

AGENDA MANAGEMENT SHEET

Name of Committee Cabinet

Date of Committee 6th April 2006

Report Title Revised Policy for the Provision of Pedestrian Crossings and Pedestrian Phases at Traffic Signals

Summary This report sets out a revised policy for the provision of pedestrian crossings and pedestrian phases at traffic signals to ensure the most effective use of the available resources.

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Would the recommended decision be contrary to the Budget and Policy Framework? Yes/No

Background Papers Local Transport Note 1/95.
18 letters/emails of comments.

CONSULTATION ALREADY UNDERTAKEN:- *Details to be specified*

- Other Committees Cabinet 26th May 2005, Environment Overview and Scrutiny Committee 8th November 2005 and 22nd March 2005.
- Local Member(s)
(With brief comments, if appropriate)
- Other Elected Members All County Council Members consulted
Councillor K Browne } for information
Councillor Mrs E Goode }
Councillor Mrs J Lea }
- Cabinet Member Councillor M Heatley
(Reports to The Cabinet, to be cleared with appropriate Cabinet Member)
- Chief Executive

- Legal I Marriott
- Finance
- Other Chief Officers
- District Councils All District and Borough Council's consulted, see **Appendix C** for list and **Appendix D** for comments.
- Health Authority
- Police Support approach to prioritisation, which is both fair and consistent.
- Other Bodies/Individuals Midlands Traffic Signal Service Improvement Group and other bodies/individuals consulted, see **Appendix C** for list and **Appendix D** for comments.

FINAL DECISION **YES/NO** *(If 'No' complete Suggested Next Steps)*

SUGGESTED NEXT STEPS :

Details to be specified

- Further consideration by this Committee
- To Council
- To Cabinet
- To an O & S Committee
- To an Area Committee
- Further Consultation

Cabinet – 6th April 2006

**Revised Policy for the Provision of Pedestrian Crossings
and Pedestrian Phases at Traffic Signals**

**Report of the Strategic Director of
Environment and Economy**

Recommendation

That Cabinet:-

1. Approves the Policy for the Provision of Pedestrian Crossings and Pedestrian Phases at Traffic Signals in **Appendix A** together with the associated Technical Procedure.
2. Authorises the Strategic Director of Environment and Economy or his nominee to review, amend or update the Technical Procedure in accordance with the Policy as he considers appropriate.

1. Introduction

- 1.1 This report presents a revised policy for the provision of pedestrian crossings. The policy also includes the provision of pedestrian phases at traffic signals.
- 1.2 Local Transport Note 1/95 and good practice in other highway authorities have been taken into account in drafting the policy.
- 1.3 The demand for new crossings far exceeds the County Council's ability to provide funding. When investigating requests, it is necessary to compare objectively the different levels of need at sites, so that decisions can be made in a consistent way and best value obtained from the available resources.
- 1.4 The likely outcome of adopting the new policy will be an assessment methodology giving increased weighting for provision of crossing facilities at locations frequented by children, elderly people and people with disabilities, and where traffic flows include a significant proportion of heavy goods vehicles.

2. Background

- 2.1 A Final Report on the Best Value Review of Traffic Management was presented to Cabinet on 26th May 2005. On that occasion Cabinet approved the report and the appended Outline Service Improvement Plan. Action F of the Outline

Service Improvement Plan required consideration of the need for a review of the policies for the provision of traffic signals, pedestrian phase at traffic signals and pedestrian crossings.

2.2 Following the review of the above policies a report was presented to The Environment Overview and Scrutiny Committee on 8th November 2005 on progress with the Best Value Review. The report included proposals for proposals for a revised policy for the provision of pedestrian crossings and pedestrian phases at traffic signals. The next steps proposed in the Review, which were endorsed by the Committee included:-

- (i) Carry out consultation regarding the proposed policy for The Provision of Pedestrian Crossings and Pedestrian Phases at Traffic Signals.
- (ii) Report to Cabinet and obtain approval of the proposed policy for The Provision of Pedestrian Crossings and Pedestrian Phases at Traffic Signals.

3. Current Policy for Pedestrian Crossings

3.3 The current County Council policy for the provision of pedestrian crossings was approved by the County Council's former Transportation Committee in January 1992. It was substantially based on the (then) current guidance from the former Department of Transport (DTp) which recommended criteria based on measuring the degree of conflict between pedestrians crossing a road and traffic by using the number of pedestrians crossing in an hour (P) and the two-way flow of traffic in an hour (V) in the formula $P \times V \times V$ (or PV^2). By this means the relative merits of different types of crossings at various sites could be measured and proposals ranked in order of priority.

3.4 This approach is considered to be sound in principle, but has some limitations as it does not take into account factors such as the age and fitness of pedestrians, speed and composition of traffic, width of road and the accident record.

4. Proposed Changes to Policy

4.1 It is intended to retain the PV^2 criteria as a basis for considering the need for new crossings, but now it is proposed that the following factors will also be taken into account:-

- (a) the needs of different types of pedestrians (e.g. children, or elderly).
- (b) vehicle type (e.g. heavy goods vehicles).
- (c) waiting time to cross the road.
- (d) width of road.
- (e) speed limit of the road.
- (f) the pedestrian injury accident record.

- 4.2 In a similar way to current practice, it is proposed that a list of justified crossings be maintained ranked according to the level of need, for future funding. The list will be used annually to inform the selection of schemes to be funded.

5. Consultation and Subsequent Amendments to the Draft

- 5.1 A consultation on the draft policy was carried out. A list of consultees is contained in **Appendix C**. The comments received from the consultees are listed in **Appendix D** and where possible these have been incorporated within the Policy.
- 5.2 The policy will serve as an explanation of how the County Council considers requests for pedestrian crossings. Improvements have been made to the presentation of the policy, which is now in a style which will readily permit transfer to a customer-friendly leaflet or web page.

6. The Technical Procedure

- 6.1 A procedure covering the technical details of the operation of this policy (see **Appendix B**) will be maintained. The technical procedure is intended to:-
- (i) Define in detail how the level of need of a crossing will be calculated in accordance with the policy.
 - (ii) Provide the criteria to be used for the appropriate type of crossing.
- 6.2 It is proposed that at the discretion of the Head of Service, the Technical Procedure may be reviewed and varied from time to time. However, the weighting factors and criteria employed will be applied consistently to all requests for crossings in a given funding cycle.

7. Conclusion

- 7.1 It is recommended that the revised Policy (in **Appendix A**) and Technical Procedure (in **Appendix B**) be adopted as it will provide a more balanced approach to assessing the need for pedestrian crossings by taking into account local conditions and the needs of more vulnerable pedestrians. It is possible that some crossings, which would not have been considered justified under the current policy, may now be justified by the new policy. The new policy itself will not result in more crossings being provided, but it will ensure a more effective use of available funding.

JOHN DEEGAN
Strategic Director of Environment and Economy
Shire Hall
Warwick

13th March 2006

Cabinet – 6th April 2006

**Revised Policy for the Provision of Pedestrian Crossings
and Pedestrian Phases at Traffic Signals**

The Policy

1. Introduction

This policy explains how requests for new pedestrian crossings will be considered by the County Council's Environment and Economy Directorate.

The demand for new crossings far exceeds the County Council's ability to provide funding. For this reason we will compare the need at requested sites, so that decisions can be made in a consistent way and best value obtained from the available resources.

2. Safety

We will consider safety first, so we will only assess the need for crossings at locations where the appropriate design standards for safety can be met.

3. How we will assess the need for a pedestrian crossing

We will assess the level of need for a requested crossing by:-

1. Measuring the degree of conflict between pedestrians crossing the road and the two-way traffic flow and
2. We will also take into account the following factors
 - the age and ability of pedestrians;
 - the different types of vehicles in the flow of traffic;
 - the length of time pedestrians have to wait to cross;
 - the width of the road;
 - the speed of traffic and
 - the pedestrian injury accident record at the site.

4. The survey

If the safety requirements for a crossing can be satisfied then we will measure the conflict between the traffic and pedestrians by carrying out a 12-hour survey which will count:-

- the number of pedestrians crossing in an hour (P)
- the flow of vehicles in both directions in an hour (V)

Our assessment will be based on the average of the four busiest hours in the day (between 7 am and 7 pm). When the survey are carried out, the pedestrians will be classified by their age and ability; and the vehicles will be classified by vehicle type so that we can take into account the differences between cars, heavy goods vehicles, buses, motorcycles and pedal cycles.

5. The appropriate type of crossing

We will use the information gathered in the survey and the various factors listing in 3.2 to determine whether a crossing should be provided and which type of crossing (if any) is appropriate at the site.

There are three main types of crossing - a refuge, a Zebra crossing or a signal-controlled crossing (usually a Puffin). The type of crossing to be provided will also be subject to engineering considerations (e.g. there must be sufficient width to fit in a refuge).

To justify a signal-controlled crossing, such as a Puffin, it will be necessary to demonstrate a much higher level of need than a refuge. We will consider a Zebra crossing at the intermediate level of need.

6. Upgrading a Zebra crossing to a Puffin crossing

Generally the pedestrian accident rate at Zebra crossings is lower than at Puffin crossings. However a Zebra crossing may be considered for conversion to a Puffin crossing, when a worse than average pedestrian injury record is likely to be improved.

We may also consider upgrading a Zebra crossing to a Puffin crossing as part of a wider traffic management scheme linked to the County Council's Urban Traffic Control System in appropriate circumstances.

7. Provision of pedestrian phases at traffic signals

We will investigate the need for a pedestrian phase at an existing traffic signal junction in a similar way to a stand-alone pedestrian crossing. However, providing a pedestrian phase reduces the time available for traffic and at busy junctions this can result in long queues of vehicles. For this reason each junction will be considered individually.

8. The priority list

We will include a justified crossing in a list, ranked by the level of need, for future funding. The list will be used annually to inform the selection of schemes to be included in the County Council's capital programme.

9. Other circumstances where crossings will be provided or upgraded

This policy describes the way in which we will consider requests for new crossings based on surveys of existing pedestrian and vehicle flows. There are four alternative approaches to providing crossings in the County Council's Local

Transport Plan in addition to this policy. We will continue to use these approaches.

- **Safer Routes to School** – where the aim is to encourage more children to walk to school with less use of the car.
- **Casualty Reduction Schemes** – where the rate of return from likely casualty savings is sufficient to justify the expenditure on a crossing.
- **Developer-funded schemes** – where crossing facilities are required to mitigate anticipated traffic impact of developments and/or anticipated increases in pedestrian flows.
- **Facilities installed on Quality Pedestrian Corridors** – where crossing facilities may be considered as part of a package of measures on a strategic walking corridor.

10. The technical procedure

A procedure covering the technical details of the operation of this policy is maintained by the Council's Head of Transport and Highways.

The content of this procedure may be reviewed and updated by the Head of Transport and Highways, but it is to be expected that the same technical process will be used to assess all schemes during an annual funding cycle.

Cabinet – 6th April 2006

Policy for the Provision of Pedestrian Crossings and
Pedestrian Phases at Traffic Signals

Technical Procedure

1. Introduction

This procedure covers the technical details of operation of the Council's Policy for the Provision of Pedestrian Crossings and Pedestrian Phases at Traffic Signals (hereinafter referred to as "the Policy"). This document must be read in conjunction with the Policy.

2. Survey

The survey for obtaining values of P and V as described in the Policy shall take place along the stretch of road approximately 50 metres either side of the requested location. If the weather deteriorates during the survey, arrangements will be made to carry out a survey on another day.

When pedestrian surveys are carried out, the pedestrians will be classified by their age and an indication of whether they are physically disabled.

3. Determining the level of need for a pedestrian crossing

The level of need will be determined by calculating the degree of conflict between pedestrians crossing the road and the two-way traffic flow as described in the paragraphs below.

The degree of conflict used will be **the adjusted PV² value** calculated as follows.

P_{mod} = the number of pedestrians crossing in an hour (P) weighted by age and ability in accordance with the table below

type of pedestrian	multiplying factor
Child <16	1.25
Adult	1
Elderly	2
Disabled	3

The multiplying factor for cyclist is 1 and for equestrian is 3.

V_{mod} = the flow of traffic in PCUs (passenger car units) in an hour calculated from the survey data using the weightings in the table below

type of vehicle	multiplying factor
Cars	1
Light goods vehicles	2
Bus	2
Heavy goods vehicles	2.5
Motorcycles	1*
Pedal cycles	1*

* Since this impacts on pedestrians in the same way as cars, the PCUs are up-rated to reflect this.

For each hour between 7 am and 7 pm the weighted $P_{mod} V_{mod}^2$ value is calculated by multiplying the weighted number of pedestrians by the weighted number of vehicles squared, i.e. $P_{mod} \times V_{mod} \times V_{mod}$.

The $P_{mod} V_{mod}^2$ figures are ranked in order and the top four figures are divided by four to obtain the **average $P_{mod} V_{mod}^2$** value (representing the four busiest hours of the day).

The **adjusted PV^2** value is obtained by multiplying the **average $P_{mod} V_{mod}^2$** value by the pedestrian waiting time factor (T), width of road factor (W), speed limit factor (S) and accident record factor (A). Hence the **adjusted PV^2 value** is calculated as follows:

adjusted PV^2 = average $P_{mod} V_{mod}^2$ value x T x W x S x A using the factors T, W, S & A from the paragraphs below.

4. Waiting Time Factor (T)

The Average Waiting Time will be derived by the engineer attempting to cross the road at five random times during the known peak traffic period.

The waiting time factor (T) will then be taken from the table below.

Average Waiting Time	Waiting Time Factor (W)
Less than or equal to 20 seconds	1.00
21 seconds to 30 seconds	1.20
31 seconds to 40 seconds	1.25
More than 40 seconds	1.30

5. Width of Road Factor (W)

This factor considers the standard road width to be 7.3 metres. The Road Width Factor is obtained by dividing the road width by 7.3m i.e. $(\frac{\text{road width}}{7.3})$.

6. Speed Limit Factor (S)

The Speed Limit Factor (S) is based on the speed limit and will be taken from the table below.

Speed limit of the road	Speed Limit Factor (S)
20 mph speed limit	0.8
30 mph speed limit	1.0
40 mph speed limit	1.2
50 mph speed limit	1.3

7. Accident Record Factor (A)

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

$$A = 1 + \frac{N}{10}$$

where N is the number of pedestrian injury accidents in the previous three years.

8. Criteria for justifying pedestrian crossings

To justify a **refuge**, the adjusted PV^2 value should be greater than 0.4×10^8 , but the width of road needs to be at least 7.8m.

To justify a **zebra crossing**, the adjusted PV^2 value should be greater than 0.6×10^8 , but a zebra crossing should not be installed on roads with an 85-percentile speed of 35 m.p.h. or above and the two-way traffic flow should be less than 500 vehicles/hour.

To justify a **signalled-controlled** crossing (Pelican, Puffin, Toucan or Pegasus), the adjusted PV^2 value should be greater than 0.9×10^8 . Current national guidelines indicate that it is not advisable to install a signalled controlled crossing where the 85th percentile speed is greater than 50 mph.

9. Guidance on upgrading a Zebra crossing to a Puffin crossing

Investigations carried out in the County (Summer 2005) show that the average rate of pedestrian injury accidents at zebra crossings is 0.2 accidents per year, and the average rate at Pelican/Puffin crossings is 0.6 accidents per year. The Policy states that a zebra crossing may be considered for conversion to a Puffin crossing, when a worse than average pedestrian injury record is likely to be improved.

Graeme Fitton
 Planning, Transport and Economic Strategy
 Warwickshire County Council

22nd February 2006

Cabinet – 6th April 2006

**Policy for the Provision of Pedestrian Crossings and
Pedestrian Phases at Traffic Signals**

List of Consultees

- All 62 County Council Councillors
- Midlands Traffic Signal Service Improvement Group
- 5 Members of Parliament (Mike O'Brien, Bill Olnier, Jeremy Wright, John Maples & James Plaskitt)
- Stratford-upon-Avon Town Centre Manager - Mr Andrew Cooper
- Rugby Town Centre Company - Mr Robin Richter
- Warwick District Council – Mr Ian Coker
- Nuneaton and Bedworth Town Centre Manager - Mr Alan Ottey
- Warwick Town Centre Business Development Manager - Mr Adrian Field
- North Warwickshire Borough Council Directorate of Administration - Borough Secretary
- North Warwickshire Borough Council Directorate of Environmental Services - Borough Technical Officer
- Nuneaton & Bedworth Borough Council Planning & Development Department - Planning & Development Manager
- Rugby Borough Council Department of Technical Services
- Stratford-on-Avon District Council Technical and Amenities Department - The Chief Technical Officer
- Warwick District Council - The Head of Engineering
- Warwickshire Constabulary - The Chief Constable
- Warwickshire Fire and Rescue Service - The County Fire Officer
- Nuneaton Ambulance Station - Mr R Moore
- West Midlands Ambulance Service - The Chief Ambulance Officer
- Automobile Association Developments Limited
- RAC Live
- National Framers Union - Mr P Tame
- The Road Haulage Association Limited Midland & Western Region
- Freight Transport Association - The Regional Secretary
- Cyclist's Touring Club, Nuneaton - Mr I Bonner
- WCC Countryside Recreation - Mr Paul Williams
- Coventry and Warwickshire Disabled Drivers' Association - Mrs N Lewis
- Council of Disabled People
- Disabled Drivers Association - Mrs N Lewis
- Guide Dogs for the Blind Association Midland Region Training Centre
- Living Streets Leamington - Janet Alty
- Senior Peoples Forum - Mr K Hope

- Warwickshire & West Midlands Association of Local Councils - Mrs A Hodge
- Warwickshire Association for the Blind George Marshall Centre at Canalside
- Ramblers Association Area Secretary - Mr S Wallsgrove
- DIAL - Ms Mary Beaumont
- Stratford-upon-Avon & District Chamber of Trade – Ms Gloria Parker
- Coventry & Warwickshire Chamber of Commerce - Mrs Clare Newell
- Leamington Spa Chamber of Trade – Mr John Curtis
- Nuneaton Business Alliance – Secretary - Karen Little

Cabinet – 6th April 2006

**Policy for the Provision of Pedestrian Crossings and
Pedestrian Phases at Traffic Signals**

Comments from Consultees

Cllr Booth

Comment - expressed his general support for the new policy. However, the policy provides the technical procedure to be varied from time to time by the Head of Service. While this is sensible it would potentially allow the policy to be changed from scheme to scheme as a response to external pressure and would prefer the wording to be changed to "the same technical procedure is to be used to score all the schemes assessed in any particular financial year".

Response – This is the intention of the policy and the wording will be amended to reflect this.

Cllr Mrs Goode

Comment - expressed her general support for the new policy. However, the survey does not pick up the number of people who would use a crossing if it was there and if the survey is carried out on a wet day this nor reflect the actual use.

Response – there is no methodology for measuring suppressed demand when carrying out a pedestrian survey. If during the survey the weather deteriorates arrangement will be made to carry out a survey on another day.

Cllr Heatley

Comment - expressed his general support for the new policy.

Cllr Hyde

Comment - expressed his support for the new criteria's which emphasis on the young, elderly and disabled pedestrians.

Cllr Longden

Comment – happy to support measures that make it easier to obtain crossings. However, expressed his concern that the criteria is still too strict, more notice should be taken of local residents and elected members, and a pragmatic approach adopted.

Response – the demand for the provision of new pedestrian crossings far exceeds the available funding. For this reason it is necessary to be able to compare the levels of justification at various sites, so that decisions can be made in a consistent way and best value obtained from available resources.

Cllr Mrs Timms

Comment - expressed her general support for the new policy and totally agrees with the inclusion of factors such as composition of traffic and the age and ability of pedestrians in the justification process.

Cllr Tooth

Comment – broadly accept the revision of priorities and criteria. However, is concerned that where old people live in sheltered accommodation, this area has been overlooked.

Response – the needs of older people have been considered; the likely outcome of adopting the new policy would be a greater priority being given to the provision of crossing facilities at locations frequented by elderly and disabled people.

Cllr Vereker

Comment - expressed his general support for the new policy. However, the need for the crossing should not be based on the number of pedestrian accidents.

Response – the justification for a crossing at a given location will be ascertained by measuring the degree of conflict between pedestrians crossing the road and the two-way. However, if pedestrian accidents are occurring at a specific location this will be taken into account when assessing the need for the new crossing, along side the other factors listed within the policy.

Mr John Maples MP

Comment – pleased to see a professional approach being taken in the development of the Policy.

Nuneaton and Bedworth Town Centre Manager - Mr Alan Ottey:

Comment - see no major problems with the new policy and recommends that groups such as the Access & Mobility Groups are consulted.

Response – various Mobility Groups were consulted.

North Warwickshire Borough Council Directorate of Environmental Services - Adrian Allen:

Comment – no adverse comments to report on the proposals and understand by introducing additional factors will undoubtedly lead to an improved selection process. This in turn hopefully result in fewer accidents and address the requirements of people with special needs.

Rugby Borough Council Dept. of Technical Services: Mr J Kerslake:

Comment - expressed support for the new criteria.

Warwickshire Constabulary - The Chief Constable:

Comment – support approach to prioritisation, which is both fair and consistent.

Warwickshire Fire and Rescue Service - The County Fire Officer:

Comment - expressed general support for the new policy.

The Road Haulage Association – Mr M Farmer:

Comment - Road Haulage Association understands the need to priorities the provision of crossings for reasons of cost and resources and supports efforts in this directions.

Warwickshire County Council, Countryside Recreation – Jo Cooper:

Comment - expressed general support for the new policy.

Living Streets Leamington - Janet Alty:

Comment - expressed support for the new criteria. The criteria should also include potential demand 'generated' by the introduction of a crossing; fully capture the vulnerability and abilities of people or and allowance for unpredictable human behaviour.

Response – there is no methodology for measuring suppressed demand when carrying out a pedestrian survey. Local Transport Note 1/95 and good practice in other highway authorities have been taken into account in developing these proposals.

Warwickshire and West Midlands Assoc. of Local Councils - Mrs A Hodge:

Comment - dropped kerbs should be provided at new crossings; that more funds should be allocated to new crossings and also high priority should be given to crossings compared to pedestrian phases at junctions.

Response – All new controlled crossings and traffic signal junctions will be designed to current design standards, which require dropped kerbs to be provided.

Ramblers Association - Mr S Wallsgrove:

Comment - that recreational use of crossing points should be made a more prominent part of the policy since, as proposed, it is clearly aimed at utilitarian use.

Response – the demand for the provision of new pedestrian crossings far exceeds the available funding. For this reason it is necessary to be able to compare the levels of justification at various sites, so that decisions can be made in a consistent way and best value obtained from available resources.

Disablement Information and Advice Line (DIAL) - Ms Mary Beaumont:

Comment – there is not enough time allowance to cross the road for pedestrians with mobility issues; the lack of consistency; that some crossings do not have a 'audible sound' or a 'rotating cone' installed for visually impaired people.

Response – when the crossings are installed, the green man period will be adjusted to suit that location; the majority of the crossings that are now being provided are Puffin crossings; all new controlled crossings and traffic signal junctions will be designed to current design standards, which require 'audible sound' where permitted and 'rotating cone' to be provided.