

# Safe Roads in Somerset: Road Safety Strategy 2017-2026

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# Foreword

Travel is an essential part of life, however transport is a complex system in which both positive and negative effects on health can arise; one of these being serious injury or death as a result of an incident or collision.

Somerset County Council will adopt a Safe System approach to road safety, seeking to ensure that no human is killed or seriously injured as a result of a road crash.



Cllr John Woodman, Somerset County Council's Cabinet Member for Highways and Transport

*"I am very excited to promote the development of a new road safety strategy for Somerset. Our aim is to reduce deaths and serious injuries due to road collisions in our County using a diverse range of tools and working in strong partnerships."*

# 1. Introduction

## 1.1 Road Traffic Injury

Road collisions can have a devastating effect on the lives of those involved, their family and friends and the wider community. The fear of road collisions can make people reluctant to travel by modes, such as cycling and walking and this can affect freedom of movement, especially for young people and the elderly. In addition extended road closures can have serious consequences for road users and the local economy.

Somerset County Council has set out its policy and priorities for transport and communities within our Local Transport Plan called the 'Future Transport Plan' and within our 'County Plan'. This Road Safety Strategy, 'Safe Roads in Somerset' will support the overall vision of Somerset County Council to increase prosperity and ensure that we continue to care for and protect the people of Somerset and its visitors.

## 1.2 Somerset Roads

Somerset is comprised of five district authorities with a diverse landscape of rural and urban road environments. Less than 1% of Somerset roads are motorway, 11% are A roads and 89% are minor B, C and unclassified roads.

Somerset has built an additional 74 miles of road infrastructure in the last ten years, an overall increase of 1.8%, while traffic volume has risen by 6% in the same period, (the volume is also 28% higher than 20 years ago). While traffic volume has been increasing, the numbers of collisions and people seriously injured or killed has been gradually decreasing. This is due to a diverse range of interventions including; investment in road improvement and road engineering, safer vehicles, road user education, enforcement of road laws and improved trauma response and medical care.

However, from 2012-2016 122,512 people were seriously injured or killed on England's roads, 1041 of them in Somerset. This is unacceptable. There are indications nationally that progress has stalled and locally it is slowing, suggesting new approaches may be needed.

### Costs of road traffic injury

The Department of Transport place an average value of £83,893 on each road collision injury that is successfully prevented and estimate that each fatal collision alone costs £2 million<sup>1</sup>. These estimated values include costs arising from; lost output, medical and paramedic treatment, the police, insurance administration and damage to property estimates. In Somerset this equated to a figure greater than £94 million in 2017.

## 2. What is a Safe System?

### 2.1 Safe System Approach

Almost all road deaths and injuries are preventable. However, for a continued decline in road traffic collisions and serious or fatal injury there needs to be a shift in the way that road safety is delivered in local areas. Somerset County Council aims to adopt a Safe System approach to road safety. The principal aim of this approach is that no human should be killed or seriously injured as a result of a road crash, and the traffic system should be designed to this end. In a Safe System there is a shared responsibility for preventing injury, not just between road users and enforcers but also those that design, build and manage roads or vehicles. It is also essential that good quality post-crash care is available should a serious collision occur.

A Safe System approach to road safety requires recognition that even with comprehensive road safety interventions, even the most conscientious people will always make mistakes on the road and that the human body has a known, physical limit to tolerate crash forces before harm occurs. Road infrastructure must be designed and engineered to minimise both the risk of mistakes by road users (by enabling them to behave with due care and respect), and serious injury should a collision occur. It is an inclusive approach that caters for all groups using the transport system, including drivers, motorcyclists, passengers, pedestrians, cyclists, and commercial and heavy vehicle drivers. A safe systems approach also helps to align road safety management with other goals. By creating partnerships where government or transport agencies work closely with other groups, safe systems can help to tackle other problems associated with road traffic, such as congestion, noise, air pollution and lack of physical exercise.

#### Additional resources on the Safe System and Vision Zero approach to road safety

[www.gov.uk/government/publications/road-safety-statement-working-together-to-build-a-safer-road-system](http://www.gov.uk/government/publications/road-safety-statement-working-together-to-build-a-safer-road-system)

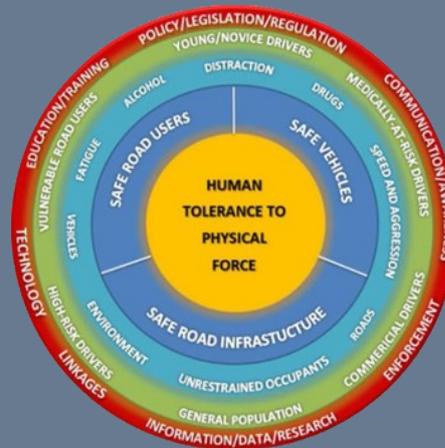
[www.visionzeroinitiative.com/](http://www.visionzeroinitiative.com/)

[www.brake.org.uk/facts-resources/15-facts/1484-safe-systems-facts-page](http://www.brake.org.uk/facts-resources/15-facts/1484-safe-systems-facts-page)

## 2. What is a Safe System?

### Four guiding principles of a Safe-System

- People will always make mistakes;
- The human body has a known, physical limit to tolerate crash forces before harm occurs;
- Individuals have a responsibility to act with care and within traffic laws; however a shared responsibility exists with those who design, build, manage and use roads/vehicles and provide post-crash care; and
- All parts of the system (Figure 1) must be strengthened in combination to multiply their effects ensuring that road users are protected if one part fails.



**Figure 1:** adapted from the 2009 WHO report on the Global Status on Road Safety [2](#)

The differences between a safe system and traditional approach to road safety are summarised in Table 1.

	Traditional	Safe System
What is the problem?	All injury collisions, but a focus on fatal and serious injuries	Significant focus on fatalities and serious injuries
What causes the problem?	Human factors	People make mistakes, people are fragile
Who is responsible?	Individual road users	Road users and system designers
What is the approach?	Incremental approach to reduce the problem	Systematic approach to build a safe road system
What is the appropriate goal?	Optimum number of fatalities and serious injuries	Zero fatalities and serious injuries

**Table 1:** Differences between the Traditional and Safe Systems approach to road safety.

## 2. What is a Safe System?

### 2.2 Requirements of a Safe System

A Safe System approach does not disregard that all road users have a responsibility to act with care, but in a safe system the responsibility is proportional to the risk of causing serious injury. Drivers of motorised vehicles bear the greatest responsibility for safety, while cyclists and pedestrians less so because they rarely cause serious injury. All road users have a significant responsibility to share the road correctly, consider their actions and in accordance with the law, those who transgress, or make momentary errors especially while driving cars and lorries, have the potential to cause more harm than vulnerable road users who do so.

In a Safe System priority should therefore be given to the vulnerability of human beings, not to vehicle mobility at any cost. This can pose challenges in a rural county like Somerset where there are significant lengths of rural roads, some of which have historic and constrained layouts, in addition to lengthy commutes both within and across the county.

The use of a Safe System approach in Somerset will require identifying high risk locations, prioritising road treatments and balancing proactive assessments of highway improvements with the rural character of the County.

# 3. How will Safe Roads in Somerset be Achieved?

## 3.1 Vision

The vision for Safe Roads in Somerset is that no road user should be killed or seriously injured on the roads of Somerset. The specific actions required to achieve this are detailed within the action plan and align with the following key components of a safe system;

- Safe road users
- Safe roads and roadsides
- Safe speed; and
- Safe vehicles.

## 3.2 Safe Road Users

Individual knowledge, experience and attitudes affect road user behaviour and compliance with road safety law. Putting road users at the centre of a safe system requires acknowledging road user's strengths and weaknesses and avoiding a victim blaming culture for those experiencing serious road injuries. Although intentional non-compliance with the laws of the road does occur, lapses in attention and errors of judgement are an unavoidable reality of road use when there are millions of road users daily.

In terms of addressing the modifiable factors that impact on road user behaviours (e.g. drug and alcohol use, excess speed, mobile phone use and driving while tired) evidence shows that using Behaviour Change Techniques (BCT) in road safety education and training are most likely to impact on road user behaviour. There are a range of different BCTs available that can be tailored to the target<sup>3</sup> audience.

Behavioural interventions alone will not eliminate road injury and these approaches need to be used alongside a wide range of road safety solutions, including engineering and enforcement to ensure that those at highest risk of making errors on the road network are identified and targeted appropriately. Technological advances will also aid road users in safer behaviours, alongside of educational promotions.

National and local data and evidence identify that the priority groups for road safety education and training in Somerset are;

- Car drivers (in particular young drivers and passengers aged 16-24 years);
- Older road users (over 60 years);
- Work-related drivers;
- People living in more deprived areas of Somerset;
- Motorcyclists; and
- Vulnerable road users (e.g. pedestrians, cyclists and equestrians) – *this includes children and young people as a specific target sub-group*

# 3. How will Safe Roads in Somerset be Achieved?

## 3.3 Safe Roads and Roadsides

The design of roads and roadsides often contribute to the outcome of collisions, as well as the causation. It is recognised that not all collisions can be prevented however when they do occur the road environment should be engineered to reduce the risk of serious injury. There are a wide variety of approaches to achieving this outcome including **passive safety** (where interventions such as crash barriers on central reservations and the avoidance of signs or fixed objects in likely crash paths are used to protect road users) and more extensive highways engineering. Techniques such as filtering out or directing motorised traffic (**filtered permeability**) can also be used to reduce speed and direct traffic away from residential or pedestrian areas.

Adapting roads and roadsides after they have been built can be expensive and challenging. An effective and safe road system for Somerset requires a pro-active approach, ensuring that safety is considered in the planning and building of all new developments, prioritising the needs of the most vulnerable road users.

One of the key dangers on our roads is that different types of road user share the same space. As far as possible, a safe systems approach seeks to segregate different road users, developing and enhancing safer routes for vulnerable users, and ensuring junction design accommodates all classes of user enabling them to traverse the junction in safety.

As well as continuing to assess and engineer routes with higher rates of collisions, especially rural roads, causing injury, a proactive approach is required to identify and adapt roads where the road design is likely to cause severe injury, should a collision occur in the future.

## 3.4 Safe Speed

To build a safe road system, speed limits should be set appropriately, guided by the knowledge of the human body's tolerance to external forces.

Studies show that reductions in average speed result in substantial casualty reductions. **Just a 5% reduction in speed can result in a 30% reduction in the number of fatal crashes**<sup>4</sup>.

Vulnerable road users are at particular risk from higher traffic speeds. **The risk of a pedestrian being killed if hit by a car increases from 10% at 30 mph to 70% at 50 mph**<sup>5</sup>.

Speed can have wide impacts on communities. Real or perceived danger can deter people from walking and cycling but there are also environmental consequences. A doubling of speed from 30 mph to 60 mph will typically increase noise levels by about 10 dB (perceived as being about twice as loud)<sup>6</sup>.

## 3. How will Safe Roads in Somerset be Achieved?

Speed is an area of shared responsibility between those that design, use and enforce road traffic laws. Alongside ensuring that road users understand the significant benefits of speed reduction is a need to ensure that roads guide and enable road users to adopt the posted speed limit, this is termed as **self-explaining** and requires consistency across a wide area to be effective<sup>7</sup>.

Self-explaining roads are those on which the driver is encouraged to naturally adopt behaviour consistent with design and function. Drivers perceive the type of road and know how to behave, and this helps to make it obvious to drivers when and why a speed limit has changed. Such an approach uses simplicity and consistency of design to reduce road user error. It is generally accepted that human error is involved in the majority of road collisions. Although education, awareness and enforcement are important tools in reducing the number of collisions, it is important that the road environment and the vehicle be adapted to the limitations of human abilities.

There are also design solutions available to decrease speed, such as reducing access to cut-through roads in urban and rural areas. Reducing traffic speeds through 20 mile per hour schemes has shown to reduce collisions, encourage people to walk and cycle and do not significantly affect journey times.

Effective enforcement of speed limits is a crucial element of achieving a safe speed environment. Technological advances with average speed cameras, insurance company remote monitoring ('black boxes') and in the future potentially autonomous vehicles, can all assist with this objective. Somerset County Council, our partners and other major employers and fleet operators can also lead by example in setting expectations around speed limit compliance by their employees.

### 3.5 Safe Vehicles

Vehicle design, maintenance and technology all play important roles in ensuring the safety of road users; however this often relies on appropriate use of systems such as seatbelts, child car seats, in-vehicle insurance telemetry as well as regular maintenance of private, fleet and agricultural vehicles.

Although innovation for safer vehicles is primarily nationally or internationally led, local authorities have a role and interest in ensuring that vehicles using the road network are roadworthy and that the road network can adapt with technological developments.

# 3. How will Safe Roads in Somerset be Achieved?

## 3.6 Partnership Working

In order to effectively address these key components of a safe system, effective partnership working to agreed objectives across the statutory and voluntary sector is critical. Somerset County Council is a leading member of the South West Accident Reduction Working Group (SWARWG) and a member of Road Safety Great Britain. At a local level Somerset County Council works closely with partners in Avon and Somerset Police, Devon & Somerset Fire & Rescue Service, Severn Major Trauma Network, Highways England and the South West Ambulance Service NHS Foundation Trust (SWAST). The County Council's road safety team has a significant role in enablement, particularly to better understand the patterns of collisions that occur on the roads of Somerset and to help co-ordinate road safety activity across the partners.

## 3.7 Manage by Objectives

Although road safety has always taken evidence based approaches to road engineering and road user education, the availability and quality of road safety data is continuously improving. Partnership working and a shared responsibility for road safety across the system offers an ever increasing insight into the causes and consequences of road injury in Somerset.

Effective management of a safe road system requires a focus on results and the achievement of safety objectives or outcomes<sup>8</sup>. Analysis of results and trends, alongside research, helps to inform the system on how best to prioritise and allocate resources for interventions. Please see Appendix for Somerset County Council's current road safety key performance indicators.

### Somerset Road Safety Team

The Road Safety Team in Somerset contains a Collision Investigation and Prevention (CIP) team and an Education, Training and Publicity (ETP) team. In the 2017/18 financial year;

- Somerset Road Safety engaged with and delivered talks and training to 25,410 people through a number of different types of delivery
- 1973 pupils were trained in 'Bikeability' cycle safety training
- Over 1.6 million impressions/reach were achieved through our social media channels
- 3 safety engineering schemes were completed, two route treatments and a collision cluster site

For more information on the work of the Somerset Road Safety Team please visit [www.somersetroadsafety.org](http://www.somersetroadsafety.org)

## 4. Road Safety Policy

### 4.1 National Policy

In 2011 the Department for Transport (DfT) produced the Strategic Framework for Road Safety<sup>9</sup> to look at three main areas relating to road safety:

- Freeing local councils to make their own decisions on how best to make their roads safer;
- Improving public education and training; and
- Penalising the minority of offenders who drive dangerously.

In 2015 the Government identified adopting the Safer Systems approach as a priority in its Road Safety Statement. As such Somerset County Council is able to identify the aims and objectives of local strategy and how best to implement road safety interventions. As no specific targets were identified within the strategic framework local targets were developed and are detailed within the **Appendix**.

Traffic authorities have the flexibility to set local speed limits that are appropriate for the individual road, reflecting local needs and taking account of local considerations. In 2013 the DfT requested through a Setting Local Speed Limits circular that traffic authorities keep their speed limits under review with changing circumstances. This included considering the introduction of more 20 miles per hour limits and zones, over time, in urban areas and built-up village streets that are primarily residential, to ensure greater safety for pedestrians and cyclists<sup>10</sup>.

### Somerset County Council's Responsibility

Under Section 39 of the Road Traffic Act 1988 highway authorities are required to prepare and carry out a programme of measures designed to promote road safety. This includes; investigating collisions arising from the use of vehicles on roads and highways within their administrative area, taking measures to prevent reoccurrence and the construction, improvement, maintenance and repair of such roads and paths in addition to road safety education to enable safe road users.

The Local Authority also has duties to ensure the efficient movement of traffic under the 2004 Traffic Management Act (traffic meaning all modes of transport). Section 16 (1) of the Act refers to the duty placed on a highway authority to manage the road network with a view to achieving efficient movement of traffic on the network, while having regard to other policy objectives.

# 4. National Policy

## 4.2 Local Policy

At a local level road safety is a key consideration within a range of Somerset County Council policy including our 'Future Transport Plan (2011-2026) which highlights that "Transport is part of everything we do. It allows us to go to work or school, visit the people we care about and access the things we need. However, if not managed carefully the impacts transport has can also be bad for us, our economy and the environment". This, and other local policy, acknowledges that staying safe when travelling in our County is a key priority for residents, commuters and visitors alike.

# 5. Transport, Road Safety and Health

## 5.1 Active travel

A quarter of Somerset's population is inactive<sup>11</sup>. Incorporating physical activity into everyday routines is seen as a key method for building up fitness and confidence in physical activity and reducing risk of ill-health and premature death. However many people, perceive cycling (and sometimes walking) to be unsafe.

*"It is not appropriate to improve road safety by the discouragement of active travel modes as the health benefits of active travel significantly outweigh the risks by as much as 20:1" (DfT/DH, 2010)*

Transport and planning policy can help or hinder good health. Fear of traffic and a perceived lack of safety have a major impact on people's decisions on how to travel. This often results in the use of motorised vehicles for short journeys, commuting to work or taking children to school. Safer roads mean more people will be able to walk and cycle. This will improve health and also reduce the use of motorised vehicles and the associated air pollution and congestion this brings. Conditions will however need to be perceived as safe, as well as actually being safe in practice for travel behaviour to change.

## 5.2 Health Inequalities

Health inequalities are a key issue in road safety. People living in more deprived areas typically have less access to a car but are exposed to high levels of motorised traffic. Children from the most deprived backgrounds are five times more likely to be injured on the road compared with children from the most affluent backgrounds<sup>12</sup>. Through prioritising active forms of travel and the needs of vulnerable road users this strategy has the potential to improve the overall health of Somerset residents while reducing inequalities in health outcomes.

# 6. The Burden of Road Traffic Injury

## 6.1 Overall trend

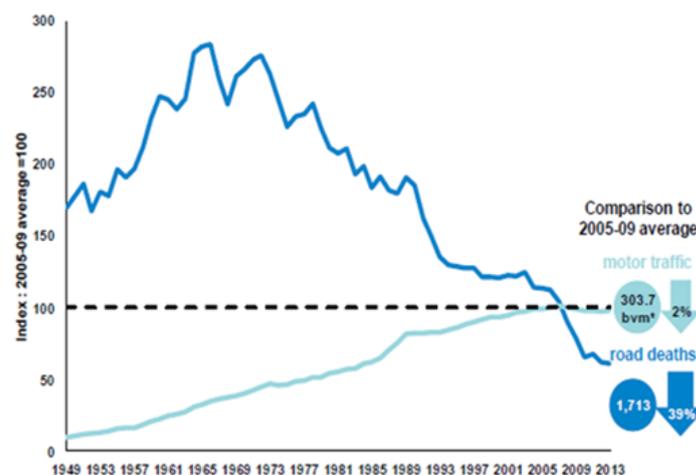
Through road safety measures, and partnership working with enforcement agencies, there have been significant and successful efforts to reduce casualties in Somerset over the last twenty years. However some of the reduction is attributable to safer vehicles, improved medical care, improved driver standards through changes to the driving test, and national road safety initiatives.

Both nationally and locally it is clear that this impact is starting to plateau (Figure 2).

In Somerset this plateau needs to be considered against background traffic growth, in 2016 this was estimated at 3%<sup>13</sup>. It is therefore possible that the data shown for Somerset slightly underestimates the true reduction in serious and fatal casualties and collisions.

### Trends over time

Reported road fatalities and motor traffic, GB: 1949 to 2013<sup>1</sup>



<sup>1</sup> Traffic estimates from 1995 onwards were produced on a new more accurate basis and are not directly comparable with previous years.

\*bvm = billion vehicle miles

**Figure 2:** National trend in reported road fatalities in the UK against motor traffic (DfT, 2014)

## Road safety data sources

### STATS 19

STATS19 is the primary source of data for road traffic collisions and injuries and published by the Department for Transport. These STATS 19 forms are completed by a Police Officer for reported collisions resulting in injury. This form includes the types of vehicles involved, the consequent casualties, relevant causation factors (as identified by the police officer) and areas of behaviour which may have led to the collision. An injured casualty is recorded as fatal, seriously or slightly injured by the Police on the basis of information available within a short time of the collision.

- A Fatal Injury is one where a death occurs less than 30 days after a collision;
- A Serious Injury is one for which a person is detained in hospital as an in-patient, or any of the following injuries whether or not they are detained in hospital: fractures, concussion, internal injuries, crushing, burns (excluding friction burns), severe cuts, severe general shock requiring medical treatment and injuries causing death 30 or more days after the collision; and
- A Slight injury is an injury that doesn't necessarily require medical treatment, such as bruising, sprains and slight shock.

# 6. The Burden of Road Traffic Injury

## Hospital Admissions Data

Hospital Episode Statistics (HES) detail all admissions, outpatient appointments and A&E attendances at NHS hospitals in England. Admissions are coded according to the primary cause of injury. Because of this it is possible to extract data on admissions relating to transport injury for local consideration and analysis.

## Trauma and Audit Research Network (TARN)

TARN collect, collate and analyse data on all serious trauma injuries in England, including those sustained through a road traffic collision. The Severn Trauma Network are Somerset County Council's local partner and are able to provide detailed information on the most severely injured casualties in Somerset.

## 6.3 Road Injury Data Sources and Definitions

Somerset County Council uses a variety of data to understand road safety trends and determine policies and solutions. Understanding local road collision and injury data ensures that limited funding is allocated appropriately and those inequalities in road safety outcomes are identified and prioritised for action.

In addition to STATS 19 data, Somerset County Council Road Safety Team accesses a range of data sets to help produce a more complete picture of safety issues. Amongst these sets are Traffic Flow and Speed Data, Speed Information Device records, NHS Hospital Data, Enforcement information from the Police Mobile Camera Enforcement Team and demographic information.

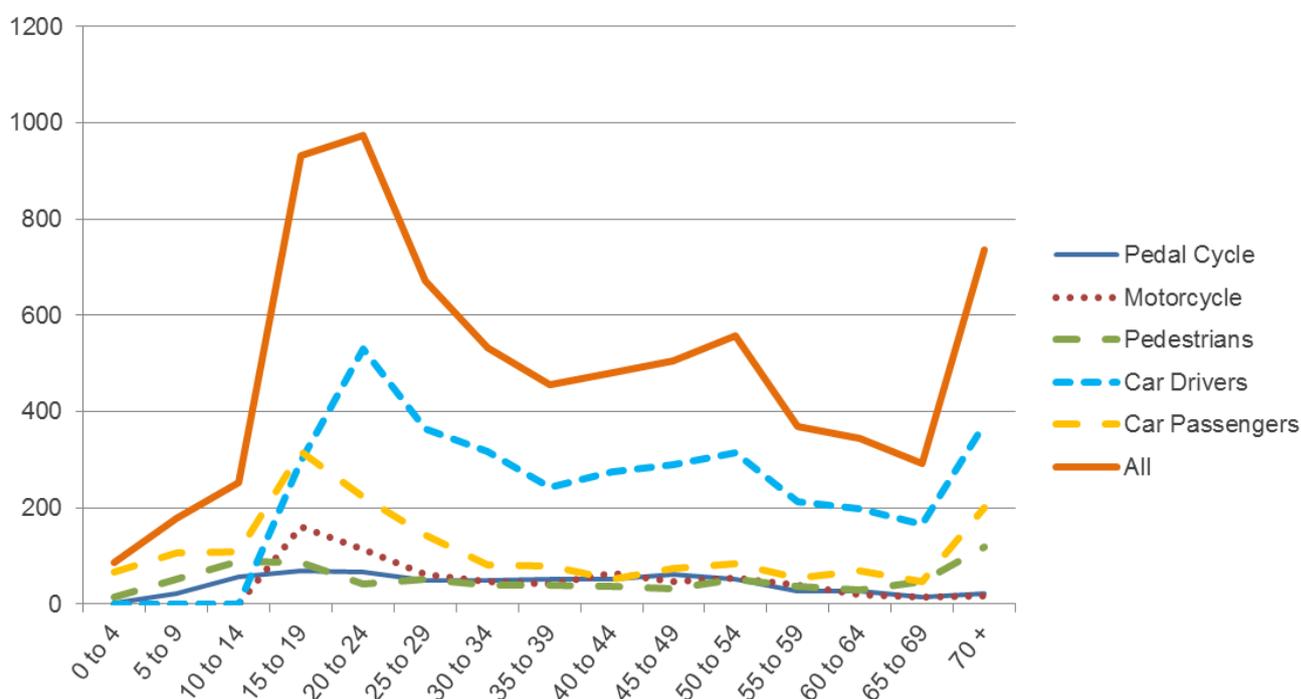
## 6.4 People Killed or Seriously Injured in Somerset (local analysis of STATS 19 data from 2012-2016)

### 6.4.1 General

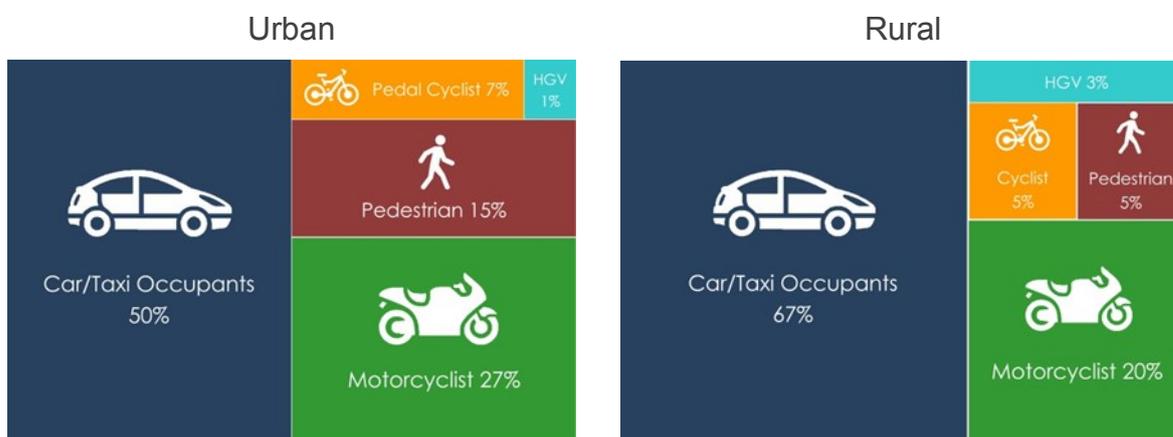
- Between 2013-2017 1014 people were killed or seriously injured in Somerset;
- Approximately three quarters of people involved in an injury collision originate from within the county;
- More collisions occur in the summer and autumn. This period is also when traffic flows are highest;
- People living in deprived areas in Somerset are more likely to be killed or seriously injured in a road traffic collision. During this period 28% of casualties on Somerset roads were from the two least deprived quintiles while 36% were from the two most deprived quintiles;

## 6. The Burden of Road Traffic Injury

- During this period 49% of collisions resulting in serious injury or death occurred on urban roads (where the speed limit is 40mph or lower) and 51% occurred on rural roads where the speed limit was greater than 40mph;
- Within urban areas the majority of road users killed or seriously injured were car users (drivers or passengers) (50%) followed by Motorcyclists (27%), Pedestrians (15%) and Cyclists (7%) (Figure 4); and
- Within rural areas a larger majority of road users killed or seriously injured were car users (drivers or passengers) (67%) followed by Motorcyclists (20%) and an equal proportion of Pedestrians (5%) and Cyclists (5%) (Figure 4).



**Figure 3:** Number of people Killed or Seriously Injured (KSI) in Somerset by age group and road user group (STAT 19 data 2012-2016, DfT 2017)



**Figure 4:** Proportions of road users KSI on rural and urban roads (STAT 19 data 2012-2016, DfT 2017)

# 6. The Burden of Road Traffic Injury

## 6.4.2 Children and young people (aged 0-15 years)

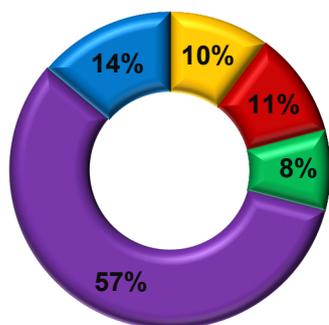
- The majority of children and young people seriously injured or killed on Somerset's roads are car passengers (53%), followed by pedestrians (30%) and cyclists (16%).

## 6.4.3 Young Drivers

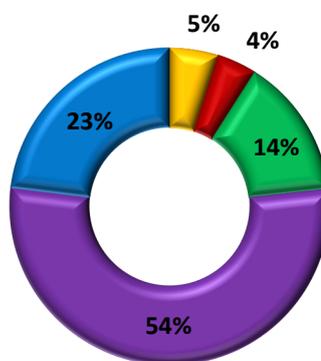
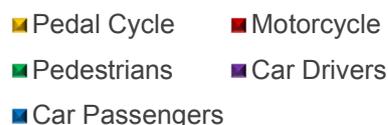
- Figure 3 demonstrates that there is a significant peak of road traffic injury in car users aged between 17 and 24 years. A majority of those injured in this age group are male.

## 6.4.4 Older Adults (aged 60+ years)

- As road users age they become at increased risk of significant road injury particularly due to increased physical vulnerability.
- A disproportionate amount of casualties seriously injured on Somerset roads are over 65 (Figure 3).



**Figure 5:** Proportion of people killed or seriously injured in 40-59 year old age-group (STAT 19 data 2012-2016, DfT 2017)

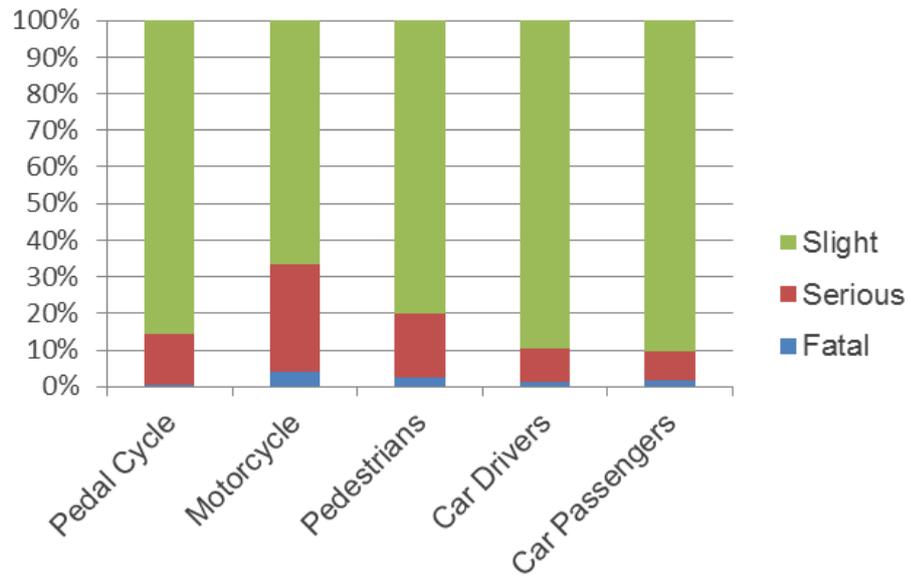


**Figure 6:** Proportion of people killed or seriously injured in 60+ year old age-group (STAT 19 data 2012-2016, DfT 2017)

# 6. The Burden of Road Traffic Injury

## 6.4.5 Motorcyclists

- Figure 7 demonstrates that motorcyclists are particularly vulnerable to severe injury should a collision occur. Within the motorcycle user group over 30% of reported collisions involving a motorcyclist resulted in serious or fatal injury.



**Figure 7:** Proportions of slight, serious and fatal injury by road user group (STATS 19 data 2012-2016, DfT 2017)

<sup>1</sup>Department for Transport (2016) 'Accident and casualty costs (RAS60)' (available from <https://www.gov.uk/government/statistical-data-sets/ras60-average-value-of-preventing-road-accidents>) [accessed 01/12/2017]

<sup>2</sup>WHO (2015) 'Global status on road safety' (available from [http://www.who.int/violence\\_injury\\_prevention/road\\_safety\\_status/2015/en/](http://www.who.int/violence_injury_prevention/road_safety_status/2015/en/)) [accessed on 03/06/2017]

<sup>3</sup>RAC (2017) Using Behaviour Change Techniques: Guidance for the road safety community (available from [http://www.racfoundation.org/assets/rac\\_foundation/content/downloadables/](http://www.racfoundation.org/assets/rac_foundation/content/downloadables/)

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[ing behaviour change techniques Guidance for the road safety community.pdf](#))

<sup>4</sup>WHO (2004) 'Speed: the facts' (available from [http://www.who.int/violence\\_injury\\_prevention/publications/road\\_traffic/world\\_report/speed\\_en.pdf](http://www.who.int/violence_injury_prevention/publications/road_traffic/world_report/speed_en.pdf)) [accessed on 01/01/2017]

<sup>5</sup>RAC (2012) 'Speed limits: a review of the evidence' (available from [http://www.racfoundation.org/assets/rac\\_foundation/content/downloadables/speed\\_limits-box\\_bayliss-aug2012.pdf](http://www.racfoundation.org/assets/rac_foundation/content/downloadables/speed_limits-box_bayliss-aug2012.pdf)) [accessed 30/04/2017]

<sup>6</sup>RAC (2012) 'Speed limits: a review of the evidence' (available from [http://www.racfoundation.org/assets/rac\\_foundation/content/downloadables/speed\\_limits-box\\_bayliss-aug2012.pdf](http://www.racfoundation.org/assets/rac_foundation/content/downloadables/speed_limits-box_bayliss-aug2012.pdf)) [accessed 30/04/2017]

<sup>7</sup>International Transport Forum (2016) 'Zero roads deaths and serious injuries: Leading a paradigm shift to a safe system'. OECD Publishing: Paris

<sup>8</sup>International Transport Forum (2016) 'Zero roads deaths and serious injuries: Leading a paradigm shift to a safe system'. OECD Publishing: Paris

<sup>9</sup>Department for Transport (2011) 'Strategic framework for road safety' (available from <https://www.gov.uk/government/publications/strategic-framework-for-road-safety>) [accessed 03/04/2017]

<sup>10</sup>Department for Transport (2013) 'Setting local speed limits' (available from <https://www.gov.uk/government/publications/setting-local-speed-limits>) [accessed on 01/05/2017]

<sup>11</sup>Public Health England (2012) Public Health Outcomes Framework (available from <http://www.phoutcomes.info/>) [accessed 2/02/2017]

<sup>12</sup>ROSPA (2014) 'Road safety and public health' (available from <https://www.rosipa.com/rospaweb/docs/advice-services/road-safety/practitioners/rosipa-road-safety-and-public-health.pdf>) [accessed on 01/06/2017]

<sup>13</sup>Somerset County Council (2016) 'Somerset Traffic Data' Somerset Transport Data Team: Somerset County Council

# 7. Objectives

## 7. Objectives

To help us ensure we address and recognise the numerous issues as outlined in this strategy the following objectives have been set. This Strategy and objectives will help inform multi-partner delivery and implementation plans which will help us achieve the aim of safe roads in Somerset.

Objectives	
Safe road users	<ul style="list-style-type: none"> <li>Promote a sense of responsibility by road users, especially for the protection of more vulnerable road users;</li> <li>Encourage compliance with traffic law and educate road users of the risks of excess speed, fatigue and being under the influence of drugs and/or alcohol while using the road;</li> <li>Identify road users not compliant with traffic law;</li> <li>Promote corporate responsibility for fleet vehicle behaviour and work driver training;</li> <li>Ensure that evidence led road safety education, training and information is available and accessible to identified priority groups; and</li> <li>Provide and promote road safety education and awareness raising material in a range of appropriate formats e.g. face to face training, virtual reality training and through social media.</li> </ul>
Safe Road and Road-sides	<ul style="list-style-type: none"> <li>Ensure that the needs of the most vulnerable road users (pedestrians, cyclists, horse-riders, children and the elderly) are prioritised in new and existing highways infrastructure, implementing passive safety and evidence based solutions;</li> <li>Continue to review and adapt routes where there is an increased risk of serious injury to road users, implementing speed limits and engineering solutions to mitigate against this risk; and</li> <li>Investigate serious and fatal collisions to assess the contribution of the road infrastructure on the outcome of a collision and identify any suitable engineering solution.</li> </ul>
Safe speed	<ul style="list-style-type: none"> <li>Ensure that speed limits are consistent and reflective of the road environment and use, taking into account the vulnerability and physical limitations of road users;</li> <li>Ensure a consistent 'self-explaining' road design;</li> </ul>

# 7. Objectives

Objectives	
Safe speed	<ul style="list-style-type: none"> <li>• Protect vulnerable road users by separating them from fast moving traffic;</li> <li>• Continue to increase the use of 20mph limits and zones in areas where vulnerable road users will be mixing with motorised vehicles e.g. town centres, children’s playgrounds and outside schools during pick-up times;</li> <li>• Work with communities and police to identify, assess and enforce areas where speed of motorised vehicles is a concern; and</li> <li>• Increase road users’ understanding of the benefits of speed reduction, promoting an ethos of responsibility for other road users, especially for those using modes of transport that make them more vulnerable to injury in a collision.</li> </ul>
Safe vehicles	<ul style="list-style-type: none"> <li>• Enforce, lobby and encourage compliance with regulatory and maintenance standards by vehicle owners and operators, and our own organisations, to ensure that vehicles using our road network are safe and roadworthy;</li> <li>• Promote ‘safe vehicles’ within road safety campaigns and training;</li> <li>• Plan and prepare for technological advances, such as connected and autonomous vehicles, on the Somerset road network; and</li> <li>• Educate road users, especially children, pedestrians and cyclists about the road safety issues related to being around large and long vehicles.</li> </ul>
<p style="text-align: center;"><b>Partnership working and managing by objectives</b></p> <ul style="list-style-type: none"> <li>• Use data and evidence to target, coordinate develop and evaluate road safety education and training programmes and continue to ensure that practice is reactive to emerging evidence;</li> <li>• Use data and evidence from across the system to inform preventative road engineering interventions;</li> <li>• Use data from across the system to identify high-risk locations for road safety review and enforcement</li> <li>• Design and implement targeted mitigation measures</li> </ul>	

## 8. High-Level Action Plan

(1) Partnership working and managing by objectives		
Aim	Objectives	High-Level Actions
<p>Effective and efficient use of resources to prioritise road safety education, engineering and enforcement activity</p> <p>Shared responsibility and vision for road safety across all key agencies</p> <p>A skilled network in place to horizon scan and effectively respond to emerging evidence and technological developments relevant to road safety</p>	<p>(a) Increased partnership working across the road safety system</p> <p>(b) Use data and evidence from across the system to inform preventative road safety interventions</p> <p>(c) Lead from the front over promotion of corporate responsibility for road safety</p> <p>(d) Use data and evidence from across the system to understand injury causation, outcomes and modifiable factors in road injury prevention</p>	<ul style="list-style-type: none"> <li>• Taking an aspirational vision of road safety</li> <li>• Altering people's views about the inevitability of crashes, and overturning institutionalised attitudes towards road safety responsibility</li> <li>• Carrying out data collection and analysis, so that crash risks and current road safety performance can be better understood</li> <li>• Development of a multi-agency forum and associated action plan for road safety strategy development and operational planning in Somerset</li> <li>• Identify and action opportunities for increased data sharing between agencies e.g. data on injury, speed, collisions and community reports held within 'Qlik Sense' and the Severn Trauma Audit &amp; Research Network</li> <li>• Use these data sources to analyse causation and impact of the most serious collisions, identifying opportunities for action as appropriate</li> </ul>

# 8. High-Level Action Plan

(1) Partnership working and managing by objectives		
Aim	Objectives	High-Level Actions
		<ul style="list-style-type: none"> <li>• Development of a shared communications plan for road safety messages and training in Somerset</li> <li>• Share and learn from regional best practice through road safety team participation in regional and national road safety forums e.g. SWAWRG/ RSGB meetings, and ADEPT (County Surveyor's Society)</li> </ul>
Partners		
<p>Avon &amp; Somerset Police, Devon and Somerset Fire &amp; Rescue, Highways England, Severn Trauma Audit Network, Air Ambulance, Schools</p>		

## 8. High-Level Action Plan

(2) Safe road users		
Aim	Objectives	High-Level Actions
Vehicles are driven in a manner consistent with road law and share the road with more vulnerable users	<p>(a) Promote a sense of responsibility especially for more vulnerable road users</p> <p>(b) Encourage compliance with traffic law and educate road users of the risks of excess speed, fatigue and being under the influence of drugs and/or alcohol while using the road</p> <p>(c) Identify road users not compliant with traffic law</p> <p>(d) Promote corporate responsibility for fleet management policies and work driver training</p> <p>(e) Ensure that targeted and evidence led road safety education, training and information is available and accessible</p> <p>(f) Provide and promote road safety education and awareness raising in partnership with key stakeholders in a range of appropriate formats</p> <p>(g) Ensure that targeted and evidence led road safety education, training and information is available and accessible</p>	<ul style="list-style-type: none"> <li>• Delivery of a range of road safety education and retraining to priority road users groups (see <a href="http://www.somersetroadsafety.org">www.somersetroadsafety.org</a> for current delivery) in locations and formats appropriate to the target audience e.g. schools and for groups experiencing high collision occurrence</li> <li>• Delivery of social media, communications and other awareness raising activity to road users around key road safety topics e.g. drink and drug-driving, mobile phone use, eye-sight and fitness to drive (<a href="http://www.somersetroadsafety.org/events">http://www.somersetroadsafety.org/events</a>)</li> <li>• Work with the police to identify repeat offenders and prioritise road users with risk-taking behaviours for education and training</li> <li>• Communication of available training and resources for priority groups through appropriate professional networks, e.g. School Safe-guarding boards, Primary care, Advanced Motoring and Motorcycling groups, Equestrian and Agricultural groups etc.</li> <li>• Partnership working to identify opportunities for joint-working on training and education</li> </ul>

## 8. High-Level Action Plan

(2) Safe road users		
Aim	Objectives	High-Level Actions
		<ul style="list-style-type: none"> <li>• Implement MOSAIC (geographical segmentation tool) analysis to better understand and tailor road safety education and communications for specific road users groups</li> <li>• Promote and advocate for the use of the 'Driving for Better Business' risk assessment and risk management toolkit within Somerset businesses and on-line</li> <li>• Review current road safety training against recent recommendations on Behavioural Change Techniques for Road Safety Education (including evaluating desired training outcomes using evaluation toolkits)</li> </ul>
Partners		
<p>Avon &amp; Somerset Police, Devon and Somerset Fire &amp; Rescue, Highways England, NHS Somerset, Local businesses, local Councils and the Media, Schools</p>		

## 8. High-Level Action Plan

(3) Safe Speed		
Aim	Objectives	High-Level Actions
<p>Road speeds appropriate to the design and use of roads in Somerset</p> <p>Adherence to posted road speed and conditions by road users</p>	<p>(a) Ensure that speed limits are consistent and reflective of the road environment and use, taking into account the physical limitations of road users</p> <p>(b) Ensure consistent 'self-explaining' road design</p> <p>(c) Protect vulnerable road users by separating them from fast moving traffic</p> <p>(d) Continue to increase the use of 20mph limits and zones in areas where vulnerable road users will be mixing with motorised vehicles e.g. town centres, children's playgrounds and outside schools during pick-up times</p> <p>(e) Work with communities and police to identify, assess and enforce areas where speed of motorised vehicles is a concern</p> <p>(f) Increase road users understanding of the benefits of speed reduction for all road users</p>	<ul style="list-style-type: none"> <li>• Conduct urban and rural road speed limit reviews to prioritise routes requiring a change in speed limit and/or engineering solutions to support users to drive at the posted speed, ensuring consistency across the network</li> <li>• Ensure that roads are designed or adapted to help guide and enable road users to adopt the posted speed through appropriate traffic management.</li> <li>• Work with communities and Police to identify, assess and enforce areas where speed of motorised vehicles is a concern</li> <li>• Increase road users understanding of the benefit of speed reduction, and promote an ethos of responsibility especially for more vulnerable road users through the use of behavioural change techniques in road safety education, training and communications</li> <li>• Continue to conduct Urban Safety Management Reviews and introduce Rural Safety Management Reviews to identify areas where vulnerable road user collisions would likely be reduced by lower traffic speeds, , traffic engineering, road safety, education and enforcement.</li> </ul>
Partners		
<p>Avon &amp; Somerset Police, community and special interest groups, Road users, Community speed watch, Parish Council and communities</p>		

## 8. High-Level Action Plan

(4) Safe roads and road sides		
Aim	Objectives	High-Level Actions
<p>A road environment that minimises the risk of serious collision</p> <p>A road environment that minimises the risk of severe or fatal injury should a collision occur</p>	<p>(a) Ensure that those most vulnerable to injury are prioritised in new and existing developments and highways infrastructure, implementing passive safety and evidence based solutions as appropriate</p> <p>(b) Review and treat routes where there is an increased risk of serious injury to road users. Implementing area wide treatment including speed limits, traffic calming and filtered permeability as required to mitigate against this risk.</p> <p>(c) Investigate serious and fatal collisions to assess the contribution of the road infrastructure on the outcome.</p>	<ul style="list-style-type: none"> <li>Review current provisions for vulnerable road users to ensure that those most vulnerable to serious injury are protected, including the implementation of area wide treatments, passive safety interventions, speed and traffic engineering;</li> <li>Work with partners through the Somerset multi-agency road safety forum to increase information available on serious and fatal collisions, using this information to assess the impact of the road environment on the outcome of a collision;</li> <li>Review current practice around pre-maintenance assessments of existing road network and recorded injury collisions including considerations of passively safety and other traffic engineering measures ;and</li> <li>In partnership with Highways England contribute to the production of a regional incident and casualty reduction plan to cut injury collisions on the trunk road network running through Somerset.</li> </ul>
<b>Partners</b>		
Highways England, Avon & Somerset Constabulary, Coroner's Office, District Councils, Developers		

## 8. High-Level Action Plan

(5) Safe vehicles		
Aim	Objectives	High-Level Actions
<p>Vehicles using Somerset's road network are appropriately maintained</p> <p>The road network in Somerset is able to adapt to technological developments</p>	<p>(a) Enforce, lobby and encourage compliance with regulatory standards, and the adoption of best practice by vehicle owners, and our own organisations, to ensure that vehicles using our road network are as safe as possible</p> <p>(b) Promote safe vehicle use within road safety campaigns and training</p> <p>(c) Plan and prepare for technological advances, such as connected and autonomous vehicles, on the Somerset road network</p>	<ul style="list-style-type: none"> <li>• Work in partnership with Highways England and other partners to deliver and widen roadside safety checks of Heavy Goods Vehicles and tyre safety checking on vehicles on Somerset roads</li> <li>• Offer advice on the safe maintenance of agricultural vehicles</li> <li>• Incorporate vehicle safety messages in road safety campaigns and training (e.g. tyre safety and pre-driving checks)</li> <li>• Continue the implementing of the 'Trucks and Child Safety' (TACS) programme to help promote safe user behaviour around large vehicles on our roads</li> <li>• Advocate for the adoption of the Construction Logistics and Cyclist Safety (CLOCS) programme for HGV operators</li> <li>• Use the Somerset multi-agency road safety forum to; horizon-scan and analyse the impact of new developments (e.g. connected and autonomous vehicles) and agree actions required of partners to manage any impact on road safety in Somerset</li> <li>• Work with local groups regarding safe agricultural vehicle use</li> </ul>
Partners		
<p>Highways England, National Government, Trading Standards, Parents, HGV operators, National Government, Motor manufacturers, Agricultural Groups</p>		

# Appendix: KPI Summary and 2017 Trend

In 2012, Somerset Road Safety set new targets to 2020 in five key categories:

- Total number of Killed and Seriously Injured (KSI) casualties;
- Vulnerable road users KSI casualties (Pedestrian, Motorcycle or Pedal Cycle casualties);
- 60+ years KSI casualties;
- 16-24 years KSI casualties; and
- Child 0 – 15 years KSI casualties.

2017 Targets: Casualties

