
Project:	Bromsgrove Western Route Review		
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Subject:	Review of JMP 'Western Bypass Assessment' report		

1 Introduction

The purpose of this note is to review on behalf of Bromsgrove District Council the JMP 'Bromsgrove Western Bypass Feasibility Assessment' report from November 2015, with a view to advising on the technical validity, or otherwise, of its findings. The note also takes into account the written response to this document by Whitford Vale Voice (WVV), issued in July 2016.

The JMP report uses both the term *bypass* and *distributor road* interchangeably throughout. Therefore, where specific references have been made to the JMP report, we have used the term that was contained within the JMP document.

2 Report Overview

The local plan process has identified a number of sites to be brought forward for housing. The infrastructure associated with this level of growth has yet to be identified as part of the Infrastructure Delivery Plan. In order to take a holistic views of what is required, a review of previous plans for a bypass around the western side of Bromsgrove is required. In para 1.3 of the JMP report, one of the three study aims is to assess "*the need for a Bromsgrove western distributor road in the medium or long term*", while the other two cover planning and deliverability.

It is stated in para 2.3 that "*the prime role of such a road would be to distribute local traffic around the urban area of Bromsgrove. In essence the scheme would act in a supporting role for already planned developments.*" The future developments which might require the scheme are then briefly described in Section 3, while the actual 'need' for the scheme is considered in the 'Traffic Considerations' of Section 4. The conclusion of this section is that the anticipated growth in traffic flows to 2026 is unlikely to justify "*a major road construction scheme*" over and above the junction improvements set out in the Local Plan Infrastructure Delivery Plan (IDP).

Estimated scheme costs are presented in Section 5, which are based on route options discussed in Section 2. Estimates are based on SPONS unit costs.

Potential scheme benefits are then discussed in Section 6. Unlike the costs, benefits are not quantified. Instead, Benefit-Cost Ratios (BCR) from other local distributor schemes in the UK are presented, and an estimated relatively low BCR applied to this scheme.

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The report concludes that the case for investing in the scheme is *“uncertain and not capable of being substantiated in current circumstances”*.

Clearly with recent policy changes including the Duty to Cooperate and the GL Hearn report; the need for highways infrastructure may need further investigation given the increased level of growth that may be required.

3 Report Gaps

Overall, it is not considered that the JMP report presents sufficient evidence to support the conclusion that *“a Western Distributor Road was not necessary to support growth identified within Bromsgrove’s emerging local plan.”* A summary of the main gaps in the report’s evidence are provided in the following subsections.

3.1 Clarifying the Problem

The report does not clarify or identify the problem that the scheme is potentially required to address, which means that there is no frame of reference for assessing its suitability or otherwise. A detailed evidence base would normally be required which identifies the current problems on the network and a range of options to address this. The report seems to only assess one scheme without going through an optioneering process.

As noted above, the report suggests the scheme’s role would be to *“distribute local traffic around the urban area of Bromsgrove”*, but it doesn’t elaborate on the extent or cause of existing local traffic problems, how these will change in future, and the degree to which planned improvements will address them. It also notes that the scheme would *“act in a supporting role for already planned developments”*, but again doesn’t discuss what provision will be made for these without the scheme and whether that will be adequate.

Without a clear understanding of the problem, it’s not possible to evaluate the effectiveness of the scheme as a potential solution.

3.2 Projecting Beyond the IDP

The report relies on the IDP as a complete record of all mitigation required to support delivery of the District Local Plan up to 2023. It also states that future planning conditions beyond this year were too uncertain to assess scheme feasibility for that timeframe.

It is therefore noted that this report’s limitation is to assess the feasibility of the scheme up until 2023 only, meaning that further work is required to assess feasibility beyond this year, which is now only 5 years away.

For the shorter-term scenario up to 2023, however, and as noted by the WVV response, there is no evidence provided in the report that the IDP schemes are actually sufficient to satisfactorily mitigate future traffic impacts in the town. Instead, despite para 4.34 stating that *“improving performance of key junctions on the existing network is key to managing the anticipated traffic growth”*, this fact is more of an assumed input to the report than an evidence-based output from it. Outside of this assumption, however, the report lacks a strong case against there being a need for the scheme.

3.3 Application of Traffic Data

The conclusion of the ‘Traffic Considerations’ section states that the *“evidence available on traffic flows indicates that volumes of traffic in Bromsgrove... would not support a major road construction scheme”*, but it is not clear from this section how this conclusion is derived.

The section begins by reviewing traffic growth forecasts from the 2012 Bromsgrove Transport Package report for the area of the scheme. Quite significant uplifts in the region of 40% are listed, but it is stated that this will be managed by the measures proposed by the IDP.

There is then a review of surveyed 12-hour all-movement AADT volumes for three locations on the A38 and an estimate of how these will increase once future growth is applied. Again, the growth implications are quite significant. However, it is then stated that only a small proportion of this traffic would use the scheme as the additional distance of the route would make it "*relatively unattractive*". The basis of this conclusion is not clear, as the distance of the scheme would be about the same. The following sub-section also notes that the scheme would induce a certain level of traffic, which seems to undermine this conclusion as much of this induction would be from the A38.

The section includes Table 2.1 from DMRB TA46/97 which lists the economic flow ranges for different carriageway standards. However, it is not clear what purpose this table serves in the analysis. As noted by the WVV response, the AADTs recorded for the A38 are 12-hour flows over all arms of certain urban junctions, whereas Table 2.1 lists 24-hour AADTs for rural road links. Even if they were comparable, though, the uplifted A38 flows listed would suggest the need for a dual-carriageway upgrade of this route, which contradicts the section's conclusion that "*the evidence available... suggests that improving performance of key junctions on the existing network is key to managing the anticipated traffic growth.*"

The other way in which this table is potentially relevant is in supporting the statement within this section that "*we are of the view that a single carriageway would be adequate should a case for a western distributor be sustainable.*"

In reality, however, the evidence presented is insufficient to support either statement. Only through use of an appropriate model that allows for redistributive impacts could either the adequacy of the IDP measures or the infrastructure requirements of the scheme be properly identified. Misapplying DMRB AADT ranges to surveyed flows on only the A38 is inadequate for both purposes.

3.4 Consideration of Costs

Scheme cost estimates are based on general unit costs applied to preliminary route corridors. At this outline stage, such an approach is to be expected but, as noted by the WVV response, no use of existing infrastructure is assumed, nor of the new infrastructure that would need to be implemented to support the major developments planned for this area. Inclusion of such assumptions could result in some potentially significant cost savings.

It is noted that, as part of this exercise, we have not reviewed the suitability of the unit costs and quantities applied.

3.5 Consideration of Benefits

Section 6 of the report lists the potential generic benefits which could be accrued from the scheme. It then presents the predicted Benefit Cost Ratios (BCRs) from other recent 'distributor road' schemes around the country, which vary from a minimum of 2.8 to 12.6. The report estimates that the BCR for the Bromsgrove scheme would be no higher than 2.0, and concludes that the case for investment is uncertain.

It is agreed that, based on the evidence presented, no conclusions about the case for investment can be drawn. However, it is noted that the evidence is also insufficient to propose a BCR upper limit of 2.0 for the scheme, as BCR estimates cannot be reliably derived from comparison with other schemes. Every scheme is different and has its own unique set of potential benefits which need to be considered, taking into account the scheme's full objectives and impacts. Neither of these are defined in this report.

4 Recommended Actions

As noted above, it is not considered that the JMP report presents sufficient or adequate evidence to dismiss the case for a western distributor / bypass route for Bromsgrove. It should be noted that the overall conclusion could potentially be correct, but further work would be needed to verify this one way or the other. It is recommended that a further scoping study may be required to ascertain the level of work that may be required to determine a further suture study.

The recommended actions for achieving this would be:

1. **Problem definition** – A clear vision is required for the scheme and what it intends to address. To provide a frame of reference for the study, it is important to define the existing transport conditions and future problems that the scheme is required to solve. This establishes the need for the scheme and so determines clear objectives.
2. **Problem baselining** – In order to develop potential effective solutions, the causes of the existing and/or future problem should be fully understood. This stage will involve a degree of data collection or use of some other modelling tool.
3. **Option development** – Potential solutions for resolving the problem need to be defined. This will include the scheme, but could also involve other approaches and/or variants of the scheme.
4. **Option testing** – The future performance of the scheme and its alternatives should be tested using an appropriate transport model. This would ideally be a strategic model capable of simulating route choice, but alternative methods to suit budgets and timescales could also be appropriate. The scheme should be tested against a 'Do Minimum' scenario, which would include the future developments and IDP schemes but not the scheme itself.
5. **Option sifting** – Based on modelled benefits and preliminary costs, the scheme and its alternatives would be sifted using an early assessment tool, such as Mott MacDonald's INSET software.
6. **Option selection** – The feasibility and value of the scheme would be an output of the process, together with its relative value compared to alternatives.

These initial work elements could then directly input to a Strategic Outline Business Case for the scheme at the next stage and ultimately form the basis for a Full Business Case seeking funding from both developer contributions and potential other Government led funding sources