

**ROTHERHAM BOROUGH COUNCIL – REPORT TO MEMBERS**

<b>1.</b>	<b>Meeting:</b>	<b>Regeneration Scrutiny Panel</b>
<b>2.</b>	<b>Date:</b>	<b>23 March 2011</b>
<b>3.</b>	<b>Title:</b>	<b>Pedestrian crossing assessment method and costs</b>
<b>4.</b>	<b>Directorate:</b>	<b>Environment &amp; Development Services</b>

**5. Summary**

To inform Members of the method of assessing requests for controlled pedestrian crossings, the types of crossing available, and the costs involved in the installation of a crossing.

**6. Recommendations**

**The Scrutiny panel is asked to note the contents of this report.**

## 7. Proposals and Details

### Assessment of crossing requests

The Council has a policy, based on current national guidance produced by the Department for Transport, of only providing controlled pedestrian crossing facilities when the value of vehicle (V) and pedestrian (P) flows multiplied together (using the formula  $PV^2/10^8$  and adjusted for certain factors) exceeds 1.0. In order to consider requests where the criteria is almost met the Cabinet Member for Regeneration and Environment will make a decision on each case where this value is between 0.85 and 1.0.

The first stage in the assessment of a request for a controlled pedestrian crossing is to do a pedestrian and vehicle survey. This survey is done for the 12 hour period from 07:00 to 19:00 and covers 50m either side of the site where the crossing has been requested. This survey is then used as the basis for the detailed assessment.

For each of the twelve hours of the survey the number of pedestrians crossing (P) is multiplied by the square of the traffic flow (V) to give the unmodified  $PV^2$  value. This is then multiplied by the site specific adjustment factors to give the modified  $PV^2$  value. Adjustment factors are used to take into account the proportion of elderly, blind/partially sighted and mobility impaired pedestrians, the proportion of unaccompanied children, the proportion of pedestrians with prams and pushchairs, the carriageway width, the time pedestrians spend waiting to cross and crossing the road, vehicle speed and any improvement in accessibility as a result of providing the crossing.

Adjustments to the  $PV^2$  calculation are made as follows:

- percentage of pedestrians who are elderly, blind or mobility impaired (E) – if less or equal to 15% use a factor of 1, if more than 15%, use percentage plus 100 all divided by 115 – i.e.  $(100 + E)/115$ ;
- percentage of pedestrians who are unaccompanied children (C) – if less or equal to 15% use a factor of 1, if more than 15%, use percentage plus 100 all divided by 115 – i.e.  $(100 + C)/115$ ;
- percentage of pedestrians with prams and pushchairs (B) – if less or equal to 5% use a factor of 1, if more than 5%, use double the percentage over 5% plus 95 all divided by 105 – i.e.  $(95 + 2B)/105$ ;
- width of road (W) – if less or equal to 7.3 metres use a factor of 1, if more than 7.3 metres use width divided by 7.3. If road is already divided use half the total width;
- time spent crossing the road (T) – if average of whole observed sample is less or equal to 20 seconds use a factor of 1, if 20 to 40 seconds use a factor of 1.2, if 40 to 60 seconds use 1.4, and if over 60 seconds use 1.6;
- vehicle speed (S) – if 85<sup>th</sup> percentile under 30 mph use 1, if 30 to 40 mph use 1.1 and if over 40 mph use 1.4;
- where a crossing would be located on a road that divides a community or is outside a school, clinic, community centre, home for the elderly or a busy shopping centre a modification factor of 1.1 should be used. Where there are two of these facilities a factor of 1.25 should be used and where three or more exist a factor of 1.4 should be used.

- In order to take account of community demand a modification factor of 1.1 should be applied where there are three or more requests for a crossing and where a petition has been received a factor of 1.2 should be applied.
- Improving access to bus services – if the crossing would improve access to public transport a modification factor of 1.1 should be applied.
- Number of heavy goods vehicles – larger vehicles can be intimidating to pedestrians and can make it harder to cross the road. If the percentage of HGVs as a percentage of total traffic volume is between 2% and 5% a modification factor of 1.1 should be used, between 5% and 10% a factor of 1.2 should be applied and above 10% 1.3 should be used.

The average of the four highest of these twelve modified  $PV^2$  values is then used as the measure of whether a crossing should be provided or not. This calculation is done by inputting the survey details into a spreadsheet which automatically calculates the modified  $PV^2$  values and the average of the four highest values.

This method of assessing pedestrian crossing requests was approved by the former Cabinet Member for Economic Regeneration and Development Services in February 2006 (minute No. 182 refers), with modifications to the method being approved by the former Cabinet Member for Economic Development, Planning and Transportation in March 2010 (minute No. G140 refers).

### **Choice of type of crossing**

The type of crossing facility that will be provided when  $PV^2$  exceeds 0.85 will depend on the speed and volume of traffic. Where vehicle flows are no more than moderate and 85<sup>th</sup> percentile speeds do not exceed 35 mph then a zebra crossing may be suitable. In other cases a signal controlled crossing should be provided.

The number of blind, partially sighted and mobility impaired pedestrians crossing at a particular location will also affect the choice of crossing as zebra crossings are unlikely to be suitable to meet the crossing needs of these people.

In cases where the  $PV^2$  value does not exceed 0.85 but is greater than 0.2 then a pedestrian refuge may be provided assuming that site characteristics allow this.

In addition to the above, the provision of a pedestrian crossing will be considered as an accident remedial measure at locations with a concentration of pedestrian accidents.

### **Priority list and programme of implementation**

All requests for pedestrian crossings, which meet the assessment criteria, are ranked in order of priority. Schemes are ranked by multiplying their  $PV^2$  value by the typical cost of that type of crossing divided by the budget cost estimate for the specific scheme. An annual programme of implementation is produced based on this list and the amount of funding available. A typical programme would be to construct up to one zebra and one Puffin/Pelican crossing. The current priority list is attached as Appendix A.

### **Cost of installing pedestrian crossings**

Pedestrian crossings along with other highway improvement works are currently priced in accordance with the G100 Strategic Partner for Civil Engineering Schemes contract. This contract was won, following a competitive tendering exercise, by Ringway. As part of the contract Ringway had to form an alliance with Rotherham's in-house delivery team who also work to the tendered rates. The contract award was assessed on the basis of price forming 70% of the score and quality 30%. Ringway were successful on both parts and were approximately 10% lower on the price element of the evaluation model used compared with the other four contractors that submitted bids.

It should be noted however that the exact cost of a new crossing depends very much on its location; for example a controlled crossing on a classified dual carriageway road may cost in the region of £250,000 and a zebra crossing on an unclassified single carriageway road may cost around £35,000.

### **Consultation with the public and crossing users**

It is not normal practice to consult members of the public and potential crossing users, in locations where crossings have been requested, before an assessment of need has been made. To do so could potentially result in artificially high survey results being obtained if members of the public knew when a crossing survey was to be carried out.

However, once the need for a crossing has been determined and included in the annual implementation programme consultations are carried out with adjacent residents, ward councillors, parish councils, the emergency services and South Yorkshire Passenger Transport Executive.

## **8. Finance**

Limited funding is available from the Local Transport Plan Integrated Transport Capital Programme for the provision of pedestrian crossings.

## **9. Risks and Uncertainties**

A pedestrian crossing may meet the criteria for inclusion on the priority list but the lack of funding and/or site constraints may mean that the crossing does not get constructed.

## **10. Policy and Performance Agenda Implications**

The provision of controlled pedestrian crossings is in line with the Council's themes of Alive, Safe and Achieving and the objectives set out in the South Yorkshire Local Transport Plan, for improving road safety, accessibility and social inclusion.

## **11. Background Papers and Consultation**

Local Transport Plan  
South Yorkshire Road Safety and Casualty Reduction Strategy

Dept for Transport Local Transport Note 1/95 – The Assessment of Pedestrian Crossings

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