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**Halesowen Area Committee – Wednesday 6<sup>th</sup> July 2011**

**Report of the Director of the Urban Environment**

**Transportation Issues**

**Purpose of Report**

1. To update committee regarding a number of transportation issues in and around Halesowen Town Centre.

**Background**

2. At its meeting on the 9<sup>th</sup> March 2011, Halesowen Area Committee Members requested an update regarding the operation of the bus lanes in and around Halesowen town centre, and additional information regarding the justification of pedestrian crossings at the Grange Roundabout.

**Bus Lanes**

3. The bus lanes in Queensway and Bromsgrove Road were delivered in partnership with Centro as part of the 139 Route Bus Showcase scheme in 1999/2000. The primary objective being to improve bus journey times and journey time reliability for services to and from Halesowen bus station.
4. Information from Centro indicates that the facilities are used by a significant number of bus services each day, with the following indicative frequencies during the inter peak period (between 10:00 and 11:00 hrs)
  - Queensway eastbound : 29 services per hour
  - Queensway westbound: 13 services per hour
  - Bromsgrove Road northbound: 22 services per hour
5. Having discussed the matter with Centro, they feel it would be appropriate to establish an evidence base as to the benefits/impacts of the three identified bus lanes in relation to both buses and other road users to inform any future consideration. Given the impending review of the Dudley Bus Voluntary Partnership Agreement, Centro recommend that this exercise is undertaken jointly with our bus operator partners.
6. On this basis the Council, in partnership with Centro and bus operators will carry out a detailed review of the operation and impact of the three identified bus lanes, which is anticipated to commence this year.

## **Grange Roundabout Pedestrian Crossing Justification**

7. As agreed at the Halesowen Area Committee meeting on Wednesday 9<sup>th</sup> March 2011, Members have been sent a copy of the councils Pedestrian Crossing Policy, a summary of the key points, and further information provided by Mr J. Young. In addition, further pedestrian and traffic surveys on the A456 Stourbridge Arm of the roundabout were carried out during week commencing 6<sup>th</sup> June 2011, in accordance with the minutes. The results of which are contained in Appendix A to this report with an explanatory note.
8. An analysis of the latest survey results carried in accordance with the Council's Pedestrian Crossing Policy gave an adjusted  $PV^2$  value of  $0.64 \times 10^8$ . The threshold for justifying a controlled signalised crossing is  $0.9 \times 10^8$  which in real terms should be multiplied by 2 for dual carriageway sites because the pedestrians are provided with two separate crossings, each dealing with one direction of flow. However the results fail to qualify for either a single or dual carriageway site and therefore a controlled crossing facility is not justified at this location, at this point in time.

## **Finance**

9. The cost of any further works that may be required at the Grange roundabout can be funded from the existing budget for the scheme.
10. Any costs associated with changes to the bus lanes would have to be found from existing capital budgets.

## **Law**

11. The Council is empowered to improve Highways under Section 62 of the Highways Act 1980. Traffic Regulation Orders are made under powers contained in Section 1 of the Road Traffic Regulation Act 1984. The Traffic Calming Act 1992 amends the Highways Act 1980 to allow works to be carried out to promote safety and to preserve the environment. Section 111 of the Local Government Act 1972 authorises the Council to do anything which is calculated to facilitate or is conducive or incidental to the discharge of any of its statutory functions.

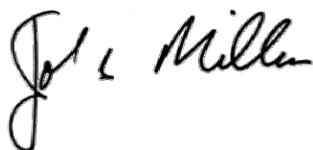
## **Equality Impact**

12. The proposals contained within this report comply with the Council's Equality and Diversity Policy whilst also seeking to introduce measures that will be of direct benefit to children and some of the most vulnerable road users in the community.

## **Recommendation**

13. That the committee note the contents of this report.
14. That the committee recommend to the Cabinet Member for Transportation that the Council, in partnership with Centro and bus operators carry out a detailed review of the

15. That the committee recommend to the Cabinet Member for Transportation that in light of the latest crossing analysis that a controlled crossing is not justified and that no further action should be taken.



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**John Millar**  
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### **List of Background Papers**

Dudley MBC Traffic & Transportation – Pedestrian Crossing Policy

**Pedestrian Crossing Analysis for A456 Manor Way (Stourbridge Arm)**

**Date: 9<sup>th</sup> June 2011**

**Technical Procedure**

The level of need for a pedestrian crossing is determined by calculating the degree of conflict between pedestrians (P) crossing the road and the two way vehicle (V) flow. This is known as the  $PV^2$  value.

Adjustment factors are then used to capture local site conditions which may add to the difficulty in crossing the road. These factors include type of pedestrian, type of vehicle, time taken to cross the road, width of the road, local speed limit and accident history. Details of these are contained in the Dudley MBC Pedestrian Crossing Policy.

These factors are used to calculate the overall degree of conflict and result in an adjusted  $PV^2$  value.

**Method of calculation for pedestrian demand**

The summary survey results for the number of pedestrians crossing in the four highest pedestrian vehicle conflict hours are shown in the table below.

The type of pedestrian is given a multiplication factor to reflect their ability to cross the road.

Hour	Category	Flow	Multiplication factor	Total	Grand Total
7:00am - 8:00am	Adult	5	1.25	6.25	6.25
	Child	0	1.5	0	

Hour	Category	Flow	Multiplication factor	Total	Grand Total
10:45am - 11:45am	Adult	7	1.25	8.75	10.25
	Child	1	1.5	1.5	

Hour	Category	Flow	Multiplication factor	Total	Grand Total
12:15pm - 1:15pm	Adult	6	1.25	7.5	10.5
	Child	2	1.5	3	

Hour	Category	Flow	Multiplication factor	Total	Grand Total
5:30pm - 6:30pm	Adult	10	1.25	12.5	12.5
	Child	0	1.5	0	

**Average P (Adjusted for local site conditions) = 9.875**

The average of the four highest values is then used in the final adjusted  $PV^2$  calculation.

**Method of calculation for vehicle demand**

The summary survey results for the two way traffic flow in the four highest pedestrian vehicle conflict hours are shown in the table below.

The type of vehicle is given a multiplication factor to reflect the difficulty caused to pedestrians waiting to cross the road.

Hour	Category	Flow	Multiplication factor	Total	Grand Total
7:00am - 8:00am	Car / LGV / M/C / Cycle	1819	1	1819	1931
	HGV	54	2	108	
	Bus	2	2	4	

Hour	Category	Flow	Multiplication factor	Total	Grand Total
10:45am - 11:45am	Car / LGV / M/C / Cycle	1453	1	1453	1603
	HGV	72	2	144	
	Bus	3	2	6	

Hour	Category	Flow	Multiplication factor	Total	Grand Total
12:15pm - 1:15pm	Car / LGV / M/C / Cycle	1595	1	1595	1761
	HGV	82	2	164	
	Bus	1	2	2	

Hour	Category	Flow	Multiplication factor	Total	Grand Total
5:30pm - 6:30pm	Car / LGV / M/C / Cycle	1866	1	1866	1922
	HGV	26	2	52	
	Bus	2	2	4	

**Average V (Adjusted for local site conditions) = 1804.25**

The average of the four highest values is then used in the final adjusted  $PV^2$  calculation.

The average  $PV^2$  from pedestrian and vehicle table results above is calculated as follows:

$$9.875 \times 1804.25^2 = 32146265.87$$

$$\text{Therefore Average } PV^2 \text{ (Adjusted for local site conditions)} = 0.32 \times 10^8$$

#### Calculation of Waiting Time factor (T)

The average waiting time is derived by a survey of five random attempts to cross the road during the known peak traffic periods. The A456 Stourbridge Arm scored 1.3 which correlates to a waiting time of more than 40 seconds. This is the highest score that can be achieved under this factor.

#### Calculation of Width of Road factor (W)

This factor recognises that the standard road width is 7.3 metres. The road width factor is therefore obtained by dividing the actual road width by 7.3 metres. A456 Stourbridge Arm was measured at 9.3 metres on its widest carriageway. This equates to a road width factor of 1.27.

### Calculation of Speed Limit factor (S)

The speed limit factor is based on the actual speed limit, which at the survey location is 40mph. This results in a speed limit factor of 1.2.

### Calculation of Accident Record factor (A)

The pedestrian injury accident record at a site is taken into account in the following formula:

$$A = 1 + N / 10$$

Where N is the number of pedestrian injury accidents in the previous three years within the vicinity of the site.

N splits into 3 categories.

- 1 – Slight Accident
- 2 – Serious Accident
- 3 – Fatal Accident

As no pedestrian injury accidents have been recorded in the previous three years on the A456 Stourbridge Arm, this equates to an accident record factor of 1.

### Final Adjusted PV<sup>2</sup> Calculation

The overall calculation captures all the factors considered above.

$$PV^2 \times T \times W \times S \times A = \text{Adjusted } PV^2$$

$$(0.32 \times 10^8) \times 1.3 \times 1.27 \times 1.2 \times 1 = 0.64 \times 10^8$$

The threshold for justifying a controlled signalised crossing is  $0.9 \times 10^8$  which in real terms should be multiplied by 2 for dual carriageway sites because the pedestrians are provided with two separate crossings, each dealing with one direction of flow. However, the  $0.64 \times 10^8$  score at this site fails to qualify for either a single or dual carriageway site and therefore a controlled crossing facility is not justified at this location, at this point in time.