

CRITERIA FOR ESTABLISHING SCHOOL CROSSING PATROL SITES

The following provides a summary of the procedure detailed within Road Safety GB's School Crossing Patrol Guidelines (updated November 2013).

The 'supporting information' section below has been added by officers to assist in undertaking the procedure.

Background to the Criteria

The SCP site assessment criteria uses the PV^2 formula as its basis where:-

P = Number of child pedestrians

V = Number of vehicles

The relationship PV^2 provides a measure of both the potential conflict and the delays experienced by pedestrians.

The criteria also incorporates factors to reflect the special conditions at sites during school opening and closing times when the numbers of child pedestrians are concentrated over a fairly short period of time.

Part One – Pedestrian and Vehicle Count

A classified count should be undertaken at the site to identify the busiest 30-minute period, recording child pedestrians and vehicles.

The count should include child pedestrians who attend an educational establishment.

The numbers of children who cross the road at (for existing staffed sites) or within 50 metres of the site (for unstaffed or new sites) should be recorded.

Traffic counts are recorded as 'passenger car units' (PCUs) equivalent values 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 (up to 3.5 tonnes gross weight)	1 PCU
1 Bus/Coach	2 PCUs
1 Medium Goods Vehicle (over 3.5 tonnes gross weight)	2 PCUs
1 Large Goods Vehicle (over 7.5 tonnes gross weight/ multi-axle lorries)	3 PCUs
1 Bendi-Bus	3 PCUs

The heaviest pedestrian and vehicle flows usually occur during morning journeys between 08:15 and 09:15.

The count should be conducted during this period, unless it is proven otherwise that the afternoon period is busier, in which case counts should be carried out during that period.

The count that is undertaken must be site-specific, taking into account the start and finish times and relevant activities of the school(s) served by the SCP.

The child pedestrian and vehicle data should be recorded in 5-minute consecutive periods.

Supporting Information

The child pedestrian and vehicle count should be taken over a period of 1 hour.

The vehicle count should include traffic travelling in both directions where there is two-way traffic.

Prior to undertaking the count, contact should be made with those who know the site well, e.g. the existing SCP and the school, to establish when the site is usually busiest e.g. during dry or wet weather, in the morning or afternoon etc. The count should be undertaken during those conditions that the site is likely to be busiest.

The relevant school should be conducted the day prior to the count being undertaken to make the school aware that the count is taking place and to ensure that the count is being conducted on a 'typical' school day e.g. there are no school trips taking place etc.

In most instances 2 officers will be required to undertake the count.

Part 2 – Calculation of PV^2 Rating

Using the count data collected from the SCP site, the calculation PV^2 is completed as follows:

Identify the busiest consecutive 30-minute period (note that vehicles form the most significant part of the equation).

Calculate the total of child pedestrians (P) and multiply it with the square of the total number of PCU equivalents (V^2) from the same consecutive 30-minute period to provide the product PV^2 .

Part 3 – Comparison with Adopted Criteria Threshold Level

There are 3 possible outcomes resulting from part 2 of the assessment.

Outcome 1 – If a PV^2 figure of greater than 4 million is achieved, a SCP at the site **can** be justified and the assessment process is complete.

Outcome 2 – If the PV^2 figure achieved is lower than 4 million, a SCP at the site **cannot** be immediately justified and part 4 of the procedure should be applied.

Outcome 3 – Sites having fewer than 15 children (P) crossing the road in the busiest 30-minute period should not be considered for establishing a SCP. Part 4 of the procedure will not be applied in these instances as a SCP at the site **cannot** be justified following the initial assessment.

Part 4 – Consideration of 'Adjustment Factors' and Selection of a 'Multiplier'

Where the PV^2 figure achieved is lower than 4 million (outcome 2 above), a detailed site investigation should be undertaken using the list of 'Adjustment Factors'.

These quantify the 'environmental' site-specific factors that may be the cause of potential risk at the proposed site.

Each item in the list below must be assessed objectively and the corresponding factor assigned to each item as relevant to the site.

A site assessment should be undertaken to enable each of the characteristics listed below to be assessed and to establish the number of factors that should be allocated to the site.

Once the number of adjustment factors relevant to the site is determined, the total figure of adjustment factors will be used in part 5 of the procedure.

Adjustment Factors

1. Carriageway Width

Site-specific characteristic	Factor
Carriageway width between 7.5 and 10 metres	+1
Carriageway width in excess of 10 metres	+2
Footpath width less than 2 metres	+1
Down gradient steeper than 12.5% (1 in 8)	+2
Down gradient less than 12.5% greater than %5 (1 in 20)	+1

2. Speed/ Visibility

It is recommended that SCP sites are not established on roads with speed limits greater than 40mph.

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

3. Other site characteristics

Assessment criteria	Site-specific characteristic	Factor
Street lighting	No street lighting	+3
Signs, street furniture, trees etc	If visibility is variously obstructed within 100 metres of the proposed site and pedestrians are masked	+1
Road markings	If the site is complicated by road markings for the purpose other than a SCP, e.g. turning lanes etc, within 50m either side	+1
Junctions	If the site is on a major road and is within 20 metres of a road junction	+2
	If the site is on a minor road and is within 20 metres of a road junction	+1
Accidents	Accidents involving pedestrians on weekdays within 50 metres of the proposed crossing point	+1 per pedestrian injured per year based on a 3-year average
Weight of traffic	Where pedestrian flows are light, the vehicles flows are heavy and the criteria are not satisfied i.e. at 800 PCUs per hour (2-way)	+1

4. Age Factors

Average age	Factor
Primary (up to 11 years)	+5
Secondary (12+ years)	+1

Part 5 – Recalculating the rating against the Adopted Criteria Threshold Level

The total number of adjustment factors identified in part 4 of the procedure should be used to identify the appropriate multiplier from the table of 10% compound multipliers detailed below.

Table of 10% Compound Multipliers

Number of factors	Multipliers to be applied to basic PV ² 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

The compound multiplier is used to uprate the original PV² value to provide a weighted assessment of the potential risk at the site.

The multiplier identified from the table of '10% Compound Multipliers' should be multiplied with the original PV² figure.

The result of this calculation is the 'new' PV² value.

There are 2 possible outcomes resulting from part 5 of the assessment.

Outcome 1 – If a PV² figure of greater than 4 million is achieved, a SCP at the site **can** be justified following further investigation at the site and the assessment process is complete.

Outcome 2 – If the PV² figure achieved is lower than 4 million, a SCP at the site still **cannot** be justified following further investigation and this marks the end of the assessment process.

Name of School	SCP site location	Lunchtime shift
Aberbargoed Primary	Commercial Street (red carpet)	No
Abertysswg Primary	O/S school, Walter Street, Abertysswg	Yes
Bedwas Junior	O/S school, junction of Pandy Road/ Church Street	Yes
Blackwood Primary	O/S school, Apollo Way, Blackwood	Yes
Blackwood Primary	Attlee Road/ Morrison Street, Blackwood	Yes
Blackwood Primary	Junction of Bloomfield Road/ Cefn Road	No
Bryn Awel Primary	Is Fryn, Rhymney	No
Bryn Awel Primary	Hill Street, Rhymney (zebra crossing)	No
Bryn Primary	O/S school, Forest Hill, Pontllanfraith	No
Cefn Fforest Primary	Greenwood Road, Junction of Grove Park Estate	Yes
Cefn Fforest Primary	Bedwellty Road (arm of roundabout)	Yes
Cefn Fforest Primary	O/S school, Central Avenue, Cefn Fforest	Yes
Cefn Fforest Primary	Junction of Waunborfa Road/ Pencoed Avenue	Yes
Crumlin High Level Primary	O/S school, Commercial Road, Crumlin	Yes
Crumlin High Level Primary	O/S Crumlin Institute, Main Street (traffic lights)	No
Cwm Ifor Primary	O/S school, Heol Aneurin (on road narrowing)	No
Cwmaber Infants	High Street, Abertridwr (zebra crossing)	Yes
Cwmcarn Primary	O/S school Ivor Street/ Caradoc Street	Yes

Name of School	SCP site location	Lunchtime shift
Cwmcarn Primary	O/S school, Ivor Street/ Caradoc Street	Yes
Cwmfelinfach Primary	Bridge View, Cwmfelinfach	No
Cwmfelinfach Primary	Islwyn Road, Wattsville (zebra crossing)	No
Cwrt Rawlin Primary	O/S school, Cae Meillion, Caerphilly	No
Derwendeg Primary	Junction of Heol Y Felin/Hengoed Road	No
Derwendeg Primary	O/S school, Hengoed Road	No
Fochriw Primary	O/S school, Pontllytyn Road (on narrowing)	No
Glyn Gaer Primary	Junction of Glyn Gaer Road/ Rolls Avenue	No
Glyn Gaer Primary	Junction of Gelligaer Road/ Church Road	No
Glyn Gaer Primary	Church Road, Gelligaer (pelican crossing)	No
Hengoed Primary	O/S school, Hengoed Avenue	No
Libanus Primary	Junction of Libanus Road/ Road to school (red carpet)	No
Libanus Primary	Blackwood Road (red carpet)	No
Llanfabon Infants	High Street/ Heol Islwyn	No
Llanfabon Infants	High Street, Nelson (zebra crossing)	No
Machen Primary	O/S school, Newport Road, Machen	Yes
Markham Primary	O/S school, Pantycyfn Road, Markham	No
Nant y Parc Primary	O/S school, Universal Site	No
Pantside Primary	O/S school, Old Pant Road, Pantside	Yes
Park Primary	O/S school, Junction of Park Drive/ Park Crescent	No
Pengam Primary	O/S school, Commercial Street, Pengam	Yes
Penllwyn Primary	O/S school, Fleur de Lys Avenue, Pontllanfraith	Yes
Pentwynmawr Primary	High Street, Pentwynmawr (zebra crossing)	Yes
Pontllanfraith Primary	O/S school, Penmaen Road, Pontllanfraith	Yes
Pontllytyn Primary	Just below school, Fochriw Road	No
Pontllytyn Primary	Waterloo Terrace, Pontllytyn	No
Pontllytyn Primary	Merchant Street, Pontllytyn	No
Rhiw Syr Dafydd Primary	O/S school, Maesygarth Road	No
Rhiw Syr Dafydd Primary	O/S Post Office, Syr Dafydd Avenue	No
Risca Primary	High Street, Risca (park gates)	No
Risca Primary	Dan y Graig Road, Risca	No
St Gwladys Primary	Junction of McDonnell Road/ Ruth Street	No
St James Primary	O/S school, Lansbury Park, Caerphilly	No
The Twyn Primary	Junction of Van Road/ East View	No
Tir Y Berth Primary	O/S school, Horner Street, Tiryberth	No
Ty Sign Primary	Junction of Elm Drive/ Thistle Way	Yes
Ty Sign Primary	O/S school, Elm Drive, Risca	Yes
Tynewydd Primary	O/S Catholic Church, junction of Greenfield and North Road	No
Waunfawr Primary	Junction of Risca Road/ Waunfawr Road	No
Waunfawr Primary	Gladstone Street/ Cobden Street (on corner)	Yes
White Rose Primary	O/S school, School Street, New Tredegar	No
Ysgol Gynradd Gymraeg Caerffili	O/S school, Parcyfelin Street, Caerphilly	No
Ystrad Mynach Primary	Pantycelyn Street/ Penallta Road	Yes
Ystrad Mynach Primary	O/S school, lower end of Lewis Street	No
Ystrad Mynach Primary	Nelson Road (puffin crossing)	No