

Appendix 1

Road Crash/Injury Facts

Appendix 1 - Road Crash/Injury Trends

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APPENDIX 1

Road Crash/Injury Trends

1. CRASH AND INJURY TRENDS

The national casualty reduction targets adopted by the Isle of Wight Council aim to achieve the reductions outlined below by 2010 compared with the average of the for the years 1994–8 (baseline). There are separate targets for casualties involving killed and serious injuries (KSI) and slight injuries:

- a 40% reduction in the number of people killed or seriously injured (overall)

- a 50% reduction in the number of children killed or seriously injured (child)
- a 10% reduction in the slight casualty rate (expressed as the number of people slightly injured per 100 vehicle kilometres travelled)

The number of people injured in each category has risen in both 2000 and 2001 compared with 1999 and is currently at or above the baseline figures for the 1994-98 average.

Figures 1 and 2 show progress against these targets.

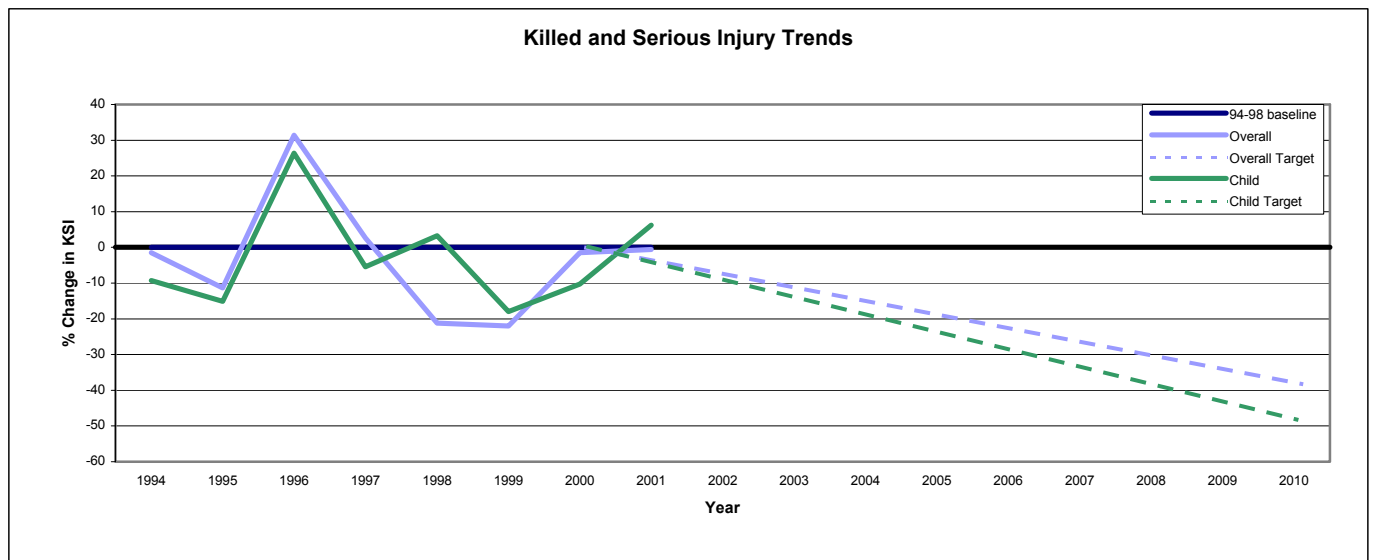


Figure 1 – Trend in killed and serious injuries (KSI)

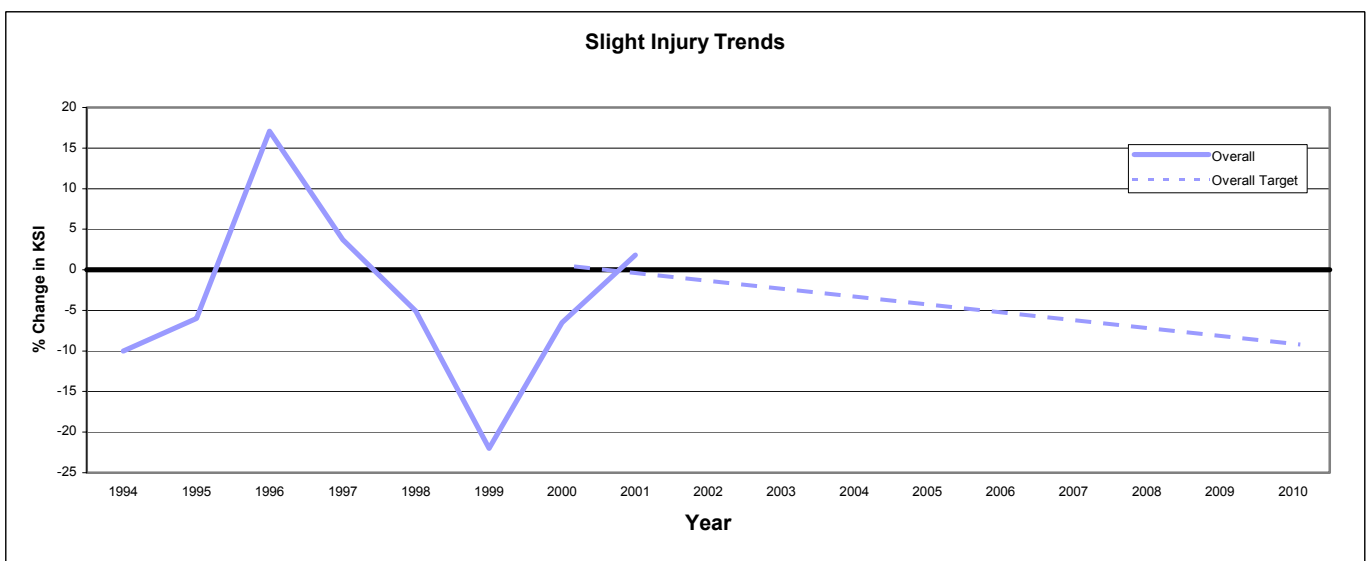


Figure 2 – Trend in slight casualties

2. CRASHES AND INJURIES IN 2001

In 2001 there were 503 recorded crashes involving 699 injuries. There were:

- 1 person killed
- 120 people with serious injuries
- 578 people with slight injuries

Crashes by Month

The months of the year in which the crashes occurred are shown in Figure 3.

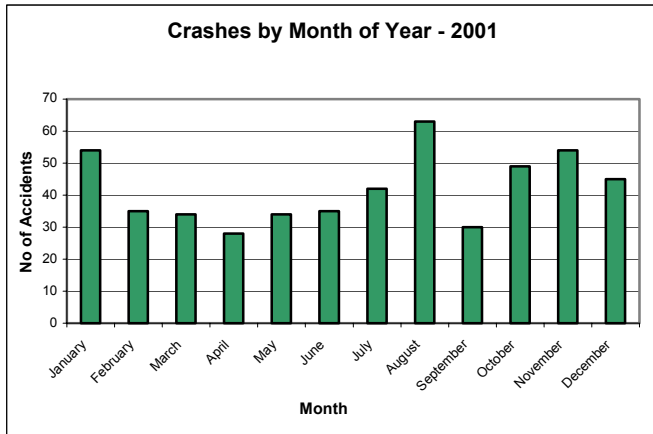


Figure 3 – Crashes by month

August is the peak month for crashes. However, January, October and November also have high numbers of crashes.

Crashes by Day

The days of week on which the crashes occurred are indicated in Figure 4.

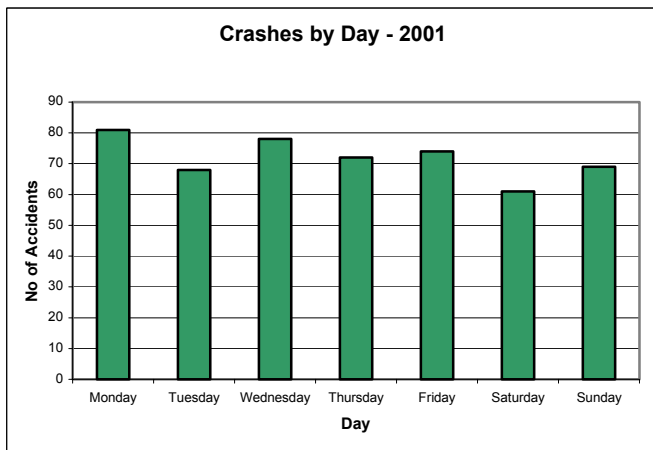


Figure 4 – Crashes by day

Monday is the peak day for crashes with Saturday having the least.

Crashes by Hour

The times of day at which the crashes occurred is shown in Figure 5.

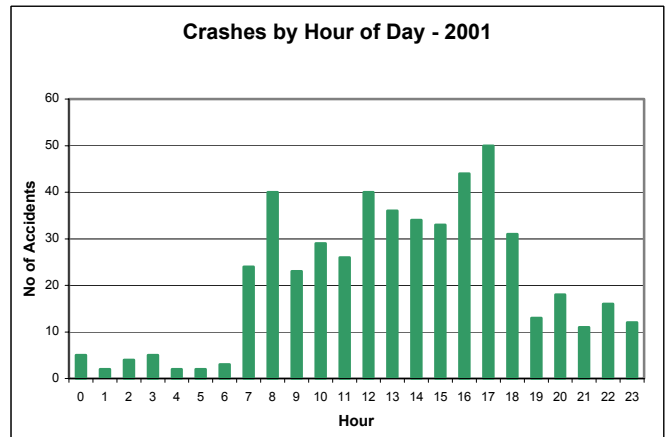


Figure 5 – Crashes by hour of day

The peak hour for crashes is 17.00 to 18.00. There is also a peak in crashes in the morning between 08.00 and 09.00 and also at midday between 12.00 and 13.00 hours.

Crashes by Road Surface Condition

The proportion of crashes occurring on a wet road has remained fairly constant between 26 and 31%. In 2001, 31% of crashes occurred on a wet road surface compared with 37% for Great Britain.

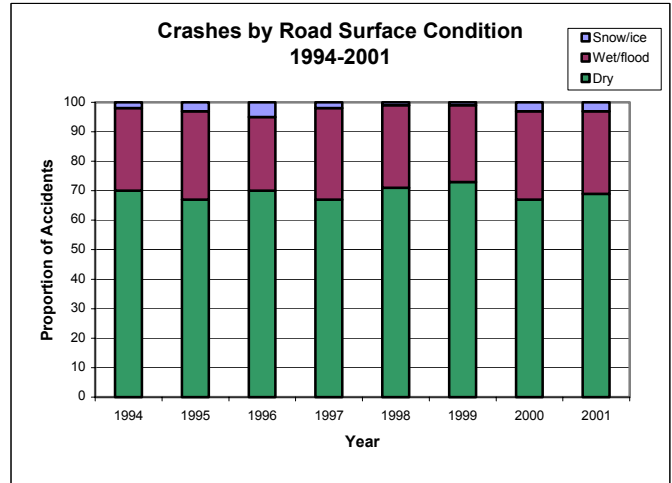


Figure 6 – Crashes by road surface condition

The proportion of wet crashes in 2000 and 2001 was similar to 1995 and 1997.

Injuries by Road Class

The locations of the injuries by road class are shown in Figure 7.

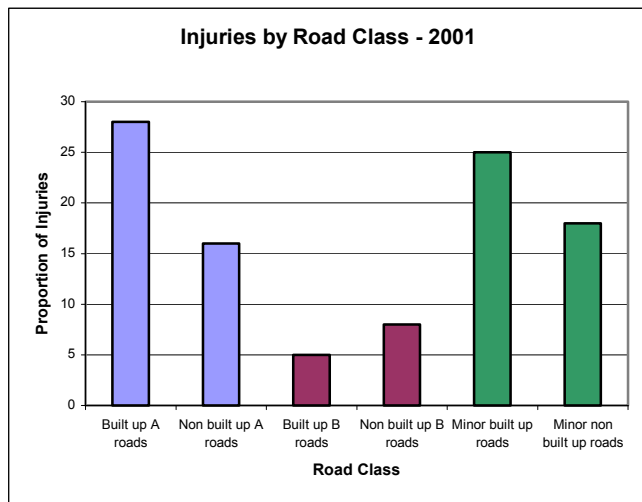


Figure 7 – Injuries by Road Class

The greatest proportion of injuries occurred on built-up roads with 58% (compared with 73% for Great Britain). The remaining 42% of injuries occurred on non-built up roads.

Injuries by Road User Type

The numbers of different types of road users injured in crashes are shown in Figure 8.

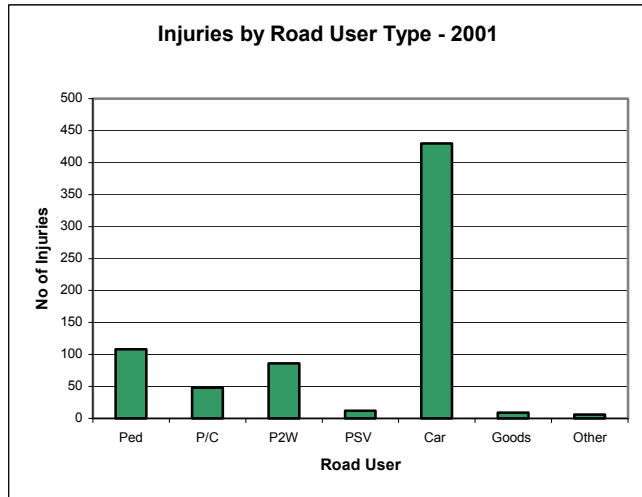


Figure 8 – Injuries by road user type

The vast majority of people (62%) injured were car occupants. Pedestrian injuries were the next highest with around 15% of the injuries (compared to 13 for Great Britain). Powered two wheelers accounted for 12% (compared to 9% for Great Britain) and pedal cyclists accounted for 7% of injuries (compared to 6% for Great Britain). Vulnerable road users make up 34% of all injuries (compared to 28% for Great Britain).

Injuries by Age

The age groups of people injured in crashes are indicated in Figure 9.

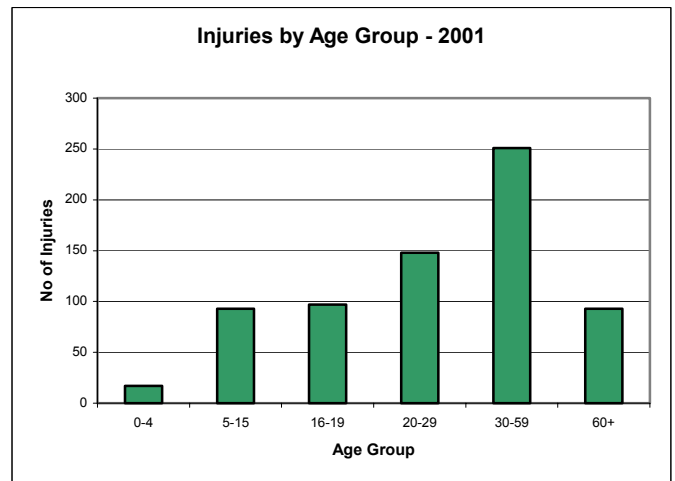


Figure 9 – Injuries by age group

People in the 30 to 59 years old age group account for around 36% of the injuries. However people in the 16 to 19 years old age group account around 14% of the injuries and those aged between 20 and 29 account for 21% of injuries. People aged over 60 years account for 13% of injuries.

3. PEDESTRIAN INJURIES

Pedestrian Injuries by Year

The numbers of pedestrians injured in crashes are shown in Figure 10.



Figure 10 – Pedestrian injuries by year

The number of pedestrians injured rose to 108 in 2001 following 3 years of gradual decline.

Pedestrian Injuries by Age

The pedestrian injuries by age group are shown in Figure 11.

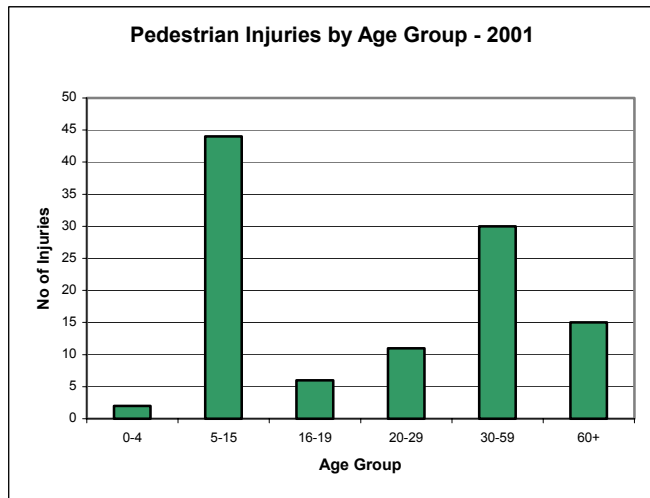


Figure 11 – Pedestrian injuries by age

Pedestrians account for 15% of all injuries compared with 13% for Great Britain. Children under the age of 16 accounted for 39% of all pedestrian injuries, which is about the same as for Great Britain. Elderly pedestrians account for 13% of all pedestrian injuries, which is very similar to 14% for Great Britain.

Younger pedestrians walk longer distances and are more vulnerable because their ability to judge the speed of traffic and safe crossing opportunities is not fully developed.

Pedestrian Injuries by Road Class

Pedestrian injuries by road class are shown in Figure 12.

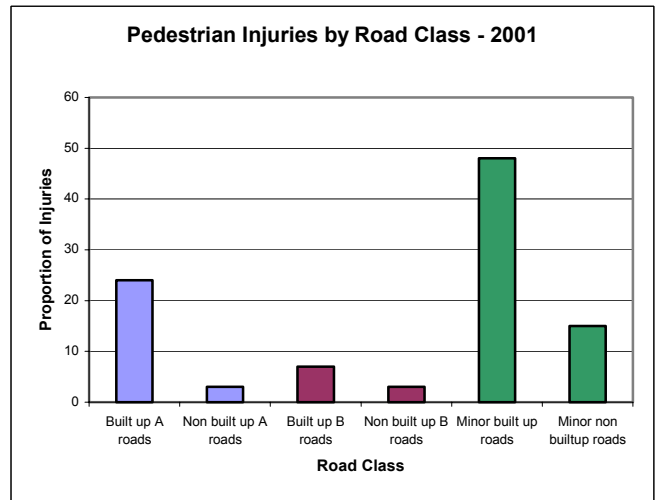


Figure 12 – Pedestrian injuries by road class

A high proportion (79%) of injuries occurred on built-up roads. The remaining 21% of casualties took place on non-built-up roads. Most noticeably nearly 50% of pedestrian crashes occur on minor built-up roads.

Child Pedestrian Injuries by Year

Child pedestrian injuries between the years 1994 and 2001 are shown in Figure 13.



Figure 13 – Child pedestrian injuries by year

The trend for child pedestrian injuries appears to be rising and reached a peak in 1998. It fell in 1999 but appears to be rising gradually again to 46 in 2001.

Child Pedestrian Injuries by Age

Figure 14 shows the ages of child pedestrians involving injury. A total of 46 child pedestrians were involved in crashes during 2001.

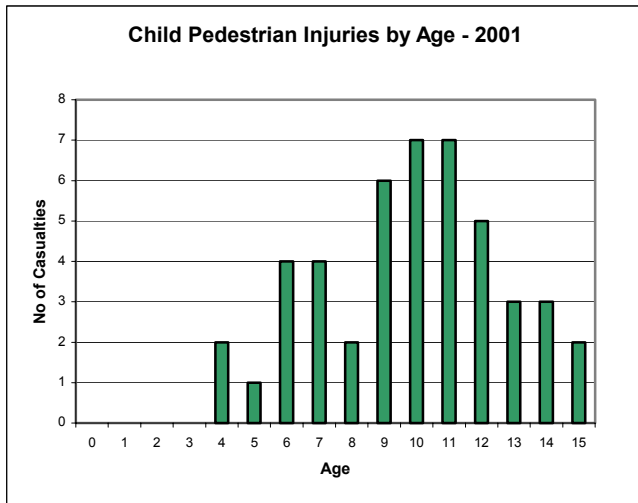


Figure 14 – Child pedestrian injuries by age

Child pedestrians aged between 9 and 12 were involved in the most crashes (54%). This is the age when children are starting to travel independently and their road user skills are least developed.

Child Pedestrian Injuries by Road Class

The proportion of injuries involving child pedestrians by road class is shown in Figure 15.

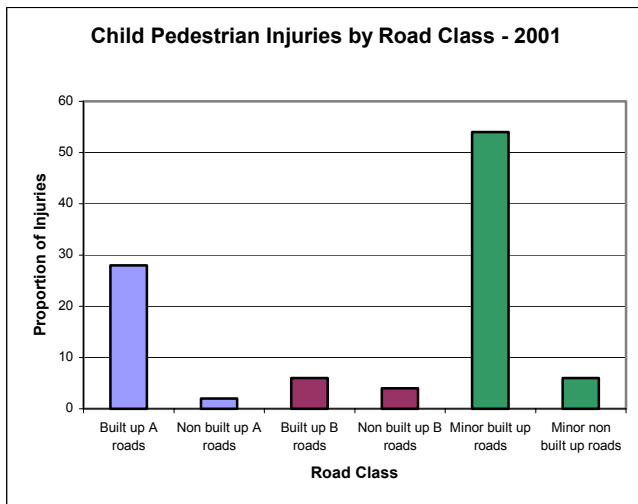


Figure 15 – Child pedestrian injuries by road class

The proportion of child pedestrians injured on built up roads is high (88%). The majority (54%) are injured on minor built up roads.

4. PEDAL CYCLE INJURIES

Pedal Cycle Injuries by Year

The number of pedal cycle injuries between 1994 and 2001 is shown in Figure 16.

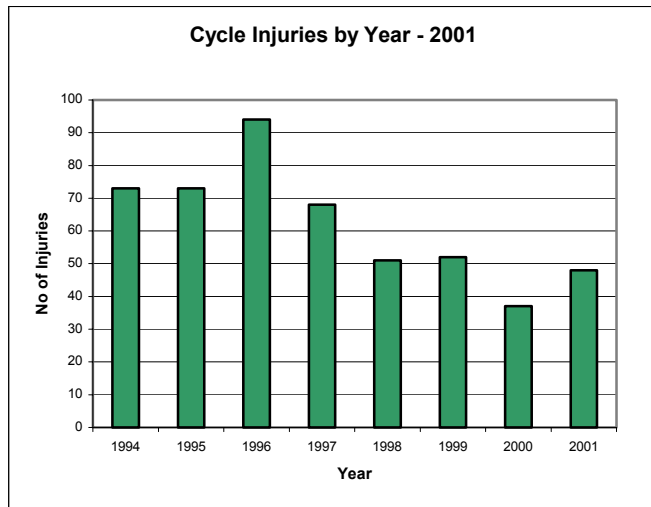


Figure 16 – Cycle injuries by year

The number of cycle injuries fluctuated throughout the years with 1996 being the worst year. Following 1996 the number of injuries has generally declined to the lowest level in 2000. However in 2001 the number of cycle injuries rose slightly to 47. The overall trend still appears to downward.

Pedal Cycle Injuries by Age

The number of cycle injuries by age group is shown in Figure 17.

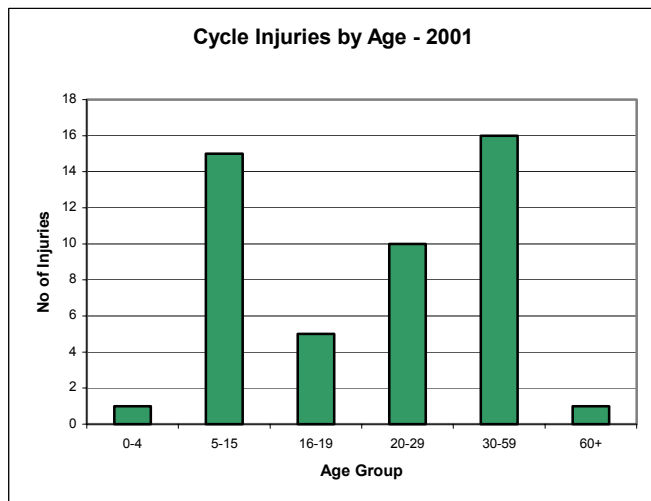


Figure 17 – Cycle injuries by age

Child cyclists account for nearly one-third of all cycle injuries.

Pedal Cycle Injuries by Road Class

The proportion of pedal cycle injuries is shown in Figure 18.

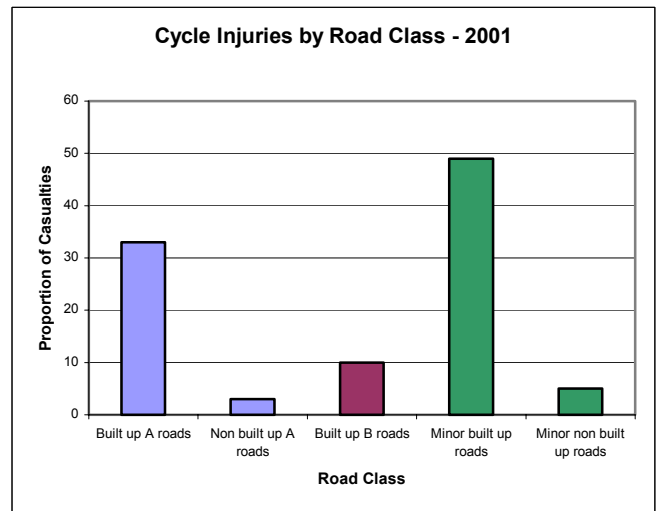


Figure 18 – Cycle injuries by road class

Built-up roads account for 92% of all cycle crashes. Nearly half of all cycling crashes occur on minor built-up roads.

Under Reporting of Cycling Crashes

When hospital records are compared with police crash records it is apparent that a great number of injuries to cyclists go unreported to the police. A Transport Research Laboratory study found that only around one-third of serious injuries and one-fifth of slight injuries to cyclists were recorded by the police.

5. POWERED TWO-WHEELED VEHICLES INJURIES

Powered Two-Wheeled Vehicle Injuries by Year

The numbers of powered two-wheeled vehicle injuries are shown in Figure 19.

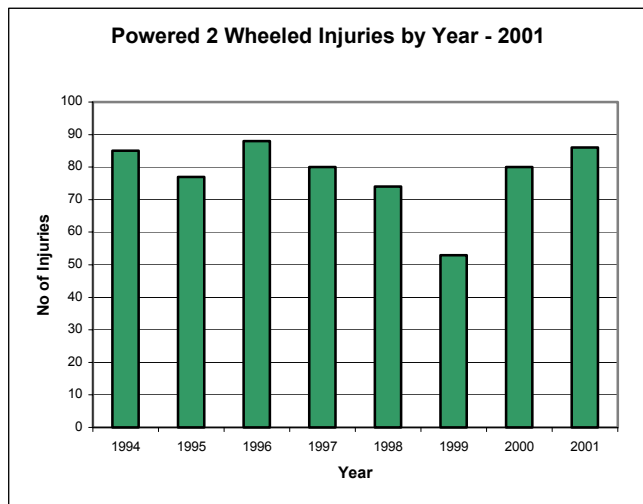


Figure 19 – Powered 2 wheeled injuries by year

The number of powered two wheeler injuries fluctuated throughout the years, declining to the lowest levels in 1999. However since 1999, the number of injuries has risen again to 86.

Powered Two-Wheeled Injuries by Age

The number of powered two-wheeled vehicle injuries by age group is shown in Figure 20.

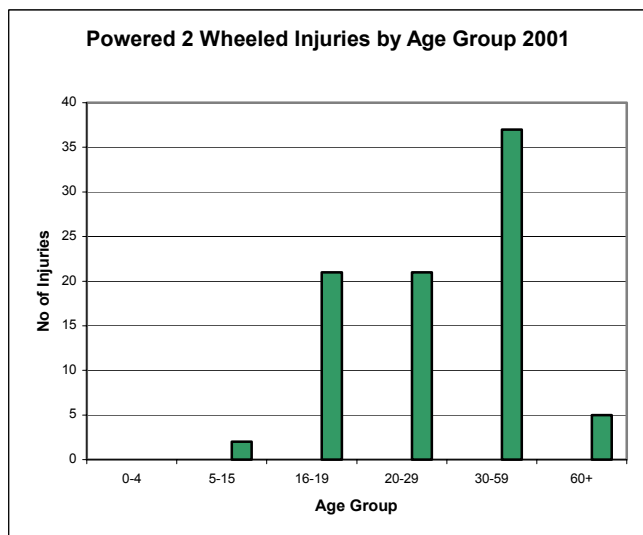


Figure 20 – Powered 2 wheeled injuries by age

Younger riders under 19 years old account for 27% of injuries. The majority of injuries (43%) involved riders aged between 30 and 59 years old.

Powered Two-Wheeled Injuries by Road Class

The proportion of powered two-wheeled vehicle injuries by road class is shown in Figure 21.

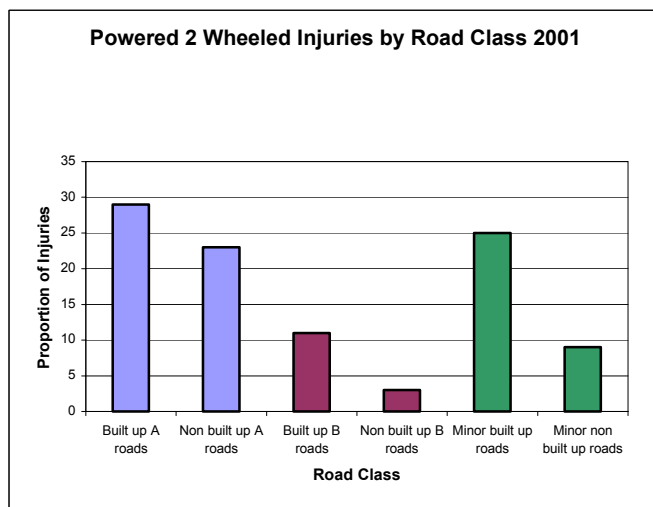


Figure 21 – Powered 2 wheeled injuries by road class

The greatest proportion of powered two-wheeled injuries occurred on built-up A roads (29%).

Powered Two-Wheeled Injuries by Hour and Engine Size

The number of powered two-wheeled vehicle injuries by hour of day and engine size is shown in Figure 22.

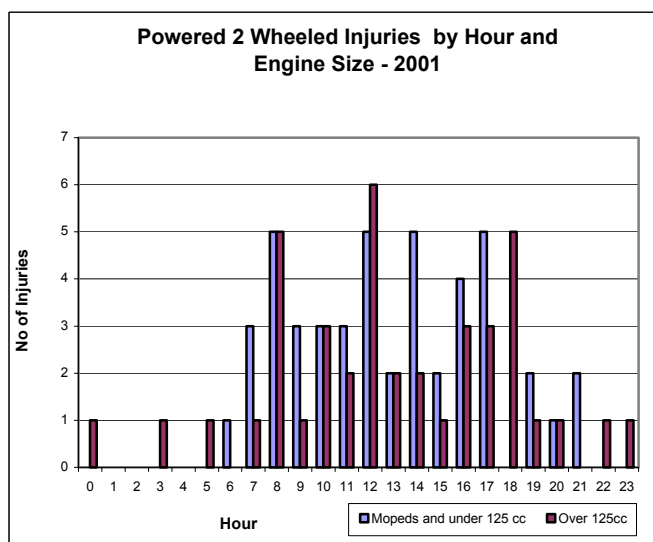


Figure 22 – Powered 2 Wheeled injuries by Hour

The greatest number of injuries involving mopeds and powered 2 wheeled vehicles under 125cc occurred between 07:00 and 17:00 hours, no injuries occurred between 21:00 and 06:00 hours. Injuries involving powered 2 wheeled vehicles over 125cc peaked at midday, during the morning peak hour at 08.00 hours and in the evening peak hour at 18.00 hours.

Powered 2 Wheeled Injuries by Day and Engine Size

The number of powered two-wheeled injuries by day is shown in Figure 23.

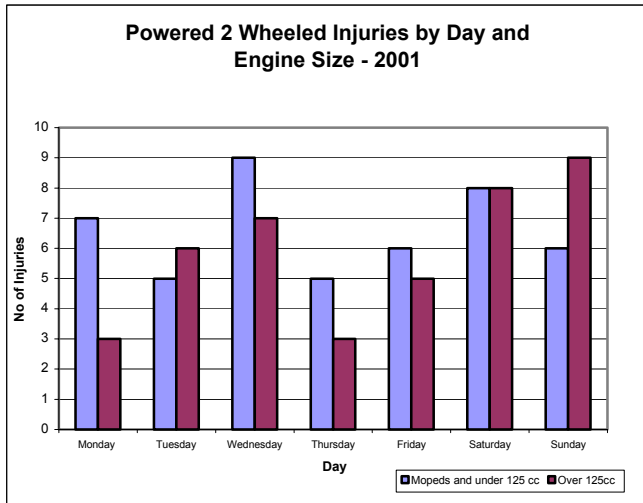


Figure 23 – Powered 2 wheeled injuries by day

Injuries involving powered 2 wheeled vehicles over 125cc peaked at the weekend.

6. DRIVER AND PASSENGER INJURIES

Driver Injuries by Year

The numbers of driver injuries are shown in Figure 24.

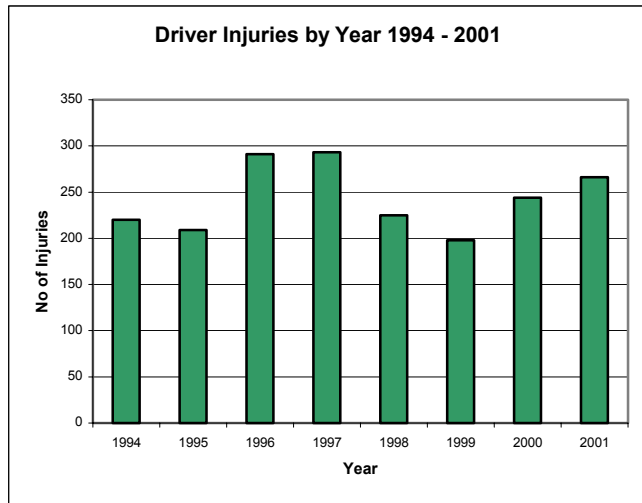


Figure 24 – Driver injuries by age

The number of driver injuries fluctuated throughout the years, declining to the lowest levels in 1999, to just under 200 injuries. However since 1999, the number of injuries has risen again to 266.

Driver Injuries by Age

The number of driver injuries by age group is shown in Figure 25.

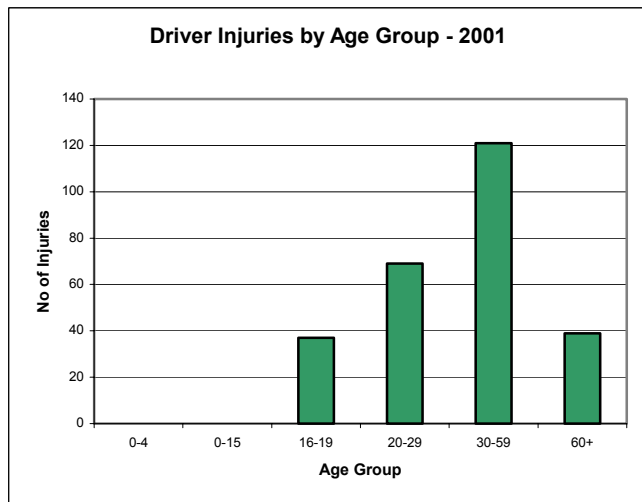


Figure 25 – Driver injuries by age group

Drivers aged between 16 and 19 years old accounted for 37 injuries and drivers over 60 years accounted for 39 crashes.

Driver Injuries by Road Class

The proportion of driver injuries is shown in Figure 26.

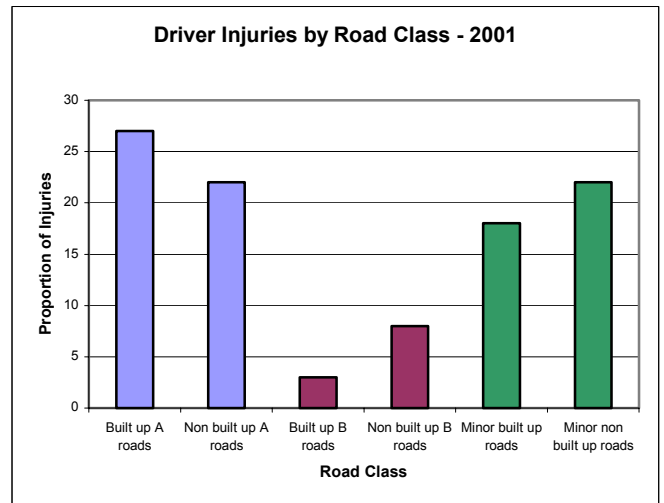


Figure 26 – Driver injuries by road class

The greatest proportion of driver injuries occurred on built-up A roads (27%).

Passenger Injuries by Year

The numbers of driver injuries are shown in Figure 27.

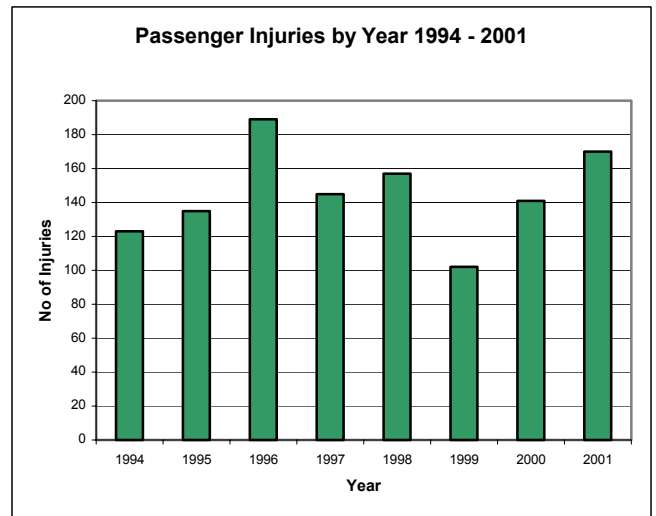


Figure 27 – Passenger injuries by year

The number of driver injuries fluctuated throughout the years, declining to the lowest levels in 1999, to just over 100 injuries. However since 1999, the number of injuries has risen again to 170 injuries.

Passenger Injuries by Age

The number of passenger injuries by age group is shown in Figure 28.

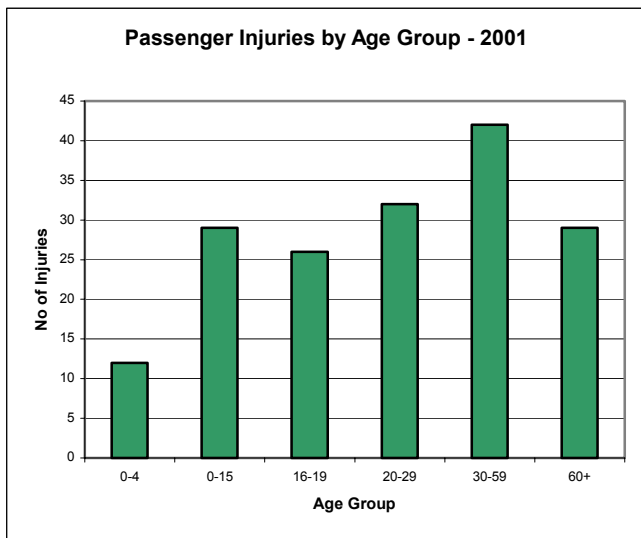


Figure 28 – Passenger injuries by age group

Younger passengers aged under 19 years old accounted for 39% of injuries. Passengers aged over 60 years accounted for 17%.

Passenger Injuries by Road Class

Passenger injuries by road class are shown in Figure 29.

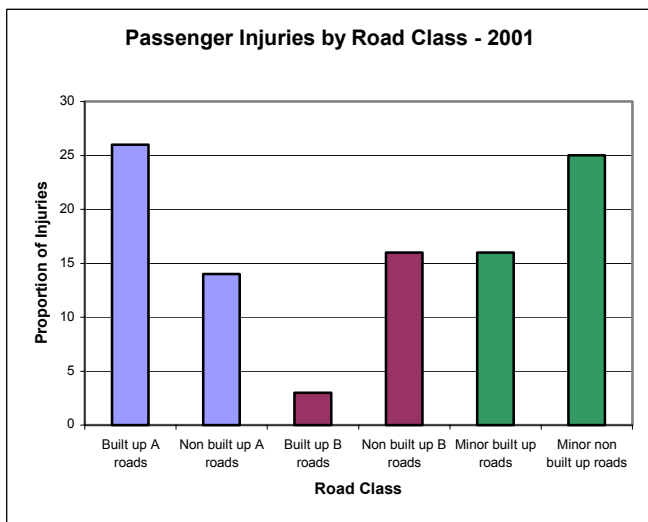


Figure 29 – Passenger injuries by road class

The greatest proportion of passenger injuries occurred on built-up A roads (26%).

Appendix 2

Safer Routes to School Programme

Appendix 2 – Safer Routes to School Programme

Contents

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- 2. Possible options to improve safety**
 - 2.1 Measures to improve road safety
 - 2.2 Measures to promote travel by walking/cycling
- 3. Proposed strategy**

APPENDIX 2

SAFER ROUTES TO SCHOOL PROJECTS

1. INTRODUCTION

Over the last 10 years the number of parents driving their children to school has increased substantially with consequent increases in traffic congestion around schools at start and finish times.

Safer Routes to School projects are intended to improve road safety and reduce child casualties on the journeys to and from school. By encouraging more walking and cycling to school the schemes are also intended to improve children's health and to reduce local traffic congestion and pollution.

Successful Safer Routes to School projects require initiatives within the schools themselves as well as road safety engineering and education measures. The projects should involve the school, local residents, the health authority and the police in addition to the local authority's transportation department. The active involvement of the school children and teachers is essential. Some local authorities have looked at giving incentives to a teacher at each school in the Safer Routes to Schools initiative to encourage them to take an active role in co-ordinating and "championing" this issue. Incentives have included an additional salary increment.

Safer Routes to School Projects can be identified in three ways:

- By using road crash data to identify those schools where children travelling to or from school have been involved in road crashes
- By inviting schools to take part in a project provided that the school is preparing to produce a School Travel Plan to enhance the project
- By identifying schools with particular local congestion problems

Experience elsewhere in the country suggests that crashes near schools are relatively infrequent and hence crash data alone will generally only identify a small number of schools with a poor safety record.

2. POSSIBLE OPTIONS TO IMPROVE SAFETY AROUND AND ON THE ROUTES TO SCHOOL

2.1 Measures to improve road safety:

- Parking restrictions or School Keep Clear markings can lead to more orderly parking in the area adjacent to the school's pedestrian and vehicle access points. However programmed enforcement activity may be required to prevent illegal waiting whilst parents drop off and pick up children
- Traffic calming measures can reduce vehicle speed and provide narrower sections of road which children can cross more easily
- Variable speed limits can be applied outside the school with lower speed limits (generally 20mph) operating in the periods when children are entering and leaving the school
- Provision of safe crossing facilities on main walking and cycling routes to school can improve safety
- Provision of education, awareness and pedestrian/cycle training programmes for schools
- Provision of support packages including project work, competitions, events and promotional material
- Safer routes to schools initiatives can be set up to involve parents, teachers and school children. It is necessary to analyse their various concerns about the school journey. This may be done through questionnaires to all groups of people. Measures taken in response may include road safety education in schools, raising the awareness among parents and the provision of low cost engineering measures to specific road or footway problems

2.2 Measures to promote travel by walking/cycling

- Provision of new or improved walking and cycling routes can encourage these modes of travel
- Provision of safe and secure cycle parking facilities and lockers to encourage cycling
- School travel plans can help to put in place policies that encourage walking and cycling to school, improve safety and ease local traffic problems
- Walking buses can encourage groups of children to walk to/from school together, accompanied by adults

3. Proposed Strategy

- Check child injuries (location and time of day) to identify those occurring on school journeys
- Identify schools with particular local traffic congestion problems
- Write to all schools inviting them to take part in Safer Routes to School projects. Participating schools will be required to produce School Travel Plans to demonstrate their commitment to the objectives of the Safer Routes to Schools programme.
- Prepare a programme (in priority order) of schools for Safer Routes to Schools projects
- Implement a given number of projects per year (dependent on funds and resources - 5 schools per annum) for the next 5 years in accordance with the programme above
- Undertake pupil and teacher travel surveys and classroom sessions on developing initiatives to encourage walking and cycling
- Set up a monitoring system to look at child casualties on the school journey and the modal split of journeys to and from school and publish information annually
- Review and reassess the programme annually
- A Child Pedestrian Co-ordinator has been appointed to run a pilot project at 11 Primary Schools on the Isle of Wight. This involves structured pedestrian training throughout children's time at the schools, starting with Year 1 children

Appendix 3

Isle of Wight Speed Management Strategy



SPEED MANAGEMENT STRATEGY

1. Introduction

Vehicles travelling at excessive or inappropriate speed raise great public concerns about road safety. They also have adverse implications for sustainable travel initiatives, community severance, air quality and noise. The Isle of Wight Council recognises and supports the government's initiative "to develop a speed policy that takes account of the contribution of reduced speeds to environmental and social objectives as well as to road safety". This was outlined in the DETR publication *New Directions in Speed Management – A Review of Policy*. This has set the agenda for future speed management policy and has identified the main areas to be tackled as:

- Developing a national framework for determining appropriate vehicle speeds on all roads, and ensuring that measures are available to achieve them
- Publicising widely the risks of speed and the reasons for limits
- Researching a number of speed management problems to develop and test new policies
- Ensuring that policies take account of environmental, economic and social effects when assessing their ability to reduce casualties

Research into accidents has shown that speeding or driving at inappropriate speed contributes to a significant percentage of collisions (up to around 33%) particularly more serious collisions. For each 1 mph reduction in average speed, accident frequency is reduced by an average of 5%. Recent research shows that it varies between around 3% and 6% depending on the type of road.

The Isle of Wight Council will work with partners (See Section 6) to introduce a wide range of measures and

initiatives to reduce the dangers posed by speeding vehicles. These will include:

- Introducing a new method of assessing appropriate speed limits
- Enforcement initiatives to increase compliance with speed limits
- Engineering measures to compliment speed limits
- Education, training and publicity initiatives and campaigns to raise awareness of the problems posed by speeding vehicles and encourage people to drive at more appropriate speeds

The principles and actions in this Speed Management Strategy are integrated into the Isle of Wight Council's Road Safety Plan.

2. Speed Limit Assessments

The setting and enforcement of speed limits is a key area of speed management. Speed limits that drivers can more easily understand and accept are likely to be more effective and require less enforcement activity. Revised guidance on the setting of more appropriate speed limits will be published as a result of the comprehensive national review of speed limits that is currently taking place. When this guidance is published the Isle of Wight Council will undertake a review of speed limits, associated signing and other appropriate measures. Problems on rural roads and country lanes will be addressed as part of this review.

Photo of local speed limit scheme

However, it is recognised that a new method of evaluating more appropriate speeds for roads and hence more appropriate speed limits is needed urgently as an interim measure. The proposed method is outlined below.

Interim Speed Limit Assessment Procedure

A flow chart for the procedure is shown in figure 1.

The assessment process consists of three parts:

- a) calculate the appropriate speed for any given section of road
- b) determine the existing speed for the section of road

- c) identify appropriate measures to achieve that speed

A complimentary programme of education, training and publicity measures is needed to bring about long term reductions in vehicle speed and improve driver awareness, therefore enhancing road safety.

The process will identify the appropriate vehicle speed for a section of road. This will not necessarily be the posted speed limit nor an indication that the posted speed limit should be altered. However, the posted limit should be as close as possible to the appropriate speed to enable a pattern of consistency across the county to be developed and the right message passed to the driver.

Calculating appropriate speed

When a speed management project or speed limit review is undertaken, the first step shall be the identification of the appropriate vehicle speed for the section of road being considered. This is calculated using the scoring system in Annexe 1. The scoring system requires an experienced engineer to assess a range of factors including:

- road hierarchy
- frontage development
- severance
- road geometry
- junction frequency
- parking
- accidents
- vulnerable road user facilities and movements

The “score” for the section of road being considered determines the appropriate speed for the road.

Determining existing speed

The next stage is to carry out a speed survey to determine the existing vehicle speeds. The most complete understanding of existing speed patterns

will be obtained by a seven-day survey, however it is recognised that this may not always be possible. The use of radar survey would be suitable, subject to them being undertaken at appropriate times. Using local knowledge and information from the Police and residents the most appropriate times of the day and week can be identified and surveys carried out at those times. The free flow vehicle method should be used to obtain the most accurate understanding of existing vehicle speeds.

Achieving appropriate vehicle speed

In locations where the appropriate vehicle speed matches the posted speed limit then it will not be necessary to change the speed limit. If actual vehicle speeds need to be reduced then consideration can be given to appropriate measures.

In many cases the appropriate vehicle speed will be above the existing vehicle speed. Should this not be the case, then the only consideration will be if the speed limit should or needs to be raised to match more closely the appropriate vehicle speed. The only benefit in taking such action would be to bring about a level of consistency throughout the County or to reduce road accidents. It is unlikely that such action would result in increases in vehicle speed, although this should be considered as a possible outcome.

Where the appropriate vehicle speed is below the speed of existing traffic, various techniques for slowing vehicles should be evaluated to determine the most cost effective and appropriate measures. This may require measures such as traffic calming, safety cameras and speed limits etc. Experience from previous schemes will enable engineers to design measures that will achieve a particular speed range with a high level of confidence. Measures should therefore be selected to achieve the appropriate vehicle speed so that the corresponding speed limit

can also be applied without the need for extensive enforcement. However, consideration must also ensure measures are appropriate to the location and the environment, support other Local Transport Plan strategies and are acceptable to the local community.

Another widely used technique, particularly where physical measures are not appropriate, is the installation of a safety camera. In the majority of cases the site will need to meet the criteria outlined in Section 3.

Please check the section shaded below

In a limited number of locations it is possible that physical measures are unsuitable, in which case it will be necessary to discuss options for set levels of enforcement with the police. Even in such circumstances it is very possible that some physical measures, for example, speed activated signing, will be appropriate in conjunction with enforcement. Agreement to the enforcement period and re-assessment of existing speeds should be made with the police so that the reduction in speed is maintained. Such instances may also involve the use of site-specific education and speed enforcement days with the presence of Road Safety Officers and the deployment of the County Councils mobile Speed Indicating Device (SID).

The process detailed in this strategy and the resulting appropriate speed shall be achieved by a suitable means for that category of road. For example, road humps would not normally be suitable for an A road carrying heavy goods vehicles or being part of a bus route. Safety cameras will only be deployed at sites meeting the criteria laid down by the government as outlined in Section 3.

ISLE OF WIGHT – SPEED MANAGEMENT STRATEGY

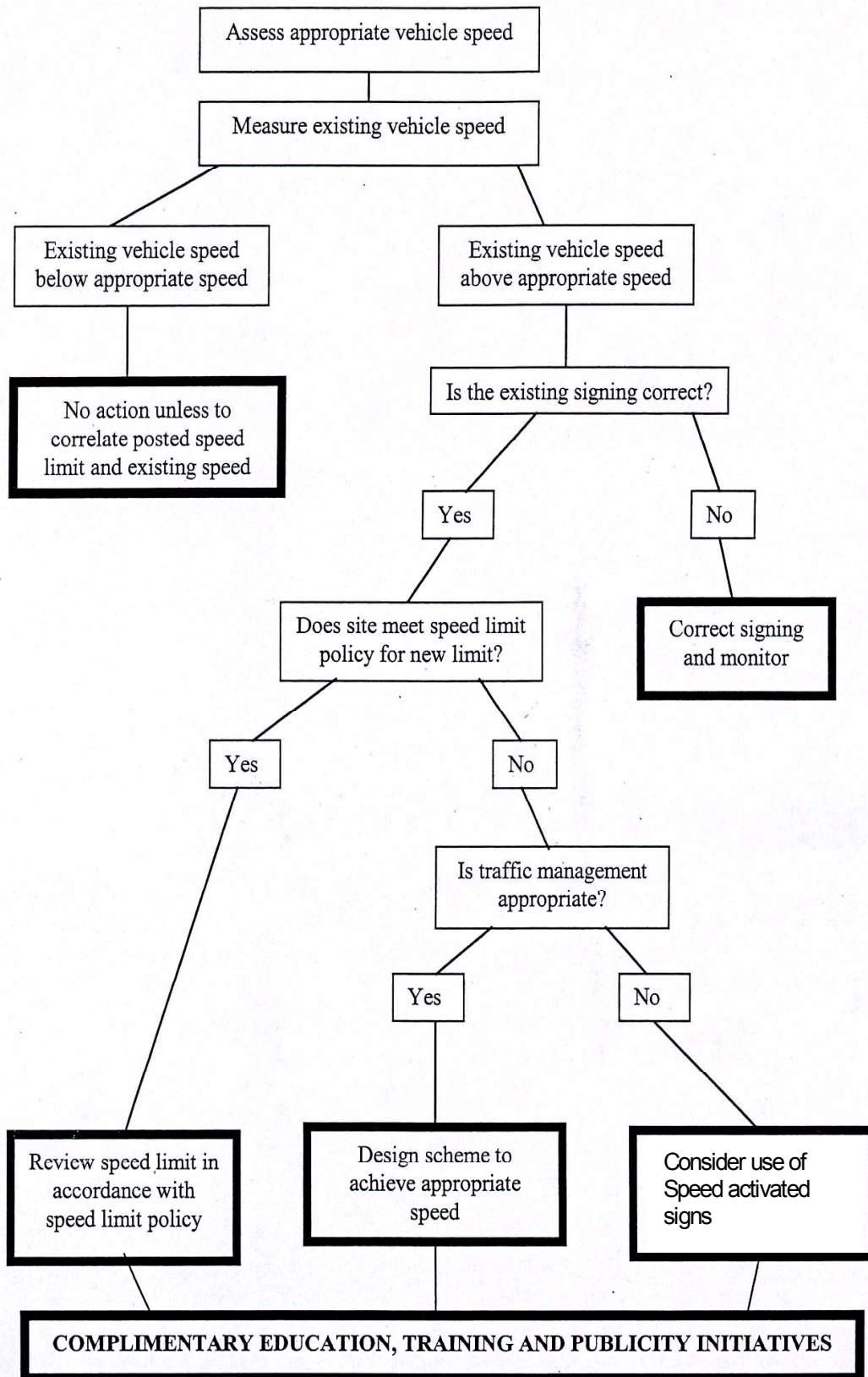


Figure 1 – Speed Assessment Flow Chart

3. Enforcement initiatives to improve compliance with speed limits

Hampshire Constabulary is responsible for enforcing speed limits on the Isle of Wight. The use of automatic safety camera technology as a means of detecting and deterring speeding vehicles (at locations where there are speed related injury accidents) as well as red light infringements at traffic signals plays an increasing role in enforcement. On 1 April 2002, a partnership between the Isle of Wight Council, Hampshire County Council and Hampshire Constabulary was set up. This partnership has taken over the management of safety cameras throughout the whole of Hampshire Constabulary area. Under this arrangement, safety cameras will be deployed on the basis of the injury accident criteria laid down by the Government. A proportion of the fines (“netting-off”) paid for speeding will be used to fund the purchase of further safety cameras and associated equipment as well as the operational, maintenance and management costs of the system. It is expected that the majority of resources will be deployed at the identified sites. These sites will be identified to drivers with safety camera signs. Prospective sites will be reviewed annually and any new sites identified will be added.

Trials during 2000/1 in eight partnership areas in England found that very significant speed and casualty reduction benefits were achieved using this approach:

- Monitoring data from the partnerships indicated that average speed at sites where enforcement took place was down between 3.6mph and 7.7mph. Average speed at camera sites across all of the partnerships was down by an average of 5.6mph.
- The number of collisions was down between 4% and 65% at sites where enforcement took place. On average there were 35% fewer collisions at sites where cameras were operating. This means there were *379 fewer collisions* at enforced camera sites in the pilot areas.
- On average there were 47% fewer people killed and seriously injured at camera sites where enforcement was taking place. On the basis of historical trend data it is estimated there were *109 fewer people killed or seriously injured* at camera sites as a result of increased enforcement. Evidence also indicates that the initiative has been successful in reducing the numbers of those most at risk from road collisions - children and pedestrians.
- On the basis of research already carried out for DfT it has been possible to calculate that the initiative has saved around £27m in the last financial year in terms of ambulance and medical costs, lost output and human costs of fatalities and serious injuries.
- All partnerships have worked together well and there is no evidence of an excessive burden being placed on magistrates' courts, nor that police priorities have been diverted.
- Six of the eight partnerships have recovered the costs of investment in camera equipment and ongoing enforcement in year 1. Both of these partnerships will recover costs in year 2.
- Public perception remains mostly positive with surveys demonstrating that the majority of the public accept that the purpose of the initiative is to save lives rather than generate revenue.

The government's current criteria for the use of safety cameras for detecting speeding vehicles under the

“netting off” arrangement through the partnerships are stringent:

- Fixed camera sites can only be used at locations where there have been 8 personal injury collisions with at least 4 people killed or seriously injured per kilometre of road in three years
- Mobile camera sites can only be used at locations where there have been 4 personal injury collisions with at least 2 people killed or seriously injured per kilometre of road in three years
- Speed must be a contributory factor to the collisions and vehicle speeds should be at or above ACPO guidelines
- At least 20% of drivers should be exceeding the speed limit
- There should be no other obvious measures to improve road safety

Photos of local speed camera sites and signs

On the Isle of Wight a number of both fixed sites and mobile sites have been identified in accordance with the criteria. Some of these are at existing sites and some at new sites. The latter are likely to become operational in April 2003. This is a data led enforcement approach involving close liaison with the police.

Hampshire Constabulary will continue to enforce speed limits more generally on the Isle of Wight primarily using their traditional methods of detection.

4. Engineering roads for more appropriate speeds

Roads can be re-designed to discourage inappropriate speeds. Engineering measures such as traffic calming can be provided at problem sites to indicate more appropriate speeds or to physically restrict speed to particular levels in support of speed limits. It may be the case that these are more appropriate for particular types of roads or problems than safety cameras (See Section 3). A number of proposed actions to achieve local speed reductions at problem locations have been identified:

- **Including measures to reduce vehicle speeds around schools and colleges as part of Safer Routes to Schools projects** – The areas outside schools and colleges and the routes to and from them are often a concern to children, parents and teachers. There is often intense activity in the period of time when staff and pupils are entering or leaving the school. Outside these times there may be little activity unless the road is on a main traffic route.

Photo of local safer routes to school schemes with traffic calming

- **Improving safety in residential areas through traffic calming measures such as road narrowings, road humps, chicanes and restrictions on through traffic** – These may also involve 20mph Zones and Home Zones The

areas where people live should be as safe as possible. These are areas where children will play and learn their first road skills. Around 25% of all road crashes each year (involving 40% of all child injuries) take place on minor built up roads. Research has shown that reducing traffic speeds and volumes on these types of road can reduce the number of people injured by more than 60%, with few if any fatal or serious injuries.

Photo of local traffic calming schemes in a residential area

- **Developers of all new residential roads and estates will be required to provide measures to constrain vehicle speeds to around 20 mph on those roads** – This will help to ensure that new residential areas do not become future problems sites for vehicle speeds and that residential areas are as safe as possible.

Photo of local new estate road designed to limit speed

- **Providing speed management measures such as gateway treatments and speed activated signs at entrances to towns and villages –**
This will help to remind drivers of the need to reduce their speed as they enter towns and villages and be aware of potential dangers.

Photo of local gateway scheme

An annual programme of engineering measures to reduce speeds will be identified. Priority will be given to locations with a recorded injury accident problem relating to vehicle speed.

5. EDUCATION, TRAINING AND PUBLICITY
IMPROVING AWARENESS, INFLUENCING ATTITUDES AND CHANGING BEHAVIOUR

Making drivers and riders more aware of the problems caused by speeding vehicles, influencing their attitudes and changing their behaviour are key areas of speed management to address.

A number of proposed actions to increase public awareness of the consequences of driving too fast and measures to influence attitudes and behaviour have been identified:

- **Running appropriate local publicity and awareness campaigns and supporting national campaigns such as “KILL YOUR SPEED” and “THINK”**

Photos of local speed campaign

- **The use of a mobile Speed Indicator Device (SID) to display drivers speeds at various locations where there is concern about vehicle speeds**

Photo of Speed Indication Device

- **The provision of a number of Radar Speed measuring guns for the use of Town/Parish Councils to measure vehicle speeds**

Photo of people using speed gun

- **Providing pre-driver training courses and road safety education in schools and colleges that provide a significant content relating to the problems caused by speeding vehicles and more appropriate behaviour**

- Evaluating the establishment of a Road Safety Forum involving local interest groups and community representatives to discuss and co-ordinate ways of reducing vehicle speeds to more appropriate levels, improve road safety and reduce accidents

Photo of education work in schools

- Identifying potential high risk speeders and offering driver /rider education and retraining as an alternative to fines and penalty points in appropriate cases, where this would be beneficial

Photo of local council/committee meeting

The Isle of Wight Council will develop its programmes of education, training and publicity measures and campaigns to improve awareness of the problems caused by speeding vehicles and encourage people to drive/ride at more appropriate speeds.

Photo of vehicles speeding or crash

- Promoting a better understanding of the dangers of driving at an inappropriate speed on driver and rider training, improvement and rectification courses

Photo of local driver/rider training courses

6. Partnership approach

Involving a wide variety of bodies and groups with an interest in road safety and speed related problems can improve the effectiveness of delivering important road safety information. Hampshire Constabulary has a primary role in detecting and deterring speeding vehicles. The deployment of automatic safety camera technology is an important tool in the speed management strategy but is only a part of the comprehensive approach to managing vehicle speeds outlined in this strategy. The use of safety cameras will be restricted to sites with a road casualty problem that meets the criteria laid down by the government (outlined in Section 3 of this appendix). The Road Safety Plan emphasises the need to involve partners in a constructive way and the establishment of a Road Safety Forum would be a major step forward in this area. Potential partners have been identified in Appendix 6 and are summarised below:

- **Hampshire Constabulary**
- **Town and Parish Councils**
- **Schools and Colleges**
- **Local Education Authority (LEA)**
- **Health Authority**
- **Media**
- **Driving Instructors and Specialist Driving Associations**
- **Community Forums**
- **Fire and Ambulance Services**
- **Walking and Cycling groups**
- **Transport Operators**
- **British Horse Society**

The Isle of Wight Council will investigate and evaluate the establishment of a Road Safety Forum involving local interest groups and community representatives to discuss and co-ordinate ways of

reducing vehicle speeds to more appropriate levels, improve road safety and reduce accidents

Annexe 1**SPEED MANAGEMENT STRATEGY: Appropriate Speed Assessment****Guidance Notes**

The assessment should be carried out by, or in liaison with, a suitably experienced engineer. Before commencing an assessment the length of road under review should be carefully considered to ensure it is of suitable length and that the locations of possible termination points are suitable and clearly defined. The desirable minimum for the assessment length is 800m. Scores should be assigned to each assessment category as appropriate. Additional information to assist follows:

Category 2) Frontages – select the score for the predominant activity. Normally this will be the frontage type covering the greater percentage of the section of road in question, but this may need to be modified to suit particular circumstances, and such modification should always be in consultation with the Police authority.

Category 3) Severance – select the appropriate multiplier for the level of severance. Dual carriageways will be Yes (high) whilst normal residential roads may be Yes (low).

Category 4) Existing Traffic Management Facilities – apply the highest score appropriate if measures exist.

Category 6) Verge – score as appropriate, for country lanes (with a narrow verge or ditch) as No.

Category 8) Carriageway width – for dual carriageways the width should include the central reserve.

Category 11) Junction frequency – include busy private accesses e.g. petrol stations, offices etc.

Category 12) Residential access – where properties have direct pedestrian or vehicular access.

Category 13) On street parking – score if regular parking occurs (mainly for residents).

Categories 14 and 15) Cyclists/pedestrians – few where there is infrequent use, lots near town centre locations or other major trip generators.

Category 18) Proposed measures – score yes if any of these have recently been, or are about to be, implemented.

Category 19) Environmental Scheme – score yes if part of an environmental enhancement scheme comprising a conservation area or a home zone. Other locations may also qualify for this score but this should only be included in consultation with the Traffic and Transportation Manager and the Police Authority.

ISLE OF WIGHT – SPEED MANAGEMENT STRATEGY

No.	Assessment Category		Score
1.	Road Hierarchy	Primary Road	5
		County Distributor	25
		District Distributor	40
		Local Distributor	50
		Access Road	80
2.	Frontages	None/rural	0
		Business	5
		Elderly (care homes etc.)	10
		Shopping	15
		School/Hospital	20
		Residential	25
3.	Severance (Road dividing a Community)	No	1*
		Yes (high)	4*
		Yes (low)	3*
		* = Multiply Frontages score by Severance	
ROAD LAYOUT FACTORS			
4.	Existing Traffic Management Facilities	Traffic Calming	0
		Traffic Signals	4
		Pedestrian crossing	6
		Central refuge	8
		None	10
5.	Footway	Both sides	0
		Part (less than 50% length) or 1 side	3
		None or <1m wide	5
6.	Verge	Yes	0
		Part (less than 50% length) or 1 side	3
		No/country lanes	5
7.	Available Carriageway Width (kerb to kerb)	>10m	0
		7 - 10m	5
		5.5 – 7m	15
		<5.5m	35
8.	Gradient	<10%	0
		10 – 20%	1
		>20%	2
9.	Central Reserve	Yes	0
		No	2
10.	Street Lighting System	No	3
		Occasional (Less than 50% of length)	2
		Whole length (existing speed limit 50 mph or above)	1
		Whole length (existing speed limit 30 or 40 mph)	0
11.	Junction Frequency	None	0

ISLE OF WIGHT – SPEED MANAGEMENT STRATEGY

	Average	>200m	5
		100 – 200m	15
		<100m	20
	ROAD CONDITION FACTORS		
12.	Direct Residential Access to the Highway	No	0
		Yes	5
13.	On Street Parking	No	0
		Yes	5
14.	Cyclists	Few (Possible or allowed)	10
		Lots (Signed cycle route or cycle lane present)	15
15.	Pedestrians	Few (Include possibility of pedestrians)	10
		Lots (Residential and shopping areas, schools etc.)	15
16.	Equestrians	Few (e.g. Bridleway present)	10
		Lots (Near stables, gallops etc.)	15
17.	Accidents (latest 3 years)	None	0
	N.B. All PIA's included	0 – 2 accidents per km	2
		2 – 5 accidents per km	5
		5 – 10 accidents per km	10
		10 – 15 accidents per km	15
		15 – 20 accidents per km	20
		>20 accidents per km	30
	PROPOSALS		
18.	Proposed Measures	Minor or Major Improvement and/ or LCRM	
	No = 0, Yes = 10		
19.	Environmental Scheme	Area subject to environmental considerations	
	No = 0, Yes = 70		

Points Score	Appropriate speed MPH
<50	70
51 to 70	60
71 to 130	50
131 to 250	40
251 to 350	30
351 to 427	20

Appendix 4

Local Safety Scheme Programme

APPENDIX 4 - LOCAL SAFETY SCHEME PROGRAMME

It is proposed to monitor the effectiveness of all of the council's expenditure on treating crash problem sites. Each year a list of the local safety schemes undertaken will be published together with details of the injuries before and after treatment and the cost of the treatment. Three years before and after information will be included where available. Where the full 3 years after information is not available, the results for an interim period of 1 or 2 years after information will be included. This will allow an annual comparison to be made until the full 3 years after information is available. Table 1 provides information on a sample of local safety schemes that were implemented between 1994 and 2001. The table gives detail of the measures employed, the completion date, an estimated and an actual cost, the casualty totals for 3 years before and 3 years after. A comparison of the casualty savings with the scheme cost provides a First Year Rate of Return (FYRR).

Location	Measure	Date	Cost (est)	Actual Cost	FYRR	Injuries 3 years before	Injuries 3 years after
B3399/B3401; Freshwater Road, Chessell	Carriageway re-alignment Rationalisation of existing warning signs Improved advanced warning signs	March 1994	£25,000	£13,500	235%	5	3
A3056 Newport Road, Apse Heath	Improved signing & marking. Clear definition of bend.	March 1994	£1,574.28	£1,574.28	3798%	10	12
A3055 Cowleaze Hill, Shanklin	Footway re-alignment Additional chevron & warning signs, black/white kerbing, white lining, anti-skid Removal of vegetation	June 1994	£3,221	£6,821	2558%	10	4
C17 Mersley Downs Road, Arretton	Carriageway reconstruction, improved signing	Sept 1995	£51,480	£47,515	137%	11	12
Ashey Road/Smallbrook Lane/Carters Road, Ryde	Changed junction priority, red textured surfacing, transverse bar markings, improved signing Kerb re-alignment Removal of vegetation	Sept 1996		£9,500	923%	10	8
A3055 Brading Road, Rowborough	Improved signing, markings, and clear definition of bend. Kerb re-alignment Coloured textured surfacing Removal of vegetation	Dec 1997	£20,000	£18,000	517%	20	14
Landguard Road, Shanklin	Footway build-outs, uncontrolled pedestrian crossing points, re-positioned give-way lines, Reduced carriageway width	May 2000	£20,000	£16,040	879%	7	0*
A3056 Branstone Cross, Apse Heath	Enhanced Junction Signing – Anti-skid, SLOW markings, Junction-build out, increased visibility splay	Oct 2000	(1)£15,000 (2) £24,000	£9,000	93%–280% 224%-280%	8	1*

Staplers Lane/Long Lane Newport	Junction signalisation, speed camera signing	May 2001		£44,400		2	None available
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Future Scheme

St John's Road, Ryde – up-grade of signals, junction signalisation, anti-skid. Est FYRR – 222%

* = only 1 years 'after' data available

Appendix 5

Road Safety Audit Policy and Procedure

Appendix 5 - Road Safety Audit Policy and Procedure

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APPENDIX 5 - ROAD SAFETY AUDIT POLICY AND PROCEDURE

1. Introduction

1.1 Purpose

Road Safety Audit is a systematic and objective method for checking the safety aspects of a wide range of road schemes to:

- ensure that road schemes operate as safely as practicable
- minimise the occurrence and severity of road crashes
- consider the safety of all road users
- improve the awareness of safe design practices by design, construction and maintenance staff

The main purpose of Road Safety Audit is to identify potential road safety hazards within the design of road schemes and make practical recommendations to eliminate or minimise them. Road Safety Audit is not intended to be a technical check or a check of compliance with design standards, which should take place separately if required.

A Road Safety Audit should be carried out from each of the following road users' point of view by examining how they are likely to use the scheme:

- Pedestrian (adult, child, elderly, mobility and sight impaired)
- Cyclists (pedal and powered)
- Drivers (car and commercial vehicles)
- Equestrians

This procedure describes the method and responsibilities for the management of the Road Safety Audit process for the Isle of Wight.

1.2 Background

Road Safety Audit was developed during the 1970's and 1980's, by UK road safety engineers, predominantly working in local authorities. This was in response to crash problems associated with the opening of new road schemes and road improvements. In 1990 formal guidelines and requirements were introduced in the UK, which lead to the widespread undertaking of Road Safety Audits.

1.3 The need for Road Safety Audits

Roads are constructed or changed for a variety of reasons, for example to relieve congestion or to allow access to new development. Mistakes can be made and design or budget constraints may lead to road safety problems. Opportunities to include casualty-reducing elements may have been missed or road safety may not always receive a sufficiently high priority.

Road Safety Audit can help to ensure that road safety is given a high priority. The process can be applied to new roads, road improvements, traffic management schemes, development proposals and maintenance schemes.

Road Safety Audit has an important part to play in achieving the road safety objectives of the Road Safety Plan.

1.4 The benefits of Road Safety Audits

A study of 40 minor works schemes in Surrey indicated that those schemes that were safety audited on average resulted in 1 less person injured in road crashes per scheme per year. In Denmark, the first year rate of return for safety audits has been estimated at around 150%. In Ireland it was found that 30% of the safety problems identified resulted in injuries within 5 years of the implementation of the scheme.

Process and Practice

2.1 Scope

This Procedure applies to all engineering schemes implemented on roads for which the Isle of Wight is the Highway Authority. Road Safety Audits should be carried out on all the road schemes indicated below, except where the total cost of road works on the entire scheme is less than £5,000. For schemes of lesser value, the decision whether or not to carry out an audit is the responsibility of the Traffic and Transportation Manager

This Procedure also applies to schemes planned and designed by outside organisations on behalf of the Isle of Wight or on roads that will be the maintenance responsibility of the Isle of Wight. Such outside organisations should be able to demonstrate that they have adopted all relevant parts of this Procedure. Specialist sub-contractors may be used, or if this is not appropriate, staff undertaking the audit should be completely independent of the scheme design and experienced in road safety engineering and undertaking Road Safety Audits.

The safety audit process should be applied to the following types of road scheme:

- New road schemes (including residential developments)
- Major improvements
- Minor improvements
- Traffic management schemes
- Development schemes
- Major maintenance schemes

This Procedure also applies to arrangements between developers and the Isle of Wight as a result of schemes arising from planning applications. It is the responsibility of the Traffic and Transportation Manager to determine the requirement for a Road Safety Audit in accordance with this Procedure.

2.2 Road Safety Audit stages

Road schemes should be subject to Road Safety Audit at a number of the stages throughout their planning, design and construction process.

Stage F: Feasibility Study

To examine the choice of route, the purpose and function of the road in the hierarchy, the standards applicable and the number and types of junctions, and in housing zones to consider speed management issues. To examine major planning developments

Stage 1: Completion of Preliminary design

To assess horizontal and vertical alignments, sight lines, and layouts and suitability of junctions

Stage 2: Completion of Detailed design

To assess detailed junction layout, road markings, signs, lighting, landscaping and other design details

Stage 3: Scheme completion

To examine the completed scheme by driving, walking or cycling along the new route (as appropriate). The scheme should also be examined during the hours of darkness to ensure that night-time safety standards have been achieved

Stage 4: Scheme Monitoring - 1 year after completion

An examination of the crash records of the scheme and other reported road safety problems

Stage 5: Scheme Monitoring - 3 years after completion

An examination of the crash records of the scheme and other reported road safety problems

Stage F may only be needed for schemes where there is a choice between different scheme options. Stages 1 and 2 can be combined for smaller schemes with the agreement of the Traffic and Transportation Manager. Stage 3 Road Safety Audits can be carried out in two parts for major schemes. These are stage 3a) - (prior to completion) and 3b) - (immediate post-opening in both daytime and darkness conditions). For minor schemes Stage 3 Road Safety Audits should be carried out at either pre-opening or immediate post-opening.

For the purpose of this Procedure a major scheme is one where the total cost of road works on the entire scheme is greater than £5,000. In addition, such a scheme can be defined at the discretion of the Traffic and Transportation Manager.

A representative from the Design team, Maintenance team and the Police should be invited to all Stage 3 Road Safety Audits. The Design team, Maintenance team and the Police representatives are present as expert advisors and do not formally constitute part of the Road Safety Audit Team.

2.3 The Road Safety Audit Team

The Road Safety Audit can be carried out by either the Isle of Wight Council or by external bodies. The Audit Team proposed by the Design Team Project Manager must be approved by the Traffic and Transportation Manager prior to the commencement of the Road Safety Audit.

It is essential that Road Safety Audits are carried out by a team of at least two people who are independent of the scheme design. This improves the quality of the audit and reduces the risk of safety problems being missed. The team should have suitable Accident Investigation and Prevention expertise and training to undertake the Road Safety Audits. The Road Safety Audit Team should comprise at least one member with direct road safety engineering experience. Additional specialist staff, such as Road Safety Education, Training and Publicity Officers and Traffic Signal Engineers, can be brought into specific projects as required.

Table A outlines the experience required of the Road Safety Audit Team. CVs of the Audit Team members should be lodged with the design consultant (if appropriate) and the Traffic and Transportation Manager for the Isle of Wight.

TABLE A: EXPERIENCE REQUIRED OF ROAD SAFETY AUDIT TEAM	
◆	team members should have recent relevant experience of undertaking Road Safety Audits;
◆	team members should have recent relevant Accident Investigation and Prevention experience;
◆	team members should have attended recognised Accident Investigation and Prevention training and Road Safety Audit training courses (e.g. RoSPA);
◆	knowledge of design standards and maintenance standards;
◆	the organisation carrying out Road Safety Audit should have the appropriate level of public liability and professional indemnity insurance for this type of work;
All Road Safety Audit teams should be approved by the Traffic and Transportation Manager prior to undertaking Road Safety Audits	

2.4 Definitions and roles within Road Safety Audit

- Design Team: the group undertaking the various phases of scheme design and/or supervision of construction. This team may be internal or external to Isle of Wight
- Project Manager: the person within the design team responsible for ensuring the progression of the scheme design in accordance with procedures; The project manager is responsible for proposing the Audit team and obtaining the approval of the Traffic and Transportation Manager before commissioning the Audit Team
- Road Safety Audit Team: a team of two or three people, independent of the Design Team, comprising staff with road safety engineering training and experience, which considers the scheme from a road safety point of view. This team can include specialists brought in on an ad-hoc basis
- Exception Report: a report prepared by the Design Team Project Manager in association with the Traffic and Transportation Manager in response to the Road Safety Audit Report. The Exception Report should give reasons why recommendations from the Road Safety Audit Report have not been adopted, and where appropriate outline alternative solutions

The Design Team Project Manager should provide all of the information required by the Road Safety Audit Team.

2.5 Information and time required to carry out Road Safety Audits

Subject to the overall scheme implementation programme, at least ten working days is required from receipt of drawings and other design information to complete a Road Safety Audit. At least 20 working days prior notification of the need for an audit should be given wherever possible.

The information supplied for Road Safety Audit should include at least:

- design brief;
- design checklist;
- departures from Standard;
- scheme plans;
- other scheme details;
- crash details where relevant;
- traffic flows and/or speeds where relevant;
- previous Road Safety Audit reports;
- previous Exception Reports;
- notification of the proposed date for the start of construction.

An example of a standard form covering these items to be completed by the Design team is shown in Annex A.

The Isle of Wight Council should retain a copy of all information submitted to the Road Safety Audit Team together with the Road Safety Audit report and any Exception reports.

It is the responsibility of the Design Team to ensure that adequate time for the Road Safety Audit process and for potential post-Audit re-design is considered within the overall project programme.

2.6 Carrying out Road Safety Audits

Once the Audit Team has been approved they should be sent the audit information (See 2.5). A member of the Audit team should check it for completeness and any missing or additional information required should be identified and requested from the Design Team Project Manager.

Stage F, 1 and 2 Audits - After examining the scheme briefly to understand the scheme concept and scope, a member of the Audit Team visits the site, takes photographs and notes about anything that may effect the safety of the proposed scheme. The same team member then completes an examination of the information supplied and makes notes of the safety problems that have been identified and the recommendations to eliminate or minimise the problems. After this, the information together with the photographs and site notes are passed to the other team members for them to examine independently and note problems and recommendations. The forms outlined in Annex B can be used for this. The team members should then meet and discuss the points that they have found and decide which ones to include in the formal report. The reasons for not including any particular problems and recommendations should be recorded on the audit forms.

The person who visited the site then prepares the Audit Report in draft form for the other team members to check. Once the report has been finalised, copies should be sent to the Design Team Project Manager and the Traffic and Transportation Manager.

Stage 3 Audits – The audit team visits the site together with any representatives of the Police, Design and Maintenance that have been invited to attend. The scheme is driven and walked (and cycled if necessary) by team members. Notes of potential road safety problems are made and photographs taken. The points identified should be discussed before leaving site. A draft report is prepared for other team members to check. Copies may be sent to other representatives who attended the meetings. Once the report has been finalised copies should be sent to the Design Team Project Manager and the Traffic and Transportation Manager.

Stage 4 and 5 Audits - The road safety performance of schemes that have been audited will be monitored by the Traffic and Transportation Manager. This will take place 1 year (Stage 4) after and 3 years (Stage 5) after the completion of the schemes. The purpose of this is to examine any subsequent safety problems and report on how engineering designs can be improved to reduce crashes and improve road safety.

Key issues

The main purpose of Road Safety Audit is to identify potential road safety hazards within the design of road schemes and make practical recommendations to eliminate or minimise them. Hence the team

undertaking the Road Safety Audit need experience and training in Accident Investigation and Prevention and undertaking Road Safety Audits.

A number of checklists are available to assist in the audit process. They are not a substitute for road safety experience and training. They should be used only after the auditors have completed their examination of the scheme as a means of checking that nothing has been overlooked. Checklists can also be valuable for aid training road safety auditors.

Road Safety Audit should be carried out from the point of view of how people will actually use the roads in a variety of conditions and not just be a check for technical or design standards compliance. This process will involve role-play as different road users.

2.7 The Road Safety Audit Report

The Road Safety Audit report should include an introductory statement setting out the terms of reference and listing the Road Safety Audit Team members. The statement should describe when the Road Safety Audit was carried out and refer to plans and documents checked by the Road Safety Audit Team, which should be listed in an appendix to the report.

The report should include a series of road safety problems and related recommendations for improvement. The report should be signed by the members of the Road Safety Audit Team.

The report should be written in a concise and specific format. Each problem is documented in terms of a potential road safety problem. This is most effective where the Road Safety Auditor attempts to describe a potential crash scenario that will affect a user of the scheme. These scenarios should, as far as possible, be capable of being backed up from crash records on previous schemes. Recommendations, in terms of outline engineering measures, are then provided to help the Design Team to choose an appropriate action. The recommendations should, as far as possible, be capable of being backed up by evidence that the type of measure suggested is an effective safety feature. It is not the responsibility of the Road Safety Audit Team to re-design the scheme. Their objective should be to get the Design Team to accept each road safety problem. It is the responsibility of the Design Team, in consultation with the Project Manager from the Client Division, to decide on what action is appropriate.

A sample Safety Audit Report is shown in Annex C.

Once the Road Safety Audit Team has completed the Road Safety Audit, copies of the final report should be sent to the Design Team Project Manager and the Traffic and Transportation Manager. A paper copy of the final report plus all the requested documentation and plans should be retained by the Isle of Wight Council and the Road Safety Audit Team.

It is the responsibility of the Traffic and Transportation Manager to ensure that the quality and consistency of Road Safety Audit Reports are monitored, as set out in this Procedure.

2.8 The Exception Report

The Design Team Project Manager should consider the Road Safety Audit Report and if any of the recommendations are not adopted then an Exception Report must be prepared. The Traffic and Transportation Manager will either accept that the Road Safety Audit recommendations should be implemented in full, or agree and sign an Exception Report (prepared by the Design Team Project Manager).

The Traffic and Transportation Manager should instruct the Design Team Project Manager to make those changes to the design that are required as a result of the Road Safety Audit Report. Where an alternative recommendation is proposed by the Design Team, discussions should be held with the Road Safety Audit Team before finalising the action and Exception Report.

The Design Team Project Manager should forward a copy of the Exception Report to the Road Safety Audit Team. The exception report should be based on the feedback form illustrated in Annex D.

In the case of unresolved issues the final decision as to whether a Road Safety Audit recommendation is implemented will be the responsibility of the Traffic and Transportation Manager.

2.9 Flowchart for Road Safety Audit

A flowchart summarising the Road Safety Audit process is detailed in Annex E.

3. Issues arising from this Procedure

3.1 Resource Implications

The adoption of this procedure has important implications in terms of staff resources for Isle of Wight Council.

If Road Safety Audits are to be carried out within the Isle of Wight, a team of two people will have to be formed and trained. They will not be able to audit any designs that they have worked on (in order to remain independent). This may require additional staff. If Road safety Audits are to be carried out externally then additional staff time within the Isle of Wight will be needed to manage the process. There will be a need for additional ongoing staff time and commitment to maintain and operate the system.

3.2 Training

A three-day training course was undertaken by staff from the Isle of Wight Council to make them aware of Road Safety Audit. More detailed training in Accident Investigation and Prevention may be necessary for Road Safety Audit team members.

The Isle of Wight could also consider establishing a list of approved safety auditors externally with minimum standards of experience and training in Accident Investigation and Prevention and Road Safety Audit.

3.3 Checklists

Checklists are available in the Highways Agency Design Manual for Roads and Bridges - HA42/94 and the IHT Guidelines for The Safety Audit of Highways. These checklists should not be used for a "menu based tick box" approach to auditing but rather as an aid to auditors to check that potential road safety problems are not overlooked. Designers should be made aware of the Road Safety Audit process and may be interested in the checklists to get a feel for the issues that auditors are likely to be interested in. This together with feedback reports from the monitoring of audited schemes will help designers to produce safer schemes.

3.4 Safety Guidelines and references

A number of guidelines are available which provide useful road safety guidance. A selection of these are listed in Annex F.

Design guides and road safety research documents also contain useful information on safety standards and the types of crash problems that could occur on schemes and how to minimise the likelihood of such crashes. Road Safety Auditors should have a good working knowledge of these and should keep up-to-date with such information.

ANNEX A - CHECKLIST TO BE PREPARED BY THE DESIGN TEAM PROJECT MANAGER REQUIRING A ROAD SAFETY AUDIT REPORT

SCHEME NAME:

AUDIT STAGE: FEASIBILITY/ STAGE 1/ STAGE 2/ STAGE 3/STAGE 4/STAGE 5

TODAY’S DATE:

DATE AUDIT REQUIRED BY:

I request a Road Safety Audit at
 This work should be carried out in accordance with Isle of Wight’s Road Safety Audit Procedures. The report will describe any road safety problems that are identified from material supplied by us to your Road Safety Audit Team. The report will also list recommendations made by your Road Safety Audit Team to reduce the possibility of future crash occurrence.
 Please note the information that we are submitting for the purposes of the Road Safety Audit.

Design brief	
Design checklist	
Departures from Standard	
Scheme plans (list separately if possible)	
Other scheme details (list separately if possible) e.g. signs schedules	
Crash printout for existing roads affected by the scheme	
Traffic surveys	
Previous Road Safety Audit reports	
Previous Exception Reports	
Start/completion date for construction	
Any other information (list separately)	

Signed.....
 Name.....
 Position.....

ANNEX B - ROAD SAFETY AUDIT COMMENTS LIST

SCHEME NAME:

AUDIT STAGE: FEASIBILITY/ STAGE 1/ STAGE 2/ STAGE 3/STAGE 4/STAGE 5

TODAY'S DATE:

DATE AUDIT REQUIRED BY:

AUDITOR'S NAME.....PAGE.....OF.....

plan no.	road safety audit comments	discussed within audit team	comment included in report	reason not included

ANNEX C – SAMPLE REPORT FORMAT

LOCATION OF SCHEME

ROAD SAFETY AUDIT STAGE 2

ROAD SAFETY AUDIT TEAM (Organisation)
ADDRESS

LOCATION OF SCHEME

ROAD SAFETY AUDIT STAGE 2

1. INTRODUCTION

- 1.1 This report describes a Stage 2 Road Safety Audit carried out on ? (date) on behalf of ? (design organisation). The Road Safety Audit was carried out between ? (date) and ?(date) in the offices of ? (organisation).

The Road Safety Audit team members were as follows:-

Name, Position, Qualifications, Organisation

Name, Position, Qualifications, Organisation

- 1.2 The Road Safety Audit comprised an examination of the drawings relating to the scheme supplied by the design office. Other information was provided in the form of ? (list of documents). ? (name) visited the site on ? (date). A Stage 1 Road Safety Audit was carried out by ? (organisation) on ? (date).

OR

- 1.2 (For Stage 3 Audits) The Road Safety Audit comprised a daylight examination of the site on ? (date). Also present on the site visit were:

? (name and organisation)

? (name) visited the site during darkness on ? (date).

- 1.3 This Stage 2 Road Safety Audit has been carried out in accordance with the relevant sections of the Isle of Wight's Road Safety Audit Procedures. The team has examined only those issues within the design relating to the road safety implications of the scheme, and has therefore not examined or verified the compliance of the design to any other criteria.
- 1.4 Appendix 1 describes the drawings and other information examined by the Road Safety Audit team.
- 1.5 All of the problems described in this report are considered by the Road Safety Audit team to require action in order to improve the safety of the scheme and minimise crash occurrence.

2. ITEMS RESULTING FROM THIS STAGE 2 ROAD SAFETY AUDIT

2.1 Problem

Recommendation

2.2 Problem

Recommendation

etc...

3. ROAD SAFETY AUDIT TEAM STATEMENT – STAGES F, 1 AND 2

We certify that we have examined the drawings and other information listed in Appendix 1. This examination has been carried out with the sole purpose of identifying any features of the design that could be removed or modified to improve the safety of the scheme. The problems that we have identified have been noted in the report, together with suggestions for improvement, which we recommend should be studied for implementation.

signed.....Name, Organisation

date.....

signed..... Name, Organisation

date.....

APPENDIX 1

List of Drawings Examined
Other Information

OR

3. ROAD SAFETY AUDIT TEAM STATEMENT – STAGE 3

We certify that we have examined the site in daylight on ? (date) and in darkness on ? (date). These examinations have been carried out with the sole purpose of identifying any features of the design that could be removed or modified to improve the safety of the scheme. The problems that we have identified have been noted in the report, together with suggestions for improvement, which we recommend should be studied for implementation.

signed..... Name, Organisation

date.....

signed..... Name, Organisation

date.....

countersigned.....

OTHERS INVOLVED

Name, Organisation (e.g. police, design organisation)

ANNEX D - CLIENT DIVISION – ROAD SAFETY AUDIT FEEDBACK FORM

SCHEME NAME:

AUDIT STAGE: FEASIBILITY/ STAGE 1/ STAGE 2/ STAGE 3/STAGE 4/STAGE 5

TODAY'S DATE:

Safety audit report para. no.	safety problem accepted	safety recommendation accepted	alternative recommendation

Signed.....
Name.....

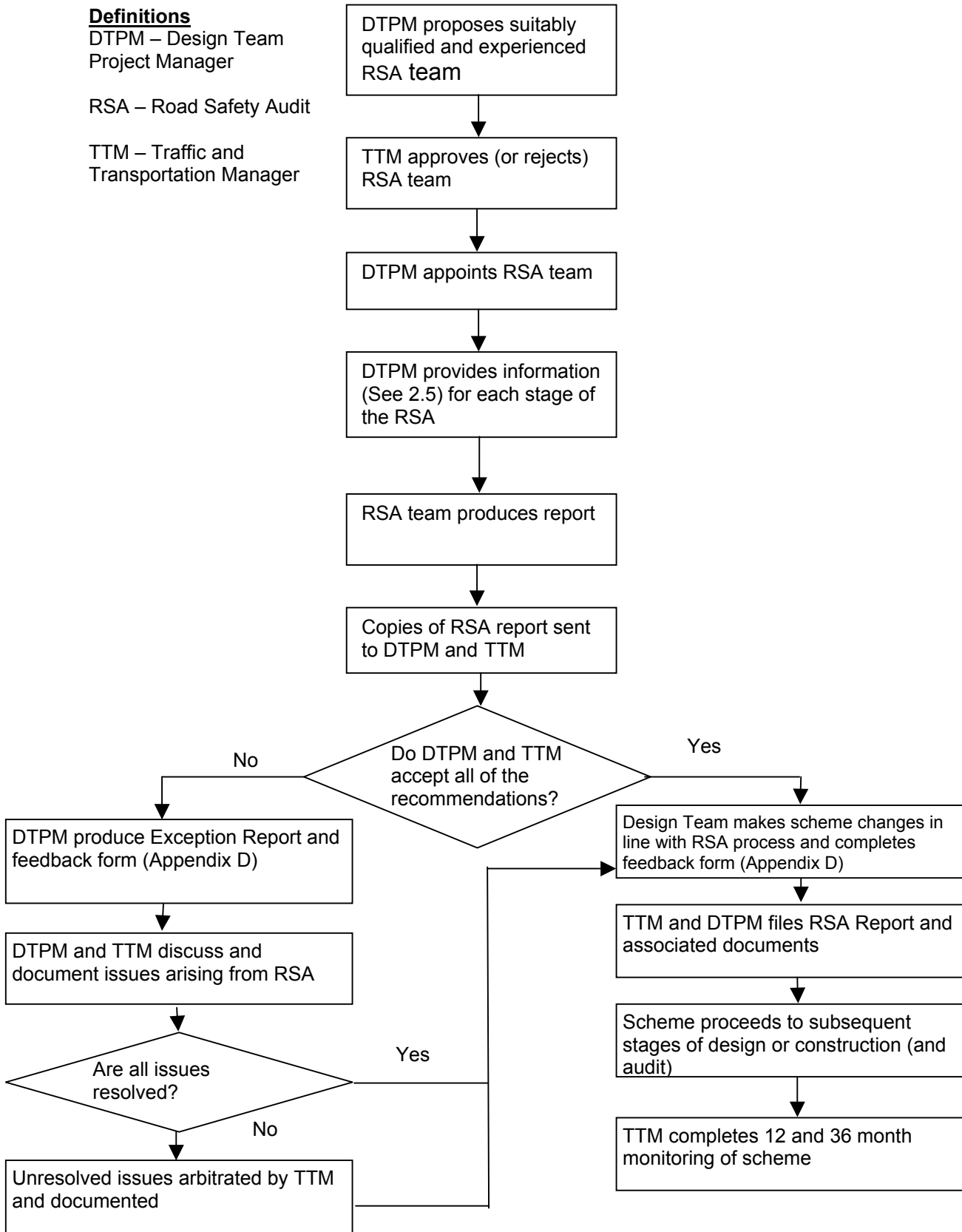
ANNEX E: ROAD SAFETY AUDIT PROCEDURE FLOWCHART

Definitions

DTPM – Design Team Project Manager

RSA – Road Safety Audit

TTM – Traffic and Transportation Manager



ANNEX F – A selection of Road Safety Guidelines and Reference Material

UK Design Standards and other useful documents

A full list of UK Design Standards is available from The Stationary Office under the title of the Standards for Highways Works - Design manual for Roads and Bridges.

References of some of the more up to date and relevant documents are given below:

HA 42/94	Road Safety Audits
HD 19/94	Road Safety Audits
HD 28/94	Skidding Resistance
TA 4/80	Access to Highways – Safety Implications
TA 52/87	Design Considerations for Pelican and Zebra Crossings
TA 67/95	Providing for Cyclists
TD 9/93	Highway Link Design
TD 16/93	Geometric Design of Roundabouts
TD 19/85	Safety Fences and Barriers
TD 28/87	Pedestrian Crossings
TD 30/87	Design of Road Lighting
TD 42/95	Geometric Design of Major/Minor Junctions
TD 78/97	Design of Road markings at Roundabouts
TD 50/99	The Geometric Layout Of Signal Controlled Junctions and Signalised Roundabouts

Others useful documents

The following list outlines some of the documents that Road Safety Auditors should be familiar with.

RoSPA	Road Safety Engineering Manual
IHT	Guidelines for Accident Reduction and Prevention (International Edition)
IHT	Guidelines for Rural Safety Management
DB32	Residential Roads and Footpaths (2 nd Edition)
PPG13	A Guide to Better Practice – Reducing the need to travel through land use and transport planning
Traffic Advisory Leaflets (various)	
The Safety Audit of Highways, IHT Guidelines, 1996	
Local Transport Note 1/95 – Assessment of Pedestrian Crossings	
Local Transport Note 2/95 – Design of Pedestrian Crossings	
Traffic Engineering and Control – Periodical	
Surveyor - Periodical	

Appendix 6
List of Partner Organisations

APPENDIX 6 - PARTNERSHIP ORGANISATIONS

Improving road safety should be a joint venture through partnerships and this requires the positive co-operation of road users and a large number of both public and private sector organisations. These include the Government (through the Government Office for the South East – GOSE), Isle of Wight Council, Hampshire Constabulary, schools, insurance companies, hospitals and health organisations, motor manufacturers and retailers and a variety of organisations and bodies that have specific responsibilities or interests in road safety.

At its broadest level all road users have an element of responsibility for their own behaviour and those they are looking after.

The involvement and exchange of views and information of as many bodies and groups improves the effectiveness of spreading the road safety message. Wide spread interest is vital if improvements in the behaviour of drivers, riders and pedestrians, enhancement in vehicle safety, better roads and road engineering and better enforcement are to be achieved.

The main public bodies with an input to improving road safety and reducing crashes and their main involvement are:

- **Government** prepares planning, highway and traffic legislation. It is also responsible for vehicle design and construction regulations, vehicle inspection, vehicle testing and driving standards. The government determines priorities and funding for road safety engineering, policing, education, publicity and training/testing.
- **The Engineering Services Department of the Council** is responsible for the planning and engineering of the transport system. They have many specific programmes of work aimed directly at improving road safety. They are also responsible for:
 - ⇒ investigation and treatment of road crashes
 - ⇒ monitoring and assessment of traffic safety
 - ⇒ education, publicity, awareness, and training with regard to road safety issues
 - ⇒ Co-ordination of road safety initiatives
 - ⇒ provision of traffic management safety measures such as:
 - ⇒ safer routes to schools
 - ⇒ speed management including 20 mph zones, traffic calming, safety cameras etc.
 - ⇒ pedestrian/cycle crossings and routes
 - ⇒ junction control
 - ⇒ anti-skid surfacing
 - ⇒ road signs and markings
 - ⇒ maintenance of the road network
 - ⇒ provision of facilities for pedestrians, cyclist and public transport
 - ⇒ design and construction of roads and road improvements
- **Hampshire Constabulary** is responsible for enforcement of much of the highway and traffic law that impacts on road safety. A lot of effort goes into deterring drivers from speeding and drink/driving. They also get directly involved in publicity and educational work. They are consulted closely on engineering matters.
- **Town and Parish Councils** have local knowledge of traffic and road safety problems. It is important that they are encouraged to take a positive role in improving road safety by being actively involved in the identification and prioritisation of safety problems and solutions. They can act as a sounding board for the local community and can assist in communicating road safety messages to the community and assisting in road safety campaigns.
- **Schools and Colleges** will be encouraged to produce travel plans that reflect the safety of their students and staff. The views of schools and colleges will be sought and they will be encouraged to have a positive role in promoting road safety in their communities. Schools are actively involved in safer routes to schools projects. Road safety topics can be used in other areas of work to develop the personal and social skills of pupils. They can communicate information to parents on road safety issues
- **The Local Education Authority (LEA)** has a role to play in incorporating road safety issues into the school curriculum. A Key Stage 2 “Step by Step” resource is being developed to encourage children to look at

health, safety and environmental aspects of walking to school. Road safety officers support the LEA and regularly make schools aware of road safety issues and the teaching aids that are available

- **Health Authority**

The Isle of Wight Health Authority has recognised the importance of encouraging safe walking, cycling and reduced car use as key issues in improving the Island's Plan for Health and Well-Being. The Council works in partnership with the local Health Authority to develop and take appropriate actions to ensure that transport (including safety matters) and health matters are dealt with inclusively.

- **The media** has the ability to publicise information and provide a base for discussion. Resources come from national and local news, in-store promotions, distributions, school activity, complementary advertising, mailings and radio phone-ins can be used to raise awareness of safety issues. The use of web sites on the internet and email communication is a new way of reaching target audiences to ensure that road safety messages are readily accessible and influence road user behaviour

- **Other groups that may be involved in road safety**

- **Driving Instructors and Specialist Driving Associations** are important links to young drivers and can train them in hazard perception and responsible driving behaviour
- **Community Forums** often show concern for traffic safety and can indicate where improvements are required. Involving them in the design and promotion of schemes and policies encourages ownership and support for safety work
- **Fire and Ambulance Services** have to deal with the casualties of road crashes and may be able to offer an insight into how to prevent crashes or reduce the injuries that arise from them
- **Disabled groups** can offer specialist advice on where their members have particular road safety problems and how they can be solved
- **Walking and Cycling groups** can help to identify particular problems for pedestrians and cyclists and may be able to offer assistance in practical training courses
- **Transport Operators** are responsible for significant parts of many people journeys. It is possible that better links to their services may help to reduce safety problems
- **The British Horse Society** can help to provide training for riding on the highway and may be able to identify measures to improve the road safety of horse riders

Appendix 7
Summary of Key Actions

APPENDIX 7 - SUMMARY OF KEY ACTIONS, COSTS AND RESOURCE IMPLICATIONS

Action	Target Area
<ol style="list-style-type: none"> 1. Structured road safety education programmes 2. Encouraging the promotion of road safety and providing support to children, parents, carers, teachers and school governors including children's traffic club 3. Providing and developing appropriate road safety resources for parents, carers and teachers 4. Providing and supporting cycle and pedestrian training activities 5. Running appropriate publicity and awareness campaigns 6. Expanding the safer routes to schools programme 7. Undertaking programmes of speed reduction measures in residential areas 8. Undertaking a detailed investigation/audit of all crashes involving children 	Child Safety
<ol style="list-style-type: none"> 9. Running appropriate publicity and awareness campaigns for high risk pedestrian and cyclist groups 10. Providing safer walking and cycling facilities and routes 11. Reducing the dangers to walking and cycling caused by traffic volume and speed 12. Ensuring that the needs of pedestrians and cyclists (including mobility impaired) are given a high priority in all modifications to the road network 13. Undertaking a detailed investigation/audit of all crashes involving pedestrians and cyclists 14. Investigating the implications of implementing a road user audit process 	Pedestrian and Cycle Safety
<ol style="list-style-type: none"> 15. Promoting advanced riding courses via locally based organisations 16. Encouraging riders to seek refresher and familiarisation training via direct access organisations 17. Carrying out publicity and awareness campaigns 18. Working with representatives of motorcycle user groups to look at issues of concern 19. Improving road conditions that could be a hazard 20. Undertaking a detailed investigation/audit of all crashes involving powered two-wheeled vehicles 	Powered Two-Wheeled Vehicle Safety
<ol style="list-style-type: none"> 21. Making driver training, improvement and rectification courses widely available 22. Undertaking publicity and awareness campaigns aimed at key issues and targeting of high risk groups 23. Promoting the use of appropriate in car safety equipment for child seats and restraints 24. Publicising the availability of consumer information on the safety performance of different types of vehicle when involved in a collision 	Driver and Passenger Safety
<ol style="list-style-type: none"> 25. Assisting Hampshire Constabulary in providing better and more effective traffic law enforcement 26. Promoting a better understanding of the road safety consequences of poor or inappropriate road user behaviour 27. Offering education and retraining as an alternative to fines and penalty points in appropriate cases where this would be beneficial 	Enforcement and Deterrence (Safety of All Road Users)
<ol style="list-style-type: none"> 28. Investigating road crashes and treating problem locations, routes and areas with engineering measures to reduce the number and severity of injuries 29. Monitoring trends in road casualties and ensuring that appropriate action is taken 30. Improving safety at school and college entrances and on routes to schools and colleges 31. Improving safety in residential areas by reducing speeds through traffic calming measures including Home Zones and 20 mph Zones 32. Improving facilities for pedestrians and cyclists 	Safety of the Road Network (Safety of All Road Users)

33. Speed management measures will be provided at entrances to towns, villages and locations with specific speed related injury problems	
34. Implementing a system of Road Safety Audits for all significant changes to the highway network to ensure that they operate as safely as practicable	
35. Reviewing road improvement and maintenance policies to ensure that road safety is given a high priority	
36. Evaluating the establishment of a Road Safety Forum to discuss and co-ordinate ways of improving road safety and reducing crashes. A wide membership of the Road Safety Forum will be encouraged.	Partnership Approach (Safety of All Road Users)
37. Improving accessibility to road safety information and making it easier for people to comment on road safety issues and problems	