AGENDA MANAGEMENT SHEET

Name of Committee	**Communities Overview and Scrutiny Committee**
Date of Committee	**28 April 2011**
Report Title	**Preventing Speed Related Road Casualties**
Summary	To consider how Warwickshire can best prevent people being killed or injured in speed related road crashes in the context of the present financial restraints.

For further information please contact	Estyn Williams Road Safety Manager Tel. 01926 412712 estynwilliams@warwickshire.gov.uk	Stephen Rumble Road Safety Intelligence Team Leader Tel. 01926 412740 stephenrumble@warwickshire.gov.uk

Would the recommended decision be contrary to the Budget and Policy Framework?	No
Background Papers	

CONSULTATION ALREADY UNDERTAKEN:-   *Details to be specified*

Other Committees	☐	....
Local Member(s) (With brief comments, if appropriate)	☐	....
Other Elected Members	☒	Councillor A Cockburn
Cabinet Member (Reports to The Cabinet, to be cleared with appropriate Cabinet Member)	☒	Councillor R Hobbs
Chief Executive	☐	....
Legal	☒	I Marriott – Comments incorporated.
Finance	☐	....

Other Chief Officers	☐	....
District Councils	☐	....
Health Authority	☐	....
Police	X	Warwickshire Police
Other Bodies/Individuals	☐	....

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

SUGGESTED NEXT STEPS :

Details to be specified

Further consideration by this Committee	☐	....
To Council	☐	....
To Cabinet	X	This Committee may wish to make recommendations to cabinet.
To an O & S Committee	☐	....
To an Area Committee	☐	....
Further Consultation	☐	....

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Communities Overview and Scrutiny Committee – 28 April 2011

Preventing Speed Related Road Casualties

Recommendation

The Committee is invited to comment on the existing balance of measures used to influence traffic speed and, if appropriate make recommendations to Cabinet.

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1.   Introduction

'Tackling excessive and inappropriate speeding is possibly the biggest challenge currently facing road safety.'

(The Parliamentary Advisory Council for Transport Safety [1])

1.1   This report has been prepared in response to a request from the Chair of this Committee to enable the Committee to scrutinise the Council's approach to speed management in light of budget reductions.

1.2   Warwickshire Police have expressed agreement with the content of this report.

1.3   Road traffic collisions are a major cause of death, injury and human suffering. In 2010, 301 people were killed or seriously injured on Warwickshire's roads and a further 1,790 were slightly injured. The economic cost of Warwickshire's road traffic collisions in 2010 was estimated to be £104M[2].

1.4   Over the last decade the number of deaths and serious injuries on Warwickshire's roads has more than halved (figure 1), with the rate of reduction exceeding the national average and government targets.

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[1] Gwilliam, R. (2008) Behave Yourself – Road Safety Policy in the 21st Century. Parliamentary Advisory Council for Transport Safety

[2] Figure based on Department for Transport estimates for the costs associated with road accidents and casualties in Reported Road Casualties Great Britain: 2009. Department for Transport.

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Figure 1: Road users killed or seriously injured in Warwickshire 2000 to 2010
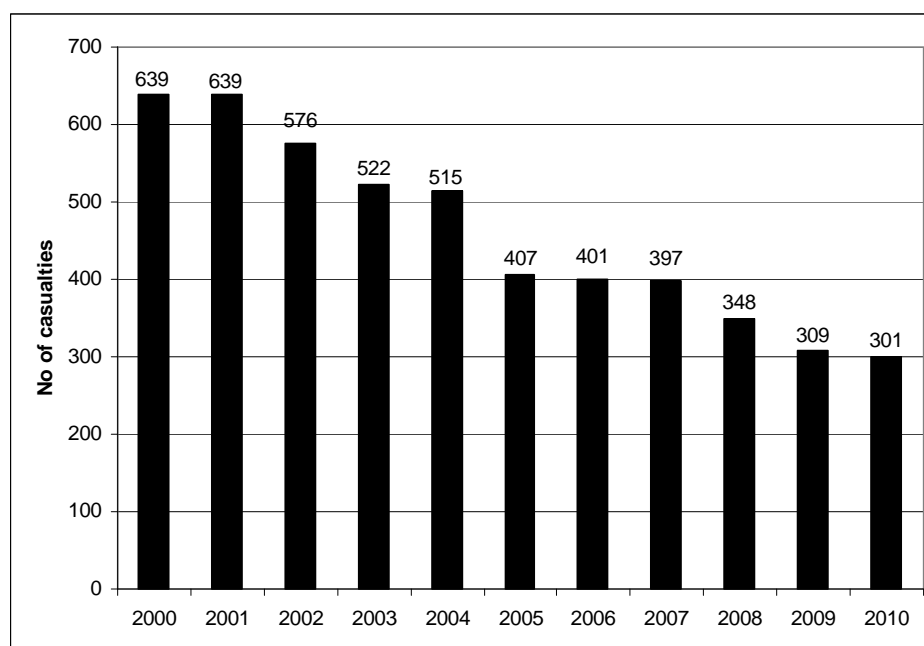
2.   Speeding and Road Collisions

2.1   Speeding is a major cause of road collisions and contributes significantly to the severity of the consequences of crashes. Nationally in 2009, exceeding the speed limit or travelling too fast for the conditions was recorded as a factor in 27% of fatal collisions[3]. The prevalence of speeding in fatal collisions has led Warwickshire Police to label speeding as one of the 'fatal four' causes of road death[4].

2.2   Many of our communities are concerned about speeding traffic and the Council receives over 500 complaints about the issue every year. Nationally, speeding traffic is rated as a significantly greater problem than any other antisocial behaviour[5]. In Warwickshire's Citizen Panel (May 2008) speeding traffic was the most commonly mentioned form of anti-social behaviour to be a problem in respondent's local areas.

3.   Speed Management Strategy

3.1   Speed management is a vital component of our road safety strategy. Measures that have reduced traffic speed such as speed cameras and the speed limit review have also contributed to casualty reduction. This is not unexpected given

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[3] Department for Transport (2010) Reported Road Casualties GB: 2009 Annual Report.

[4] The others are impairment (alcohol, drugs, etc), distraction (mobile phones, passengers etc), and the failure to wear seatbelts.

[5] Poulter, D.R., & McKenna, F.P. (2007). Is speeding a "real" antisocial behaviour? A comparison with other antisocial behaviours, *Accident Analysis & Prevention*. The authors found that 43% of the population regarded speeding traffic as a 'very' or 'fairly big' problem in their area

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that research has established that reducing average speed by 1mph cuts injury collisions by 5%[6].

3.2 The Council agreed a Speed Management Strategy in 2007 (see **Appendix A**). The strategy consists of a number of objectives and policies covering the 3 Es of road safety; Education, Engineering and Enforcement. The strategy recognises that no one approach to speed management will work in isolation and therefore advocates using a range of methods to persuade motorists to comply with speed limits, and drive at an appropriate speed. The Speed Management Strategy is broadly consistent with Warwickshire Police's road safety strategy.

3.3 Engineering interventions are effective at reducing vehicle speeds at specific locations or along routes. Visible enforcement through speed cameras and roads policing creates a threat of detection and prosecution that deters speeding. Education helps motorists understand the dangers associated with speed and can change attitudes towards speeding and positively influence driver behaviour, resulting in improved speed limit compliance. However, providing speed education to drivers is difficult because the message is complex, driving attitudes and behaviours are entrenched and there are relatively few opportunities to engage with the public.

3.4 A significant dilemma facing road safety is the need to balance the competing priorities of casualty reduction and responding to community concerns about speeding traffic. People tend to highlight speeding problems in the areas in which they live or frequent, but most serious casualties tend to occur outside residential areas. The current approach is to prioritise interventions that will prevent the greatest number of casualties for the funding available.

4. Funding Speed Management

4.1 The funding available for road safety, including speed management, has reduced significantly. Speed camera enforcement, which was previously funded by Area Based Grant (ABG) and had an original allocation of approx £1.2M in 2010/11, is now funded by a Council revenue budget of £250k supplemented by surplus from running the Speed Awareness Workshops. Consequently enforcement has been scaled back significantly compared to previous years. The budget restrictions have also reduced the funding available for other measures that can address speeding such as safety engineering schemes and education, training and publicity initiatives. Some road safety services designed to combat speeding are now being charged for and others utilise volunteers.

5. Speed Management Techniques

5.1 This section outlines the speed management techniques used by the Council. More detailed information relating to these techniques, including a summary of available evidence on effectiveness is provided in **Appendix B**.

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[6] Taylor M C, Lynam D A and Baruya A (2000) The effects of drivers' speed on the frequency of road accidents. Transport Research Laboratory and Taylor M C, Baruya A and Kennedy J V (2002) The relationship between speed and accidents on rural single-carriageway roads. Transport Research Laboratory.

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Speed Cameras

5.2   Speed cameras have been highly effective and made a significant contribution to casualty reduction in Warwickshire. There has been a 77% cut in the number of people killed or seriously injured (KSI) at camera sites between the baseline (1994-98 average) and 2009. This is significantly greater than the 46% KSI reduction experienced on Warwickshire's road network not covered by speed cameras during the same period.[7] Speed readings show that vehicle speeds have been reduced in the vicinity of cameras and evidence also shows that the introduction of speed cameras has positively influenced driver speed across the entire road network. There is significant public support for speed cameras both locally and nationally and the Coalition Government has stated that it supports the use of speed cameras[8].

Figure 2: People killed or seriously injured at Warwickshire camera sites

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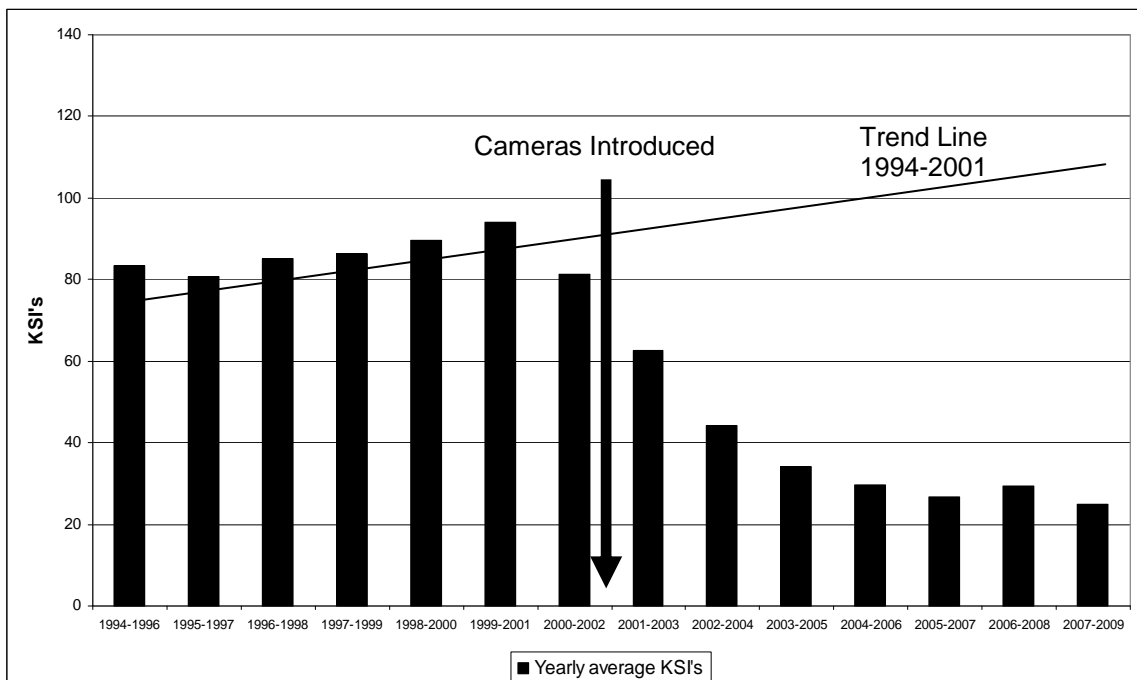
[7] KSI casualties at camera sites reduced from a baseline of 86 (annual average 1994-98) to 20 in 2009. Warwickshire's total KSI casualties fell from 711 to 309 during the same period..

[8] See for example letter to Local Authorities from the Road Safety Minister, Mike Penning, dated June 2010.

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Speed Awareness Workshops

5.3   Warwickshire Police prefer to educate rather than penalise less serious speeding offenders because these drivers are often highly responsive to education. Drivers whose speed is not reckless are offered the opportunity to attend a Speed Awareness Workshop (SAW) as an alternative to prosecution.

5.4   Speed Awareness Workshops present an unparalleled opportunity to challenge the norm of speeding and persuade motorists to drive at safer speeds. SAWs have been proven to positively influence driver attitude and reduce reoffending rates[9]. The Parliamentary Advisory Council for Transport Safety suggest that SAWs 'may provide the key to achieving a critical mass of compliant drivers'[10].

5.5   In Warwickshire SAWs are run by the County Council under a Service Level Agreement with the Police and the courses follow an approved national model[11]. Attendee feedback highlights that the workshops are viewed positively with clients awarding the workshops an overall average rating of 4.6 out of 5. SAWs have a 70% take up amongst eligible drivers in Warwickshire and are predicted to be delivered to approx 10,000 motorists during 2011/12. Without speed cameras SAWs would not be delivered and this opportunity to educate motorists would be lost.

Vehicle Activated Signs (VAS)

5.6   Vehicle activated signs (VAS) provide individual feedback and advice to drivers by flashing up a message or warning to influence their behaviour. The signs are popular with motorists and communities alike. Permanent VAS were initially used in Warwickshire as part of casualty reduction schemes, but are now used more widely with purposes including encouraging speed limit compliance to support speed limit changes and in response to community concern. Temporary VAS are made available to local communities through the SpeedAware programme. VAS can reduce vehicle speeds, however the impact varies according to the type and size of sign, location, and scale of the initial problem. It is likely that the impact of VAS has reduced as the signs have become more common place and that drivers response to VAS lessens over time.

5.7   With approximately 300 VAS in Warwickshire, the annual maintenance and renewal cost has grown significantly and is predicted to increase further. Any increase in the number of VAS will increase costs at a time when budgets are declining.

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[9] Various examples highlighted in Dr F Fylan et al (Brainbox Research) and Prof. M Conner et al (University of Leeds) Road Safety Research Report No 66: Effective Interventions for Speeding Motorists. Department for Transport.

[10] R Gwilliam (2008) Behave Yourself – Road Safety Police in the 21st Century. Parliamentary Advisory Council for Transport Safety.

[11] The SAW national model is designed by the Association of Chief Police Officers.

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Community Based Initiatives

5.8   Interventions are available to help communities who are concerned about traffic speed that are not eligible to receive enforcement or engineering interventions because other sites with a worse casualty history have to take priority for funding. The Council run Community SpeedAware scheme and Police facilitated Community Speed Watch harness the enthusiasm of the community and involve them in the promotion of safer driving in their area. The initiatives also help to address the publics fear of the dangers posed by speeding traffic and reinforce drivers awareness of their speed. However, the schemes concentrate on residential areas which are not where most serious casualties usually occur.

Lowering Speed Limits

5.9   The County Council's speed limit policy is based on Department for Transport guidance. The general policy is that speed limits should be self-sustainable, that is a speed limit that will be generally adhered to without needing enforcement. Lowering a speed limit will not normally reduce vehicle speeds by itself. Enhanced speed limit signing or additional engineering or enforcement measures are normally required.

5.10   Speed limits have been lowered through the following programmes:-

(i)   **Speed Limit Review**. A review of all A and B road speed limits required by the Government led to 120 speed limit changes.

(ii)   **Village Speed Limit Review**. A systematic review of village speed limits on rural roads that aims to introduce 30mph speed limits in all villages. More than 40 villages have benefited from the scheme.

Physical Traffic Calming Measures

5.11   Physical traffic calming measures such as road humps, speed cushions, chicanes and narrowings can be effective at reducing road casualties, but are best suited to residential/suburban roads with low traffic volumes and speed limits of 30mph or less. Such techniques can be expensive, have high maintenance costs and are sometimes unpopular with motorists and residents once installed.

Driving Ambitions

5.12   Driving Ambitions is a programme offered through secondary schools to educate pre-drivers about driving, including the dangers and consequences of speeding. Driving Ambitions seeks to deliver positive messages about safe driving at a time when young people are forming opinions that will shape their future driving behaviour. The programme is a cost effective method of educating future drivers and is delivered to 85% of secondary schools.

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Public Information and Education Campaigns

5.13   Information campaigns targeting road users set the context for other speed management activities and help the public understand the risks and dangers associated with speeding. Campaigns have been shown to influence the speed at which motorists drive. However, they require significant investment and there is currently no budget available to support campaigns that target speeding.

Roads Policing

5.14   Visible roads policing encourages compliance with traffic law by signifying a threat of detection and prosecution across the entire road network. It ensures that the threat of speeding detection still exists for motorists on roads not covered by cameras. Warwickshire Police prioritise enforcement which targets high harm offenders who pose the greatest risks to the safety of others. This includes targeting routes with historic road safety issues and locations where high risk road user groups such as powered two wheel riders and young drivers are present.

5.15   Physical policing is labour intensive, expensive and cannot deliver the same level of enforcement and presence on the roads offered by speed cameras for a much lower cost. A reliance on police enforcement on its own would have a far lower deterrent effect on speeding than when combined with cameras because the chance of apprehension would be significantly less. In light of reductions to police budgets, roads policing could not be relied upon to address the speeding problem in isolation.

6.   Conclusion

6.1   The Council's policy is to target the resources available to prevent the greatest number of casualties so that we can provide Warwickshire's residents with the safest road network possible.

6.2   The Speed Management Strategy adopted by the Council utilises the whole range of techniques in the 3E's of road safety (engineering, education and enforcement) to combat excessive and inappropriate speed. This approach has served the Council well and contributed to its record of halving the number of road deaths and serious injuries and reducing them at a rate which exceeds the national average and government targets over the last decade.

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6.3 Within this overall approach the correct solution will vary according to the problem, location and available resources and may change over time. The Council needs to constantly fine tune the way it deploys its resources in the light of changing circumstances. The Committee is invited to comment on the existing balance of measures used to influence traffic speed and if appropriate, make recommendations to Cabinet.

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Preventing Speed Related Road Casualties

Speed Management Strategy

1.   Introduction

This strategy is a coordinated approach to the issue of speed which states objectives and develops proposals to address the management of speed in ways that result in roads that are safer for all, and takes into account the needs of local communities.

2.   Speed Management

2.1   Successful management of speed will be achieved only by the County Council, Warwickshire Police, Borough and District Councils, Parish Councils and other community organisations working together.

The benefits of managing speed to better suit the local environment are:-

(i)   A reduction in the number of casualties on the road.

(ii)   A reduction in demands on the emergency services.

(iii)   Improvements to the quality of life in local communities.

(iv)   Encouragement of more environmentally friendly methods of travel.

Improvements in the environment for walking, cycling and horse riding.

To do this, we need to utilise a combination of the three 'E' s.

(i)   Education – to influence for the better the ways in which people drive, walk and cycle

(ii)   Engineering – to design and improve roads in a way that encourages safer and more responsible driving.

(iii)   Enforcement – to work with the Police to carry out targeted enforcement where there are significant road casualties or where unacceptable speeding is a problem

2.2   The overall objective is to attempt to alter the culture of the many drivers who consider that they alone can judge what speed is appropriate, into one in which a more responsible attitude prevails.

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3. Why is Speed a Problem?

3.1   Speeding and accidents are closely related. When a hazardous situation arises the greater the speed, the greater the risk that an accident will occur. And the greater the speed of those involved in an accident the more serious the consequences will be.

3.2   Research shows that speed was a major contributory factor in around one third of all traffic accidents.

3.3   Drivers travelling too fast do not just put themselves at greater risk. They also endanger more vulnerable road users and adversely affect the environment of the communities though which they pass.

3.4   The great challenge is to change the culture of drivers. Many drivers view their speed as a matter for their personal decision based on their own values. We need to change this so that they give due consideration to the impact it has on the communities through which they pass.

4. The Role of the Driver

4.1   Influencing the attitude of drivers is therefore a key element of any strategy. Research at the University of Manchester categorised those drivers who are most likely to be involved in speed related accidents into three groups:-

   (i)   Error makers: those who do not look.

   (ii)   Lapsers: those who do not think.

   (iii) Violators: those who do not care.

4.2   It is these three groups of drivers who most need to alter their approaches to driving by taking a more responsible attitude to other road users. This requires a culture change, so that the community finds driving too fast as socially unacceptable as drink driving.

4.3   However, it is not just these drivers who are the problem. We all drive too fast at times. There is a collective feeling that it is acceptable because everyone else does it and the chances of being detected and prosecuted, except at camera sites, is very small. Once again, it is necessary to change the culture, as this attitude can be passed on to our children when they start driving.

4.4   The majority of drivers do not speed significantly through their own communities, since they have an affinity with the people who live and work there. Many however, do so through other communities.

5. The Strategy Objectives and Their Implementation

5.1   The Strategy is formed of a set of objectives, each aimed at a particular problem associated with speed that is encountered in Warwickshire. This is followed with a statement setting down the Council's policy with respect to the objective.

5.2   The Strategy acknowledges and builds on many of the existing initiatives with regard to vehicle speeds and safety in the county. It then aims to add to and improve on these existing initiatives.

5.3   The Strategy is set out in a way that new developments, guidance and technologies can be accommodated and taken account of in the future.

5.4   In order that each policy can be followed, the Strategy identifies a number of actions that would need to be approved and funded for implementation in future years.

5.5   The timescale for delivering the strategy will depend on the funding available.

6.   The Objectives and Policies

6.1   **Objective SMS 1 - Education**

To increase the awareness of drivers to the problems caused by inappropriate speed, and foster a more responsible attitude to driving at an appropriate speed for the road conditions.

Policy SMS 1

The County Council, with the support of Warwickshire Police, will continue to support national speed campaigns by local initiatives, with local campaigns and events aimed at raising the profile of the use of appropriate speed.

6.2   **Objective SMS 2 - Education**

To work with young drivers to improve their understanding of speed issues.

Policy SMS 2

The County Council will continue work with its partners to promote programmes to make young drivers, and those approaching driving age, more aware of the problems caused by inappropriate speed, and to foster a more responsible driving attitude.

6.3   **Objective SMS 3 - Education**

To assist communities with perceived speeding problems to take ownership of local issues.

Policy SMS 3

The County Council will work with Warwickshire Police, other local councils, and other bodies to give support to local communities that wish to promote safer driving and reduced speeds in their areas.

6.4   **Objective SMS 4 - Education**

To encourage drivers detected speeding to undergo training as an alternative to prosecution.

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Policy SMS 4

The County Council will continue to work with the police to provide Speed Awareness workshops for drivers detected speeding as an alternative to prosecution.

6.5 **Objective SMS 5 - Education**

To encourage local businesses and employers to implement an Occupational Road Risk Policy, which will include speed issues.

Policy SMS 5

The County Council will offer training:-

(i)   To help local employers to fulfil their health and safety obligations by managing occupational road risk.

(ii)   To help occupational drivers to adopt safer driving practices.

6.6 **Objective SMS 6 Engineering**

To ensure that new and improved roads within the County are constructed so that their layout encourages responsible driving and more appropriate speeds.

Policy SMS 6

The County Council will continue to require that new and improved roads are designed and built to appropriate standards. In addition, they will require that the layout of these roads will encourage safer driving generally, and will generally discourage inappropriate speeds in environmentally sensitive areas.

6.7 **Objective SMS 7 - Engineering**

To gather data on road accidents to assist in the reduction in the number of speed related road casualties.

Policy SMS 7

The County Council will continue to work with Warwickshire Police to provide and analyse all available road accident data for those working towards reducing road casualties within the county, and where appropriate, to identify problems associated with inappropriate speed.

6.8 **Objective SMS 8 - Engineering**

To reduce casualties at those sites where significant numbers of accidents have occurred where speed was a factor.

Policy SMS 8

The County Council will work to reduce casualties at those sites with the worst records. At the sites where significant numbers of the accidents were speed

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related, particular attention will be paid to using methods to reduce speeds to more appropriate levels.

6.9 **Objective SMS 9 – Engineering**

To have in place a policy for the setting of local speed limits

Policy SMS 9

The County Council will use the guidance in DfT Circular 01/2006 to assess and set local speed limits.

6.10 **Objective SMS 10 - Engineering**

To have in place appropriate speed limits on all county roads.

Policy SMS 10

The County Council will follow the recommendation of DfT Circular 01/2006 that 'Consistent with their duty in respect of road safety, traffic authorities will wish to focus on the use of speed management measures, including more appropriate speed limits, or a combination of these measures, on those roads (not just on A and B roads) with the most pressing problems of collisions and injuries, or where there is a widespread disregard for current speed limits'.

6.11 **Objective SMS 11 - Engineering**

To reduce the environmental impact of speeding traffic in villages.

Policy SMS 11

The County Council aims to ensure all villages in the County have a 30 mph speed limit where this can be achieved in accordance with its speed limit policy. Engineering measures will be employed where necessary to help reduce speeds to levels appropriate for a lower speed limit.

6.12 **Objective SMS 12 – Engineering**

To reduce the environmental impact of traffic in towns through an Urban Speed Limit Review.

Policy SMS 12

The County Council will develop an initiative for reviewing speed limits on the main road network of urban areas not covered by the A and B roads review. This will have a particular emphasis on achieving workable 30 mph limits on roads that currently have 40 mph limits. It is intended, however, that this should commence after the Village Speed Limit Review is substantially complete.

6.13 **Objective SMS 13 - Engineering**

To take advantage of opportunities which arise to further reduce speeds in certain environmentally sensitive areas by considering the introduction of 20mph speed limits or 20 mph zones where appropriate.

Policy SMS 13

The County Council will consider the use of 20 mph speed limits or 20 mph zones where appropriate in accordance with the speed limit policy. Engineering measures will be employed where necessary to help reduce speeds to levels appropriate for a lower speed limit.

6.14 **Objective SMS 14 – Engineering**

To ensure that drivers are at all times aware of the speed limit of the road on which they are travelling

Policy SMS 14

The County Council will regularly review and, where necessary update, the type, number and locations of all speed limit signs.

6.15 **Objective SMS 15 - Enforcement**

To provide improved levels of speed enforcement.

Policy SMS 15

The County Council will continue to press Warwickshire Police to carry out an increased level of speed enforcement, particularly where there are justifiable community concerns over speeding.

6.16 **Objective SMS 16 – Enforcement**

To reduce speeds where high levels of casualties have occurred, but where the installation of more conventional methods of casualty reduction treatment are not possible, or have been tried and significant levels of casualties continue to occur.

Policy SMS 16

The County Council will use safety cameras as part of its integrated strategy to reduce casualties. We will use them as a last resort where the evidence shows they are the most cost effective way of reducing casualties at a particular site or route.

We will adopt the recommendations of DfT Circular 1/2007 subject to the following amendments and additions:-

(i)   Sites and routes will be prioritised on the basis of their casualty history and safety cameras will be considered as part of any engineering treatment or measure where it is the most effective method of reducing road casualties.

(ii)   Safety camera enforcement will be carried out in an entirely open and conspicuous way, but advance signing will only be used where it is likely to help reduce casualties.

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Speed Management Techniques

B1. Speed Cameras

B1.1 Funding Arrangements

Speed cameras were first used in the UK in 1992. Following a series of successful trials the National Safety Camera Programme was launched in 2001 to pave the way for a national roll out of cameras. Warwickshire joined the programme at the end of 2001.

Safety camera enforcement was originally funded through a process known as hypothecation or 'netting-off'. This allowed safety camera partnerships to recover the costs of operating cameras and conducting education programmes from fines paid by speeding motorists. This system was replaced in 2007 by the road safety grant which was allocated to Local Authorities through the Local Transport Plan initially and more recently through the Area Based Grant. The introduction of the grant provided local areas with new freedoms to make local decisions on how to use the funding to support road safety or other local priorities. In Warwickshire part of the grant was used to support initiatives targeting young drivers[1] and motorcyclists[2], as well as funding the community based SpeedAware project.

In 2011/12 camera enforcement is funded by Council funding (£250k) supplemented by surplus from running Speed Awareness Workshops (SAWs). This type of funding model has the approval of the Road Safety Minister. The approach ensures the deterrent effect of speed cameras are maintained, but also enables us to educate less serious speeders through SAWs. It would cost an estimated £500 to £750k to discontinue all speed camera enforcement in Warwickshire due to redundancies, decommissioning sites, building costs etc.

The amount of camera enforcement in Warwickshire in 2011/12 has reduced in response to funding cuts. All fixed speed camera sites have been retained, but the number of cameras that are operational at any one time has been reduced. In addition, Warwickshire Police have reduced the number of mobile enforcement units. Speed camera deployment is prioritised on the basis of the severity of the casualty and speeding problem.

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[1] 17% of drivers/riders killed or seriously injured in Warwickshire in 2010 were aged 17-21.
[2] Power two wheel users represent approximately 1% of road traffic but made up 18% of road users killed or seriously injured in Warwickshire in 2010.

B1.2 Fixed Cameras

Although initially expensive to install, fixed speed cameras have low ongoing operating costs. This is particularly the case with newer digital fixed cameras where the digital process negates the need to load, collect and process wet film. By nature of being in position permanently fixed cameras offer a greater number of hours deterrent then mobile cameras.

B1.3 Mobile Cameras

The temporary nature of mobile cameras enable enforcement at a greater number of locations compared to fixed cameras and contribute to the overall deterrent to speeding through the unpredictable nature of their deployment. Mobile camera operating costs are higher than fixed cameras because they require a vehicle and operator to undertake the enforcement.

B1.4 Impact of Cameras on Speeding

A survey undertaken in 2006 revealed that 37% of respondents were less likely to speed following the recent increase in the number of cameras and only 17% said they just slow for cameras[3]. This is supported by national statistics collected by permanent automatic traffic counters at locations away from any form of speed management[4]. The figures show that average speeds in free-flowing traffic fell from 33mph to 30mph and the percentage of vehicles exceeding the limit all fell from 72% to 48% between 1996 and 2009. The greatest change took place between 2001 and 2005, which coincides with roll-out of the national safety camera programme.

Evidence shows that vehicle speeds increase when fixed cameras are decommissioned. There was, for example, a significant increase in vehicle speeds in the vicinity of the fixed speed camera at Greenmoor Road, Nuneaton after it was put out of action by vandalism. The proportion of vehicles exceeding the speed limit increased from 1% to 14%.

The decision to switch off all cameras in Oxfordshire in August 2010 led to an increase in speeding traffic at camera sites with rises in speeding offences of up to 400% being recorded at camera sites[5]. This ultimately led to Oxfordshire County Council reversing its decision to switch off cameras and camera enforcement was reinstated in April 2011.

B1.5 Public Opinion of Speed Cameras

Two-thirds of respondents to a 2006 public opinion survey of Warwickshire households said they supported the use of safety cameras and just 20% said they opposed their use.[6]

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[3] Survey by Warwickshire Casualty Reduction Partnership. 1,002 postal questionnaires distributed to Warwickshire addresses selected at random from the electoral register. 24.7% response rate.
[4] Department for Transport (2010). Road Statistics 2009: Traffic Speed and Congestion.
[5] R Owen (2010) The Speed Camera Switch-off: One Month On. Thames Valley Safer Roads Partnership & Daily Mail (24/11/10) 'Police to restore safety cameras as speeding soars 400% following the big switch-off'.
[6] Survey by Warwickshire Casualty Reduction Partnership. 1,002 postal questionnaires distributed to Warwickshire addresses selected at random from the electoral register. 24.7% response rate.

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The Council's Citizen's Panel survey of October 2009 included questions on road safety. Asked which measures were the most important in reducing accidents 52% nominated enforcing speed limits. Asked which methods were the most effective at reducing speeds 41% nominated cameras in residential areas and 45% nominated cameras on main roads.

In an annual survey of members the AA asks 'It is now common for the police to use speed cameras at the side of the road to identify vehicles in speeding offences. How acceptable do you think this is?'. In 2010 75% of respondents answered 'quite acceptable' or 'very acceptable'.[7]

B1.6   Key studies assessing the effectiveness of speed cameras.
Prof. Richard Allsop (2010): The Effectiveness of Speed Cameras: A Review of the Evidence. RAC Foundation

Camera type	Average speed reduction	Average reduction in proportion of vehicles exceeding speed limit (%)	Average reduction in Proportion of vehicles exceeding speed limit by 15mph+ (%)
Fixed camera – urban	5.3mph	72%	94%
Fixed camera - rural		51%	62%
Mobile urban	1.4mph	18%	36%
Mobile rural	1.0mph		

Allsop concludes that speed cameras have been preventing approximately 800 KSI casualties per year nationally.

Other robust studies to conclude that speed cameras have a positive impact on vehicle speeds and road casualties include:-

(i)   Wilson C, Willis C, Hendrikz JK, Le Brocque R, Bellamy N. (2010) Speed cameras for the prevention of road traffic injuries and deaths. Cochrane Database of Systematic Reviews.

(ii)   Gains, M. Nordstrom, Prof B. Heydecker, J. Shrewsbury (2005): The National Safety Camera Programme: Four Year Evaluation Report. DfT 2005.

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[7] Prof R Allsop (2010) The Effectiveness of Speed Cameras: A Review of Evidence. RAC Foundation.

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B2. Vehicle Activated Signs (VAS)

Vehicle Activated Signs (VAS) provide individual feedback and advice to drivers by flashing up a message or warning in order to alter driver behaviour. The signs have two primarily functions:-

(i)   To encourage drivers to approach hazards such as bends and junctions at a safe speed.
(ii)   To encourage speed limit compliance to support speed limit changes or in response to public concerns over perceived speed or accident issues.

Transport Research Laboratory[8] study published in 2002 found that:-

(i)   Junction and bend warning signs reduced average speed by up to 7mph.
(ii)   Average speeds were reduced by an average of 4.5 mph at 30mph sites using VAS that displayed speed roundels.
(iii)   Accidents across 24 sites in Norfolk reduced by one-third compared with the number of accidents that would have been expected without signs.

Study conducted by South Gloucestershire Council[9] of 33 VASs found that:

(i)   average speeds reduced by 4mph
(ii)   3 year accident numbers were estimated to have reduced by 7%.

These studies were conducted when VAS were a recent innovation, sparsely used, and focused on locations where there was a clear link between the message displayed and behaviour requested. It is likely that some of the VAS were used in conjunction with other engineering techniques as larger safety schemes.

In more recent research, Prof. Allsop[10] found that on a 30mph road with high traffic volume, speed increased significantly when a VAS was installed to replace a fixed speed camera:-

(i)   Average speeds rose by over 4mph
(ii)   The daily number of vehicles exceeding 35mph increased from less than 100 per day with the camera in action, to over 1,000.

The Transport Research Laboratory found that VAS had little effect on speeds when used to encourage compliance with temporary 20mph limits outside schools. Added to this, the cost of installation (a VAS would be required on all approach roads as well as the road on which the school is situated) led to the conclusion that they offered poor value for money. The Department for Transport have indicated that requests for authorisation to conduct similar work is unlikely to receive approval.[11]

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[8] M Winnett and A Wheeler (2002) Vehicle-activated signs – a large scale evaluation. Transport Research Laboratory
[9] South Gloucestershire Council (2002) Vehicle Activated Signs in South Gloucestershire.
[10] Prof R Allsop (2010) The Effectiveness of Speed Cameras: A Review of Evidence. RAC Foundation.
[11] Department for Transport (2003) Traffic Advisory Leaflet 1/03.

There is overwhelming public support for VAS. A survey by MORI for the County Surveryors Society in 2006 found that VAS were supported by 80% of the public, compared to speed cameras 62% and humps 53%.

B2.1   Temporary Vehicle Activated Signs

Two studies that have measured the impact of temporary vehicle activated signs found the signs have a limited (at best a 1.9mph reduction in average speed) and short-lived impact on vehicle speeds. The studies also revealed that vehicle speeds return to normal levels as soon as the signs are removed.[12]

B3.   Community Based Initiatives

B3.1   SpeedAware

SpeedAware helps communities to combat speeding and promote safe driving through the provision of a two-week package of measures. SpeedAware is available at a cost of £250 and provides:-

(i)   Visits from an operator using a Speed Indicator Device (displays a vehicle's speed followed by either a smiling or frowning face).
(ii)   Small vehicle activated signs mounted to posts.
(iii)   Wheelie bin stickers and other promotional materials.
(iv)   Temporary posters displayed along the roadside.

The scheme can operate on roads with 30 or 40mph limits.

B3.2   Community SpeedAware

Community SpeedAware utilises community volunteers by loaning out portable VAS (Smiley Speed Indicator Device flashing signs) to those areas where there is a strong local concern over traffic speeds. The scheme consists of a tripod mounted flashing sign which is loaned out for two weeks. Full training and Health & Safety equipment is given out free of charge. The scheme is ideal for small groups, Neighbourhood Watch groups or local councils.

B3.3   Community Speed Watch

Community Speed Watch enables volunteers to monitor traffic speed. Community volunteers are trained by Warwickshire Police to monitor vehicle speeds with laser speed guns at approved sites within 30 or 40mph speed limits. The Police issue letters to speeding drivers to encourage them to comply with speed limits. Repeat offenders may be targeted with enforcement. The visible presence of Community Speed Watch can have a positive impact on the traffic speed.

Equipping a Community Speed Watch programme typically costs £3,000. There are also additional training and monitoring costs. The back office activity of writing to speeding drivers is performed by Police volunteers. Warwickshire Police have

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[12] LK Walter and J Knowles (2008) Effectiveness of Speed Indicator Devices on reducing vehicle speeds in London. Transport Research Laboratory. Poulter and McKenna (2005) Long-term SID report. University of Reading project report for Royal Borough of Kensington.

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purchased eight sets of equipment through a grant from Community Cash Back[13] which are leant to Community Speed Watch Groups on a rotational basis. In addition three groups (Kenilworth, Long Marston and Warwick Woodloes) have purchased their own equipment to enable them to operate on a permanent basis. There has been considerable interest in the scheme in Stratford and Warwick Districts, but less involvement from community groups from the north of the county.

B4 - Lowering Speed Limits

Citizen's Panel (Wave 31, October 2009), 66% of respondents supported the introduction of lower speed limits to improve safety.

B4.1   The Speed Limit Review

The review of speed limits on all Warwickshire A and B class roads as required by the Government followed guidance set by the Department for Transport (DfT Circular 1/2006) and led to more than 120 speed limit changes. Limits were not changed on routes where it was determined that a lower limit would be unrealistic without additional engineering measures.

One year evaluation results showed:-

(i)   Average speeds reduced on 85% of the roads where speed limits were lowered.
(ii)   22% reduction in injury crashes.
(iii)   35% reduction in crashes resulting in death or serious injury.

B4.2   Village Speed Limit Review

The Village Speed Limit Review has conducted a systematic review of village speed limits on rural roads with the aim of introducing 30mph speed limits in all villages. More than 40 villages have benefited from the scheme with speed reductions of up to 10mph being experienced in some villages. All villages on A or B class roads have been reviewed and the review of villages on C roads is almost complete.

B5 - Physical Traffic Calming Measures

A study by the University of Leeds looked at 35 British traffic calming schemes, the majority of which included vertical shifts such as speed humps or cushions and found that:-

(i)   The 85th percentile speed (speed at or above which 85% of vehicles travel) fell by an average 12mph across all sites.
(ii)   Accident levels fell by up to 40%.

B6 – Driving Ambitions

Driving Ambitions was independently evaluated by Brainbox Research in 2009. The summary findings were:-

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[13] Community Cash Back Grants allocates a proportion of money recovered from criminals back in communities.

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(i)   Young people experience a significant positive change in attitudes following Driving Ambitions, particularly towards speeding and using mobile phones while driving.

(ii)   Driving Ambitions causes a change in how young people feel about taking risks and an increase in their awareness of how they are personally at risk. Young people become more aware that if they take risks or make mistakes they can be in a serious collision with severe consequences.

(iii)   Driving Ambitions encourages greater confidence amongst young people in their ability to behave safely, even if their friends do not.

(iv)   Young people who have experienced Driving Ambitions have significantly greater knowledge of risks on the road, and they understand how they can stay safe on the roads.

(v)   Following Driving Ambitions, young people are more aware of how state of mind influences driving, and they can recognise when other people are not driving safely.

(vi)   The presentation material and the presenters' personal accounts help young people to understand the severity of being involved in a collision. Being in a collision is made to seem much more real to them and they gain a greater understanding of the need for drivers to take responsibility for themselves and their passengers.

B7   Publicity Campaigns

A 2006 Midlands wide publicity campaign targeted young drivers with the message that by speeding they could kill or injure someone close to them. The evaluation[14] showed:-

(i)   45% of respondents recalled seeing or hearing the campaign.
(ii)   27% said the posters would encourage them to ask a fast driver to slow down.
(iii)   39% said the posters would make them drive more slowly.
(iv)   45% said the adverts would make them more aware of their speed.

Think Road Safety National Campaigns

Funding of national Government road safety campaigns through the Think! brand has been cut. We anticipate there being less national high profile road safety campaigns.

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[14] 599 interviews with target age group conducted across Midlands by independent market research agency.

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