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Prepared by:	Fred Jones	Date:	18 March 2020
Approved by:	Tony Sheach	Checked by:	Phil Old/Oliver Hague
Subject:	Wyre Forest Local Plan Review – Transport Evidence		

1 Introduction

Mott MacDonald (MM) have been commissioned by Bromsgrove District Council (BDC) to undertake a high-level review of a series of documents in support of the Wyre Forest Local Plan Review, presented initially in the form of the “Wyre Forest Local Plan Review – Transport Evidence” dated June 2019.

Since this initial set of documents, MM has now additionally reviewed the following documents which have been supplied in order to ascertain whether any of the previous comments have been addressed by additional work:

- Worcestershire County Council (WCC) Transport Demand in the Hagley Area (TDHA) (January 2020);
- WFDC Infrastructure Delivery Plan (June 2019);
- A450 Corridor Enhancement Report (June 2019); and
- Blakedown Station Car Park Options (June 2019).

Comments from MM’s review of these 5 documents in response to questions from BDC is set out below in Section 2.

The WCC report “*Transport Demand in the Hagley Area*” was not available during the first review and therefore has now been considered with some preliminary findings from MM set out in Section 3.

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2 BDC Questions and Observations

BDC set out a series of observations in the form of questions to MM, initially on the Wyre Forest Local Plan Review – Transport Evidence” dated June 2019 and subsequently on the four documents noted in bullet point above. This section provides commentary based on both our initial response to BDC and as updated by the consideration of the four documents noted above.

1. Is it possible to tell from the information provided if the WFTM is fit for purpose it is being used for ie, supporting the WFDC plan review?

The information provided to date does not give any comfort on the models fitness for purpose to be used in support of the WFTM Local Plan Review and therefore, in the absence of the usual suite of documentation MM cannot consider the model suitable for this use.

The ‘Wyre Forest Local Plan Review – Transport Evidence’ report does consider WebTAG (without stating what this is) and Present Year Validation but essentially concludes that, as this is an early assessment, the model does not need to be WebTAG compliant. MM would argue that whilst WebTAG compliance is not necessary at this stage in order that assessments are proportionate, some form of robust validation exercise should have been undertaken even at this early stage so as to give some degree of confidence that the WFTM is broadly representative of current conditions. In most circumstances if a reasonable validation can be demonstrated then for early and proportionate assessments a model can be considered ‘fit for purpose’ and therefore that the results can be relied upon.

In order to determine if the model is fit for purpose, we recommend a review of the WFTM Model Validation Report (MVR) and any details on a present year validation if this was undertaken and any data collection report for all data used in the WFTM. With this additional information, it should be possible to make a reasonable assessment as to model suitability for the task, based on government guidance (with sources from ‘Transport evidence bases in plan making and decision making’, ‘Travel Plans, Transport Assessments and Statements’ and TAG).

It is also worth noting that in Section 4.3 of the “Wyre Forest Local Plan Review – Transport Evidence” document, it is stated that the WFTM can be used for non-major schemes. Therefore, it should be acknowledged that no major schemes should be evaluated using the WFTM. TAG Unit M2 states “Schemes with a capital cost of less than £5 million can generally be considered as modest”, ie that schemes with a capital cost in excess of £5million can be considered as major. The purpose to which the WFTM is applied should be considered against this guidance.

In addition, it is difficult to determine from the documentation received at what stages a Variable Demand Model was run. It would be beneficial to know if a VDM was run for the 2036 ‘with’ and ‘without’ scenarios to assess if there are any shifts towards public transport, which would have the effect of reducing the number of highway trips and therefore the have any bearing on the case for a highway scheme.

Finally, and on fitness for purpose, the “Transport Demand in the Hagley Area” (TDHA) report does not go into any detail about how the model was developed and, only figures based on the outputs from the model are provided. Therefore, the TDHA report does nothing to address concerns with the WFTM being fit for purpose.

2. Whilst the model appears to demonstrate that there is a forecast increase in traffic in Hagley area by 2036 is it possible to understand what that increase will be relative to today’s levels, the same goes for flows into Bromsgrove?

From the information provided there is no way to see what the quanta of increase would be over the current 'baseline' level. In addition, the model has not been validated against current traffic conditions so any change in flow shown is unlikely to be accurate.

The TDHA report also does not provide a comparison between the 2011 and 2036 models. It does provide 2011 data, but this is observed data from the 2011 census and not from the WFTM and therefore has a completely different basis. There is therefore no credible baseline for comparative purposes. The THDA report does provide flow differences between the 'with' and 'without' Local Plan scenarios, but again this is just for the 2036 scenario and not for any other model years and therefore the magnitude of change over the baseline is unknown.

Without knowing that the 2011 base model is 'fit for purpose' and can be demonstrated to represent current travel patterns and therefore demand at even an 'in principle' level, MM cannot have confidence in the forecasts provided by the future year models and none of the other reports reviewed offered any information on the increases forecast by the model between 2011 and 2036.

The MVR and details on a present year validation would be beneficial in determining the order of change between the base and forecast years and if the routing in the model reflects actual travel patterns.

Additionally, an uncertainty log and Model Forecasting Report should be provided to determine how the 2036 model was created and so that significant assumptions and risks can be understood.

3. It's not possible to understand which sites have an impact on which locations

Forecast Scenarios that clearly show the true impact of the local plan allocation sites should be developed. If so, this would enable you to clearly see what the impacts are and why particular mitigation has been developed and whether it is suitable to mitigate the impacts of the Local Plan.

If the local plan allocations have been input to WFTM correctly each site would have one or more zones within the model. The major developments could then be selected, and numeric/graphical outputs could be provided to show the quanta associated with each development and allow some sort of sense checking and an initial assessment of the impact of individual development sites on the transport network. As a minimum, this should be done for major sites however smaller sites adjacent to known hotspots where a smaller impact could have a significant effect should also be considered.

Within the TDHA report, flow difference plots are provided between the 'with' and 'without' Local Plan scenarios. However according to the legend, these plots show the flow difference in HGVs and not all vehicles, this should be clarified.

The report also provides figures on the amount of local plan traffic passing through Hagley. However, this does not indicate which developments are the cause of this increase in traffic. Additionally, the amount of local plan traffic that is forecast appears to be significantly different to the forecast increases in traffic flow. Therefore, further information is required to determine the level and individual causes of traffic re-routing and if the routes to Hagley are well represented within the WFTM.

MM recommend that information is provided individually for the larger development sites, so the distribution of trips and subsequent routing is transparent and in order that the impacts of the traffic generated by development sites, on highway network performance, are visible. We recommend obtaining Select Zone Analysis for each of the development zones, with a list of which developments are within that zone and how many trips they are producing. This should be provided alongside flow difference plots showing all vehicles and not just HGVs.

It should be noted that Figures 3 to 6 in the TDHA report show some significant increases in HGV levels, which we believe requires further investigation. To understand this better, the number of HGV trips being generated by each of the developments should be clearly identified.

The 'A450 Corridor Enhancement' report provides some information about the Stone Hill North Development traffic, but it is minimal and is only for this one site. None of the other reports reviewed included information about development site impacts.

4. Some of the routes which are modelled do not extend far enough to Bromsgrove or Hagley so we can only assume journey time increases to these locations

Figure 1 shows the model area. The model area is split into two sectors: Worcestershire and Wyre Forest. It is not clear from the report how detailed the Worcestershire sector is within the model, but the link flow diagrams shown in Figure's 5 and 6 do show traffic flows within Hagley and Bromsgrove on the major highway links. Based on BDCs concerns with the Wyre Forest Local Plan, it is recommended that the report should clearly show the impacts of the site allocations through Bromsgrove.

The TDHA report does not provide any information about journey times in the WFTM, nor do the other reports reviewed and reported in this note. In order to determine journey time impacts, more information than is provided in any of the reports is required.

The Transport Evidence document provides 2036 journey times for selected routes but does not provide a comparison with the 'without local plan' scenario, the 2011 model or observed journey times. Data for each of these scenarios should be provided.

Journey time graphs are provided in the appendices, but these show 'Obs Base', 'Mod Base' and 'SC6'. It is unclear what year these journey time routes are for and what 'SC6' represents.

Clearer journey time analysis is required before any credible conclusions can be drawn, with time against distance graphs showing journey times for:

- Observed 2011/revalidated year;
- Base model/revalidated model;
- 2036 without local plan; and
- 2036 with local plan.

5. There appears to be no mitigation modelled at any stage so we don't know if individually or cumulatively the mitigation will have any chance of solving the issues identified or whether it creates more problems than it solves.

From the information supplied MM concur with this view and the extent of any mitigation is not clear.

The assessment should be undertaken with a number of assessment scenarios, which could include:

- 2011 Base Year (validated to current traffic conditions)
- 2036 Reference Case (committed development only)
- 2036 Do Minimum (with land allocations and immediate access onto the highway network)
- 2036 Do Something with mitigation (or even a number of cumulative assessments for the larger development sites)

These scenarios would provide a much clearer picture of changes in traffic flows and congestion and would allow mitigation measures to be evidenced appropriately and provide some confidence that solutions are available.

Further testing on deliverability of major improvements is needed in order to give confidence that significant improvement schemes identified as mitigation have a good chance of realisation.

The TDHA report does not provide evidence of any mitigation being modelled within the WFTM. Whilst it does provide a '2036 Reference Case' and '2036 Do Minimum' as suggested above, there is still no '2036 Do Something with mitigation' option.

The TDHA does state that "a bypass for Hagley will be considered only after investment has been made to exhaust alternative travel options. In the specific case of the A456, this means investment in rail infrastructure and services to enable this mode to accommodate a much greater mode share of generated trips". This implies that measures to reduce highway demand before assessing mitigation are to be considered, however these measures are not identified.

Our overall conclusion is that the "Wyre Forest Local Plan Review – Transport Evidence" report dated June 2019 is short on evidence and contains several inconsistencies regarding the justification of the use of WebTAG principles.

There are a number of issues identified in the report, including:

1. Lack of validation of the 2011 base year to current traffic conditions. The report mentions Present Year Validation but does not undertake this assessment to determine the suitability of the WFTM.
2. Only one forecast scenario year. Changes in traffic flows cannot be determined.
3. Lack of analysis on the impacts on key routes within Bromsgrove.
4. Does not clearly state how the mitigation measures have been developed and on what basis.
5. There is data presented in the report that is either incomplete or does not provide a clear purpose (see Table 5)

After a review of the TDHA report and other reports listed above, we further conclude that:

6. There is still a lack of evidence of the validation of the 2011 base year to current traffic conditions and there is no further detail about the suitability of the WFTM to assess the Wyre Forest Local Plan.
7. Whilst information on forecast year scenarios 'with' and 'without' the Local Plan is provided, changes in traffic flows relative to the base year cannot be determined.
8. There is no further analysis on the impacts on key routes within Bromsgrove.
9. The analysis within the TDHA report for Hagley is sparse.
10. No further clarity has been provided on how the proposed mitigation measures have been developed and there is no WFTM scenario in which they are included.

In order to better assess the WFTM and therefore the implications of the modelled results, we recommend obtaining and reviewing the following information from or related to the WFTM:

- Model Validation Report;
- Details on a present year validation, if this was undertaken (and if not initiate this exercise);
- Data Collection Report;
- Evidence to show at which stages a VDM run was undertaken;
- Uncertainty Log;
- Model Forecasting Report;
- Select Zone Analysis with details about which developments correspond to model zones and the number of trips generated for each development;
- Flow difference plots between the 'with' and 'without' local plan scenarios that show total traffic flow; and
- Journey time analysis.

Following consideration of the above MM will be able to give a properly informed view on the suitability of the WFTM for the purpose of the assessments required and an opinion on any analysis prepared to support the Local Plan Review in the context of issues raised by BDC.

3 Review of the Transport Demand in the Hagley Area Report

Section 5 of the 'Transport Demand in the Hagley Area' (TDHA) report focusses on the modelled impacts of the Wyre Forest Local Plan in Hagley. It sets out that work has been undertaken to analyse the forecast change in traffic flow in Hagley (in 2036) through 'with' and 'without' Local Plan scenarios in the WFTM.

The report does not set out the differences between the 'with' and 'without' scenarios. Therefore, it is not possible to determine where growth has been assumed and the extent to which growth is constrained to NTEM. This applies to both the 'Without Local Plan' and 'With Local Plan' scenarios. The report should be clear on how development trips have been dealt with both generally and in relation to NTEM growth, i.e. is growth constrained to NTEM forecasts at all?

A very small increase in trips through Hagley, 68 in the AM and 69 in the PM, is reported. In both peaks, the increase in inbound trips (inbound to Hagley) is higher than outbound, but it is not clear how 'inbound' has been defined, so we are not sure what the significance of this is. The flow increases shown in Figures 3 to 6 show values for HGVs and therefore the flow differences for all vehicles cannot be sense checked or compared to the stated flow increases (i.e. the numbers in the text of the report).

Even though there is a small forecast increase in traffic flow, there are 234 trips, from the development assumed in the local plan, in the AM and 191 in the PM that 'passes through Hagley' according to the report. It is not clear in the report how these 234 and 191 trips were calculated. These numbers are significantly different to the flow increases stated in Section 5.3. The report states that this is because of capacity constraints at junctions in Hagley, causing re-routing to alternative routes. Again, it is not clear what 'capacity constraints at junctions in Hagley' means.

Due to the extent of the network provided and that only HGV values are illustrated in Figures 3 and 5, it is difficult to determine where the re-routing away from Hagley is forecast. Further information is required about the nature of the forecast re-routing. Additionally, there appears to be 'model noise' in Kidderminster, i.e. some parts of the model may not be converging. It is therefore recommended to obtain information about levels of model convergence for each year, time period and scenario.