

# Dudley Metropolitan Borough Council | Deployment School Crossing Patrol Service | Policy



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## Background

### 1.1. Current Legislation

- 1.1.1. Section 270 of the Transport Act 2000, which came into force on 30th January 2001, amended the 1984 Regulations to allow School Crossing Patrols (SCP's) to operate "at such times as the Authority thinks fit". Therefore, SCP's may now work outside the hours of 8.00 am to 5.30pm and can stop traffic to help anyone (child or adult) to cross the road.

### 1.2 The Need for Criteria

- 1.2.1 The need to ensure the safety of children, especially on their journeys to and from school is paramount to the Council's aims of reducing road traffic casualties whilst encouraging active travel to school. The school crossing patrol service plays a vital role in delivering these aims. Every parent and carer wants to have confidence that their child will be safe on the journey to and from school. However, every road cannot have a school crossing patrol and so it is necessary to have some way of measuring where to provide the service.
- 1.2.2 When the SCP service was first established few guidelines were available to those who were responsible for its operation and management. Nor was advice provided by any of the Government Departments. Most decisions were based on one (or more) person's perceptions of the safety or danger of sites.
- 1.2.3 No matter how skilled the manager, the situation had the potential for subjective decisions to be made that were not consistent. Sites which were justified might well be refused a SCP, whereas sites which did not justify one could well have SCP's authorised.

## 1.3 Development of the Criteria

- 1.3.1 SCP criteria were developed which incorporated elements from the existing proven and widely adopted method for the assessment of potential zebra and pelican crossing sites. Accordingly, the SCP criteria used the PV2 formula as its basis (P = Number of Pedestrians V = Number of Vehicles)
- 1.3.2 Although the counts include all pedestrians the criteria is calculated using only the number of pedestrians aged between 5-11 (children attending primary school). Irrespective whether they are accompanied by an adult or walking alone.
- 1.3.3 The relationship PV2 provided a measure of both the potential conflict and the delays experienced by pedestrians. It also accounted for the need to help small numbers of pedestrians to cross roads safely when traffic flows were heavy and the delays long; and conversely, large numbers of pedestrians to cross when traffic was lighter and the delays shorter.
- 1.3.4 The SCP criteria also incorporated factors to reflect the special conditions at sites during school opening and closing times when the numbers of child pedestrians were concentrated over a relatively short period of time. Environmental differences between sites and the varying levels of traffic awareness between children in rural areas and those in large urban areas also needed to be taken into account.
- 1.3.5 In order to regularise the ranking of SCP sites a series of 'Adjustment' factors was produced by LARSOA based on examples of known site conditions (in addition to the basic vehicle and pedestrian flows). These criteria have been used (often with local amendments) by some Authorities for many years. Dudley had initially had not adopted these factors, however these adjustments as outlined in the national guidelines will now be used as recommended as good practice by the Road Safety GB (Local Authority Road Safety Officers Association).
- 1.3.6 The national guidelines also recommend that pedestrian controlled crossings (puffin, pelican, toucan) should NOT have a SCP facility unless there are extenuating circumstances.

### 2.1 Parental Responsibility\*

Even where an SCP is provided, parents remain responsible for ensuring their children's safety, just as they do when a zebra crossing or pelican crossing is provided. Some parents may (incorrectly) believe that the Authority assumes responsibility for the safety of their children on their whole journey to and from school when a SCP is provided.

### 2.2 The RS GB guidelines state:

- 2.2.1 ***(6.4 RSGB Guidelines) Working at Light Controlled Signal Crossings (puffins, pelicans, traffic light junctions, toucans etc.)***  
*SCP's should not be located on light-controlled crossings unless there are exceptional circumstances such as poor driver behaviour (for example red light running), large groups of children crossing or concern about the children's age and ability to use the facility correctly. Local road safety enforcement, education or pedestrian training at the school in question may help to address these concerns.*

*The RSGB( LARSOA) Guidelines Best Practice:-  
Best Practice*

*It is not necessary for SCP's to work on pelican, puffin or toucan crossings(unless there are exceptional circumstances), as they are, by definition, safer crossing facilities. However, where they do work on such crossings, SCP's should be specifically trained how to do so. They must use the crossing's lights to stop traffic and display their SCP sign as normal.*

- 2.2.2 In Dudley we have adopted this advice although with a number of exemptions. These are that; we will continue to operate a patrol on a light controlled crossing if:-
- The speed limit is between 31mph and 40mph.
  - The crossing is immediately outside a school entrance.
  - The pedestrian facility cannot be operated by pedestrians.
  - The crossing facility is part of traffic junction control lights.
  - If an existing patrol is operating at this site, we will not disestablish it until either the Patrol has been transferred to another site or has left employment.
  - If a site is disestablished we will look to ensure that appropriate markings and signs are in place to assist any pupils on their journey to school

## 2.3 Traffic light failures

- 2.3.1 In not providing a SCP at a pedestrian controlled crossing a circumstance may arise where, upon failure of the lights, the crossing becomes uncontrolled.
- 2.3.2 In this situation we would request that members of schools staff of the nearest school, on arrival at the school be mindful of the need to report any such failure to Dudley Council Plus 01384 812345 or the School Crossing Patrol Service 01384 815401 and register the site details.
- 2.3.3 Based on our priority commitments, if there is an unused standby the SCP Service will then try to cover the site.

## Guidelines for traffic / pedestrian counts

### 3.1. Introduction

- 3.1.1 Flows of child pedestrians (P) crossing the road on their way to and from school are generally concentrated into very short periods of time. The heaviest pedestrian/vehicle flows usually occur during the morning journey sector between 08.15 and 09.15. Notwithstanding this surveys are undertaken to cover morning and afternoon, just in case the afternoon count should prove higher.
- 3.1.2 Surveys are site specific, taking into account the start and finish times and relevant activities of the school(s) served by the SCP. The data is recorded in 15-minute consecutive periods. This procedure is described in detail below.

### 3.2 The criteria

- 3.2.1 The LARSOA procedure for determining whether or not an SCP Site is justified comprises six parts:
  1. Pedestrian and Vehicle Count.
  2. Calculation of PV2 Rating.
  3. Comparison of PV2 with criteria threshold level of  $4 \times 106$ .
  4. Consideration of 'Adjustment Factors' and selection of 'Multipliers' (where appropriate).
  5. Re-calculation and re-check against the adopted criteria threshold level.
  6. Consideration of additional facilities (e.g. zebra and light-controlled crossings - where heavy traffic flows/speeding exist).
- 3.2.2 In many cases it is unnecessary to proceed beyond Part 3 of the procedure as this will often provide a clear indication about whether or not an SCP Site can be justified.

- 3.2.3 The graph on page 8 is used to carry out an initial check about the viability of the SCP Site:
- a. Sites falling within area “B” require further investigation.
  - b. Sites which fall within area “C” will not usually warrant further investigation unless there are exceptional circumstances attaching to the Site.
  - c. Sites which fall within area “P” require special consideration because traffic flows are so heavy as to create major difficulties for an SCP to operate safely. Within this area additional facilities (such as pedestrian crossings) may be justified.

### 3.3 Procedure - Part One - Pedestrian and Vehicle Count

- 3.3.1 In Dudley, previously sites having less than 20 children crossing the road in the busiest 30-minute period should not be considered for the establishment of an SCP. This is now 15 to match the National guidelines.
- 3.3.2 A count is taken at the Site to identify the busiest 30-minute period, recording child pedestrians (P) and vehicles (V) As defined below

- 3.3.3 The traffic counts record vehicles as 'passenger car' equivalent values (PCU's), by using the following multiplication factors:

Passenger Car Units (PCUs) for Recording Purposes

3 Pedal Cycles = 1 PCU

2 Motorcycles = 1 PCU

1 Car = 1 PCU

1 Light Goods Vehicle = 1 PCU  
(up to 3.5 tonnes gross weight)

1 Bus/Coach = 2 PCUs

1 Medium Goods Vehicle = 2 PCUs  
(over 3.5 tonnes gross weight)

1 Large Goods Vehicle = 3 PCUs  
(over 7.5 tonnes gross weight/multi axle lorries)

1 Bendi-bus = 3 PCUs

Where an automatic vehicle counter is used that does not provide vehicle classification data, then some observation of the traffic flow and composition will be used.

- 3.3.4 The count will include child pedestrians ,aged 5-11 (P) who attend an educational establishment and who cross the road at, or within 50 metres of, the Site, at the time of the heaviest traffic flow (normally during the morning peak). The numbers of all children (P) who cross the road at (in the case of existing manned Sites) or within 50 metres of the site (in the case of unstaffed or proposed new Sites) are recorded.

### 3.4. Procedure - Part Two - Calculation of PV2 Rating

N.B. all values used in the calculation are taken from the same 30-minute (2x15 consecutive minute) busiest period.

- 3.4.1 Having collected all the necessary data from the site, the calculation PV2 is completed using the busiest consecutive 30-minute period (Note that vehicles form the most significant part of the conflict equation).

### 3.5. Procedure – Part Three - Comparison with Adopted Criteria Threshold Level

- 3.5.1 The initial method of assessing whether or not the proposed Site is justified is achieved simply by using graph 1. (Page ). The values 'P' and V2' are entered on the appropriate axes and projected to produce a co-ordinate on the graph. The position on the graph indicates whether or not the Site is justified at this stage or whether further investigation is required.

- 3.5.2 Examples (i):

200 children (P) and 250 vehicle equivalents (V) in the same consecutive 30 minute period, multiplied together in the form PV2 produces point 'X' on the graph. The point is within area 'A', exceeding the required threshold value of  $4 \times 10^6$  and justifying the establishment of an SCP Site. There is no need for further Site assessment, or mathematical calculations.

#### RESULT

Site can be justified.

### 3.5.3 Example (ii):

300 children (P) and 100 vehicle equivalents (V) in the same consecutive 30-minute period, multiplied together in the form PV2 produces point 'Y' on the graph. This is within area 'B' not achieving the threshold level and not justifying the establishment of an SCP Site at this stage. Reference should be made to Part 4 of the criteria in order to re-assess whether or not the Site can be justified.

#### RESULT

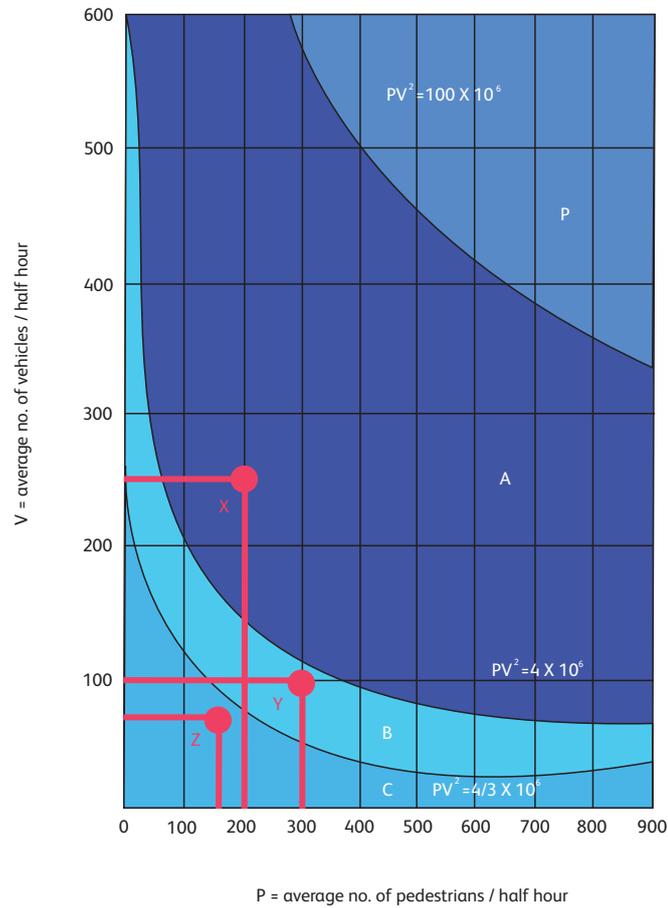
Site NOT immediately justified - further checks needed.

### 3.5.4 Example (iii):

150 children (P) and 75 vehicle equivalents (V) in the same consecutive 30-minute period, multiplied together in the form PV2 produces point 'Z' on the graph. This is within area 'C' not reaching the threshold level and almost certainly not justifying the establishment of an SCP Site.

In exceptional situations regarding the provision of an SCP at this Site, then Part 4 of the criteria may be applied to verify the position.

Action Chart - Checking SCP Site Viability (using graph)



Position of Point	Action to be taken
Area 'P'	Crossing facilities justified (It is recommended a light controlled crossing be considered).
Area 'A'	SCP Site justified. (Recommended establishment of SCP Site)
Area 'B'	SCP site not justified at initial assessment. (Apply Part 4 of the procedure to verify the position).
Area 'C'	SCP Site definitely not justified at initial assessment. (Apply Part 4 of the procedure only if exceptional circumstances exist).

## Adjustment Factors

### Consideration of 'Adjustment factors' and selection of 'Multiplier'.

- 4.1 In cases where sites do not meet the basic PV2 criterion, the site is checked for 'Adjustment Factors'.
- 4.2 Where the PV2 criterion threshold level falls within area 'B' a detailed Site investigation is undertaken using the list of 'Adjustment Factors' (Page 10).
- 4.3 The adjustment factors quantify the 'environmental' considerations used in assessing the potential risks at the proposed Site. Each item is assessed objectively and appropriate factors assigned.
- 4.4 Once the number of adjustment factors has been decided, the appropriate multiplier is obtained from the table of compound multipliers (Page12).

## Recalculating Criteria

### Recalculating the Rating against the Adopted Criteria Threshold Level

- 5.1.1 The 'Multiplier' indicated in the table of Compound Multipliers' is multiplied by the previous threshold rating (PV2). The result of this calculation is the 'New' PV2 value This is compared with the adopted threshold level.

Worked Examples - using the 'Multiplier' factor

Example 1	300 pedestrians	100 vehicles
V <sup>2</sup>	100 x 100	= 10,000
PV <sup>2</sup>	300 x 10,000	= 3,000,000

This is less than 4 million and produces point 'Y' on the graph in area 'B'. 5.1.2 However, further investigation at the site identified five 'Adjustment Factors' that should be taken into account. By referring to the Table of Compound Multipliers, five factors produce a multiplier of 1.610.

- 5.1.3 Thus the revised value is  $3,000,000 \times 1.610 = 4,830,000$ . This value exceeds the criteria threshold value ( $4 \times 106$ ) and therefore justifies the establishment of an SCP Site.
- 5.1.4 Had only two factors been assigned, the multiplier would have been 1.210 and the revised value  $3,000,000 \times 1.210 = 3,630,000$  (less than 4,000,000).

It would not have justified the provision of an SCP Site.

Example 2	150 pedestrians	75 vehicles
$V^2$	$75 \times 75$	= 5,625
$PV^2$	$5625 \times 150$	= 843,750

This produces a value of 843,750, point Z within area 'C' on the graph, and a SCP is not justified.

Unless the Site attracts an abnormally large number of Adjustment Factors, it is unlikely that an SCP Site could be justified.

## Additional Facilities

### Consideration of Additional Facilities ( only to be used for those falling into area 'P')

- 6.1 Where significant flows of vehicles and/or children are identified at the potential site, some sort of additional facilities may be justified. Assuming that there are no grade separated facilities already available, a zebra or light-controlled crossing should be considered in accordance with the criteria laid down by the DfT.
- 6.2 It should be remembered that the Council's responsibility as 'employer' is to ensure the safety of their employees (SCPs) and the people in their charge and the safety of those who may be affected by their acts or omissions. Therefore, sites which are very heavily trafficked, or deemed potentially dangerous by the nature of the road layout or other environmental conditions, may not be safe for the authorisation and siting of an SCP.

## Environmental Adjustment Factors

### 7.0 The following section highlights environmental factors that may be the cause of potential risk at Sites where an SCP already exists or is proposed.

Accurate site assessment makes it possible to check off each of the items on the following list and establish how many adjustment factors should be allocated (factors being assigned according to the level of difficulty). Using the final total of adjustment factors it is possible to determine a compound multiplier (from the table), which is then used to upgrade the original PV2 value to provide a weighted (and more accurate) assessment of the potential risk at the Site.

#### Table of Proposed Adjustment Factors

7.1	Carriageway Width (single Carriageway)	Factor
	Carriageway width between 7.5 and 10 metres	+1
	Carriageway width in excess of 10 metres	+2
7.2	Footpath width less than 2 metres	+1
7.3	Down gradient steeper than 12.5 % (1 in 8)	+2
	Down gradient less than 12.5 % greater than 5 % (1 in 20)	+1
7.4	Patrol crosses 2 roads	+1
7.5	Speed/Visibility	
	It is recommended that SCP sites are not established on roads with speed limits greater than 40 mph.	

85 % ile speed of traffic) <sup>1</sup>	Visibility (metres) <sup>2, 3</sup>	Factor
Travelling between 30 – 40 mph	Less than 50 m	+3
	Between 50 – 75 m	+2
	Between 75 – 100 m	+1
Travelling between 40 – 50 mph	Less than 60 m	+3
	Between 60 – 100 m	+2
	Between 100 – 150 m	+1

These are not speed limits, they relate to the 85th percentile speed which is the speed which 85 % of the vehicles are not exceeding.

<sup>1</sup> To obtain the 85th percentile (85 % ile) speed of traffic, a record of the speeds of at least 100 free running vehicles will be needed on one visit during the period 08.30 (08.15 if the full operation of an SCP is required) to 09.00 - i.e. the site operation times prior to the commencement of the busiest school day.

The formula used is:  $(85\% \text{ ile} - 30) = \text{FACTOR}$   
 e.g. 36 MPH 85 % ile gives  $\frac{(36 - 30)}{3} = +2$

<sup>2</sup> Care must be taken when using these factors, as the distances shown are less than vehicle stopping distance in adverse weather conditions.

<sup>3</sup> If parked vehicles obstruct sightlines or mask children, and it is not possible to prohibit parking, then the visibility criteria from the kerb edge should be applied using a 1 metre eye level.

7.6	Signs, Street Furniture, incl. , Trees, etc If visibility is variously obstructed within 100 metres of the proposed Site and pedestrians are masked.	Factor  +1
7.7	Road Markings If the Site is complicated by road markings for the purpose other than an SCP, i.e. turning lanes etc., within 50 metres either side.	Factor  +1
7.8	Junctions If the Site is within 20 metres of a road junction On the minor road On the major road	Factor   +2 +1
7.9	Accidents Accidents involving pedestrians on weekdays within 50 metres of the proposed crossing point. One point per pedestrian injured per year based on a three-year average.	
7.10	Existing crossing facilities Zebra crossing	  -3
7.11	Traffic Calming Traffic Calming Traffic calming and 20mph zone	 -1 -2

## Table of Compound Multipliers

No of Factors	Multipliers to be applied to basic PV2 figures
1	1.100
2	1.210
3	1.331
4	1.464
5	1.610
6	1.772
7	1.949
8	2.144
9	2.358
10	2.594
11	2.853
12	3.139
13	3.453
14	3.798

### 8.1 Sites not meeting the criteria but with a combination of exceptional circumstances.

*If the site contains a large number of exceptional circumstances such as poor driver behaviour, large groups of children crossing, dangerous location, such as on a steep hill or bend or concern about the children's age and ability to cross correctly.*

*Local road safety enforcement, education or pedestrian training at the school in question may help to address these concerns. If this has been carried out and concerns remain then in extreme exceptional circumstances, and with the Cabinet Members approval a scp provision may be provided.*

Requests for provision for Secondary , Nursery, Play Group, Breakfast Club and Extended School pupils.

- 9.1 There is no funding or legal requirement to make provision to assist the above groups to cross roads.
- 9.2 However, the Council takes its responsibility to keep children as safe as possible and so if a requesting educational facility can recruit and fund a patrol, assuming that appropriate numbers of pedestrians attending that establishment and appropriate traffic levels are present to ensure that the PV2 calculation meets the approved criteria, but counting all child pedestrians, we would be willing with a small administration charge to train, manage and monitor the patrol in the same way as the established patrols.

## Snow Policy

- 10.1 The Council's School Crossing Patrol Service Snow Policy.
- 10.2 If Children's Services announce a general school closure, then patrols will be stood down.
- 10.3 If individual schools close prior to opening time, the patrol will also be stood down and no cover will be provided.
- 10.4 The Council has a duty to provide as safe a working environment as is practicable for its employees. Therefore in exceptional weather conditions School Crossing Patrols may be stood down.
- 10.5 The School Crossing Patrol Service will advise schools if such a circumstance arises.
- 10.6 In addition if schools are open with lying snow on the pavement at the patrol sites, which are immediately outside the school, it is requested that Caretakers grit an area of not less than 4 x 2 metres on both sides of the road.
- 10.7 A grit bin can be requested if required. Contact: Council Plus 01384 812345

