

The Universal Bus

Future Improvements
Have your say

May 2020



UNIVERSITY OF
CAMBRIDGE



Opportunity to Provide Feedback

The Universal bus service currently runs every 15 minutes Monday to Friday, linking Eddington with West Cambridge, the city centre (Queens College/Silver Street), the railway station and the Cambridge Biomedical Campus (CBC) (including Addenbrooke's). The service also runs at the weekends between Eddington and the railway station at a reduced frequency. The service is subsidised by the University of Cambridge and has been operated by Go-Whippet since it launched in 2016.

The University is looking at options for a new contract in July 2021. This consultation report provides information about the future route improvements under consideration. Feedback has

been sought from staff, students and the wider community and continues to be welcome.

Comments or questions on these options can be made by filling in the online survey <https://www.surveymonkey.co.uk/r/UniversalBusConsultation> before 26th May 2020.

If you would like to input into future transport consultations being carried out by the Environment and Energy section at the University of Cambridge, we suggest joining the University's Transport Consultation Group (TCG). To find out more and join the TCG, visit <https://www.environment.admin.cam.ac.uk/travel>.

Background

The University of Cambridge commissioned WSP transport consultants to review the Universal bus service prior to the start of a new contract, which could last until 2029. Ongoing support for the Universal bus service is one of many commitments outlined in the University's Transport Strategy 2019–2024 (PT1)¹. The University has also committed to considering securing additional services directly where partnership working or the marketplace do not provide what is required (PT4)¹.

The review conducted by WSP included:

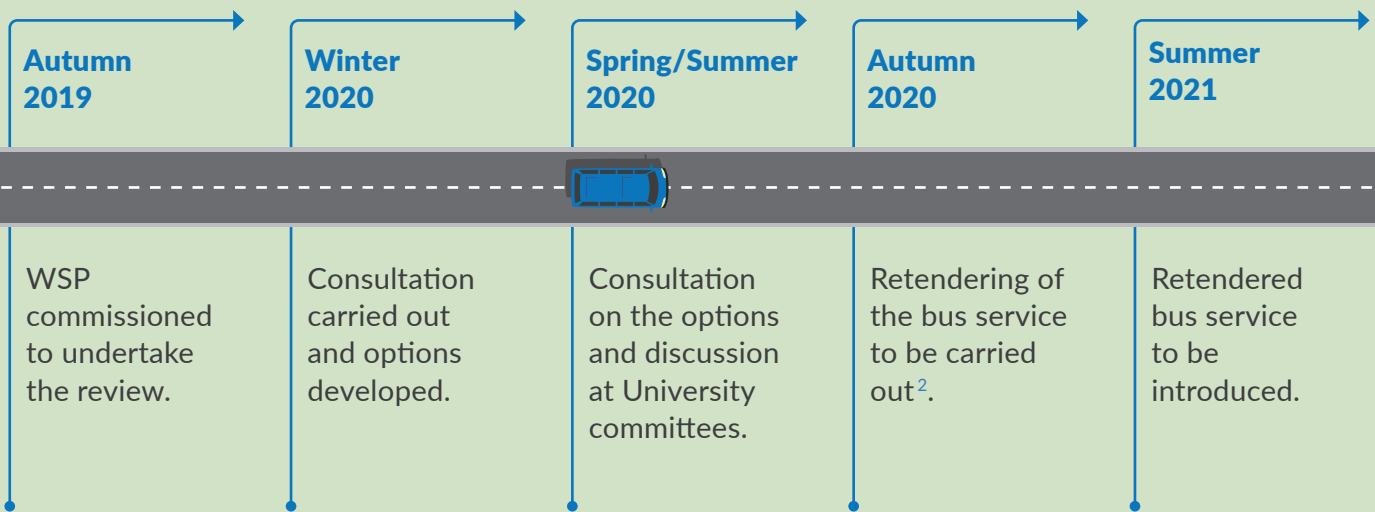
- Extensive engagement to get the views of members of staff, students and the wider community:
 - 3,864 responses to the online and in-person surveys
 - A series of focus groups with users and departmental representatives (24 attendees)
 - 22 meetings with interested stakeholders

- An analysis of the performance of the current Universal bus service
- Development of a series of options to improve the service
- An assessment of the options which were scored against a set of strategic goals developed for the review
- An assessment of options for introducing low- or zero-emission vehicles into the service.

The review found that there were several possible improvements to the Universal bus service that could benefit users. These were discussed by the University's Transport Working Group in April. This consultation report outlines the options being considered.

¹ https://www.environment.admin.cam.ac.uk/files/university_of_cambridge_transport_strategy_2019-2024.pdf

Timeline



²We will strive to deliver this, however during the current coronavirus pandemic this timeframe may be subject to change.

Current Performance



700,000
PASSENGERS
in 2018-2019



Contactless Ticketing

introduced in **December 2019**



2,000

TRIPS
made on
weekdays

M T W T F S S



1,000

TRIPS
made during
weekends

M T W T F S S



67%

users are
satisfied or very satisfied
with the service



14%

users are
dissatisfied or very dissatisfied
with the service

45%

of users were University card
holders in **2018-2019**

Consultation Findings

Survey

- High levels of satisfaction with the value for money of the service, security and cleanliness; varied levels of satisfaction with the locations/destinations served by the bus and walking time to the bus stop with departments and Colleges on Hills Road scoring these much lower. Lower levels of satisfaction in general with the waiting time and the reliability
- The most frequent comment about suggested improvements related to a more frequent service; other suggestions included better real-time information, and additional serviced locations
- The most common response about additional serviced locations was to add stops for Girton College, Homerton College, Faculty of Education and other locations in the city centre
- Requests for other Park & Ride locations included Trumpington and Babraham Road

Focus Groups

- Key barriers to use were: reliability and frequency, interchange opportunities, connectivity with other public transport services and routeing
- Real-time information requires improvement
- Support for the ticketing system to be integrated with other bus services and rail services
- Demand for the service to be re-routed to include Homerton and Girton Colleges

Inputs and Appraisal Method

The route improvements were reviewed against the five appraisal criteria formed through a review of several University documents³. The appraisal criteria are as follows:



1 Environment

Minimise the University's environmental footprint from transport



4 Wellbeing

Make a positive contribution to the wellbeing of staff and students



2 Sustainability

Encourage sustainable travel and modal shift away from the car towards using the bus



5 Innovation

Exploit emerging and future technologies effectively



3 Convenience

Facilitate convenient and predictable travel to and between University sites for all staff, students and visitors

³ University Transport Strategy; the Environmental Sustainability Vision, Policy and Strategy; the Carbon Reduction Strategy; the University's People Strategy and the West Cambridge Masterplan

Route Options

As a result of the review, ten options were developed. Two options to use Hills Road for all of the journeys have been discounted on the grounds that this would increase journey times for those working at the Cambridge Biomedical Campus

(CBC), and make journey times unpredictable, due to congestion levels on Hills Road. The remaining eight options being considered as part of the consultation are set out below.

	Busway	Split-service (both Busway and Hills Road)
Do minimum: no change to current route; increase peak running times to allow for reliable operation and create a layover/terminus at the CBC; extension of Saturday and Sunday services to terminate in CBC instead of the current terminus at Cambridge station	Option 0.1	Not assessed
Service extended to Girton College; terminates at CBC	Option 1.1	Option 2.1
Service extended to Girton College; terminates at Babraham Road Park & Ride	Option 1.2	Option 2.2
Service extended to Girton College; terminates at Trumpington Park & Ride	Option 1.3	Option 2.3
Service extended to Girton College; services terminates at both Babraham Road Park & Ride and Trumpington Park & Ride	Not assessed	Option 2.4

A split service would be differentiated to customers as Universal bus route A and Universal bus route B.

All route options (except for the Do minimum option 0.1) include extending some of the services from Eddington to Girton College, which would require one additional bus for each option. The University is working with Cambridgeshire County Council to investigate if a bus stop could be provided on Huntingdon Road for this purpose. University committees will consider whether an extension to Girton College should be provided.

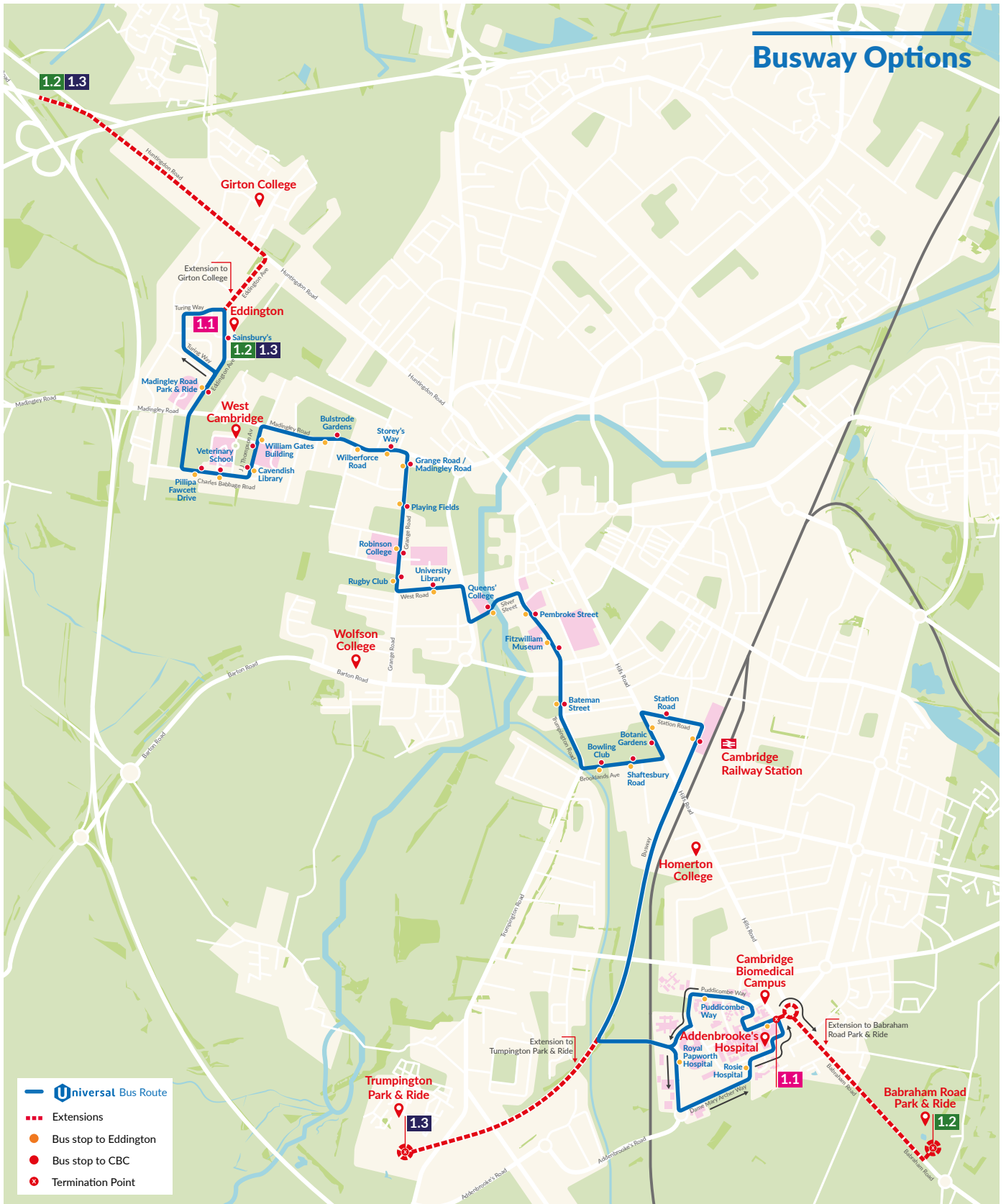
One of the major differences between the route options is the choice to use the Busway between Cambridge Railway station and the CBC for all the services, or to split the service to take two separate routes. Service A would start at Girton College, then would operate on the current route

from Eddington to Cambridge Railway station and then use the Busway to arrive at CBC. Service B would start at Eddington then travel through West Cambridge and Madingley Road and then use the full length of Grange Road into Barton Road to come closer to Wolfson College, then to Hills Road and CBC. This option has been designed to serve as many University sites as feasible whilst retaining reliability and high frequency.

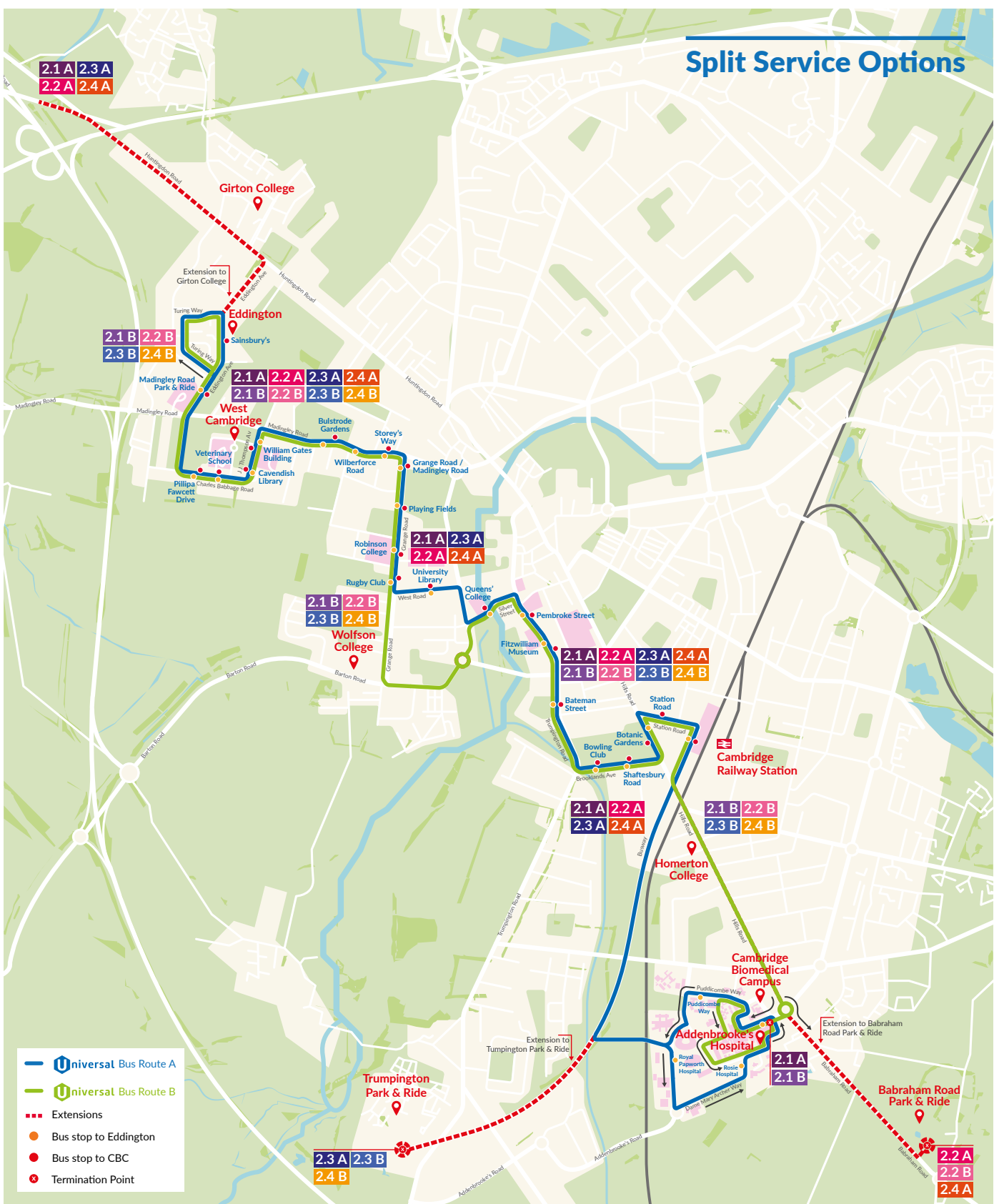
The option to extend the service to either Babraham Road or Trumpington Park and Ride may only be possible when capacity at these locations increases, or when the South West Travel hub at junction 11 of the M11 is open to ease the pressure off Trumpington Park and Ride.

A map showing the route options is shown on the next page.

For each route option, there are two frequency options: either to keep the same level of frequency throughout the day (every 10 minutes on the core section between Eddington and the CBC) or to reduce frequency between 10am and 4pm to every 15 minutes (as per the current timetable). The review has also considered costing. Options under consideration are: retaining the £1 fare for University members and £2 for non-card holders; increasing the fare in line with inflation; extending subsidised fares to other key groups, such as NHS staff and Eddington residents who are not University members.



Split Service Options



Appraisal of the Options

As part of the review, WSP assessed the likely cost of each option and predicted the number of passengers each service is likely to attract. WSP then assessed each option against the appraisal criteria to determine which option had the highest score. This was carried out for both Diesel Euro 6 options and electric bus options. The main findings were:

- Using the Busway for all routes (options 0.1-1.3) provides a more reliable and faster journey, which is predicted to encourage more passengers to use the service, assisting the University in achieving the aims relating to shifting more journeys from the car to public transport and sustainability. This option does not provide access for departments and Colleges near Hills Road and therefore scored lower for the convenience and wellbeing appraisal criteria.
- Splitting the service so half use the Busway and half use Hills Road (options 2.1 to 2.4) gave benefits in serving more locations, so scoring higher for the convenience and wellbeing appraisal criteria. The services using Hills Road would have longer, less predictable journey times and therefore is predicted to generate fewer passengers from CBC, but more passengers from along Hills Road. These options have therefore scored less for convenience than the options only using the Busway.
- Using either Babraham Road or Trumpington Park & Ride (options 1.2, 1.3, 2.2-2.4) allowed the bus service to be used for more journeys to work, giving a higher score for the environment, sustainability, wellbeing and convenience appraisal criteria.
- Options to electrify the service scored higher on the environment and innovation appraisal criteria.

⁴ 15 = every 15 minutes, 10 = every 10 minutes, 20 (10) = A and B every 20 minutes, so combined frequency of every 10 minutes, 30 (15) = A and B every 30 minutes, so combined frequency of every 15 minutes

⁵ Peak = 7:00 to 9:00 and 15:30 to 18:30

⁶ Inter-Peak = 9:01 to 15:29 and evenings

⁷ All diesel options have been scored 0 in the innovation category. WSP has also prepared costings for each electric option and scored using the scoring criteria. Each option using electric buses has a higher score overall, scoring higher in the innovation category.

⁸ Based on the combined score – does not consider costs.

	Predicted Increase in Passengers	Journey Time (Eddington → CBC)	
		Morning (Peak)	Midday (Inter-Peak)
Option 0.1	Low	45 min.	36 min.
Option 1.1 A	Med	45 min.	36 min.
Option 1.1 B	Med	45 min.	36 min.
Option 1.2 A	High	45 min.	36 min.
Option 1.2 B	High	45 min.	36 min.
Option 1.3 A	High	45 min.	36 min.
Option 1.3 B	Med	45 min.	36 min.
Option 2.1 A	Med	45 min.	36 min.
		52 min.	40 min.
Option 2.1 B	Med	45 min.	36 min.
		52 min.	40 min.
Option 2.2 A	High	45 min.	36 min.
		52 min.	40 min.
Option 2.2 B	High	45 min.	36 min.
		52 min.	40 min.
Option 2.3 A	High	45 min.	36 min.
		52 min.	40 min.
Option 2.3 B	High	45 min.	36 min.
		52 min.	40 min.
Option 2.4 A	High	45 min.	36 min.
		52 min.	40 min.
Option 2.4 B	High	45 min.	36 min.
		52 min.	40 min.

■ Service A (via Busway)
 ■ Service B (via Hills Road and Barton Road)

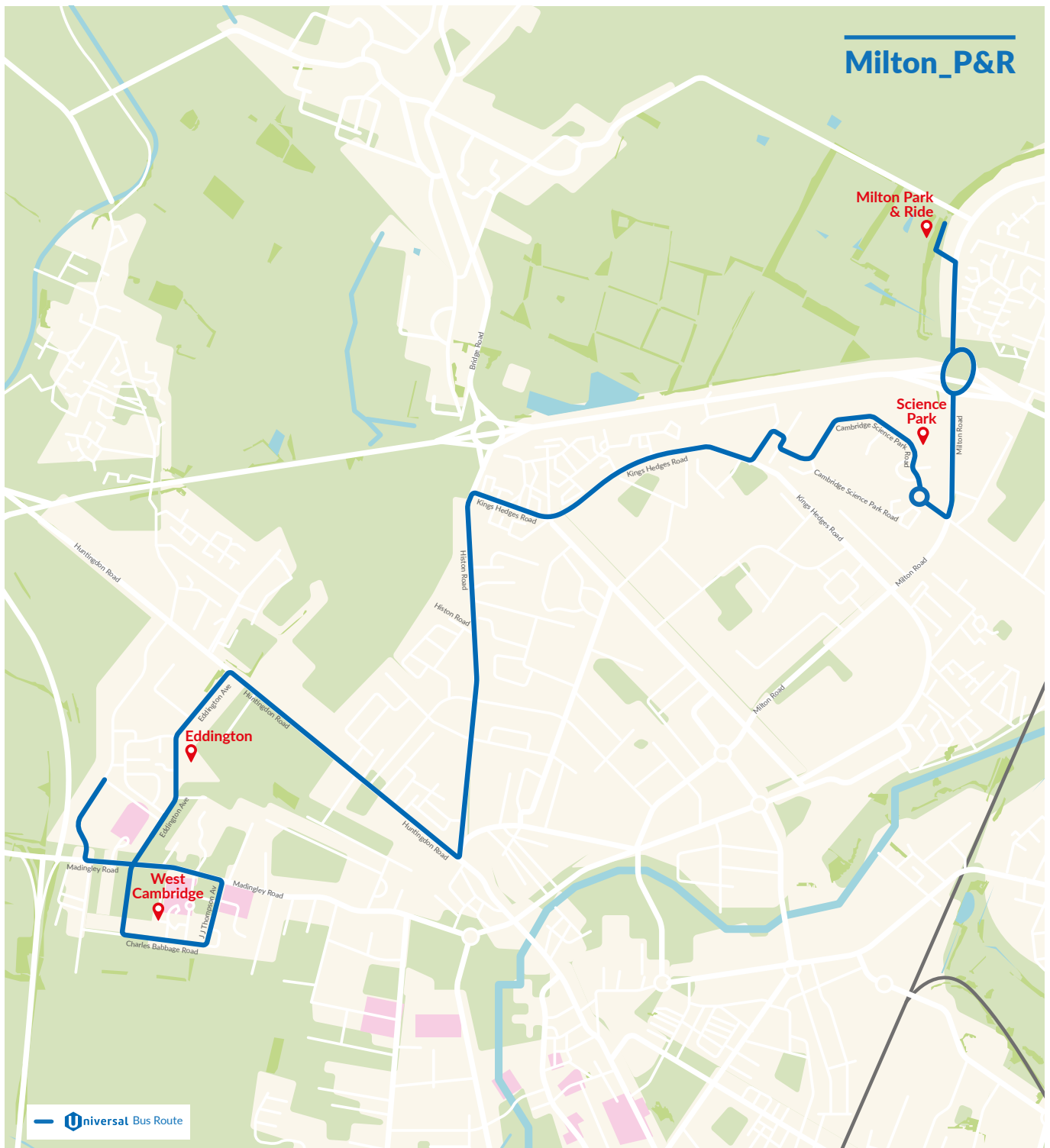
■ Environment
 ■ Convenience
 ■ Wellbeing
 ■ Sustainability

Frequency ⁴		Cost to the University	Combined Score from Appraisal Criteria ⁷	Ranking ⁸
Peak ⁵	Inter-Peak ⁶			
15 min.	15 min.	£	$2.2 + 5.0 + 0.5 + 0.2 = 7.9$	12 th
10 min.	10 min.	£ £	$1.4 + 5.0 + 0.5 + 0.8 = 7.7$	13 th / 14 th Tie
10 min.	15 min.	£ £	$2.4 + 5.0 + 0.5 + 0.5 = 8.4$	11 th
10 min.	10 min.	£ £ £	$0.4 + 5.0 + 3.0 + 3.8 = 12.2$	3 rd
10 min.	15 min.	£ £	$1.3 + 5.0 + 3.0 + 2.5 = 11.8$	4 th / 5 th Tie
10 min.	10 min.	£ £ £	$0.1 + 5.0 + 3.0 + 3.4 = 11.5$	6 th
10 min.	15 min.	£ £ £	$1.8 + 5.0 + 3.0 + 2.0 = 11.8$	4 th / 5 th Tie
20 min. (10 min.)	20 min. (10 min.)	£ £	$0.5 + 2.5 + 3.0 + 1.6 = 7.6$	15 th
20 min. (10 min.)	30 min. (15 min.)	£ £	$1.2 + 2.5 + 3.0 + 1.0 = 7.7$	13 th / 14 th Tie
20 min. (10 min.)	20 min. (10 min.)	£ £ £	$0.8 + 2.5 + 4.0 + 4.1 = 11.4$	7 th
20 min. (10 min.)	30 min. (15 min.)	£ £ £	$1.7 + 2.5 + 4.0 + 2.8 = 11.0$	8 th
20 min. (10 min.)	20 min. (10 min.)	£ £ £	$0.3 + 2.5 + 4.0 + 3.5 = 10.3$	9 th
20 min. (10 min.)	30 min. (15 min.)	£ £ £	$0.6 + 2.5 + 4.0 + 2.3 = 9.4$	10 th
20 min. (10 min.)	20 min. (10 min.)	£ £ £	$0.9 + 2.5 + 5.0 + 4.9 = 13.3$	2 nd
20 min. (10 min.)	30 min. (15 min.)	£ £ £	$2.1 + 2.5 + 5.0 + 4.6 = 14.2$	1 st

Additional service between Milton Park & Ride, West Cambridge and CBC

An additional bus service between Milton Park & Ride and West Cambridge was also investigated as part of the review. This service would improve access to the University for employees and staff to the north, north east and east of Cambridge. By servicing the Science Park, it would also help to connect a number of locations that are not

currently serviced or require multiple changes. A map of the proposed route is shown below. There is also an option to route this service through NIAB/Darwin Green when this road opens in the future. University committees will consider whether to trial this service.



What Next?

Comments or questions on these options can be made by filling in the online survey <https://www.surveymonkey.co.uk/r/UniversalBusConsultation> before 26th May 2020. The feedback will be collated and presented as part of reports to the University committees. These reports will be considered during June and July to determine

which options will be procured. Our timeframe for a decision on which option to take forward was planned for Michaelmas term 2020 and we will strive to deliver this, however during the current coronavirus pandemic this timeframe may be subject to change.





THE CAMBRIDGE *green*
CHALLENGE