

Summary of the T-IRP's advice on XXX's Technical Evidence (TIRP1)

Diagram of RAG rating system

G	Advise (agree for AAS) no changes needed
AVG	Advise (require for AAS) some small amendments/adjustments needed
A	Advise (require for AAS) some amendments needed
AVR	Advise (require for AAS) that more development is needed in certain important areas
R	Advise (require for AAS) that significant development is needed in important areas

Feedback

		Initial Evidence Submission		Full Business Case					
Panel comments		RAG	LA response (please cross reference updated report sections)	Page reference	RAG	LA response (please cross reference updated report sections)	Panel comments	RAG	LA response (please cross reference updated report sections)
<b>Transport modelling</b>									
<b>Scope and Suitability (extent and purpose of the tool given the policies potentially being considered)</b>									
Please provide maps of the current traffic speeds across the links of interest, vs those modelled.		a/g	We propose to provide a comparison using GIS of the 2015 model speeds against 2018 Trafficmaster data by direction for each time period for the following corridors where we have exceedances: 1) A53 - Sandy Lane to A500 2) Buckhall New Road - Limesh Junction to Poteries Way 3) Victoria Road - Jones Square to City Road The corridor approach is better given the differences in the defined links between Trafficmaster data and the NSMM model links	See T2, Figures 5-8 and 5-9 and accompanying text					
Table 3-1 indicates no overall traffic growth between 2015 and 2018 and is useful evidence. Only LGV traffic has increased significantly, a pattern common to most urban areas. The decision to stick with the 2015 un-updated calibrated model to represent the 2018 situation seems reasonable based on the evidence presented.			We are pleased there is agreement to use the 2015 model to represent 2018	n/a					
Where do Home based LGV commuting and EB trips get included, given that NRB LGVs are what is in the GV segment? (p.21)			LGVs and HDVs cover all trip purposes (including commuting and employer business) in the demand model, the level of disaggregation by trip purpose is unlikely to have a material impact. In the assignment model LGVs and HDVs are assigned as all purpose vehicle matrices, so therefore there is no impact on forecasting / option testing work. The assignment model is only by vehicle compliance type. It should also be noted that it is an incremental demand model, the base observed vehicle matrices for LGVs and HDVs are derived from factored RSI data capturing all purposes.	See T2 p22 (updated)					
It appears the trip generation are not NTEM based, but this is not automatically problematic, provided the local rates have been derived with good data. Little information is provided about their source. Page 22 and 23, is the trip generation model in future years applied only to the change in the number of households or to all future households?			Trip generation rates are based on RSI and household interview surveys, future trip generation rates have been further checked/benchmarked using TRCs. The future trip generation model covers all trips but the updated trip generation rates are only applied to the change in same use for the forecast years, i.e. the change in households, jobs and retail GFA between base and forecast year multiplied by the future trip generation rates.	See T2 p22 and 23 (updated)					
<b>Validation (keeping in mind the scope)</b>									
Roadside interview data have been used to derive origin and destination trip rates for employment, education, shopping and leisure." P.23 Does this imply that these NRB trip rates are for car trips only, excluding rail and bus? It would also be useful to know more about the date and the spatial coverage of these RSI surveys. The later p.28 indicates they are from 2009. To which trip end planning data are these rates applied?		a	NRB trip rates are person trip rates covering all modes. More information will be provided on this, the planning data they are applied to and on the RSI's in an updated version of the report.	See T2 section 4.3.2 (updated)					
P.24, T2 and p.38 T3 "2) The mean value of the LGV and HDV cost skims is taken." ??? Does this imply that the HDVs and LGVs are in a single distribution model. If so this would be inappropriate, given the major observed differences in their spread across road types and area types. Later discussions appear to indicate clearly that there are separate distribution models for HDV and LGV.			Separate productions and attractions are derived for LGVs and HDVs and they are distributed separately through the distribution model to produce separate LGV and HDV trip matrices.	See T2 P24 and 25 (updated)					
Section 4.8 Table 4.11, the high PT fare elasticities for NRBEB are dubious, while those for other modes are low. The network-based car elasticities of -1.4 for a 10% fuel cost change are low. But increase to -0.24 for a 20% change. The car time elasticity of -0.16 looks low. Could this be an indication of issues in the demand model?			The 20% test is within TAG guidance for fuel costs, the lower number is likely due to the polycentric nature of N Staffs and the prevalence of shorter distance trips. For public transport again we are marginally outside the recommended TAG range however within it for the short term elasticity recommendation of -0.16 or above. The elasticities have come from local data as recommended by TAG, we also do not exclude cross-sections' fares which will likely have a significant impact. The car journey time elasticity is within the TAG range, i.e. less than 2. All the above is outlined in the provided reports.	See T2 P37, minor changes made					
A5.8 looks at the GEH around the areas of air quality issues and indicates that the matches are perhaps adequate overall - What about by vehicle type GEH, as the policies will impact differentially on vehicle types? Table 5.3 to Table 5.5 show the difference between modelled link flows and observed traffic counts for these locations" p.55. When Tables are these? If it means Tables 5.2 to 5.4, then a clearer explanation is needed of how to match up these three specific locations to the screenlines in the Tables.			Further information will be provided in the updated reports regarding the flow validation by vehicle type at the exceedance locations. Appendix A provides flow validation by different vehicle types (cars, LGVs, HDVs etc)	See Table 5-9 and 5-10					
<b>Baseline Forecasts (forecasting without measures)</b>									
Please indicate how the results would differ were NTEM trip rates and standard trip generation were used.		a/g	If NTEM trip rates were used this would affect the demand model matrices however the final car matrices are constrained to Tempro so the overall impact would likely be small	n/a					
<b>Modelling AD Measures (forecasting after introducing the measures and the methodology for modelling these measures)</b>									
Very little detail is provided about model structure and this makes the CAZ response modelling in Table 6.2 rather vague. However, such information as is provided generally appears suitable but of course much depends on the eventual application details, e.g. T2 are currently part of the car trip matrices, but demand will be separated out primarily using a universal factor from the ANPR survey data with some adjustment of locations of high use demand, such as the where bar rates are in the city/centre and at Stoke-on-Trent rail station." P.20.			More detail on the how the charging CAZ has been modelled will be provided in a later version of the T3 report. Note from the ANPR data that demand is very low in N Staffs representing less than 0.0% of all car traffic.	T3 report updated - sections 6 and 7					
The NSMM transport model does not explicitly model walking and cycling trips, so a percentage reduction in car trips will be needed for related policies" P.37		a	Given the narrow congested corridors of the exceedance locations where there is no space to add in cycle facilities, cycling has not been looked at. It is not represented in the NSMM model.	See update to Table 6-2 in T3 report					
A bit odd that there is no HREB trip purpose distinguished, only NRBEB? p.16 and p.33. Maybe the industrial structure with perhaps few management services within SAN make this an acceptable simplification. Into which other purpose is the HREB added?			HREB is included in the commuting trip purpose in the NSMM transport model, i.e. home to work. Please note that the actual trip matrices that are assigned are all purpose by vehicle type and compliance, segmenting the demand model trip purposes further would unlikely have a tangible impact on the modelling work.	n/a					
Is it possible to include a light-touch active mode analyses in the places where there is likely to be mode shift?			Given the narrow congested corridors of the exceedance locations where there is no space to add in cycle facilities, cycling has not been looked at. It is not represented in the NSMM model.	not required as active mode travel not modelled see updated Table 6-3 in T3 report					
<b>General</b>									
The reports generally are clearly written but are rather short of detail on a number of important topics and with some sentences that raise questions that might or might not be significant			Reports will be updated in due course with additional detail						
<b>Behavioural assumptions</b>									
<b>Responses to measures</b>									
It is not clear whether the model can represent the parking levels measures. How will these be incorporated?		a/g	The workplace parking levels measures have been screened out using demand analysis from select link analysis of the 2022 reference case traffic demand. From that work it became clear that the actual demand for non-compliant commuting cars that would be going to such zones would be very small especially when you allow for the spatial restrictions of the policy and the balance between private parking spaces and the % of spaces that the employer rather than the employee would pay. The overall impact would be small and therefore it is not worth undertaking further detail modelling or appraisal as part of the option testing.	See update to Table 6-2 in T3 report					
The SP survey should if possible consider questions on the size of the charging zone, as multiple zone sizes are being considered. Is it possible to split the sample base for this purpose? If not possible, how will the results be applied to multiple zone sizes?			The SP surveys did not consider different size charging zones given time constraints for carrying out the actual interviews, but peoples response should not change significantly. The model will capture the impact of different sizes in terms of the amount of demand going through/into/through and across the corridor if different corridor sizes are tested. However the % demand responses will be constant unless the actual charge changes for any or all of the vehicle types. The SP surveys were based on other surveys provided by JAQU (Bradford and Bath), were also reviewed and agreed by JAQU and all comments incorporated.	See T-1 in T3 report					
<b>Sensitivity analysis</b>									
Please consult JAQU guidance and discuss with JAQU officers to agree best sensitivity testing to conduct for OBC		a/g	We are happy to discuss and agree with JAQU the sensitivity tests	See updated section 4.1 in the T3 report					
<b>Overlapping policies</b>									
<b>General</b>									
Thanks for clear, well presented reports									
<b>Air quality modelling</b>									
<b>Tools</b>									
Helpful to see maps of concentration distribution to determine areas of most concern		a/g	This will be updated in the next issue of the report (pending additional feedback on results tables).						
<b>Scope (incl. receptors)</b>									
Please highlight the locations of the continuous monitors in AQ3 Fig 4.									
<b>Specific treatments (canyons, foyers, gradients etc.)</b>									
<b>Calibration</b>									
Zonal calibration should be avoided if possible as there is a risk it leads to overfitting of the base year data. Please justify the use of zones (by demonstrating suitability when compared to a single global calibration factor).		a	We have not used a zonal calibration factor for a number of reasons, including the overfitting issue. Instead, a single global adjustment factor (1.89) was used, as described in AQ3 section 2.2. All model results presented for the TIRP have used this global adjustment factor. In AQ3 Section 2.3 ("Model verification"), figure 4 presents results for each area using different symbology, in order to allow patterns to be identified. However, these areas were not calibrated separately. The rationale for this decision (in line with the comments on the left) is given in Section 4.2 of AQ3. In Section 4 of AQ3 ("Model uncertainty and sensitivity") we have presented results using zonal calibration as a sensitivity analysis, to illustrate roads which would exceed the AQO if this approach was used, this will allow the uncertainty in the global model calibration factor to be accounted for in the options development, but is not part of the model results for target determination.						
<b>Meteorology</b>									
<b>Chemistry</b>									
<b>Emissions</b>									
<b>Outputs</b>									
<b>General</b>									
Thanks for the well presented reports.									
<b>Target determination</b>									
<b>TD1</b>									
<b>TD2</b>									
<b>General</b>									
<b>Analytical Assurance Statement</b>									
<b>Limitations of the analysis</b>									
not reviewed at IES									
<b>Risk of error / robustness of the analysis</b>									
not reviewed at IES									
<b>Uncertainty</b>									
not reviewed at IES									
<b>Use of the analysis</b>									
not reviewed at IES									
<b>General</b>									
<b>Measures Considered</b>									
<p>In this section please provide a summary statement detailing:</p> <ul style="list-style-type: none"> <li>the measure(s) being considered</li> <li>the particular modifications to the transport model carried out to incorporate these measures</li> <li>the locations in the documents where the details of these adjustments can be found</li> <li>whether the measures require in model or off-model adjustments to incorporate the behavioural assumptions/responses to measures</li> <li>the locations in the documents where the details of these assumptions can be found</li> </ul>									