campus Masterplan refresh (Transport Section) which is being undertaken as part of the development of the campus and its interfaces to improved regional transport links.

Travel Planning

Campus partners continue to deliver a range of travel planning initiatives to support staff. Where possible, staff continue to work from home, although it is anticipated that a number of these staff will return to the workplace during the 3rd quarter of the year. Employers are ensuring that their travel plan offer is supportive and includes e.g. cycle to work loans, corporate ticketing options for public transport, reduced fares for single and daily ticketing, agile working where appropriate.

Next Steps

The campus has been reconfigured in light of Covid-19, including closure of the Main Drive to buses and general traffic. Such measures impact a range of cycling, walking and public transport interventions, so an understanding of the anticipated longevity of such measures will be important to define next steps. It is planned that the Main Drive will re-open in the next few weeks (but may close again, depending upon requirements of the Trust in relation to management of Covid-19 patients in any second wave).

The Travel and Transport Group is scheduled to meet again in mid-September. This will provide an opportunity to reflect further on Covid-19's impact on the actions identified in the Review. This is a precursor to agreeing the next priorities for delivery, which the group will continue to progress ahead of the appointment of a permanent resource who will provide additional momentum for delivery.

APPENDIX 4: ENERGY GRID REINFORCEMENT - INDICATIVE BUSINESS CASE

1. Introduction

This report considers options for addressing power network capacity constraints in the Greater Cambridge area including the role the Greater Cambridge Partnership could take to remove a significant barrier to growth and enable both renewables projects and the electrification of transport. Although not detailed, this report summarises progress to date and addresses the core elements that will ultimately form the business case.

The information contained in this report is based upon work to date with the regional Distribution Network Operator (UKPN), Asset Utilities Ltd and other local authorities who are developing similar projects in response to similar challenges, in particular Ebbsfleet and Central Bedfordshire.

2. Strategic case

The objectives

The proposal is that GCP should support investment to pro-actively increase the capacity of the electricity grid in the Greater Cambridge area in order to achieve the following objectives:

- To ensure that growth in Greater Cambridge is not delayed due to limitations in the electricity grid and that costs for new connections are not prohibitive
- To contribute to a net zero economy by ensuring that there is adequate headroom in the electricity grid to enable the following:
 - o take-up of renewable technologies
 - o take-up of electric vehicles
 - o reductions in dependence on gas for domestic power supply

The case for intervention

The Greater Cambridge Partnership's (GCP's) Economy and Environment Working Group commissioned Asset Utilities to undertake a local electricity network analysis. The key areas of work covered include:

- The types and levels of constraints on the local distribution network in the Greater Cambridge area and how this impacts a) the delivery of housing and jobs and b) opportunities for clean energy projects and the electrification of transport to improve air quality and reduce carbon emissions; and
- The quantification of these impacts on the growth targets and timescales agreed by Government with the GCP as part of the Cambridge City Deal; and
- Identification and recommendation of the most effective interventions that the GCP and partners could facilitate and/or invest in.

The report, produced in Feb 2019, noted that UKPN has advised that present demand capacity for Greater Cambridge is 240 MW and the additional demand, notably driven by the electrification of transport, could almost triple the existing total demand requirement for the Greater Cambridge area from 240MW to 710 MW by 2031 as illustrated in Figure 1.

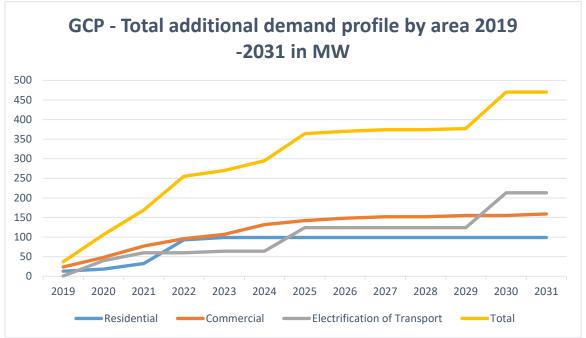


Figure 1: The cumulative additional demand profile by area together with the total cumulative demand profile from 2019-2031.

Despite planned reinforcement works by UKPN there is limited capacity within the existing 132-kV primary sub-station network. The problems are particularly acute at Histon, Arbury and Fulbourn. Power supply from these existing substations is limited by the circuits feeding them and the size of the transformers. This means that there are a number of planned private and public sector projects that would be 'at risk' of not taking place. Capacity is also constrained for power upload which means opportunities to exploit alternative energy sources, such as solar power, cannot be fully realised until capacity is reinforced.

The key finding of the report was that "It is clear that the electricity network as designed, is unable to meet the future electrical demand requirements or the changing face of technology (EV connections) in Greater Cambridge."

Policy Alignment

Greater Cambridge City Deal

The proposed investment is consistent with the deal agreed between Government and Greater Cambridge which allows Greater Cambridge to maintain and grow its status as a prosperous economic area. Our deal is intended, amongst other things to accelerate delivery of 33,480 planned homes.

CPCA Independent Economic Review

The findings of the report are consistent with those of the CPCA Independent Economic Review (CPIER 2018) which recognises that the current electricity network is a barrier to growth in two key respects:

• without significant grid reinforcement works to the existing network by UKPN, capacity problems would result across the GCP area; and

• constraints on the grid also severely impact localised generation of clean energy and our ability to install Electric Vehicle (EV) charging.

The Cambridgeshire & Peterborough Local Transport Plan

Creation of grid capacity to serve an increased electric vehicle fleet is also consistent with Objective 10 of The Cambridgeshire & Peterborough Local Transport Plan which states "Reduce emissions to 'net zero' by 2050 to minimise the impact of transport and travel on climate change"

The specific policy under Policy Theme 10.1 "Reducing the carbon emissions from travel" is "Reducing emissions by encouraging the uptake of new emissions free technologies and encouraging sustainable alternatives to the private car"

Local Plans

The Adopted 2018 Cambridge Local Plan Policy 29: Renewable and low carbon energy generation states that:

"Proposals for development involving the provision of renewable and/or low carbon energy generation, including community energy projects, will be supported, subject to the acceptability of their wider impacts. As part of such proposals, the following should be demonstrated:

- a. that any adverse impacts on the environment, including local amenity and impacts on the historic environment and the setting of heritage assets, have been minimised as far as possible. These considerations will include air quality concerns, particularly where proposals fall within or close to the air quality management area(s) or areas where air pollution levels are approaching the EU limit values, as well as noise issues associated with certain renewable and low carbon technologies; and
- b. that where any localised adverse environmental effects remain, these are outweighed by the wider environmental, economic or social benefits of the scheme."

In the South Cambridgeshire Local Plan, Policy CC/2: Renewable and Low Carbon Energy Generation states "Planning permission for proposals to generate energy from renewable and low carbon sources, with the exception of proposals for wind turbines, will be permitted provided that:

- a. The development, and any associated infrastructure, either individually or cumulatively with other developments, does not have unacceptable adverse impacts on heritage assets (including their settings), natural assets, high quality agricultural land, the landscape, or the amenity of nearby residents (visual impact, noise, shadow flicker, odour, fumes, traffic);
- b. The development can be connected efficiently to existing national energy infrastructure, or by direct connection to an associated development or community project, or the energy generated would be used for on-site needs only;
- c. Provision is made for decommissioning once the operation has ceased, including the removal of the facilities and the restoration of the site; and
- d. Developers have engaged effectively with the local community and local authority"

The case for public funding

Utility providers have a statutory duty to deliver required upgrades and reinforcements within their networks to support the delivery of growth. However, they are regulated by OFGEM and

constrained to operate reactively to demand. They are only able to commit to designing upgrades on their networks when outline planning consent is available and they have been approached by developers and are certain that development will come forward to avoid the risk of 'stranded' assets. This can create significant delays in housing and commercial developments and it can take several years to deliver power infrastructure thereby delaying growth, renewables projects and the electrification of transport. This challenge is not unique to Greater Cambridge.

If GCP does not support intervention then grid capacity will proceed at a slower pace in line with UKPN's negotiations with OFGEM for investment in their business investment plan which replaces the current 2015-2023 Plan. Without investment, any single developer who applies for power at the point where capacity is not available would be quoted for the full cost of reinforcement, which can impact development viability.

A coordinated approach to transform the local energy network is required across a range of public and private organisations to help protect the delivery of future residential and commercial developments (and associated job creation) and providing the flexibility to enable the delivery of the electrification of transport and renewable generation projects. Without intervention the network might become a constraint for projects which will contribute to achieving net zero carbon goals.

The Asset Utilities report noted that in the short (2019-2021) to medium (2022-2025) term, funding the upgrade of the 132KV network is needed to unlock commercial developments. This could unlock the Southern Fringe and potentially other areas across the network. Some further investment into grid reinforcements could also speed up delivery of housing growth.

In the medium (2022-2025) to long (2026-2031) term, the focus must be on delivering smart and micro grids. For this to happen, the building blocks must start to be put place in the next 1 to 2 years to support delivery in the medium term.

The case for GCP funding

Grid reinforcement aligns well with GCP objectives as it is an enabler of growth in the area and supports the electrification of transport. The GCP Executive Board has already agreed the principle of investing in grid reinforcement, and this was confirmed by the Future Investment Strategy process in March 2019. Subsequent sections of this report outline potential commercial and funding options that might allow a shared approach to funding whilst achieving a degree of risk transference.

3. Economic case

Following on from the Local Network Analysis outlined in the previous section, an engineering feasibility study was commissioned from UKPN as the local Distribution Network Operator (DNO) with the resulting report produced in October 2019.

The feasibility study report stated that development to the West and South of Cambridge is currently limited by the absence of 132kV and 33kV network infrastructure. The strategic view to support growth in these areas is centred in the extension of the 132kV and 33kV networks between East and West Cambridge, as illustrated in Figure 2. These extensions would provide significant flexibility to offer grid access more widely across the city as and where it might be required in the future.

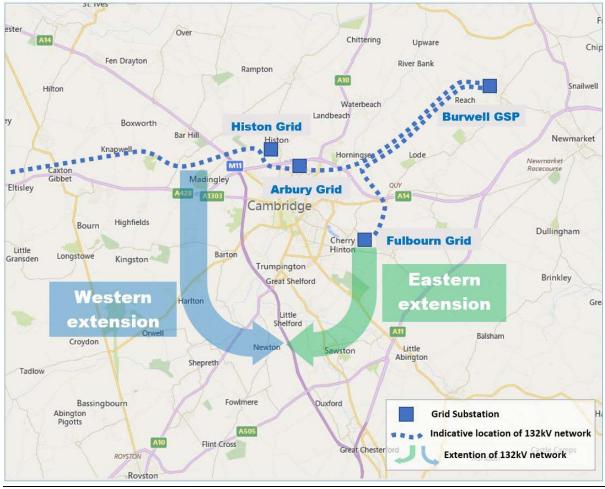


Figure 2 - Existing 132kV network in the Greater Cambridge area and proposed extension corridors

The Eastern extension will allow further growth to the East and South of Cambridge by bringing capacity closer to emerging developments. The Western extension will provide capacity to West Cambridge (including future developments in Bourn/Cambourne) and relieve existing grid substations so further growth can be accommodated in North and Central areas of Cambridge. The Western and Eastern extensions will interconnect to the south of the city, to form a loop, thereby establishing the necessary resilience to sustain the expected demand growth in keeping with national standards for Security of Supply.

Due to the uncertainty of the rate of electrification of heat and transport and consequent impact on network infrastructure requirements, three demand growth scenarios were considered in the feasibility study report namely 'Moderate', 'High' and 'Gone Green'. These scenarios are indicative for the purposes of the report.

The report identified 12 major interventions required to deliver this strategic solution of which:

- Six are being undertaken by UKPN already or are being planned by them
- Three are required in any growth scenario, but will not be progressed by UKPN until they are certain that development will come forward. These three interventions are described in the table below.
- Three further interventions that would only be required in the highest demand growth model and are not considered further in this document.

Options available to GCP

Option A: Do nothing

As described above, this is effectively leaving the matter in the hands of the network operators. This has the potential to create significant delays in housing and commercial development as power infrastructure is not forward funded prior to need. Any single developer who applies for power at the point where capacity is not available would be quoted for the full cost of reinforcement, which can impact viability of the development. This approach could also adversely affect the electrification of transport and renewables projects.

Option B: Provide the means to undertake the three interventions required in any growth scenario. These are described in the table below:

Intervention name	East Cambridge Grid	Trumpington Primary and new East Cambridge interconnector	West Cambridge Grid
Requirements	New Grid substation within the Babraham Road area which would provide a 90MVA transformer.	New Grid substation in the Trumpington area which would provide a 64MVA.	New Grid substation south- west of the A428/A14/M11 junction which would provide two 90MVA transformers.
Outcomes	This option would support growth of up to 22,400 jobs within various existing science parks such as Babraham Research Campus, Granta Park, Wellcome Genome Campus as well as up to 2550 homes.	This option would support growth of up to 14,000 jobs within existing science parks such as Cambridge Biomedical Campus, and the new hospital proposed at Addenbrookes, number of homes unlocked to be confirmed.	This option would support growth of up to 14,000 jobs in the West of Cambridge; support a greener public transport offer at Madingley Road Park and Ride and support up to 3,500 homes (Bourn) as well as new homes in Cambourne
	to Smart Grids which are a	ble to deal with the fluctuat wables, and electrification of	rid capacity needed to upgrade ions in power associated with of transport and increased
Estimated upfront cost	£12.5m Excluding land acquisition costs.	£11.5m Excluding land acquisition costs.	£20.1m Excluding land acquisition costs.

Notes:

- MW refers to the power required by the devices plugged into the network. MVA is the output power the amount electrical transformer equipment will supply out. 10MVA will feed circa 8MW power requirement but is not an exact science.
- The costs have been provided by UKPN. They are based on standardised costings and are estimates only.
- UKPN advise that these estimates assume connectivity into the existing grid via underground cables.

Project phasing

UKPN's preference would be to deliver the interventions in the order laid out above (i.e. East Cambridge Grid, then the Trumpington Primary and new East Cambridge interconnector and finally the West Cambridge Grid) due to estimated demand versus capacity available and for operational reasons. Whilst UKPN have indicated that there could be some flexibility in this order, they have continued to stress the East Cambridge Grid as a priority.

It would also be possible to undertake one or two of these interventions although the full benefits of growth enablement will only by realised on delivery of all three.

Land

The East Cambridge and West Cambridge Grids each require a piece of land approximately 65m x 45m (~0.75 acres) with vehicular access for construction and ongoing maintenance. The Trumpington Primary and new East Cambridge interconnector would require a smaller piece of land approximately 40m x 30m (~0.3 acres). UKPN advises that different land shapes can be accommodated although this could affect construction costs.

The CCC Strategic Assets team have worked with UKPN to identify 'optimal areas' in which to locate each of the substations (it should be noted that these might be considered 'optimal' from UKPN's standpoint and that other stakeholders may view them differently). The greater the distance that substations are located from these UKPN optimal areas, the greater the cost, complexity and risk, in particular because of the need to connect into the existing power network. Consequently there is a benefit in sticking as closely as possible to the UKPN optimal areas although they advise that adjacent/nearby areas could also be considered.

Given that the city of Cambridge is surrounded by Green Belt land, it is unsurprising that the optimal sites lie in the Green Belt. Moving further away from Cambridge than the UKPN optimal areas to avoid the Green Belt is impractical because it extends for a considerable distance. Moving in the other direction towards the city itself means considering development sites.

a) Potential Green Belt sites

The substations would be classed by the National Planning Policy Framework (NPPF) as being 'inappropriate development' which are by definition harmful to the Green Belt and would not be approved except in very special circumstances. The definition of 'very special' circumstances is subject to assessment on a case by case basis, not least because there might be multiple circumstances that taken together would be very special. However, these very special circumstances will not exist unless the potential harm to the Green Belt is clearly outweighed by other considerations. Specifically the NPPF suggests that very special circumstances may include the wider environmental benefits associated with increased production of energy from renewable sources.

The scale of the proposed substations could potentially give rise to harm to Green Belt by way of their visual and physical impact upon their locality and the openness of the area. A strong case could be made that the energy supply challenge faced by Greater Cambridge and the constraints upon local generation constitute 'very special circumstances'. Such a case would need to be developed by employing a specialist planning consultant to look at this matter prior to seeking pre-app advice from the planning authority. Each UKPN optimal area is different in character and

potential sites would therefore require individual consideration. A generic case could not be created for all three.

The case for using a Green Belt location would need to be compelling and is likely to include:

- A full and clear explanation of why the Green Belt location is the only suitable location for this new infrastructure
- A detailed description of how the schemes brought forward have been configured to minimise that harm to ensure that the balance of harm and benefit is most beneficial
- A quantification of the consequences, having regard to public good rather than the cost of a non-Green Belt location
- An identification of the benefit from the provision of this new infrastructure not only its support for economic growth and recovery but probably more importantly the contribution that the infrastructure will make to the electrification of transport and supporting UK goals towards net zero carbon.

In terms of costs, farmland typically sells for £10-£14k per acre. However land with any potential development has "hope value". GCP would ideally need a willing seller to enable the purchase of land and this is always at a premium. The cost per acre is generally higher for smaller sites given that the various transactional costs become a significant proportion of the total.

b) Potential development sites

The cost implications of locating a substation on a development site are significant with typical costs of £750k/acre meaning a potential land cost for the larger substations in excess of £500k. Moreover, there is likely to be a reluctance from housing developers to build next to a substation and this might result in the need to acquire more land at additional cost to provide a 'buffer'.

c) Progress on finding sites

To date, the project has conducted limited investigations into land options (based on the sizes provided by UKPN) in their optimal areas because approaching landowners would only risk creating additional cost pressure. Working in conjunction with the County Assets team and other officers, a number of possible opportunities have been identified for each optimal location although some appear more promising than others.

Work undertaken suggests a larger land take now needs to be considered to provide for landscape and environmental mitigation. GCP is also in search of land which can be used to achieve net biodiversity gain. As such it is possible that a site could be found which could accommodate the substations as well as new biodiversity schemes.

Public bodies such as Highways England and Network Rail occasionally hold small pieces of land that they are prepared to divest, and it is possible that it may be possible to find appropriate land by this means. In general, sites which are on or close to other utilities/infrastructure, will be easier to justify from a planning perspective as they have less impact on the openness of the Green Belt. It is proposed that this is explored further in the next stage of the project.

Work to date to identify sites has considered the current Local Plan. The new Local Plan may provide different opportunities for substation locations although the timing is likely to be problematic especially for the East Cambridge Grid.

Whilst challenging, the project is now considerably better placed to commission further works on identifying viable sites.

Planning authority

It is our expectation that the network operator would submit any required planning application and therefore the planning authority would be the Greater Cambridge Joint Planning Service. An alternative option would be for GCP/County Council to submit the planning application on the network operator's behalf. In this case it would be determined by the County Council's own Planning Committee under Regulation 3 of The Town and Country Planning General Regulations 1992.

Indicative investment appraisal

CCC Finance have prepared a spreadsheet (Appendix 1) showing an example of how costs (excluding land purchase) incurred on a single new Grid substation funded by a loan could potentially be recovered from developers who wish to make use of the new electrical capacity provided. Rather than the current situation where the first developer to require new infrastructure pays a disproportionate amount of the cost, each developer in this example pays a pro-rata share of the cost (adjusted for inflation) based on the amount of the new capacity they want to make use of. Cost recovery is discussed further in the Financial Case below.

The Local Network Analysis report presented to GCP in February 2019 suggested that there was already more demand for electricity than existing capacity in some areas and that this disparity was likely to grow over time - particularly as a result of new housing & commercial ventures and the growth in electric vehicles. Informal discussions with local consultants have supported this view. That would suggest that new capacity provided would be taken up quickly and that is reflected in option 1 in the spreadsheet. However, the report did not consider how sensitive developers might be to the cost of recharges nor could it take into account the economic shock associated with Covid-19. The spreadsheet therefore includes a second option, showing the financial impact if the take-up of new capacity was significantly slower. The development of an outline business case would include testing the market in order to predict the likely take-up of new capacity in practice.

The spreadsheet assumes a loan over 25 years. Both option 1 and option 2 show positive NPVs.

4. Commercial case

Engagement to date has been with UKPN, the DNO for this area and much of the information in this report derives from that engagement. However, the use of an Independent Distribution Network Operator (IDNO) could be considered for some elements of the work to achieve the most cost effective delivery mechanism. An informal discussion with the market has suggested that some IDNOs are capital rich and are looking for investment opportunities, and they may consider Greater Cambridge an attractive prospect given the growth of the area. The competitive market that OFGEM has created by introducing IDNOs does offer possibilities to select a development partner for this work that meets GCP's objectives.

Some other authorities seem to have considered the use of IDNOs but ultimately decided to proceed with their local DNO for all aspects of the work. There are pros and cons of either route which would need to be explored in detail should the project proceed to the next stage using the learnings from other local authorities where appropriate. One consideration is that getting the best commercial deal often takes time and needs to be balanced against required delivery dates.

Other similar local authority led projects have had to consider the issue of State Aid, and we are likely to be able to learn from their experience should comparable State Aid requirements remain in place from 2021 onwards.

UKPN or the IDNO would operate the substations once commissioned and there would be no legacy OPEX liabilities on GCP or its partners. We understand from other local authorities working with UKPN that they (i.e. the local authorities) will retain control over which developer connection requests to accept to maximise the growth potential of the investment. Whether this would be appropriate in this scheme requires further analysis.

5. Financial case

Principal cost drivers

Our work to date has indicated that the key costs associated with delivering the project would be:

- Build and implementation of the grid substations (estimated costs provided by UKPN above)
- Land: a range of costs is described above and it will not be possible to estimate land costs with any degree of accuracy until the project is progressed further.
- Works associated with connecting the substations to the existing power grid. If land can be identified in the optimal areas, UKPN advise that these costs (for underground cables) are included in the estimates above. Otherwise, these costs will be highly dependent on the precise location of the land in relation to the existing power grid.
- Works required to achieve planning permission including surveys. The costs of this are hard to estimate at this stage without detailed knowledge of the sites in question, and are likely to be higher for land in the Green Belt. We have been advised that it is likely that this aspect could be delivered for all three sites for £750k.
- Professional and technical services will be required to deliver this infrastructure successfully. As well as needing support from those with detailed knowledge of the electricity market, specialist legal skills will be required to ensure a robust and compliant approach is adopted.

Based on discussions with other local authorities, we believe that a budget of £300k should be allowed for this although this will need to be confirmed during the next stage of work.

Cost element	Current best estimate or range
Substation build	East Cambridge Grid: ~£12.5m
	Trumpington Primary and new East Cambridge
	interconnector: ~£11.5m
	West Cambridge Grid: ~£20.1m
	Total for all three grid substations: ~£44.1m
Land	Very difficult to estimate at this stage but if all sites used development land, this could exceed £1.5m
Connection of grid to existing	Cost dependent to location of land in relation to
network	existing power network
Professional services – planning	~£750k
Other professional and technical	~£300k
services	

Cost recovery

For the first 10 years from activation of each substation, contributions can be recouped from developers when they use the capacity provided. Other local authorities have agreed or are in the process of agreeing a cost recovery arrangement with their DNOs that will enable them to recover public sector forward funded investment from developers who subsequently connect to the Council funded grid substations.

Care is required about exactly what can be recharged and legal advice will be required. We have been advised that recharges over and above what is deemed fair could be subject to legal challenge. In addition, if a substation was particularly expensive to build, this would potentially result in higher connection costs for organisations and developers which may prove to be a disincentive. Mitigation of this risk will be discussed with UKPN/IDNO.

Funding

It is assumed that GCP would fund the development of this project at least in part via a loan to enable grant funding to be invested in other capital schemes. Consideration is also required of follow on arrangements given the fact that such a loan would be likely to extend beyond the period in which the GCP is intended to exist, and the County Council's willingness to underwrite loan funding for a non-commercial venture that potentially limits their ability to take out loans for other projects.

UKPN are currently preparing their business investment plan for the period 2023 to 2028. We are working with them to understand how we can collaborate on the grid constraints highlighted in this report with the aim of securing a contribution towards this project. UKPN have advised that they will conduct formal consultation on their business plan in early 2021, and our response to this will be of the utmost importance. Whilst UKPN recognises that Greater Cambridge is a priority for investment, they point out that they have a number of other priorities in the eastern region and that it is OFGEM who ultimately decide which aspects of UKPN's business plan progress to the next stage.

As a result, it is uncertain whether a contribution would be forthcoming. A decision on UKPN's business investment plan is expected in mid to late 2021.

The Future Investment Strategy process in March 2019 provisionally identified some funding for this this project. This would enable the GCP to initiate work on the first grid substation, and whilst this sum would be insufficient to fund all three interventions, the cost recovery mechanism and potential co-funding mechanisms offer possible ways to complete the full project.

6. Management case

Project Governance

If GCP were to fund this project, it is anticipated that GCP Executive Board processes would apply.

Since the project would involve land acquisition and potentially loan funding with an extended payback period, it is anticipated that key aspects of the project would be governed by the County Council Commercial and Investment Committee.

Project Delivery

Whilst the approach to delivery remains to be finalised, UKPN is likely to be a key partner whether or not an IDNO is involved. Independent connection providers can also carry out works on behalf of the DNO or IDNO but appropriate oversight would ensure that the end product is fit for purpose and compliant with all necessary specifications.

Key risks and mitigations

At this early stage, the following key risks and mitigations have been identified:

- Failure to gain planning permission: a specialist planning consultant would be required to build a case prior to seeking pre-app advice from the planning authority, particularly for sites in the Green Belt. As there are three potential sites, it is not necessarily the case that all three would fail. The risk could be mitigated by strengthening the case in terms of benefits relating to renewables.
- Cost and/or time overruns with UKPN or IDNO: it is recommended that appropriate technical skills are retained during the next stage of the project to mitigate this risk. In particular, the risk sharing approach between GCP and UKPN/IDNO would require special attention.
- Demand turns out to be significantly lower than anticipated: although the Asset Utilities and UKPN reports highlight strong demand, these analyses would need to be reviewed in the light of the impact of Covid-19 and addressed further in the Outline and Full Business Cases.
- Inability to fully recover costs: further legal advice is required to mitigate this risk.

All risks will be significantly mitigated by continued close working with other local authorities who are further advanced with their plans, in particular Ebbsfleet and Central Bedfordshire.

7. Next Steps

The following steps are anticipated:

Scoping stage

The principle aims of the stage are to:

- Develop a commercial approach
- Develop a set of options for land and engage specialist skills to assess acquisition costs and consider what is required to submit compelling planning applications
- Form an initial view of demand impact as a result of Covid-19 and other changes since the Asset Utilities analysis in early 2019
- Procure appropriate technical consultants to undertake the above and to produce the business case in the next stage
- Finalise the approach and provide firm cost and time estimate for the business case stage.

The cost estimate for the scoping stage is £100k, with the aim to complete this in time for the March 2021 Executive Board cycle.

Business case stage

This stage would build on the scoping stage to deliver an outline business case for approval. It is anticipated that this would be ready for the September/October 2021 Executive Board Cycle. A final business case would follow once all consents were in place. The timetable will be confirmed during the scoping stage.

8. Recommendations

GCP Executive Board is requested to:

- Note progress to date on this project
- Approve expenditure of up to £100k to deliver the scoping stage of this project.

Annex 1 Illustrative investment appraisal

Illustrative example of recovering costs of a Grid Sub-station

Option used in calculation 1															Discount rate	4.42%
Capital costs Commercial Recovery					Loan					Summary Analysis	- option 1	Summary Analysis - option 2				
Contract Year Year Total capital costs		Remaining MVA capacity	Illustrative MVA capacity used		Inflation uplift	Cost recovery	Loan requirement	Loan balance	Principal repayment	Interest repayment	Total repayment	Annual cash (flow	Cumulative cash flow	Annual cash flow flov		
				Option 1	Option 2		£	£		£	£	£	£	£	£	£
			90			2.00%					2.37%					
0	2020															
1	2021	£700,000						£700,000	£700,000		£16,590	£16,590	-£16,590	-£16,590	-£16,590	-£16,590
2	2022	£1,400,000						£1,400,000	£2,078,011	£21,989	£49,249	£71,238	-£71,238	-£87,828	-£71,238	-£87,828
3	2023	£9,800,000	90.0	10.0	10.0	4000/	04 555 550	£9,800,000	£11,809,020	£68,991	£279,874	£348,865	-£348,865	-£436,692	-£348,865	-£436,692
4	2024	£2,100,000	80.0	10.0	10.0	100%	£1,555,556	£2,100,000	£13,493,882	£415,138	£319,805	£734,943	£820,612	£383,920	£820,612	£383,920
5	2025		50.0	30.0	10.0	102%	£4,760,000	£0	£12,990,577	£503,305	£307,877	£811,181	£3,948,819	£4,332,738	£775,485	£1,159,405
6	2026 2027		30.0	20.0	10.0	104%	£3,236,800	£0	£12,475,344	£515,233	£295,666	£810,899	£2,425,901	£6,758,640	-£810,899	£348,506
/	2027		10.0	20.0 10.0	10.0	106% 108%	£3,301,536	£0	£11,947,900	£527,444 £539,944	£283,165	£810,609	£2,490,927	£9,249,567	£840,159	£1,188,665
8	2028		0.0	10.0	10.0	108%	£1,683,783	£0 £0	£11,407,956		£270,369 £257,269	£810,313	£873,470	£10,123,037	£873,470	£2,062,136
9	2029		0.0		10.0	110%	£0		£10,855,215	£552,741		£810,010	-£810,010	£9,313,027	-£810,010	£1,252,126
10	2030		0.0		10.0		£0	£0	£10,289,374	£565,841	£243,858	£809,699	-£809,699	£8,503,328	£942,109	£2,194,235
11	2031		0.0		10.0	115% 117%	£0 £0	£0 £0	£9,710,122	£579,251	£230,130	£809,381 £809.056	-£809,381	£7,693,947	£977,463 -£809.056	£3,171,698
12			0.0		10.0				£9,117,143	£592,980	£216,076		-£809,056	£6,884,891		£2,362,642
13	2033 2034		0.0		10.0	120% 122%	£0	£0	£8,510,110 £7,888,690	£607,033 £621,420	£201,690	£808,723 £808,382	-£808,723	£6,076,168	£1,050,310	£3,412,952
14	2034		0.0		10.0	122%	£0	£0			£186,962		-£808,382	£5,267,786	£1,087,832	£4,500,784
15			0.0		10.0	124%	£0	£0	£7,252,542	£636,148	£171,885	£808,033	-£808,033	£4,459,753	-£808,033	£3,692,751
16	2036		0.0		10.0	127%	£0	£0	£6,601,318	£651,224	£156,451	£807,676	-£807,676	£3,652,078	£1,165,145	£4,857,896
17 18	2037 2038		0.0			129%	£0 £0	£0 £0	£5,934,659	£666,658 £682,458	£140,651 £124,477	£807,310 £806,935	-£807,310 -£806,935	£2,844,768	-£807,310 -£806,935	£4,050,586
18	2038		0.0			132%	£0 £0	£0	£5,252,201 £4,553,569	£698,632	£124,477 £107,920	£806,935 £806,552	-£806,935	£2,037,833 £1,231,281	-£806,552	£3,243,651 £2,437,099
20	2039		0.0			135%	£0 £0	£0	£3,838,379	£715,190	£90,970	£806,552 £806.160	-£806,160	£425,121	-£806,160	£2,437,099 £1,630,939
20	2040		0.0			137%	£0 £0	£0	£3,838,379 £3,106,239	£732,140	£90,970 £73,618	£805,758	-£805,758	-£380,637	-£805,758	£1,630,939 £825,181
21	2041		0.0			140%	£0 £0	£0	£3,106,239 £2,356,747	£749,492	£55,855	£805,758 £805.347	-£805,347	-£1,185,983	-£805.347	£19,835
22	2042		0.0			145%	£0 £0	£0	£1,589,492	£767,255	£37,671	£803,347	-£804,926	-£1,990,909	-£804,926	-£785.091
23	2043		0.0			146%	£0 £0	£0	£804.054	£785.439	£19.056	£804,926 £804.495	-£804,926	-£1,990,909 -£2,795,404	-£804,926	-£1,589,586
24	2044		0.0			149%	£0 £0	£0	£004,054 £0	£804.054	£ 19,056 £0	£804,495	-£804,054	-£2,795,404 -£3,599,457	-£804.054	-£2,393,639
25	2045		0.0			15276	£U	LU	20	2004,054	20	£804,034	-2004,054	-23,099,457	-£004,054	-£2,393,039
Totals	25yr	£14.000.000		90.0	90.0		£14,537,675			£14.000.000	£4,137,132	£18,137,132	-£3,599,457		-£2,393,639	
	grees to detail?	True		True	True		,501,010						20,000,401			

£1,131,253

NPV

NPV

£145,636