CAMBRIDGESHIRE & PETERBOROUGH COMBINED AUTHORITY

Agenda Item No: 2.4

Transport Modelling for Cambridgeshire and Peterborough

To:	Transport and Infrastructure Committee
Meeting Date:	18th January 2023
Public report:	Yes
Lead Member:	Cllr Anna Smith, Chair of Transport and Infrastructure Committee
From:	Michael Soper, Analysis and Evaluation Manager
Key decision:	N/A
Forward Plan ref:	N/A

Recommendations:

The Transport and Infrastructure Committee is recommended to:

a) Note progress on the delivery of the Transport Model Project.

b) Recommend the Combined Authority Board agree the full business case for the Transport Model including the timeline and future arrangements for the delivery of the Model.

c) Recommend to the Combined Authority Board to approve the drawdown of £1.721m allocated within the Medium-Term Financial Plan for the delivery of the model.

Voting arrangements: b) and c) - A vote in favour by at least two thirds of all Members (or their Substitute Members) appointed by the Constituent Councils who are present and voting, to include the Members appointed by Cambridgeshire County Council and Peterborough City Council, or their Substitute Members

1. Purpose

1.1 The purpose of the report is to seek approval for the full business case for the Local Transport Model and to seek approval of the release of the 'subject to approval' funds as outlined in the Medium-Term Financial Plan (MTFP).

1.2 The Transport and Infrastructure Committee and the subsequent July 2022 Combined Authority Board have previously agreed to the release of £740k and now the remaining approx. £1.721m over the MTFP period requires approval to complete the project. As well as seeking financial approval, this paper provides an update on the work of the Transport Model Steering Group and associated consultants.

2. Background

2.1 During the assessment of recent transport studies, the DfT have suggested that the use of the existing suite of models will not be suitable going forward for use in scheme business cases due to the age of the data and the area of coverage. The issue of data age has been addressed by the recent creation of a '2019 Present Year Validation' which indicates that the model validates well within the core area of the model, but this does not address the issues with the coverage of the modelled area.

2.2 There is currently a significant number of CPCA and other organisation transport schemes either at the proposal stage or in early business case stage that require a valid transport model to test the scheme impact and benefits. The proposed new model of the whole CPCA area will enable the testing of multiple schemes for a wide range of end users, including (but not limited to):

- CPCA;
- Peterborough City Council
- Cambridgeshire County Council (CCC);
- Greater Cambridge Partnership;
- District Council Local Plans, and
- Developers.

2.3 Schemes that might benefit from the provision of the proposed model are listed in full in the appendices. There are several advantages from building a single model covering the whole of the CPCA area instead of a range of smaller scheme specific models, namely:

- The larger model will be more efficient to build and use; and
- Will ensure consistency of results across all schemes that would not be possible if the current model system continued.

2.4 In addition, the use of a single large model will enable the true level of benefits from a package of schemes to be assessed and will also enable an accurate assessment of where the benefits sit. It is important to note that without a fully TAG compliant model it will be harder for identified transport interventions to demonstrate their impact and benefits and gain government funding.

2.5 The proposed model will also facilitate the testing of the impact of a wide range of modes of Transport and will also facilitate the testing of the interchange between modes. Making a significant contribution to testing policies aimed at achieving change in mode share,

increasing sustainable modes of travel, and tackling climate change.

3 Delivering the model

3.1 The Combined Authority Board previously approved a £740k budget to commission a full business case for the transport model. Following this, CCC were appointed as lead commissioners with guidance being provided by a steering group that included representatives of Peterborough City Council and the Combined Authority.

After this, WSP-Atkins were appointed under the Cambridgeshire and Peterborough Joint Professional Services Framework (CPJPSF) to complete the Model Specification Report which has been received by the steering group, amended, and approved. Together with the financial section of this paper the Model Specification Report forms the full business case for the delivery of the model and is included within the appendices.

3.2 The core elements of the Specification Report cover:

- A review of existing models and confirmation that a renewal of modelling is required to meet the requirements of future infrastructure projects;
- A full review of available data that includes the recommendation that 2023 be used as the model's base line year, based on it being representative of the 'post-Covid' period;
- The scope of the model including geographical area, zoning, time-periods and mode types. These include cycling, walking, passenger transport (rail and bus) and Park and Ride;
- A full assessment of the software choices with the recommendation that PTV Visum be used for all elements of the model;
- Full exploration of the base modelling methodology. Including the incorporation of networks developed from existing models (with additional new work), modelling of trips and trip mode choice, journey times and quality assurance; and
- An explanation of the forecasting method including the assertion that 'Local Plan scenario' is to be the "default" forecast for future travel demand and supply with the ability to commission additional scenarios as needed.

3.3 Overall, the steering group has satisfied itself that the model as specified fully meets future requirements providing it is delivered in line with the Model Specification Report. Essentially, inputs of land use (employment and dwellings), trip generation and outputs of mode shares, distribution patterns, trip length distributions, down to detailed analysis of flows assigned to the modal networks and individual junction delays will be generated for each period modelled and available at the modelled level of segmentation and aggregated summaries. This information will then be available to inform a range of business cases.

3.4 To reflect the coverage of the model the steering group have agreed to call it the Cambridgeshire and Peterborough Combined Authority Model or CaP-CAM for short.

4. Financial Implications

4.1 The current budget profile for spending on transport modelling within the MTFP is shown below. The bulk of the 2022/23 funding allocation will need to be reprofiled into 2023-24. This is based on the decision to delay the data collection for the model to Spring 2023.

	2022-23	2023-24	2024-25	2025-26
	Delivery (see recommendation C)		Forecast Running Costs To be agreed	
Approved	£740k			
Subject to approval	£1.136m	£585k	£215k	£215k

4.2 This Committee and subsequently the Combined Authority Board are being asked to approve the further drawdown of funding to allow for the completion of the project in a timely manner. This is on the basis that a full model specification has been drawn up and a delivery plan has been developed and agreed by officers and the consultants delivering the model build. This plan is shown in detail as appendix three. The main milestones will be:

- Data collection report completed by end July 2023.
- Base model developed by end January 2024.
- Model development and validation report signed off by January 2024.
- Forecast model and forecast model report signed off by end April 2024.

4.3 It should be noted that the data collection cost of £800,000 is currently a high estimate (including a significant contingency) as the cost can vary depending on field conditions and successful collecting of 'typical' data. The total delivery cost provided by CCC is outlined as being £2,046m compared to an allocated delivery budget within the MTFP of £2,461m. The residue £415k is reserved to cover the additional costs to Peterborough City Council for integrating the Peterborough Transport Model into Cap-CAM. At present PCC forecast these costs as being £365k; this is currently being tested by CPCA project managers as part of due diligence.

4.4 The forecast running costs into years 2024-25 and beyond create an indicative cost pressure on the CPCAs revenue budget (the initial build costs being capital) and are based upon operation of the previous model by Cambridgeshire County Council. There is a precedent for aspects of the modelling to be run as a traded or chargeable service, e.g., modelling of the impact of large developments on transport being charged to the developer. The precise nature of this trading is being explored together with CCC so a present the committee / board is not being asked to approve the running cost aspect of the project until the cost is firmed up.

5. Legal Implications

5.1 N/A.

6. Public Health Implications

6.1 N/A.

7. Environmental and Climate Change Implications

7.1 N/A.

8. Other Significant Implications

8.1 N/A.

9. Appendices

9.1 Appendix 1 – Transport Schemes that will benefit from the model

9.2 Appendix 2 – Model Specification Report

9.3 Appendix 3 – Delivery plan and detailed cost estimate

Appendix One: Schemes Potentially Benefiting from Model Development

CPCA / CCC / PCC Potential Schemes

A1260 Nene Parkway Junction 15
A1260 Nene Parkway Junction 32-3
A16 Norwood Dualling
A47 Dualling
Cambridge South Station
Coldhams Lane roundabout improvements
Ely Area Capacity Enhancements
Fengate Access Study - Eastern Industries Access - Phase 1
Fengate Access Study - Eastern Industries Access - Phase 2 (University Access)
Local Transport Plan
Regeneration of Fenland Railway Stations
A141 SOBC
A10 OBC
Peterborough Station Quarter
A142 Chatteris to Snailwell
Development of Key Route Network
Harston Capacity Study
Segregated Cycling Holme to Sawtry
Fenland Stations
Buses Reform - Enhanced Partnership, franchising or BAU
Active Travel Strategy and Schemes
EV Charging Schemes and Outcomes from AFVS
Snailwell Loop
Demand Responsive Transport
Market Towns Programme
20 is plenty
First and last mile (including freight)
Heavy Vehicle Commercial Strategy
A14 Junction 37
A14 Junction 38
Queensgate Bus Interchange
City Centre Transport Vision - Peterborough
Second rail station at St Neots
Alternative bus station (HDC)
Ramsey improvements
Thorpe Wood cycleway
Junction 21 of the A15 Paston Parkway

GCP Schemes

Making Connections
CSET
Cambourne to Cambridge Bus Improvements
Cambridge Easter Access
Waterbeach to North East Cambridge

Other Schemes

A428 trunk road between the Black Cat roundabout on the A1
East / West Rail

Large Scale Strategic Developments

Alconbury Weald,
North-East Cambridge,
Northstowe,
Waterbeach, and
Cambridge Airport

Appendix Two: Model Specification Report

(See separate document)

Appendix Three: Delivery plan and detailed cost estimate
(See separate document)