

For each scheme completed we will carry out a combination of quantitative (i.e. did it achieve the KSI / speed reduction target set?) and qualitative (i.e. did it meet the needs and aspirations of the target audience and was it well received?) research to measure progress against the aims, objectives and targets. We will use Buckscc MOLASSES, the casualty matrix, TRANstat and other tools to complete the quantitative research and regular surveys, market research and other forms of consultation to carry out the qualitative research.

Scheme review

The final stage in the process will involve a review of the scheme to identify what can be learned and how these lessons can be applied. We will be asking if the scheme was effective, what elements were or were not successful, and how we could make improvements in the future. If it failed to meet the aims, objectives and targets set we will try to identify the reasons to influence the development of future projects.

This stage will also enable us to decide if the scheme should continue in its existing form, be changed to reflect the lessons we have learned or be discontinued because it has failed to deliver value for money. As such this stage may also be the first step in repeating the process described above, to deliver continuous improvement.

We expect to complete the detailed data analysis during 2006/07 and anticipate that this will enable us to progress a number of interventions during the Second LTP period. Clearly with each scheme the sooner that success (or indeed failure) can be demonstrated the better, but to ensure that our assessment and review is based on good evidence, we expect the research, development, launch, implementation and monitoring to take a minimum of eighteen months. In some cases we may not be the lead authority for a scheme (i.e. enforcement of specific offences) but will nevertheless monitor the results and support the activities.

We recognise that to achieve the necessary reduction in KSIs during the Second LTP we need to strike a careful balance between the 'sniper' approach (identifying narrow and very specific target groups that may achieve success but will not significantly reduce absolute numbers and may not demonstrate value for money) and the 'scatter-gun' approach (seeking to reduce

casualties with a broader and less focussed target group that potentially could reduce absolute KSI figures and would be value for money but would be far harder to hit). To achieve this balance we will draw upon our experiences with targeted marketing for other areas of work, such as personalised travel planning.

7.6.3 Motorcyclists

Nationally, motorcycle use is growing and it is a mode of travel that can contribute to congestion, air quality and accessibility objectives. However, feelings about safety, whether real or perceived, can deter some people from motorcycling. The casualty matrix (see Table D2) shows that motorcyclists of all ages make up 20.7% of all KSI casualties in Buckinghamshire, with riders between 20 and 29 making up more than 27% of all motorcyclists killed or injured.

Across the country there are two specific 'at risk' groups of motorcyclists, namely younger people on smaller machines in urban areas and older riders on larger bikes in rural areas. The latter group has been clearly identified as 'at risk' in the county, leading to the development of the 'Be a Better Biker' project, but analysis to date does not suggest that the former group is over represented. We will continue to monitor casualty data to see if this changes in future years.

To address the increase in motorcycling casualties and to support the development of the 'Be a Better Biker' project and a Powered Two Wheeler strategy, we have already established a Bikers Forum, comprising local riders, motorcycle action groups, Thames Valley Police and other agencies. The Forum enables us to regularly consult with a representative group of motorcyclists on proposals for both motorcycling and more general transport schemes and interventions, and it will be a valuable resource in the development of future schemes.

Broader actions that we will take to improve safety and accessibility for motorcyclists include the consideration of motorcycling in all scheme designs (following IHIE guidelines) and during the safety audit process and we will also seek to improve the availability of secure parking facilities close to transport interchanges and key destinations.



Engineering to enhance motorcyclist safety

Motorcycle instructors often tell trainees that ‘Where You Look Is Where You Go’ (i.e. wherever they look during a manoeuvre is where they are likely to end up). Bikes on the approach to a bend seek as much information as possible about the road condition and the severity of the bend. A biker will often use the vanishing point (the furthest point in view and where the left and right hand sides of the road appear to intersect) and on a bend this will seem significantly closer. If the bend is severe it will appear very close.

After three fatalities, five serious and two slight injuries to motorcyclists at one location during an eight year period we investigated the bend, concentrating on roadside features that might distract the rider. Usually hazard marker posts are sited to emphasise the crown of a bend. At this location we added extra posts further round the bend to the point where the vanishing point began to move away from the biker’s view. We also placed them closer together so they kept appearing in the line of sight to move the focus around the hazard.

In the three years after implementation there have been no further biker collisions at this site. We are looking to extend this approach to other locations, and will use intelligent road studs where loss of control crashes are happening during the hours of darkness.

We will expand “Be a Better Biker” in the future to reach a greater number of motorcyclists across Buckinghamshire, and will encourage businesses to sponsor assessment days for their employees, highlighting that such interventions can be very cost effective. We will also discuss accreditation with motorcycle insurance companies with a view to offering reduced premiums as an incentive for participating bikers.

Targeting riders of smaller machines

We will investigate offering an accredited OCN Scooter Course at schools, sixth form colleges or Further Education institutions for users of machines under 125cc. We will also promote relevant and dedicated websites (such as www.twistandgoforit.com, www.bare-bones.org or www.skidz.org.uk) with riders of smaller machines to increase awareness of their vulnerability.

Methodology for campaign development

To develop specific projects, campaigns and interventions to reduce motorcycling casualties, during the Second LTP period, we will be applying the principles described above involving:

- Detailed data analysis to identify specific target groups and priorities for action
- Market research with target groups to identify messages and media
- Development of scheme, project or intervention
- Launch, supported by appropriate promotional activities
- Quantitative and qualitative research to determine effectiveness
- Review of intervention, supported by ongoing data analysis

Whilst the steps in this process will be broadly similar for all ‘at risk’ groups, there are specific issues related to each group that need to be considered. For motorcyclists, the steps are examined in more detail below.

Detailed data analysis

Using AccsMap and the casualty matrix we will analyse casualties amongst motorcyclists by gender and age to determine if there are specific groups that are over represented in the data. Initial reviews suggest that target groups are more likely to be male riders between the ages of 20 and 39.

We will then review the types and causes of collisions for the target groups to establish whether there are common factors and influences that provide a specific focus for the scheme, such as excessive or inappropriate speed. Small-scale engineering improvements will also be looked at to see if they can improve the situation at specific locations.

This analysis, supported by our ACORN data, should enable us to identify specific groups, types and factors and define a specific change that we want to achieve. The motivations and interests of the target group are key to delivering changes.

Market research

As 'Be a Better Biker' proved, each group has its own motivations and aspirations and perhaps the only way to find these out is to use existing studies or conduct our own research. Market research of this kind will benefit from the assistance and support of the Bikers Forum, enabling us to identify what specific groups want and need, how best to communicate with them, and to test materials and schemes developed by others.

Between September and October 2005 we completed a survey with motorcyclists that both confirmed our existing understanding and helped identify new information:

- 91% of respondents were male (65% aged 30 – 49 years)
- Bikers would like other road users to be more aware of motorcyclists
- Demand for post-test training is high amongst bikers
- The condition of a road surface is important to motorcyclists

This information will be discussed further with the Bikers Forum to help determine appropriate actions and plans.

Scheme development

Data analysis and market research will shape the type and nature of projects we will take forward and therefore it is difficult to be specific about the form that these will take. However, we anticipate that many will employ the full range of tools available to us including education, training and publicity, engineering and enforcement.

Since the 'Be a Better Biker' brand is already recognised by motorcyclists we will seek to link future schemes with this image, not only minimising costs but also creating a 'family' of products and services for bikers. As part of the development we will use the information collected to set aims, objectives and targets, to measure progress against and judge effectiveness.

Launch of scheme

The nature and style of a scheme launch has a major role to play in its success, and should have been considered as part of the market research. The launch also needs to be supported by promotional activities that interest the target group and the media to secure cost effective publicity.

Quantitative and qualitative evaluation

At an agreed stage or the conclusion of a scheme, we will assess the outcomes to measure its success. For each we will carry out a combination of quantitative (i.e. did it meet the targets?) and qualitative research (i.e. did it meet the needs of the target audience?), using Buckscc MOLASSES, the casualty matrix, TRANstat, regular surveys, market research and other tools.

Scheme review

Each scheme will be reviewed to highlight lessons learned and to identify future improvements. If it failed in its aim we will try to discover the reasons to influence future projects. The review will also help us decide if the scheme will continue, either in its existing or amended form, or be dropped because it has failed to deliver value for money. This will enable us to demonstrate a continuous improvement process. The detailed data analysis should be completed during 2006/07, enabling us to develop a number of schemes during the Second LTP. We expect the research, development, launch, implementation and monitoring of each to take a minimum of eighteen months to ensure that our assessment and review is based on good evidence. We will seek to strike the right balance between the 'sniper' and the 'scatter-gun' approach (see 7.6.2 above), using our experiences of targeted marketing in other areas of work.



7.6.4 Other user groups

Since our overarching objective and target for safety is to reduce the number of KSIs on the roads of the county we have used the casualty matrix to prioritise target groups and activities. At this stage, this has identified car users and motorcyclists as 'at risk' groups, which means that other road user groups will not be specifically targeted for action. However, we will be regularly updating the casualty matrix and will amend our programmes should significant changes occur.

We will still be making efforts to improve safety for cyclists, pedestrians, horse riders, children and older people through activities in other areas of this Second LTP, the application of the scheme

assessment matrix and by 'mainstreaming' safety (as described in 7.5). Examples of these activities are set out below.

We will also continue to use and promote national road safety campaigns, organised and developed by the Department for Transport, since they are based on detailed research and seek to influence behaviour based on national casualty trends. Whilst we have yet to assess its relevance to local priorities by comparing national and local trends using our casualty data, it currently supports road safety issues for which we hold no comparative data. The materials provided are also high quality and cost us nothing, representing excellent value for money.



Road user group	Example actions
Cyclists	<ul style="list-style-type: none"> • Development of Quality Cycle Corridors and wider cycle networks (in line with cycling strategy hierarchy) • Promotion of cycling and cyclist training through travel planning activities • All transport schemes to be safety audited to embed cycling safety
Pedestrians	<ul style="list-style-type: none"> • Improvements to walking networks and footway maintenance • Promotion of walking and pedestrian training through travel planning activities • Improvements to structures and lighting to enhance safety • All transport schemes to be safety audited to embed pedestrian safety
Horse riders	<ul style="list-style-type: none"> • Maintenance of roads, footways and bridleways to consider equestrian needs • Rural transport schemes to be designed in line with AONB Management Plan • Safety audits to consider equestrian safety where appropriate
Children	<ul style="list-style-type: none"> • Integration and promotion of road safety within wider school travel planning activities • Organisation and management of school crossing patrol service • Expansion of Junior Road Safety Officer scheme via promotion of school travel initiatives • Appropriate safety measures around schools as part of school travel plan development

7.7 Objective Three – Targeting sites, routes and other areas of concern

Our overarching objective for safety is to reduce the number of people killed and seriously injured on Buckinghamshire roads, to achieve and if possible exceed the national target by 2010. Changes to the road environment with remedial engineering work should make a significant contribution towards this objective, particularly where they are supported by enforcement and education, training and publicity (ETP).

Traditionally such activities have focused on identified sites or locations, where there is a higher than average incidence of collisions and casualties, but the number of these where we can demonstrate good value is falling. To address this we are broadening our approach to include routes and other areas of concern. Similarly, solutions will not necessarily focus on engineering alone, but a combination of the three E's (engineering, enforcement and ETP).

7.7.1 Targeting sites

To identify and prioritise 'hot spot' sites and locations for remedial action we use AccsMap software that records data about all collisions in Buckinghamshire. We complete searches to pinpoint sections of the road network where KSIs have occurred in the latest 36 month period and combine the information with data on slight casualties to determine the overall safety record. To prioritise sites for action in the coming year each section is scored:

- 3 for each fatality
- 3 for each serious injury
- 1 for each slight injury

This enables us to compare sites objectively and target those that will help us reduce the number of KSIs. We will also investigate sites that may not score so highly, but where a significant percentage of collisions are of a particular type (i.e. loss of control, in darkness, on wet road surface). Recommendations for action are made for those sites where work on the highway could help reduce the collision problem.

Some sites, where excessive speed is identified as a contributory factor, may require enforcement

alone. In those circumstances we liaise with Thames Valley Police and the Safer Roads Partnership to encourage them to use targeted enforcement to reduce casualties. Other locations may need engineering since changes to the physical environment, such as altering junctions or providing adequate vision for drivers, will reduce collisions. In other places there may be no common factor for collisions, and so education, training and publicity may be more appropriate.

Increasingly, however, enforcement, engineering or education, training and publicity in isolation are not enough to reduce casualties and secure a good first year rate of return on our investment. More and more 'hot spots' require a combination of all three as well as improved maintenance to achieve the maximum possible benefits.

All treated sites are subject to pre and post scheme monitoring using Buckscc MOLASSES software, enabling good practice to be determined and applied at other suitable locations. For example, by installing a mini roundabout on the A4155 at the junction with Sheepridge Lane we successfully reduced both collisions and speeds, and similar schemes completed elsewhere in the county have also demonstrated good results.

Targeting sites – A41 Aston Clinton bypass

A cluster of collisions was identified at the newly built roundabout at the end of the A41 Aston Clinton bypass. Circumstances for the collisions included:

- Drivers changing lanes on the approach from Aylesbury
- Heavy Goods Vehicles (HGVs) turning over when proceeding from the bypass towards Aylesbury
- Drivers failing to give way at the roundabout

Our investigations revealed additional information:

- Drivers exceeding the national speed limit applicable to the road
- Drivers exceeding the speed limit for their vehicle type
- Driver error responsible for failures to give way
- HGVs entering the roundabout too quickly, needing to brake in the circulatory area and rolling over

To address this situation and help reduce collisions we have encouraged Thames Valley Police to carry out overt speed enforcement on the road.



7.7.2 Targeting routes

We will use both the route assessment map (that identifies routes with the highest number of KSIs per kilometre) and other analysis (that identifies routes with the highest actual number of KSIs) to help determine where actions or interventions on routes will be most appropriate. Disregarding motorways and trunk roads, the majority of roads with both the highest number of KSIs per kilometre and the highest total number of KSIs are key urban or interurban corridors, many of which are identified as priority congestion management corridors (PCMC) in our congestion strategy. As a result schemes that are

developed to either tackle congestion or reduce casualties will be designed carefully to balance often conflicting needs.

We anticipate that some of the identified routes would benefit from a “Route Alert” approach (see below), whilst others may require intervention that are focussed solely on driving behaviour or the enforcement of driving offences. We will engage with local community areas affected, wherever possible, to ensure that schemes and interventions are developed to reflect and meet local needs.

Route Alert

A pilot scheme to reduce casualties and influence driver behaviour by raising awareness of hazards on specific routes. Elements of the scheme included:

- Signs highlighting casualty numbers in previous 3 years
- Signs include messages such as “Take Extra Care” or “Watch Your Speed”
- Maintenance at junctions and along the route (i.e. cutting back foliage & vegetation)
- Improved signing and lining and minor engineering improvements

It was developed by the Thames Valley Safer Roads Partnership and was launched in March 2004. Similar route treatments on the A43 involving Oxfordshire, Northamptonshire and the Police have led to a 61.1% reduction in casualties

7.7.3 Targeting other areas of concern

We recognise that it will not be possible to reduce casualties by only targeting sites or routes. Collision analysis will also help us identify other areas of concern and prioritise them using the scoring method described in 7.7.1. This will enable us to determine and respond to other issues that arise with the ever changing nature of traffic and transport in Buckinghamshire.

During the initial years of the Second LTP period we will support the ongoing speed limit review by

addressing appropriate concerns raised by residents in the fourteen geographical areas. In later years we will engage with local communities (see Part One, Our Vision for Transport) to identify other areas of concern across Buckinghamshire and use this information to support the development of a work programme that is focused on casualty reduction and meeting the national road safety target.



Speed Management Strategy


We published a Speed Management Strategy for Buckinghamshire in 2002, that sets out how we, and our partners, will work together to manage and reduce speeds and speed related casualties across the county. The key elements in the strategy were enforcement, engineering and education.

Good progress has been made with the speed limit review. Formal consultation has been completed on speed limit proposals in 11 out of the 14 areas and public consultation has taken place in 4 areas (as of the end of November 2005). It is anticipated that speed limits in all areas of Buckinghamshire will have been reviewed and revised limits implemented by the end of 2008.

Wherever possible, work on speed limit reviews and safety measures will be integrated to ensure

that we achieve value for money and are responsive to the needs of local communities. Such integration has already been achieved with terminal points for speed limits being denoted with central island 'gateway' features. The introduction of revised speed limits will continue to be supported by education, training and publicity measures using Speed Indicator Devices and the 'Make the Commitment' campaign.

We will also ensure that engineering schemes and proposals are designed with the support and involvement of local communities to address casualty problems, wherever they occur. We will seek to influence perceptions or manage expectations by providing appropriate information to the public and the local media about the principal causes of collisions and casualties on the local road network.

Area	Actions
 <p>Enforcement</p>	<p>Thames Valley Safer Roads Partnership</p> <ul style="list-style-type: none"> • TV SRP (comprised of Thames Valley Police, highway authorities, the Court and Crown Prosecution Service) manages all safety camera initiatives to contribute to the national KSI target. It uses fixed and mobile cameras to provide data-led enforcement to reduce casualties and modify driver behaviour. • Our responsibilities are maintenance of roadside equipment, local publicity and marketing, data provision and analysis as well as monitoring • Recent evaluation work undertaken by the TV SRP also shows that there has been a 44% reduction in KSIs, 20% reduction in slights and 25% reduction in personal injury collisions at camera sites in 2004 when compared to 2000. <p>We look forward to the development and strengthening of our excellent working arrangements with the police and neighbouring authorities as we progress and implement a new wider road safety partnership that will enable us to maximise the benefits of the new funding arrangements that become effective in April 2007. During 2006/07 we will:</p> <ul style="list-style-type: none"> • Take a leading role in the development of a wider road safety partnership, building on the strengths of the existing TV SRP. • Extend the partnership to involve other stakeholders such as the health and fire services. • Meet with partners to ensure that the new arrangements are in place before April 2007. • Consider the wider role of police enforcement and encourage a data led approach that has the shared objective of casualty reduction. • Further develop our policies, practices and procedures in the light of new guidance, yet to be published.

Area	Actions
<p>Engineering</p>	<p><i>Speed Limit Review (SLR)</i></p> <p>A comprehensive review of the speed limits across Buckinghamshire, splitting the county into 14 manageable areas, prioritised by KSIs on derestricted A & B roads. The SLR aims to ensure that speed limits are:</p> <ul style="list-style-type: none"> • Consistent • Appropriate for local conditions • Typically 30 or 40mph for most identifiable communities • Reduced where casualty reduction can be achieved <p>The SLR involves:</p> <ul style="list-style-type: none"> • Collecting data on traffic speeds and collisions • Establishing Area Working Group to determine speed limit proposals • Formal and public consultation • Implementation of new speed limits • Publicity and promotion for new & revised speed limits
<p>Education</p>	<p><i>Publicity and promotion</i></p> <p>Revenue recovered from TVSRP has supported the development of a number of education and publicity initiatives to support the Speed Management Strategy, including:</p> <p><i>Speed Indicator Devices (SIDs)</i></p> <ul style="list-style-type: none"> • Mobile speed reactive signs that display speeds or a 'smiley'/sad face • Used to raise awareness amongst drivers of their speed • We have 8 available for loan by community groups and schools • Evaluation of their effectiveness is currently underway <p><i>Make the Commitment (MtC)</i></p> <ul style="list-style-type: none"> • Drivers encouraged to commit to driving at appropriate speeds • Parish councils, schools & groups can also make commitment • Information about new schemes sent to committed individuals • Launched in 2004 – more than 1000 people already signed up • Supported by leaflets, posters and displays available for loan

8 SUMMARY

8.1 Overall Objectives

Performance Indicators	Number of people killed and seriously injured on Buckinghamshire roads by 2010
(Targets)	<p>36% reduction in number of people killed and seriously injured (all ages)</p> <p>27% reduction in number of children killed and seriously injured (0-15)</p> <p>10% reduction in number of slight casualties (all ages)</p>
Policies	All road safety work will be guided and prioritised on the extent and severity of casualties
Actions	<p>During the Second LTP Period we will:</p> <ul style="list-style-type: none"> • Work with the Highways Agency, supported by the Department for Transport, to reduce the number of KSIs occurring on motorways and trunk roads in Buckinghamshire, to enable the achievement of our national targets • Undertake ongoing detailed analysis of collision types in urban and rural areas.

8.2 Objective 1 – Mainstreaming road safety

Performance Indicators	Number of collisions at sites where maintenance has been identified as a contributory factor
(Targets)	15% reduction in the number of casualties at maintenance sites prioritised through analysis of collision data
Policies	<p>All casualty reduction schemes will be prioritised using the scheme assessment matrix that takes account of wider objectives, value for money and deliverability</p> <p>All transport schemes and projects will be subject to the safety audit process</p> <p>All transport schemes and projects will be analysed for safety cost benefits using Buckscc MOLASSES software</p> <p>The needs of vulnerable road users will be considered within the development of all transport schemes</p>
Actions	<p>During the Second LTP period we will:</p> <ul style="list-style-type: none"> • Complete an audit of street lighting in all areas in the county and analyse its potential contribution to community safety and casualty reduction by 2008 • Undertake ongoing detailed analysis of collision types in urban and rural areas. • Complete a review of all subways to address community safety concerns by 2009

8.3 Objective 2 – Targeting at risk users

Policies	Our priorities for road safety activities with user groups will be determined using the casualty matrix and will be reviewed annually
Actions	<p>During the Second LTP period we will:</p> <ul style="list-style-type: none"> • Conduct market research with target groups to identify messages and media • Test external materials and schemes and adapt good practice where it is found • Develop schemes and initiatives for 'at risk' groups throughout the Second LTP period • Evaluate road safety schemes and initiatives for effectiveness • Analyse collision postcode data and make comparisons with CACI socio-economic classification data to establish if there is a link between affluence and casualties by end 2008 • Integrate workplace travel planning with work related road safety – one product and one brand • Research motorcycle collisions in more detail to identify groups and factors. • Use market research to develop the 'Be a Better Biker' brand

8.4 Objective 3 – Targeting sites, routes and other areas of concern

Policies	All safety schemes will seek to meet the needs of the local area
	The development of schemes and interventions for rural and urban areas will reflect differing environments and guidance
Actions	<p>During the Second LTP period we will:</p> <ul style="list-style-type: none"> • Identify and prioritise target sites using data from Accsmap and the KSI route assessment map. • Report on safety improvements by referring initially to the Speed Management Strategy and later to emerging Local Communities • Develop schemes and initiatives for targeted sites, routes and other areas of concern throughout the Second LTP period • Speed limit review (signs, lines etc) will be implemented by end 2008



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