

## Bicester Strategic Delivery Board

<b>Date of meeting: 19 July 2018</b>	<b>AGENDA ITEM NO:  10</b>
<b>Report title: Bicester New Motorway Junction Feasibility Study</b>	
<b>Author: Andrew Bowe, Lead Officer for Strategic Transport Tel: 01295 221842</b>	
<b>Email: <a href="mailto:andrew.bowe@cherwellandsouthnorthants.gov.uk">andrew.bowe@cherwellandsouthnorthants.gov.uk</a></b>	

### 1. Purpose of report

- 1.1 This report provides a summary of the M40 junction feasibility study following the Garden Town update to the previous meeting of the Strategic Delivery Board in March 2018.

### 2. Background

- 2.1. The M40 Junction Feasibility Study has progressed through various stages of preparation since 2016. Consultants were appointed to assess the implications and potential opportunity for a new M40 junction which could help improve connectivity to the strategic highway network, relieve congestion through the central areas of Bicester and support the management of traffic on the peripheral routes around Bicester. The study has been delivered in two stages: stage 1 - options development and stage 2 - options assessment.
- 2.2. A full assessment of the best performing options was carried out. The completion of the study was delayed by not being able to access the Oxfordshire Strategic Transport Model while it was being used to prepare the Partial Review of the Cherwell Local Plan. A Draft Stage 1 Options appraisal report was prepared in November 2016. It set out the approach used to identify and assess a range of potential M40 junction options that can support Bicester as a Garden Town over the next two decades.
- 2.3. There has been support for the proposed Oxford Milton Keynes Cambridge Expressway and East West Rail in the National Infrastructure Commissions' Final Report: "*Partnering for Prosperity*" published in November 2017 which made it clear the Expressway and East West Rail were key transport infrastructure priorities in the growth arc. The new M40 junction options have considered the potential for the project to align with the wider infrastructure projects in the Oxford -Cambridge corridor. This report is set in the context of the announcement of a preferred corridor route for the Oxford- Milton Keynes- Cambridge corridor.

### 3. Options development and assessment

#### Stage 1 – Options development

- 3.1. Eight potential motorway options were identified and were sifted using a variety of evidence including environmental data. The assessment showed that there were benefits for Bicester with the South East Perimeter Road and new Motorway junction in place. The Stage 1 assessment identified four preferred options that should be considered for taking forward for further investigation in Stage 2:
  - 3.1.1. Option 1 – North of Bicester near Middleton Stoney

- 3.1.2. Option 2 – M40 junction 9
- 3.1.3. Option 3 – South of Bicester near Merton
- 3.1.4. Option 4 – South of Bicester near Arncott
- 3.2. All of these options had the potential to support employment and housing growth in the Bicester area, provide value for money and align with the Bicester masterplan and emerging proposals for the Ox-Cam Expressway. The recommendation was that the preferred option should be part of a package of measures to ensure that Bicester achieves its full potential.
- 3.3. The assessment of options included:
  - 3.3.1. Highway impacts of a new motorway junction on the M40
  - 3.3.2. Headline costs and benefits, focusing particularly on the local area
  - 3.3.3. Implications of a new M40 junction on the proposed South East Perimeter Road
  - 3.3.4. Demonstrating whether a new motorway junction would enable accelerated housing delivery and
  - 3.3.5. Carrying out an early sifting of options identifying a preferred option or range of options.
- 3.4. The options reports show that a new M40 junction has the potential to accelerate housing growth in Bicester and the surrounding area including at the former RAF Heyford site. The preferred options were considered against the criteria of cost, highway impacts, local development impacts and strategic cases (economic, strategic and commercial).
- 3.5. The options appraisal identified and assessed a range of potential M40 junction options that can support Bicester as a Garden Town. The identification of the options used a variety of assessments and methodology which is important for Highways England as the organisation responsible for the M40 and SRN. Highways England was involved in the consideration of the options. Highways England has made it clear that a new motorway junction may be possible but it needs to be considered in the light of the Oxford Cambridge Expressway.

## **Stage 2 Report – Options Assessment**

- 3.6. The final report was completed in March 2018. It forms part of the feasibility study commissioned to support Bicester's Garden Town status. The principal options considered in the report seek to address the existing transport issues in a national scheme opening year of 2021 and those issues arising from the significant planned growth in Bicester by 2031.
- 3.7. The improvement of access to Bicester from the M40 can also be complementary to the delivery of other transport goals such as making Bicester a more accessible location for non-motorised users through improvements to walking and cycling provision. Strategic road access improvements are also complementary to the planned improvements on the local highway networks such as the South East Perimeter Road. Nevertheless, improvements in accessibility between Bicester and the M40, whether by provision of a new motorway junction or improvement of existing junctions will not deliver significant changes in travel patterns in the town such that it removes the need for other improvements to be made.
- 3.8. The Department for Transport's transport appraisal guidance states that an Options Appraisal Report or similar should document the process of identifying the need for intervention and the process of option development and selection. Initial locations were identified where an intervention would be possible. The long list included both upgrades of existing junctions and new junctions on the M40, where new junctions were considered, physical constraints and opportunities were taken into account. As part of the assessment, each of the options were analysed using the DfT's Early Assessment and Sifting Tool (EAST) to identify strategic economic managerial financial and commercial potential success.

- 3.9. The Stage 2 traffic modelling for the options assessment utilised the revalidated Bicester Transport model to appraise the benefits of the options selected for further assessment following stage 1 of the study.

#### **4. Conclusion and recommendations**

- 4.1. The work to investigate the feasibility of a new motorway junction for Bicester was instigated by the Government's support for Bicester as a Garden Town. The project was funded as a capacity study and as such does not form part of any Council policy or proposals. Instead it provides technical information to be used in considering the options for growth and the potential for increase accessibility to the M40 to deliver development over the next decades.
- 4.2. From the options developed and assessment of them, it is concluded that a free flow link between the M40 and A34 would provide the greatest economic return of the options considered. This option allows the A34 to M40 northbound traffic to flow freely across the junction and removes the circulatory flow of the roundabout allowing extra capacity for traffic entering and leaving Bicester. It would remove a significant bottleneck on the M40/A34 and provide accessibility from Bicester to the SRN.
- 4.3. A new motorway access and exit from the north on the Middleton Stoney Road is the most economical option in terms of cost and would help reduce congestion on the existing M40 junctions 9 and 10 and is comparatively inexpensive compared to other options. The benefits of this option are more localised and would require more investigation of the impacts on the local highway network in terms of integration with the A4030. Such a junction may also help improve the profile of the Bicester area for journeys originating in the Midlands and the North. New access routes from the M40 south of Bicester were found to be more difficult and expensive to implement due to their construction taking place in a floodplain and other environmental constraints (water, noise, ecology and visual impact).
- 4.4. There remains a possibility that the Ox-Cam route aligns with a route similar to the options considered in the Bicester options appraisal report. The options for a M40 – A34 link and new junction on the A4030 offer the highest level of transport user benefits and are suitable for taking forward as a preferred option.
- 4.5. Based on the assessment it has been concluded that either a free flow link between M40 north and the A34 west at or near Junction 9 or a new motorway junction to the north of the M40 Junction 9 would offer a high value for money and be suitable to recommend as a preferred option in a future business case.