



# **SPEED MANAGEMENT STRATEGY**



















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# DIRECTORATE OF THE ENVIRONMENT ENGINEERING DIVISION TRANSPORTATION ENGINEERING GROUP

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## SPEED MANAGEMENT STRATEGY

### 1.0 INTRODUCTION

1.1 The Speed Management Strategy adopts a holistic approach to the speed management interventions adopted by the Council and provides a framework that identifies and includes policies, practices and procedures that appropriately consider and respond to road traffic speed related complaints.

### 2.0 THE AIM OF THE SPEED MANAGEMENT STRATEGY

- 2.1 The aim of the Speed Management Strategy is to set out the Council's approach to speed management in the County Borough in order to:
  - i. Make a significant contribution to reducing inappropriate vehicle speeds within the County Borough.
  - ii. Ensure the Council operates within the statutory requirements of Highway Authorities.
  - iii. Advise residents, Local Members and our customers in a transparent way on how complaints about speeding traffic will be considered and dealt with.
  - iv. Make appropriate use of limited resources via value based decisions that are proportionate to the problem and level of risk posed from speeding traffic.
  - v. Increase awareness of speeding and speed related issues through Education, Training and Publicity resources.
- 2.2 The Council will make decisions that will reflect the most recent best practice guidelines relevant to speed management in Wales; and
  - i. Review and adapt the Council's Speed Management Strategy as new technology becomes available.
  - ii. Manage efficiently and review sites identified for action on a regular basis and particularly before an activity is withdrawn.
  - iii. Assess requests for service of this nature in the first instance by collecting speed data.
  - iv. Refer as a matter of urgency to the Mid and South Wales Safety Camera Partnership sites displaying a serious traffic speeding problem that requires enforcement.
  - v. Carry out all appraisals in a fair and transparent manner.
- 2.3 This strategy intends to provide a transparent approach to speed management that investigates and responds in an appropriate manner to all identified speed related complaints and requests for traffic

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- calming. It also compliments the Councils integrated approach to road safety policies, practices and awareness and education campaigns.
- 2.4 The strategy framework will manage and respond to speed risks both real and perceived by measuring the problem and following through a set of procedures and appraisals that will identify an appropriate response or action.
- 2.5 The outcome will be a safer highway network with more targeted resources and the means of clarifying, for our customers, the extent of the problem and a reasoned response. The actions in response to the identified problems will include dissemination of results and will operate in parallel and in partnership with enforcement action provided by the Mid and South Wales Safety Camera Partnership's Gwent Regional Safety Camera Enforcement Unit (SCEU) and Gwent Police's Roads Policing Unit.
- 2.6 Requests for traffic calming, safety cameras or variable message signs are regularly received, all relate to speed management. Whilst traffic calming devices are used to improve road safety and the local environment, by attempting to modify behaviour and controlling drivers' speeds to match local conditions, this may not be the most appropriate response to a speeding problem.
- 2.7 Traffic calming needs to be considered where there is evidence of motorists exceeding the speed limit and a history of personal injury collisions. On rare occasions traffic calming may be used where there is evidence of traffic using an inappropriate route or to mitigate traffic impact on local roads mostly associated with new development.

### 3.0 STATUTORY DUTIES

- 3.1 The Council receives many complaints about speeding traffic, which arise from concerns about family and personal safety along streets in our towns and villages. Caerphilly County Borough has a duty of care to its residents and highway users to consider and develop policies that respond to matters of concern to the public.
- 3.2 The Council in its capacity as Highway Authority has a legal obligation to carry out duties under section 39 of the 1988 Road Traffic Act, which places a requirement to prepare and carry out a programme of measures, designed to promote road safety. The Highway Authority is responsible for setting local speed limits under the Road Traffic Regulation Act 1984.
- 3.3 The Speed Management Strategy will also contribute to achieving casualty reduction and therefore contribute to the Road Safety Strategy for Wales and the current national targets. The current casualty reduction target is to be achieved by 2010 and is based on a reduction

when compared with the average casualty figures for 1994-98 period: This target is aimed specifically to achieve:

- a 40% reduction in the number of people killed or seriously injured in road accidents:
- a 50% reduction in the number of children killed or seriously injured;
- a 10% reduction in the slight casualty rate, expressed as the number of people slightly injured per 100 million vehicle kilometres.
- 3.4 The primary legislation for traffic calming is the Highways Act 1980, sections 90A to 90F. Within this legislation it is made clear that road humps, which includes speed cushions, can only be constructed on roads that have a speed limit of 30mph or less. This does not preclude the use of other traffic calming techniques on roads with a speed limit of 40mph or above but use of any measure should be appropriate to the signed speed limit and provide for the function of the road.

### 4.0 **ENFORCEMENT**

- 4.1 Enforcement of the speed limits promoted by the Highway Authority is an important aspect of the Council's Speed Management Strategy. Enforcement can be considered to be two types: passive and active.
  - Passive measures are typically designed to manage driver's speed whilst not requiring human operation or intervention. Passive enforcement measures relate to the physical highway environment and seek to impose physical controls on highway users, to prevent inappropriate use of the highway.
  - · Active enforcement is, at present, carried out by Gwent Police and the Mid and South Wales Safety Camera Partnership and is supported by Local Highway Authorities in the region.
- 4.2 The Council as the Highway Authority intends to promote both types of enforcement measures to alleviate problems where appropriate.
- 4.3 Enforcement of traffic law with its objective of casualty reduction has to take its place with other calls upon police resources and court time and the amount of police resources dedicated to road traffic policing is limited. Caerphilly County Borough Council's Traffic Management Section carries out the role of liaison with the police regarding specific local problems.
- 4.4 The Mid and South Wales Safety Camera Partnership is an agreement between 16 Local Authorities. At present the Welsh Assembly Government is leading on a proposal to form a single all Wales partnership.

### 5.0 SPEED MANAGEMENT INTERVENTIONS

## Safety Camera Partnership

- 5.1 The Mid and South Wales Safety Camera Partnership carries out an appraisal of all speed complaints received, and this information is shared with the local authorities. The response will be determined by what is considered to be appropriate and the capacity of the Mid and South Wales Safety Camera Partnership to deliver it. The ultimate action is enforcement using safety camera equipment.
- 5.2 Safety cameras capable of recording and facilitating prosecutions comprise fixed cameras and mobile cameras. Fixed (static) cameras tend to be located along roads with a poor safety record and are always supported by a very poor collision record.
- 5.3 Mobile cameras must also satisfy certain conditions. There is however some capacity to deploy safety cameras in response to complaints received from the community. Those sites that qualify for attention and have permanent camera signs will be reviewed regularly, if there has been a significant improvement or engineering measures implemented at the site, then signage will need to be withdrawn. This will release capacity for the Safety Camera Enforcement Unit (SCEU) to take action elsewhere.

### **PACT**

- 5.4 A police initiative to involve local communities in matters of local concern is known as PACT. This is a police engagement initiative labelled Partnerships And Communities Together (PACT) that embraced the ethos of Neighbourhood Policing. It is the police service's commitment to improving quality of life, by working more visibly and closely with local communities, together with partner agencies, and targeting the issues that local communities identify as those that matter most. PACT is intended to empower and involve communities in the decision making process with a view to reducing the fear of crime.
- 5.5 The Mid and South Wales Speed Camera Partnership funded the provision of hand held speed guns, and the SCEU has trained Community Police Officers in their use as a way of providing a quick visible response to issues raised at PACT meetings, in advance of gathering full 24/7 speed data. Speed guns collect data that is useful for decision making, awareness campaigns or enforcement matters.
- 5.6 The Highway Authority has been actively involved with this initiative and enables matters relating to traffic speeds to be investigated promptly by working with Community Police Officers.

### **VAS**

5.7 Caerphilly County Borough Council also has the capacity to use driver awareness measures, in the form of VAS (Vehicle Activated signs) and

VMS (Variable Message Signs). These measures are most appropriate where the problem of excessive speed is less severe. Studies have proven that the use of VAS can achieve an average reduction in mean speed of 4mph where there has been no change in the posted speed limit.

## SPEED MANAGEMENT STRATEGY - ACTIVITY MATRIX

The following activity matrix shows the interrelationship/activities in 5.8 speed management between the Mid and South Wales SCEU, the Highway Authority and the Roads Policing Unit (police).

SPEED MANAGEMENT RELATED RESPONSIBILITY/ ACTIVITY	HIGHWAY AUTHORITY	MID & SOUTH WALES SCEU	ROADS POLICING UNIT
Statutory responsibility for	$\sqrt{}$		$\sqrt{}$
road safety			
Speed Complaints	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$
Speed Data Collection	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$
SPEED MANAGEMENT			
TOOLS/ACTIVITIES			
Traffic Management			
Setting Local Speed Limits			
Traffic Regulation Orders			
Enforcement		$\sqrt{}$	$\sqrt{}$
Accident remedial and traffic			
calming engineering			
measures			

### 6.0 **EVALUATION CRITERIA**

- 6.1 The intervention criteria used through the examples applies to 30 mph speed limits unless it is stated otherwise.
- 6.2 Vehicle Activated Signs have been in use throughout the United Kingdom since 2000. A large scale evaluation carried out in 2002 by TRL (Report TRL 548) has found that there is a positive effect on speed reduction and collisions. The study evaluated a range of signs and locations and found that, 'the average reduction in mean speed where there had been no change in the speed limit was 4 mph'. This study allows the identification of an intervention threshold for VAS. which includes an allowance for a margin of error in recording equipment. It would be difficult to encourage compliance by all motorists to travel below the legally signed speed limit and subsequently reduce the mean speed criteria for the road to below 25 mph for a 30 mph road. This is the reason why the intervention level is set at a mean speed of at least 32 mph and an 85<sup>th</sup> percentile<sup>1</sup> of at

<sup>&</sup>lt;sup>1</sup> The 85<sup>th</sup> percentile is the recorded speed that 85 percent of the traffic is travelling at or below along a road.

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least 37 mph. The Council's Speed Management Strategy is based on the use of speed management tools that are appropriate to the severity of the problem.

- 6.3 This Speed Management Strategy develops the Vehicle Activated Signs project within a holistic approach and leads on from the previous report to the Council's Regeneration Scrutiny Committee in June 2008. The data collection and analysis associated with the Speed Management Strategy will also inform the review of Local Speed Limits. Further information on the review of local speed limits can be obtained from the report to the Regeneration Scrutiny Committee in September 2008 regarding the Welsh Assembly Government's Consultation on Draft Guidance for Setting Local Speed limits.
- 6.4 It is also important to note that speed limits are the legally enforceable maximum speed for the road and do not negate the driver's responsibility to travel at a speed appropriate for the prevailing conditions.
- 6.5 At a speed problem threshold of or above at least 37 mph mean speed and at or above at least 42 mph 85<sup>th</sup> percentile<sup>1</sup> recorded speed the road or street will be considered against the adopted traffic calming policy. This level of speeding traffic is deemed to warrant consideration of engineering measures and enforcement.
- 6.6 Should a complaint be received in a 40 mph limit a minimum intervention criteria of at least 43 mph mean speed and a 85<sup>th</sup> percentile<sup>1</sup> of at least 48 mph would apply. Speed records above this level within a 40mph limit would require an assessment of the appropriateness of the posted limit and will be subject to review when the revised setting local speed limits guidance for Wales is released. Traffic calming humps, which include speed cushions could not be implemented on a road with a speed limit of 40 mph or over, see road hump regulations. Nevertheless, horizontal deflections can be considered in certain circumstances.

### 7.0 20 MPH ZONES/LIMITS

7.1 Requests for 20 mph zones will only be considered for locations that have a main attractor of vulnerable road users. To date 20 mph zones have only been implemented in areas that surround primary schools and along roads that serve local communities and are situated away from the classified road network. Classified un-numbered roads (Class III) might be considered, but this will be dependent on their role and function.

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<sup>&</sup>lt;sup>1</sup> The 85<sup>th</sup> percentile is the recorded speed that 85 percent of the traffic is travelling at or below along a road.

- 7.2 A further criterion used in the past has been the Wales social deprivation index with communities receiving priority that have the highest deprivation score within the Caerphilly County Borough. This strategy proposes to prioritise 20mph Zones to locations with a record of pedestrian injury collisions that are school related.
- 7.3 Collisions predominantly resulting in child/pedestrian/cyclist casualties have not been noted to cluster around schools. Nevertheless, reducing the generic speed of traffic and the speed limit will improve the safety of the school journey. It may also help to encourage modal shift to sustainable forms of transport.
- 7.4 It is proposed to prioritise the consideration of requests received for 20mph Zones around schools that have developed a School Travel Plan (See Appendix C). The school travel plan will achieve a number of objectives:-
  - It will allow identification of problems experienced during the journey to school.
  - It will help to encourage active participation in the development and ownership of a sustainable transport strategy within communities.
  - Raise awareness of road safety education and travel choices, and encourage more walking and cycling and reduce car journeys.
- 7.5 The prioritisation of 20 mph zones to areas supported by a School Travel Plan will allow the safety improvements to be supported by Education, Training and Publicity (ETP) initiatives that provide road safety learning opportunities. Holistic management of road safety problems within communities will provide opportunities to promote ETP, healthy lifestyles and address barriers to sustainable travel.
- 7.6 It is also important to consider the role and ownership by the school/community, thereby maximising the benefits of 20 mph zones in the context of a safe routes in community approach. In the absence of a school/college as the main attractor, proposals will only be considered in communities where there is a primary attractor of vulnerable road users such as a leisure complex or local shopping centre/facilities.
- 7.7 As a rule all requests for a 20 mph zone or limit will be first considered in terms of their locality and position along the Highway network. Those 20 mph limits or zones, which are proposed for or have a negative impact on strategic roads, unfortunately, cannot be considered. A change to the limit along a road of this nature would require traffic calming and potentially have an impact on other local roads through displacement of traffic or impact on the economy of the area. This is explained in the traffic calming report of December 2005 agenda item

- 7(7). The technical appraisal process used to identify those roads most meriting traffic calming was refined in 1999 and is in accord with meeting casualty reduction targets.
- 7.8 Every proposal or public request for traffic calming will continue to be subjected to a consistent multi-stage appraisal process but in the first instance the recorded speed will need to provide evidence of a problem of excessive speeding.
- 7.9 The Highway Authority considers new developments and promotes and advocates local road and highway design, which encourages appropriate traffic speeds through the Residential and Industrial Development design guide. 20 mph speed limits and zones are promoted where they do not include roads providing access to hospitals and or fire stations and are applicable where there is an alternative access for through traffic. Zones only apply to residential streets. The DfT's Manual for Streets also advocates slower speeds by encouraging designers to keep vehicle speeds at or below 20 mph on residential streets unless there are overriding reasons for accepting higher speeds.
- 7.10 There is no intention to retrospectively introduce 20 mph zones in residential areas. Such requests will be treated on their individual merit and in line with the appraisal process (see Appendix C). Requests will need to be in proximity to a school or part of a Safe Routes in the Community Strategy to be considered for a 20mph speed limit or zone within existing communities.
- 7.11 Physical engineering measures and traffic calming will continue to focus on casualty reduction, this means that in the absence of a collision history engineering measures would not be considered.
- 7.12 Any request, which raises concerns about the speed of traffic, will be included in the speed management appraisal by firstly recording vehicle speeds and examining the casualty record. Locations that have a higher than anticipated collision record will be identified and examined as part of existing practices in partnership with Gwent Police.

### 8.0 THE PROCESS

- 8.1 The process for evaluating and responding to an excessive speed issue is shown in the flow chart (see Appendix A), and explained below.
- 8.2 The trigger for the processes that make up the strategy is achieved by testing each request against the recorded speed data in the first instance. In the absence of recent speed data i.e. less than 6 months old, data will be obtained through placing electronic equipment along roads within the County Borough.

- 8.3 The speed record will be generated from all speed records collected for at least 24 hours a day over a 7 day period. This will take an appropriate record of the speed of traffic travelling along a road and if appropriate be recorded through school terms times.
- 8.4 The results and analysis of the speed data will confirm whether or not there is evidence of excessive or inappropriate speed. If there is no evidence of excessive speeds, no further action will be taken, and the complainant/requester will be informed. Where there is evidence of excessive speeds, the following interventions will be considered.
  - VAS Vehicle Activated Signs
  - 2. Refer to Safety Camera Enforcement Unit
  - 3. Engineering Measures

### **Intervention 1**

8.5 The site will receive VAS treatment if the speed data is within the range of between 32 – 36 mph mean speed and 37 – 41 mph 85<sup>th</sup> percentile<sup>1</sup> speeds for a 30 mph speed limit.

### Intervention 2

- 8.6 The Safety Camera Enforcement Unit (SCEU) will be informed when the alleged excessive speed issue is received and provided with a copy of the correspondence and any speed data collected. The SCEU will consider the matter in terms of their independent appraisal process. The action they may take will be according to the level of the problem. The following is an indication of the assessment process and actions considered by the SCEU:
  - Stage 1 Carry out site assessment
  - Stage 2 Appraisal of data collected
  - > Action 1 No further action
  - Action 2 Short term use of Speed Visor (VMS)
  - Action 3 Road Policing Unit
  - > Action 4 SCEU Consideration as an Enforcement site.

### Intervention 3

- 8.7 Where the speed data record taken along the road is at least 37 mph mean speed and the 85<sup>th</sup> percentile is at least 42 mph the road will be considered for traffic calming or accident remedial treatment.
- 8.8 All requests reaching this stage for consideration of engineering measures will be considered against the existing 3 stage traffic calming policy (see Appendix B) and prioritised when the criteria and considerations are satisfied in stage 1 and 2 of the policy. The

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<sup>&</sup>lt;sup>1</sup> The 85<sup>th</sup> percentile is the recorded speed that 85 percent of the traffic is travelling at or below along a road.

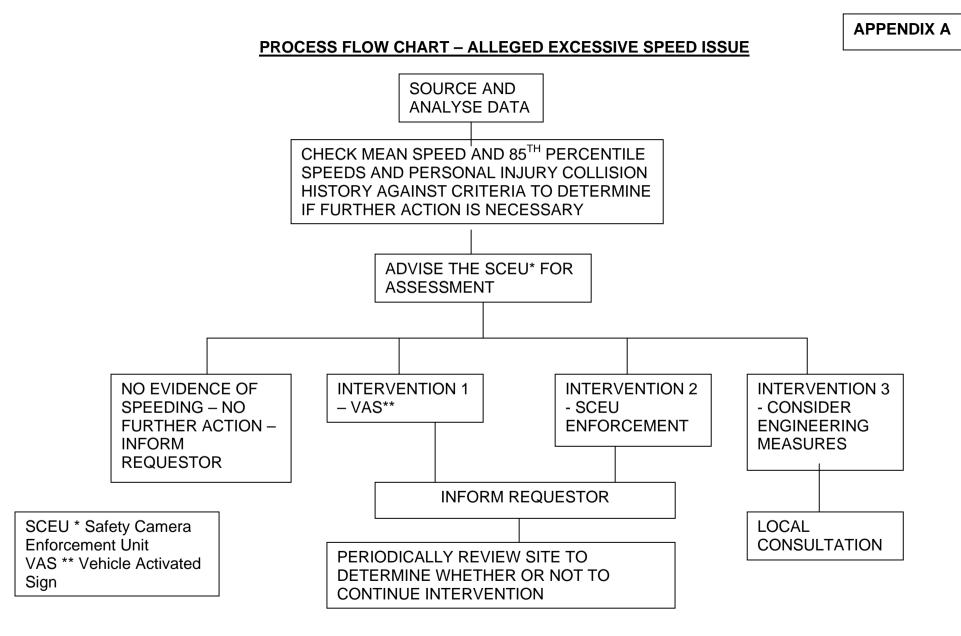
- prioritisation and building of traffic calming schemes is subject to available funding streams.
- 8.9 The existing multistage approach to considering traffic calming is important both to respond in an appropriate manner to requests for physical measures and also to ensure that we get the balance right in terms of the role of the road and management of the core and strategic highway network.
- 8.10 If the location has a collision history an accident remedial scheme will be considered if a treatment can be developed which would reduce the number of collisions. This will apply to all roads and would not be discounted because of the classification of the road or its function.
- 8.11 Where there are a number of collisions along a length of road a further study will be carried out in the first instance, which will assist in informing and developing schemes that offer value for money and have treatable causation factors. The treatments may include traffic calming but more often schemes are developed to treat common themes and are termed to be accident remedial schemes.
- 8.12 The road will also be placed within a schedule of VAS treatment and referred to the SCEU for appraisal and consideration for an enforcement campaign.

## 9.0 MONITORING AND REVIEW

- 9.1 At the end of a programme of VAS treatment or enforcement speed data will be collected and the site reviewed.
- 9.2 If the problem has improved then the activity is withdrawn and the Local Member(s) will be informed. This allows additional capacity to treat other locations, which have not benefited from the initiatives.
- 9.3 Where a location has had traffic calming treatment and also receives enforcement and/or VAS activity, after completion of the traffic calming scheme the enforcement and VAS activity will be withdrawn. This will include collection of post engineering measures speed data to check that the scheme has achieved its objective.
- 9.4 All decisions about VAS and enforcement will be taken after review of the speed record for the road and will be guided by the intervention thresholds, which is a sound basis for taking action or withdrawing action. The process of review is indicated in the flow chart.
- 9.5 Sites selected for treatment will only be withdrawn from the schedule of VAS after a review of speed data has been carried out and only when the intervention thresholds are no longer exceeded.

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9.6 Caerphilly Council will implement a phased withdrawal using a VAS sign to collect and monitor traffic speeds after the removal of speed camera enforcement action and signage. This information will be supplied to the SCEU for Officers to note any significant increase in recorded speeds post withdrawal of enforcement. All sites will be evaluated against the speed management threshold criteria before being considered for dismissal.



### TRAFFIC CALMING APPRAISAL AND POLICY

APPENDIX B

Source: Report to Technical Scrutiny Committee December 2004.

Stage 1 considers whether the site is suitable for traffic calming. Generally main roads, roads without a speed restriction, or the sole access for emergency vehicles are rejected at this stage. There may well be a problem but traffic calming is not the appropriate solution.

Stage 2 involves a brief appraisal of the site. The criteria used are consistent excessive traffic speed, the presence of 2 or more accidents which might have been prevented by traffic calming, evidence of extraneous traffic and a strong community need. A proposal failing these tests is excluded from further considerations.

Stage 3 involves a much more rigorous analysis. The factors considered at this stage are:

- The accident record over the previous 5 years with greatest weight (i) given to the last 3 years;
- (ii) The speed of traffic.
- (iii) Vehicular and pedestrian flows;
- (iv) Presence of parked vehicles;
- (v) Fronting development, including housing, care homes, schools:
- (vi) The role of the road in the community and the level of extraneous traffic:
- (vii) Importance to buses and emergency vehicles;

Length of road to be calmed (this is a cost surrogate/substitute).

The factors are grouped into 4:

- Safety for which a site can score up to +50; (i v)
- The local role of the road can score up to +15; (vi)
- Community aspects can score up to 35: (vi)
- Negative factors (buses and emergency vehicles, the needs of necessary through traffic) can have a negative impact up to -50).(vii)

Thus a site can score between +100 (fully meets all positive criteria) to -50 (no benefits with severe adverse impact on existing road traffic). The length of the road is considered in making a final judgement to reflect likely cost of a possible scheme, although it is not included in the score calculation, which is in effect a score for the length of road being considered.

**APPENDIX C** 

### APPRAISAL AND POLICY FOR 20 MPH SPEED LIMITS AND ZONES

Requests for 20mph zones outside schools will be considered where a school has developed a school travel plan or has committed to producing a plan or for areas included in a safe routes in the communities study or bid. Only roads that are not main roads Class A, B or CIII can be considered for 20 mph zones or limits unless the road is reclassified and has a significant reduction in traffic volumes.

Stage 1: Examine the location of the school or safe routes in the community study area and determine the potential area for the speed limit or zone.

Stage 2: Collect speed data for the roads identified.

Stage 3: Analyse the data in terms of the potential for setting the speed limit according to the current 'Setting Local Speed Limits Guidance' adopted in Wales.

Categories of treatment are:-

- TRO (Traffic Regulation Order) schemes satisfying the criteria for 20 mph limits by signing only.
- TRO schemes requiring engineering measures to change the speed limit to 20mph and to comply with the self policing requirement.

Stage 4: Prioritise the budget available towards those identified zones and speed limits surrounding schools that have catchment areas with the highest school related pedestrian casualty rate and/or highest recorded vehicle speeds. The rate is calculated by a count of the last 5 year period of personal injury collisions involving child pedestrian casualties.

Stage 5: Progress those schemes that require a TRO and signage only as the speed along the residential streets match with current guidelines.

Stage 6: Include those locations that require engineering measures to comply with the speed limit change into an advanced design programme. (subject to funding)

Stage 7: Retain the ranking list for an annual review against School Travel Plan requirements.

Those schemes that require engineering measures to enable a 20 mph speed limit or zone will be progressed but may have to be retained in a forward programme and compete for funding in subsequent years. All prioritised schemes will be recommended to members for inclusion in the Capital Programme subject to available funds and in the appropriate year.