

East West Rail Consortium Strategic Board 9th December 2020

Agenda Item 6: London Road, Bicester: Update

Recommendation: It is recommended that the meeting:

- a) Note the progress of the Stage 1 Options Appraisal Report for London Road, Bicester**
- b) Agree the importance of identifying and promoting an investment package that addresses London Road, Bicester level crossing in order to enable the longer-term potential of East West Rail**

1. Introduction

- 1.1. As part of the East West Rail 2020/21 Consortium Work Programme, funding was allocated to progress a Stage 1 Options Appraisal Report (OAR) for London Road, Bicester. This work has been undertaken by the Oxfordshire County Council (OCC) Innovation Team (iHub), in association with transport modelling undertaken by consultants WYG using the Bicester model
- 1.2. The OAR work sets out and appraises options for interventions that will help enable continued access to and from Bicester Town centre as level crossing down-time increases in line with train service frequencies. In particular, it considers what measures should be prioritised for investment once train service frequencies increase above those already expected following opening of Phase 2 of the route between Bicester and Milton Keynes/ Bedford (timetabled for December 2024), for example once Phase 3 of East West Rail between Bedford and Cambridge is delivered.
- 1.3. By developing the evidence base, the OAR helps to build a common understanding amongst partners of the longer-term transport access investment options needed in Bicester as the EWR project develops. This is seen as key to enabling the longer-term potential of East West Rail to be realised.

2. Methodology

- 2.1. At the start of the project, a number of different project objectives were developed, taking into account current policy and strategy. These were finalised following feedback by local county councillors and representatives from key partners- England's Economic Heartland (EEH) and Cherwell District Council, and are as follows:
 1. To facilitate expansion of rail services while maintaining connectivity across the town and promoting town centre vitality and accessibility
 2. To encourage the development of a high-quality, innovative and resilient integrated transport system that promotes active travel provision and supports healthy place-shaping
 3. To promote opportunities for pedestrians and cyclists in Bicester
 4. To reduce carbon emissions from transport in Bicester and improve air quality in the town, particularly within the designated Air Quality Management Area

5. To improve connectivity between key employment and residential areas and their access to the strategically important transport networks, including rail services
 6. To encourage and facilitate the efficient operation of bus services in Bicester and the surrounding area
- 2.2. In addition, a number of different intervention options were defined. These were based on work undertaken to date related to potential options for continuing to allow transport accessibility in Bicester, once the London Road level crossing down-time increases. They are as follows:
- Option (do-something) 1: Delivery of the SE Link Road and Bicester Bypass improvements
 - Option (do-something) 2: Direct highway intervention at London Road (either a bridge or underpass)
 - Option (do-something) 3a and b: Delivery of a package of sustainable transport improvements, based on 2 of the CAT (Contribution to Active Travel) interventions scales (out of the 3 intervention scales outlined as possible), as proposed as part of the Bicester Local Cycling and Walking Infrastructure Plan (LCWIP). This plan was endorsed at Oxfordshire County Council Cabinet in September 2020.¹ These options are:
 - CAT C: development of a comprehensive cycle route network, and
 - CAT B: which includes (in addition to these measures in CAT C), a number of measures re-allocating road space to active modes of travel (which would also be complemented by softer support measures to promote cycling).
- Both 3a and 3b forecast a scenario where travel demand in the Bicester urban area shifts towards walk/cycle trips. The mode split predicted in the Bicester LCWIP for each of these scenarios is shown in **Appendix 1**, and these targets are reflected in the transport modelling work undertaken.
- 2.3. The OAR work pulls together the assessment of these options, both against the objectives set for the project, but also using evidence from modelling work to assess their benefits/ disbenefits.

3. Work completed to date

a) Assessment of Options against objectives

- 3.1. The options have been assessed against the 6 objectives noted above, with each objective given a score of 1 to 5 as follows:
1. Significantly worsen conditions, 2. Slightly or moderately worsen conditions, 3. No impact on objective, 4. Slightly or moderately improve conditions, 5. Wholly or significantly achieve objective

The outcome of this scoring assessment is given in the table below:

	Option (DS)1	Option (DS) 2	Option (DS) 3a	Option (DS) 3b
Objective I Rail service expansion facilitated & town centre accessibility & vitality	4	4	4	5

¹ Bicester LCWIP- as approved at the County Council Cabinet, Sep 2020:
[Agenda for Cabinet on Tuesday, 15 September 2020, 2.00 pm - Oxfordshire County Council](#)

promoted				
Objective ii Integrated transport system supporting active travel & healthy place shaping	4	3	4.5	5
Objective iii Promote walking and cycling opportunities	4	3	4.5	5
Objective iv Reduce CO2 emissions and improve air quality	3	3	4	4.5
Objective v Improve inter-connectivity	4	4	4	4
Objective vi Facilitate efficient bus services	4	3	4	4
Total	23	20	25	27.5

3.2. A fuller explanation of the objective scoring is given in **Appendix 2**, but in summary the proposed sustainable transport options (based on the Bicester LCWIP) generally score better overall against the objectives set.

b) Assessment of options using the Bicester model.

3.3. Transport modelling work for Options 1 to 3b has also now been completed and have been compared against a theoretical 'do-nothing' option where the crossing is closed for part of the time (approx. 28 mins/ hour as per the current planned train service specification once EWR Phase 2 is in place) and a 'do-minimum' option, where it is assumed that the crossing effectively becomes unworkable and hence closed for general use (but that no interventions are taken forward). In all 'do something' options, it is assumed that the level crossing is fully closed (though directly replaced with an alternative in option 2). A table showing the impact of traffic flows on key routes is given in Appendix 3, but in summary the following impacts are shown:

'Do-minimum'- no intervention: Increase in flows compared with the 'do-nothing' option (crossing only closed for part of time) on the existing A41 route, with flows also increasing on the Eastern Perimeter Road.

Option 1: Delivery of the SE Link Road and Bicester East Perimeter Road improvements: With delivery of improved roads on the outskirts of Bicester, traffic decreases significantly on the existing A41 as traffic routes to the new SE Link Road, but traffic on other routes remains largely similar to the 'do-minimum' option. (excepting London Road, given assumed closure of the level crossing).

Option 2: Direct highway intervention at London Road: Under this option, significant increases of traffic are seen on London Road Launton Road and in Market Square compared to the 'do-minimum' option, with decreases on the by-pass at Charbridge Lane as traffic uses more central Bicester routes.

Option 3a: Development of a comprehensive cycle and walking network for Bicester: Traffic flow is slightly lower on key routes than the do-minimum option, as people switch to using active travel modes within Bicester, but there is little impact on peripheral routes.

Option 3b: Development of cycle network, including certain road closures to re-allocate space to active travel modes: Traffic flows are much lower in central Bicester Streets including through Market Square due to 'on-point' road traffic restrictions/modal filters and the further switch to active travel modes.

c) Assessment of options using the central government Early Assessment and Sifting Tool (EAST)

- 3.4. Each option is also being appraised through use of an EAST assessment. This is being done against the strategic, economic, managerial, financial and commercial cases and gives an earlier indication of the business cases for each of the options. The detail of this will be included in the final report.

4. Next Steps

- 4.1. Within the OAR, each option has been considered separately for the purposes of assessment against objectives, transport modelling and the EAST assessment. However, it is expected that following completion of this work in the next few months, consideration will need to be given on how the different options can be brought together to form proposed transport investment packages. These will need to both provide a longer-term solution to severance issues caused by the London Road crossing, but also fit with wider Bicester area transport and land-use policy to be progressed through the new Oxfordshire Local Transport Plan, and the Cherwell Local Plan.
- 4.2. It will also be important for this work to feed into the EEH Connectivity Studies that are now commencing (in the context of the EEH draft Transport Strategy), and the on-going work on developing the EWR train service specification enabled by Phase 2 and more importantly by Phase 3 of the project.

James Gagg
December 2020

Appendix 1: CAT Levels for Bicester and forecast levels of transport trips by mode for each

Note: The London Road OAR only considers the intervention options proposed under options C and B. Option C includes development of a comprehensive cycle/ walk network, with option B in addition including re-allocation of some road space through targeted traffic restrictions. Option A (not assessed in the OAR) included full roll out of Low Traffic Neighbourhood principles to the Bicester urban area.

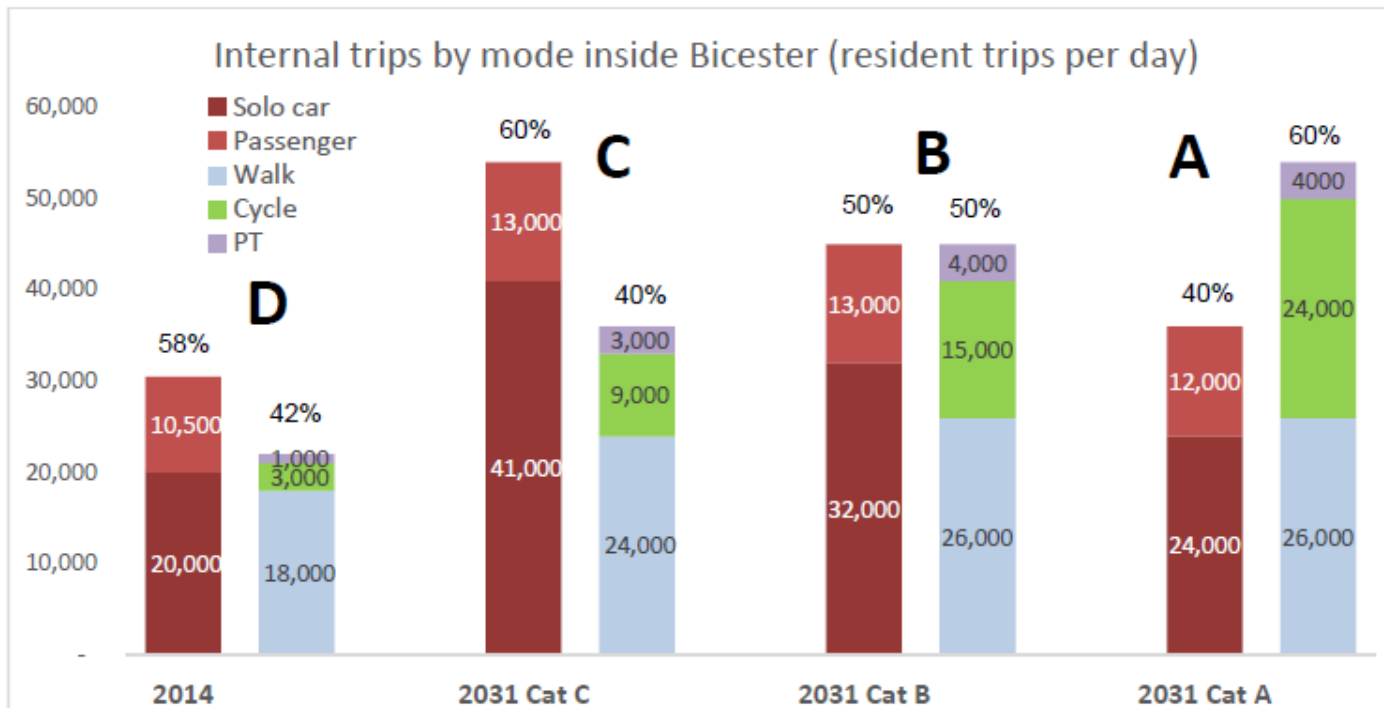


Figure 9 Current (D) and predicted (2031-5) number of daily trips by Bicester residents within Bicester only (i.e. excluding trips to/from outside Bicester) for different levels of Council commitment. The left-hand columns show car travel and the right-hand columns show sustainable travel (walking, cycling and bus use) with overall percentages of trips. Source: Baxter 2015 for total trip rates in 2031-5 and category C split.

Appendix 2: Explanation of objective assessment

Objective 1:

- DS1 – allows additional rail services, creates reduced flows in town centre increases vitality, but reduced connectivity for cars
- DS2 – improved connectivity for cars, but increased flows in town centre, reduces accessibility for other users and vitality
- DS3 a – reduced traffic into town, increased accessibility by sustainable transport, reduced connectivity for cars. Vitality increased – economic benefit from active travel for businesses due to increased footfall
- DS3 b – as above, but more so for increased vitality (examples of economic benefit elsewhere inc Dublin 100% increase in business in some shops from pedestrianisation), reduced delays in general around town

Objective 2:

- DS1 – increased resilience to network from new road, traffic attracted away from town centre supports active travel
- DS2 – resilience increased due to crossing replacement, but active travel discouraged through increased traffic in town
- DS3 a – active travel encouraged, and traffic levels reduced improving network resilience
- DS3 b – as above, but more so

Objective 3:

- DS1 – marginally improved active travel opportunities from reduced traffic flows
- DS2 – level crossing removal improves active travel, but increased traffic in town reduces opportunities
- DS3 a – increased opportunities for active travel
- DS3 b – as above, but more so

Objective 4:

- DS1 – reduces traffic in most of town, but increases on King's End (AQMA)
- DS2 – opposite impact to DS1, but reduced CO2 emissions from more direct motorised journeys
- DS3 a – reduced traffic improves carbon emissions and air quality
- DS3 b – as above but more, and best scenario for AQMA

Objective 5:

- DS1 – slight benefits by taking north-south through traffic around town
- DS2 – more direct access to employment areas east of Launton Road
- DS3 a – interconnectivity by bicycle improved
- DS3 b – as above, but reduced interconnectivity by car (closures); may improve PT interconnectivity through increased reliability from reduced traffic

Objective 6:

- DS1 – removing traffic from town centre makes bus operations more attractive
- DS2 – little impact on services
- DS3 a – reduced traffic should make bus operations more attractive
- DS3 b – as above but more so, esp. if road closures to cars increase reliability. Significantly reduced traffic also improves walking environment, so supports bus use

Appendix 3: Traffic model flows

2-way flows	12 hour flow					
	Road Name	KU	LRLC	DS1	D S2	DS3 a
London Road (between the Launton Road junction and level crossing)	6991	2937	2933	12551	2772	2598
London Road (south of level crossing)	4019	0	0	9645	0	0
A41 west of Graven Hill/London Rd	30699	32295	23908	30238	30632	30463
Charbridge Lane (at railway bridge)	21650	23379	23932	18993	21682	21202
Launton Road (just north of junction with London Road)	9053	7759	7656	12561	7479	2768
Launton Road (at railway bridge)	13050	12696	12422	15666	11517	10701
Launton Road (north of Churchill Road)	15952	17266	16959	13754	16134	14393
A41 (between Bicester Village and Vendee Drive)	38215	38543	29557	37584	37517	35566
Market Square (both sides combined)	9229	8221	8123	9830	7934	866
Kings End east of Queens Ave	5372	6237	6249	5037	6142	1764

Predicted 12-hour flows (pcus)

Figures in red denote the scenario which gives the highest flow on each road section, and figures in green show the lowest flow on each road section

KU = 'do nothing' scenario – level crossing closed 28 min per day

LRLC = 'do minimum' scenario – level crossing closed fully

DS1 = Improvements to South East Link Road and Bicester Bypass

DS2 = Direct replacement construction (under- or overpass)

DS3 a = CAT C sustainable package, comprehensive cycle network

DS3 b = CAT B sustainable package, cycle network, road closures (including in the town centre and Buckingham Road central corridor) and additional supportive policy measures

- DS2 has largest number of 'worst' flows, while DS3 b has highest number of 'best' flows
- DS3 b – flows on roads around Bicester largely unaffected, as modal shift is for internal-Bicester trips. Most significant benefit found on Market Square (flows only 10% of KU / LRLC)
- Kings Road AQMA best scenario DS3 b; worst scenario DS1
- NB roads with capacity problems under do nothing scenario:
 - A41 west of Graven Hill/London Road
 - Launton Road (at railway bridge)
 - Launton Road (north of Churchill Road)
 - A41 (between Bicester village and Vendee Drive)
 - Market Square (both sides combined)
- DS3 b addresses capacity problems at:
 - Market Square
- DS3 b reduces capacity problems at:
 - Launton Road (at Railway bridge)
 - Launton Road (north of Churchill Road)
 - A41 (between Bicester and Vendee Drive)
- DS1 addresses capacity problems:
 - Westbound (but not Eastbound) on A41 west of Graven Hill/London Road
 - A41 (between Bicester village and Vendee Drive)