



**CAMBRIDGESHIRE
& PETERBOROUGH**
COMBINED AUTHORITY

CAMBRIDGESHIRE & PETERBOROUGH COMBINED AUTHORITY – OVERVIEW AND SCRUTINY COMMITTEE

DRAFT MINUTES

Date: 29th January 2018

Time: 11am

Location: Cambridgeshire County Council

Present:

Cllr Robin Carter
Cllr Terry Hayward
Cllr Mike Bradley
Cllr Alan Sharp
Cllr John Batchelor (Chair)
Cllr Alex Riley
Cllr Fred Yeulett
Cllr David Mason
Cllr Dave Baigent
Cllr Rod Cantrill
Cllr Lucy Nethsingha

Cllr David Over
Cllr Ed Murphy

Huntingdonshire District Council
Huntingdonshire District Council
East Cambs District Council
East Cambs District Council
South Cambs District Council
South Cambs District Council
Fenland District Council
Fenland District Council
Cambridge City Council
Cambridge City Council
Cambridgeshire County Council (arrived at
1pm)
Peterborough City Council
Peterborough City Council

Officers:

Kim Sawyer
Martin Whiteley
Keith McWilliams
Jon Alsop
Anne Gardiner

Legal Counsel & Monitoring Officer
Chief Executive Officer
Director for Transport and Infrastructure
Interim Project Accountant
Scrutiny Officer

Others:

James Palmer
Tom Higbee

Mayor of Combined Authority
Associate Director from Steer Davies Gleave

1. Apologies

- 1.1 Apologies received from Cllr French.

2. Declaration of Interests

- 2.1 No declarations of interests were made.

3. Minutes

- 3.1 The minutes of the meeting held on Monday 18th December 2017 were agreed as a correct record.

4. Rapid Mass Transport

- 4.1 The Committee received a presentation from the consultants Steer Davies Gleave (Appendix A)
- 4.2 The Chairman invited the committee to ask questions of the consultants, the Director of Transport and the Mayor of the Combined Authority.

The following points were raised during the discussion:-

- The report that was released in December outlined the emerging findings from the study to get feedback; the current report reflected the final detail of the study; the report belonged to Steer Davies.
- There would be a tunnel station in the centre of Cambridge but the detail around what type this would be was not known yet; the purpose of the study was to provide feasible options.
- The most expensive component of the scheme was the tunnels, so the longer the tunnels were the more expensive the scheme would be.
- It would be possible to use existing infrastructure but no detail was available yet.
- The report was putting forward a concept idea so there was not the detail around how much land may be required but it was acknowledged that land in Cambridge was expensive and highly sensitive.
- There were a number of examples of the suggested technology being trialed and being adopted in the UK. The technology would be available at the time.
- It was recognized that some form of demand management would be required but what format this would take had not been considered other than recognising it would be needed.
- The RMT system would be a dedicated space that could hold up to 500 people and allow travel in comfort and on mass within tunnels.
- Options for a system in Peterborough could be looked at.

- The route was not set yet but the underground would be linked up like the London Underground system. New routes would be where there were significant routes already but further routes across the county could be considered.
- Although the system was Cambridge centric it would be key to getting people from one side of the city to the other side which would relieve congestion in the surrounding area around the city.
- There existed an extraordinary economy across the county but there was increasing pressure on housing prices. There was a need to create growth by having a high-quality transport system, which would in turn create high quality market towns.
- To ensure that the market towns were connected existing infrastructure such as rail stations would be used and interchanges would be created.
- Until the public transport in the area was of high quality the banning of cars within the city of Cambridge could not be considered, however once there was an appropriate public transport system this could be considered.
- The figures for the cost per km came from London Bridge Associates; they have advised that the ground is suitable for tunnelling but full details are not known at this time as it is still early on in the project.
- Highways England would consider interventions from other organisations that would help alleviate traffic and reduce their costs, however funding for the CAM project was more likely to come from outside investors than from central government.
- Funding would not come from a precept levied by the Mayor nor would local district councils be asked to contribute.
- Finance could come from the private sector; elected Mayors had the ability to look for alternative solutions around funding and as Cambridgeshire had high land value this could be captured and used for further financing of major projects.
- This system could only be delivered by the Combined Authority. The system would go into many areas of county and therefore it must be Combined Authority project. Leaders of District Councils sat on the Board so there would always be input from those areas. To maintain the speed required for successful development the project could not be considered by different organisations.
- Existing road developments and planning projects could be affected; some would continue, others may need to change so they aligned with the CAM project and others may need to be dropped but a detailed study of this would need to be done. The Combined Authority would work with colleagues at GCP to identify the different schemes; this was an important piece of work over the coming months.
- The use of busways was felt by the Mayor to be an inappropriate way to

solve the issues of traffic in Cambridge as it just pushed the problem further out of the city. The Mayor was disappointed that the GCP was continuing to invest in this area.

- The Board and Mayor would go through the appropriate processes required to ensure transparency. The Mayor was accountable to the electorate.

4.3 The Chair-person thanked the Mayor and the consultants for attending to give the presentation and answering the committee's questions.

5. Budget Consultation

5.1 The Committee received the budget consultation from the Project Accountant to make any comments on.

5.2 The Committee members raised concern that the budget consultation only contained two pages of information.

5.3 The officer explained that the budget was made up of known expenditure and upcoming budget proposals.

5.4 Cllr Murphy requested that a review of funding for housing in Peterborough was considered in the budget.

The member made reference to the Peterborough University project; Peterborough City Council was looking at selling or leasing Bayard Place while the university project team were looking at accommodation so could the two organisations speak to each other.

5.5 The LEP budget would be brought to the Board separately in March with both budgets being combined once the two organisations had become one.

5.6 The budget had tried to reflect all major programmes and would cross reference the RMT budget as this was currently not reflected.

5.7 The Committee agreed that they would like to hold an additional Overview and Scrutiny meeting before the additional Board meeting in February to scrutinise the budget and the consultation results.

6. Review of Combined Authority Board Agenda

6.1 The Committee reviewed the agenda due to come to the Board on Wednesday 31st January 2018.

6.2 In regard to the housing report members were advised that the paper with the next tranche of housing funding would come to the February Board meeting.

6.3 In regard to the report on a 'Stronger Public and Private Sector Partnership in Cambridgeshire and Peterborough' the committee were advised that the Business Board would be a blend of business representatives and public-sector representatives but which organisations would be represented had yet to be decided. Once the Board was established it would be their decision as to who would sit on the Combined Authority Board to represent them.

In regard to the different geography of the two organisations, the Mayor, deputy

Mayor's and the Chief Executive would be working with other authorities and central government to consider this issue. This would be brought back to the Board to decide and would allow for O&S to scrutinise if they wished.

7. Communities and Local Government Select Committee Report

- 7.1 Members queried whether they could scrutinise the Mayor directly or only decisions of the Mayor made through the Board. The Monitoring Officer advised that under the Parliamentary Order the Combined Authority has one role and the Mayor had a separate role. The Mayor could make decisions separately although these could not be key decisions and would have a minor financial impact.

The committee could look at the office of the Mayor but this would need to be focused and the committee would need to define what they wanted to gain from scrutinising the office of the Mayor.

- 7.2 Members raised concern around the amount of time the Board meetings lasted in comparison to the O&S meetings, the Board meetings did not seem to last very long.

The Committee were advised that Board members were fully engaged with all reports prior to them being presented at the public meeting and that there was a robust debate between Board members.

- 7.3 In regard to the RMT tender process the committee were advised that the Combined Authority would need to go through a procurement process.

There was a framework that had been agreed that had been used to select the current provider. The Combined Authority would return to the framework to select the new contract; the current consultant had considerable knowledge so it would be a cost saving by using the same consultant if they met the criteria set out in the framework.

8. Overview and Scrutiny Work Programme Report

- 8.1 The Committee received the report which provided the Committee with the draft work programme for the Overview & Scrutiny Committee for the remainder of the 2017/18 municipal year and asked them for comments and suggestions.
- 8.2 The Committee discussed the RMT report and whether the processes had been followed for the release of information and were advised that the law stated that supportive reports may come out late but must be published as soon as possible.
- 8.3 The Committee agreed they would like to set up a review to consider the work around the Rapid Mass Transport, the terms of reference would be brought back to the additional meeting on the 12th February for the committee to consider and agree.

9. Combined Authority Forward Plan

- 9.1 The Committee had no comments to make regarding the forward plan of the Combined Authority.

10. Date of Next Meeting

10.1 The next meeting would be held on the 12th February 2018 at location and time to be confirmed.

Meeting Closed: 13:25pm.

Cambridge Rapid Mass Transit Options Appraisal

‘Cambridgeshire Autonomous Metro’ (**CAM**): The Proposition

Cambridgeshire and Peterborough Combined Authority

January 2018

Overview

- The case for rapid mass transit
- Option Development and Sifting Process
- Description of shortlisted options:
 - LRT, AVRT, Cambridgeshire Autonomous Metro
- Recommendations:
 - Preferred option
 - Option development
 - Funding mechanisms
 - Delivery

The Case for Mass Transit

January 2018

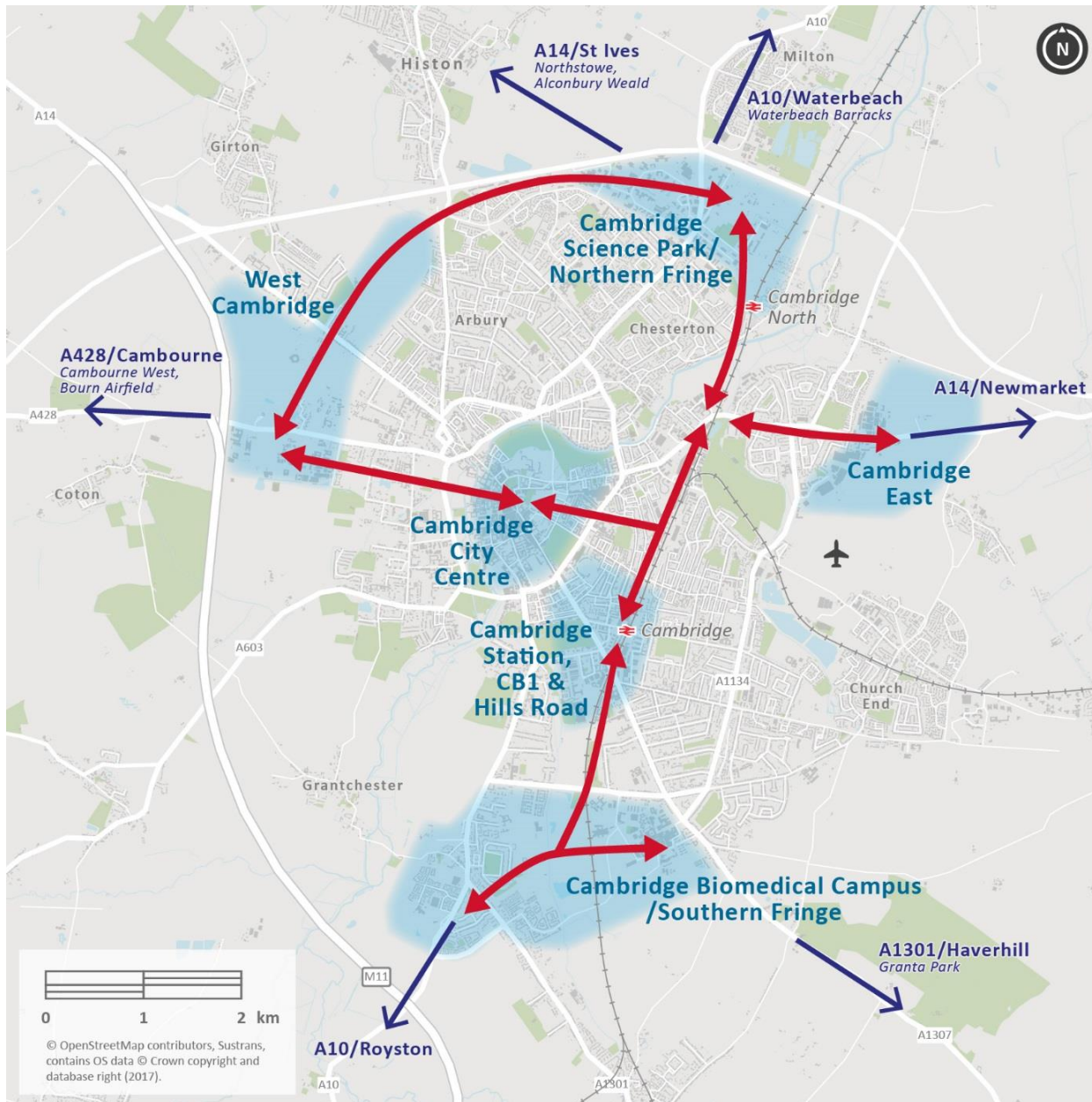
What is required?

Cambridge requires a transit network which:

- Delivers **high quality, high frequency, reliable** services, attractive to car users:
 - World-leading user experience, with fully-segregated infrastructure, dedicated stops and real time information
- Delivers **maximum connectivity**, network coverage and reliable journey times:
 - Directly linking all key destinations and corridors to one another
 - Minimising the need to interchange
- Provides **sufficient capacity for growth**, and to support Transit Oriented Development:
 - A maximum capacity through City Centre core of 15,000 - 20,000 people per hour each direction
- Is **flexible to adapt** for the future:
 - Responsive to technological advances as they develop and become commercially available
 - Providing capacity for growth, with a network that can be developed incrementally enabling operation to be scaled to support and accommodate future growth
 - Planned for autonomous operation, but can accommodate driver-operated services in the short term
- Utilises **emerging technology**, including connected and autonomous vehicles:
 - Huge opportunity for Cambridge to be a 'city of firsts' in developing a high quality, high capacity automated mass transit system.
- **Must represent value for money, be affordable and deliverable.**

Network of connectivity

Connects all key destinations and development sites to one other and to radial corridors



Options Assessment Process

January 2018

Long list of options considered

- Rail Based Metro
- Rubber Tyred Metro (VAL)
- Light Rail Transit/Tram (LRT)
- Ultra Light Rail
- Affordable Very Rapid Transit (AVRT)
- Bus Rapid Transit (BRT)
- Kerb Guided Bus
- Cambridgeshire Autonomous Metro (CAM)
- Monorail
- Personal Rapid Transit
- Cable Car

Options shortlisted based on providing a capacity commensurate with Cambridge's demand:

LRT

AVRT

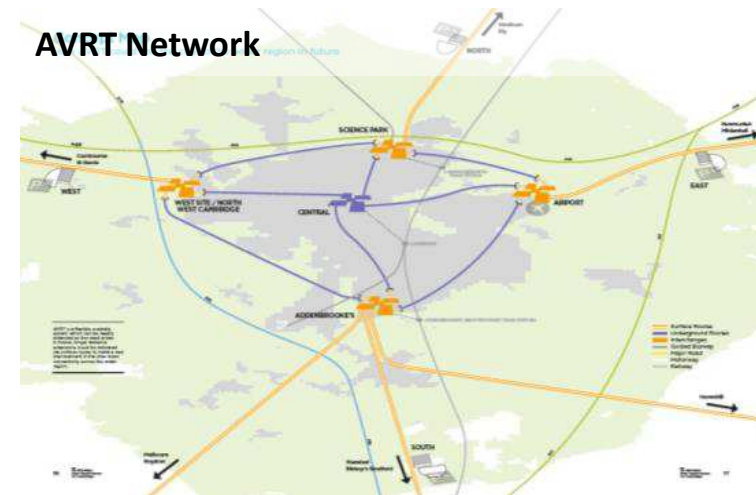
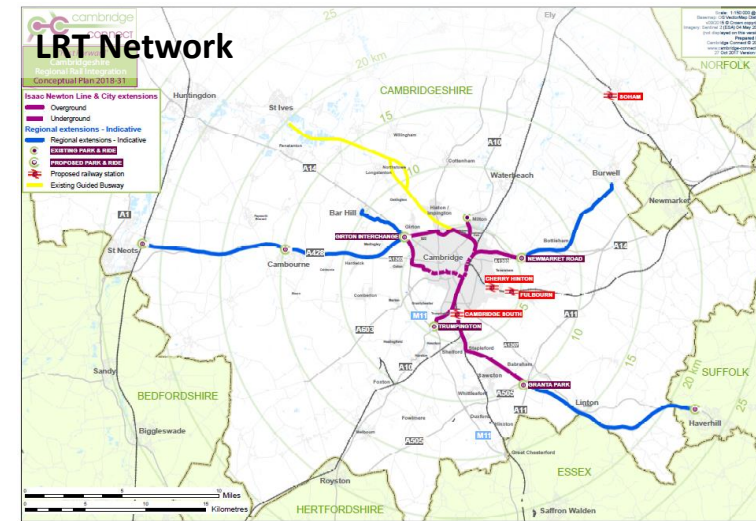
CAM

Shortlist subject to more detailed assessment

Shortlisted Options - Description

- Option developed around concept of:
 - City focused network – with P&R, feeder services
 - Regional network – direct linkages to market towns
 - All options include tunnelling within city centre

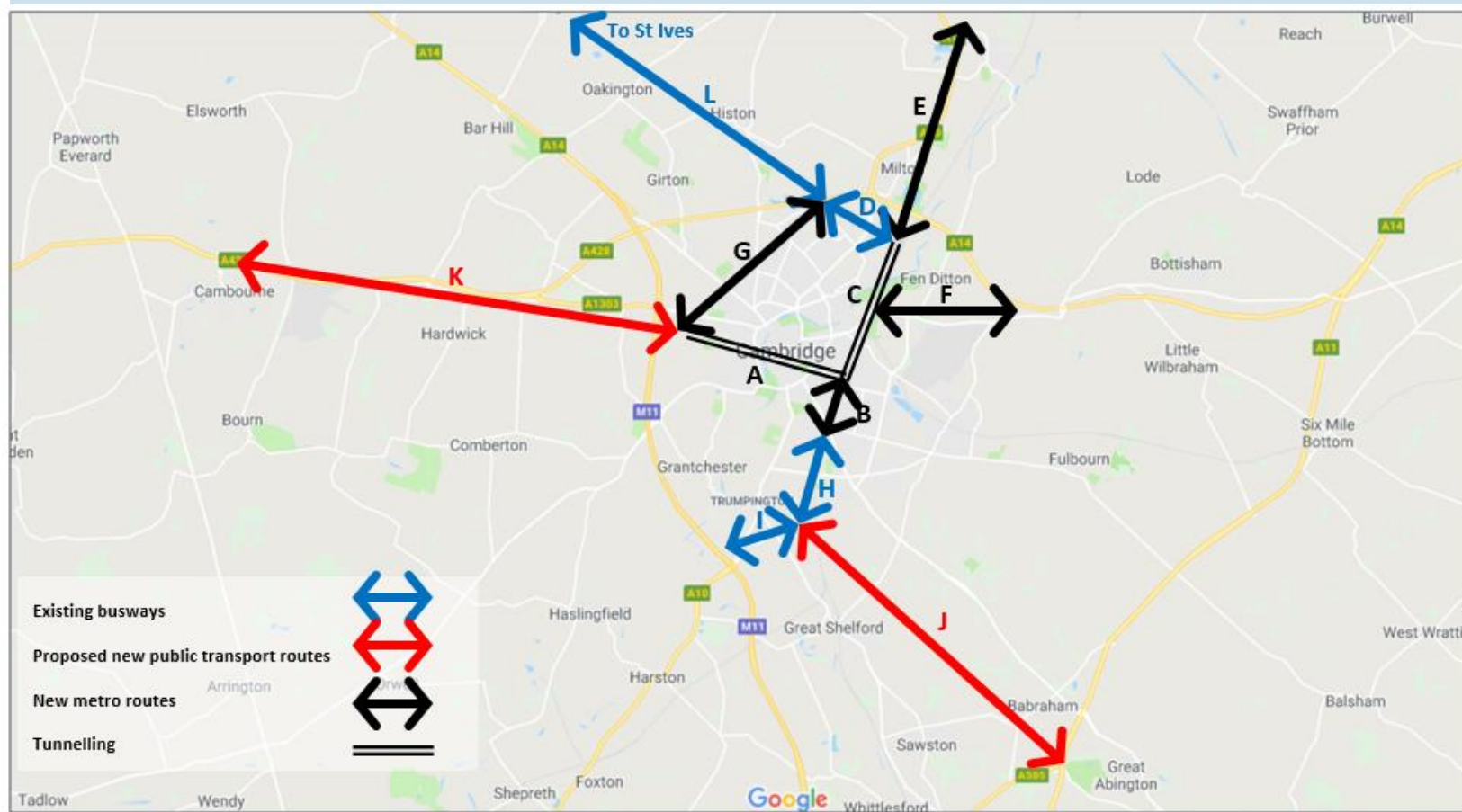
Option	Description - Infrastructure	Capital Cost (indicative)
LRT City Network	<ul style="list-style-type: none"> • 42km new infrastructure • Corridors served via P&R, bus feeders 	£2.8bn
LRT Regional Network	<ul style="list-style-type: none"> • 90km new infrastructure • Direct service to hinterland locations 	£4.5bn
AVRT City Network	<ul style="list-style-type: none"> • 15km new infrastructure • Corridors served via P&R, bus feeders 	£1.1 - £1.7bn
AVRT Regional Network	<ul style="list-style-type: none"> • 56km new infrastructure • Direct service to hinterland locations 	£2.1bn
Cambridgeshire Autonomous Metro (CAM)	<ul style="list-style-type: none"> • 42km new infrastructure • Could support direct services across full regional network (i.e. 90km +) 	£1.5 - £1.7bn



Cambridgeshire Autonomous Metro - Network (infrastructure)

CAM combines the use of existing and planned segregated infrastructure with a short City Centre tunnel to deliver maximum connectivity throughout Cambridge and its hinterland

Ability for the network to expand incrementally, in line with housing growth, or as sufficient demand is established to justify dedicated infrastructure.



CAM: Indicative vehicle and features

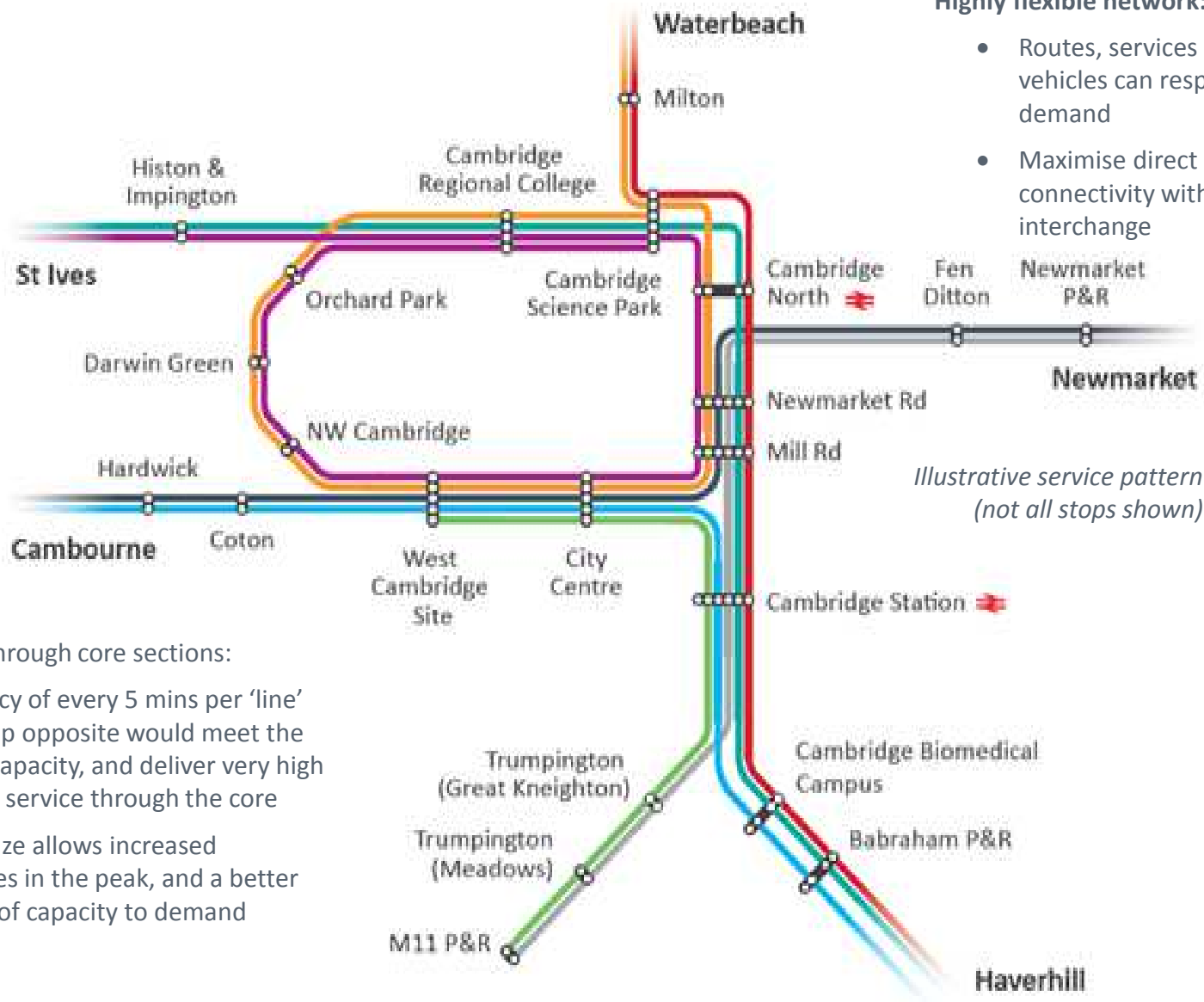


- High capacity and frequency
 - Capacity to support future growth in Cambridge
 - Reduced headways and fleet optimisation
- Electric vehicles
 - Battery operated and charge-at-stop
- Proven technology
 - Already operating elsewhere
- Autonomous capable
 - Can operate with a driver initially until autonomous technology matures
 - Automation using on-board sensors
 - No requirement for rails or physical guidance
 - Platooning of vehicles
- Branding
 - Centrepiece of a Cambridge transport 'brand' integrated with other modes.

CAM: The vision



CAM: Operational Concept



High frequency through core sections:

- A frequency of every 5 mins per 'line' on the map opposite would meet the required capacity, and deliver very high frequency service through the core
- Vehicles size allows increased frequencies in the peak, and a better matching of capacity to demand

Options Assessment of Shortlist

January 2018

Strategic Assessment - Approach

- Does it provide the transport outputs and benefits that deliver wider outcomes?
- Is it deliverable?

Transport Benefits	Deliverability risk
<ul style="list-style-type: none">• Network coverage• Route flexibility• Frequency of service• Journey time / reliability• Number of interchanges• Accessibility• Perceived quality	<ul style="list-style-type: none">• Technical feasibility• Technology• Value for money• Affordability• Powers / consents / legislation• Stakeholder / public acceptability

Summary of Options Assessment

Feature	LRT	AVRT	CAM	Benefits of CAM
Connectivity	✓✓	✓	✓✓✓	<ul style="list-style-type: none"> Delivers maximum connectivity within Cambridge, to major 'city fringe' employment centres, satellite centres and market towns
Capacity	✓✓✓	✓✓	✓✓✓	<ul style="list-style-type: none"> Provides capacity and coverage to support growth
Quality	✓✓✓	✓✓	✓✓✓	<ul style="list-style-type: none"> Segregated routes and high-quality vehicles will benefit passengers and encourage significant modal-shift from car
Flexible and scalable	✓	✓	✓✓✓	<ul style="list-style-type: none"> Can be planned on basis of automated vehicles, and systems allowing for platooning (capacity) and network management (system optimisation and efficiency) Concept allows flexible operation to support growth over time Operation efficiency through optimising service levels and demand / capacity by corridor, time-period etc.
Value for Money	X	X	✓✓	<ul style="list-style-type: none"> Most cost-effective means of delivering connectivity, quality and capacity outputs, by making best use of existing and planned infrastructure and taking advantage of opportunities from rapidly advancing technology Most likely meet criteria for, and secure, Government funding contribution
Affordable	X	?	✓✓	<ul style="list-style-type: none"> Likely to deliver an operational surplus i.e. not require ongoing subsidy
Deliverable	✓	X	✓✓	<ul style="list-style-type: none"> Elements of proposition can be implemented within next 5 years Delivery of full concept would be quicker than for other options considered

Conclusion of Option Assessment

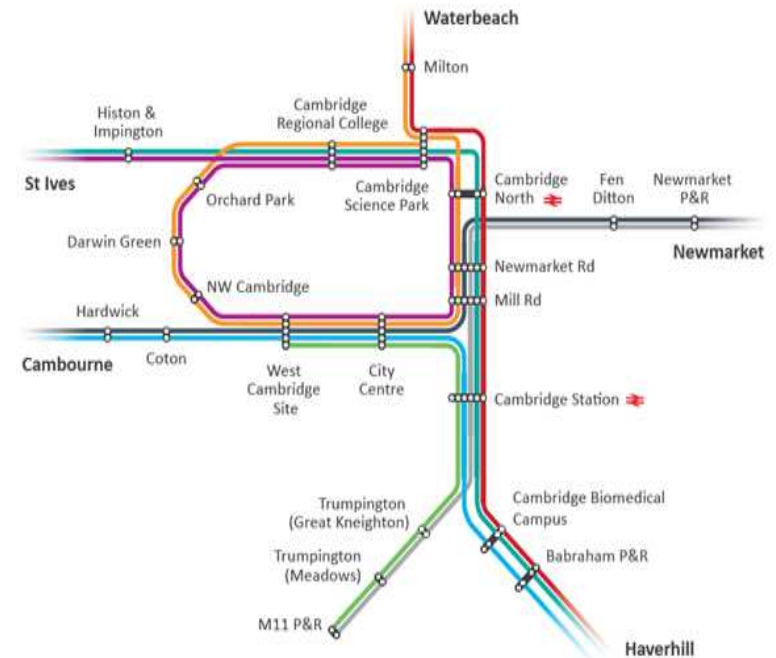
- **CAM offers the potential to deliver the capacity, quality and coverage**, to support wider outcomes related to housing growth, jobs, GVA
 - More cost effective than LRT - **similar benefits at c. 1/3 of the overall cost of LRT**
 - Greater coverage, connectivity and accessibility than AVRT, better meeting the requirements of a Mass Transit system for greater Cambridge - **higher benefits potential at similar or lower cost.**
 - More deliverable, flexible and scalable
- The CAM concept utilises emerging technology, including connected, autonomous / driverless vehicles
 - a great opportunity for Cambridge to be a 'city of firsts' in developing a **high quality, high capacity, world-class automated mass transit system**
- **It could deliver transit-oriented development**, and utilise a range of local funding mechanisms, including **land value capture**, which could support delivery of scheme.

Recommendations

January 2018

Development of CAM

- **Development of proposition:**
 - Vehicles and technology
 - Infrastructure, routes, services, hubs
- **Phased development of network:**
 - Utilise existing and proposed segregated alignments
 - Tunnel > step change connectivity and reliability delivering full segregation within the city
 - Future segregation and priority measures can be implemented across wider network (aligned with growth, congestion) are to ensure quality of services
- **Autonomous, connected, driverless:**
 - Could operate on segregated sections within 5 years
 - Full roll out as regulation permits driverless operations on general road network
 - Infrastructure can support high-quality vehicles and services in interim



Operations

- CAM would be developed as 'private' infrastructure, owned and managed by the Combined Authority
 - CA would have control over quality and service aspects, but could be operated by a third party
- CAM would be fully integrated with other public transport modes and first/last mile solutions - creating one transport 'brand' for Cambridgeshire, and a familiarity and ease of use for passengers similar to TfL and TfGM
- Subject to further analysis, the proposed solution will be viable and is unlikely to require a public subsidy to operate
- Operating costs are dependent on the routes and service patterns adopted. These are flexible:
 - Over time - scale up to accommodate planned growth / growth in demand
 - Between regional corridors and destinations
 - Peak vs. inter-peak (driverless operation better enables this)
 - Allows for mix of vehicle lengths (higher / lower capacity)

Funding mechanisms

CAM could be funded through a combination of:

- **Existing mechanisms:**

- Community Infrastructure Levy
- Business Rate Supplement
- Council Tax Precept
- Local tax retention
- Workplace parking levy or dynamic charging regime
- Highways England Contribution
- Direct contributions

- **Innovative funding:**

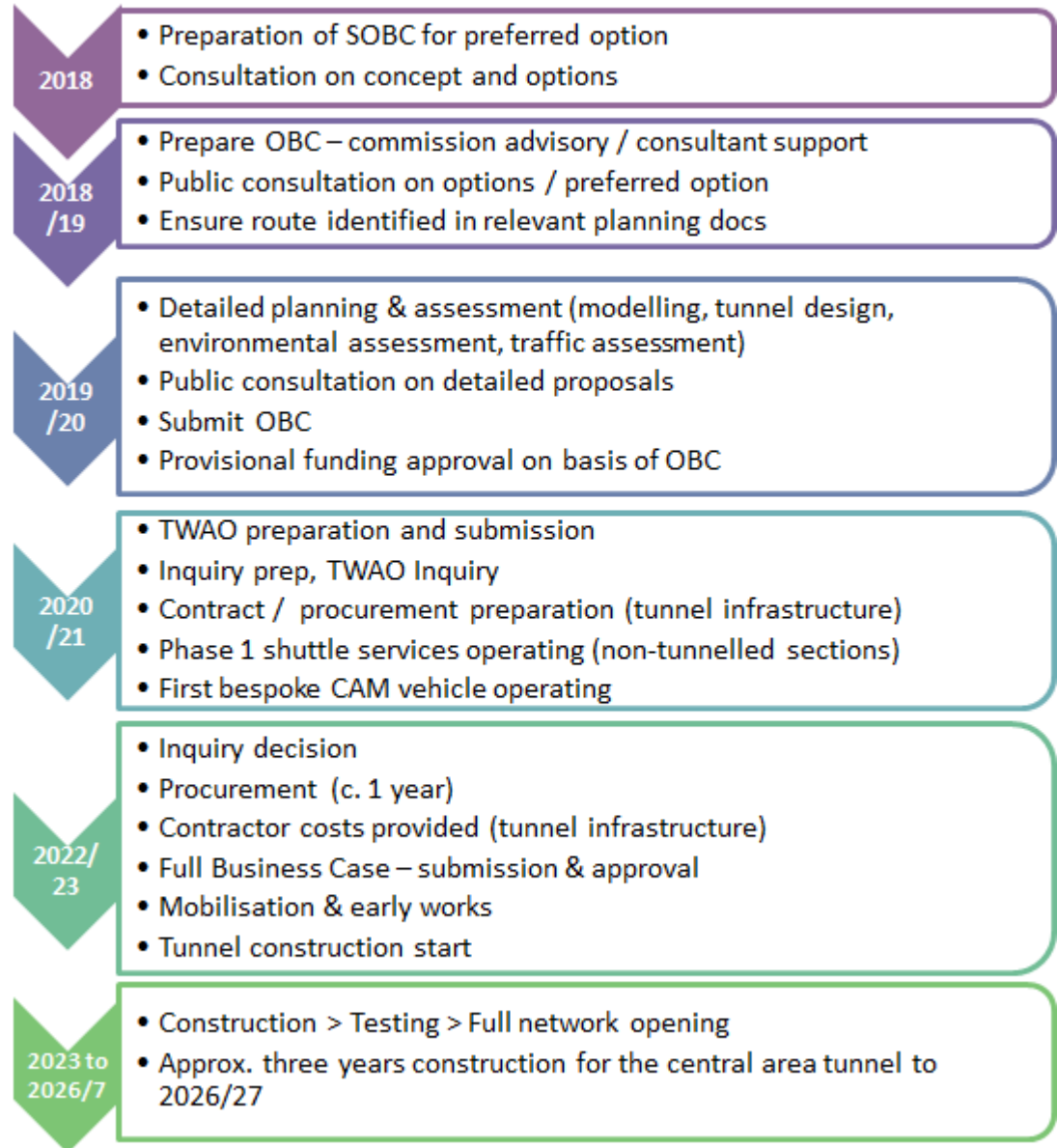
- More flexible approaches to existing land-value capture mechanisms, as proposed by National Infrastructure Commission in November 2017, including:
 - a city-regional CIL and/or pooling of Section 106 agreements
 - ability to forward-fund infrastructure by borrowing against future receipts
- Wholly new land-value capture mechanisms, which fully address the “*significant weaknesses*” of current mechanisms identified by the National Infrastructure Commission, if developed through primary legislation

- **Central Government funding** through existing funding streams

- E.g. Large Local Major Schemes (DfT), Housing Infrastructure Fund (DCLG)

Indicative Delivery timescales

- **Phase 1 in early 2021:**
 - Bespoke CAM vehicles delivered to Cambridge
 - Adaptation of guideway for autonomous operation
 - Initial shuttle service operating between Biomedical Campus and Cambridge Station
- **Through services via tunnel in 2026/27**



Thank you

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