

# Local Transport Strategy 2014 APPENDIX 5 ROAD SAFETY PLAN











# Falkirk Council area: road safety plan from 2014

# 1. INTRODUCTION

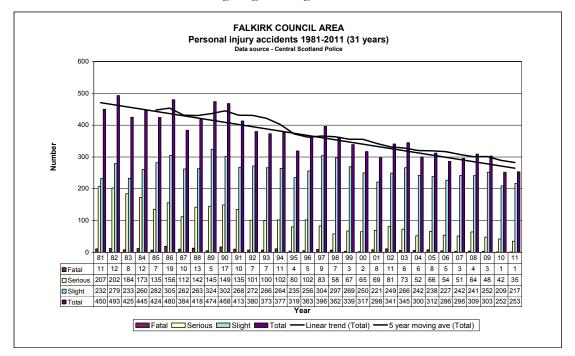
- 1.1 This is Falkirk Council's third road safety plan. The extensive background material provided in the previous plans is not repeated, here. However, Falkirk Council's goals and values are. These were agreed in June 1996 and remain valid.
- 1.2 Its goals are to:
  - promote economic prosperity
  - create healthier and safer communities
  - reduce disadvantage and inequality
  - develop personal potential, and
  - improve the environment.

# 1.3 Its values are:

- public service
- performance, and
- partnership.
- 1.4 A road system is clearly essential to the first of these goals. Without one, it would be difficult to achieve the others. However, in the creation of healthier and safer communities, the contribution of the road system, i.e. the roads, vehicles and their users has not always been positive. In 1950, 529 and in 1970, 815 people were killed on Scottish roads, an upward trend reflected across Great Britain.
- 1.5 In 1967, the Ministry of Transport published its white paper "Road safety a fresh approach". This recommended a more scientific approach to road safety. By 1974, the Department of Transport's Road Safety Directorate had produced the first version of its Accident Investigation and Prevention Manual, and had developed a suitable training course. Section 8 of the Road Traffic Act 1974 then placed a specific duty to promote road safety, which was confirmed by Section 39 of the 1988 Act.
- 1.6 Subsequently, the efforts of local authorities in Scotland, together with the efforts of such as the academic researchers, vehicle and their components designers, police, education departments, health services and other interested parties, including road users, have produced a gradual decline in the annual number of personal injury accidents (pias) involving vehicles on roads and a consequent decline casualty frequencies and severities.
- 1.7 The following sections describe progress in the Falkirk Council area, and some of the actions being planned for the future.

# 2. ACCIDENT HISTORY

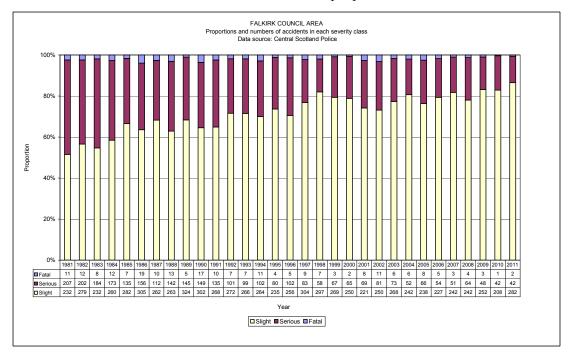
2.1 The numbers of pias occurring in the Falkirk Council area since 1981 are shown in the following diagram, together with their severities:



- 2.2 The severity of a pia is that of the most seriously injured casualty in the accident. Casualty severities are defined in the CASUALTY SEVERITY section, below.
- 2.3 Overall, the trends are downward. However, had the data for (e.g.) total accidents 2006-2008 been all that were available, a reader may have thought otherwise, since the pia numbers in that period rose by nearly 8%, from 286 to 310. The problem is that accidents do not occur in some regular, easily identified pattern. They tend to occur at random, and the year by year totals are subject to "random variation".
- 2.4 A better indication of actual trend can be gained from comparing averages at the ends of 2006 and 2008. A period commonly used is five years. The 2002-2006 average is 317.4 and that for 2004-2008, 300.8, a reduction of slightly more than 5%, and a much better reflection of the underlying trend, which can be shown to be nearly seven fewer accidents per year over the 29 years since 1981. Five year averages will be used throughout much of this document.

# 3. ACCIDENT SEVERITY

3.1 The following diagram shows how the accident severities have changed since 1981, in terms both of numbers and of proportions:



- 3.2 From the table, it can be seen that accident numbers in each class are falling through time, and from the chart it can be seen that the proportions in each class have changed.
- 3.3 The tables below demonstrate the effects of these changes.

Average nos. of accidents of each severit				
Period	Fatal	Serious	Slight	Total
1981-1985	10	180	257	447
2007-2011	3	49	245	297
%age change	-70	-73	-12	-34

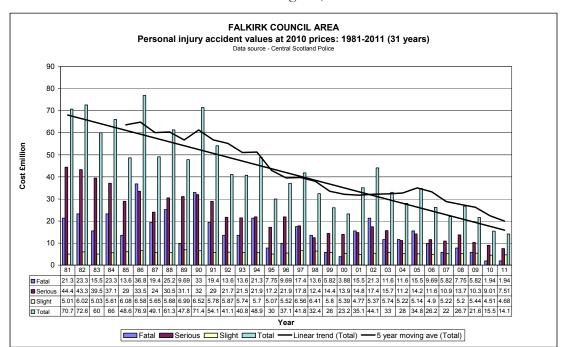
Average %ag	es of each	accident severity
-------------	------------	-------------------

Period	Fatal	Serious	Slight	Total
1981-1985	2	40	58	100
2007-2011	1	18	81	100

# 4. ACCIDENT VALUES & COSTS

- 4.1 The Department of Transport assigns values to the costs of casualties and accidents in Great Britain based on a "willingness to pay human cost" approach. This is intended to encompass all aspects of cost, both "human" and "economic".
- 4.2 The latest available values are set down in Tables 9, 10 and 11 of the 2011 edition of the Scottish Government's annual publication, "Reported Road Casualties Scotland" (formerly "Road Accidents Scotland").
- 4.3 The "all roads" pia values are:

Accident severity	Values at 2010 prices (£)
Fatal	1,938,455
Serious	214,563
Slight	21,578



4.4 These values were used in the diagram, below:

4.5 The marked fall in value, from a five year average of about  $\pounds$ 64m to one of about  $\pounds$ 20m in 26 years is largely a consequence of the reduction in accident severity. This may provide some justification for the "worst-sites-first" approach taken by road safety engineers in the Forth Valley area since the local authorities in that area first began to address their statutory duty in earnest (i.e. when adequate systems for analyses had been developed).

#### 5. CASUALTY SEVERITY

5.1 Complementary to the statutory process of preventing pias are the reduction in the resultant number of casualties and the reduction in severity of the injuries sustained by them. The Department for Transport (DfT)'s document "STATS20 – Instructions for the Completion of Road Accident Report Form STATS19" recognises three severity classes and defines them thus:

#### Killed

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.

#### Seriously injured

Examples are:

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.

#### Slightly injured

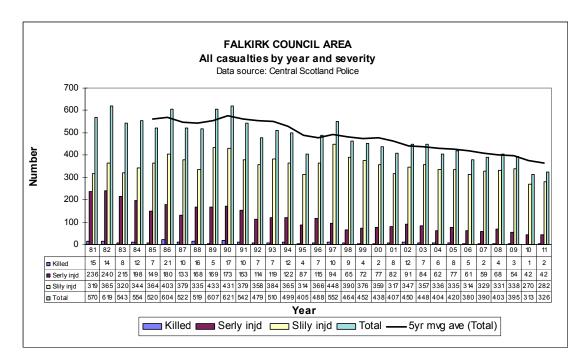
Examples are:

Sprains, not necessarily requiring medical treatment Neck whiplash injury Bruises Slight cuts Slight shock requiring roadside attention. (Persons who are merely shaken and who have no other injury should not be included unless they receive or appear to need medical treatment).

5.2 Means of refining these degrees of injury are currently being considered by DfT.

# 6. CASUALTIES HISTORY

6.1 The distribution of the currently used degrees of casualty severity is shown in the diagram, below:



6.2

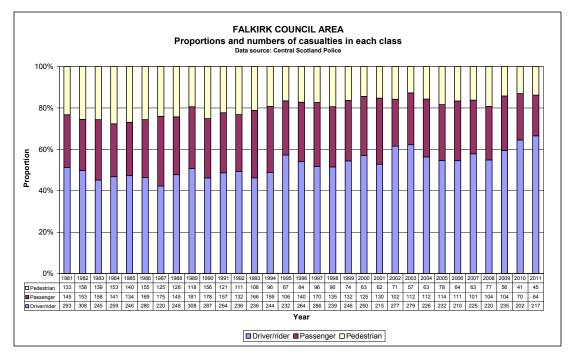
From the table, it can be seen that casualty numbers in each severity class have fallen. The table below demonstrates the effects of these changes.

		Average nos. of c	casualties	
Period	Killed	Seriously injured	Slightly injured	Total
1981-1985	11.2	206.8	342.4	561.2
2007-2011	2.4	53.0	310.0	365.4
%age change	-79	-74	-9	-35

6.3 Overall, therefore, casualty numbers have fallen by around one-third between 1985 and 2011. In other words, average casualty numbers have fallen by 196 in 26 years, or at a rate of around 7.5 per year. This is slightly better than the casualty target set in earlier editions of Falkirk Council's road safety plans, namely "six fewer ... per year".

# 7. CASUALTY DISTRIBUTION BY CLASS

7.1 The following diagram shows the distributions of casualties by class since 1981:



7.2 The diagram above shows a rising proportion of casualties who are in the driver/rider class, and the table below compares average numbers for the relevant five year periods.

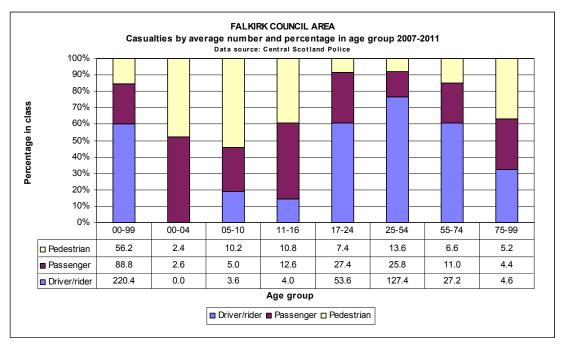
Average nos. of casualties (and proportions of Total)	Average nos.	of casualties	(and pro	portions	of Total)
---	--------------	---------------	----------	----------	-----------

Period	Drivers/riders	Passengers	Pedestrians	Total
1981-1985	270 (48%)	146 (26%)	144 (26%)	561 (100%)
2007-2011	220 (61%)	89 (24%)	60 (15%)	365 (100%)
Changes in ave nos.	-19%	-39%	-58%	-35%

7.3 The table above confirms the shift in the proportion of casualties from the pedestrian class towards the vehicle occupant classes.

# 8. CASUALTY CLASS AND AGE GROUPS

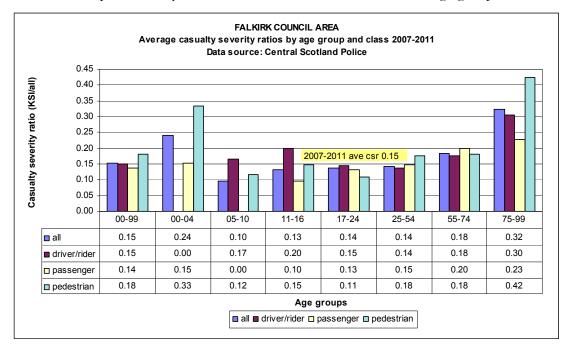
8.1 The diagram below shows how the casualty classes were distributed within several age groups in the period 2007-2011:



8.2 The colours correspond to casualty class, and the proportion of each colour in a bar corresponds to the percentage of casualties within the age group shown at the bottom of the bar. The total number of driver/rider, passenger and pedestrian casualties in each age group can be calculated from the table. Note the wide range of casualty numbers involved; an average of 5.0 in the 00-04 years age group to an average of 166.8 in the 25-54 years age group.

#### 9. CASUALTY SEVERITY RATIO BY AGE GROUP

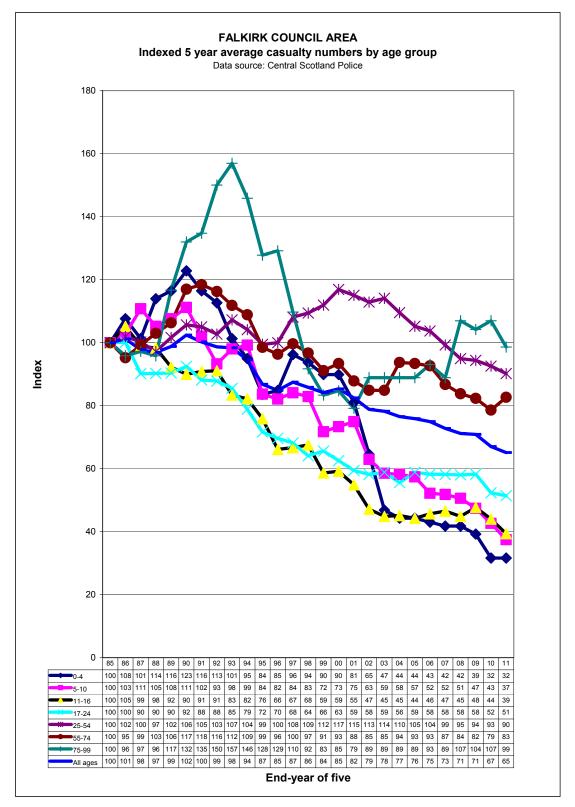
9.1 The diagram shows the casualty severity ratios (number KSI/total number) experienced by the basic classes of road user, in various age groups:



9.2 Hence, the normal 2007-2011 casualty severity ratio is 0.15. This is a considerable improvement on the 0.39 figure for 1981-1985. However, it should be noted that, at 0.42, the casualty severity ratio experienced by pedestrian casualties in the 75-99 year old age group is currently considerably greater than 0.39.

# 10. CASUALTY TRENDS BY AGE GROUP

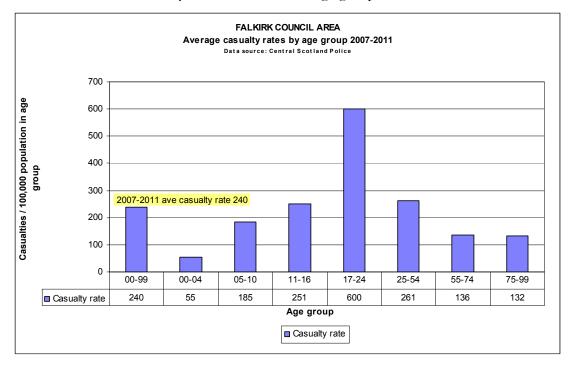
10.1 The chart below shows how average casualty numbers have changed within each of the age groups chosen. The 1981-1985 averages are indexed to 100, to avoid the problem of comparing the widely different numbers involved in each group.



10.2 The generally downward direction of casualty numbers in age groups 0-4 years, 5-10 years, 11-16 years and 17-24 years is welcome, but there may be lessons to be learned from the considerable peaks in the other three age groups, namely, those at end year 2004 for the 25-54 years group, end year 2000 for the 55-74 years and end year 1993 for the 75-99 years age group. A further concern arising from the above diagram is the generally rising trend of the 75-99 years age group.

# 11. CASUALTY RATES BY AGE GROUP

11.1 The following diagram provides a comparison of the rate at which casualties are sustained by those in the various age groups:



11.2 The 2007-2011 ave casualty rate for the Falkirk Council area is 240 casualties per 100,000 population. The table below include the comparable Scottish rate:

#### 2007-2011 averages (estimated) for given age groups

		Population in age group	%age of 00-99 yrs age group	%age of all casualties	Falkirk casualty rate	Scottish casualty rate
	0-99	152,524	100	100	240	285
	0-4	9,152	6	1	55	71
ears	5-10	10,142	7	5	185	179
Age group (years)	11-16	10,8768	7	7	251	268
grou	17-24	14,831	10	24	600	586
Age	25-54	63,825	42	46	261	322
4	55-74	32,861	22	12	136	177
	75-99	10,837	7	4	132	156

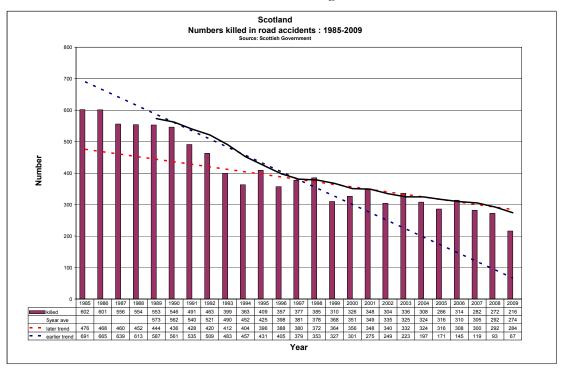
Note: casualty rates are ave nos./100,000 population in each group

- 11.3 Currently, the 11-16 years and the 17-24 years age groups in the Falkirk Council area experience higher casualty rates than the comparable Scottish ones, the first by 6 % age points, and the second by 14 % age points.
- 11.4 It should be noted that, although casualty rates are based on the population of the Falkirk Council area, casualties need not actually be residents within

that area. To that extent, all the rates quoted are approximations deemed sufficient for the purpose.

# 12. TARGETS - GENERAL

- 12.1 It is interesting to note that the first Scottish casualty reduction target was set in 1987, by the Under-Secretary of State for Scotland, Lord James Douglas-Hamilton. A 33% reduction from the 1981-1985 average number of casualties was to be achieved by the end of 2000.
- 12.2 In fact, casualties across Scotland fell by only 20% by the end of 2000 and so the national target was not achieved. In the Falkirk Council area, the average fell by 16%.
- 12.3 Targets set in 2000 were based on averages for the period to 1994-1998. Reductions of 40% in killed and seriously injured (KSI) casualties, 50% in child KSI casualties and 10% in the number of casualties slightly injured per 100 million vehicle kilometres were to be achieved by 2010.
- 12.4 By the end of 2010, national reductions of 46%, 66% and 37% in the above rates could be observed. The corresponding figures for Falkirk Council area were: 42%, 63% and 34%.
- 12.5 It is unfortunate that the number of fatalities has not been the subject of a separate target. Their number has simply been absorbed into the "all" and "KSI" casualty targets, potentially biasing remedial work towards injuries of lower severity. Had their value been the subject of a target, the approach might have been quite different.
- 12.6 A fatality target might have led to earlier demands for an explanation of the apparently sharp change in direction from a reduction of around 24 fatalities per year to around 8 fatalities per year which occurred at the national level, in the mid-1990s, as is illustrated in the diagram, below:



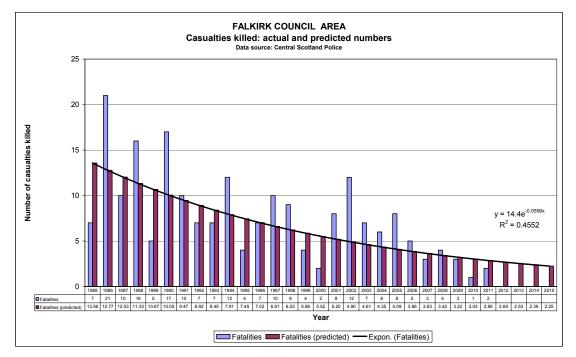
12.7 Happily, the latest (third) set of targets may help to redress the balance, as they include a specific reference to fatalities. They are set out in the Scottish

government's 2009 road safety strategy document, Scotland's Road Safety Framework to 2020 (SRSF2020).

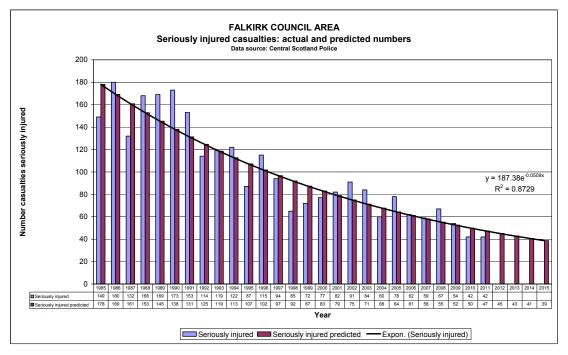
- 12.8 The base period is now 2004-2008 and there are four targets. By 2015, the numbers of those killed are to be reduced by 30%, those seriously injured by 43%, those children killed by 35% and those children seriously injured by 50%. Note that the targets are not mutually exclusive, as the first and second two include the subjects (children) of the third and fourth.
- 12.9 By 2020, the reductions are to amount to 40%, 55%, 50% and 65%, respectively.
- 12.10 The introduction of specific target for fatalities is consistent with the approach that has been taken by road safety engineers in the Forth Valley, since the late 1980s, which involved actively seeking out blacksites at which fatal accidents seemed more likely to occur than others.
- 12.11 The relevance of the national situation to Falkirk Council, of course, is that the Council's constituents are not confined to using only roads in the Falkirk Council area.

# 13. TARGETS - FALKIRK COUNCIL AREA

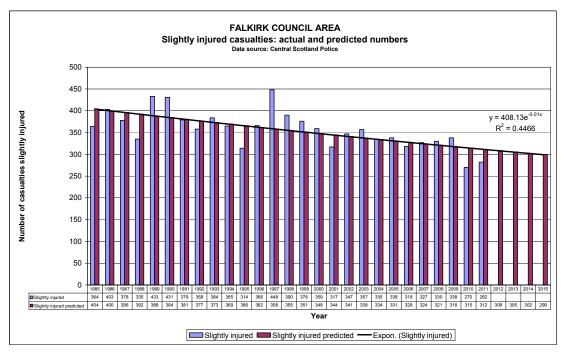
- 13.1 Previous road safety plans have explained the difficulty in setting local targets, and have suggested one target, of six fewer casualties per year, based on what appeared to have been achievable historically.
- 13.2 The Scottish Government has recognised the difficulty in setting local targets in its SRSF2020, within which it now merely asks "partners to contribute to the overall achievement of the Scottish targets".
- 13.3 Bearing in mind that the accident (and consequently, casualty) reduction process is subject to a wide variety of factors, many if which will be unknown. In considering local targets, therefore, it seems sensible to consider historical data and to extrapolate from them.
- 13.4 The diagram below refers the numbers killed on roads in the Falkirk Council area, and suggests that the number in 2015 will be around two. It can be shown that the "predicted" five-year average for 2011-2015 is 2.54, and that that is 34% lower than the "predicted" five-year average for 2004-2008 of 3.87.



13.5 The diagram below refers to the numbers seriously injured on roads in the Falkirk Council area, and suggests that the number in 2015 will be around 39. It can be shown that the "predicted" five-year average for 2011-2015 is around 43, a figure that is 30% lower than the "predicted" five-year average for 2004-2008 of 61.

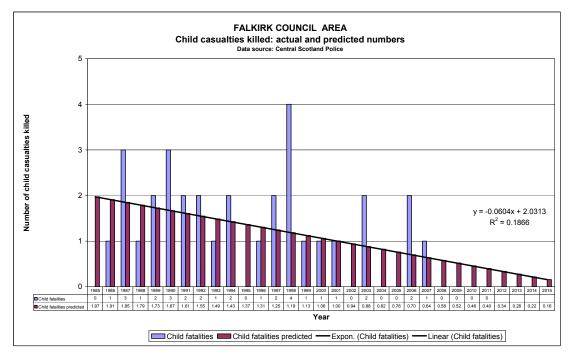


13.6 The diagram below refers to the numbers slightly injured on roads in the Falkirk Council area, and suggests that the number in 2015 will be around 299. It can be shown that the "predicted" five-year average for 2011-2015 is around 305, a figure that is 7% lower than the "predicted" five-year average for 2004-2008 of 321.

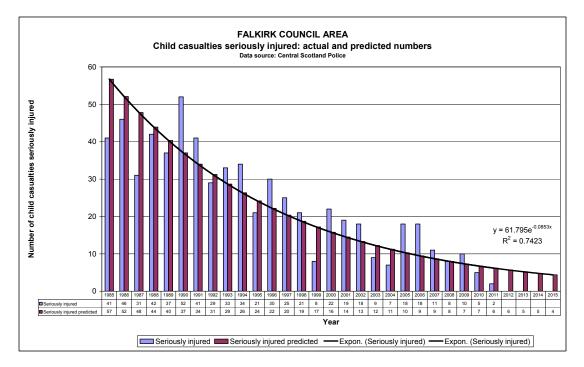


13.7 The prediction for Falkirk Council area at 2015 is, therefore, around 340 casualties, of whom around 42 will be seriously injured or killed. Allowing for some rounding, this last is consistent with 2011-2015 KSI target **average** of 48 to which the relevant section of Falkirk Council's 2012 update to its Single Outcome Agreement refers, and to which the Council is already committed.

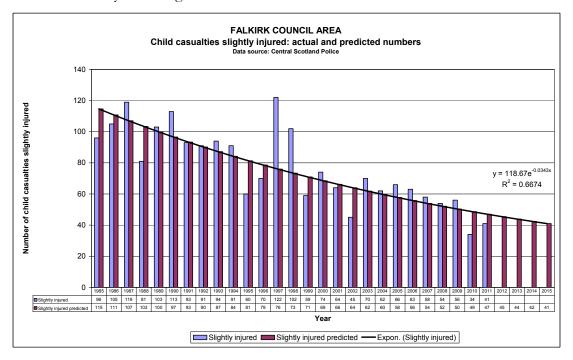
- 13.8 The above three diagrams refer to casualties of all ages, adults and children, the latter being casualties aged between 00-15 (inclusive), as do the two national targets. (There is no target for casualties who are slightly injured.)
- 13.9 Somewhat confusingly, the government has set another two targets involving children. Children are defined as those aged 00-15 years (inclusive). The following three diagrams refer to those injured on roads in the Falkirk Council area.



- 13.10 The diagram below refers to the number of children killed on roads in the Falkirk Council area. In this case, the best of several badly fitting curves to the data was a straight line. Taking it literally, it suggests that the number of children killed in 2015 will be around 0.16, or around one every 6 years. It can be shown that the "predicted" five-year average for 2011-2015 is 0.28 (or around 1 every 3.5 year) and that that is 60% lower than the "predicted" five-year average for 2004-2008 of 0.70 (or around 1 every 1.4 years).
- 13.11 The difficulty of making sensible predictions with such very small numbers is clear. As is what the effect of a single accident resulting in several child fatalities will be. Nonetheless, child fatality numbers seem to be heading in the right direction.
- 13.12 The diagram below refers to the numbers of children seriously injured on roads in the Falkirk Council area, and suggests that the number in 2015 will be around 4. It can be shown that the "predicted" five-year average for 2011-2015 is around 5, and that that is 50% lower than the "predicted" five-year average for 2004-2008 of 10.



13.13 The diagram below refers to the numbers of children slightly injured on roads in the Falkirk Council area, and suggests that the number in 2015 will be around 41. It can be shown that the "predicted" five-year average for 2011-2015 is around 44, and that that is 21% lower than the "predicted" five-year average for 2004-2008 of 56.



- 13.14 Note that, in all six of the above diagrams, an indication of how well the graph fits the data is given by the value of  $R^2$ . The closer this is to unity (1) the better the fit. Hence, the graphs relating to the seriously injured casualties fit well, the others do not.
- 13.15 Readers may come to their own conclusions about the quality of the above predictions. Accepting them as they are, however, within the Falkirk Council

area, the five year averages at the end of the 2011-2015 period compared with those for 2004-2008 may be: 34% fewer killed and 30% fewer seriously injured, overall, with 60% fewer children killed and 50% fewer children seriously injured. Whether these will be a sufficient contribution to the national target reductions (respectively, 30%, 43%, 35% and 50%) is unknown.

# 14. DISCUSSION

- 14.1 The foregoing will have given the reader some sense of the complexity of the road safety question.
- 14.2 Looking at the casualties that result from road accidents, for example, it can be seen that people in the 17-24 years age group suffer the highest casualty rate (para. 11.2). In other words, they suffer more casualties than would be considered normal given the number in their age group. However, their pedestrian casualty severity ratio is the lowest of all the age groups and casualty classes (para. 9.1).
- 14.3 In contrast, people in the 75-99 years age group suffer a relatively low casualty rate (para. 11.2). In other words they, suffer fewer casualties than would be considered normal given the number in their age group. However, their pedestrian casualty severity ratio is the highest of all age groups and casualty classes (para. 9.1).
- 14.4 The numbers of casualties in the various groups (para. 8.9) are a further complication. In pursuit of a target, it may be tempting to ignore the smaller groups, but to do so would be quite unacceptable, particularly if the group in question was more susceptible to remedial measures than a larger group.

# 15. THE NATURE OF THIS ROAD SAFETY PLAN

- 15.1 Previous road safety plans referred to successive Forth Valley local authorities' rejection of discrimination in respect of casualties, other than on grounds of severity. It was felt that this would lead to the development of remedial measures which would help those most at risk, regardless of any other attribute such as age, ethnicity or ability.
- 15.2 This "worst-first" approach, to every aspect of road safety, appears to have served Falkirk Council's constituents well in the past, and there seems no reason to change it.
- 15.3 It is worth bearing in mind that a remedial measure affecting one group may well benefit another. The opposite may apply, however, and so previous plans also referred to the need to consider not only the positive effects of any scheme, but also to endeavour to identify and deal with any negative effects.
- 15.4 As an extension of that philosophy, previous plans recorded Falkirk Council's recognition of the danger inherent in any road system and its commitment to endeavouring to ensure that no-one operates in any way on or near the road in a manner that is not as safe as it is currently possible to make it.
- 15.5 Clearly, success in the endeavour will require continuing efforts to understand the interactions between road, user and vehicle that lead to accidents and the measures that work best. There is little merit in applying remedies with which road users are uncomfortable, however, and the acceptability of such measures will be taken into consideration.
- 15.6 Road users need all the help they can get from those responsible for providing and maintaining the road system. This means that those providing the system must take account of the psychologies of the various road users. As before, an element of the plan is for the various authorities involved to accept their responsibilities to provide a transport infrastructure that will accommodate human frailty, rather than one which simply allocates blame to the road user.
- 15.7 All with an interest in its continuous improvement will be encouraged to adopt a "Safe Systems" approach to road safety. This aims to reduce energy dissipation in accidents to levels below those which will kill or seriously injure road users. It requires acceptance of shared overall responsibilities between system designers, maintenance engineers and road users.
- 15.8 At every stage, account will be taken of the results of sound, scientific research and such good practice as can be identified with reasonable certainty. In particular, account will be taken of the fact that road safety depends to a great extent upon what road users perceive.

# 16. THE RULES OF ACCIDENT CAUSATION

16.1 At this point it is worth repeating the Royal Society for the Prevention of Accidents (RoSPA)'s definition of a road accident, which is:

'A rare, random, multi-factor event always preceded by a situation in which one road user or more has failed to cope with the road environment'.

- 16.2 In studies completed in 1980, the relative contributions of road user, road and vehicle to road accidents were found to be 93-94 percent, 28-34 per cent and 8-12 percent, respectively, with the road user being the only factor identified in 57-65 percent of the accidents studied. It does not, however, follow, that all remedial measures should be directed towards changing the road user. Human beings are notoriously difficult to change. It is quite often possible, easier and more acceptable, to influence human behaviour by changing the environment. Humans have several basic limitations which must be recognised and taken care of in the technical design of the road.
- 16.3 It is useful, therefore to bear in mind the set of four "rules of accident causation" proposed by a leading researcher in the road safety field, Rune Elvik, in a paper presented in 2005 to the 18th International Co-operation on Theories and Concepts in Traffic Safety workshop. They are:

1. The universal law of **learning**, stating that the rate of accidents per unit of exposure is inversely related to the amount of exposure.

2. The law of **the unpredictable**, stating that the more rarely a certain risk factor is encountered the larger is its effect on accident rate.

3. The law of **complexity**, stating that the more units of information [to which a road user must attend], the higher becomes the accident rate.

4. The law of **cognitive capacity**, stating that the more reduced cognitive capacity becomes, the higher the accident rate.

16.4 The first might apply to novice drivers, whose rate of involvement in accidents falls quite quickly with experience. The second might apply to a driver coming across a bend of unusual severity in a length of otherwise unsurprising road. The third might apply at a roundabout, where the complexity of a junction has been considerably reduced, and the fourth might apply where a road user's mental capacity is overloaded, whether by attempting too many tasks at once, or by the ingestion of some psychotropic agent.

# 17. ACCIDENT DATA

- 17.1 Accurate accident data are fundamental to understanding the accident problem, and to developing and prioritising cost-effective counter-measures. Their accuracy and credibility depend upon close co-operation between central government, local government and police forces.
- 17.2 The power to collect the data is implied by sections 39 and 40 of the Road Traffic Act 1988 (RTA) and a Home Office circular (263/1948) requires the police to collect data on road injury accidents and submit them to DfT. The "STATS19" system used in their collection is jointly owned and managed by the Department for Transport's Standing Committee on Road Accident Statistics1 (SCRAS).
- 17.3 SCRAS was set up in 1977 to oversee the new STATS19 process for road accident data collection. It was given the following terms of reference:

1. to consider problems arising in the collection of data on road accidents and make recommendations

2. to disseminate information on techniques and procedures developed in connection with the system of accident reporting

3. to consider any amendments to the system that may be required and make recommendations at the time of the quinquennial review

17.4 Data quality is now a major concern. As accident numbers have fallen, so its accuracy has to improve. There is now a greater understanding of the need for a sound taxonomy (MEE - mutually exclusivity and exhaustiveness) and for reliability or consensus trials. Success in these trials means that there is consistency in code selection. Currently, however, the STATS19 has not been subject to any such trial.

Falkirk Council will continue, therefore, to support efforts to bring the design of STATS19 up-to-date, including those efforts directed at collating data from council databases and hospital databases. The burden on both police and local authority engineers would be much reduced if the static accident circumstances data (such as that relating to relatively unchanging roads and junction types) did not have repeatedly to be collected, with the consequent scope for mistakes.

<sup>&</sup>lt;sup>1</sup> Information on SCRAS can be found on the DfT website at: <u>http://www.dft.gov.uk/pgr/statistics/committeesusergroups/scras/</u>

# 18. ACCIDENT STUDIES

- 18.1 By virtue of the Road Traffic Act 1988, local authorities must prepare and carry out a programme of measures designed to promote road safety. They may make contributions towards the cost of measures for promoting road safety taken by other bodies, but they must carry out studies into accidents arising out of the use of roads within their areas. In the light of these studies the must take such measures, as seem appropriate to them, to prevent such accidents.
- 18.2 Accident studies are now carried out within Falkirk Council's Development Services' Engineering Design Unit's Network section, following the disbanding of the joint accident investigation unit to which previous plans referred.
- 18.3 From the data supplied by the Police, a number of accident blacksites have been identified and, bearing in mind the "worst-first" philosophy, were prioritised for studies which started in 2013.
- 18.4 The list is subject to change, as time passes and more data become available, but following initial studies and weighting, the ranked list sites for study currently appears as shown below:

Road i	dentity	I and a static
Division	Number	Location description
В	905	at T-jn Philip Drive
С	116	bend at Cuttyfield
А	9	bend at The Hollings
А	803	Main Street Camelon west of Union Road
А	904	at T-jn A993 Snab Brae
А	706	at ATS X-roads jn A993, Bo'ness
А	88	at T-jn C116 Waterslap Road (north)
А	905	Glensburgh road at staggered jn M9/Forth & Clyde Way
А	9	at T-jn C30 Salmon Inn Road
А	8004	bend at bridge abutment Checkbar
В	902	around Bainsford Cross (including side roads)
А	905	at rbt jn Cadger's Brae with Inchyra Road
А	803	around mini-rbt jn B816 Bonnybridge
А	9	at jn Pretoria Road Larbert

Falkirk Council will continue to study accidents within its area and, based on the results of these studies and the resources available, continue to take appropriate action to reduce their number.

# 19. ROADS & DESIGN

- 19.1 The Council's duty to promote road safety depends not only upon the execution of its specific duty to study road accidents, but also upon its exercise of good practice in all areas of the business of providing and maintaining roads.
- 19.2 The heading above refers to the division within Falkirk Council's Development Services department which deals with matters such as road and bridge design, traffic management, road lighting, development control, asset management and road maintenance.
- 19.3 All contribute to the safety of road users through their knowledge, experience, judgement and understanding of the vast array of legislation, guidance and codes of practice pertaining to the business of providing roads.

# 20. TRANSPORT PLANNING

- 20.1 As stated earlier, the Council's duty to promote road safety depends not only upon the execution of its specific duty to study road accidents, but also upon its exercise of good practice in all areas of the business of providing and maintaining roads. However, roads facilitate transport by a variety of means, in varying quantities and of a wide range of user vulnerability.
- 20.2 The heading above refers to the unit within Falkirk Council's Development Services which deals with planning for future demand, through the estimation of traffic volume and composition, bearing in mind national policy in respect of modal change.
- 20.3 Hence, its function is to facilitate safe transport for travellers in the area of whatever age or ability by whatever means. The unit, therefore, deals with school crossing patrols, school transport, public transport, traffic flow composition, measurement and prediction, sustainable transport, walking and cycling.
- 20.4 Specifically the Road Safety Plan will help Falkirk Council identify and prioritise road safety schemes that will be funded from the Council's Capital Programme Road Safety Budget.



Falkirk Council Development Services

Appendix 5 : Road Safety Plan

October 2014 Abbotsford House, David's Loan, Bainsford, Falkirk FK2 7YZ