

Road Safety Plan

2011-2015





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Introduction

Background

Road safety is one of many factors that affect peoples' daily and long term travel choices. Everyone should have the freedom to travel safely by all modes of transport. Accidents on our roads are the greatest cause of accidental death in the United Kingdom, often resulting in unnecessary grief and suffering.

A key duty of local authorities is the provision and maintenance of a safe road network, including footways and cycleways. This network is essential to daily lives of our citizens and visitors, and is critical to the delivery of key services, commerce, communication and the health and wellbeing of communities. The road is usually the first thing the public set foot upon outside their homes, and even vital services such as water and drainage can be delivered by road.

While many accidents involve some element of driver error, it is known that safer road design and layout can contribute the most to reducing the number of accidents, particular those resulting in death or serious injury.

Creating a safer road system would, therefore, greatly assist Stirling Council and its community partners in achieving many of the objectives established under the Single Outcome Agreement and Community Plan. This review and road safety plan has been prepared with those objectives in mind. Consequently, it complements the Local Transport Strategy, Stirling Council's Strategic Plan and the Community Safety Strategy.

The Road Traffic Act 1988 (Section 39) places several statutory duties on Local Authorities so that they:

- Must prepare and carry out a programme of measures designed to promote road safety
- Must carry out studies into accidents arising on local roads
- Must, in light of those studies, take measures as appear appropriate to prevent such accidents
- In constructing new roads, must take measures as appear appropriate to prevent accidents when the roads come into use.

These measures not only include engineering works, but may also include education, training and publicity programmes. This Road Safety Plan & Review offers a focus for providing such a road safety service in the Stirling area.



The Road Safety Plan & Review for Stirling Council Area

Stirling Council published its first Road Safety Plan in 2004, based on the casualty reduction targets set by the Government for Great Britain for the period 2000 to 2010.

The 2004 Road Safety Plan set out how Stirling Council aimed to reduce road traffic accidents and resulting casualties in partnership with other public agencies. As well as providing an action plan of works and initiatives that were to be carried out by all agencies, the Plan set out engineering actions that were to be carried out by Stirling Council's Roads and Transport Service to reduce accidents and casualties.

As the period for the GB targets comes to a close, the contribution Stirling Council has made over the last decade towards achieving these targets must be reviewed, to help inform future efforts. In 2009 the Scottish Government published Scotland's Road Safety Framework to 2020 'Go Safe on Scotland's Roads its' Everyone's Responsibility', a document that set the first national casualty reduction targets specific to Scotland and perhaps more importantly, an overall road safety vision. The principle of targets for road casualty reduction is fundamentally sound and it was thought that there was a strong case for setting targets specific to Scotland based on previous trends.

To this end, Stirling Council has published the Road Safety Plan Review (2004 – 2010) and a new Road Safety Plan, the first document reviews casualty reduction efforts since 2004 and the second looks to the future of casualty reduction across the council area.

This is the second Road Safety Plan for Stirling Council area. It sets out the road safety and casualty reduction objectives for the period 2011–2015 and reviews the outcomes of the previous plan. It describes how the various public agencies in the Stirling Council area can continue to work together to improve road safety through properly evaluated complementary engineering, education, enforcement and encouragement initiatives.

The purpose of the Road Safety Plan is to ensure that a structured approach is adopted towards achieving a reduction in the number of road accidents and resultant casualties. It identifies local road safety issues, sets out action points, establishes priorities and targets resources where most needed.

The Roads Transport & Open Space Service, through delivery of the Plan, will contribute towards Stirling Council achieving the visions and strategic outcomes of the Single Outcome Agreement and the Strategic Plan.

The plan period was chosen to coincide with the Scottish Government's Road Safety Framework first milestone target of 2015.

The Plan was produced by the Roads, Transport & Open Space Service in consultation with Central Scotland Police, Central Scotland Fire and Rescue, NHS Forth Valley Health Board, Scottish Ambulance Service, Central Scotland Safety Camera Partnership and other Council Services.

Vision, Aim and Objectives

Vision

The Scottish Government published 'Scotland's Road Safety Framework to 2020' in 2009, which set out its long term road safety vision that there will be:

"A steady reduction in the numbers of those killed and those seriously injured, with the ultimate vision of a future where no-one is killed on Scotland's roads and the injury rate is much reduced"

In order to achieve this ultimate vision the Scottish Government has for the first time set casualty reduction targets specific to Scotland. Stirling Council supports this vision and will focus its road safety efforts on contributing towards Scotland achieving these. Figure one shows how road safety policy is delivered across organisations in Scotland and where Stirling Council fits in.



Figure 2.1-1: Road Safety Stakeholders

Single Outcome Agreement

The Scottish Government's Road Safety Framework is driven by a number of strategic objectives, amongst which Single Outcome Agreements are included. Delivery of the road casualty reduction targets in the Framework will play a key part in meeting national strategic objectives to help make Scotland:

- Safer
- Stronger
- Healthier
- Wealthier
- Fairer

As part of Stirling Council's commitment to helping Scotland meet its national objectives and the concordat between Councils and the Scottish Government, Stirling Council's Single Outcome Agreement (SOA) was agreed in 2008.

The Road Safety Plan will play an important role in the delivery of the visions and strategic outcomes of the SOA made between Stirling Council and its Community Planning partners. Delivery of the plan is of particular relevance to:

- **Strategic Topic 5:** Making Stirling a place with safe, strong and resilient communities.

Reducing the numbers of deaths or serious injuries resulting from road traffic accidents is one of the primary indicators identified in the SOA.

Strategic Plan

Stirling Council's Strategic Plan 2008-2012 'Shaping Stirling' sets out the Council's visions and strategic objectives and is the delivery plan of the SOA. Implementing the Road Safety Plan is one of the key actions identified as showing the Council's commitment to 'maintain and improve the safety of communities'. At a strategic level, implementing the Road Safety Plan will form an important part of the Roads Transport & Open Space Service's contribution to:

- **Strategic Topic 4:** We will make Stirling a place where improved wellbeing adds life to years, not just years to life.



Environment Services

Environment Services are responsible for the delivery of the Council's road functions. The Service operates to ensure effective delivery of the Council's Visions, Values and Strategic Aims, and adheres to its Management Principles. The Service aim in relation to roads is:

"To manage and maintain roads to allow the safe movement of people, goods and services for the social and economic benefit of all people in Stirling."

Aim

The Road Safety Plan recognises and develops Stirling Council's Strategic Outcomes and visions that relate to road safety. The road safety aim of Environment Services is therefore:

- To maintain or improve the long-term rate of reduction in numbers of deaths and injuries on Stirling's roads.

Objectives

To meet this road safety aim, contribute towards achieving the national casualty reduction targets and carry out the Council's statutory duties, the objectives of the Council's Road Safety Plan & Review 2011-2015 are:

- To present a framework of strategies, policies and plans to further improve road safety over the next five years moving towards the ultimate vision where no-one is killed on our roads
- Determine the types and extent of the road safety problems
- Identify a programme of measures to address these problems
- Improve the transport environment to reduce actual and perceived safety hazards
- Improve partnership working to enhance delivery of road safety improvement initiatives
- Inform local people and businesses about road safety and the measures they can take to improve safety for all road users.

Local Transport Strategy

The road safety plan recognises and develops the objectives relating to road safety and traffic management as included in the Local Transport Strategy 2006-2009.

- To improve safety for all users of the transport network, with particular attention to the vulnerable users.
- To reduce the speed of vehicles in sensitive areas particularly where pedestrian volumes are high.
- To improve perceived and physical safety of all transport users.
- To reduce conflicts between pedestrians and vehicles.
- To reduce the number of fatal and serious accidents.
- Continue to assess areas of concern and implement schemes to reduce the number and severity of personal injury road accidents within Stirling Council's area of influence.
- Continue to review and manage the traffic system in order to plan and implement schemes to improve the safety and efficiency of the road network.

Casualty Reduction Targets for 2020

Although progress towards the targets set in 2000 has been mostly positive over the last ten years, it is evident that the GB fatal accident rate is not falling as quickly as it had prior to 2000. It is also apparent that the death rate for children is higher in Scotland than in other parts of GB.

In response, the Scottish Government published Scotland's Road Safety Framework to 2020 'Go Safe on Scotland's Roads it's Everyone's Responsibility'. This document sets ambitious new casualty reduction targets, which for the first time are specific to Scotland. Table 1 sets out the four new targets to be met by 2020 against a baseline average for 2004-2008 and the milestone targets for 2015.

| Casualty Reduction Targets for 2020 | | |
|--|-------------------------------|----------------------------|
| Target | 2015 Milestone % reduction | 2020 Target % reduction |
| People Killed | 30 | 40 |
| People Seriously Injured | 43 | 55 |
| Children (aged < 16) Killed | 35 | 50 |
| Children (aged < 16) Seriously Injured | 50 | 65 |

Additionally, the previous target set for the reduction of slight injury casualties is to continue:

- a 10% reduction in the slight casualty rate by 2020, expressed as the number of people slightly injured per 100 million vehicle kilometres.

The main emphasis of the targets is again on reducing those killed or seriously injured as a result of road traffic accidents, but crucially targets are set for individual casualty severities rather than combined as before.

The slightly injured target relates to road traffic volumes rather than absolute numbers of people injured and although the reduction target appears much smaller than the others, there are significantly more slightly injured casualties than those either killed or seriously injured. Meeting this target will represent a substantial reduction in the number of casualties.

This plan describes the actions that Stirling Council and can take, in partnership with others such as Central Scotland Police, Road Safety Scotland, etc., within our respective spheres of influence. However, it is not realistic to expect that our actions alone, we be the sole means of reducing the number of accidents and casualties on our roads. Transport Scotland as the Trunk Roads Authority, will play an important role not only nationally but also in the Stirling Council area. The UK and Scottish Governments will continue to play key roles through the

introduction of primary and secondary legislation, improving data quality, funding road safety research, funding national campaigns and key initiatives and supporting national road safety groups.

Manufacturers also play a vital role, by designing vehicles that are less likely to be involved in accidents and are safer for the occupants and other road users in the event of an accident. However, the public are probably the most important sector to engage with, as without their support the new targets will be difficult to achieve and the overall vision will remain unattainable. The Scottish Road Safety Framework recognises the importance of this and emphasises that road safety is the responsibility of everyone who uses the road.

This Road Safety Plan is a working document, which it is hoped will evolve and improve over time. The targets and areas of action will be reviewed as required, taking into account:

- Changes in the nature of road accidents in Stirling
- Findings of continuing analysis of accident data by Stirling Council and Central Scotland Police
- Success or otherwise of initiatives included in this Road Safety Plan
- Changes in Government policies relating to road safety matters.



Cost of Accidents

To stress the importance of the need to reduce accidents and casualties, it is worthwhile considering the financial cost of accidents. The Department for Transport estimates the value of accident and casualty costs each year. These values are used to produce average accident and casualty costs for Scotland and the Scottish Government includes these in its annual publication *Reported Road Casualties*. The average costs per accident by severity in Scotland for 2009 are shown in Table 2:

| Accident Costs | |
|-------------------|------------|
| Accident Severity | Costs |
| Fatal | £1,830,497 |
| Serious | £208,296 |
| Slight | £20,415 |

These costs take account of:

- human costs (pain, grief, suffering, loss of enjoyment of life etc.);
- economic costs (loss of output due to injury and medical costs);
- the cost of damage to vehicles and property; and
- the cost of Police and insurance administration.

Aside from the grief and financial hardship suffered by individuals or families who have the misfortune to have experienced a road traffic accidents affect us all through the taxes we pay to both Local and Central Government, transport delays, disruption to travel and increased insurance premiums. Casualties, resulting from accidents increase the burden on the NHS and Local Authorities through reduced economic output, lower revenues, increased benefit payments and increased burden on health, social welfare and care services.

The average annual cost of road traffic accidents in the Stirling Council area for the latest five-year period 2005 to 2009 was £31 million compared with £44million for the baseline period 1994 to 1998. Although this sum has fallen by more than a quarter, it is clearly in all our interests to continue to work together to reduce the number and severity of accidents, and to contribute towards meeting the targets.

The cost per accident in Scotland is higher than the average for Great Britain. This is due to differences in the average number of casualties per accident and the proportions of killed and seriously injured casualties.

Accident Data

Data Collection

Reliable data is essential if meaningful analysis of accidents is to be made, to inform future actions. Central Scotland Police officers collect road accident data using a form referred to as STATS19. The completed STATS19 data are submitted to the Scottish Government and Stirling Council, who carry out various validation processes to refine and improve the data, in conjunction with the Police.

Through its association with the Scottish Government's Liaison Group on Road Accident Statistics (LGRAS), Stirling Council will continue to work with other agencies, to improve the arrangement of the data collection system to ensure that data is collected as accurately as possible.

However, proposals for improved data collection have been made and co-operation with Central Scotland Police has led to the inclusion of a properly designed form within the Scottish Government's annual Reported Road Casualties Scotland.

Stirling Council and other agencies involved in data collection should encourage the same scientific approach to data collection in all aspects of the road safety work, whether in the education, enforcement or engineering fields.

| Casualty Severity | |
|-------------------|--|
| A. | 'Fatal' injury includes only those cases where death occurs in less than 30 days as a result of the accident. 'Fatal' does not include death from natural causes or suicide. |
| B. | Examples of 'Serious' injury are: <ul style="list-style-type: none">• Fracture• Internal injury• Severe cuts• Crushing• Burns (excluding friction burns)• Concussion• Severe general shock requiring hospital treatment• Detention in hospital as an in-patient, either immediately or later• Injuries to casualties who die 30 or more days after the accident from injuries sustained in that accident. |
| C. | Examples of 'Slight' injury are: <ul style="list-style-type: none">• Sprains, including neck whiplash injury, not necessarily requiring medical treatment• Bruises• Slight cuts• Slight shock requiring roadside attention. |

Other Data

The Scottish Government is exploring the possible use of other data, such as hospital admissions data, to enhance the analysis of road accidents. The Scottish Government made a commitment to developing a system to analyse casualty data together with socio-demographic data, in partnership with DfT, which would be available to Local Authorities and Police forces. The DfT together with Thames Valley Road Safety Partnership developed the MAST project, which enables online cross-analysis of Stats 19 data and socio-demographic data from Experian's Mosaic Public Sector database.

The use of alternative data sources may help identify groups of individuals who have a greater than average risk of involvement in accidents. It may also help identify existing and emerging accident trends that are not immediately apparent using just STATS19 data.



Stirling Council Area

Road Network

Stirling occupies a strategic location in the centre of Scotland and the main road network provides direct links to all parts of Scotland and beyond, including Glasgow and Edinburgh in the south, and Perth & Kinross, Argyll & Bute and the Highlands in the north.

Stirling Council is responsible for 1009 km of public local roads. This represents 1.9% of the local roads in Scotland. 369 km (36%) of these roads are in the built-up or urban areas and 640 km (64%) are in non-built up or rural areas. This proportion is similar to that for the whole of Scotland.

Not all public roads in the Stirling Council area are the responsibility of the Local Authority. The main strategic routes, or trunk roads, are the responsibility of the Scottish Government. Accidents occurring on the trunk road network

affect the residents of Stirling Council area and its emergency services, but the council has no involvement in the management or maintenance of these roads. There are 137 km of trunk roads and motorways in the council area, which makes up 4% of all trunk roads in Scotland. These roads play a vital role in travel around the Stirling Council area carrying 40% of all traffic and representing 13% of the total public road length in the Stirling Council area. These roads are as follows:

- M80 motorway
- M9 motorway
- A9 (north of and including Keir Roundabout)
- A82
- A84 (north of and including Kildean Roundabout)
- A85

Stirling Accident & Casualty Comparisons

The five-year baseline period 1994 to 1998 shows that an average of 319 personal injury accidents (pia) were reported annually on roads in the Stirling Council area, resulting in 451 casualties. Of these casualties, 331 were as a result of accidents reported on local roads and 120 as a result of accidents reported on trunk roads. 15 of the trunk road casualties resulted from accidents reported on motorways.

Over the latest five-year period 2005 to 2009, an average of 283 accidents resulting in 376 casualties were reported annually. Of these casualties, an average of 284 were as a result of accidents reported on local roads and 92 as a result of accidents reported on trunk roads. 12 of the trunk road casualties were as a result of accidents on motorways.

The motorway network in Stirling Council area carried 20% of all traffic in 2008, but over the period 2005 to 2009 only 3% of all accidents were reported on these roads. This clearly shows the relative safety of motorways compared with other roads.

As expected, the proportions of accidents and resulting casualties reported on local roads have remained at roughly the same levels. The five-year average accident and casualty numbers for each network are shown in Tables 6-1 and 6-2 below:

| Stirling: Local & Trunk Road Accident Comparison | | | | |
|--|----------------------|-----------------|----------------------|-----------------|
| Severity | 1994-1998 5 year ave | | 2005-2009 5 year ave | |
| | Local Road | Trunk (inc. M) | Local Road | Trunk (inc. M) |
| Fatal | 6 | 3 | 4 | 3 |
| Serious | 79 | 25 | 43 | 17 |
| Slight | 161 | 45 | 172 | 44 |
| All severity | 246 (77%) | 73 (23%) | 219 (77%) | 64 (23%) |
| Total | 319 | | 283 | |

| Stirling: Local & Trunk Road Casualty Comparison | | | | |
|--|----------------------|------------------|----------------------|-----------------|
| Severity | 1994-1998 5 year ave | | 2005-2009 5 year ave | |
| | Local Road | Trunk (inc. M) | Local Road | Trunk (inc. M) |
| Fatal | 6 | 4 | 4 | 3 |
| Serious | 93 | 38 | 51 | 21 |
| Slight | 232 | 78 | 229 | 68 |
| All severity | 331 (73%) | 120 (27%) | 284 (76%) | 92 (24%) |
| Total | 451 | | 376 | |

All Personal Injury Road Traffic Accidents, Stirling Council Area

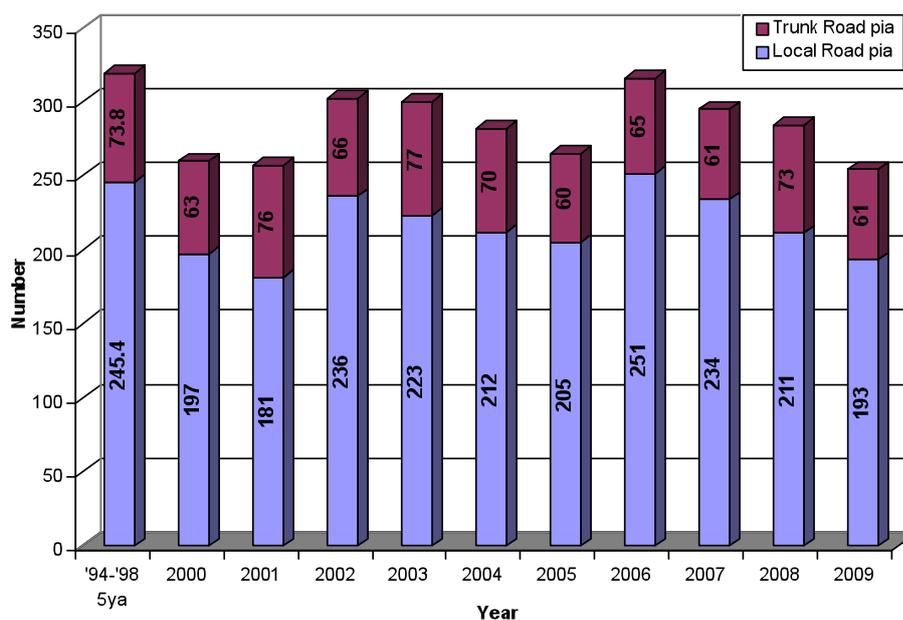


Figure 6-1 shows accidents reported on local and Trunk roads in Stirling Council area from 2000 to 2009 and the 5-year average for the baseline period 1994-1998.



All Casualties, Stirling Council Area

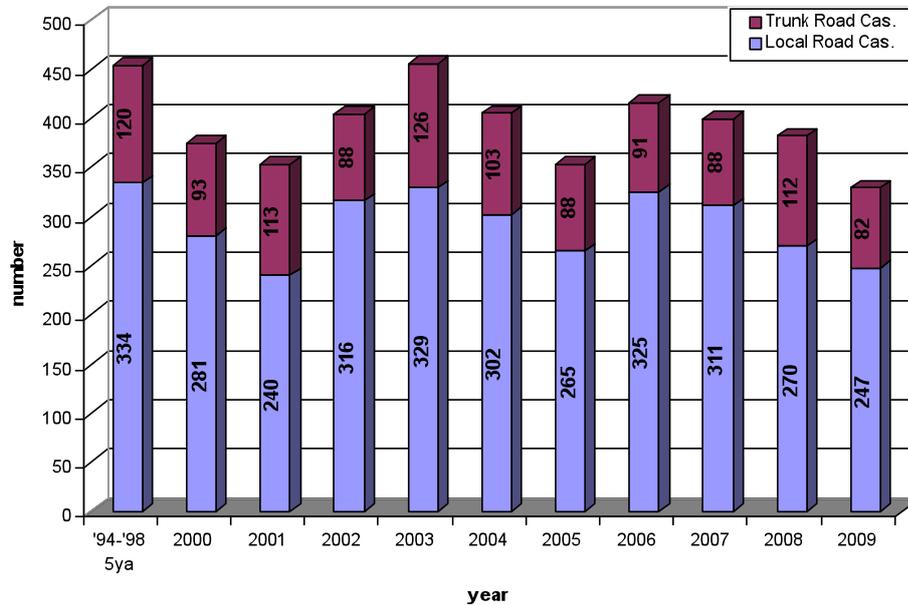


Figure 6-2 compares the number of casualties resulting from reported accidents on local and Trunk roads in the Stirling Council area from 2000 to 2009 and the 5-year average for the baseline period 1994-1998.

Scotland Casualty Comparisons

Between 2004 and 2008 there was an annual average of 13,024 accidents in Scotland resulting in 17,094 casualties. Of these casualties, an average of 14,035 occurred on local roads and 3,059 on trunk roads. The average numbers and severities are shown below (2009 Trunk road data not available).

| Stirling: Local & Trunk Road Casualty Comparison | | | | |
|--|----------------------|-------------------|----------------------|-------------------|
| Severity | 1994-1998 5 year ave | | 2005-2009 5 year ave | |
| | Local Road | Trunk (inc. M) | Local Road | Trunk (inc. M) |
| Fatal | 258 | 120 | 202 | 90 |
| Serious | 3630 | 829 | 2112 | 492 |
| Slight | 3888 | 949 | 2314 | 582 |
| All severity | 18639 (84%) | 3677 (16%) | 14035 (82%) | 3059 (18%) |
| Total | 22316 | | 17094 | |

Road Safety Problems

This section identifies the road safety problems that are of greatest concern in the Stirling Council area and explores the difficulties that we face in addressing them.

Scotland's Road Safety Framework to 2020 gathers these issues under 5 headings and makes specific commitments to address them through the traditional themes of road safety, or Four Es namely; Engineering, Enforcement, Education and Encouragement. The headings used in the Framework are:

- Working Together
- Being Responsible
- Driving for Life
- Reducing Risk
- Designing for Human Error

Under each of these headings, there are various groups of road users, behaviours and further road safety problems that are of particular concern both nationally and locally. While we embrace the philosophy of the Framework and will contribute towards achieving its aim and objectives, we must focus our casualty reduction efforts on those road safety issues that are of particular importance to residents and road users in the Stirling Council area.

Certain groups of road users have been identified as having an increased risk of involvement in accidents or suffering serious injuries. The problems that these groups experience are explored under the theme Vulnerable Users. There are certain Road User Behaviours, which

may affect any road user and increase exposure to the risk of involvement in accidents or increase the risk of suffering injury. Scotland's Road Safety Framework identifies those behaviours, actions and conditions that increase risk on the road.

This section explores the contribution that interventions taken under the traditional road safety themes of Engineering, Enforcement, Education and Encouragement can make towards our casualty reduction efforts. Evaluation must underpin all of the actions proposed, so that measurable casualty reduction benefits can be demonstrated. To ensure that casualty reduction efforts are evidence led, the framework emphasises the need to ensure that any measures implemented are based on sound evidence and are fully evaluated.

This can be difficult in certain cases, but Road Safety Scotland, RoSPA and Department for Transport continue to improve the guidance given on how to carry out valid evaluation. Road Safety Scotland's recent 'Think piece', highlighted the problems associated with the implementation of road safety education interventions without proper evaluation.

The need for proper evaluation applies as equally to engineering and enforcement interventions as it does to education and encouragement. We will always seek to fully evaluate the effectiveness of any road safety interventions promoted by Stirling Council, or ensure that their potential benefits are supported by relevant research.



Vulnerable Groups

The vulnerable groups identified in the Framework are:

- Children
- Older people
- Mobility Impaired
- Pedestrians
- Young drivers
- Motorcyclists
- Foreign drivers

Children

| Number of Child Casualties | | | | |
|----------------------------|-------------|-------------|------------|------|
| | 2004-08 ave | 2006-10 ave | Change (%) | 2010 |
| Killed | 0.4 | 0.4 | 0 | 0 |
| Serious | 6.2 | 3.6 | -42 | 2 |
| Slight | 31.0 | 26.2 | -15 | 17 |

Child safety is an emotive subject. Children are amongst the most vulnerable road users. Because of their age, children are not sufficiently developed or experienced to cope easily with the road environment. They are vulnerable on our roads, whether they are very young and unaware of the dangers, or as young teenagers, who often have increased freedom to use the roads on their own.

Children are more likely to be killed or seriously injured in road accidents in Scotland than elsewhere in Great Britain. The Government has taken this into consideration and set separate casualty reduction targets for children killed and seriously injured. These targets appear ambitious, but are worthwhile.

Between 2005 and 2009, 70 children were killed and 1500 seriously injured on Scotland's roads. Over the same period, two children were killed and 24 seriously injured on roads in the Stirling Council area.

Whilst the emphasis has been on changing the road environment on the routes to and

at schools, most accidents involving children actually occur away from these areas and outside school hours. It is important that initiatives promoted in our schools are designed to provide children with skills and training necessary for them to cope with the road environment. Stirling Council has adopted an Education Transport Policy for children who live in rural or outlying areas and do not have access to a safe walking route.

School travel plans and 'Safer Routes to School' initiatives are designed to encourage changes in travel patterns, it is important that we continue to provide infrastructure that improves the road environment for children and other vulnerable road users.

Only a small proportion of accidents in the Stirling area involve children, but it is important to continue to focus on the education of this group, as lessons learnt in early years are critical to developing future generations of responsible road users. This will lead into awareness raised through secondary education initiatives.

Older People

| Number of Older Casualties (aged 70 and older) | | | | |
|--|-------------|-------------|------------|------|
| | 2004-08 ave | 2006-10 ave | Change (%) | 2010 |
| Killed | 1.4 | 0.8 | -43 | 0 |
| Serious | 6.4 | 5.4 | -16 | 5 |
| Slight | 13.8 | 14.6 | 6 | 15 |

Whilst older people have the life experience that children do not, they often do not have the agility or the reactions of a younger adult. Their eyesight is often poorer and they may also have slower reaction times, and this can increase the likelihood of being involved in a road accident. Once involved in an accident, they are more likely to be seriously injured because their bodies tend to be more fragile.

There are more than 1 million people over 60 years of age in Scotland today who are approaching, or are in retirement, and sadly, of all pedestrians killed each year, nearly half are over 60 years of age. This is four times higher than the average for all other age groups.

Advances in medicine and improved lifestyles have increased longevity over recent decades and this seems likely to continue. These improvements will not only result in more people living longer, but will also result in increased activity. Greater numbers of more active older people will increase the risk of this people of this age group being involved in accidents.

There is no specific target relating to this age group, but because of their general vulnerability to injury, it is important that initiatives and

measures are undertaken to reduce the risk of their involvement in accidents.

Mobility Impaired

Mobility impairment covers a wide range and severity of physical and mental conditions, each of which can make this group of road users vulnerable. People with mobility impairments are may also belong to any of the other vulnerable groups covered by this Plan.

The various equality duties have been drawn together in the UK Government's Equality Act, which rightly places duties on public authorities to consider the needs of everyone.

We will endeavour to take account of the needs of people with disabilities in all road safety measures and initiatives which we implement, including the design and maintenance of the local road network across Stirling Council to meet the obligations of the Equality Act.

It is not possible to easily identify road safety problems experienced by those with mobility impairments from STATS19 data. However, we will consider the Transport Scotland guidelines when assessing new developments or improvements to our road network, to reduce the risk of accidents involving members of this group.



Pedestrians

| Number of Pedestrian Casualties | | | | |
|---------------------------------|-------------|-------------|------------|------|
| | 2004-08 ave | 2006-10 ave | Change (%) | 2010 |
| Killed | 0.8 | 1.2 | 50 | 0 |
| Serious | 9.4 | 6.4 | -32 | 3 |
| Slight | 30.4 | 29.0 | -5 | 21 |

Pedestrians are one of the most vulnerable groups of road users, as they have little to protect them from injury if they are involved in an accident. Between 2006 and 2010, 11% of all casualties in the Stirling Council area were classed as pedestrians and 28% of these were children aged between 5 and 15.

The concentrations of pedestrian accidents are typically higher in Stirling City Centre, and other urban areas, where a higher volume of pedestrians and vehicles increases potential conflict.

The introduction of appropriate traffic calming measures is one way to improve safety for pedestrians. They have a successful record of reducing vehicle speeds and levels of traffic that are inappropriate for a particular class of road. Traffic calming can also reduce the severity and frequency of accidents.

The survivability of pedestrian impacts with modern cars has improved over recent years. However, the size differential of vehicles remains a concern, as the numbers of sports utility (SUV) and multi purpose (MPV) increase. The consequences of accidents involving pedestrians and larger vehicles, including HGVs and 'buses, are likely to be serious.

In seeking to enhance the safety of pedestrians, we will adopt the recently revised guidance given in Designing Streets and continue to consider the needs of pedestrians when we carry out road safety audits in our areas.

Pedal Cyclists

| Number of Pedal Cycle Casualties | | | | |
|----------------------------------|-------------|-------------|------------|------|
| | 2004-08 ave | 2006-10 ave | Change (%) | 2010 |
| Killed | 0.2 | 0 | -100 | 0 |
| Serious | 3.4 | 4.6 | -35 | 2 |
| Slight | 13.2 | 11.8 | -11 | 15 |

Pedal cyclists are a particularly vulnerable group, as they are often unprotected (except helmets) and usually share roads with larger, faster vehicles. Cycling levels within Stirling Council area are quite low, estimated at around 2% of all journeys to work and 1% of all journeys to school. Even with these low levels, pedal cyclists accounted for 6% of all casualties in 2010. The number of cyclists injured in accidents has fallen over the long term, but over the last five years, the trend has been upwards.

The Council aims to increase cycling as a mode of travel through promotion of the Local Transport Strategy, in line with the Government's ambition. Despite an increase in the provision of cycling infrastructure across the Council area, particularly in Stirling City, increased cycle usage will increase the exposure to risk and this could subsequently lead to more accidents involving cyclists.

To reduce conflict between vehicles and cyclists, the Council in partnership with Tactran has developed a network of cycle routes and supporting infrastructure, mainly in the Stirling City area. Further partnership work with Sustrans, resulted in the development of the National Cycle Network Routes 7 and 76, utilising a mixture of quiet roads and off-road paths, where possible.

We will continue to work with partners at Cycling Scotland, Active Stirling and Central Scotland Police to promote cycle training in schools and we will support promotion of the range of programmes of adult cycling training offered by Cycling Scotland.

Under reporting of accidents involving pedal cyclists is a known issue, as cyclists are often reluctant to report accidents. This can make it difficult to identify issues that may require attention.

Motorcyclists

| Motorcyclists | | | | |
|---------------|-------------|-------------|------------|------|
| | 2004-08 ave | 2006-10 ave | Change (%) | 2010 |
| Killed | 1.6 | 2.0 | 25 | 1 |
| Serious | 16.0 | 15.6 | -3 | 12 |
| Slight | 15.4 | 14.2 | -8 | 18 |

Riders of motorcycles (including motor scooters, mopeds, motor-tricycles and motorcycle combinations) are considered a vulnerable group. Motorcycle riders and their passengers have little protection, travel at speeds comparable with other motor vehicles and are small and inconspicuous compared with other motor vehicles. These factors contribute to their relatively high rate of involvement in accidents and increased risk of sustaining serious or fatal injuries from such accidents.

Increasingly, motorcycles are bought for leisure and recreational purposes and evidence suggests that more middle-aged men are buying motorcycles. This is reflected in the age profile of those motorcycle users injured in accidents. Since 1998, three out of five of motorcycle casualties on roads in our area were aged between 30 and 49 years. A significant proportion of fatal accidents in our area involve motorcyclists. 33% of all fatalities reported in the Stirling Council area between 2006 and 2010 were motorcyclists.

There are several recognised and well-used motorcycling routes that pass through the Stirling Council area, mostly on trunk roads, but access from major urban areas is gained via local roads.

We support initiatives promoted by partners that are aimed at improving the safety of motorcyclists in the local area such as 'Bikesafe' and 'Around the Corner'. We will support publicity and awareness campaigns that are provided locally by our road safety partners and nationally by Road Safety Scotland and other organisations.

We must consider the needs and vulnerabilities of motorcyclists when designing new roads, implementing improvements on existing roads and carrying out maintenance works. Motorcyclists are at particular risk of losing control on wet road markings, manhole covers and other ironwork, surface joints, loose gravel, potholes, etc. When the motorcycle rider loses control and falls from their bike, striking other vehicles is an obvious concern, but they are also very vulnerable to injury when striking objects on the roadside.

Young Drivers

| Number of Young Driver Casualties | | | | |
|-----------------------------------|-------------|-------------|------------|------|
| | 2004-08 ave | 2006-10 ave | Change (%) | 2010 |
| Killed | 1.0 | 0.8 | -20 | 0 |
| Serious | 13.4 | 11.0 | -18 | 10 |
| Slight | 47.6 | 48.4 | 2 | 35 |

Young Drivers – defined in this road safety plan as drivers aged between 17 and 25 - have been identified as a vulnerable group because of their disproportionate risk of involvement in accidents. Generally, the physical abilities of young drivers should be approaching their peak and having recently passed their driving test, their education and theoretical knowledge should also be fresh. Young people can have difficulty associating driving behaviours with potential consequences and it is known that young inexperienced drivers are less able to identify and anticipate hazards as quickly as those with more experience.



A recent Scottish Government research paper found that younger drivers view rural roads as an opportunity to test their driving skills by driving at higher speeds.

Over the period 2006-2010, 302 young drivers aged between 17 and 25 years were injured as a result of accidents on roads in the Stirling Council area. More than 25% of all driver casualties were in this age group and of these, approximately 60% were male. Almost 75% of these casualties were as a result of accidents reported on rural roads, where approximately 50% of the drivers injured were male. But perhaps most tellingly, almost three times as many young male drivers as young female drivers were killed or seriously injured in accidents.

One of the main actions of this Road Safety Plan is to engage with this vulnerable group, and although education and encouragement will continue to be the main methods of addressing young drivers, engineering initiatives will be applied to assist where possible.

Central Scotland Police deliver a range of Road Safety Scotland's educational resources in our schools including 'Crash Magnets' and 'Your Call'. These resources are supplemented with theatre productions designed to target alternative behaviours and social pressures such as 'Friends Disunited'.

The Central Scotland Road Safety Partnership has delivered the 'Safe Drive, Stay Alive' production to about 4000 young and pre-drivers each year for the past 3 years.

Road Safety Scotland has developed the 'Get in Lane' website to provide information on a variety of road safety related problems to young drivers and this group was the main focus of campaigns during 2011.

Foreign Drivers

Tourism is an important part of Stirling's economy and overseas visitors make up a substantial proportion of tourists in our area, with 290,000 trips reported in the Argyll, Loch Lomond, Trossachs, Forth Valley and Stirling tourist region.

It is important that traffic signs and road markings are clear and unambiguous, as language and cultural differences may increase the risk of road accidents involving foreign drivers.

On main tourist routes, it may be necessary to reinforce the requirement to drive on the left, particularly after leaving motorways and dual carriageways, and on other parts of the network.

Road Safety Scotland has produced a 'Driving in Scotland' leaflet aimed at overseas visitors that gives advice on driving in the UK and is translated into several languages.

Migrant workers represent another group of foreign drivers that have road safety problems that must be considered. RSS has produced a further 'Driving in Scotland' leaflet that gives more comprehensive motoring advice to migrant workers, in the most appropriate languages. Stirling Council has produced a migrant worker pack that is available in English and Polish and includes the 'Driving in Scotland' leaflet.

What we can do

- 1** Improve infrastructure or implement road safety engineering measures to reduce the number or risk of accidents, where appropriate.
- 2** Consider the needs of all road users, particularly vulnerable groups, before implementing any improvements to the road network or approving new developments.
- 3** Support the promotion of initiatives or publicity campaigns aimed at improving road safety for all road users.
- 4** Support and encourage national and local road safety educational and publicity campaigns to promote safer driving behaviours.
- 5** Continue to support and encourage the delivery of nationally and locally developed road safety educational resources aimed at vulnerable user groups.
- 6** Implement or support the promotion of any measures, initiatives or campaigns aimed at improving road safety for children.
- 7** Implement or support the promotion of any measures, initiatives or campaigns aimed at improving road safety for older people.
- 8** Implement or support the promotion of any measures, initiatives or campaigns aimed at improving road safety for the mobility impaired.
- 9** Implement or support the promotion of any measures, initiatives or campaigns aimed at improving road safety for pedestrians.
- 10** Support the delivery of cycle training to children and adults.
- 11** Encourage the use of appropriate cycle safety equipment and clothing.
- 12** Encourage reporting of pedal cycle accidents.
- 13** Promote the use of PTW rider friendly infrastructure through design, maintenance and road safety audit.
- 14** Support initiatives that seek to influence the attitudes of young people towards road safety and driving behaviour before they acquire their driving licence.
- 15** Continue to provide road safety information for tourists and migrant workers.
- 16** Ensure that traffic signs and road markings are as clear and unambiguous as possible.



Road User Behaviours

There are further behavioural matters that may affect the safety of any road user regardless of which age or user group they belong to. These are categorised as:

- Rural roads
- Seatbelts
- Impairment
- Distraction
- Driving at work
- Speed
- Gender.

Rural Roads

| Rural Roads | | | | |
|-------------|-------------|-------------|------------|------|
| | 2004-08 ave | 2006-10 ave | Change (%) | 2010 |
| Killed | 6.8 | 5.6 | -3 | 3 |
| Serious | 60.8 | 51.0 | -12 | 50 |
| Slight | 193.8 | 185.6 | -4 | 150 |

There are numerous hazards on rural roads that can contribute to an increased risk of involvement in accidents. However, there is a perception particularly amongst younger or more inexperienced drivers that because rural roads are quieter than urban roads, the risks are smaller.

The variety of hazards on rural roads can present a greater risk to drivers, particularly when they travel at speeds that are inappropriate for the prevailing road conditions.

There is a clear accident problem on rural roads in the Stirling Council area. Over the five-year period 2005 to 2009 there were twice as many people injured in accidents on rural roads than there were on urban roads in our area. Of all those injured on rural roads, nearly three quarters were drivers. More than ten times as many people were killed over this period on rural roads and 3 times as many people seriously injured.

We study accident sites and promote remedial measures at sites that have a record of fatal or serious accidents. These sites are predominantly on rural roads and it is important that this work continues to improve the safety of our roads.. To reinforce the particular risks associated with driving on rural roads, RSS recently launched their 2011 'Country Roads' awareness campaign.

Seatbelts

In 2006, over a third of people killed in road accidents in Great Britain were not wearing a seatbelt. The severity of injuries sustained in accidents can be greatly reduced by ensuring that all occupants wear seatbelts. Seatbelt wearing reduces the risk of fatality for those involved in accidents by 50%.

Enforcement of seatbelt use is one of the Key Operational Behaviours identified by ACPOS in the Scottish Road Policing Framework 2009-2012 and is aimed at reducing the risk of fatal injury. RSS launched its 'Have you clicked' publicity campaign in 2010, as part of the 'Don't risk it' brand. Stirling Council supports this campaign and has applied the branding to some of its vehicles to raise awareness.

Child passengers are at particular risk of injury in accidents when they are not properly restrained. It is important that the correct type of child or booster car seat is used and that they are correctly fitted. Road Safety Scotland, in partnership with Police and Arnold Clark, run the 'Good Egg' In-Car Safety campaign, which aims to ensure that all child passengers are carried safely in cars. The campaign features the 'Good Egg' guide to provide advice about appropriate child restraints, car seat clinics, publicity and the www.protectchild.co.uk website.

Impairment

Driving is a complex task that requires high levels of awareness and concentration. When drivers' ability to carry out this task is impaired in any way, the risk of being involved in an accident is greatly increased. The impacts of impairment through drink and drug driving are increasingly becoming apparent and this is an area of behaviour targeted by Road Safety Scotland's 'Don't Risk It' marketing campaigns.

Another area of concern is impairment through fatigue or drowsiness, which can be caused through lack of sleep, or the use of prescription and over the counter drugs.

Central Scotland Police targets Drink and Drug driving in line with Key Operational Behaviours identified in the 'Scottish Road Policing Framework 2009-2012'.

Distractions

The occurrences of avoidable distractions are on the increase. These can be in-vehicle distractions such as using mobile devices, drinking, eating or smoking while driving and children; or external-to-vehicle distractions such as advertisements, variable message signs, etc. Research has shown that drivers are four times more likely to be involved in an accident when using a mobile phone while driving.

Driving while using a mobile phone with hands-free kit is also hazardous as it can take 50% longer for drivers to react when having a conversation using a hands free kit than in normal driving conditions. Due to the elevated risk of involvement in accidents, Stirling Council does not permit employees to use mobile phones or hands-free kits while driving.

Recent research by the Institute of Advanced Motorists found that "failed to look properly" was the most frequently recorded STATS 19 accident contributory factor in Great Britain between 2005 and 2009. While this does not necessarily mean that distractions were the cause of all such accidents, available research tends to indicate that distraction can play a large part.

It is therefore important that distractions are kept to a minimum, particularly at locations where road users are performing complex tasks or

there are conflicts, such as junctions. As well as removing roadside distractions under provisions of the Roads (Scotland) Act 1984 and the Town and Country Planning Act (Scotland) 1997, Stirling Council has a policy for the control of unauthorised advertising.

Driving at Work

Research suggests that between one-quarter and one-third of all road accidents involve people driving at work and more employees are killed in 'at work road accidents' than in all other occupational accidents.

There is a legal requirement for employers to manage the occupational road risk and have a 'duty of care' for employees while driving at work. RoSPA has set up the Scottish Occupational Road Safety Alliance to raise awareness of managing occupational road risk and to promote occupational road safety within Scotland by promoting the positive benefits of risk management.

Stirling Council has produced procedures and policies to support employees driving for work. A Responsible Driver Policy was introduced in 2010 and annual driver checks are carried. The Scottish Government developed the Freight Best Practice Programme with the aim of reducing emissions and improving safety. It has a range of free material to help road freight managers and drivers work more efficiently and safely.

Speed

The efficient movement of goods and people is of enormous material benefit to society. It is known that there is a correlation between excessive speed and accidents, however this is often regarded in isolation. Motorways are the "fastest" roads in the country, but are also those where the overall accident rate is lowest, although they do have the highest fatality ratio. Nationally, most accidents happen on urban roads, where accident rates are higher, but vehicle speeds are generally much lower. Accidents involving high impact speeds are likely to result in serious or fatal injuries.

Both excessive and inappropriate speed can make roads seem less safe, and therefore have an effect on how safe people feel in local



communities. Higher vehicle speeds also result in more serious injuries in the event of an accident. Speed limits should be established in a consistent manner that reflects the expectation of all road users and matches the road environment. To be effective, it is important that speed limits are evidence-based and self-explanatory to the road user, and should reinforce the road users' perceptions of the appropriate speed for the road environment.

Stirling Council reviewed all speed limits on local 'A' and 'B' roads in 2010. A new speed limit policy, that reflects current guidance on the application of speed limits, was adopted as part of this review.

Gender

Males are far more likely to die in road traffic accidents than females. The casualties in the Stirling Council area between 2006 and 2010 is illustrated below:

| Number of Casualties by Gender & Severity 5 year ave. 2006 to 2010 | | | | | |
|---|--------|---------|-------|------------|------------|
| | Killed | Serious | Total | Sev. ratio | Fat. ratio |
| Killed | 4.6 | 42.6 | 210.8 | 0.22 | 0.022 |
| Serious | 1.4 | 23.4 | 159.4 | 0.16 | 0.009 |
| Slight | 6.0 | 66.0 | 370.2 | 0.19 | 0.016 |

Both the indicators, casualty severity ratio (Killed and serious)/all and Fatality ratio (Killed/all) emphasise the tendency for males to be injured more severely. Most importantly, the male fatality ratio is double that for females.

What we can do

- 1 Reduce the number of roadside hazards and encourage the use of passively safe infrastructure through design, maintenance and road safety audit.
- 2 Support and encourage enforcement and road safety campaigns aimed at seatbelt wearing.
- 3 Support road safety education and publicity initiatives that aim to improve understanding of which child car seat to choose and how to fit it correctly.
- 4 Support and encourage road safety educational and publicity campaigns to improve awareness of the effects of fatigue and drowsiness.
- 5 Continue to discourage the use of all mobile phones while driving by directing employees to comply with the Council's 'mobile phone use while driving' policy.
- 6 Reduce the number of roadside distractions through enforcement of the Town and Country Planning (Scotland) Act, the unauthorised advertising policy and the Roads (Scotland) Act.
- 7 Rationalise traffic signs wherever possible.
- 8 Reduce the risk of Stirling Council employees' involvement in accidents while driving for work by promoting Managing Occupational Road Risk (MORR) policies.
- 9 Provide driver training for employees as required.
- 10 Encourage other local employers to adopt MORR policies.
- 11 Implement the recommendations of the Speed Limit Review and Speed Limit Policy;
- 12 Support our partners where enforcement of speed limits is required.
- 13 Support and encourage national and local road safety educational and publicity campaigns specifically aimed at male road users.

Safer Roads: What We Do

We will work with our partners to reduce accidents and casualties using measures across the road safety themes of Engineering, Enforcement, Education and Encouragement to: "Maintain the long-term rate of reduction in the numbers of deaths and injuries on Stirling's roads."

Engineering – Theme E1

Environment Services will play a key role in introducing a range of engineering measures that can enhance road safety and supplement the limited specific budget available for accident reduction schemes.

Accident Investigation and Analysis

To achieve the overall aim and the objectives of the Road Safety Plan, the following key areas of activity have been identified:

- Assembly and validation of accident data;
- Analysis of data;
- Identification of sites, trends and problems;
- Internal consultation process;
- Carry out appropriate studies;
- Make recommendations based on the outcome of studies;
- Provide road safety advice, as required, to the Service and Council; and
- Produce casualty reduction strategies e.g. Road Safety Plans.

To reduce the number of accidents and maximise potential casualty savings, the Traffic & Road Safety Team carries out a detailed analysis of Stats 19 accident records. This allows the identification of any accident cluster sites or emerging trends that may require remedial action.

Other accident related data is used to identify existing and emerging accident trends that are not immediately apparent using Stats 19 data. The MAST project provides access to data analyses that link accident and socio-demographic information.

Accident cluster sites are assessed using accident rates and severity ratios, ranked according to a combined accident score and prioritised for study. Separate lists with different qualifying

criteria are used to rank 'Fatal' accident sites and 'Fatal & Serious' accident sites. It is important that a site is not selected for study and treatment based on a short-term accident record, which may be subject to random variation. Therefore, most sites ultimately selected for study have been under observation for a number of years. With fewer discrete accident cluster sites with easily identifiable trends or patterns than before, alternative methods of accident reduction must be used to continue the current downward accident and casualty trends including:

- Route Accident Reduction Plans (RARP) – study of routes with higher than expected accident rates;
- Mass Action – study of different locations demonstrating similar problems;
- Area-Wide Action – study of a whole area with a higher than expected number of accidents.

Accident remedial schemes develop from the recommendations given in accident studies, whether these are Cluster Site Studies, Route Accident Reduction Plans, Mass Action Plans or Area Action Plans. These schemes are prioritised then implemented as funding becomes available, most often from the Council's capital budget.

Actions – we will

- 1 Continue to analyse accidents, carry out accident studies and make recommendations for treatment.
- 2 Report annually on identified accident cluster sites, routes, areas and trends.
- 3 Continue to implement accident remedial schemes to reduce the number of accidents and reduce injury severity.
- 4 Investigate the use of alternative data sources to help identify emerging accident trends.
- 5 Monitor all schemes to gauge their success over time.
- 6 Provide annual updates on the delivery of the Road Safety Plan.



Road Safety Audits

All schemes where significant changes to the road layout, traffic composition or traffic volume are anticipated should be subject to independent Road Safety Audit, at various stages of construction.

Working with design engineers and Central Scotland Police officers, auditors carry out independent assessments of schemes to proactively reduce accident risk and ensure that "safety by design" is delivered.

The audit team liaises closely with the design team to work through any road safety problems that are identified and to produce solutions that are acceptable to all. Road Safety Engineers normally carry out these audits, but there may be occasions where external audit teams are required.

Actions – we will

- 7** Review the existing Road Safety Audit process to ensure it continues to meet the requirements of the service.
- 8** Produce a Road Safety Audit policy.
- 9** Continue to carry out road safety audits to ensure that road design and engineering optimises road safety wherever possible.

Traffic Management & Road Safety

The Traffic & Road Safety team deals with all issues relating to the management of traffic by adjusting and adapting the use of the existing road network.

The team undertakes and co-ordinates the investigation, design and implementation of traffic management schemes including traffic signal and pedestrian crossing installations, traffic signs and road markings.

The team also promotes Traffic Regulation Orders to manage and control traffic on the roads to facilitate safer movement and reduce potential conflict.

In addition, the team is responsible for the assessment and use of vehicle activated signs (VAS) across the Council area. Two basic categories of VAS are used; warning and speed limit. Warning VAS provide additional warning to drivers that they are approaching a hazard and they should slow down. Speed limit VAS are located where excess speed has been identified as a particular issue and when activated, remind drivers to reduce their speed. The Speed Limit Policy gives guidance for the use of such signs. In February 2011, the Council approved a policy framework for the selection, prioritisation and approval of speed limits.

The Scottish Executive previously made funding available for the establishment of 20mph speed limits on roads around schools. 45 schools in the Stirling Council area are now covered by a 20mph speed limit.

The Traffic & Road Safety Team also considers measures to assist mobility impaired people or those with special needs:

- Provision of dropped crossing points and tactile paving
- Accessibility Audits and Prioritisation of main routes used by those with mobility impairments
- Removal of unnecessary street furniture
- Provision of audible & tactile facilities at pedestrian crossings

Actions – we will

- 10** Promote traffic management schemes to make best use of available road space without compromising the safety of any road users;
- 11** Provide infrastructure improvements to reduce the risk of accidents involving vulnerable user groups;
- 12** Continue to liaise and engage with community and mobility access groups to gain an understanding of their needs and implement measures to address these needs.

Development Control

The Development Control team work closely with the Planning Authority, advising them on matters of road safety, road geometry, visibility and parking standards, junction location / type and the capacity of the road network. Establishing and preserving the road hierarchy is also a prime consideration to ensure modes of transport are concentrated onto roads appropriate to the journey's purpose.

The Scottish Government published its policy statement 'Designing Streets' in March 2010. Designing Streets is the first policy statement in Scotland for street design and marks a change in the emphasis of guidance on street design towards place-making and away from a system focused upon the dominance of motor vehicles. It has been created to support the Scottish Government's place-making agenda and is intended to sit alongside the 2001 planning policy document Designing Places, which sets out Government aspirations for design and the role of the planning system in delivering these. The Development Roads Guidelines and Specification are being revised to reflect the Scottish Government's street design policy. This will set out the Council's policies and standards for the design, construction and location of streets and roads for new development, ensuring safe access to the existing road network and preserving the integrity of the roads hierarchy. The policies and standards will collectively promote the safe movement of all road users by all modes of transport and ensure that 'place-making' is fully considered in development design.

Developers of significant travel generating developments are required to produce a Transportation Assessment to ensure that all modes of transport (walking, cycling, public transport and car users) are considered and can access the site in a safe manner. If significant changes to the road network, traffic composition or traffic volume are anticipated then new developments should be subject to independent Road Safety Audit.

In new developments all new road infrastructure constructed by private developers must be built to standards acceptable to the Council, which on satisfactory completion can be considered for adoption and added to the List of Public Roads. All new roads and junctions will be designed to enhance road safety and the environment. Consent is given through a permit system for various works including; the erection of scaffolding or hoarding, and placement of skips or materials for construction works. The permit process enables the Council to manage and control access to the roads to ensure the safety of all road users. Inspection visits are carried out as necessary through the duration of any works.

Actions – we will

- 13** Assess the impact of new development on the road network for all road users in terms of road safety, capacity, sustainability and accessibility.
- 14** Review and update the Council's Standards and Specifications for new development.
- 15** Continue to manage, monitor and inspect works on the public road network.

Public Utility Road Works and Road Works in General

Public Utility companies use roads and footways as routes for their pipes and cables to provide underground services. .

The New Roads and Street Works Act 1991 makes utility companies responsible for the management of their own road works. The Act makes Roads Authorities wholly responsible for co-ordinating road works and responsible for monitoring and the performance of utilities in carrying out road works.

When utility companies carry out defective work, failure to reinstate the road properly or inadequately sign, light and guard works are the main causes of risk. Traffic congestion generated by their works as a result of bad planning and failure to complete them on time can also create problems for road users.



To preserve the safety of road users and road workers, all Road Works should be signed, lit and adequately guarded in accordance with the current Safety at Street Works and Road Works Code of Practice.

Actions – we will

- 16** Continue to monitor the performance of utility companies' road works, ensuring compliance with the New Roads and Streetworks Act 1991.
- 17** Develop and implement an inspection / monitoring process for all road works, including private and in house contractors working under the conditions of the Road Scotland Act 1984.

Street Lighting

In order to help all road users move safely we provide a system of street lighting on all publicly adopted roads, footways and footpaths within urban areas and, in certain circumstances, on rural roads.

Stirling Council has a statutory duty under the Roads (Scotland) Act 1984 to maintain all publicly adopted street lighting systems.

Currently between 1500 and 2000 repairs that include; replacing lamps, gear and faulty cabling; are carried out annually on a reactive basis. The introduction of a light monitoring and dimming system will enable us to predict when a lamp will fail. This allows proactive maintenance to be carried out, resulting in fewer dark lamps, with the obvious safety benefits that this brings. Older 'yellow light' lanterns continue to be replaced with brighter, modern 'white light' lanterns. Lighting levels on roads with upgraded lighting systems will be improved to meet the latest performance requirements.

Over the last ten years, it has been Stirling Council policy to replace concrete lighting columns that had deteriorated to such an extent that they were considered dangerous. All lighting columns have a finite life, so it is important that work to replace concrete, steel and aluminium

lighting columns that have reached the end of their useful life continues.

Despite the important role that street lighting plays in improving road safety, lighting columns do present a hazard to vehicle occupants in certain circumstances. In future, passively safe lighting columns will be considered at appropriate locations where a new system is to be installed or where replacement is required, in accordance with current standards. This is of particular importance where there is a history of lighting columns having been struck by vehicles.

Actions – we will

- 18** Continue to upgrade old street lighting systems to meet current performance requirements.
- 19** Continue to replace concrete, steel or aluminium lighting columns at the end of their useful life.
- 20** Consider the use of passively safe lighting columns in accordance with current guidance, at new or existing locations.

Road Maintenance

The Roads Maintenance Team is responsible for maintaining over 620 miles of carriageway and 430 miles of footways and footpaths. This includes the maintenance of associated infrastructure including; 15,000 road gullies, 17,000 metres of safety fence, 650 bridges and 1,400 illuminated signs & bollards.

To keep the network safe, a programme of routine maintenance activities are carried out at regular intervals including; cutting of roadside verges and visibility splays, gully emptying, etc. Planned maintenance work is also carried out in accordance with the Code of Practice to deliver best value. This establishes a range of performance targets for all major elements of road maintenance. This includes the repair of surface defects such as potholes, resurfacing and renewal and traffic signs and road markings. The condition of the road surface plays an obvious part in the safety of travel on our

roads. Inspection of the road surface condition is carried out annually as part of the Scottish Road Maintenance Condition Survey. The results of this survey allow the Council to prioritise treatment and determine a programme of roads maintenance works. A measure of the condition of the road surface is one of the Statutory Performance Indicators (SPI) that Stirling Council must provide.

Poor surface skid resistance is often a contributory factor in accidents in wet conditions. The SRMC survey does not measure the level of surface friction or skid resistance, so other surveys and tests must be carried out. Stirling Council does not presently have a skid resistance policy, but a policy will be produced and adopted as part of the Roads Asset Management Plan by 2012.

The Council agreed in February 2011 to provide £4.075M of capital investment for roads maintenance for 2011/12 and provisionally, to continue this annual investment over the subsequent four years to 2015/16. This investment will primarily be used to improve the condition of the carriageways.

The exceptional weather conditions towards the end of 2010 and the subsequent failure of parts of the road network highlighted the importance of continued road maintenance.

Actions – we will

- 21** Continue to maintain the road network in accordance with the Code of Practice.
- 22** Assess the condition of the road surface through continued participation in the Scottish Road Maintenance Condition Survey.
- 23** Produce a skid resistance policy for Stirling Council.
- 24** Consider the safety of all operatives and road users when specifying or undertaking maintenance works.
- 25** Consider the needs of all road user groups when replacing or maintaining any element of the road network.

Winter Service

The Winter Service forms an integral part of the management & maintenance of Stirling Council's road network. Stirling Council has a statutory duty to take such steps as it considers reasonable to prevent snow and ice or indeed the consequences of any other weather condition endangering the safe passage of vehicular and pedestrian traffic over its public roads.

The Council's Winter Maintenance Policy and Plan sets out how it intends to treat ice and snow in a reasonable and logical manner.

In order to deal efficiently and effectively with Winter Service, operations need to be planned in a systematic manner and it is essential that a policy, with clearly defined priorities, and procedures are established. The Council's policy statement in relation to winter treatment is; The reduction, as far as reasonably practicable, of the effects of adverse weather conditions on the movement of people and vehicles, to permit safe travel on the more important roads, within the Stirling Council area.

Actions – we will

- 26** The Winter Service policy will be reviewed annually.

Safer Roadsides

Collision with a roadside object is a major contributor to serious and fatal injuries sustained in loss of control accidents. To reduce the risk of fatal or serious injury on our roads, it is important that in addition to engineering measures to reduce the risk of leaving the road, the safety and forgiving nature of the roadside is considered.

Protection of roadside objects and the use of passively safe street furniture are points that are often raised in road safety audits of new build and road improvement schemes. However, the principles of safer roadsides must be embraced by all parts of the Service such as Roads Maintenance, Traffic Management, Street Lighting, etc. and others responsible for placing objects or vegetation in the roadside. Ensuring that new or replacement street furniture



in high-risk locations is passively safe, will help to reduce the severity of injuries sustained in any future accidents. This is one way in which Stirling Council can proactively reduce the number of road users killed or seriously injured.

Actions – we will

- 27** Ensure that passively safe alternatives are considered for new and replacement street furniture, where appropriate.
- 28** Produce a policy for the provision of safer roadsides on new and existing roads.

Transport Schemes

The Council's approved a methodology for the assessment and prioritisation of transport improvement schemes, based on the Scottish Transport Appraisal Guidance (STAG). The five objectives of safety, environment, economy, integration and accessibility contained within STAG form the basis of the Council's methodology.

This methodology is used to prioritise schemes and identify the required spend from the Council's available capital budgets and other financial allocations.

This programme typically includes:

- Traffic calming measures e.g. road humps, speed cushions;
- Junction improvements e.g. mini-roundabouts, traffic signals;
- New footways;
- Pedestrian crossing facilities e.g. Zebra crossings;
- Cycle facilities e.g. cycle lanes; and
- Accident remedial schemes.

Actions – we will

- 29** Review the methodology periodically to ensure it continues to meet the needs of the Service and road users.
- 30** Continue to assess and prioritise schemes to ensure that funding is allocated appropriately and resources are targeted at sites where the maximum benefits will be achieved for road users and their communities.

Safer Routes to Schools & 20mph Speed Limits
Many parents have concerns about the journey to school that their children make each day, which may include specific road safety issues. These concerns, unless addressed, may result in cycling, walking and public transport being actively discouraged, with parents preferring to take children to school by car themselves. This merely contributes to increased congestion, pollution and potential risk on the school journey. Environment Services work closely with the Education Service, Central Scotland Police, schools and communities to identify road safety concerns and the barriers to safe and sustainable school travel. Working with young people, staff and parents, the aim is to develop school travel plans and find solutions to the problems that can be taken forward as safer routes to school initiatives. School Travel Plans have been produced for 23 schools and 20 Safer Routes to Schools schemes have been implemented as a result.

The Assets, Property & Facilities Management Service is responsible for the provision of School Crossing Patrols at 44 sites across the Council area serving 24 schools. School Crossing Patrols are provided to help children and other pedestrians cross busy roads encountered on their journeys to and from school.

School Crossing Patrols are deployed at the start and finish of each school day and although exact times vary from site to site.

Actions – we will

- 31** Continue to implement 20mph speed limits and associated speed-reducing features on roads in accordance with the Council's policy.
- 32** Continue to develop and review School Travel Plans.
- 33** Review all existing school crossing patrol sites in accordance with adopted policy.
- 34** Continue to implement measures that improve the safety of children on their journey to school and facilitate healthy, active and sustainable travel choices.

Enforcement – Theme E2

Central Scotland Police is committed to reducing deaths and serious injuries on our roads and subscribes to the 'Five Es' approach as set out in the Scottish Road Policing Framework 2009-2012. Central Scotland Police carry out enforcement directed at drivers whose behaviour presents an unacceptable risk to other road users in accordance with national policy and to meet local objectives.

The Central Scotland Police force vision and objectives are incorporated in the ACPOS National Strategy 'Scottish Road Policing Framework 2009-2012'. The framework set enforcement priorities to reduce the number of persons injured on our roads and reduce antisocial use of the roads under each of six key operational areas identified as being of particular importance to achieving the Scottish casualty reduction targets for 2020. These operational areas are:

Drink and Drug Driving

Central Scotland Police will enforce all legislation relating to 'Drink and Drug Driving'. This enforcement will be carried out continually but will be reinforced through the deployment of additional patrols commensurate with trends identified through analysis or in support of National campaigns.

The 'Don't Risk it' campaign targets drink and drug driving and is backed up by the vehicle forfeiture scheme, which allows the seizure of vehicles belonging to repeat offenders.

The annual Winter Road Safety Campaign targets a variety of behaviours that are detrimental to road safety. 'Drink and Drug Driving' is one of the main issues identified as requiring extra enforcement activity.

Speeding

Both excessive and inappropriate speed can make roads seem less safe, and therefore have an impact on how safe people feel in local communities.

i. Central Scotland Police

Central Scotland Police will work with partners and local communities to identify areas where speeding is a problem and will implement appropriate and proportionate enforcement measures.

Central Scotland Police carry out speed detection duties to enforce speed limits where necessary to improve safety and reduce anti-social behaviour. Various methods are used to ensure the travelling public adhere to the various speed limits. These include marked cars, unmarked cars, hand held radar and Visual Average Speed Computer and Recorder (VASCAR).

ii. Central Scotland Safety Camera Partnership

Central Scotland Safety Camera Partnership was launched in April 2006 with its focus being on encouraging motorists to drive within the speed limit.

The partnership is made up of Stirling Council, Clackmannanshire Council, Falkirk Council, Central Scotland Police, Transport Scotland and the Area Procurator Fiscal. Supporting partners are Forth Valley NHS Board, the Scottish Ambulance Service and Central Scotland Fire and Rescue Service.

The Partnership currently operates two mobile camera units across the Central Scotland Police area at 11 identified sites with a history of excessive vehicle speeds and accidents. Since March 2009, enforcement has taken place at key locations along A811 Stirling to Dumbarton Road, as part of the A811 Route Strategy. The partnership also operates a seasonal weekend route strategy on the A82, A84 and A85 trunk roads.



Seatbelt Use

Non-compliance with Seatbelt legislation has been identified as a contributory factor in the severity of injuries as a result of road accidents. Continuous enforcement of this legislation is carried out supplemented by national and local campaigns supported by media coverage.

Road Safety partners across Scotland agreed that 2010-11 would be a year with a specific focus on seatbelt compliance.

Driving that is Dangerous, Careless or Threatening to Others

Central Scotland Police will respond to complaints of careless or inappropriate driving and will also carry out targeted enforcement operations on roads where careless or inappropriate driving is considered as a factor in accidents.

Drivers who are disqualified also drive without insurance and Central Scotland Police will continue to carry out active enforcement to detect these offenders and report them to the courts. The use of new technologies, such as automatic number plate recognition cameras has made a significant contribution to intelligence led policing and helped target vehicles and road users of particular interest.

Careless driving legislation was introduced in 2008 that allows courts to imprison drivers who cause death or serious injury by not paying due care and attention to the road or road users through 'avoidable distractions'. A number of actions are termed 'avoidable distractions' including; mobile phone use, changing CD/radio station, applying make up, drinking, eating, etc.

Antisocial behaviour legislation allows the Police to seize vehicles, in certain circumstances, which have been driven or used in an antisocial manner.

Use of Mobile Phones and other Hand-held Devices

The use of mobile phones while driving has been found to reduce drivers' reaction times by 50%. Since the introduction of legislation in 2006 covering the use of mobile phones whilst driving, Central Scotland Police have rigorously enforced this legislation and will continue to do so by way of local initiatives and supporting National campaigns.

Using a mobile phone when driving is classed as an 'avoidable distraction' under current careless driving laws, and can result in imprisonment if it has contributed to an accident which results in death or serious injury.

Mobile phone use when driving is one of the key behaviours targeted in the Winter Road Safety Campaign.

Targeting Vehicles which are not Roadworthy

Central Scotland Police are pro-active in their enforcement of all aspects of motor vehicle Construction and Use legislation. Roads Policing Unit Officers carry out road checks and examine private cars and vans to ensure they comply with legislation. We also carry out checks with other agencies such as DWP and SEPA to ensure other laws are not being broken. Campaigns directed towards specific aspects of the legislation, e.g. tyres & lights, are held at periods throughout the year.

Roads Policing Unit officers along with VOSA carry out compliance checks on commercial vehicles based within, and travelling through, the force area. These checks cover vehicle and document maintenance, which includes ensuring that legislation covering tachographs and drivers' hours is being adhered to.

Actions

- 1 Central Scotland Police will take firm action against road users who drive in a careless or dangerous manner, fail to use seat belts, drink or take drugs and drive, whose attention is distracted whilst driving or who do not maintain their vehicles.
- 2 Working with key partners, where appropriate, CSP will maximise the impact of law enforcement through an intelligence-led approach, and contribute to the reduction of road casualties.
- 3 Central Scotland Police will work with partners and local communities to identify areas where speeding is a problem and implement appropriate and proportionate enforcement measures.
- 4 Central Scotland Police will make the maximum use of powers to prohibit and prevent the use of un-roadworthy vehicles.
- 5 Central Scotland Safety Camera Partnership will deploy cameras to enforce speed limits at identified sites and routes.

Education – Theme E3

Education and associated training are used to attempt to alter and influence the behaviour of people to develop a positive attitude towards road safety. Use of the media has played a role in education and raising awareness of dangers and hazards when travelling.

Children

Road Safety Officers from Central Scotland Police (CSP) take the lead in delivering road safety education and training for children, from an early age. The Road Safety Officers deliver educational resources that are in the main, developed by Road Safety Scotland and are specifically tailored to the various target age groups in pre-school, primary and secondary schools. Road Safety Scotland's educational resources are produced with Curriculum for Excellence in mind, ensuring that a balanced programme is provided which is linked to themes in the

schools' curriculum. Road Safety Scotland produced the 'Road Safety Within Curriculum for Excellence' leaflet, which was distributed to the head teacher of every school in Scotland with an accompanying letter.

Initiatives currently being delivered by road safety partners in the Stirling Council area include:

- Go Safe – Ziggy's Road Safety Mission;
- Streetsense;
- Scottish Cycle Training Scheme (in partnership with Active Stirling and volunteers);
- Junior Road Safety Officer Scheme;
- Streetwise Guys;
- Crash Magnets;
- Your Call;
- Crucial Crew (joint safety initiative); and
- Safe Drive Stay Alive (joint road safety initiative).

Theatre in education is used as an alternative means of delivering important road safety information to school children. Road Safety Scotland commissions travelling theatre groups to perform shows that can engage young road users in a way that addresses social pressures and alternative behaviours. Current productions include:

- "The Journey" – target audience P6 pupils;
- "The Nine Lives of Roddy Hogg" – target audience S1 pupils
- "Friends Disunited" – target audience S5/S6 pupils

RSS also produces resources to support road safety education for those with additional support needs.

- 'A2bsafely' is an interactive, internet-based resource designed by Road Safety Scotland for young people with mild to moderate additional learning needs, to introduce them to the main skills required to cross the road safely.

Central Scotland Police Road Safety Officers encourage parents and volunteers to provide assistance in schools with the delivery of the



range of initiatives – this also encourages parents to take an active role in getting the road safety message across to their own children.

As part of its statutory duties, Central Scotland Fire & Rescue plays an active part in the delivery of road safety education and training resources to children in partnership with other in the area.

- The Central Scotland Road Safety Partnership delivers the 'Safe Drive, Stay Alive' production to about 4000 young and pre-drivers a year. This is a Community Planning Partnership initiative led by Central Scotland Fire & Rescue and delivered in partnership with Central Scotland Police, Scottish Ambulance Service, NHS Forth Valley and Central Scotland Safety Camera Partnership.

By ensuring that road safety education begins for children from pre-school age continuing through primary school, secondary school and beyond, road safety skills appropriate to the age and degree of independence of the child, can be given.

Other Road Users

Education and training resources and activities are provided for a wide range of road users in addition to children. These are either linked to national campaigns and resources developed by Road Safety Scotland and others, or are developed in-house by the Collision Prevention Unit to meet local identified issues.

- Central Scotland Police runs 'Bikesafe' assessment workshops for motorcyclists who are perhaps inexperienced or need to improve their skills. 'Bikesafe' is seen as an introduction to safer riding, to encourage motorcyclists to pursue further formal training to improve their skills and reduce the risk of becoming involved in accidents. Educational and publicity events are run in conjunction with other activities at known stopping points on the most popular routes. Further information is available at <http://www.bikesafe.co.uk>.

- 'On the road' is an adult literacy resource produced by RSS, that is aimed at young drivers and riders aged 16 to 25. It is designed to encourage young people to develop a lasting awareness and understanding of central issues related to safe driving.
- Road Safety Scotland recently discontinued the theatre production 'Urban Roaddeo', to explore some of the issues facing older road users, but is to commission a successor to encompass intergenerational themes.

Actions

- 1 Together with Central Scotland Police, we will ensure that Road Safety Scotland's Curriculum for Excellence framework is complemented with road safety awareness.
- 2 We will support Central Scotland Police in the delivery of road safety education to vulnerable road user groups.
- 3 We will support Central Scotland Police's contribution to the development of initiatives, which are designed to give vulnerable road users relevant advice, information and knowledge at an early stage in their driving careers, and help reduce the likelihood of their involvement in accidents.
- 4 We will support Central Scotland Police in making the education of rural road users a priority, reinforced by highly visible patrolling and engagement.

Encouragement – Theme E4

Road safety is an issue that affects everyone. We all need to use roads whether to get around, or for the delivery of goods and services to us. For this reason Scotland's Road Safety Framework for 2020 is titled 'Go Safe on Scotland's Roads – it's Everyone's Responsibility'. In the most basic sense, the road is the primary social service without which most other services prevalent in modern society cannot be effectively delivered.

Stirling Council subscribes to the view that everyone can make a useful contribution towards making our roads safer, no matter how small that contribution may appear to be.

The encouragement of safer road use can involve the community in road safety initiatives that bring a sense of personal commitment that can help ensure the success of specific initiatives. The incremental effect through small individual actions, such as showing your child how to cross the road safely, should not be underestimated. All partners concerned with the delivery of road safety are involved to some extent and can contribute to 'encouraging' safe practices that complement the educational, engineering and enforcement measures outlined previously. Contributions might include:

Publicity

Publicity plays an important part in raising the profile of road safety initiatives and helping to encourage safer behaviours. In addition, publicity can be used to highlight what has already been achieved and what more can be done to improve road safety. Advertising within the road environment, however, will be avoided, as this type of unnecessary distraction actually increases the risk of accidents occurring. It is essential that publicity campaigns are carefully planned to target the appropriate categories of road user and are fully evaluated to gauge their effectiveness.

National Road Safety Campaigns

National campaigns are launched by central government or road safety organisations. Stirling has supported these initiatives, making reference to the campaigns as opportunities arise, including the use of logos on Council letters or other publications. Examples include:

- The 'Don't Risk It' campaign is promoted by Road Safety Scotland and focuses on four particular problem areas that contribute towards fatal and serious accidents on Scotland's roads. These are; country roads, seatbelt usage, motorcycling and drink & drug driving. The campaign is supported by a variety of media including; a dedicated website, radio and T.V. adverts, posters, logos, stickers, etc.
- THINK! is a road safety banner for campaigns across Great Britain, aiming to create a greater public awareness of all road safety issues. It is funded by the Department for Transport and uses publicity on television, radio, press, posters and other media. More information can be found on their website at www.thinkroadsafety.gov.uk.
- Road Safety Scotland recently purchased 10,000 long life shopping bags and 50,000 magnifying bookmarks as part of a promotional campaign to highlight the dangers faced by older pedestrians.

Local Road Safety Campaigns

Road safety campaigns are sometimes required at a local level to target particular behaviours or groups of users. Most local campaigns were traditionally led by Central Scotland Police, but with the additional responsibilities given to some organisations and the emergence of local partnerships, others such as; Central Scotland Fire & Rescue and Central Scotland Safety Camera Partnership, may become more involved. Stirling Council will support local initiatives and campaigns where possible. Some recent campaigns include:



- Central Scotland Police in partnership with Central FM and Central Scotland Safety Camera Partnership promoted the annual winter road safety campaign with the message 'how are you getting home. Officers target drink driving and other dangerous behaviours over a three month period through winter.
- Central Scotland Police in partnership with the Central Scotland Safety Camera Partnership launched the 'Around the Corner' motorcycle safety initiative in this area in 2010. It provides useful information on the two main motorcycling routes through the area (Gateway and Duke's) such as; narrow sections of road, bends, food/fuel stops and campaign friendly premises. This campaign operates in conjunction with 'Bikesafe', but aims to engage with motorcyclists in a less formal manner.

Employer Initiatives

Large employers, such as Stirling Council, can encourage and guide small and medium employers on road safety initiatives by leading through example and providing appropriate information and support. Examples include;

- Encouraging the development and implementation of Managing Occupational Road Risk policies to help reduce the risk of employees being involved in road accidents.
- Ensuring that working practices minimise the need to travel to reduce the risk of being involved in road accidents while at work.
- Ensuring that all new cars purchased or hired by Stirling Council have high EuroNCAP ratings and are fitted with effective safety enhancing devices, and encouraging others to do the same.

Community Initiatives

The Stirling Community Planning Partnership (CPP) provides the opportunity for local communities to be more involved and become more aware of road safety issues and to be involved in the process to tackle these concerns.

- Working with uniformed organisations in a road safety content e.g. Guides, Scouts and youth groups.
- Working with support groups for vulnerable road users such as the elderly, mobility impaired, etc. and progress initiatives that reduce their risk of involvement in accidents.

Safety Equipment

Encouraging everyone to take an interest in their personal safety through the promotion of the appropriate use of safety equipment when using or working on the roads.

- Encouraging the use of cycle helmets, restraints and the wearing of high visibility clothing.
- Ensuring that vehicles operated by Stirling Council are fully equipped with appropriate safety equipment.
- Ensuring that the colour and marking of vehicles is carefully considered and is suitable for a vehicle's primary function.

Actions – we will

- 1 Support road safety publicity and awareness campaigns.
- 2 Make full use of the media to publicise current road safety campaigns and special initiatives.
- 3 Support alternatives to prosecution where appropriate, recognising that this can engender greater public support for our activities.
- 4 Support and encourage local employers to implement measures that reduce the risk of employees being involved in accidents when using roads on the work journey or at work.
- 5 Support community road safety initiatives through continued participation in the Community Planning Partnership.
- 6 Encourage and promote the use of appropriate safety equipment when using the road.

Working Together

Partnership Working

Improving the safety of our roads is everyone's responsibility and no single organisation or group can hope to achieve the casualty reduction targets for 2020 in isolation. 'Working together for safer roads' is one of the key themes in Scotland's road safety framework and Stirling Council will support partnership working wherever possible, to deliver road safety improvements and reduce the risk and severity of accidents.

Road safety partnerships exist across the Stirling Council and Central Scotland Police areas, but are perhaps not as prominent as they need to be to fully engage with the wider community. Reducing the number of casualties resulting from road accidents is one of the key objectives agreed in the Single Outcome Agreement for Stirling. It is therefore important that road safety is given greater prominence through the Community Planning process than at present. Ideally, representatives of Environment Services would be invited to attend some Community Safety meetings to increase awareness of existing road safety problems and potential solutions. This would also give the Service a greater opportunity than at present, to engage with a diverse audience.

Closer working between the various teams in Environment Services will not only improve the service delivery to the public, but can also be used to improve the safety of the road network. It is important that a co-ordinated approach to service delivery is adopted to maximise the safety benefits of any works that take place on the road. Information sharing between teams could be improved through the adoption of a system similar to trunk road route safety files.

The formation of the Central Scotland Safety Camera Partnership has allowed us to work more closely across disciplines and boundaries,

primarily with a speed related focus. However, this Service sees an opportunity to build on this foundation, to improve the delivery of a wider range of complementary road safety initiatives not only in the Stirling Council area, but also across the Central Scotland Police force area and beyond.

Closer working between the three Local Authorities (Stirling, Clackmannanshire and Falkirk) in the Central Scotland Police force area could improve road safety through improved communication, greater consistency and sharing of good practice. Sharing of information between Local Authority area currently happens on an informal basis. Formalising this arrangement may improve the delivery of the engineering elements required to reduce the number of road accidents and resultant casualties.

Similarly, a closer working relationship with Transport Scotland, which is the agency responsible for Scotland's Trunk Roads, is desirable. Transport Scotland initiated Route Safety File meetings, as part of its Strategic Road Safety Plan commitment to engage more closely with relevant Local Authorities and Police forces. We will continue to contribute to the Route Safety Files, but hope to develop this further by engaging more actively with Transport Scotland where changes to our operations or practices may be of benefit to trunk roads users.

The main partners that we have worked with in the past to deliver improvements in road safety and casualty reductions on our roads are listed below. We hope to continue our engagement with these partners to deliver the Vision, Aim and Objectives of this Road Safety Plan. This list is not exhaustive or exclusive and we will engage with other organisations, communities or individuals as particular problems or opportunities arise.



Road Safety Partners

Stirling Council

Roads, Transport & Open Space Service

This Service is responsible, through the Local Transport Strategy, for the planning, development and delivery of the policies, infrastructure and services associated with all modes of transport (including walking and cycling). The Service together with Education Services helps plan and deliver safer routes to schools, school travel plan initiatives and manages transport to school. It is also responsible for the management and maintenance of transport infrastructure, including traffic management and meeting the Council's statutory obligations by carrying out studies into accidents, recommending measures to prevent such accidents and ensuring changes or additions to the road network are safe.

Assets, Property & Facilities Management

This Service is responsible for the recruiting, training and supervision of school crossing patrollers.

Planning Regulation & Waste

This service is responsible for Planning and regulation of development, control of advertising, Council fleet management, the safe maintenance & operation of vehicles and promoting safe driving at work practices. The Service works closely with the Roads Development Control team to minimise the impact of any development on road user safety and improve the road network where possible.

Education Services

This Service is responsible for education, care and support services to meet the needs of children and young people and families. The Service together with RTOS Services helps plan and deliver safer routes to schools and school travel plan initiatives. It also plays an important role, with Active Stirling, in educating and informing children, parents and the wider community about safe, healthy, active and sustainable school travel. It also provides free school transport for around 2480 pupils.

Central Scotland Police

Central Scotland Police is committed to reducing accidents on our roads and subscribes to the '5 Es' approach.

The main focus is on national campaigns, such as those relating to children, young drivers, rural roads, drink/drug driving, seat belt compliance, the use of mobile telephones and the effect speeding motorists have on our communities. The force vision and objectives are incorporated in the ACPOS National Strategy 'Scottish Road Policing Framework 2009-2012'

The Road Policing Unit, based at force headquarters, has specific responsibilities in relation to casualty reduction and denying criminals the use of the road. As part of that role, the Collision Prevention Unit is responsible for a whole myriad of road safety activity including partnership working with various groups and organisations. Enforcement and preventative measures are very much data driven, allowing the force to target resources where they can have most impact.

Central Scotland Police is responsible for the collection of data relating to injury road traffic accidents using the GB wide STATS19 data collection system.

Central Scotland Fire and Rescue Service

The Central Scotland Fire and Rescue Service (CSFRS) have historically attended road traffic accidents (RTAs) in a reactive role. The principal role of Fire and Rescue Services at RTAs is to save lives and to reduce the number of injuries. This is carried out by a well trained and dedicated workforce, using specialist, technical equipment.

The introduction of the Fire (Scotland) Act 2005 made attendance at RTAs and rescuing casualties statutory duties, and with these duties comes a responsibility to actively engage with road safety organisations and the public in an effort to reduce the number of casualties on Scotland's roads.

To this end, the Service is a partner in the Stirling Community Planning Partnership and by virtue of this, the Community Safety Partnership. These partnerships set out road safety objectives, which CSFR contribute towards through education initiatives such as 'Crucial Crew' and, with partners, 'Safe Drive Stay Alive'.

National Health Service Forth Valley

The NHS in Stirling, through the promotion of healthy lifestyles, has a related interest in road safety for vulnerable road users. Also, a significant amount of hospital time, in terms of both number and duration of patient episodes, is allocated for the treatment of road accident casualties.

Central Scotland Safety Camera Partnership

Central Scotland Safety Camera Partnership was formed in April 2006 to reduce speeding and reduce the number of killed or seriously injured casualties resulting from speeding related accidents.

The Partnership currently operates two mobile camera units at 11 identified sites with a history

of excessive vehicle speeds and accidents (inc. non-injury collisions). Since March 2009, enforcement has taken place at key locations along A811 Stirling to Dumbarton Road, as part of the A811 Route Strategy. The partnership also operates a seasonal weekend route strategy on the A84/85/82. The partnership publicises relevant road safety information by staging exhibitions, as well as producing and distributing publicity materials. It also contributes towards and supports partners' road safety initiatives such as 'Around the Corner' and the annual winter road safety campaign.

Scottish Government

The Scottish Government its agencies and road safety partners are committed to the outcome of 'safer road travel in Scotland for everyone'. To this end, it published 'Go Safe on Scotland's Roads – it's Everyone's Responsibility', a Framework for improving road safety in Scotland over the next decade. It describes the road safety vision for Scotland, aims and commitments, and the Scottish targets for reductions in deaths and serious injuries to 2020.



Transport Scotland

Transport Scotland is an executive agency of the Scottish Government. One of its key aims is to ensure that Scotland's trunk road network is managed efficiently, effectively, and economically on behalf of the Scottish Ministers. The bulk of the network is currently managed by four operating companies via separate contracts with Transport Scotland and covers some 3500 kilometres of motorway and main roads, 1900 bridges and 3700 other structures.

There are two road safety teams sitting within Transport Scotland – the Road Safety Policy Team and the Strategic Road Safety Team.

The Strategic Road Safety Team is responsible for monitoring the safety performance of the trunk road network as well as analysing injury accident data. The team is responsible for delivery the Action Plan resulting from the Strategic Road Safety Plan, which was published in November 2007. The plan highlights the need to remove risk and prioritise initiatives aimed at preventing accidents while reducing the severity of accidents when they do occur.

Road Safety Scotland

Road Safety Scotland sits within the Road Safety Policy Team of Transport Scotland and is responsible for the development of road safety education materials which provide an end-to-end education and training programme in road safety starting from early years and continuing throughout the school curriculum and beyond. Road Safety Scotland's primary concern is the safety of all road users. We provide advice and guidance for drivers, cyclists, motorcyclists, pedestrians and horse-riders, as well as teaching notes and class activities for educational professionals.

Actions – we will

- 1** Develop partnerships to deliver accident and casualty reductions through the Community Planning process.
- 2** Improve information sharing across Environment Services and adopt strategic route safety meetings to maximise road safety benefits.
- 3** Strengthen working relationships with our road safety partners through involvement in the Central Scotland Safety Camera Partnership.
- 4** Formalise the sharing of Road Safety Engineering information between Stirling, Clackmannanshire and Falkirk Councils.
- 5** Contribute to Transport Scotland's Route Safety Files and develop this relationship.

Research, Information and Communication

It is important that road safety interventions are, as far as practicably possible, based on sound research. The interventions used must be appropriate for the problems that have been identified and it must be possible to evaluate the outcomes.

To further our plans for partnership working and to encourage all road users to take responsibility for improving road safety, it is important that we are aware of and use available research, share knowledge and provide information in as many easily accessible formats as possible. To engage more effectively with communities and the public, it is also important that we are able to communicate what it is we do, what we want to achieve and how we plan to do this.

We currently share road safety research, information and good practice through participation in projects such as the Road Safety Knowledge Centre and UK-MORSE. We also inform and support road safety projects such as EuroRAP as required.

- EuroRAP - Department for Transport (DfT), Scottish Government and most roads authorities provide technical assistance and/or data to the European Road Assessment Programme. This is an organisation led, in the UK, by the Road Safety Foundation. Its objective, one shared by roads authorities, is to try to make roads more “forgiving” of users’ mistakes. The Foundation produces, annually, a range of maps and tables of risk ratings for selected ‘A’ roads across Great Britain.

The Road Safety Knowledge Centre is a platform for sharing good practice, research outcomes and other information. It also allows the exchange of road safety advice between a mixture of engineers, road safety professionals and other interested parties.

UK-MORSE is a national database of road safety projects implemented in the UK. Local Authorities and others submit details of any interventions used together with accident and casualty data.

This allows the performance of road safety interventions to be monitored, which can subsequently inform future projects.

Basic accident and casualty information is freely available to a wider audience through national publications such as Reported Road Casualties Scotland, www.Crashmap.co.uk, etc., or by tailoring the data provided by Central Scotland Police for use on Stirling Council’s web site. Communication technologies and social networks, such as Facebook and Twitter, can be used to inform a wider audience of our road safety Vision, Aim and Objectives, but have the added advantage of inviting greater community participation and ownership.

A communications strategy is required to ensure that relevant and useful information is made available to as wide an audience as possible. This will involve producing scheduled updates on the Road Safety Plan, but also improving access to the accident and casualty data that we hold. Improved use of the Council web site to provide links to useful road user resources and information and promote current campaigns and initiatives would raise the profile of road safety in Stirling.

It is important that we do not exclude sections of society from this information by using purely electronic media. We should therefore provide useful road safety information through traditional written media.

Actions – we will

- 1 Develop a communication strategy to improve sharing of road safety information.
- 2 Ensure that we are aware of available road safety research.



Summary

Engineering, whether of the road environment or vehicle, plays an important role in reducing the risk of accidents occurring and in reducing the severity of any injuries sustained. Similarly, enforcement plays an important role in reducing the risk of accidents by targeting poor driving behaviour and denying the most dangerous drivers use of the road.

From raising awareness of risks on the roads to promoting the concept of appropriate speeds, some involved in road safety seek to influence road users by methods other than engineering and enforcement. The delivery of relevant education, practical training and the targeted use of a variety of publicity materials can ensure that support is available to all road users of all ages. However, to ensure that limited resources are used most effectively and that measurable accident and casualty reductions are realised, it is important that such interventions are based on sound research and the outcomes are properly evaluated.

The road safety problems that exist are often complex and difficult to solve fully with engineering solutions alone. It is therefore important that multi-agency approaches to particular problems are considered and partnership working is adopted, where appropriate.

All of the partner organisations mentioned in this Road Safety Plan contribute in different ways to educating or encouraging road users how to use roads safely and respect the needs of all road user groups. However, the key roles in education, training and publicity are undertaken by

Central Scotland Police who deliver road safety educational and publicity initiatives through direct contact with road users and, Road Safety Scotland, who produce and evaluate most of the road safety educational materials and publicity literature in use in Scotland.

To further ensure that the interventions are directed where needed and have the greatest effect, it is vital that the academic contribution is fully recognised and that we make full use of the best available research. Interventions that are evidence led or based on the latest relevant research are those most likely to produce measurable accident and casualty reductions. The national casualty reduction targets for 2020 will allow us to measure the success or otherwise of interventions implemented over the 10-year period of Scotland's Road Safety Framework. These targets only represent the first step in achieving the ultimate vision set out in the Framework of a road system where no one is killed and fewer people are seriously injured. Stirling Council's greatest contribution to this national effort will be through implementation of the actions and strategies identified in the Road Safety Plan 2011-2015. To continually improve the safety of our roads and achieve the greatest reduction in the number of people killed or injured in accidents, we must take full advantage of the contributions any interested parties may make, while ensuring that the principal of achieving measurable accident and casualty reductions remain at the heart of all interventions.

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- 24 <http://www.eurorap.org/>
- 25 <http://www.roadsafetyfoundation.org/>

Formats

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