



A41 Bicester Road

Improvements Consultation

18 January - 14 February 2021



We are proposing highway improvements along the A41 Bicester Road in Aylesbury. The section of road affected is between Sir Henry Lee Crescent at Aylesbury Vale Parkway Railway Station and the junction with Rabans Lane. The aim is to create a Primary Public Transport Corridor (PPTC) that improves traffic flow for public transport users and general traffic too.

Issue

The A41 Bicester Road corridor is an important strategic transport route linking Aylesbury town centre with Aylesbury Vale Parkway Railway Station. The high volume of traffic using this route daily causes regular congestion, particularly at peak travel times.



Objectives

The objectives for these highway improvements are:

- To reduce congestion on the A41 between the western boundary of the Berryfields development and the Bicester Road/Gatehouse Road roundabout in Aylesbury.
- To reduce journey times and improve journey time reliability for all road users along the A41.
- To improve bus service information along the A41 for people to better plan their journeys.

After careful planning and consideration, we believe the proposed changes will reduce journey times along this busy route. In this consultation we would like to hear what you think about the proposed changes, which include:

- New 'intelligent' traffic lights that manage traffic-flow.
- Road-widening.
- A relocated bus lane to prioritise buses.
- New pedestrian crossings.
- Upgrading bus stop facilities.

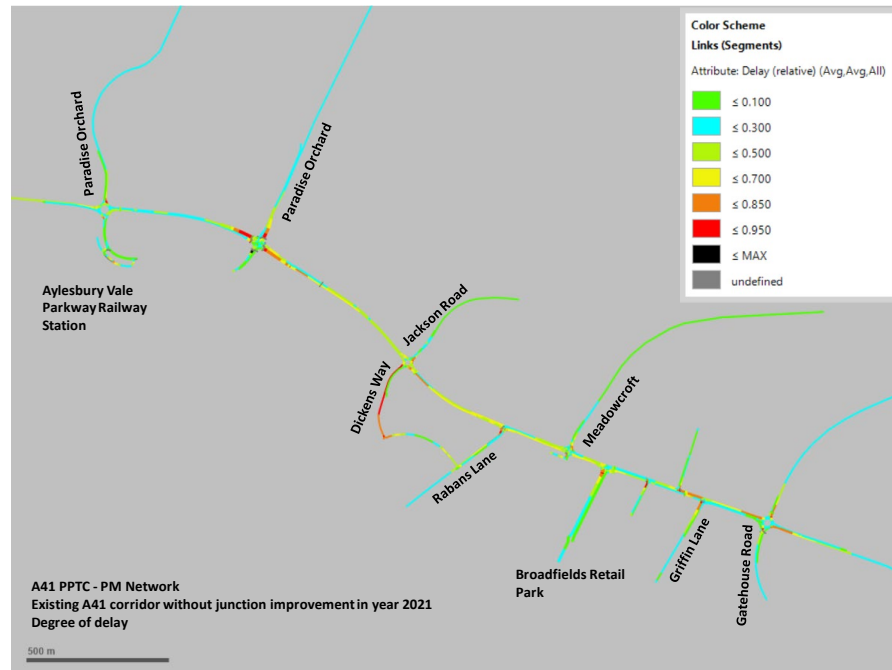
Using traffic-modelling techniques, we identified the location of current issues and where we predict future issues will occur. Using predicted traffic volumes for 2021, we then tested various solutions to address those issues and propose the most effective solutions within this consultation.

Traffic analysis

The map below shows where traffic queues occur during the morning peak travel period of 7:30am - 8:30am. The darker the colour, the longer the delay.



The map below shows where traffic queues occur during the afternoon peak travel period of 5:00pm-6:00pm. The darker the colour, the longer the delay.



The traffic queue information above shows that the main area of concern is between Aylesbury Vale Parkway Railway Station and the Rabans Lane junction. So, making improvements at the western end of Bicester Road towards the Railway Station will offer the biggest benefits for public transport users and general traffic too. On the basis of this, we are proposing a number of highway improvements which are outline on the next few pages.

PROPOSED IMPROVEMENT MEASURES

1

Extend the right-turn westbound lane on Bicester Road at the junction with Paradise Orchard – allow more space for vehicles to wait in the right-turn lane, so other traffic can pass straight through the junction along the A41 with reduced delay.

2

Relocate the existing eastbound bus lane to the River Thames Bridge, ending shortly before the Jackson Road/Dickens Way junction - this will reduce queuing straight after the Paradise Orchard junction, whilst allowing buses to bypass queues at Jackson Road.

3

Install traffic signals at the Jackson Road/Dickens Way junction, linking the new signals with the Paradise Orchard/Sir Henry Lee Crescent junction signals and Pegasus crossing to enable better traffic flow.

4

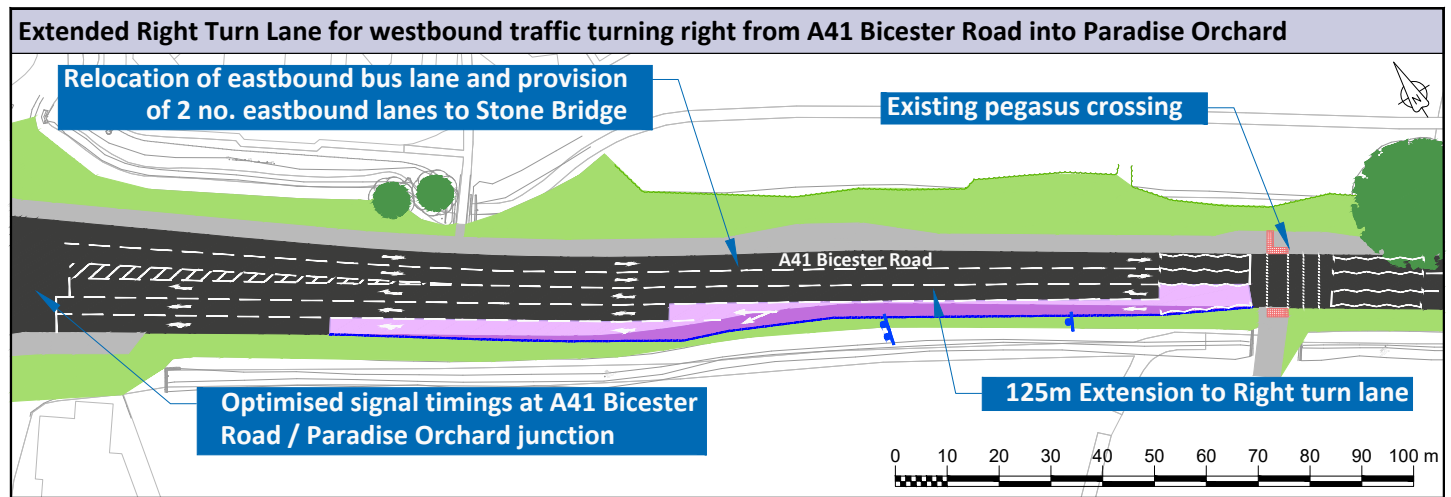
Provide two eastbound lanes between the Jackson Road/Dickens Way junction and the Rabans Lane junction.

5





Implement a SCOOT (Split Cycle and Offset Optimisation Technique) system and other traffic signal technology to link the proposed traffic signals together and improve traffic flow (see details opposite and via this link trlsoftware.com/products/traffic-control/scoot).





1. Extended right-turn lane for westbound traffic turning right from Bicester Road into Paradise Orchard



- The right turn lane from A41 Bicester Road out of town towards Paradise Orchard will be extended to allow more space for vehicles to wait in the right-turn lane, so other traffic can pass straight through the junction along the A41 with reduced delay.
- Traffic signals will be optimised to allow more vehicles to turn right into Paradise Orchard during every cycle of lights, along with giving buses preferences within the signal optimisation.



Key

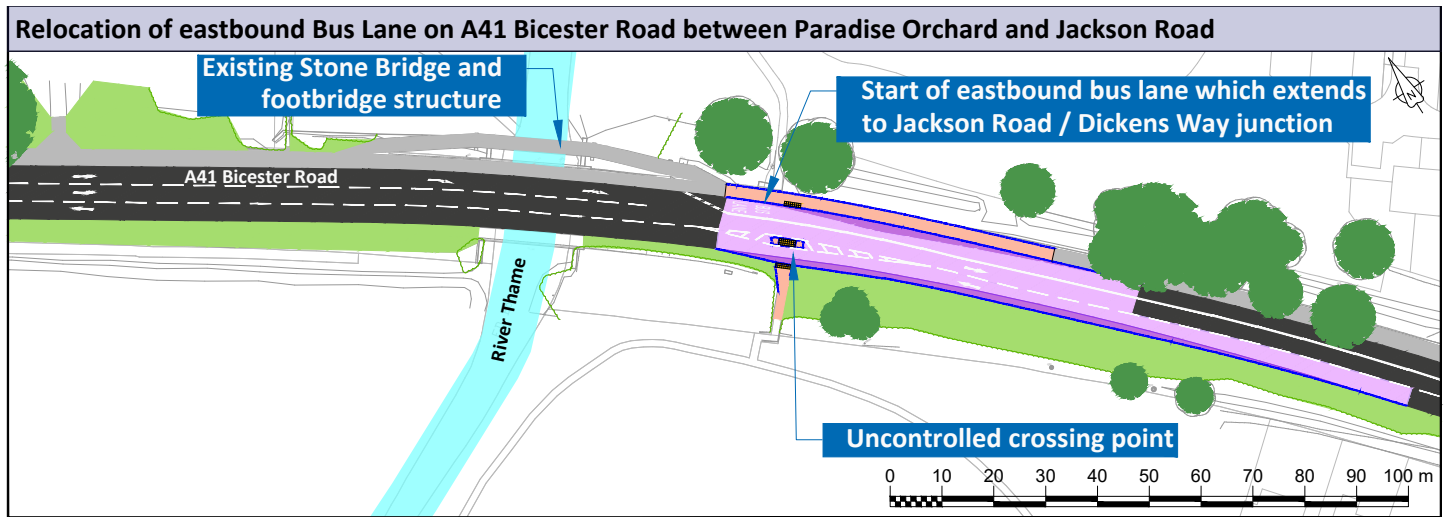
	Existing footway
	Existing carriageway
	New footway/ traffic island
	New carriageway

	Carriageway resurfacing
	Grassed area
	Existing Watercourse
	Existing trees and hedges retained











	New tactile paving
	Proposed and existing road markings

2. Relocate eastbound bus lane between the Paradise Orchard and Dickens Way Junctions

- The existing eastbound bus lane will be relocated to start after the River Thames road bridge and end shortly before the Jackson Road/Dickens Way junction. This will reduce delays for buses approaching the junction.
- The eastbound merge lane will be extended along the A41 from the Paradise Orchard junction to add capacity to the corridor.



Key

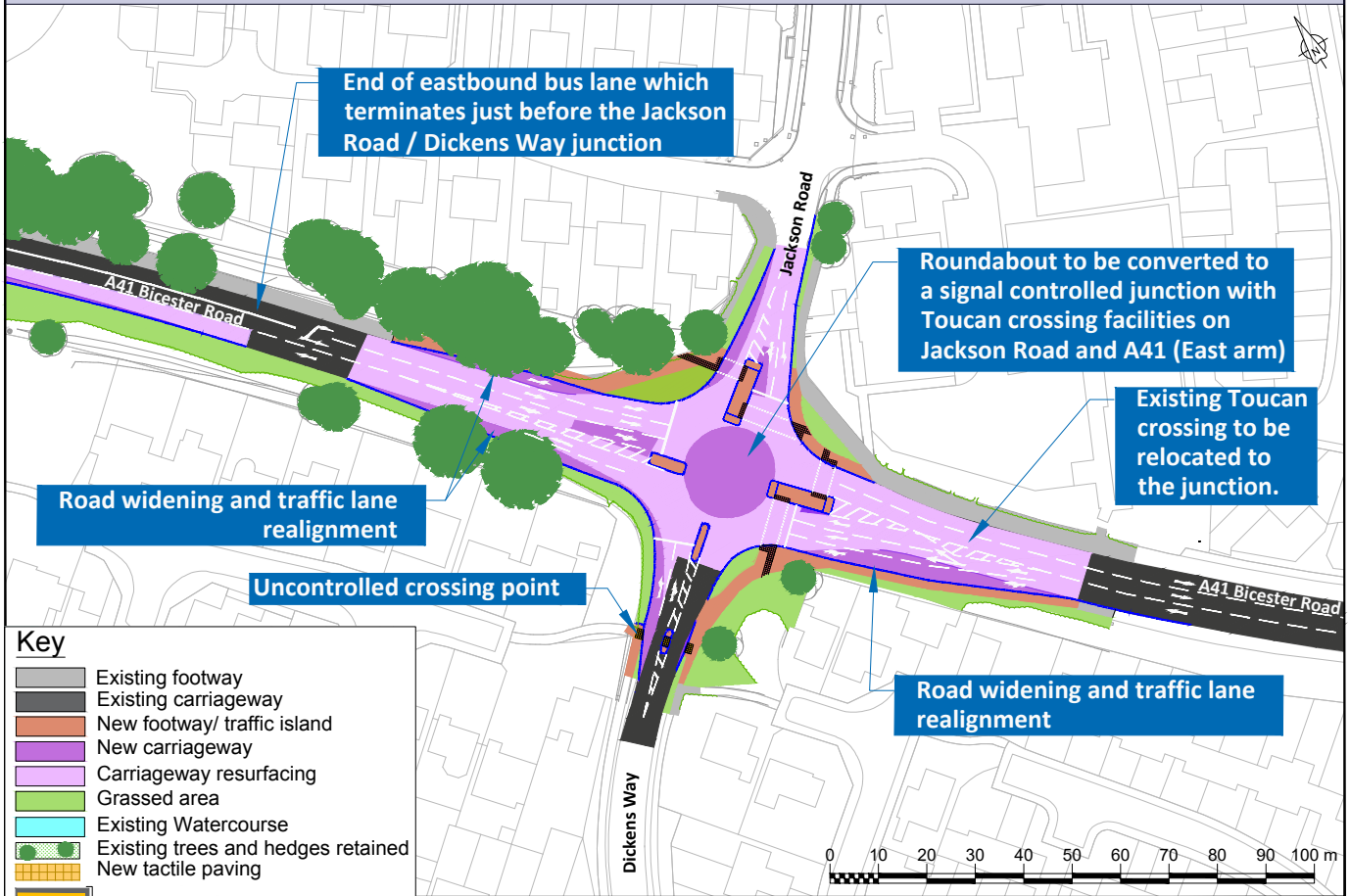
	Existing footway		Carriageway resurfacing		New tactile paving
	Existing carriageway		Grassed area		Proposed and existing road markings
	New footway/ traffic island		Existing Watercourse		
	New carriageway		Existing trees and hedges retained		

3. Install traffic signals at the Jackson Road/Dickens Way junction

- The existing roundabout is proposed to be replaced with a signal-controlled junction. The traffic signals will adapt to traffic conditions and be linked with the Paradise Orchard/Sir Henry Lee Crescent junction and Pegasus crossing to better manage congestion and delays.
- The approaches to the junction will be widened and lengthened increasing the capacity of the junction.
- Traffic signals will be optimised giving buses priority within the signal optimisation.
- The junction will be converted to a signal controlled crossing with pedestrian controlled crossing facilities within it on the A41 East arm and also cycle crossing facilities on the Jackson Road arm.

Proposed Jackson Road/Dickens Way junction design overleaf.

Signalisation of A41 Bicester Road / Jackson Road / Dickens Way junction



End of eastbound bus lane which terminates just before the Jackson Road / Dickens Way junction

Roundabout to be converted to a signal controlled junction with Toucan crossing facilities on Jackson Road and A41 (East arm)

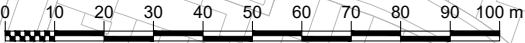
Existing Toucan crossing to be relocated to the junction.

Road widening and traffic lane realignment

Uncontrolled crossing point

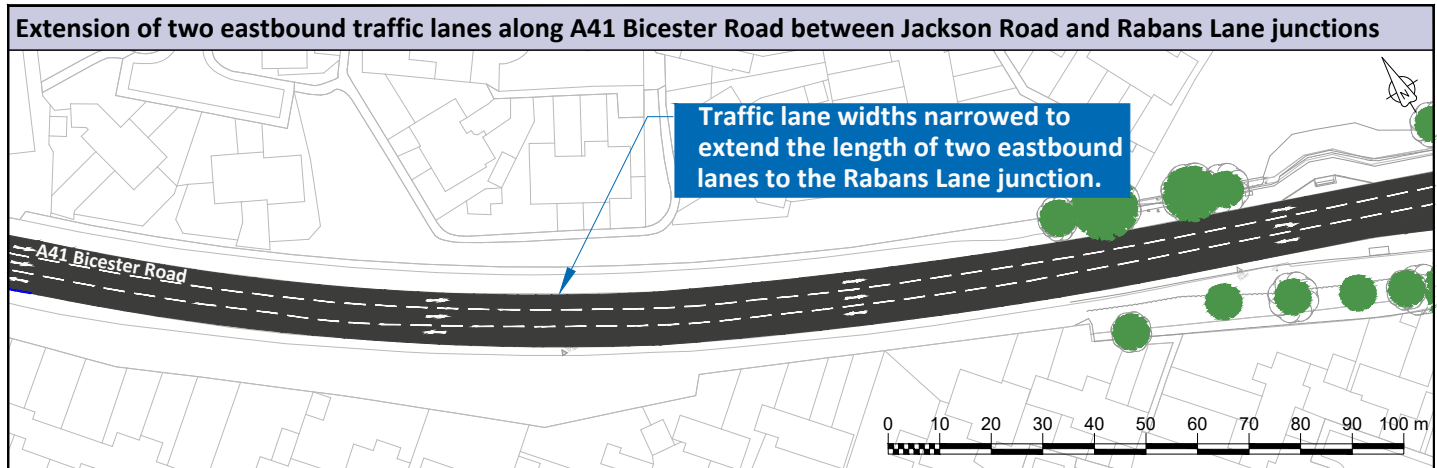
Road widening and traffic lane realignment

Key	
	Existing footway
	Existing carriageway
	New footway/ traffic island
	New carriageway
	Carriageway resurfacing
	Grassed area
	Existing Watercourse
	Existing trees and hedges retained
	New tactile paving
	Proposed and existing road markings



4. Two Eastbound Lanes between the Jackson Road/Dickens Way junction and the Rabans Lane junction

- There will be an extra eastbound lane (two in total) between the Jackson Road/Dickens Way junction and the Rabans Lane junction, increasing network capacity and helping reduce journey times.



Key

- Existing footway
- Existing carriageway
- New footway/ traffic island
- New carriageway

- Carriageway resurfacing
- Grassed area
- Existing Watercourse
- Existing trees and hedges retained

- New tactile paving
- Proposed and existing road markings

INTELLIGENT TRAFFIC SYSTEMS (ITS)

Split Cycle and Offset Optimisation Technique (SCOOT)

SCOOT allows traffic signals to work more efficiently by assessing and adapting to traffic conditions. Traffic that is approaching signals from different directions are detected using loops installed in the road, which sends information back to the control cabinet. The SCOOT system adjusts the duration of the green light signal to best manage traffic and minimise delays. Using SCOOT has substantial benefits in reducing journey times, delays, fuel consumption and vehicle emissions. It is particularly effective in places such as the A41 Bicester Road (between the Jackson Road/Dickens Way junction and the Paradise Orchard/Henry Lee Crescent junction, including the Pegasus crossing) where traffic volume changes throughout the day.

Automatic Number Plate Recognition (ANPR) and Closed-Circuit Television (CCTV)

We plan to install ANPR and CCTV cameras at the Paradise Orchard/Sir Henry Lee Crescent junction, Jackson Road/Dicken Way junction and Rabans Lane junction. ANPR cameras will allow us to measure journey times between the two improved junctions, whereas CCTV cameras will allow us to monitor traffic flows along the route, enabling us to alter signal timings where appropriate. The cameras can also be monitored by the police.

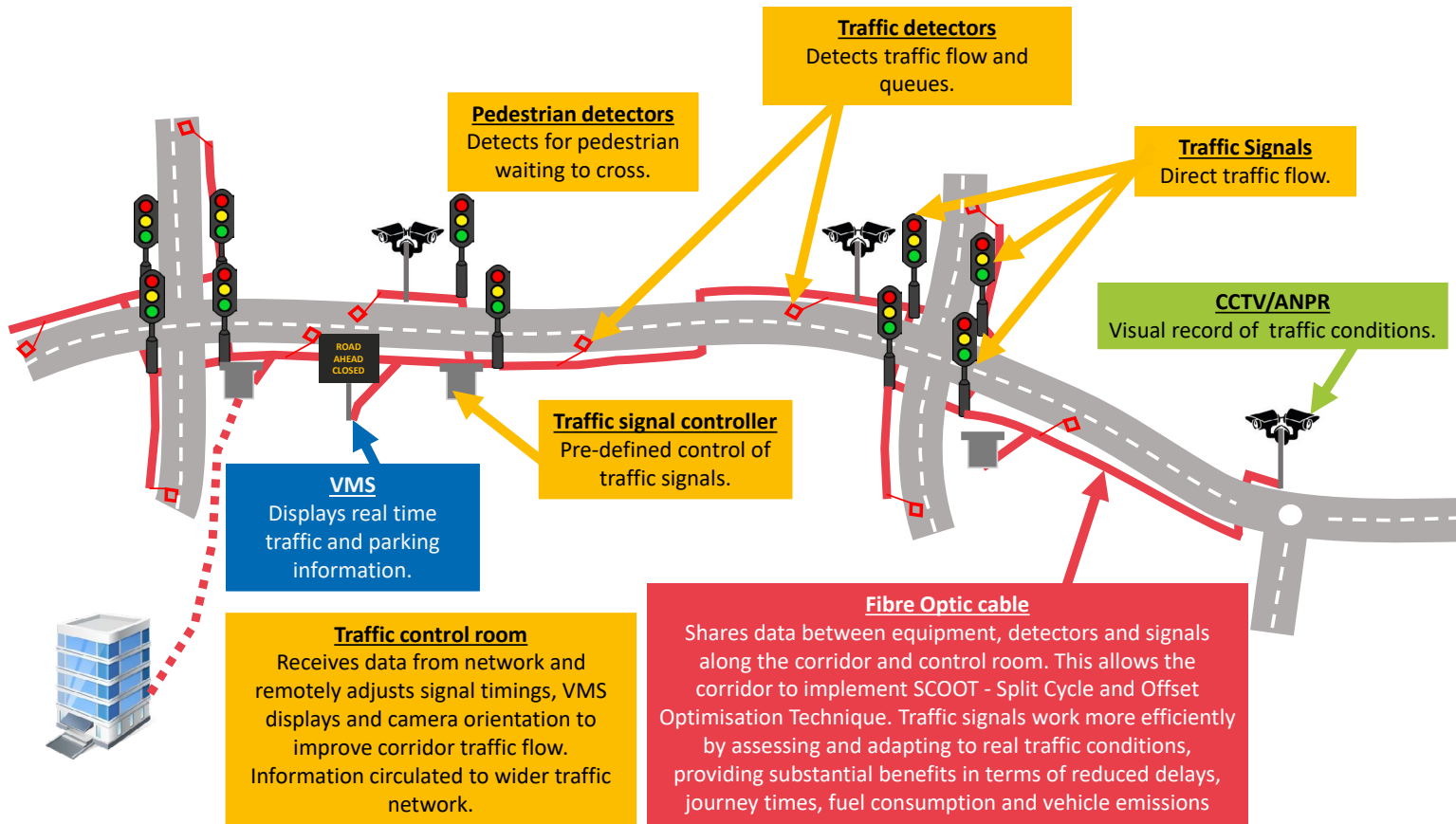
Variable message sign (VMS)

We plan to install a new westbound VMS between the Jackson Road/Dickens Way junction and the Paradise Orchard/Sir Henry Lee Crescent junction to provide real-time information to drivers.

Bus priority

We plan to introduce 'bus detection' on some buses. This system recognises when a bus is waiting at a junction and looks to give that arm of the junction preference. This helps to reduce journey times for public transport users.

Diagram showing how all the software will operate along the route.



JOURNEY TIME COMPARISONS FOR CARS

The results below quantify the predicted car journey times after the proposed construction with predicted times should there be no changes. For these, we used the distance between Aylesbury Vale Parkway Rail Station junction and Gatehouse roundabout.

Eastbound journey (into town) during morning peak travel (7.30-8.30am)

We predict the average car travel time will reduce by 1 minute 14 seconds.

Eastbound journey (into town) during afternoon peak travel (5-6pm)

We predict the average car travel time will reduce by 48 seconds.

Westbound journey (out of town) during morning peak travel (7.30-8.30am)

We predict the average car travel time will reduce by 1 minute.

Westbound (out of town) during afternoon peak travel (5-6pm)

We predict the average car travel time will reduce by 2 minutes 2 seconds.



For a full summary of the journey time results please visit our website:

[buckinghamshire.gov.uk/a41-bicester-road](https://www.buckinghamshire.gov.uk/a41-bicester-road)

JOURNEY TIME COMPARISON FOR BUSES

The results below quantify the predicted bus journey times after the proposed construction with predicted times should there be no changes. We used the distance between Aylesbury Vale Parkway Rail Station junction and Gatehouse roundabout for these estimates.

Eastbound journey (into town) during morning peak travel (7.30-8.30am)

We predict the average bus travel time will reduce by 43 seconds.

Eastbound journey (into town) during afternoon peak travel (5-6pm)

We predict the average bus travel time will reduce by 52 seconds.

Westbound journey (out of town) during morning peak travel (7.30-8.30am)

We predict the average bus travel time will reduce by 1 minute 51 seconds.

Westbound (out of town) during afternoon peak travel (5-6pm)

We predict the average bus travel time will reduce by 2 minutes 2 seconds.



For a full summary of the journey time results please visit our website:

[buckinghamshire.gov.uk/a41-bicester-road](https://www.buckinghamshire.gov.uk/a41-bicester-road)

With such high traffic levels along this stretch of the A41 it is essential to focus improvements on the corridor itself. However, we realise improving journey times along the route could negatively affect the time it takes to exit side roads onto the A41. So, along with increasing capacity at the junction, we propose to set the new traffic signals at the Jackson Road/Dickens Way junction to account for that and allow regular side road traffic-flow. Therefore, if all our proposed improvement measures are put in place, we predict that those exiting the following side roads will see very little change in their journey times:

- Paradise Orchard.
- Meadowcroft Road.
- Gatehouse Road.
- Griffin Lane.

However, we predict there will be reduced waiting times for those exiting the following side roads, on average:

- Dickens Way - 14 seconds at afternoon peak.
- Rabans Lane - 15 seconds at morning peak, 57 seconds at afternoon peak.

We also predict there will be increased waiting times for those exiting the following side roads, on average:

- Jackson Road - 51 seconds at morning peak, 37 seconds at afternoon peak.
- Dickens Way - 29 seconds at morning peak.

For a full summary of the side road journey time predictions, please visit our website (see contact details on the back page of this brochure).

JOURNEY TIME RELIABILITY PREDICTIONS

As well as improving journey times, we aim to improve journey time reliability with these improvements. This means that journey times should be more consistent and predictable, allowing people to plan journeys with more certainty. Below we have predicted the journey time reliability reductions between Aylesbury Vale Parkway Rail Station junction and Gatehouse roundabout following the proposed improvements.

Eastbound journey (into town) during morning peak travel (7.30-8.30am)

We predict the average journey time will reduce by 1 minute 14 seconds with reliability improving by 24%.

Eastbound journey (into town) during lunchtime peak travel (12.45-1.45pm)

We predict the average journey time will reduce by 11 seconds with reliability improving by 22%.

Eastbound journey (into town) during afternoon peak travel (5-6pm)

We predict the average journey time will reduce by 48 seconds with reliability improving by 58%.

Westbound journey (out of town) during morning peak travel (7.30-8.30am)

We predict the average journey time will reduce by 1 minute with reliability improving by 55%.

Westbound journey (out of town) during lunchtime peak travel (12.45-1.45pm)

We predict the average journey time will reduce by 21 seconds with reliability improving by 20%.

Westbound (out of town) during afternoon peak travel (5-6pm)

We predict the average journey time will reduce by more than 2 minutes with reliability improving by 84%.

REAL-TIME PASSENGER INFORMATION (RTPI)

RTPI screens show actual bus arrival times based on traffic flow, which allows waiting passengers to plan their journey. We propose to install RTPI units at the following four bus stops along the route:



Bus stop at Aylesbury Vale Parkway Railway Station.



Bus stop on the A41 eastbound (into town) between the Paradise Orchard junction and Jackson Road junction.



Bus stop on the A41 eastbound (into town) between the Jackson Road junction and Rabans Lane junction.



Bus stop on the A41 westbound (out of town) between the Jackson Road junction and Rabans Lane junction.

FUNDING

We have allocated £2.9 million of Section 106 funding from the Berryfields development to pay for the improvements. We have also allocated £600K from East-West Rail mitigation funds, giving a total budget of £3.5 million.

ESTIMATED TIMESCALE

Depending on the outcome of this consultation and other factors, such as Covid-19 restrictions, this timescale is subject to change.

January/February 2021	Public consultation on the initial feasibility designs.
March 2021	Consultation analysis and reporting.
Early Summer 2021	Completion of detailed design work incorporating consultation feedback.
Late Summer 2021	Start construction.
Spring 2022	Complete construction.



Visit our webpage at [buckinghamshire.gov.uk/A41-bicester-road](https://www.buckinghamshire.gov.uk/A41-bicester-road) where you can:

- View the plans in more detail.
- Take part in the consultation via an online project feedback form.
- Sign up to receive project updates. This will be the main way we will communicate with everyone throughout the project.



If you would prefer to complete a printed version of the consultation feedback form or have any further questions you can:

- Email us at hitmailbox@buckinghamshire.gov.uk
- Call us on 01296 382416



Or you can let us have your comments by writing to us at:



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