Review of Road Accident data for Killed and Seriously Injured

1. Background

The corporate performance report has, for several years, reported the number of Killed and Seriously Injured people (KSI) on the roads of Shropshire. Originally part of the national set of key performance indicators Shropshire has continued to monitor and report this measure.

Reporting of the KSI measure is based on an average of the number of people killed or seriously injured per year, during the preceding 3 year period. This method helps to smooth out any exceptional events and provides a more balanced trend view.

At the end of 2005 there was an annual average of 215 people killed or seriously injured on the roads of Shropshire. Since 2012 the annual average over three years had reduced and stabilised to around 126. During 2013 the number of KSI was at its lowest ever level. As these numbers are now being removed from the 3 year calculations the higher KSI figures for 2016 are resulting in an increased 3-year average. As at the end of June 2017 the rolling three-year average has now increased to 160.7 returning to the averages last seen in 2007/08.

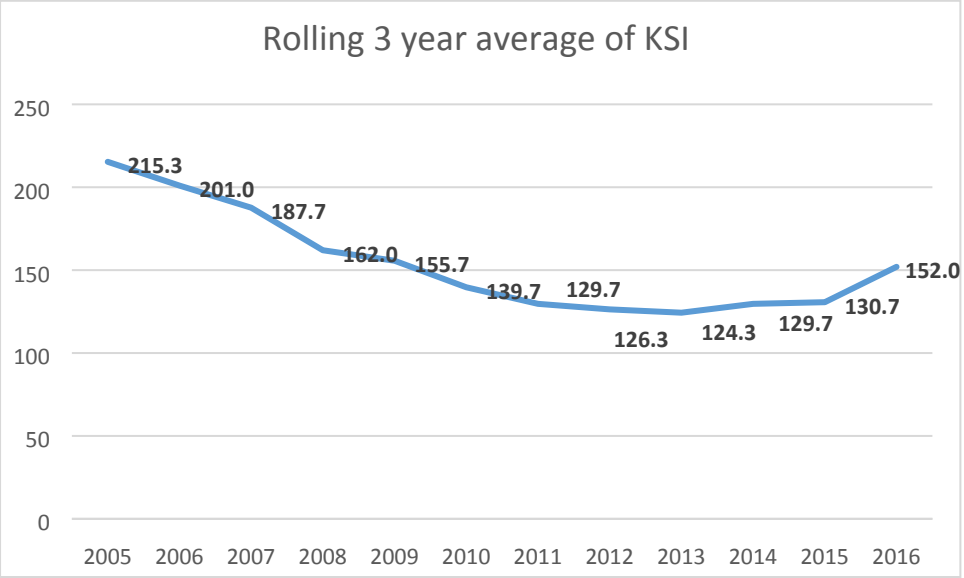


Chart 1 – average number of people killed or seriously injured per year over a 3 year period

As a result of the reported increase in the number of casualties, members have expressed concerns and would like a better understanding of potential issues and causes behind the rise. This report takes an initial insight of the accident data to help members to decide if further investigations are required.

2. Road Network

The local road network within Shropshire is managed and maintained by Shropshire Council. Highways England operates, maintains and improves England's motorways and major A roads. In Shropshire this includes the M54, A5, A49 south of Shrewsbury, A458 from Shrewsbury to the Welsh border and the A483 from Oswestry to the Welsh border. Whilst

Shropshire Council liaises with Highways England the trunk road network falls under the responsibility of Highways England. This report covers accidents for both the local and trunk road networks.

3. Key figures

The accident data in this covers the period from June 2012 to June 2017. It should be noted that the years of 2012 and 2017 are incomplete years.

Throughout this report there are references to accidents, casualties and vehicles. Readers should note that 1 accident may involve more than 1 vehicle and result in more than 1 casualty. Vehicles also includes cycles. This report reviews data where an accident results in a casualty who is either slightly, seriously or fatally injured. This report does not cover accidents where no injuries were sustained.

During the review period there were:

- 3000 accidents, with
- 4158 casualties, involving
- 5503 vehicles

4. Number of Accidents

The available data covers the period from 2102 to 2017. It should be noted that the years of 2012 and 2017 are incomplete years. The following chart shows the number of accidents and the highest level of severity of a casualty within that accident.

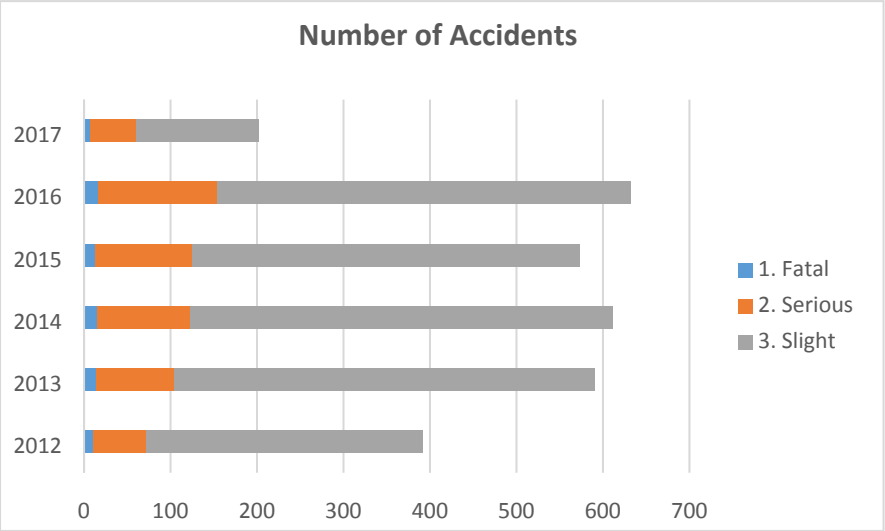


Chart 2 –number of accidents showing the highest severity of any person involved in the accident

During the period 2013 to 2016 the average number of accidents per year was 601 per year.

In 2016 there were 632 accidents 5% higher than the average. The number of accidents varies and can be affected by many factors along with random unexpected and

unexplainable events. There will also be human factors where people are impaired by drink or drugs which result in avoidable accidents.

Accident data is monitored by Shropshire Council and there is regularly liaison with both the Safer Roads Partnership and West Mercia Police where information is shared and where appropriate acted upon to make safety improvements.

5. Severity of Casualties

The following chart illustrates the recent increases in the rate of serious injuries. This data shows all casualties who were involved in an accident. A single accident may have multiple casualties with differing levels of severity.

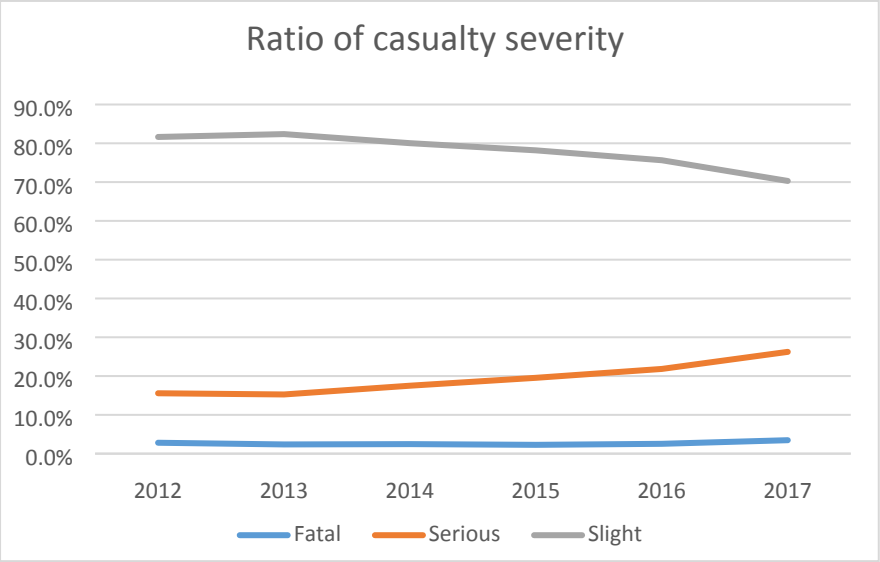


Chart 3 –ratio of casualty severity for any person involved in an accident

Reporting of increases of severity in the quarterly performance reports have stated that there does not appear to be an increase in accident rates. As part of the research for this report it was found that police forces have made changes to the recording of accidents. West Mercia Police changed to the CRASH system during December 2015. This approach uses a prescribed set of conditions to determine the scale of severity for casualties and relies less on the judgement of officers. It is likely that the reporting of injury severity is now more consistent and accurate, consequently this has shown an increase. Early indications of national data for 2015 and 2016 shows that this has led to an increase in the reporting of serious injuries by between 5 to 15%. The increase in Shropshire has been 23% and data for 2017 shows a continued increase in the rate of seriously injured.

Whilst the change of systems is likely to account for the majority of this increase the table below shows that the rate of accidents involving a casualty who is killed or seriously injured had increased prior to the change of recording.

	Fatal	Serious	Slight
2012	2.8%	15.6%	81.6%
2013	2.4%	15.3%	82.4%
2014	2.5%	17.5%	80.0%
2015	2.3%	19.5%	78.2%
2016	2.5%	21.8%	75.6%
2017	3.5%	26.2%	70.3%

The ratio of KSI accidents in Shropshire is higher than the national rates. Data for 2016 is shown below.

	Shropshire	Great Britain
Fatal	2.5%	0.99%
Seriously Injured	21.8%	13.3%
Slightly Injured	75.6%	85.7%

Key facts for sections 4 and 5

- The total number of accidents per year (2013 – 2016) have remained +/- 5% of the average
- Recent increases in the number of casualties with serious injuries is mainly as a result of changes to the recording methodology and not as a result of accident numbers.
- Reporting of Killed and Seriously Injured numbers will take 3 years to level out as a result of changes to the methodology of recording filters thorough the reporting period
- Accidents in Shropshire are more likely to result in an outcome of KSI when compared to the national average.

In-depth Data

The following sections review the accident data to identify factors that impact on accident rates and review factors that are particular to Shropshire. It should be noted that the data only refers to accidents on the public highway, which are reported to the police and have resulted in a casualty.

General trends show that the number of fatalities in road accidents is decreasing. There are many factors including advances in vehicle safety systems, road improvement schemes and public education programmes. There is not one factor which contributes to causes of accidents but it is likely to be a mixture of controllable and uncontrollable factors.

6. Economic Factors

Research indicates that as an economy grows it results in a growth of traffic, which results in more accidents. When the Gross Domestic Product (GDP) decreases there are indications that the rate of traffic growth slows and the number of fatalities reduces. During the last recession the volume of motor vehicle traffic saw an actual decrease. The following chart illustrates potential links between economic factors and fatalities.

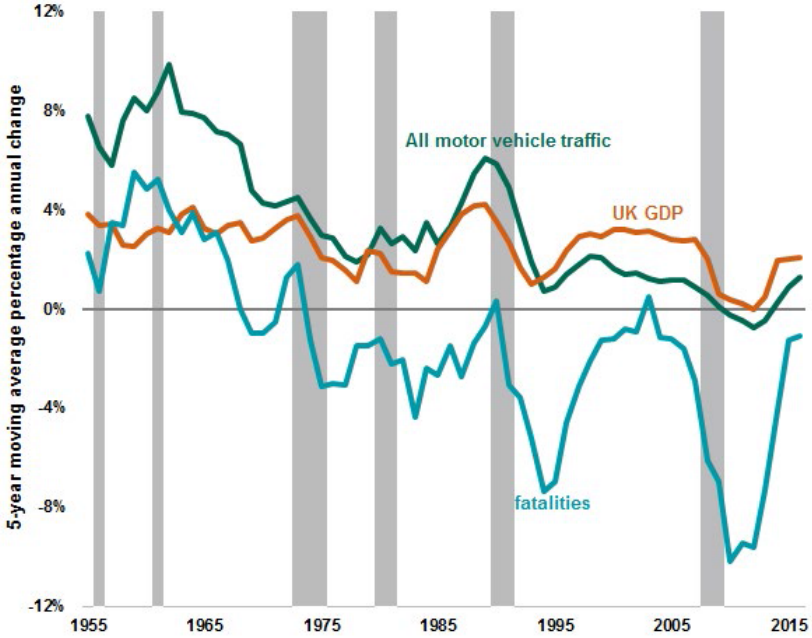


Chart 4 – effects of GDP on numbers of vehicles and fatalities. Source: DFT Reported road casualties in Great Britain 2016

Chart 5 illustrates the employment trends for Shropshire from 2004

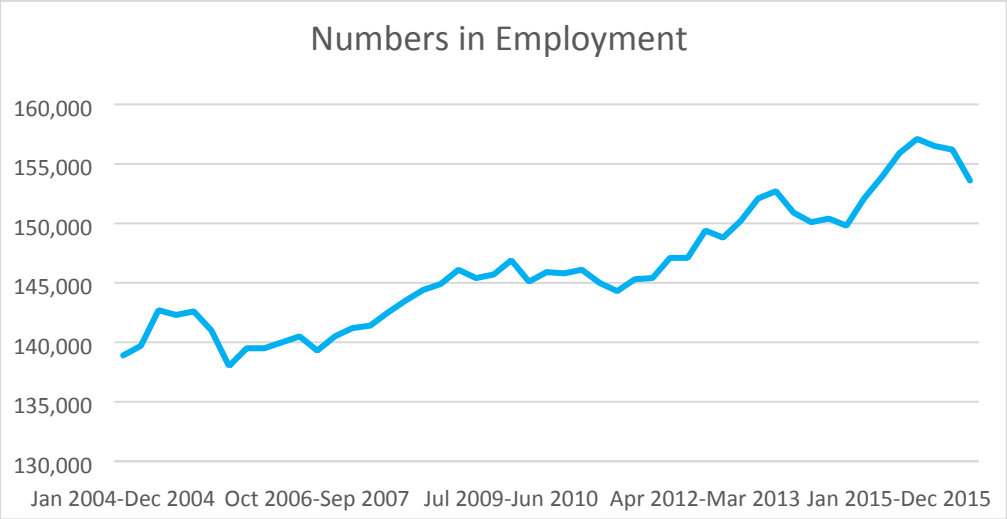


Chart 5 – Employment trends in Shropshire – Source: NOMIS

The overall trend for employment numbers in Shropshire has been positive. There was a downturn period in 2006 and then started to increase towards the end of 2007, stabilising from 2009 to 2012 and then increasing to the summer of 2016. This trend is different to that of the KSI figures and is illustrated in Chart 6.

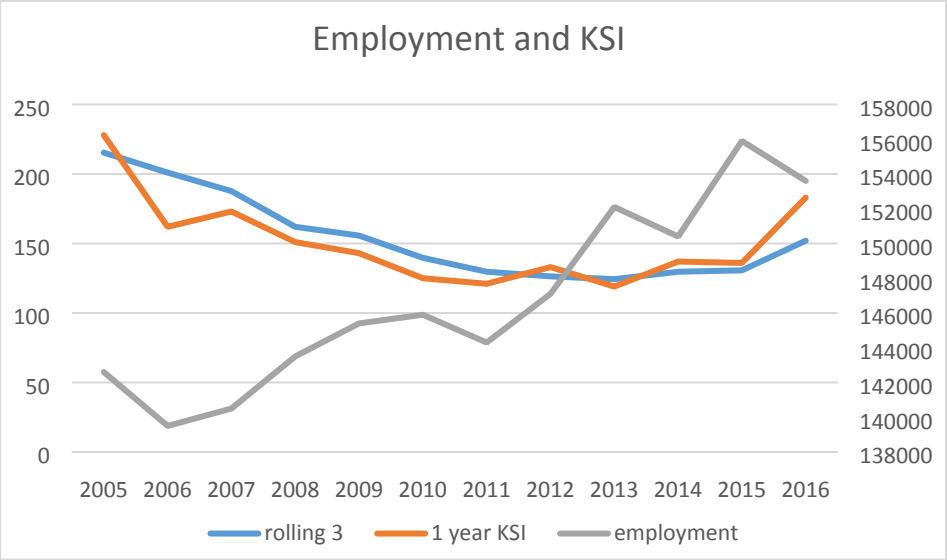


Chart 6 – comparison of Shropshire employment rates to Killed and Seriously Injured figures

During the period 2005- 2007 there appeared to be some correlation between accident and employment rates. From this time, whilst employment increased the number of KSI has reduced. Overall there does not appear to be any similarities when comparing the numbers in employment to the number of people killed or seriously injured on the roads in Shropshire.

7. Time Factors

Although the pattern of employment increase is different to that of the KSI numbers the time of accidents and of KSI does increase during key commuting times.

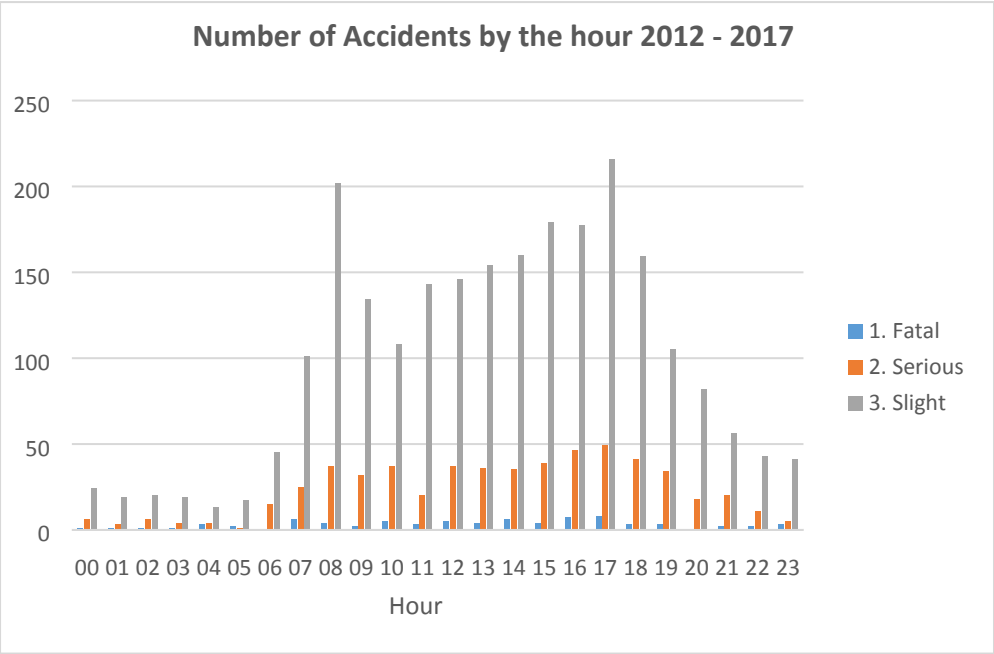


Chart 7 – Accident numbers and condition of most severe casualty by hour of day

The peak time for accidents occurs between the key commuting times of 8am to 9am and for 5pm to 6pm. There are differences in the ratios of accidents which are shown in Table 1 below.

Hour	Killed	Serious	Slight	Total
00	1.3%	1.1%	1.0%	1.0%
01	1.3%	0.5%	0.8%	0.8%
02	1.3%	1.1%	0.8%	0.9%
03	1.3%	0.7%	0.8%	0.8%
04	3.9%	0.7%	0.6%	0.7%
05	2.6%	0.2%	0.7%	0.7%
06	0.0%	2.7%	1.9%	2.0%
07	7.9%	4.5%	4.3%	4.4%
08	5.3%	6.6%	8.5%	8.1%
09	2.6%	5.7%	5.7%	5.6%
10	6.6%	6.6%	4.6%	5.0%
11	3.9%	3.6%	6.1%	5.5%
12	6.6%	6.6%	6.2%	6.3%
13	5.3%	6.4%	6.5%	6.5%
14	7.9%	6.2%	6.8%	6.7%
15	5.3%	7.0%	7.6%	7.4%
16	9.2%	8.2%	7.5%	7.7%
17	10.5%	8.7%	9.1%	9.1%
18	3.9%	7.3%	6.7%	6.8%
19	3.9%	6.1%	4.4%	4.7%
20	0.0%	3.2%	3.5%	3.3%

21	2.6%	3.6%	2.4%	2.6%
22	2.6%	2.0%	1.8%	1.9%
23	3.9%	0.9%	1.7%	1.6%

Table 1 – ratio of accidents by the condition of the most severe casualty by time of accident

84% of slight accidents occur between the hours of 7am to 8pm. The most noticeable difference is that the ratio of the severity of accident increases between 9pm and 6am where 20.8% of accidents have a severity of killed compared to 10.6% with a severity of slight.

Day and month of accidents

Chart 8 shows the trend of accidents by days. The most likely days of accidents is a Monday or Friday, which may also be linked to key commuting days.

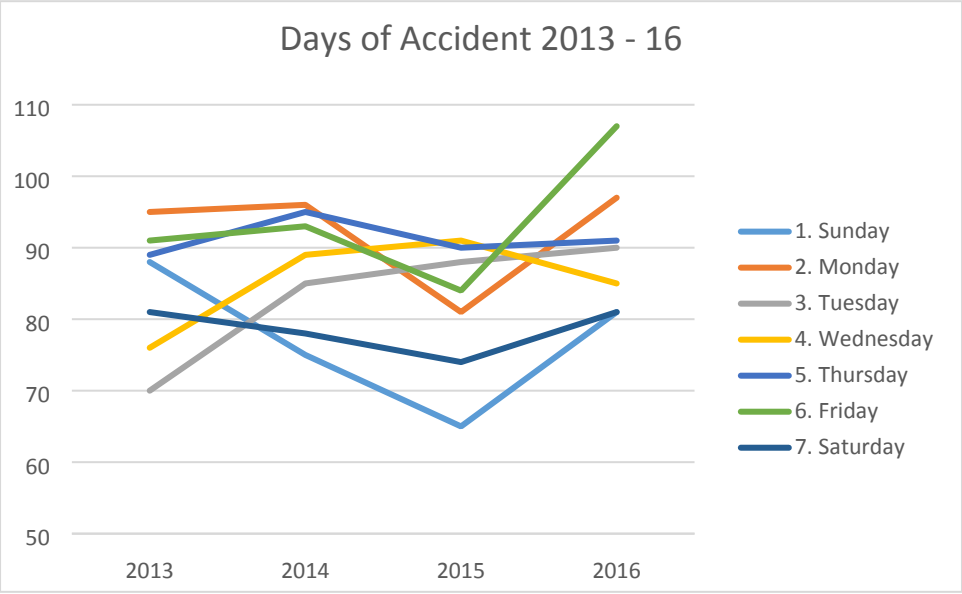


Chart 8 – trend of accidents by days

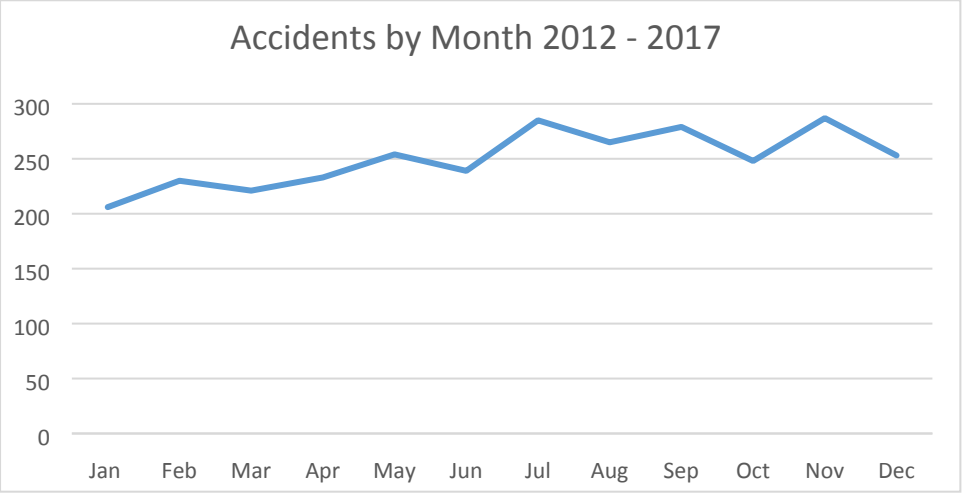


Chart 9 – number of accidents by month

Accidents by month over the period show that the peak months are July and November. Numbers generally reduce during the winter months when there is likely to be less leisure traffic. In June the peak accident day is a Sunday whereas in other months Sunday is usually one of the least likely days to have an accident. The peak month for accidents is in November.

November coincides with the end of British Summer Time when clocks go back one hour. This may be a contributing factor.

Increases in summer road traffic is a likely factor in accident rates. The A458 heading towards Snowdonia sees the biggest seasonal increase in traffic on England's major A roads. During the summer it carries almost a quarter (23.1 per cent) more vehicles than during the rest of the year. Source: RAC Foundation

8. Population and Age Factors

Population trends

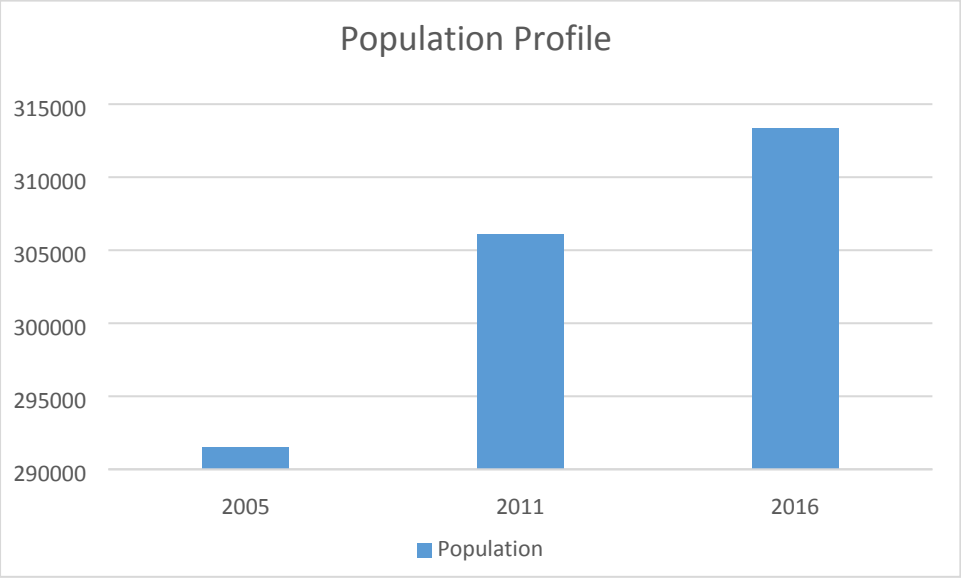


Chart 10 – population numbers of Shropshire by year

At the time of the first reporting the rolling three year accident data in 2005 the mid year population estimates for Shropshire were 291,500. The latest estimates place the population of Shropshire at 313,373, an increase of 7.5% over the period.

The increase in population figures may be a contributing factor to any changes in accident rates.

Age of casualties

The following chart compares the age profile of Shropshire compared to the age of casualties.

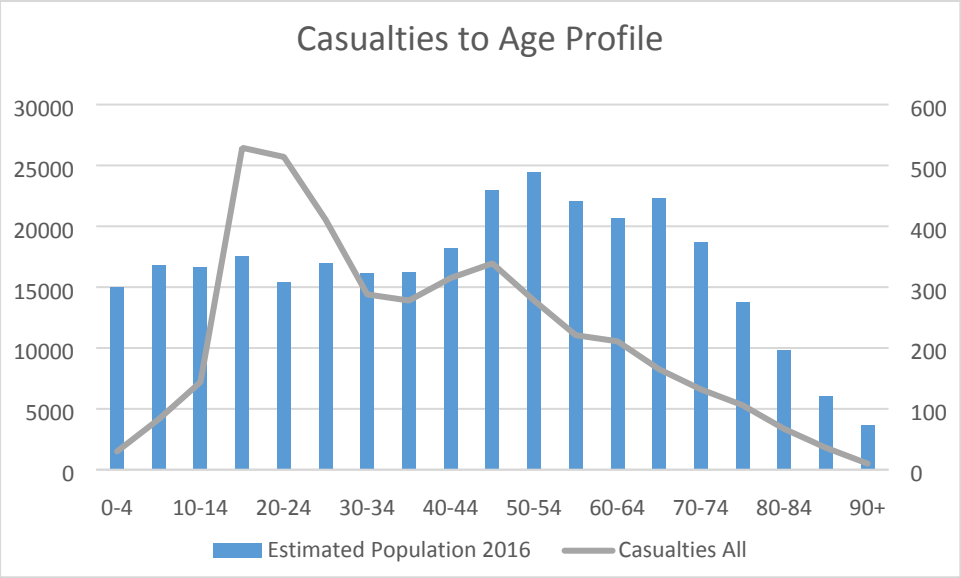


Chart 11 – comparison of casualty numbers to age profile of Shropshire

Similar to national patterns the chart shows how young age groups make up a disproportionate number of the casualties when compared to the age profile of the county.

15 to 29 year olds equate to 15.9% of the population but account for 29% of all casualties.

KSI by Age Groups

The following charts reviews the severity of casualties by age bands

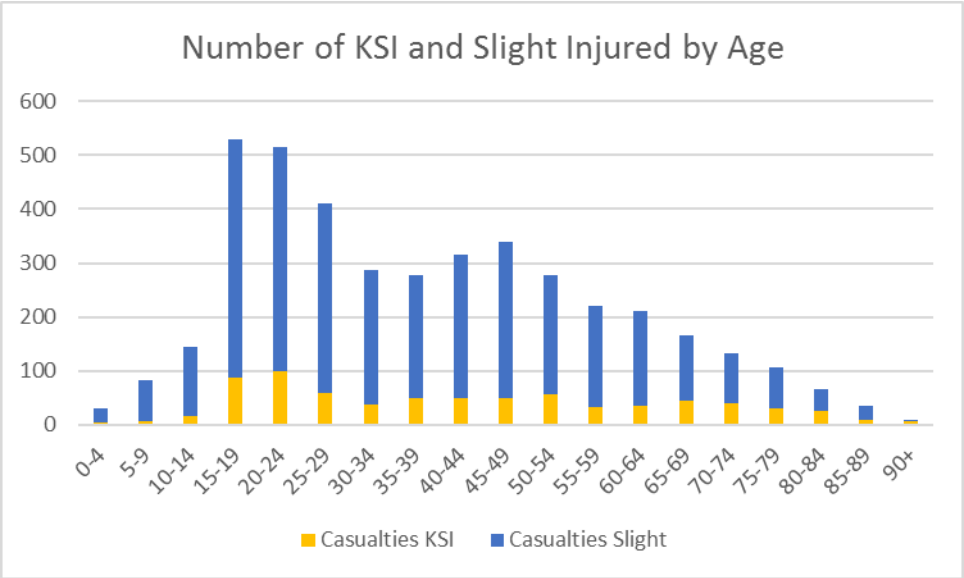


Chart 12 – number and severity of casualties by age band

The total number of casualties is highest amongst the 15-19 year age group whilst the number of KSI is highest amongst 20 – 24 year olds.

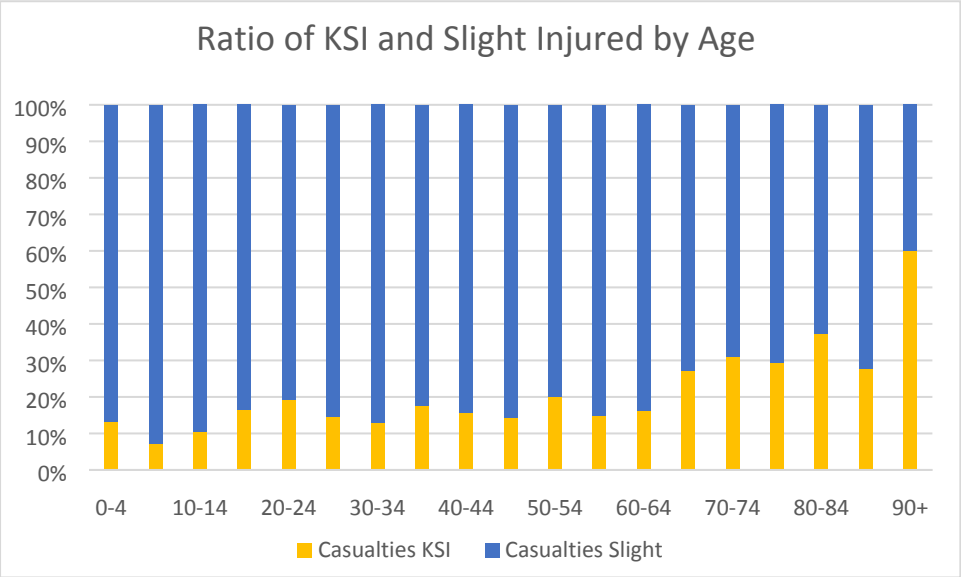


Chart 13 – ratio of casualties by severity of casualty and by age band

Whilst the likelihood of a casualty from a road traffic accident is highest amongst the younger age groups the chart indicates that the severity of injuries is likely to increase with age. From the age of 65, if a person is involved in a traffic accident, it is more likely that the severity will be higher.

The over 65's account for 12.4% of all casualties but account for 21.5% of all killed or seriously injured.

Whilst only 10 casualties were aged 90+, 60% of these had an outcome of being killed or seriously injured.

This profile of severity of casualties by age is relevant to Shropshire. In the 2011 census the percentage of over 65's was 20.7% of the population. This was higher than the national rate of 16.4%. The latest mid year population estimates for 2016 indicate that the population of over 65's in Shropshire has increased by 9,386 (14.8%) and now accounts for 23.7% of the Shropshire population. Population forecasts for Shropshire show that the over 65's will account for 33% of the population by 2037. (Population forecasts developed by Information, Intelligence & Insight team of Shropshire Council)

Based on the aging profile of Shropshire residents, it is likely that accidents involving older residents could be a contributing factor for the number of Killed or Seriously Injured casualties.

9. Vehicle Factors

Vehicle registrations in England and Shropshire are shown in the table below

	Cars	Motorcycle	Light Goods	Heavy Goods	Buses & Coaches	Other vehicles
Shropshire	77.7%	3.4%	11.6%	1.6%	0.3%	5.3%
England	82.7%	3.5%	10.2%	1.3%	0.4%	1.8%

Table 2 – vehicle registrations by location - Source: DFT Licensed vehicles by body type 2016

The percentage of vehicles registered in Shropshire shows that there is a lower percentage of cars than the national rate. However, there is a higher percentage of goods and other vehicles which includes; agricultural vehicles and hackney carriages. The registration variation reflects the rurality of the county.

The following table shows the ownership of cars by household in Shropshire and England

	No cars	1 car or van	2 cars or vans	3 cars or vans	4 or more cars or vans
Shropshire	15.8%	42.2%	30.8%	7.9%	3.3%
England	25.8%	42.2%	24.7%	5.5%	1.9%

Table 3 – % of households with a car - Source: 2011 Census – Office for National Statistics

The ownership of cars per household in Shropshire is higher than the average for England. This profile is typical in rural areas as people have lower access to public transport and find it more difficult to walk or cycle to destinations. Rural residents are therefore more reliant on their own transport.

The following chart shows the number of accidents for each vehicle type in Shropshire

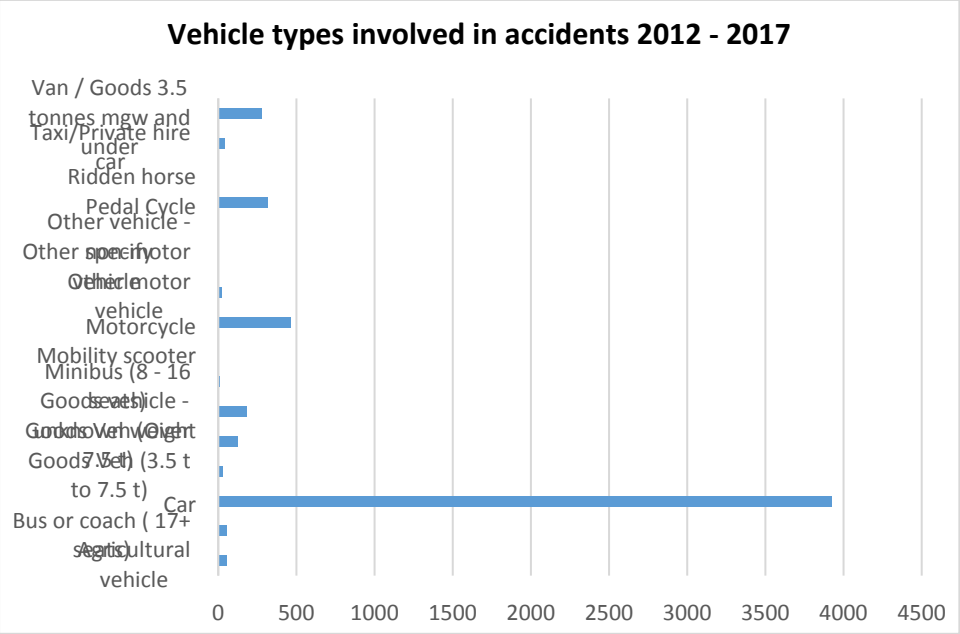


Chart 14 – number of vehicles involved in an accident by vehicle type

As the largest transport group it follows that cars account for the majority of vehicles involved in accidents. This is followed by motorcycles and pedal cycles.

There is a disproportionate number of accidents involving pedal cycles and motorbikes. Department for Transport vehicle licensing statistics show that 3.5% of registered vehicles are motorbikes and account for around 1% of distance travelled. The figures show that 8.5% of vehicles involved in accidents within Shropshire are motorbikes.

Since 1996, there has been a big increase in the number of larger motorcycles. In 1996, motorcycles over 500cc only accounted for 34% of all licensed motorcycles. In 2016 they accounted for 54%.

The National Travel Survey 2016 shows that pedal cycles account for around 2% of personal travel trips and 1% of distance travelled. The figures show that 5.7% of vehicles involved in accidents within Shropshire are pedal cycles.

Department for Transport have 135 traffic count points in Shropshire which are used for estimates of traffic volumes. Some caution should be used with the figures as they focus on A roads and Motorways and may not reflect local traffic use.

	Estimated Miles Travelled	% of Miles Travelled
Pedal Cycles	1,536,000	0.1%
Motor Cycles	8,426,000	0.6%
Cars	1,007,734,000	75.5%
Buses and Coaches	8,597,000	0.6%
Light Goods Vehicles	209,216,000	15.7%
All HGVs	99,266,000	7.4%

Table 4 – estimated journey miles per year in Shropshire by vehicle type - Source: DFT Traffic Counts

Vehicle Casualties

When reviewing data for fatal and serious casualties by vehicle type there is a greater likelihood that accidents involving motorcycles and pedal cycles will result in serious or fatal injuries when compared to other modes of transport.

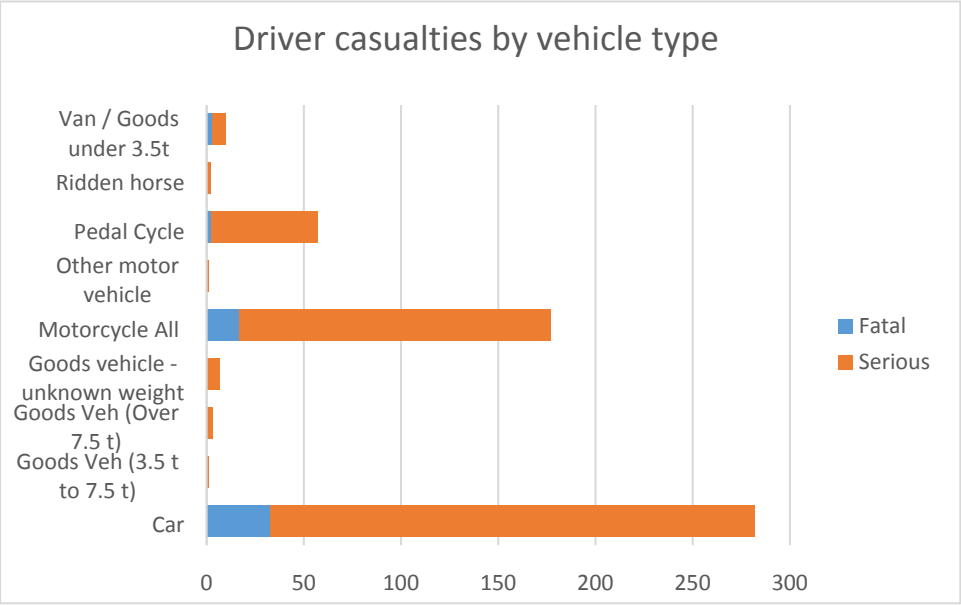


Chart 15 – number of serious or fatal driver casualties by vehicle type

When examining driver casualties the chart shows that killed or seriously injured driver casualties are apportioned as follows:

- Car Drivers 52%
- Motorcycles 33%
- Pedal Cycles 11%
- Goods vehicles/vans under 3.5t 2%

Passengers

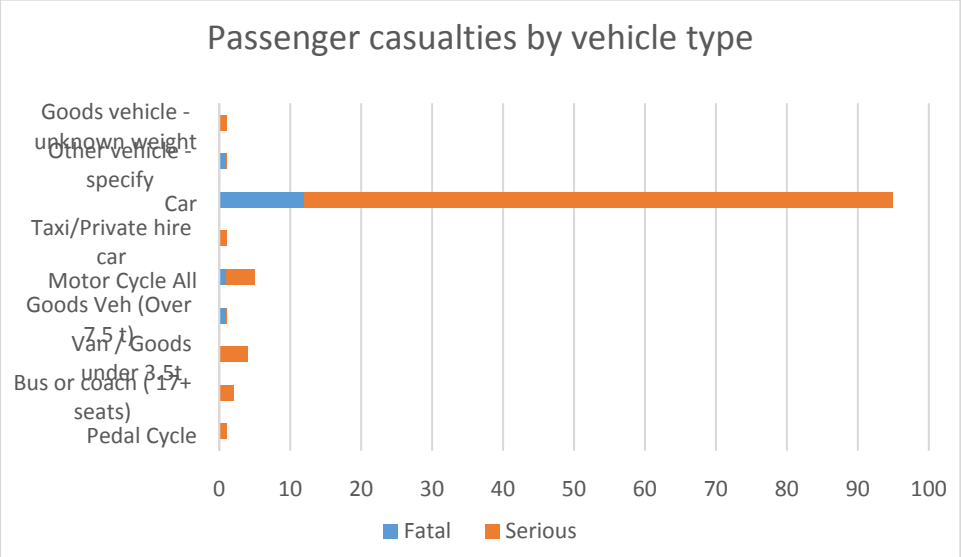


Chart 16 – number serious or fatal passenger casualties by vehicle type

When examining passenger casualties the chart shows that killed or seriously injured passenger casualties are apportioned as follows:

- Car Passengers 86%
- Motorcycle Passengers 4.4%
- Passengers of goods vehicles/vans under 3.5t 3.6%

Pedestrians

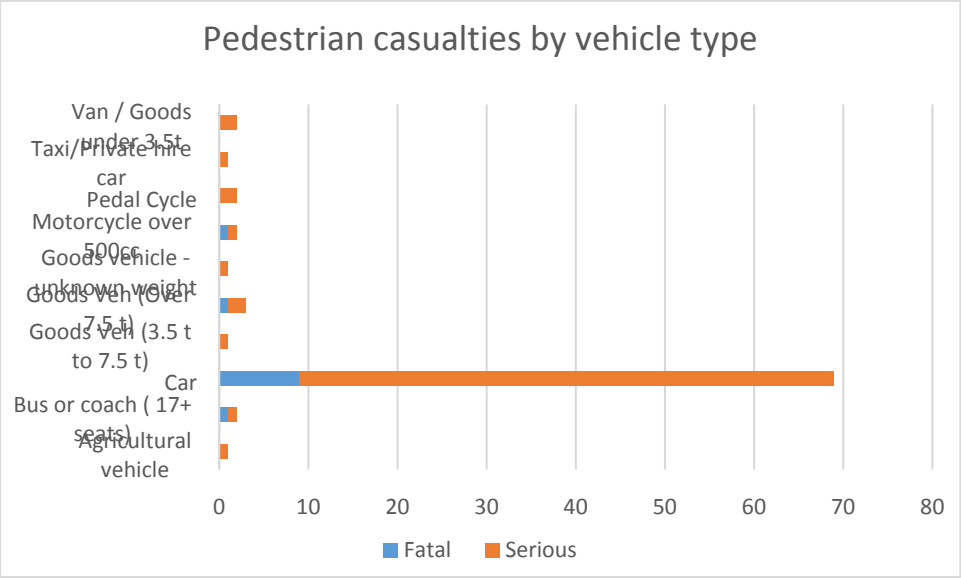


Chart 17 – number of pedestrians with serious or fatal injuries by causal vehicle type

When examining pedestrian casualties the chart shows that killed or seriously injured pedestrians casualties are as a result of injuries caused by a:

- Car 82%
- Goods Vehicle (Over 7.5 t) 3.5%
- Bus or coach, Motorcycle, Pedal Cycle, Van under 3.5t – each 2%

The profile of fatal casualties by all road user type in Shropshire differs from the national results. The following table shows the comparison. National data is for 2016 only, Shropshire data is for 2012 to 2017 as data for 2016 alone would be too small for comparison.

	Shropshire 2012 - 17	Great Britain 2016
Car	58%	46%
Pedestrian	13%	25%
Motorcycle	20%	18%
Cyclist	2%	6%

Table 5 – fatalities by road user type and locality

The data shows that Shropshire experiences a higher rate of fatalities in cars than that for Great Britain. The higher rate of car ownership in rural counties may be a factor in this. Conversely the lower rate of fatalities for pedestrians and pedal cyclists may be due to less urban environments where pedestrian and cycling accidents are more likely to occur.

10. Road Factors

The type of roads has an impact on the nature of accidents. National data, shown in table 6, illustrates that slight injuries are more likely to occur in built-up areas. The Highway Code defines a built-up area as a settled area in which the speed limit of a road is automatically 30 mph. However a built-up area is not defined by the presence of houses, but by the presence of street lights.

Casualty figures for England show that there are higher rates of slight injuries and serious injuries in built-up areas as opposed to higher rates of fatalities in non built-up areas. In England motorways account for 21% of traffic but only 5% of casualties.

	Built up	Non built up	Motorway
Fatal	44%	51%	5%
Serious	66%	30%	3%
Slight	73%	22%	5%

Table 6 – national fatality rates by built-up of road. Source: DFT Reported road casualties in Great Britain 2016

Composition of roads in Shropshire

Built-up and non built-up roads are derived from the urban and rural classification of roads. The figures in table 7 illustrate the high percentage of rural roads within the county. Within Shropshire there are:

12.4 km of motorway

32.2 km of urban A roads and 527.7 km of rural A roads

25.4 km of urban B roads and 535.5 km of rural B roads

336.2 km of urban C and U roads and 3716.4 km of rural C and U roads

	Shropshire	England
Motorway	0.24%	1.01%
Urban Roads	7.59%	40.66%
Rural Roads	92.17%	58.33%

Table 7 – road type ratios - Source: DFT Total road length (kilometres) by road type and local authority in Great Britain, 2014

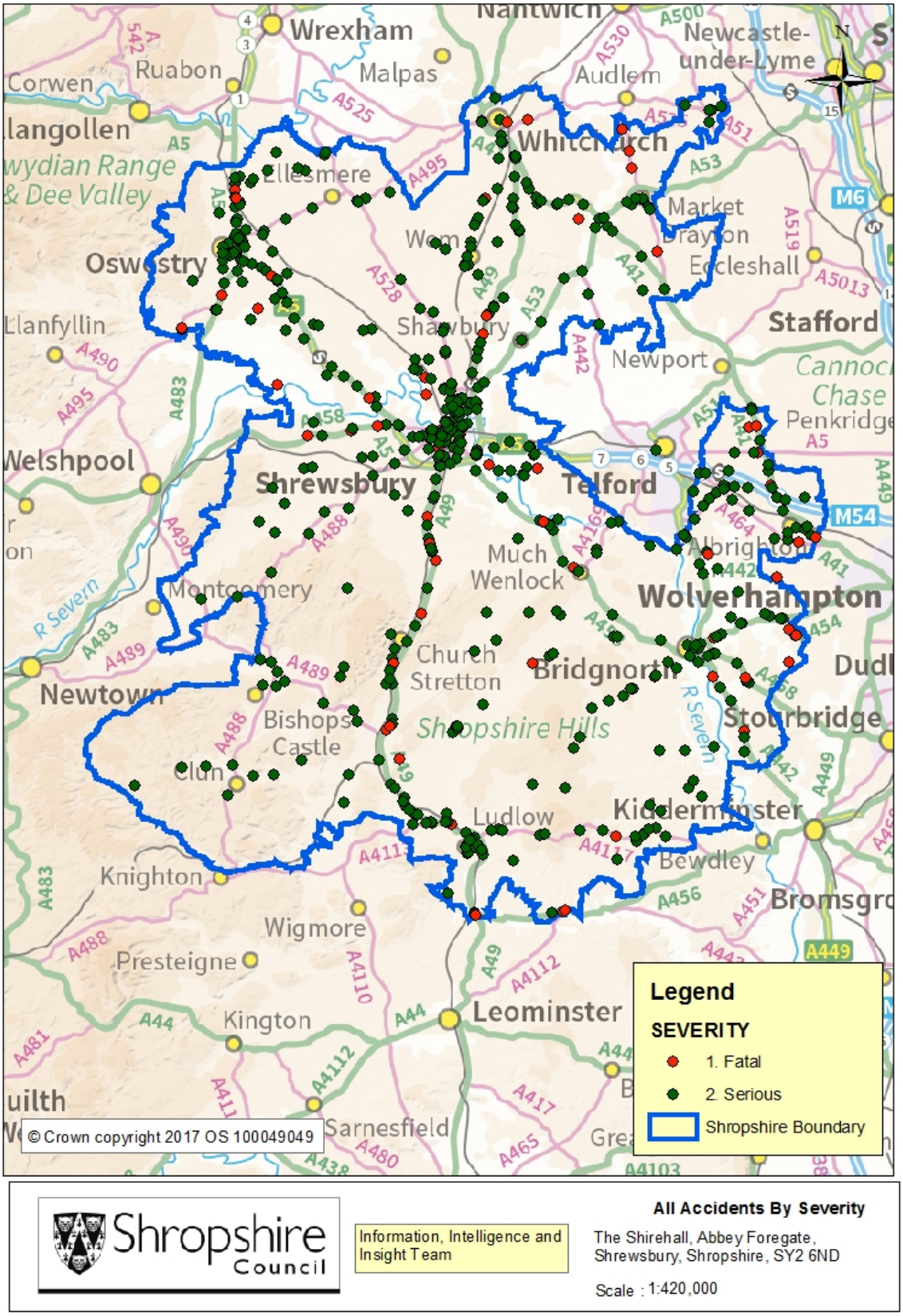
Shropshire is home to a large rural, non built-up, highway network. Many of these roads have speed limits above 30mph, which are single carriageway and have limited overtaking opportunities. This high percentage of rural, non built-up roads, coupled with national data highlighting that fatality rates are higher in non built-up areas presents Shropshire with specific challenges to reduce accident and casualty rates. Details of accidents by road type and speed are shown in table 8.

11. Location of accidents

Records of accidents show the road number where an incident occurred. As is to be expected the roads with the greatest length and those which carry higher volumes of traffic will have a higher number of accidents. Therefore the higher number of accidents on key arterial routes of the A5 and A49 is to be expected.

Accident data is monitored by Shropshire Council and there is regularly liaison with both the Safer Roads Partnership and West Mercia Police where information is shared and acted upon where appropriate.

The following map highlights the location of serious and fatal accidents, additional maps are included as an appendix.



Map 1 – location map of serious and fatal accidents

12. Road Speeds

The following chart shows the rate of accidents by the speed limit of the primary roads where accidents have occurred.

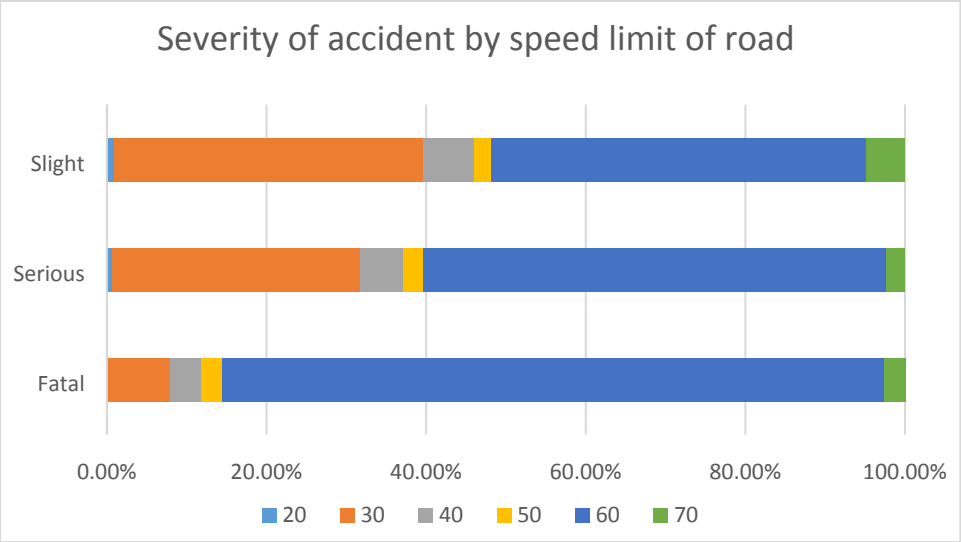


Chart 18 – ratio of accidents by speed limit with severity of most seriously injured casualty

The majority of accidents occur on 60mph roads with the severity of accidents increasing also increasing. When further examining the data by road types it shows that 60mph single carriageways incur the most accidents. This is illustrated in the table below.

	20	30	40	50	60	70
Roundabout						
1. Fatal		1				
2. Serious		6			6	1
3. Slight		32	4	3	22	8
One way street						
2. Serious	1	9				
3. Slight	4	26	2		1	
Dual carriageway						
1. Fatal						2
2. Serious			1		2	12
3. Slight		10	2	3	16	96
Single carriageway						
1. Fatal		5	3	2	63	
2. Serious	3	159	29	14	317	
3. Slight	19	837	139	42	1065	
Slip road						
2. Serious					1	
3. Slight		1	1		3	7
Unknown						
3. Slight		9	1	2	5	3

Table 8 – number of accidents by road type and severity of most seriously injured casualty

The table illustrates that 48% of accidents occur on single carriageways with a 60mph speed limit.

13. Human Factors

Each accident record shows the potential causal factors of the accident. There may be multiple factors leading to an accident and therefore up to four causal factors may be recorded. Factors are recorded as highly likely or possible causes of the accident but other factors may also have been a contributory reason.

The following chart shows the sum of high level causal factors for factors 1 to 4

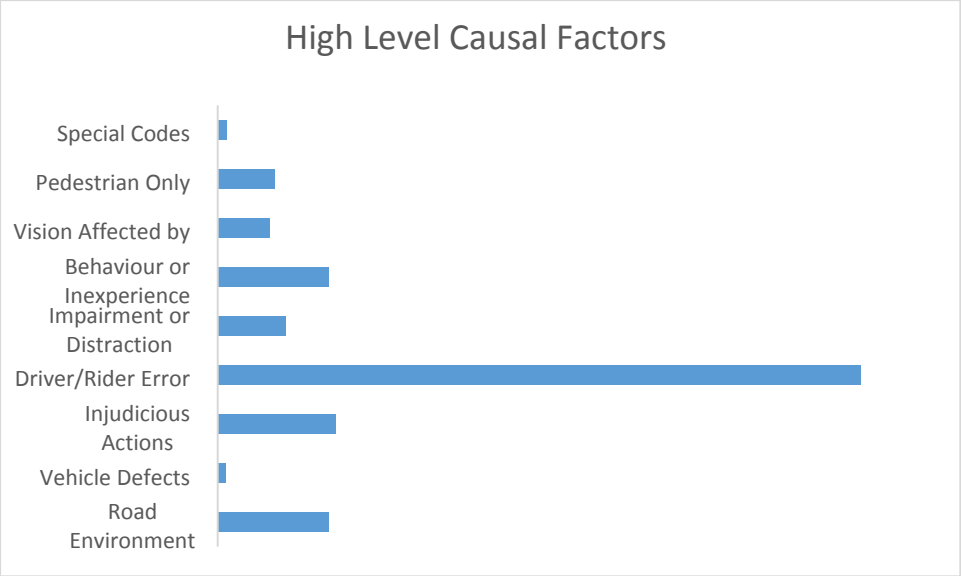


Chart 19 – sum of recorded causal factors

Driver or rider error is the most likely cause of an accident followed by Injudicious Actions, this is the same pattern as national results. The following table provides additional details of the causal factors and illustrates the range and complexities of causes.

The data illustrates the total number of references to the causal factor regardless if which causal factor it is numbered as or if it is a highly likely or possible factor. See Table 9

Road Conditions	Slippery road (due to	Deposit on road (e.g. oil, mud,	Poor or defective road	Sunken, raised or slippery	Road layout (e.g. bend, hill, narrow	Temporary road layout (e.g.	Animal or object in carriageway	Inadequate or masked signs or road	Defective traffic signals	Traffic calming (e.g. speed

	weather)	chippings)	surface	inspection cover	carriageway)	contraflow)		markings		cushions, road humps, chicanes)
	3.64%	0.91%	0.23%	0.00%	3.83%	0.12%	0.58%	0.11%	0.01%	0.01%
Vehicle Defects	Tyres illegal, defective or under-inflated	Defective lights or indicators	Defective brakes	Defective steering or suspension	Defective or missing mirrors	Overloaded or poorly loaded vehicle or trailer				
	0.21%	0.07%	0.16%	0.11%	0.00%	0.17%				
Injudicious Actions	Following too close	Exceeding speed limit	Disobeyed Give Way or Stop sign or markings	Disobeyed automatic traffic signal	Travelling too fast for conditions	Cyclist entering road from pavement	Illegal turn or direction of travel	Disobeyed pedestrian crossing facility	Vehicle travelling along pavement	Disobeyed double white lines
	3.21%	1.56%	0.57%	0.16%	3.63%	0.3%	0.21%	0.18%	0.07%	0.1%
Driver/Rider Error	Failed to look properly	Failed to judge other person's path or speed	Poor turn or manoeuvre	Sudden braking	Swerved	Junction overshoot	Junction restart (moving off at junction	Failed to signal or misleading signal	Too close to cyclist, horse or pedestrian	Loss of control
	17.74%	13.94%	7.4%	2.38%	1.56%	0.45%	0.34%	0.52%	0.99%	9.26%
Impairment or Distraction	Impaired by alcohol	Impaired by drugs (illicit or medicinal)	Driver using mobile phone	Fatigue	Distraction in vehicle	Distraction outside vehicle	Illness or disability, mental or physical	Uncorrected, defective eyesight	Rider wearing dark clothing	Not displaying lights at night or in poor visibility
	1.92%	0.22%	0.13%	0.85%	0.99%	0.41%	0.93%	0.05%	0.11%	0.12%
Behaviour or Inexperience	Careless, reckless or in a hurry	Learner or inexperienced driver/rider	Aggressive driving	Nervous, uncertain or panic	Unfamiliar with model of vehicle	Inexperience of driving on the left	Driving too slow for conditions or slow vehicle (e.g. tractor)			
	5.19%	2.01%	1.24%	0.63%	0.22%	0.11%	0.02%			
Vision Affected by	Stationary or parked vehicle(s)	Road layout (e.g. bend, winding road, hill crest)	Dazzling sun	Rain, sleet, snow or fog	Spray from other vehicles	Dazzling headlights	Vehicle blind spot	Vegetation	Buildings, road signs, street furniture	Visor or windscreen dirty, scratched or frosted etc.
	0.4%	1.19%	1.21%	0.81%	0.06%	0.16%	0.27%	0.19%	0.08%	0.07%
Pedestrian Only	Failed to look properly	Careless, reckless or in a hurry	Failed to judge vehicle's path or speed	Crossing road masked by stationary or parked vehicle	Impaired by alcohol	Impaired by drugs (illicit or medicinal)	Dangerous action in carriageway (e.g. playing)	Wrong use of pedestrian crossing facility	Pedestrian wearing dark clothing at night	Disability or illness, mental or physical
	2.05%	0.46%	0.64%	0.42%	0.4%	0.04%	0.28%	0.12%	0.27%	0.16%
Special Codes	Stolen vehicle	Vehicle in course of crime	Emergency vehicle on a call	Vehicle door opened or closed negligently	Other					
	0.12%	0.06%	0.11%	0.06%	0.45%					

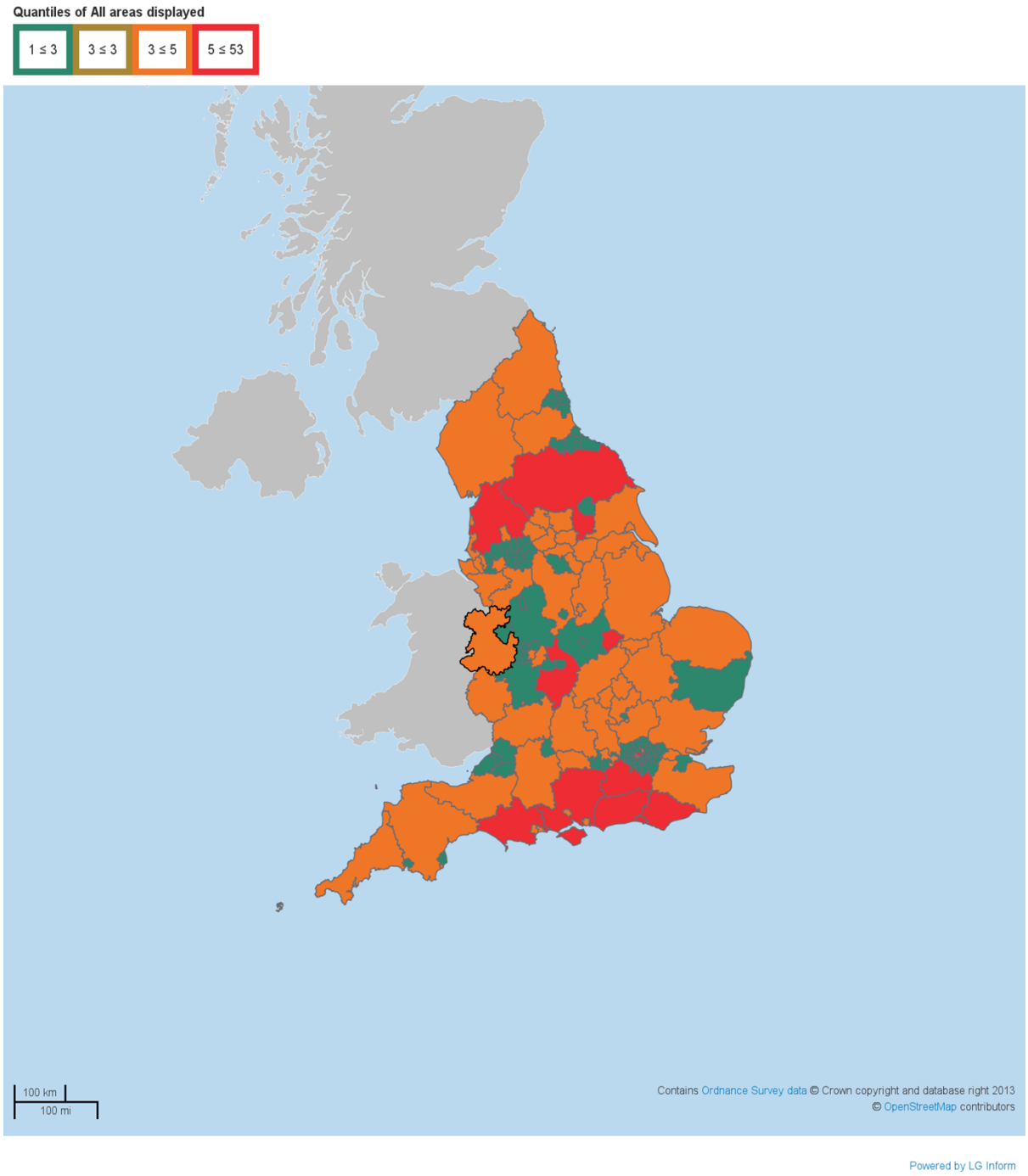
Table 9 – recorded causal factors, % of total causal factors

Driver errors, actions, behaviour and experiences are key often key causal factors within accidents. Where road conditions are cited as a causal effect the main reasons relate to weather conditions and the nature of our rural roads, which often have blind bends, narrowing points and dips which reduces visibility.

14. Benchmarking

Whilst this report focuses on accidents and KSI rates in Shropshire it is also worth comparing rates with other authorities. The following map shows the rate of KSI per 10,000 people.

People killed or seriously injured in road traffic accidents per 10,000 population (casualties per 10,000 people) (2014-16) for Shropshire & All English single tier and county councils



Map 2 – quartile rankings of killed and seriously injured accidents in England by local authorities

KSI Rates in Shropshire are higher than the national average but similar to those in other rural areas. Table 6 highlights that non built up areas experience a higher proportion of fatalities than Urban (built-up) areas. Whereas urban areas experience higher rates of slight injuries.

Summary Points

- **Accident numbers in Shropshire remain at similar levels whilst,**
- **Reporting of seriously injured has increased, this is mainly as a result of changes to the methodology for recording slight and seriously injured which came into force in Dec 2015**
- **These changes to recording will take 3 years to filter through, it is therefore likely that KSI figures will continue to show a rate of increase during this period to Dec 2018**
- **Population growth will result in more traffic, in addition**
- **Shropshire has an aging population who are at greater risk of serious injury when involved in accidents.**
- **Economic growth and an increase in employment numbers leads to high levels of commuting.**
- **Accidents are most frequent at key commuting times of 8am – 9am and 5pm to 6pm**
- **Pedal and Motor cyclists are at greater risk of accidents compared to volume of traffic**
- **Pedal and Motor cyclists are at high risk of fatality or serious injury when involved in accidents**
- **Higher percentage of roads in Shropshire are in non-urban areas which is likely to increase the severity of an accident**
- **A high percentage of KSI accidents occur on single carriageway roads with a 60mph speed limit**
- **Seasonal increases in volumes of traffic to mid Wales may be an additional factor for accidents where people are passing through the county.**
- **Key causal factors are linked to driver/rider errors or behaviour.**
- **Where road conditions are cited as a causal factor the main causes are related to weather conditions and the nature of roads with bends, hills or narrow carriageways, which are more likely in rural areas.**

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