



EXECUTIVE 12th July 2023

Report Title	Northamptonshire Strategic Transport Model
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Lead Member	Councillor Matt Binley, Executive Member for Highways, Travel & Assets

Key Decision	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the decision eligible for call-in by Scrutiny?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are there public sector equality duty implications?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Does the report contain confidential or exempt information (whether in appendices or not)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Applicable paragraph number/s for exemption from publication under Schedule 12A Local Government Act 1972	

List of Appendices

None

1. Purpose of Report

- 1.1. To update the Executive on the status of the Northamptonshire Strategic Transport Model, seek approval to rebuild the model in partnership with West Northamptonshire Council and to agree its funding. The rebuilt model will increase opportunities for successfully bidding and securing Government and developer funding and ensure the authority can plan and implement appropriate highway and transport schemes in the coming years.

2. Executive Summary

- 2.1. The Northamptonshire Strategic Transport Model (NSTM) is Northamptonshire's traffic model, which can be used for testing development proposals, providing an evidence base for spatial strategies, transport policies and major highway schemes. To ensure that they are representative, such models only have a limited life before new survey information and planning data is needed, and the model rebuilt.

- 2.2. Developed in 2008 by the former Northamptonshire County Council, the NSTM was last rebuilt in 2015. The NSTM has proven a robust basis to assess development impacts upon the road network and secure funding for proposed road infrastructure schemes.
- 2.3. The NSTM has not been significantly updated since 2015 and the age of the model, its assumptions and underlying data means the validity of model outputs could come under scrutiny for future assessment where:
 - Government funding is required for a major scheme
 - The model is supporting potentially contentious planning policy that requires public scrutiny and formal examination
 - There are traffic impacts arising from planned development anticipated on the local and Strategic Road Network (National Highways)
- 2.4. The Northamptonshire model is now due a rebuild, having reached the end of its current validity, both practically and according to Government guidance. An update will ensure that the NSTM is still relevant, robust and continues to be fit for appraising policies, transport improvements and development schemes.
- 2.5. Following consideration of a range of options, it is recommended that the NSTM be rebuilt in partnership with West Northamptonshire Council and upon completion each authority will operate and own its own copy of the model. This allows each authority to control access to the model, run individual scenarios and maintain appropriately.
- 2.6. The costs of the model update will be split equally between the two Councils. The update will be funded with £400,000 of accumulated Section 278 balances, together with £78,000 of fee income from use of the model by developers from each Council, making a total budget available of £556,000. Once updated, usage of the model will be charged to appropriate internal budgets or third parties, and external users will be charged a fee which will contribute to the cost of future updates.

3. Recommendations

- 3.1. It is recommended that the Executive...”
 - a) Agree to working in partnership with West Northamptonshire Council to update and rebuild the Northamptonshire Strategic Transport Model
 - b) Agree to West Northamptonshire Council being the lead procuring authority
 - c) Agree £78,000 of existing model fee income towards the development of the Northamptonshire Strategic Transport Model, alongside the £400k already set aside by both councils.

- d) Delegates authority to the Executive Member for Highways, Travel and Assets, in consultation with the Executive Director for Place & Economy, Executive Director for Finance and the Executive Member for Finance, to take any further decisions and/or actions required in connection with the procurement and award of the Northamptonshire Strategic Transport Model contract, without the need to return to the Executive
 - e) Note North Northamptonshire Council will retain ownership and ongoing management of its own independent version of the Northamptonshire Strategic Transport Model.
- 3.2. Reason for Recommendations – Unlike the other options considered, the joint revalidation of the NSTM produces financial, time and resource efficiencies whilst allowing each authority to retain future exclusive use of the model. There is a fair distribution of the costs and maintain individual approaches to the ongoing use of the Northamptonshire Strategic Transport Model.
- 3.3. Alternative Options Considered:
- For one council to validate the model completely at its cost whilst the other pays for access.
 - For each council to construct separate models.
 - Not update the Northamptonshire Strategic Transport Model

None of these options are recommended.

4. Report Background

- 4.1. The Northamptonshire Strategic Transport Model (NSTM) is key to developing the evidence base for spatial strategies, transport policies and improvements, and support for business cases. It is also used by developers to support their planning applications, helping to ensure that these are undertaken in a consistent way acceptable to the Council. The NSTM is a strategic multi-modal model covering Northamptonshire, with less detailed coverage beyond the county boundary, capable of assessing the impacts of future changes in travel demand and transport provision within Northamptonshire.
- 4.2. The NSTM is an industry standard computerised model that was built in 2008 and rebuilt in 2015. The rebuild took account of significant changes to the highway network and was supported by updated count data. The existing NSTM has been used to assess a wide range of policies and schemes for example, the Strategic Plan and supporting Infrastructure Delivery Plan, the A43 improvements as well as and assessing a significant number of development sites and their impacts upon the road network.
- 4.3. The base year data is now more than seven years old with previous Department for Transport, Transport Appraisal Guidance (TAG)/Design Manual for Roads and Bridges (DMRB) guidance recommending a six-year data source age limit.

TAG Unit M2.2 (May 2020) frequently references age of data as a potential limitation, dependent on the levels of change in travel demands over the intervening period.

- 4.4. The age of the model and underlying data means the validity of model outputs could come under scrutiny for future assessment where:
- Government funding is required for a major scheme
 - The model is supporting potentially contentious planning policy that requires public scrutiny and formal examination
 - There are traffic impacts arising from planned development anticipated on the local and Strategic Road Network (National Highways).
- 4.5. In March 2020, Northamptonshire County Council approved a rebuild of the NTSM with a budget of £495,000 made up of £400,000 of accumulated Section 278 balances and £95,000 of fee income from developers using the model. This work did not progress due to the impossibility of undertaking representative traffic counts during the Covid pandemic.

5. Issues and Choices

- 5.1. Given its age, it is important that the NSTM is updated to support the development and implementation of the Local Plan and the Local Transport Plan. Both policies will be developed and assessed through 2023 and into 2024. The model will also support any future major scheme business cases for transport infrastructure funding to Government and will also be important for the effective assessment of large new development applications and substantiating the transport improvements required to mitigate their impact.
- 5.2. The model rebuild updates underlying travel demand data, and the transport network available (recognising any changes since 2015). The new model will have a new 2023 base year informed by new travel pattern and demand data, which will be validated using traffic count data. Future forecast year(s) of the model will then be developed, informed by known transport improvements, new developments and travel demand changes. A number of reports will be produced as part of the commission providing a valuable evidence base.
- 5.3. The current NSTM contains a significant amount of information of value to an updated model and therefore remains a useful resource for both authorities. A key decision to be reached is whether the Council should have its own model, or whether a single model is retained. In this respect, the close proximity of larger towns to the North/West Northamptonshire border is key, as were separate models to be created, there would be a significant overlap, so movements were correctly modelled.
- 5.4. Options considered, alongside the benefits and constraints are set out below;
- **Option 1** - Both authorities develop separate strategic transport models based on the NSTM

- **Option 2** - One authority rebuilds the NSTM, with the other paying for use and access to the model
- **Option 3** - The model is not rebuilt
- **Option 4** – The NSTM is rebuilt jointly, with each authority managing a control version to enable future access, usage and control.

Option	Positive	Negative	Recommendation
1	<ul style="list-style-type: none"> • Maintain individual ownership and control • Establish individual charging models for third party access to the model 	<ul style="list-style-type: none"> • Establishment costs of two models is likely to be more expensive than creating a single model • More expensive for rebuilding the model and its ongoing maintenance. • Potential for the two models to have different assumptions or forecasts complicating any cross-border assessments 	This option is not recommended
2	<ul style="list-style-type: none"> • Clear lines of ownership, single point of contact • Lead authority could establish and update charging model • Regional model would support cross border assessments 	<ul style="list-style-type: none"> • Lead authority takes all the risk • Loss of control of access and unclear future costs for non-lead authority • Funding model for access uncertain 	This option is not recommended
3	<ul style="list-style-type: none"> • S278 funds could be redirected to alternative uses 	<ul style="list-style-type: none"> • The council wouldn't have a valid method of accessing schemes, large development proposals and policies which would limit access to funding, weaken effective development management, reduce planning capabilities. 	This option is not recommended
4	<ul style="list-style-type: none"> • Allows the Council full and direct access to the model. 	<ul style="list-style-type: none"> • The councils would need to agree governance arrangements, 	This option is recommended

	<ul style="list-style-type: none"> • Costs and risks shared. • Continues to allow the authority to charge for access to the model to third parties. • Likely to be most cost-effective approach in terms of model build, maintenance and management cost, as well as officer/project team resource requirements • Supports cross border assessments 	<p>approach to model rebuild as well as technical assumptions and requirements.</p> <ul style="list-style-type: none"> • Need to agree third party fee models. 	
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- 5.5. The delivery routes (including the procurement options) were subject to an analysis of the strengths, weakness, opportunities and threats (SWOT) of the issues around affordability, deliverability and flexibility; as well as both value for money and potential risk.
- 5.6. The recommended option 4 is a cost-effective solution, avoiding duplication of expenditure, while ensuring effective control for each authority. Such a joint or regional approach to modelling is not unusual allowing for wider network consideration as well as the cost and resource benefits. It is necessary for one authority to be the lead authority, responsible for the procurement of the consultants to undertake the work. It is proposed that West Northamptonshire Council is the lead procuring authority, with arrangements in place to ensure that North Northamptonshire Council is properly involved in the governance of the scheme.
- 5.7. The model rebuild will be procured via a competitive process with a national framework, such as the Crown Commercial Services or ESPO. This will ensure best value. Use of such a framework will also reduce risk, and the input required from legal services compared to an open tender procurement. Use of a framework would also save some time on the commissioning process. Despite the procurement being led by West Northamptonshire Council, both authorities will establish a contract with the appointed consultancy securing individual versions of the model as well as establishing a direct relationship with the appointed consultancy. Once the model is built, each authority will manage access to their version, with any model work by one council being independent of the activity of the other. Provisions within the contract will ensure that if a change within one model is agreed, then it can translate into the other cost effectively.

- 5.8. Given the specialist nature of the work, and to enable the management of this work, it is proposed that a consultant with specialist modelling knowledge is appointed to work on behalf of both council's and will be part of the joint project team managing the update of the model.

6. Next Steps

- 6.1. Assuming the approval of this report, work will commence to procure the NSTM update. The procurement will also include the ongoing hosting of the model, its management, maintenance and operation of the model for both authorities for its lifetime (approximately 7 years).
- 6.2. The model will require current traffic survey data to be collected in neutral months (to avoid seasonal effects), therefore, this work will be undertaken in Autumn 2023 through each authorities' term contract with Kier.
- 6.3. The model development, report and forecasts are anticipated to be completed in late Autumn 2024.

7. Implications (including financial implications)

7.1. Resources, Financial and Transformation

- 7.1.1. As described in section 4 above, in March 2020, the former Northamptonshire County Council approved funding of £495,000 towards an update of the NSTM. This was made up of £400,000 of accumulated balances from fees charged to developers for undertaking works on the public highway under Section 278 of the Highways Act 1980 and £95,000 of fee income from developers using the model towards an update of the NSTM. Given the challenges of the pandemic this work was not progressed.
- 7.1.2. Whilst the £400,000 of accumulated Section 278 balances remains committed, both North and West Northamptonshire Councils have identified further fee income that can further support this work, this funding will be provided on an equal share basis. Each Council has identified £78,000 of NSTM fee income towards this work, so the total funding available is £556,000. This is considered to be a realistic budget within which to undertake the model update, associated data gathering and consultant project team support will be delivered within the funding identified above.
- 7.1.3. Once the model is operational, the cost of model runs will be met from appropriate internal budgets for Council work, or from fees charged to developers where they wish to use the model to support their planning applications. As currently happens, external users of the model will be charged an additional fee for use of the model which will be put towards the cost of future updates.

7.2. Legal and Governance

7.2.1. The assistance of Legal Services will be sought in drawing up an appropriate contract for the model.

7.3. Relevant Policies and Plans

7.3.1. The proposal will assist the Council in meeting the priorities in the Corporate Plan around:

- Safe and Thriving Places
- Enable people to travel across North Northamptonshire and beyond
- Green, sustainable Environment
- Promote sustainable, active travel
- Embed low carbon technology, sustained and improved green infrastructure, and sustainable forms of transport fit for the future.

7.3.2. The proposal will assist the Council in developing and delivering Council's Local Plan and Local Transport Plan, which the Council has a statutory duty to deliver.

7.4. Risk

7.4.1. If the model is not updated there is a risk that the Council will not be able to demonstrate that its transport and land use policies meet the requirements of the legislation. Furthermore, the council may face difficulties resisting development proposals that come forward outside its Local Plan and also face difficulties substantiating planning obligations associated with transport improvements.

7.4.2. It would also be impossible for the Council to create any future major transport scheme business cases and obtain the Government funding available for these. This, in turn, would impact on the implementation of these plans and inhibits access to funding for delivering transport infrastructure schemes.

7.4.3. A risk register will be developed as part of the project management process and will ensure risks are identified, recorded and monitored.

7.5. Consultation

7.5.1. No formal consultation has been undertaken or is required on this proposal.

7.6. Consideration by Executive Advisory Panel

7.6.1. This matter has not been considered by an Executive Advisory Panel to date, but they would be free to consider it at a suitable date should they wish.

7.7. Consideration by Scrutiny

7.7.1. Any requests from the Place and Environment Scrutiny Committee will be responded to, and formal engagement or presentations required will take place.

7.8. Equality Implications

7.8.1. An Equality Screening Assessment has not identified any adverse impact on individuals with protected characteristics.

7.9. Climate and Environment Impact

7.9.1. The updated NSTM will include an emissions module which can utilise information exported from the traffic model to produce emission outputs supporting the development of air quality assessments and reporting to inform carbon impacts in decision making.

7.10. Community Impact

7.10.1. The updated NSTM will support effective policy and decision-making, and scrutiny, making a significant difference to the delivery of transport infrastructure and services and therefore have an equally significant impact on the local communities.

7.11. Crime and Disorder Impact

7.11.1. There are no specific impacts relating to the recommendations in this report.

8. Background Papers

8.1. None