

<b>14 November 2017</b>	<b>ITEM: 9</b>
<b>Planning Transport, Regeneration Overview and Scrutiny Committee</b>	
<b>Thurrock Intelligent Transport Systems (ITS) Strategy</b>	
<b>Report of:</b> Fred Raphael, Transport Development Manager	
<b>Accountable Directors:</b> Steve Cox, Corporate Director, Place	
<b>This report is Public.</b>	

## **Executive Summary**

Thurrock is experiencing persistent pressures on its road network. The local (LRN) and strategic (SRN) experiences heavy traffic congestion during weekday and weekend peak traffic periods. The existing situation on the road network adversely impacts Thurrock's businesses and residents, especially those businesses in the freight and logistics sector whose operations rely heavily on the road network and are therefore extremely vulnerable to adverse conditions on the network. Urgent action is needed to tackle the existing problems on the road network. Furthermore, the road network needs to be future-proofed in terms of its efficiency and resilience, to sustain economic productivity and support economic growth.

Appropriate and timely mitigation and solutions aimed at tackling the problems on the road network are needed to ensure that the local and strategic road networks do not eventually become a barrier to economic growth and productivity in Thurrock. The consequences of Thurrock Council adopting a 'do-nothing' approach will be disastrous for the local and national economy, given the national significance of businesses such as the three (3) ports in Thurrock.

Intelligent transport systems (ITS) is considered an effective tool in assisting the council achieve its objective of improving congestion on its network. ITS on its own will not resolve all of the present and future pressures on the road network but in combination with other interventions it can make be effective in improving the performance of the existing network, as well as providing a roadmap for delivering a fit-for-purpose future road network.

The overall aim of the Thurrock Intelligent Transport Systems Strategy is to provide the council's road network managers with state-of-the-art tools, in the form of integrated technological solutions, and by sharing road network information with Highways England, neighbouring Local Highway Authorities (LHAs) and other key stakeholders.

## **1. Recommendation(s)**

- 1.1 That the Committee considers this Intelligent Transport Systems Strategy and provide comments for the final document for final submission and adoption at January 2018 Cabinet.**

## **2. Introduction and Background**

- 2.1 “Intelligent Transport Systems” (ITS) is a catch-all term that refers to the use of technology-based solutions and applications in transport systems – such as information and communications technology in transport infrastructure and services, enabling data to be collected and shared to maximise the efficiency of transport networks. ITS encompasses a variety of technologies, ranging in their complexity and functionality. These include technologies designed to monitor and capture data; manage and control systems and communicate valuable information to end-users through an array of media e.g. variable message signs.
- 2.2 The key drivers behind Thurrock’s ITS Strategy include local congestion and difficulties on and off the Strategic Road Network (SRN) – often arising from incidents at Dartford Crossing, particularly in the west of the borough, due to its proximity to the SRN (M25/A282) and Dartford Crossing.
- 2.3 The national picture shows a rising demand for road travel and indications are that road usage is set to increase even further, reflecting both economic and population growth. The consequences of increasing demand for travel on the road network include increased traffic congestion, and corresponding economic and environmental impacts.

## **3. Issues, Options and Analysis of Options**

- 3.1 Thurrock’s increasing prominence as a logistics and distribution hub, combined with the fact that a possible 30,000 new homes could be built over the next two (2) decades as part of the new Local Plan, stresses the need to improve the congestion in the area. The negative impact that congestion is having on both residents and businesses has made it a top priority for the Council, this has led to the creation of Thurrock’s Congestion Task Force. The traffic signals in the borough are currently maintained and operated by Essex County Council. Advances in technology and the introduction of cloud-based urban traffic management control (UTMC) systems make it possible, if certain investments were made, to take control of the Thurrock network during an incident and manage the incident from any location. This would enable Thurrock Council to respond rapidly to incidents and events that are impacting its network, effectively reducing congestion in the borough.
- 3.2 There is a drive to improve the network around the Dartford Crossing, both at a local and national level, therefore, additional funding streams may be available to Thurrock. Highways England has a specific South East programme around collaboration with Local Highway Authorities, the Collaborative Traffic Management Programme (CTM), which will provide

Thurrock with opportunities for collaboration with Highways England and other local authorities. It is recognised by Thurrock that it is a good time to be investing in the network, showing a proactive response to the congestion in the borough and recognising the activities of other stakeholders in the area.

- 3.3** The first step to realising traffic congestion benefits through ITS is the development of an ITS strategy for congestion management. To date, Thurrock has not had its own ITS strategy. The ITS strategy will allow the borough to plan its investment in technology, ensuring the right technology is invested at the right time, to gain the maximum benefit from the technology. This ITS Strategy for congestion management will be the initial step that will create the base to allow for the following activities:
- Soft market testing in line with the Thurrock ITS strategy for congestion management;
  - The development and implementation of a procurement programme including the preparation of specifications and a programme for installation of ITS infrastructure.
- 3.4** Due to Thurrock's location and reliance on the Strategic Road Network, the ITS Strategy needed to consider how best to integrate and collaborate with Highways England to improve congestion for the benefit of Thurrock businesses and residents. The Highways England Collaborative Traffic Management (CTM) programme is currently being delivered. Thurrock is therefore in a strong position to ensure investment in ITS is aligned with the Highways England programme of works and will allow for future collaboration and joint network management with Highways England.
- 3.5** Collaborative Traffic Management uses ITS to share data between local highways authorities (LHA) and Highways England. This integration will be achieved through an Urban Traffic Management Control (UTMC) system. A Thurrock cloud-based UTMC system is the principal ITS technology that will be used to integrate with HE and neighbouring authorities systems. A Thurrock UTMC system will utilise the latest open standards to promote data collection and sharing, and co-ordinating interventions for network management with HE and neighbouring authorities.
- 3.6** In addition to a cloud-based Thurrock UTMC, the strategy sets out the council's approach to utilising supporting technologies such as CCTV (Closed Circuit TV) and vehicle detection to manage and monitor traffic and air pollution. The strategy describes the ITS technologies and presents a 5-Year (2018-2022) delivery Roadmap, which outlines the timescales for delivering these technologies.
- 3.7** The strategy describes the Thurrock ITS architecture, which is made up of five (5) essential parts:
- i. The UTMC system (the systems core);
  - ii. ITS inputs from road network monitoring technologies;

- iii. ITS inputs from other data sources like Port of Tilbury and DPD World London Gateway;
- iv. Interventions that can be undertaken by the network managers.
- v. ITS outputs to inform road users about current traffic conditions.

#### **4. Reasons for Recommendation**

- 4.1 The ITS strategy responds to the need to improve the efficiency and resilience of Thurrock road network and the strategic road network for the benefit of local businesses and residents. It provides a roadmap for delivery of appropriate technology based interventions and for integrating with the urban traffic management control systems of neighbouring authorities – to resolve current traffic problems on the network as well as assist with future-proofing the resilience of the network.

#### **5. Consultation (including Overview and Scrutiny, if applicable)**

- 5.1 This strategy was developed through consultation with key stakeholders, including the neighbouring highway authorities (Highways England, Essex County Council and Kent Council County), local business representatives (such as Intu Lakeside and DP World London Gateway), transport operators (Ensign and Arriva) and other Thurrock Council departments. The strategy was developed through several iterations, refined at key points to reflect the inputs from consultations.
- 5.2 The current iteration of the ITS strategy was presented and discussed at the last meeting of the Thurrock Congestion Task Force on 10<sup>th</sup> October 2017. The response from the group was generally positive and their comments have been collated and will be reflected through the next iteration of the document. These changes will be minor. Further minor changes in response to comments from the portfolio holder (Councillor Brian Little) include making additional references to air quality and heavy goods vehicles (HGVs) through the document. These changes will be made in the next iteration of the document.
- 5.3 Thurrock's Digital team were consulted in the development of this strategy and the proposed adoption draft of the ITS Strategy compliments 'Connected Thurrock – Thurrock's Digital & Information Technology Strategy 2017-2020'.

#### **6. Impact on corporate policies, priorities, performance and community impact**

- 6.1 Improved management of the local and strategic road network plays an important role in meeting the council's objectives and priorities. Improving congestion on the road network will deliver benefits for local businesses and communities including improved journey times and reduce air pollution.

## **7. Implications**

### **7.1 Financial**

Implications verified by: **Laura Last**  
**Management Accountant**  
**(Environment and Place)**

This report serves as information only and therefore has no financial implications.

### **7.2 Legal**

Implications verified by: **Vivien Williams**  
**Planning and Regeneration Solicitor**

This report serves as information only and therefore has no legal implications.

### **7.3 Diversity and Equality**

Implications verified by: **Natalie Warren**  
**Community Development Manager**

This report serves as information only and therefore has no diversity and equality implications.

### **7.4 Other implications** (where significant) – i.e. Staff, Health, Sustainability, Crime and Disorder)

There are no other implications.

## **8. Background papers used in preparing the report** (including their location on the Council's website or identification whether any are exempt or protected by copyright):

None

## **9. Appendices to the report**

- Appendix 1 - Draft Thurrock Council Intelligent Transport Systems (ITS) Strategy – 29<sup>th</sup> September 2017

### **Report Author:**

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