

# Report of the Strategic Director (Regeneration and Culture) to the joint meeting of the Bradford South and Bradford East Area Committee to be held on 27th June 2013.

**A**

---

## Subject:

Report detailing current traffic flow and journey time analysis associated with a section of the A650 Wakefield Road and Tong Street corridor with particular emphasis on the outbound High Occupancy Vehicle (HOV) lane.

## Summary statement:

This report gives information on the current traffic flow and journey time analysis associated with a section of the A650 Wakefield Road and Tong Street corridor and outlines possible options to pursue following the expiration of the Experimental Traffic Regulation Order (ETRO) for the HOV lane on 12<sup>th</sup> September 2013.

---

Barra Mac Ruairi  
Strategic Director: Regeneration and Culture

## Portfolio:

Environment & Sustainability

Report Contact: Richard Gelder  
Transport Development Manager  
Phone: (01274) 437603  
E-mail: richard.gelder@bradford.gov.uk

## Overview & Scrutiny Area:

Environment and Waste Management

**Wards:** Ward 25 Tong  
Ward 5 Bowling and Barkerend

140613PAB01



## 1.0 SUMMARY

- 1.1 This report gives information on the current traffic flow and journey time analysis associated with a section of the A650 Wakefield Road and Tong Street corridor and outlines possible options to pursue following the expiration of the Experimental Traffic Regulation Order (ETRO) for the HOV lane on 12<sup>th</sup> September 2013.

## 2.0 BACKGROUND

- 2.1 It was resolved at the joint Bradford South and Bradford East Area Committee meeting held on 27<sup>th</sup> November 2012 *“that the A650 HOV lane continue to operate in its current form, and that regular police enforcement be employed in order to deter infringement offences. A further report updating information on journey times, car occupancy and public transport usage was to be prepared for a joint Bradford South and East Area Committee meeting to be held in June 2013, by which time the UTC strategy manager will have been implemented and effects measured, and more information should be available regarding whether major improvements on Tong Street are to be included within the proposed West Yorkshire Plus Transport Fund”*.
- 2.2 With regard to journey times, and to establish whether previous measures implemented have been successful, further data was collected in May 2013 to update the data collected previously in 2009 as part of a “before” study, and in October 2012, when the HOV lane was in operation and amendments to 4 no. pedestrian crossings along Tong Street were complete. For clarity, the data shown in the tables below present the results of the data collected from all three studies.
- 2.3 To determine car journey times, data was collected manually using enumerators driving along the A650 between the New Hey Road/Neville Road roundabout on Wakefield Road and the A650/A58 Whitehall Road/Drighlington by-pass roundabout. Timings were recorded at various points along the route and the results for the full journey between the New Hey/Neville Road roundabout and the A650/A58 Whitehall Road/Drighlington by-pass roundabout are summarised below.
- 2.4 Inbound morning peak journey times and average speeds have improved as a result of the amendments to the pedestrian crossings on Tong Street which has smoothed traffic flow. The majority of delays inbound are as a result of traffic queuing on Westgate Hill Street to the junction with Tong High School, where delays here average 3 minutes and 56 seconds and the junction with the A651 Bradford Road where delays equal 1 minute 23 seconds.

### Morning Peak Inbound (into Bradford)

	<b>Average Speed</b>	<b>Average Time</b>	Minimum Time	Maximum Time
2009	13.5 mph	14 min 47 secs	6 min 5 secs	41 min 2 secs
2012	11.1 mph	18 min 2 secs	8 min 10 secs	47 min 55 secs
<b>2013</b>	<b>13.9 mph</b>	<b>14 min 26 secs</b>	<b>7 min 3 secs</b>	<b>29 min 54 secs</b>

- 2.5 Outbound morning peak journey times have seen a slight improvement with a saving of 30 seconds for all road vehicles compared to October 2012. Users of the HOV lane gain a 50 second saving compared to single occupancy vehicles on the section approaching Knowles Lane.

**Morning Peak Outbound (out of Bradford)**

	<b>Average Speed</b>	<b>Average Time</b>	Minimum Time	Maximum Time
2009	20.8 mph	9 min 43 secs	6 min 19 secs	33 min 45 secs
2012	17.6 mph	11 min 26 secs	6 min 33 secs	33 min 35 secs
<b>2013</b>	<b>18.5 mph</b>	<b>10 min 56 secs</b>	<b>6 min 33 secs</b>	<b>28 min 39 secs</b>

- 2.6 Inbound evening peak journey times have continued to deteriorate with an average increase of 50 seconds compared to October 2012. This is a result of congestion approaching the junction with Tong High School where average delays equal 2 minutes 24 seconds.

**Evening Peak Inbound (into Bradford)**

	<b>Average Speed</b>	<b>Average Time</b>	Minimum Time	Maximum Time
2009	19.7 mph	10 min 11 secs	6 min 34 secs	14 min 34 secs
2012	19.5 mph	10 min 17 secs	7 min 1 sec	14 min 36 secs
<b>2013</b>	<b>18.1 mph</b>	<b>11 min 7 secs</b>	<b>7 min 8 secs</b>	<b>17 min 18 secs</b>

- 2.7 Outbound evening peak journey times have seen a slight improvement for all vehicles with average journey times improving by 33 seconds. Compared to the previous survey undertaken in October 2012 there has been a significant improvement for users of the HOV lane, multi occupancy vehicles save an average of 3 minute 55 seconds compared to single occupancy vehicles in terms of journey time.

**Evening Peak Outbound (out of Bradford)**

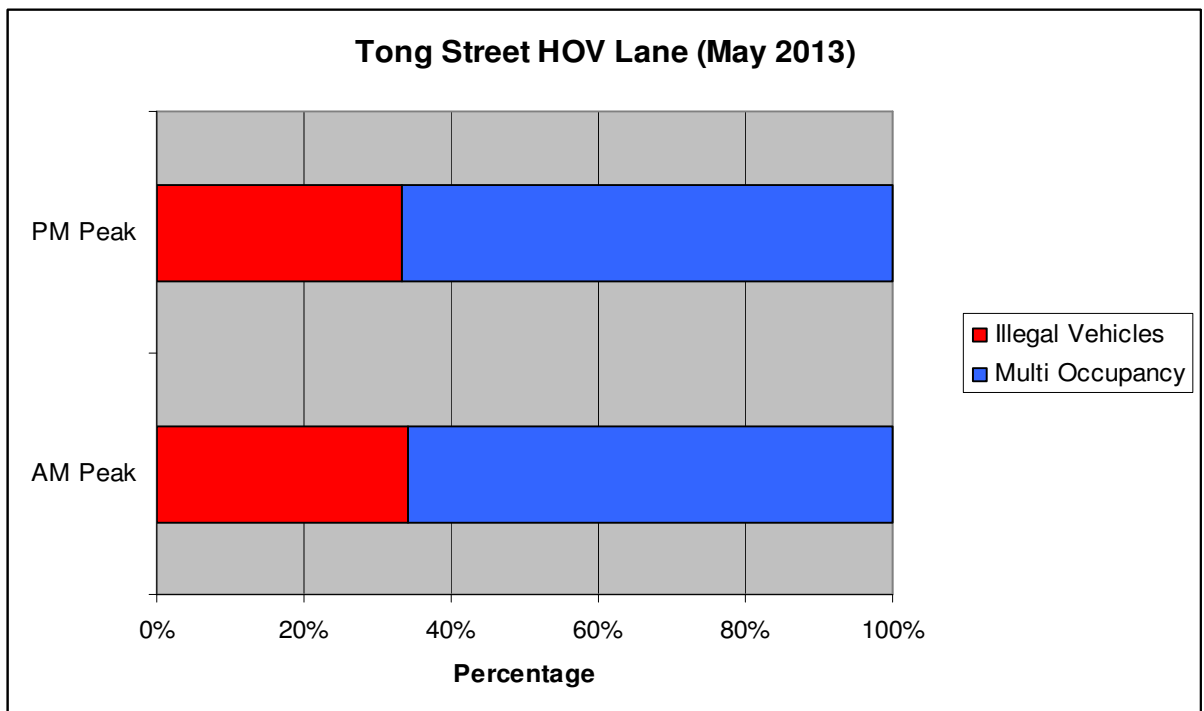
	<b>Average Speed</b>	<b>Average Time</b>	Minimum Time	Maximum Time
2009	13.9 mph	14 min 35 secs	7 min 17 secs	27 min 29 secs
2012	13.2 mph	15 min 21 secs	7 min 32 secs	29 min 47 secs
<b>2013</b>	<b>13.7 mph</b>	<b>14 min 48 secs</b>	<b>8 min 4 secs</b>	<b>31 min 35 secs</b>

- 2.8 The improved journey times for multi occupancy vehicles are summarised in the table below.

**Journey Time savings for HOV lane users compared to single occupancy vehicles**

	Oct 2012	May 2013
AM outbound	12 seconds	50 seconds
PM outbound	51 seconds	235 seconds

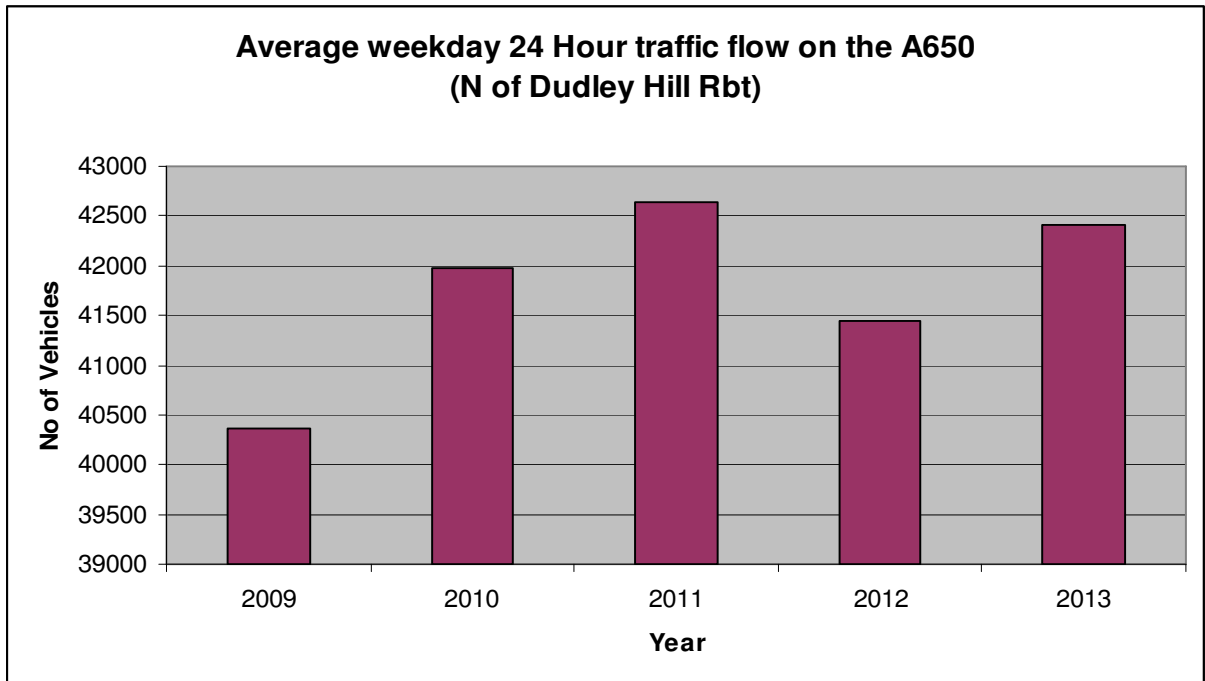
2.9 The performance of the HOV lane is being compromised by the numbers of single occupancy vehicles illegally using the lane. A survey undertaken last month found that 173 vehicles in the morning and 266 vehicles in the evening used the lane illegally (and accounted for approximately a third of all vehicles in the lane). Unlike conventional bus lanes, HOV lanes are not yet suitable for camera enforcement as current technology cannot establish with certainty the number of occupants travelling within a vehicle. (Section 144 of the Transport Act 2000 provides the necessary powers to enable the Secretary of State by regulation to make provision for the imposition of penalty charges in respect of bus lane contraventions. In 2009, CBMDC were granted these powers as part of the successful application for civil enforcement).



2.10 Previous enforcement of the HOV lane was carried out by the West Yorkshire Police during 2012, and the results of two enforcement sessions were detailed within the Report to the Bradford South and Bradford East Area Committee on 22<sup>nd</sup> November 2012. Enforcement sessions are arranged through liaison between CBMDC officers and the police, and CBMDC covers the cost of overtime paid to police officers to enforce the HOV lane. Unfortunately, due to a lack of resources no enforcement sessions have taken place in 2013 to date, but, following recent discussions between the two parties, a resumption of enforcement activity should occur in due course.

2.11 Comparing average journey times for all motor vehicles it is apparent that whilst there has been a general improvement compared to 2012 journey times still exceed those in 2009. The graph below illustrates the changes in the amount of traffic recorded on the A650 just north of Tong Street between 2009 and 2013. Comparing 2009 to 2013 traffic flows have increased by 2,060 vehicles which is equivalent to a 5.6% increase. The

additional traffic results in greater levels of congestion and has a negative impact on journey times for motor vehicles in the Tong Street Area.



- 2.12 The HOV lane does not appear to have had a positive impact on car occupancy along Tong Street. Car occupancy levels remain below the average for the rest of the district and whilst it can take considerable time for commuters to change their travel behaviour these results are disappointing.

**Average car occupancy (Tong Street)**

	2009	2012	<b>2013</b>	Bradford district (2012)
AM Inbound	1.17	1.12	<b>1.14</b>	1.29
PM outbound	1.24	1.28	<b>1.26</b>	1.40

- 2.13 Average bus occupancy has fallen slightly on services using Tong Street according to data collected by Bradford Council. This mirrors the general decline in bus patronage across all routes into the city centre where patronage fell by 4% in 2012. Arriva who operate services along Tong Street commented that “since the HOV lane was introduced they have seen improvements in reliability and punctuality on their services”. They also comment that “passenger numbers have remained the same in the Bradford area which is encouraging as they have seen a slight decline in other areas of Arriva’s Network”.

**Average bus occupancy (Westgate Hill Street)**

	2009	2012	<b>2013</b>
AM Inbound	17	20	<b>18</b>
PM outbound	20	25	<b>19</b>

**3.0 OTHER CONSIDERATIONS**

- 3.1 Construction work associated with the £150 million Highways Agency scheme on the M62 is still ongoing, scheduled for completion in late 2013. Although congestion associated with the construction work, together with accidents and breakdowns on the M62 still impacts on the A650 on occasions, the problems should reduce as the Highways Agency scheme approaches completion.
- 3.2 Bluetooth monitors have now been installed by the CBMDC UTC Unit on various traffic signal poles from Dudley Hill roundabout to Tong School to enable both inbound and outbound journey times along this section of the A650 corridor to be accurately measured. Unfortunately, due to technical software problems, it will be a few weeks yet before the system is working. Once operational the UTC strategy manager will be able to monitor journey times and various alterations can be made to signal timings automatically. Strategies will be implemented once thresholds are reached for journey times, in order to increase main road traffic flow. These changes will be for a short period of time, and will give priority to main road traffic. A down side of this is that all other movements at the junctions will suffer due to the increase in cycle time, pedestrians will have an increased wait to cross and side road traffic will have a longer time to wait and a shorter green time. Once journey times have decreased the strategy will cease and the signals will revert back to normal operation.
- 3.3 The HOV lane is currently subject to an Experimental Traffic Regulation Order (ETRO) which expires on 12<sup>th</sup> September 2013. During the first six months no objections were received, and as such, the period for objections has now expired. However, if the restrictions are to be made permanent, a further Order must be made prior to 12<sup>th</sup> September 2013 so that no date overlap occurs. To enable the CBMDC Legal Section to meet this requirement, the necessary procedures, (including advertisement stating that the provisions of the ETRO have been made permanent), will need to commence in early August 2013.
- 3.4 Major improvements to Tong Street have been identified as one of the Core Projects to be delivered through the West Yorkshire Plus Transport Fund, which has been agreed in principle by the five West Yorkshire Local Authorities, the West Yorkshire Integrated Transport Authority and York Council. Final approval to the fund will not be confirmed until later this year following the outcome of negotiations with the Government on the Leeds City Region 'City Deal'. If approval is granted, any improvement scheme will need to incorporate within the design measures that benefit all modes of transport.

## **4.0 OPTIONS**

- 4.1 Option 1 – That the experimental TRO for the HOV lane be made permanent as from 12 September 2013, and that a regular enforcement regime is arranged following prior agreement with the police.
- 4.2 Option 2 – That the Experimental Traffic Regulation Order for the HOV lane is allowed to lapse, but the existing infrastructure associated with it is kept in place. All vehicles would then be legally allowed to use the HOV lane, with the traffic signals located at the end of the HOV lane being used for traffic control management as and when necessary.
- 4.3 Option 3 – That the HOV lane is taken out of commission. This would involve removing the infrastructure, incurring both cost (estimated at £40K) and disruption whilst the works are in progress. The results would be that any time savings for HOV lane users would be lost, and all vehicles would revert to queuing back from the Knowles Lane junction.
- 4.4 Option 4 – That the HOV lane be changed to a bus lane (with allowance for taxi and cycle use), which would then enable camera enforcement to be introduced. Although this option would invariably result in a reduction of abuse, and would benefit bus journey times, the current bus frequency rate (five bus services per hour) would mean that the bus lane would remain vehicle free for long periods. Although low cost modifications could be made to the traffic signals located at the end of the HOV lane to increase “green time” for general traffic, further research in the form of traffic modelling would be recommended to ascertain the likely effects of this option. Whilst the current ETRO could not be simply formalised with the exclusion of the HOV element it would be possible to undertake the necessary consultation and re-advertisement of a bus lane TRO in a period of 4 to 6 weeks (subject to receipt of objections) which could mean that the bus lane TRO would be in place prior to the expiration of the ETRO.

## **5.0 FINANCIAL & RESOURCE APPRAISAL**

### **5.1 Financial Appraisal**

- 5.1.1 Funding for future monitoring and enforcement of the HOV lane can be sourced from existing revenue budgets.
- 5.1.2 Funding for Option 2 would need to be sourced from LTP budgets and could potentially reduce funding or delivery of other planned schemes through to the end of the Implementation Plan 1 period (March 2014).

### **5.2 Resource Appraisal**

- 5.2.1 Any further monitoring or design works to the A650/Tong Street corridor can be carried out using existing staff resources subject to the availability of funding as outlined above.

5.2.2 Implementation of any of the options outlined in this report can be resourced from existing staff resources.

## **6.0 RISK MANAGEMENT**

6.1 There are no perceived risks arising out of the implementation of the proposed recommendation.

## **7.0 LEGAL APPRAISAL**

7.1 The Council activities contained within this report can be delivered under the Council's powers as Highway and Traffic Regulation Authority.

## **8.0 OTHER IMPLICATIONS**

### **8.1 Equal Rights**

8.1.1 Equality is an important consideration for schemes within the Local Integrated Transport programme. Application of the budgets at a local level within the diverse communities of the Bradford East constituency will assist in the provision of inclusive environments catering for the needs of people with mobility impairments.

### **8.2 Sustainability Implications**

8.2.1 No further sustainability implications have arisen since those presented in the Report to the Bradford South and Bradford East Area Committee on 22<sup>nd</sup> November 2012.

### **8.3 Greenhouse Gas Emissions Impacts**

8.3.1 No additional information has been obtained which updates that presented in the Report to the Bradford South and Bradford East Area Committee on 22<sup>nd</sup> November 2012.

### **8.4 Community Safety Implications**

8.4.1 No further community safety implications have arisen since those presented in the Report to the Bradford South and Bradford East Area Committee on 22<sup>nd</sup> November 2012.

### **8.5 Human Rights Act**

8.5.1 There are no direct implications on the Human Rights Act.

### **8.6 Trade Union**

8.6.1 There are no Trade Union implications.



**8.7 Ward Implications**

8.7.1 There are no Ward implications arising from this report

**9.0 NOT FOR PUBLICATION DOCUMENTS**

9.1 None

**10.0 RECOMMENDATIONS**

10.1 That the joint Bradford South and East committees consider the four options outlined in this report and that a preferred option is determined for officer implementation.

**11.0 APPENDICES**

11.1 None

**12.0 BACKGROUND DOCUMENTS**

12.1 Report on the proposed combined High Occupancy Vehicle (HOV) and Bus Lane on the A650 Wakefield Road and Westgate Hill Street to the joint meeting of the Bradford South and Bradford East Area Committee on 27<sup>th</sup> January 2011.

12.2 Minutes of the joint meetings of the Bradford South and Bradford East Area Committees held on 27<sup>th</sup> January 2011 and 22<sup>nd</sup> November 2012.

12.3 City of Bradford Metropolitan District Council File Ref R/CC/S/100351.