



Briefing Report – BSTM Signoff

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Title: Adoption of the Buckinghamshire Strategic Transport Model

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Summary: The purpose of this report is to seek authorisation to use the new Buckinghamshire Strategic Transport Model for the purposes of assessing the impacts of major schemes and development proposals on the Buckinghamshire highway network.

Recommendation:

That the Buckinghamshire Strategic Transport Model is formally authorised for application by Buckinghamshire Council. So that the model may be used to assess planning applications around Buckinghamshire, including undertaking charged model runs for developers.

1. Background

1.1 The Buckinghamshire Strategic Transport Model (BSTM) has been in development since shortly before the COVID-19 pandemic. This traffic model has been designed to replace and improve on the aging Countywide Transport Model (CTM), baseline 2013. The BSTM has been specifically designed to analyse major transport interventions by:

- a) Illustrating wider changes in traffic flow or delay due to the introduction of a change to the highway network, or a planned change in traffic levels.
- b) Show theorised routing information to and from origins and destination locations after introduction of a proposed highway scheme or large-scale development site.
- c) Export modelling data into Geographic Information System (GIS) mapping software to produce visual outputs which can be presented to decision makers.

1.2 The BSTM has been functionally ready for use for some time, but adoption has been delayed due to concerns regarding the impact of its introduction on the assessment of several sensitive planning applications. Transport Strategy has been working with the Highways Development Management (HDM) team over the past year to assess

and mitigate these risks, primarily by a delay to the model's formal adoption and by undertaking further validation and comparison checks.

2. Main content of report

- 2.1 Transport Strategy and Funding maintains a suite of transport models which are used for various purposes including assessment of the impacts of planning applications on the highway network, local plan evidence and transport scheme business case development. In 2019 we commissioned our framework consultant Jacobs to replace the aging CTM with an updated model, primarily in order to test the new LP4B and LTP5. The cost of the development of this model to the Council was £350k.
- 2.2 The CTM is calibrated against traffic data from 2013. The BSTM is calibrated with more recent 2019 baseline traffic counts and Mobile Network data. As advised by the Department for Transport (DfT), 2019 currently represents the best baseline year given the ongoing impacts of the COVID pandemic on travel demand.
- 2.3 The BSTM is consistent with parameters set by DfT Transport Appraisal Guidance (TAG) guidance and exceeds their calibration / validation of model criteria in a number of areas. In addition to the model meeting the TAG criteria, further confidence in the ability of the model to represent current traffic conditions has been shown from the modelled journey times, which demonstrate that the model reflects observed levels of congestion at all points to a high degree of accuracy.
- 2.4 A secondary use of the BSTM is that it can be used, where there is a sufficient level of local validation, by developers of larger development sites (e.g., major developments or infrastructure projects, with a greater intensity of focus on those in proximity to most sensitive parts of the highway network) to test the impacts of their schemes on the highway network.
- 2.5 This testing is required to determine the scale of both stand-alone and cumulative impacts (considering the impacts of that development in conjunction with adjacent developments) which then inform appropriate mitigation schemes on the road network. This work is undertaken in accordance with the National Planning Policy Framework, 2021 (NPPF) and is overseen by the Councils HDM team.
- 2.6 The BSTM base year has been substantially complete for over a year, with calibration and validation work completed in summer 2021. In preparation for its adoption, we have undertaken substantial assessment of the model's more localised validation for the purposes of understanding whether it can be used in the assessment of development sites. This work was undertaken during Autumn 2022 and concluded:
 - a) Buckingham area – BSTM validates well, should be used for development purposes by HDM.

- b) Princes Risborough – BSTM validates well, should be used for development purposes by HDM
 - c) High Wycombe, Marlow, and Bourne End – not to be used for development purposes by HDM without localised updates to model.
 - d) Aylesbury – Aylesbury Town Model is the better model for development assessment purposes, and this will continue to be used for HDM.
- 2.7 Due to the implications of the model update on planning applications linked to Local Plan allocated sites and associated infrastructure, Counsel advice was sought by the Council in March 2022.
- 2.8 Counsel advice stated that BSTM may represent the best available transport modelling tool for planning applications that were based on the existing version of the CTM and could have implications on sub area models that were based on the CTM. However, Counsel advised that the Council need to take a judgment as to whether a point has been reached where there are better tools available than CTM in which to assess a planning proposal, and if so whether a proposal needs to be re-assessed using BSTM.
- 2.9 Furthermore, Counsel recommended the adoption of the BSTM be delayed until the conclusion of the Maids Moreton (16/00151/AOP) Judicial Review Challenge. This was concluded in December 2022.
- 2.10 This paper recommends the BSTM is adopted in January 2023 noting there remains risks to a handful of planning applications that are yet to be determined by the Council (see Appendix A).
- 2.11 The access fees for developers to use our transport models would remain the same following adoption of the BSTM, further details of which are available on the Buckinghamshire Council website. Fees are currently calculated as:
- a) A bespoke quote for each development site dependent on the scale of the work required (to be provided by Atkins from April 2023);
 - b) Plus an ‘access fee’ between £607.70 and £3120.90 (depending on the scale of the development) to cover the cost of administration;
 - c) Plus a 30% ‘maintenance fee’ which is held in reserve towards future modelling development.

3. Other options considered

- 3.1 We have considered the continued use of the 2013 baseline CTM. This is undesirable given the increasing age of the CTM: DfT guidance recommends no more than 6-8 years. The way the CTM model was designed also means it cannot meet the current

requirements of TAG, which means it cannot be used for the purposes of business case development and will also be challenged during scrutiny on the LP4B.

- 3.2 It should be noted that, as with any traffic forecasting models, it is possible that the testing undertaken using BSTM might generate different forecast of highways impacts than the CTM model, and this may not be wanted or supported by Council policy.
- 3.3 Due to the time it has taken to adopt the BSTM we have also considered recalibrating the BSTM model with post-COVID traffic data. However, this is not recommended by the DfT as post-COVID traffic has not yet settled back into regular patterns.
- 3.4 Adoption of the BSTM will not affect ongoing work on stand-alone transport models (i.e., junction- or local network models), as these use different datasets.

4. Legal, risk and financial implications

- 4.1 The authorisation of the use of a traffic model does not require a key decision or Cabinet approval. Legal advice has been sought during the adoption of previous traffic models, which stated adoption is a matter of officer judgement and discretion.
- 4.2 Service Director approval is therefore being requested to sign-off this model for use.
- 4.3 It is important to note that further delay to adoption will risk the baseline data becoming obsolete (requiring further significant investment by the Council to update it again to TAG requirements) and result in delay to strategic work proceeding, including: Aylesbury Town Centre Levelling Up fund work, the A421 corridor study, Local Plan for Bucks evidence base and Local Transport Plan modelling.
- 4.4 Planning and Transport Strategy Services have developed a risk tracker (Appendix A) which outlines the risk to various live planning applications.
- 4.5 Whilst it would be noted that most of the risks can be managed, we would draw attention to the full application at Land west of Moreton Road in Buckingham as there is moderate risk to the 5-year Housing Land Supply (HLS) if the model is adopted before that application is approved. This application has a resolution to grant subject to S106, however is currently subject to a Holding Direction from the Secretary of State.
- 4.6 It is anticipated that the Land west of Moreton Road would deliver 10 units in 2023/24, 50 units 2024/25 and 50 units 2025/26 and 20 in 26/27. This will slip if the new model is adopted ahead of this application being determined and the likely impact could be the loss of 50 units in our current 5-year Housing Land Supply.

- 4.7 The Southern Relief Road (SRL) in Princes Risborough has a resolution to grant subject to Environment Agency and Biodiversity Net Gain MoU matters being resolved. Unfortunately, EA issues remain outstanding, and a holding objection has been received. The EA have indicated they will respond by the 19th February. Proceeding with adoption of BSTM could necessitate further modelling to demonstrate no material change in the outcome of the original assessment.
- 4.8 In anticipation of this, the Council are undertaking a detailed comparison of the CTM and BSTM at Princes Risborough which will conclude on 6th February. The Council will then need to take a judgement as to whether the difference between the two models is sufficient enough to likely affect the outcome of the original testing and alter any conclusions of the EA and/or associated mitigation strategy.
- 4.9 If there is a material difference the Council will need to decide whether to: undertake another modelling assessment, revise the Environmental Impact Assessment for the PR SRL application, undertake another statutory consultation, and will be required to be returned to planning committee for redetermination. This would result in a significant delay to the delivery of the project and the potential loss of £12m HIF funding associated with this project (£6m of which has already been spent). Any delay to the adoption process presents considerable financial risk.

5. Corporate Implications:

- 5.1 Adoption of the BSTM is consistent with Corporate Plan priorities in the following ways:
- a) Increasing prosperity: encouraging sustainable economic growth through ensuring an understanding of congestion on our roads.
 - b) Improving our environment: addressing climate change and clean growth through ensuring that new developments will have acceptable impacts on road congestion.

6. Communication

- 6.1 Details of our transport models are available on the Buckinghamshire Council website. These details would be updated upon adoption of the BSTM.
- 6.2 The Development Management team will be required to inform impacted developers of the adoption of the BSTM and the implications on their applications. The demand for new strategic modelling will need to be prioritised and managed by Highways Development Management.

7. Next steps and review

- 7.1 Once adopted, any future transport modelling work undertaken would use the BSTM as a basis, with the CTM becoming obsolete. Data files pertaining to the CTM will be retained in case these need to be referenced with regards any earlier schemes.
- 7.2 Management of the suite of models held by Transport Strategy and Funding is in the process of being transferred from Transport for Buckinghamshire (Ringway Jacobs/Jacobs) to Buckinghamshire Highways (Balfour Beatty/Atkins).
- 7.3 The transition process is underway and expected to complete prior to the handover of our highway maintenance contracts between these two organisations. We are in regular contact with both parties to ensure a smooth transition.

8. Background papers

- 8.1 Transport Analysis Guidance (TAG) – information on the role of transport modelling and appraisal, and the principles upon which the BSTM has been built:
<https://www.gov.uk/guidance/transport-analysis-guidance-tag>

