

Safeguarding

Dorset County Council



Date of Meeting	Wednesday 15 March 2017
Officer	Michael Potter, Project Engineer – Collision Reduction and Traffic Engineering Team, Highways
Subject of Report	Causes and forces of road traffic collisions
Executive Summary	To explore the factors contributing to road traffic collisions and to understand the ‘story’ behind the population indicator ‘Number of people killed or seriously injured on Dorset’s roads’.
Impact Assessment: <i>Please refer to the protocol for writing reports.</i>	Equalities Impact Assessment: Not applicable
	Use of Evidence: Stats 19 Road Traffic Collision Data – provided and validated by Dorset Police
	Budget: Not applicable
	Risk Assessment: Not applicable
	Other Implications: Not applicable
Recommendation	The Safeguarding Committee is asked to: <ul style="list-style-type: none"> • Consider and comment on the context surrounding the topics raised within this report; • Share the contents of this report with members of relevant Committees within the County Council.

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	<ul style="list-style-type: none">• Through questioning and debate seek assurance in respect of current arrangements and identify potential actions leading to improved outcomes.
Reason for Recommendation	To continue the development of an Outcomes Based Accountability approach in better understanding of what the County Council can do to influence performance.
Appendices	Appendix A – Copy of SAFE population indicator – Number of people killed or serious injured – December 2016 Appendix B – Copy of Collision and Casualty Overview Report for 2015 Appendix C – Copy of the Road Traffic Collision reporting form
Background Papers	
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1. Background

1.1 Improving road safety is a key priority for a variety of services within Dorset County Council and with partner authorities.

1.2 The number of road traffic collisions and casualties is a valuable indicator of the context in which road safety related work operates. However, it is important to consider the 'story' behind the headline figures.

1.3 Dorset County Council and its partner organisation of Dorset Road Safe agreed to set a 2020 target of reducing the number of people killed or seriously injured (KSI) by 40%; based against the 2005/9 baseline average.

1.4 The target for 2020 is to have no more than 163 KSI casualties on roads within the Dorset CC area.

1.5 Perhaps the greatest challenge in meeting this target is the wide variety of factors that are outside the direct control of the County Council.

1.6 Recent focus has been towards Outcome Based Accountability and the understanding of what the County Council does or could do to influence performance. The one page summary for the 'SAFE' population indicator – Number of people killed or seriously injured on Dorset's roads can be found at Appendix A.

1.7 An additional consideration is the difference between perceptions of safety and actual safety. 2015 saw a continuation of the increase in pedal cyclists killed or seriously injured. Perhaps in contradiction of this, the results of a residents survey showed increasing levels of satisfaction with road safety for cyclists in recent years for Dorset residents.

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1.8 This report highlights the main points of the 'causes and forces' elements of the Collision and Casualty Overview report for 2015; see Appendix B for a more detailed review of collisions and casualties.

2. Data

2.1 Validated road traffic collision data is provided to the County Council by Dorset Police.

2.2 Data is provided monthly and is typically between 2-3 months behind due to the validation process.

2.3 Road traffic collision data includes collisions that result in human death or personal injury occurring on the Highway and notified to the police within 30 days of occurrence. Collisions can involve single or multiple vehicles.

2.4 Road Traffic Collision data is broken down into three categories of severity:

- Fatal
- Serious and
- Slight

2.5 A fatality is any death occurring within 30 days of a collision were the collision was the initial cause of injury. Should a death occur more than 30 days after the collision, it is recorded as a serious collision. If a medical episode was the cause of a crash then such incidents are recorded as medical episodes, not road traffic collisions.

2.6 Serious injury has a wide range of injuries. Any broken/fractured bone is recorded as a serious injury. This therefore includes a life changing broken bone(s) to a broken finger. It is not possible to tell from the available data if the serious injuries were life changing or not.

2.7 Slight injuries are those which are not categorised as serious but require relatively minor treatment – the only exception to this is a whiplash injury.

2.5 Damage only collisions are not routinely reported by the police and details are not provided from Dorset Police to the County Council.

2.6 Appendix C is a copy of the form used to record road traffic collisions and shows the type of detail that is able to be recorded by police officers. The County Council are able to analyse all aspects of this data in order to better understand the causes and forces for individual collisions and to identify common themes for routes, areas and sites.

3. Statistics

3.1 One person killed or seriously injured on Dorset's roads is too many.

3.2 During 2016, 10 people died whilst using roads in the Dorset County area; this compares to 23 in 2015, 16 in 2014 and 29 for the 2005/9 baseline average.

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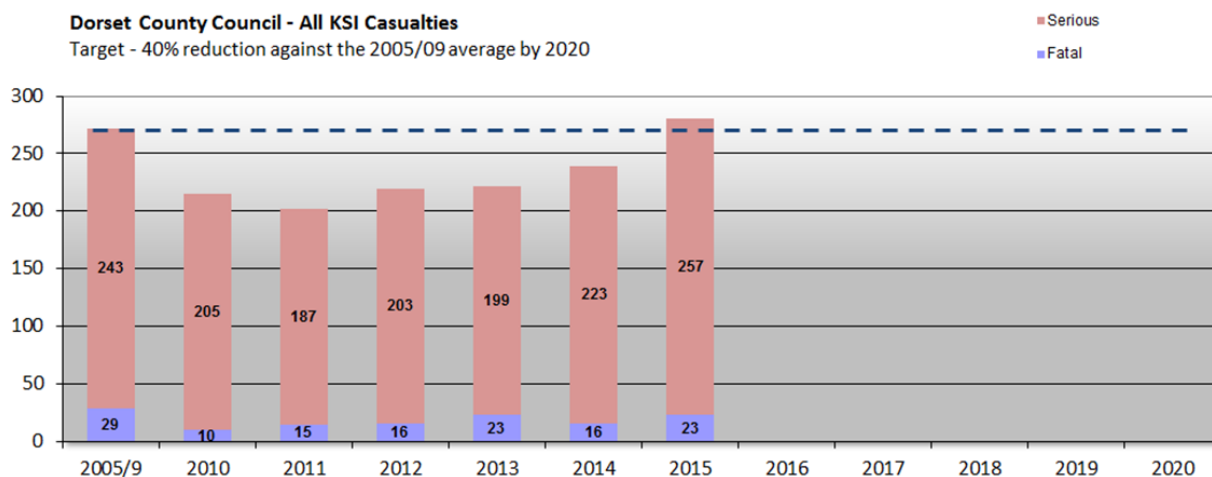
3.3 Records are available from 1 January 1998. Since 1998, 2002 had the highest number of people who died whilst using roads in Dorset with 44 deaths. Years 2010 and 2016 had the lowest with 10 road traffic fatalities.

3.4 There were year on year increases in the number of people killed or seriously injured between the end of 2011 and 2015.

3.5 Early indications for 2016 are that fewer people were killed or seriously injured than in 2015 but remain at a level that is notably higher than in recent years; data for 2016 is yet to be signed off by Dorset Police and the Department for Transport.

3.6 Chart 1 below shows the number of people killed or seriously injured by year from 2010 to 2015.

Chart 1 – Number of people killed or seriously injured from 2010 to 2015



3.7 With the exception of pedestrians, each road user group saw an increase in the number of people killed or seriously injured in 2015 against 2014. Two user groups stand out as having significant increases.

3.8 The most significant change in recent years has been the increase in the number of cyclists killed or seriously injured. Cyclists are the only road user group to have the number of people killed or seriously injured consistently above the 2005/9 average in recent years.

3.9 2015 saw a significant increase in the number of motorcyclists killed or seriously injured when compared against 2014. 2015 was the first year that the number of motorcyclists killed or seriously injured was above the 2005/9 baseline since the end of 2009.

3.10 Road traffic collisions and casualties that occurred on the Trunk Road network are included within the figures for the Dorset County area. The Trunk Road is the responsibility of Highways England.

3.11 The trunk road network within the County Council area is the A31 from Ringwood to Bere Regis, the A35 from Bere Regis to Devon and a short section of the A303 in North Dorset.

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3.12 Table 1 shows the proportion of all casualties that occurred within the County Council area on the trunk road network for the 2005/9 average and for 2010 to 2015.

Table 1 – Proportion of casualties occurring on

Period	Percentage of DCC total - Trunk Total				
	Casualties				
	Fatal	Serious	Slight	KSI	ALL
2005/9 avg	17.2%	13.1%	11.2%	13.6%	11.6%
2010	10.0%	13.2%	14.6%	13.0%	14.4%
2011	26.7%	9.6%	13.1%	10.9%	12.8%
2012	12.5%	14.3%	13.3%	14.2%	13.4%
2013	26.1%	17.6%	11.5%	18.5%	12.7%
2014	25.0%	11.7%	14.5%	12.6%	14.2%
2015	17.4%	8.6%	12.8%	9.3%	12.1%

3.13 Whilst the trunk roads in Dorset account for a notable proportion of all fatal and serious injuries the majority occur on the County Council road network.

3.14 A more detailed review of collisions and casualties can be found at Appendix B – Collision and Casualty Overview – 2015.

4. Causes and Forces

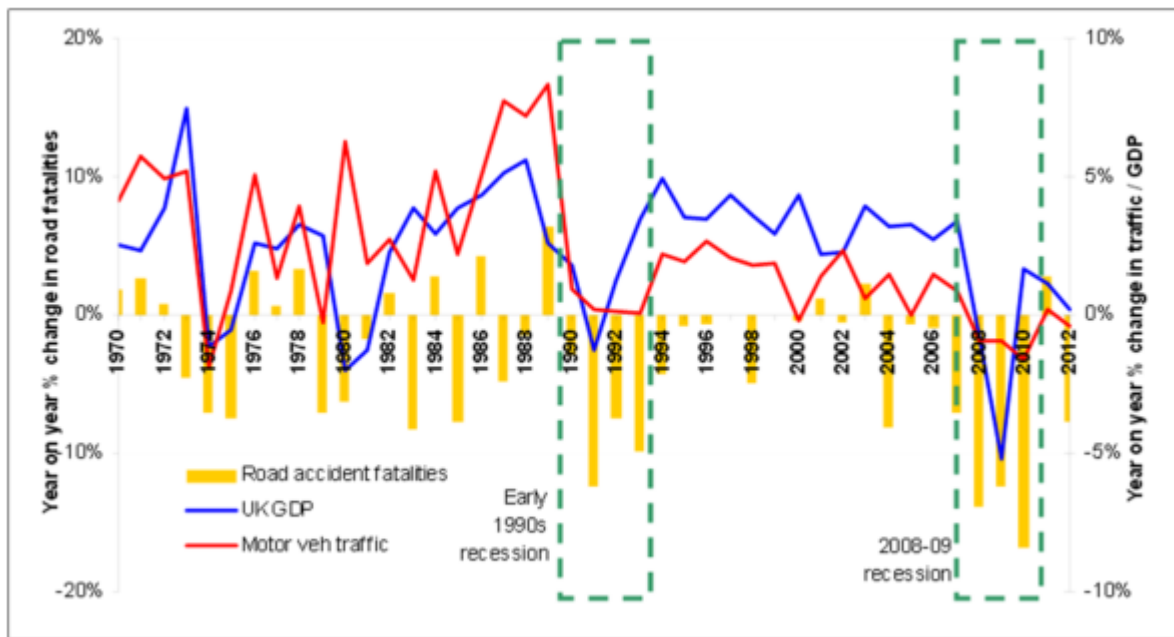
4.1 The causes and forces behind road traffic collisions and casualties is an understandably emotive subject. Much speculation often surrounds collisions and raises underlying concerns with particular sections of road irrespective of the factors associated with a particular collision.

4.2 Many of the factors that influence road traffic collisions and casualties are outside of the direct control of the County Council.

4.3 Correlations have been made between the level of GDP and number of fatalities. Chart 2 below shows the annual percentage change in number of reported road accident fatalities, GB motor vehicle traffic and UK GDP: 1970 to 2012¹.

¹ Reported Road Casualties in Great Britain: Annual Report 2012, Department for Transport, September 2013:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/269601/rrcgb-2012-complete.pdf

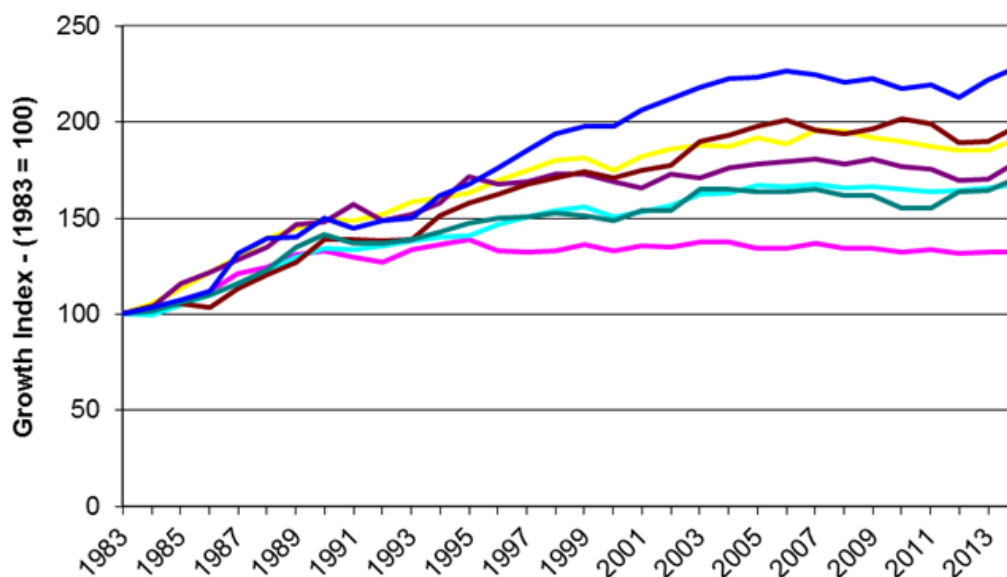
Chart 2 – UK GDP, Motor vehicle traffic and road traffic fatalities, 1970 to 2012



4.4 The increase in KSI casualties in the County Council area is in the context of improving economic performance which includes an increase in traffic. Traffic volumes rose by 3% within the County Council area.

4.5 There is a general correlation between traffic flows and the number of road traffic collisions/casualties. In short, since 2011 there has been a year on year increase in the amount of traffic using Dorset’s roads. Chart 3 shows the changes in the amount of traffic using Dorset’s roads between 1983 and 2014.

Chart 3 - Changes in the amount of traffic using Dorset’s roads between 1983 and 2014.



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4.6 The population of Dorset continues to grow which will likely result in greater demands on the highway network and possibly result in greater exposure to risk.

4.7 Weather is another important factor which can influence the number of people killed or seriously injured from one year to the next. The type of weather can have both a positive and negative influence on the overall number people killed or seriously injured; this is not Dorset specific.

4.8 For example, the winter of 2010/11 saw a significantly lower number of people being killed or seriously injured than in previous years owing to the extreme weather events; prolonged period of snow and cold weather. Such extreme weather events, whilst they would likely have contributed to isolated incidents, resulted in a lower number of people killed or seriously injured due to a combination of fewer journeys being made, drivers travelling at lower speeds and drivers being more accurately aware of prevailing hazardous conditions.

4.8 Road user behaviour is the main factor in the vast majority, if not all collisions resulting in injury. Good roads are important, however improved road user behaviour is significantly more important.

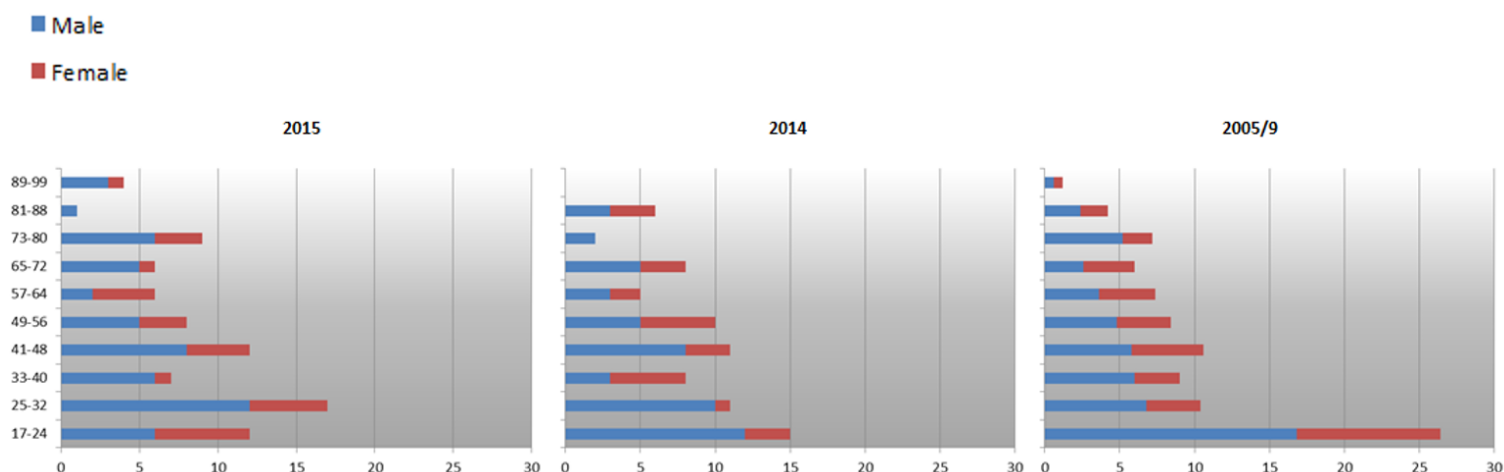
4.9 The Dorset Road Safety Partnership adopts the nationally recognised 'fatal five' causes of collisions as their key focus. These are:

- Drink and drug driving
- Excessive and inappropriate speed
- Not wearing a seatbelt
- Driver distraction e.g. Using a hand held mobile phone
- Careless and Inconsiderate driving

4.10 The cost of motor insurance has potentially had a positive impact upon the number of young car drivers (17-24yrs) who are killed or seriously injured. It is not possible to say whether the recent reductions are entirely due to the rise in the cost of insurance for young drivers but it is likely to have had an influence.

4.11 Chart 3 shows an age group breakdown of car drivers and passengers killed or seriously injured which shows a notable reduction in the proportion of young people (17-24yrs).

Chart 4 – Age group breakdown of car user KSI casualties, 2015, 2014 and the 2005/9 average.



4.12 Other factors to be aware of that can influence the occurrence of road traffic collisions and casualties are:

- In car technology
- Passive safety of modern vehicles
- Fuel prices
- Government legislation
- Demographics
- Routes being promoted as ‘must ride’ routes for motorcyclists

4.13 Included within Appendix C is a copy of the table of contributory factors that police officers are able to choose. In total that are 78 separate factors to choose from, with a maximum of six reported per collision.

4.14 Contributory factors are grouped into the following categories:

- Road environment – 10 factors
- Vehicle defects – six factors
- Injudicious action – 10 factors
- Driver/Rider error or distraction – 10 factors
- Impairment or distraction – 10 factors
- Behaviour or inexperience – seven factors
- Vision affected by – 10 factors
- Pedestrian (casualty or uninjured) – 10 factors
- ‘Special’ codes – five factors

4.15 By far the most commonly reported contributory factor for all road traffic collisions is ‘Driver/Rider error or distraction - failed to look properly’.

4.16 There is a slight difference between the ‘Top 10’ contributory factors for KSI collisions and slight collisions. Factors relating to injudicious actions are more often reported in collisions resulting in a fatality or serious injury than those resulting in slight injury. Tables 2 and 3 show the top 10 factors for KSI collisions and all injury collisions for 2015:

Table 2 – Top 10 reported contributory factors for KSI collisions - 2015

2015 KSI Collisions		
		% of all CFs
1	Failed to look properly	14%
2	Loss of control	10%
3	Poor turn or manoeuvre	9%
4	Failed to judge other persons path/speed	7%
5	Travelling too fast for conditions	5%
6	Exceeding speed limit	5%
7	Impaired by alcohol	4%
8	Careless/Reckless/In a hurry	4%
9	Swerved	3%
10	Pedestrian failed to look properly	2%

Table 3 – Top 10 reported contributory factors for all collisions - 2015

2015 All Collisions		
		% of all CFs
1	Failed to look properly	14%
2	Poor turn or manoeuvre	8%
3	Failed to judge other persons path/speed	7%
4	Travelling too fast for conditions	7%
5	Loss of control	6%
6	Slippery road (due to weather)	5%
7	Following too close	4%
8	Careless/Reckless/In a hurry	4%
9	Sudden braking	4%
10	Exceeding speed limit	2%

4.17 The high frequency of injudicious action contributing to fatal and serious injuries highlights the importance of enforcement and education/publicity interventions and initiatives in efforts to influence the number of people killed or seriously injured.

4.18 From a highway perspective, an area of influence on the causes and forces of road traffic collisions is the condition of the road itself and making reasonable improvements to the network.

4.19 It is important to consider that the number of road traffic collisions that occur as a direct result of a carriageway defect are very low.

4.20 Also, the number of road traffic collisions that occur at 'cluster' sites only represent a small proportion of the total number. For example, of the 280 people killed or seriously injured in 2015, just over 12% (35 people) were at recognised collision cluster sites; only a proportion of that, 12% could be linked in part to the highway. The behaviour of the road users involved were the overriding factor in all.

4.21 Where possible and reasonable the County Council will make improvements at cluster sites in an attempt to prevent further collisions from occurring.

4.22 It is very rare for the road condition or layout to have been the overriding factor in the occurrence of a road traffic collision.

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4.23 A more detailed review of collisions and casualties can be found at Appendix B – Collision and Casualty Overview – 2015.

5. What the County Council does to influence road traffic collisions

5.1 Carriageway condition is regularly monitored through various means and this information helps to identify sites and routes that have the greatest need for surface treatments.

5.2 All A and B roads and a few busy C class roads are subject to an annual skid resistance survey. These surveys identify sections of carriageway that have a 'poor' skid resistance.

5.3 Sites and routes that are identified as having a 'poor' skid resistance are ranked using road traffic collision data. The highest ranked sites will be those that have a poor skid resistance and highest number of collisions, ensuring that sites with the greatest evidenced need are addressed first.

5.4 Annually Highways conduct a collision cluster analysis to identify sites for investigation. If investigations reveal a common theme or trend in the type of collision engineering measures will be considered.

5.5 Engineering measures taken include the installation of passively safe street furniture. Whilst it is accepted that it would be better for a collision to not happen in the first place, passively safe street furniture reduces the likelihood of someone being killed or seriously injured should a collision occur.

5.6 All new major changes to the highway network are subjected to a Road Safety Audit. These audits are carried out at the design phase and after construction. Road Safety Audits are solely focused on the potential safety implications of a proposed or newly built scheme and identify potential safety 'problems' to be resolved. This process helps to prevent collisions.

5.7 All of the County Council's adopted highways are routinely inspected by the Community Highways Team. The busiest are inspected more often than the quietest. Busy roads in town centres, A and B and selected C roads are inspected monthly and low use residential streets and country lanes are inspected annually. Roads that fall between the two categories outlined are inspected bi-annually or quarterly depending on their use.

5.8 Highway inspections incorporate a variety of safety defects. These include the condition of the road surface, signs, lines, drainage and obstructions.

5.9 Outside of the routine inspection regime Highways also react to and investigate public enquiries and repairs are carried out if necessary.

5.10 Parking Services enforce on street parking restrictions. On street parking restrictions are generally located at areas where parking has presented a safety hazard. The enforcement of parking restrictions plays an important role in road safety as it helps prevent potential safety hazards.

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5.11 The County Council's **Transport Planning Team** are responsible for the education and publicity side of road safety. Road Safety initiatives that the Transport Planning Team currently provide include:

- **Dorset Road Safe Partnership:** Transport Planning is the lead representative for the County Council at the Dorset Strategic Road Safety Partnership. Members of the Transport Planning Team are involved with the development of new road safety publicity campaigns and educational interventions and support the delivery of existing partnership interventions. The partnership has identified six key areas of focus:
 - Pedestrian and cyclist casualties in urban areas;
 - Better road safety education and training for children, learner and young drivers;
 - Motorcycle casualties (including moped and scooter riders);
 - Rural road KSIs;
 - Careless or dangerous road user behaviour;
 - Illegal and inappropriate speed.
- **Bikeability:** Cycle training for children at three levels. Grant funding from the Department for Transport allows for free places on levels two and three. The programme has been shown to have a long lasting impact on children's hazard perception.
- **Bike It Plus:** An intensive project delivered alongside schools by Sustrans aimed at creating a lasting culture of active travel in children.
- **Adult Cycle training:** Bikeability training for adults. Dorset County Council has teamed up with local cycling trainers to provide subsidised cycle training to help refresh skills and raise confidence.
- **School Travel Health Check:** Using school census data returns on pupil location and mode of travel to provide an on-line resource for schools and other interested parties. Uses include school travel planning, identifying and prioritising infrastructure improvements, organising school transport, teaching support, targeting other projects such as Bike-it.
- **Management of the County Council's school crossing patrols:** There are currently 29 sites at which patrols operate in the Dorset County Council area.
- **SID programme:** Speed Indicator Devices (SIDs) raise driver awareness of local speed limits. An extensive evaluation into the effectiveness of SIDs has been completed and the results show that deployment of a SID can notably reduce traffic speeds.

Parish and Town Councils are able to purchase and deploy their own SID devices via the 'Community Owned SID' programme. Such sites are subject to criteria. Community owned SID are not subject to the review of the County Council's SID deployment programme and criteria assessments can still be requested via the Transport Planning Team.

6.0 Summary

6.1 The intention of this report has been to raise awareness of the context for road traffic collisions and casualties and what the County Council continue to do that aims to improve road safety.

6.2 The County Council has the potential to and does influence the occurrence of road traffic collisions and casualties, however, the extent of this influence is likely to only address a small proportion.

6.3 It is recommended that the contents of this report be considered and discussed by the Committee. In support of this the Committee are invited to consider the following key lines of enquiry in helping to assess the effectiveness of the current arrangements:

- If we do nothing new or different where is the trend heading? Is this okay?
- What's helping and hindering the trend?
- Are local services and partnerships making a difference and providing value for money?
- What additional information/research do we need to properly understand the causes and forces?
- Who are the key partners we need to be working with?
- What could work to turn the trend in the right direction including 'low cost and no cost solutions'?
- What is the Council's elected members role and specific contribution?

Mike Harries
Director for Environment & the Economy
March 2017