

From: **Michael Payne - Cabinet Member for Highways and Transport**  
**Barbara Cooper - Corporate Director of Growth, Environment & Transport**

To: **Environment & Transport Cabinet Committee - 12/11/2020**

Decision No: **20/00104**

Subject: **Kent Transport Model Support & Development Commission**

Classification: **Unrestricted**

**Past Pathway of Paper:** None

**Future Pathway of Paper:** None

**Electoral Division:** County Wide

**Summary:** A Multimodal Strategic Transport Model is being constructed for the County Council and work is underway to set up a support and scenario testing service to enable the future use of the model by KCC, by our district and borough partners and by developers. This service will be operated on behalf of the County Council by establishing a strategic partnership with a specialist transport modelling consultancy. The service contract will allow work to be undertaken on a 'call off' basis as and when required by KCC (subject to budgets) and by other public or private sector organisations in Kent. Income received from running the service will be used to maintain the model and to contribute to its future development.

A procurement process is underway for the award of a 10 year 'call off' contract.

This report provides an overview of the key aspects of the Kent Transport Model and the Support & Development Commission and recommends the granting of delegated powers to award a contract, subject to the outcome of a procurement process.

**Recommendation(s):**

The Cabinet Committee is asked to consider and endorse, or make recommendations to the Cabinet Member for Highways and Transport on the proposed decision to grant the Director of Highways, Transport & Waste delegated powers to award a contract to maintain and develop the Kent Transport Model and to run a scenario testing service on behalf of the County Council, subject to the outcome of a procurement process.

## **1. Introduction & Background**

1.1 A Multimodal Strategic Transport Model is under construction for the County Council as part of the Highways preparations for transition. The model is being used to assist our contingency planning and to improve the resilience of the Kent network and, in the longer term, to provide a platform for 'near real time' modelling and identifying network

interventions as incidents and congestion arise. The model will be completed during 2020 and the associated commission will run until 31 March 2021.

- 1.2 The building of the Kent-wide model provides the County Council with a real opportunity to better inform long term transport planning by providing a readily available evidence base. It is intended that the model will be used as the basis for all future significant transport modelling in Kent, including that required by third parties, replacing bespoke commissioning processes where modelling is required as part of other work, improving consistency between outputs and allowing cross district boundary impacts to be better understood across the county.
- 1.3 The model will be able to be used for a wide range of tasks including option testing of land use scenarios and providing the transport and emissions evidence base for Local Plans; transport infrastructure scheme identification; option testing for network management measures; and analysis to help build business cases for bids for external funding, which often need to be produced to very short bidding deadlines.
- 1.4 To enable the best use of the model, it is proposed that the transport modelling scenario testing service be available both for the County Council and for third parties including the Kent district and borough councils and developers. Income generated from charges levied to developers to access the model, who will not need to develop their own models from scratch, will be used to keep the model up to date and to reinvest in its future development.
- 1.5 An assessment has been undertaken of our options for maintaining and operating the Kent Transport Model as a service. The recommended approach is to procure a specialist transport modelling consultancy for a long-term commission (of up to 10 years including a break clause at year 5). This approach, where we will have a strategic relationship with a single supplier, provides the best return in terms of process efficiencies, effective transport and land use planning, value for money, future model innovation and potential for generating income for reinvesting in the model updates and development.
- 1.6 A procurement process is now underway for the award of a strategic transport modelling commission to a transport modelling consultancy. This report provides an overview of the key aspects of the Kent Transport Model and the principles of the future Support & Development Commission. Authority is sought for the Director of Highways, Transport & Waste to have delegated powers to make an award subject to the outcome of the procurement.

## **2. Financial Implications**

- 2.1 A financial appraisal has been undertaken, investigating previous and future potential spend on modelling as well as comparisons with other transport authorities operating a modelling service.
- 2.2 The contract value sought is £15.6m over a period of 10 years to give sufficient commissioning capacity to avoid the need to keep undertaking re-procurements and incurring model hand over costs and inefficiencies. This is a 'call off' total and KCC are not guaranteeing any work and funding to the supplier, beyond allocations for

handovers at the start and end of the contract and undertaking updates which are estimated at £320k over the 10 years.

- 2.3 The exact magnitude of work that could go through this contract is difficult to determine accurately as it is dependent on national and local development demand, funding and policy. A financial appraisal has been undertaken, investigating previous and future likely spend including comparisons with other transport authorities operating a modelling service. In the 2019 calendar year it is estimated that the total spend on modelling by KCC, the Kent districts, borough and developers, which could have been placed through this commission, amounted to £800k. Following investigations of other transport authority expenditure, together with projecting forward likely modelling spend 'triggers' such as Local Plan review dates, it is estimated that a reasonable commission value would be £1.56m per annum. Placing this commission will enable transport modelling work from KCC and third parties to be undertaken where funding has already been allocated and approved separately as part of these projects.
- 2.4 Subject to the performance of the economy and housing market, it is anticipated that projected fees paid by developer funded work could generate an income of circa £1m over the lifetime of the contract. This income will cover the £320k cost to KCC of maintaining the model over the 10 years and facilitate its future development.

### **3. Policy Framework**

- 3.1 The scheme has a strong fit with the objectives of 'Increasing Opportunities, Improving Outcomes: Kent County Council's Strategic Statement (2015-2020)' and is in line with the draft objectives and outcomes set out for the future 5 Year Plan. The model will be used to provide an evidence base to:
- Inform and improve recommendations on development options within Local Plans working in partnership with the Kent district councils
  - Determine transport policies
  - Identify and test scheme scenarios
  - Provide inputs to business cases to support bids for much needed investment in Kent's transport infrastructure and, in the longer term,
  - Contribute to measures to improve the resilience of the Kent transport by providing a 'near real time' link between changing traffic flows and active mitigations

### **4. The Kent Multimodal Strategic Transport Model**

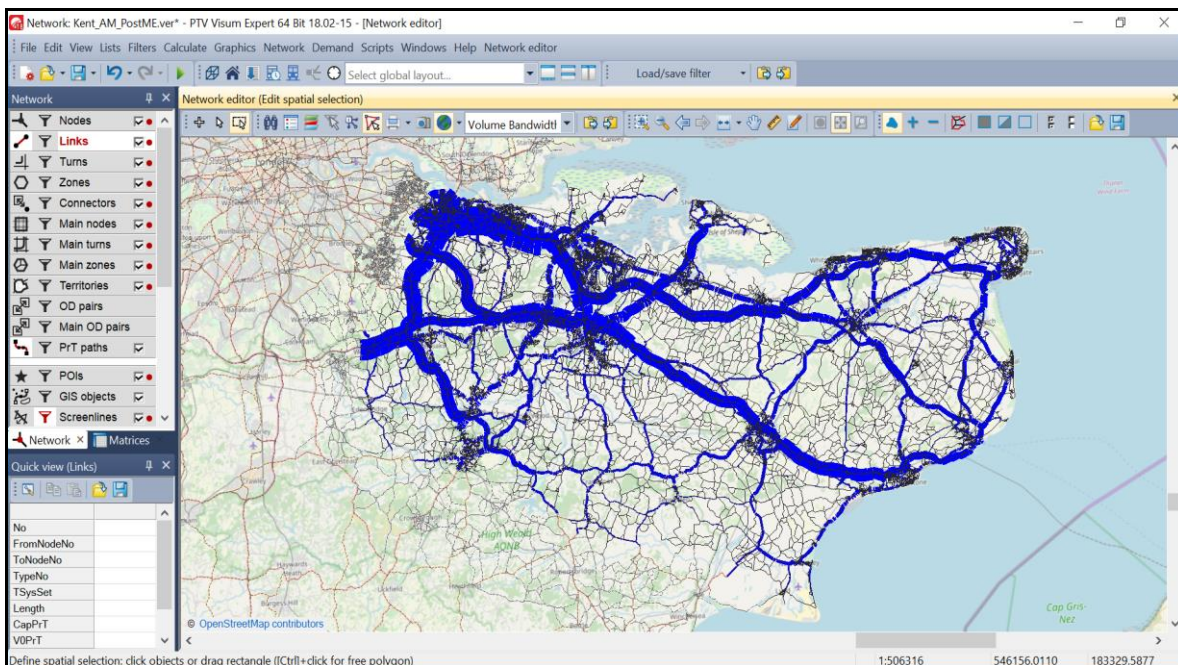
- 4.1 The Kent Transport Model is being built using a wide range of data sources including existing classified traffic count data, other Kent area transport modelling, traffic signal timings, anonymised and aggregated mobile phone records to determine origins and destinations, public transport timetable information, rail passenger numbers and journey time surveys.
- 4.2 The Model will have the following outputs and the ability to show these on maps and graphs via a series of dashboards:

- Am, Pm and Interpeak hour traffic flows, delays and journey times
- 2019 base year model and 2037 scenario year model
- HGV flows
- Public transport trips and ability to model mode shift
- Road casualties
- Vehicle emissions data for NOx, PM10, PM2.5 and CO<sub>2</sub>
- Scheme economics information (benefits to cost)

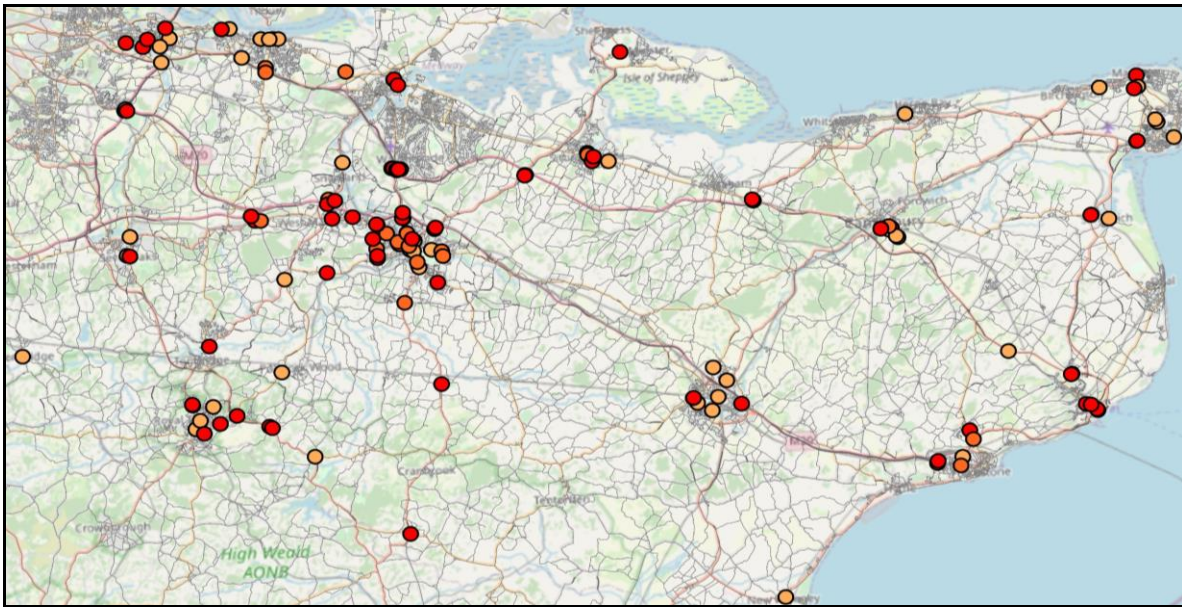
4.3 Highways England (HE) have been kept apprised and have contributed network data to the model build. In turn, information from the Model is being shared with HE and regional bodies such as Transport for the South East (TfSE) to be incorporated in updates to their modelling and data sharing programmes such as Project View as well as with neighbouring authorities including Medway Council, to improve integration and cross border working. Officers have also engaged the Kent district and borough councils and with the Kent & Medway Air Quality Monitoring Partnership in terms of the vehicle emissions data and how this will be presented.

4.4 Good progress is being made with the model build. The 2019 highway model has been completed. It is anticipated that work on the 2037 scenario, the public transport model and the dashboards will be completed by December. Initial outputs have been used to consider the impact of Operation Fennel and to feed into the business case for the A229 Blue Bell Hill junction improvement scheme. Example outputs for 2019 are shown below:

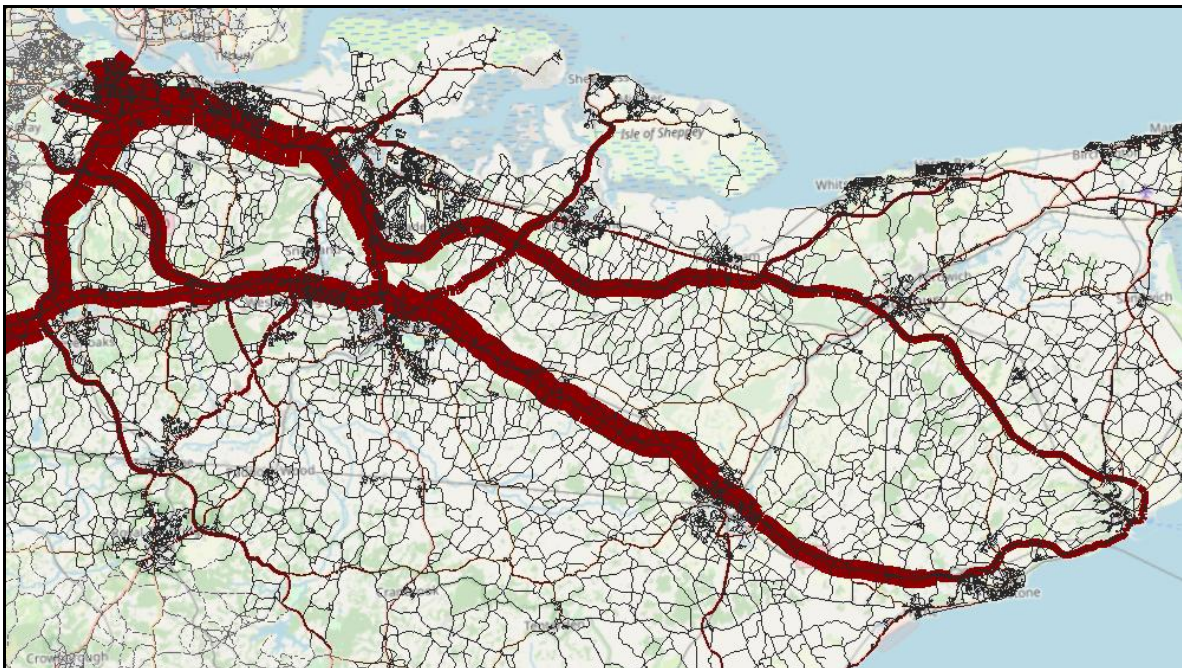
#### AM Peak Hour Traffic Flows:



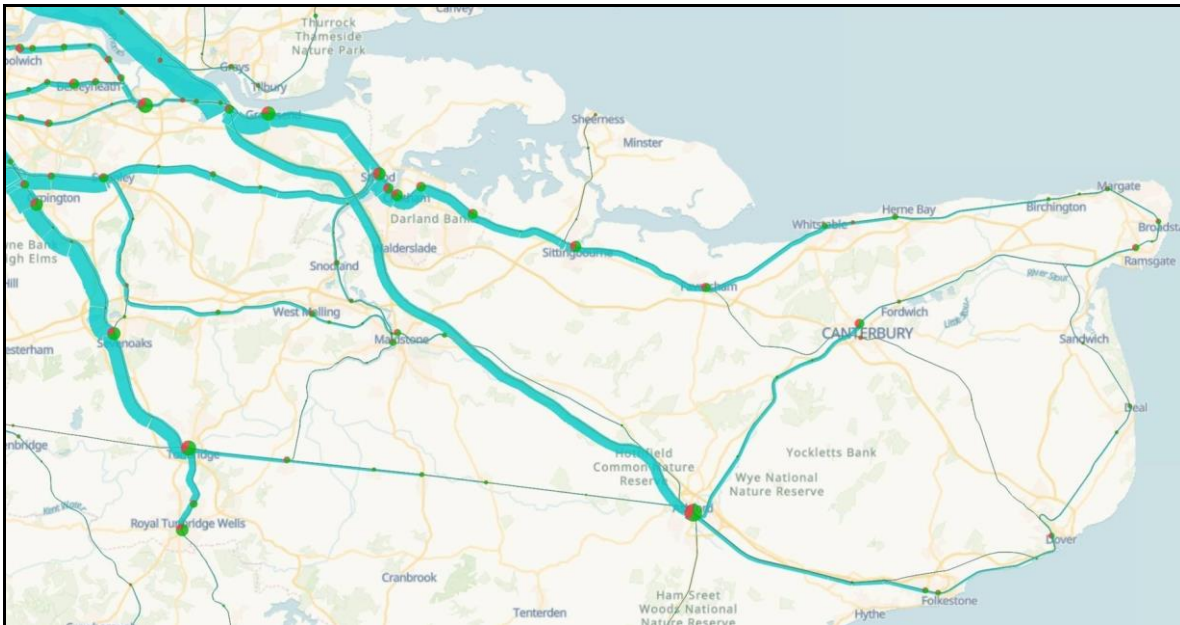
Peak Hour Delay Hotspots:



AM Peak Hour HGV Volumes:



## AM Peak Rail Journeys and Stations (Boarding in green, alighting in red):



4.5 Whilst the long term implications of Covid19 are still to be determined in terms of future trip projections and mode share, the model can be adapted to allow for increased working from home as well as to reflect the reduced number of passengers using public transport.

## 5. The Scenario Testing Service

5.1 Some 10 Transport Authorities in the UK have large area transport models and formal charging regimes in place for third parties to access their models. These include Buckinghamshire, Essex, Hampshire, Hertfordshire, Transport for London, Leicestershire, Medway, Northamptonshire, Surrey and Worcestershire. Most councils employ specialist consultancy support to run a 'charged for' modelling service.

5.2 There are estimated to be at least 8 transport modelling consultants who could run a service using the Kent Transport Model and provide the necessary 'reach back' and technical innovation specified in the commission. Some consultants also work for developers in Kent. However, a key requirement for the contract is that the supplier will not have an actual or a perceived conflict of interest for the duration of the commission.

5.3 It is planned that any organisation or business looking to use the Kent Transport Model will sign an Access Agreement with the County Council to enable work to be commissioned. In addition to the fees charged by the consultant for carrying out the work, the County Council will also make a charge to fund future maintenance and development of the model. This charge will primarily be levied on the private sector.

## 6. Legal, Equalities and Data Implications

6.1 Legal advice has been obtained and has been incorporated into the procurement documentation.

- 6.2 An Equalities Impact Assessment has been produced and it can be confirmed there are no equalities implications from awarding this commission.
- 6.3 A DPIA screening report has been completed and there are no implications in terms of use of personal data.

## **7. Conclusions**

- 7.1 The building of a Strategic Transport Model for Kent represents a step change for the County Council to improve our evidence base for decision taking in transport and land use planning. The commissioning of a support and scenario testing service will enable the future use of the model by the County Council, our district and borough partners and Kent developers to understand the impact of different scenarios in terms of traffic, trips, crashes and emissions over a wide area. Income received from running the service will be used to maintain the model and to contribute to its future development.

## **8. Recommendation(s)**

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## **9. Contact details**

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