

TOWARDS 2030

MAKING OUR ROADS SAFER FOR ALL





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Abbreviations

AIS	Abbreviated Injury Scale	IBRS	Injury Based Reporting Systems
ANPR	Automatic Number Plate Recognition	iRAP	International Road Assessment Programme
ASC	Average Speed Cameras	KSI	Killed or seriously injured (casualties)
CCC	Cambridgeshire County Council	NCAP	New Car Assessment Programme
CLOCS	Construction Logistics and Community Safety	NDORS	National Driver Offender Retraining Scheme
COM-B	Capability, Opportunity, Motivation and Behaviour Model	NIBRS	Non-Injury Based Reporting Systems
COPA	Case Overview and Prosecutions Application (Metropolitan Police)	ONS	Office for National Statistics
CPCA	Cambridgeshire and Peterborough Combined Authority	OPCC	Office of the Police and Crime Commissioner
CRASH	Collision Reporting and Sharing system	PCC	Peterborough City Council
CSP	Community Safety Partnership	PCC	Police and Crime Commissioner
CSW	Community Speed Watch	PDM	Partnership Delivery Manager
DfBB	Driving for Better Business	RPU	Road Policing Unit
DfT	Department for Transport	SDG	Strategic Development Goal
DVSA	Driver and Vehicle Standards Agency	SID	Speed Indicator Device
FORS	Fleet Operators Recognition Scheme	SPI	Safety Performance Indicator
FSC	Fatal or serious (collisions)	TBC	To be confirmed
		VAS	Vehicle Activated Sign





History

Following a number of years of informal partnership working, the first official Partnership for Road Safety in Cambridgeshire and Peterborough (PARSINCAP) was established in 2002. This focused on supporting close working relationships between the agencies listed below, in the prevention of road traffic related deaths and injuries, using the four strands of education, enforcement, engineering and epidemiology:

- Cambridgeshire County Council
- Cambridgeshire Constabulary
- Cambridgeshire Fire & Rescue Service
- Peterborough City Council
- East-Anglia Ambulance NHS Trust
- The Highways Agency (now Highways England)
- Cambridgeshire and Peterborough Public Health Network
- Magpas Air Ambulance

The inclusion of public health and medical practitioners in the partnership has been a key distinction of Cambridgeshire and Peterborough compared to most other partnerships nationally, and while the medical involvement diminished slightly in the intervening years, the refresh of the now Cambridgeshire and Peterborough Road Safety Partnership (CPRS) in 2015 revived these

links with the inclusion of Addenbrooke's Hospital and the East of England Trauma Network in the revised partnership. In 2015, the Partnership also recognised that social and economic costs of road collisions extends to wider provision not previously associated with typical road safety programmes, such as victim support and rehabilitation and therefore also added the Road Victims' Trust, a charity supporting all those affected by a fatal road traffic collision across Bedfordshire, Cambridgeshire and Hertfordshire, as a partner. A new model was developed, and the idea of a safe system approach introduced.

Key to the review of the partnership in 2015 and continuing into the next partnership strategy is the acceptance that every death and life changing injury on Cambridgeshire and Peterborough's roads or to a Cambridgeshire or Peterborough resident is one too many, and the social and economic burden of road casualties is felt much wider than just those immediately involved in the collision.

Therefore, the vision remains to prevent all road deaths across Cambridgeshire and Peterborough and to significantly reduce the severity of injuries and subsequent costs and social impacts from road traffic collisions.

Cambridge



Peterborough





Context

Road safety is an important priority for the authorities of Cambridgeshire and Peterborough. Each year, just over 2,500 people are killed or injured on the region's roads. Overall, there has been a 29% reduction in the number of casualties on Cambridgeshire and Peterborough's roads since 2009, however, much of the reduction was observed in the first five years. In fact, there was a 24% reduction in casualties in 2013, compared to 2009, whilst there was only a 6% reduction from 2014 to 2018. See figure 1.

This new Strategy is timely. Adopting new targets, a new vision and a new approach will invigorate the Partnership and assist partner organisations and communities to work together to further reduce road injury. It also provides an opportunity to think beyond road safety to safe sustainability, to ensure that road safety is combined with active travel choice, to assist communities in becoming safer and healthier, with cleaner air, less traffic and more opportunities to use travel as a form of exercise.

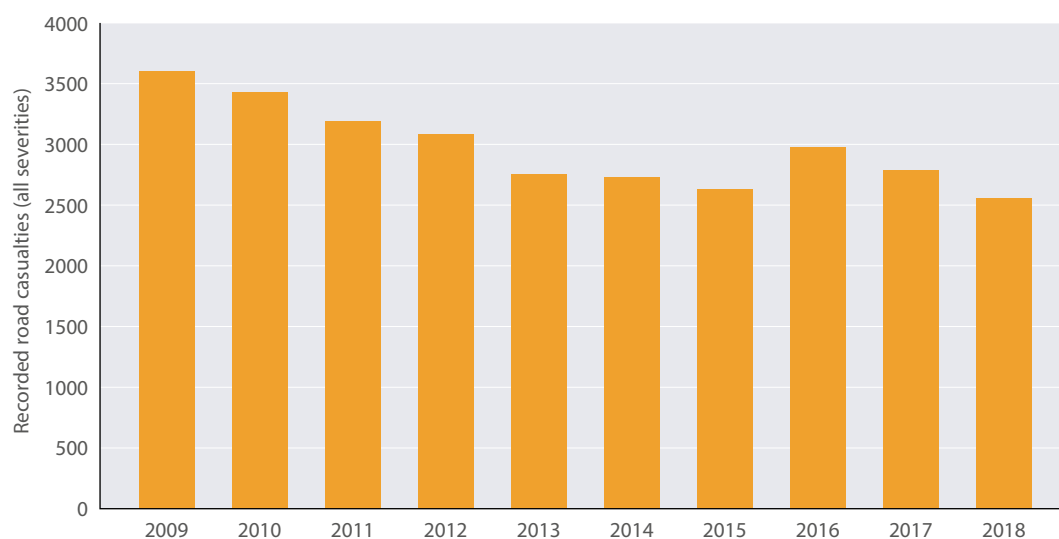
This Strategy has been created after an extensive review of the activities and structure of the Cambridgeshire and

Peterborough Road Safety Partnership. Interviews with key stakeholders and partners were conducted to understand how the partnership was functioning and which direction it should take in the future, alongside surveys to local residents and road users to uncover their priorities, with a review of previous work undertaken to map out the activities of the Partnership.

The conclusions were that the Partnership has strong foundations, with a well-established structure, including important organisations often not included in other road safety collaborations. There is a good use of data and evidence, with strong collaborations between partners to share knowledge and experience. All partners are committed to the goal of reducing road casualties.

These findings have been used alongside international evidence on best practice to re-launch the Partnership with this new Strategy, and a new name and structure, to continue to harness the passion of partners and effectively work towards Vision Zero.

Figure 1 - Number of road casualties in Cambridgeshire and Peterborough



An aerial photograph of a city landscape. In the foreground, there is a large, modern building complex with several interconnected wings, surrounded by green lawns and trees. A large parking lot with many cars is situated next to the buildings. A multi-lane highway with an overpass runs diagonally across the middle of the image. The background shows a dense urban area with numerous houses and commercial buildings, interspersed with green spaces and a large body of water in the distance.

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Vision



The Vision Zero Partnership is committed to a Safe System approach. Its structure and activities are based on the principles of Safe Systems and this Strategy sets out how the partners will work together to achieve Vision Zero.

No human being should be killed or seriously injured as the result of a road collision

The Partnership is working towards a long-term strategic goal of Vision Zero, where there are no deaths and serious injuries on the Partnership's roads. This is an ambitious goal and will need time and effort to be achievable. With this Strategy starting in 2020, the goal is to move towards **zero deaths or severe¹ serious injuries in the Partnership area by 2040.**

This Strategy sets out the structure, targets, key performance indicators and planned activities of the Partnership, explaining what the Safe System is and how it sits at the heart of the Partnership's vision.



Safe System Explanation

The Safe System is a concept in road safety which originated in Sweden and the Netherlands in the 1980s and 1990s.

At the time, scientists and policy makers began to question the prevailing view that the safety of road users was, in the last instance, their own responsibility and that the task of road safety policy was thus primarily to influence road users' behaviour so they would act safely at all times. As the decades-long decreases in the number of road fatalities and severe injuries were levelling out, it became clear a predominant focus on education, information, regulation and enforcement was no longer delivering progress. A rethink was needed.

Adopting a Safe System starts with accepting the validity of a simple ethical imperative: **No human being should be killed or seriously injured as the result of a road crash.** (ITF, 2016, p. 5)

Once this imperative is accepted, it leads to a philosophy where the whole traffic system is designed to prevent people being killed or seriously injured, often through policy frameworks such as 'Vision Zero' or 'Towards Zero'.

There are four principles which are central to a Safe System:

- **First**, people make mistakes that can lead to road collisions.
- **Second**, the human body has a known, limited physical ability to tolerate collision forces before harm occurs.
- **Third**, while individuals have a responsibility to act with care and within traffic laws, a shared responsibility exists with those who design, build, manage and use roads and vehicles to prevent collisions resulting in serious injury or death and to provide post-collision care.
- **Fourth**, all parts of the system must be strengthened in combination to multiply their effects, and road users are still protected if one part fails. (RoadSafe, 2020)

¹ 'Severe' injuries are those categorised as MAIS4+. The Abbreviated Injury Scale (AIS) severity score is an ordinal scale of 1 to 6 (1 indicating a minor injury and 6 being maximal). A casualty that sustains an injury with a score of 3 or higher on the AIS is classified as clinically seriously injured (MAIS3+) (Department for Transport, 2015).



The Safe System requires a new approach to road safety. Table 1 compares the traditional approach to road safety with the Safe System approach. It shows how there is a shared responsibility for road safety in the Safe System, moving away from a focus on making road users compliant. It continues to be important that road users comply with the rules of the system, but also that the system is forgiving when people make mistakes. Information giving and enforcement are still important, but they need to be coordinated with safe vehicle and road design, speed choice, and post collision response.

The Safe System is therefore:

- the vision or aspiration that zero fatalities and serious injuries from collisions are ultimately possible
- the principles to guide the design, operation and use of a road system with a view to reducing fatalities and serious injuries to zero

- the implementation of practices, tools and their interactions that will deliver on the principles.

(ITF, 2016, p. 30)

The Safe System requires a systematic, multi-disciplinary and multi-sectoral approach to address the safety needs of all users. It requires a proactive strategy which places road safety in the centre of road traffic system planning, design, operation and use. There are five components for action:

- Safe People
- Safe Vehicles
- Safe Speeds
- Safe Roads and Roadsides
- Post collision response

(PACTS, 2016)

Table 1 – Comparing the traditional road safety approach and a Safe System

	Traditional road safety policy	Safe System
What is the problem?	Try to prevent all collisions	Prevent collisions from resulting in fatal and serious casualties
What is the appropriate goal?	Reduce the number of fatalities and serious injuries	Zero fatalities and serious injuries
What are the major planning approaches?	Reactive to incidents Incremental approach to reduce the problem	Proactively target and treat risk Systematic approach to build a safe road system
What causes the problem?	Non-compliant road users	People make mistakes and people are physically fragile/vulnerable in collisions. Varying quality and design of infrastructure and operating speeds provides inconsistent guidance to users about what is safe use behaviour
Who is ultimately responsible?	Individual road users	Shared responsibility by individuals with system designers
How does the system work?	Is composed of isolated interventions	Different elements of a Safe System combine to produce a summary effect greater than the sum of individual treatments – so that if one part of the system fails other parts provide protection

Source: (ITF, 2016)



The system needs to provide layers of protection through these components in order to prevent deaths and serious injuries.

To help build a safe road system that is forgiving of mistakes, investment needs to be made in the creation of Safe Roads, Safe Speeds, Safe Vehicles, Safe People and Post Collision Care to put layers of protection around people to keep them safe from death and serious injuries on the road. All parts of the road system must be strengthened in combination to multiply the protective effects and if one part of the system fails, the other parts will still protect people.

(Towards Zero Foundation, 2020)

The Safe System approach suits a multi-agency partnership well. It allows different organisations to lead on different components, playing to their strengths, core business and statutory duties. In the Structure section of this Strategy, there are details of how the Safe System components will be addressed, explaining the roles and responsibilities of Partnership members.

Targets

Setting targets

Road safety targets are a useful tool for focusing activities and prioritising actions. Whilst the United Kingdom does not currently have national road safety targets, Highways England and many local highways authorities and partnerships have adopted their own targets, to provide a goal to aim for and a means of checking progress.

The House of Commons Transport Select Committee has reviewed the Government's road safety strategy twice since 2010. In its 2012 report the Committee confirmed that *"Road safety targets have played an important role in driving the UK's positive road safety record"* (Transport Select Committee, 2012: 13). (Amos, Davies, & Fosdick, 2015)

There has been research which has shown that countries which have road safety targets have generally performed better than those without. The UN identified several reasons why road safety targets have proven to be beneficial:





- Setting targets communicates the importance of road safety.
- Targets motivate stakeholders and increase accountability for achieving results.
- Targets convey the message that the Government is serious about reducing road casualties.
- Sub-national targets widen the sense of ownership by creating greater accountability, establishing more partnerships and generating more action.
- Targets raise media and public awareness and motivate politicians to support policy changes and to provide resources. (Towards Zero Foundation, 2020, p. 3)

There are 17 Sustainable Development Goals (SDGs), adopted by all UN Member States in 2015, which are a call to action to end poverty, protect the planet and improve the lives and prospects of everyone. Goal 3 is 'Good Health and Well-Being'. Specifically, target 3.6 is:

By 2020, halve the number of global deaths and injuries from road traffic accidents. (United Nations, 2020)

The Stockholm Declaration, made at the Third Global Ministerial Conference on Road Safety in Stockholm on the 19th and 20th February 2020, stated:

Reiterating our strong commitment to achieving global goals by 2030 and emphasizing our shared responsibility, we hereby resolve to;

Call upon Member States to contribute to reducing road traffic deaths by at least 50% from 2020 to 2030 in line with the United Nations High-Level Political Forum on Sustainable Development's pledge to continue action on the road safety related SDG targets, including 3.6 after 2020, and to set targets to reduce fatalities and serious injuries, in line with this commitment, for all groups of road users and especially vulnerable road users such as pedestrians, cyclists and motorcyclists and users of public transport. (Third Global Ministerial Conference on Road Safety: Achieving Global Goals 2030, 2020, p. 3)

The '50 by 30' campaign (Towards Zero Foundation, 2020) to halve global road deaths and serious injuries by 2030 encapsulates this SDG, with the European Union adopting this target in order to meet its long-term strategic goal of achieving Vision Zero by 2050. (European Commission, 2019)

Changes in casualty reporting

The systems for collecting statistics about road casualties have been well-established for a number of years and even though these systems are managed by individual police forces, the level of consistency has traditionally been considered to be quite good. However, new software reporting systems (such as CRASH and COPA) have changed the way in which injury severity is classified.

The introduction of Injury Based Reporting Systems (IBRS) appears to have led to a change in the reported severity of road casualties. This can be explained by the change of reporting systems from Non-Injury-Based Reporting Systems (NIBRS), where judgement of the casualty severity is made by the reporting police officer, to IBRS, where the severity of the injury is determined automatically from the most severe type of injury suffered. It appears that some casualties that would have been categorised as 'slight' on NIBRS are recorded as 'serious' in IBRS. This became apparent from initial analysis of high level data suggesting that switching to CRASH and COPA added between 5 and 15% to the Great Britain total for 'serious' injuries [in 2017]. (Office for National Statistics, 2019, p. 3)

The Office for National Statistics (ONS) Methodology Advisory Service has completed analysis to quantify the effect of the introduction of new injury-based report systems, such as CRASH and COPA, on the number of slight and serious injuries reported to the police, and to estimate the level of slight and serious injuries as if all police forces were using injury-based reporting systems.

What this means is that, in order to make comparisons with casualty figures before the introduction of these new systems, adjusted figures (as calculated by ONS) should



be used. It means that there will be differences between these adjusted figures and those previously published for Cambridgeshire and Peterborough, but it will allow consistent future analysis.

Figure 2 shows the number of people who were reported as killed or seriously injured on Cambridgeshire and Peterborough's roads since 2009, and the figures after the

adjustment calculations have been performed. The CRASH system was introduced by Cambridgeshire Police in 2016, shown by the converging figures. In 2009, there were 482 reported KSI casualties, compared to 595 when the figures were adjusted. Figure 3 shows the figures for slight injuries, with 3,120 reported in 2009, adjusted down to 3,007.

Figure 2 – Cambridgeshire and Peterborough Killed and Serious Casualties - Reported and Adjusted

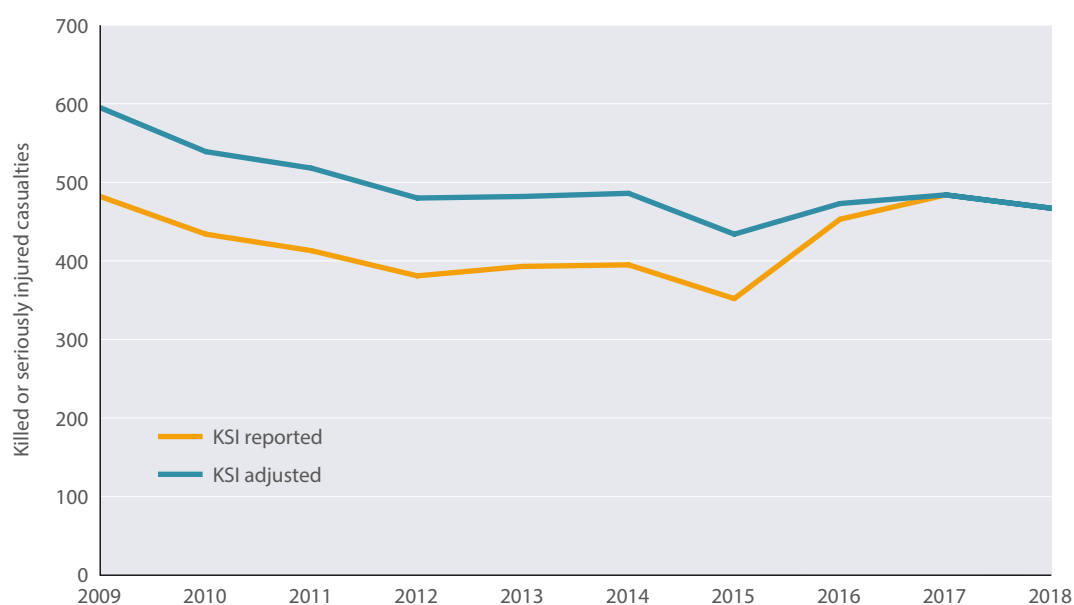
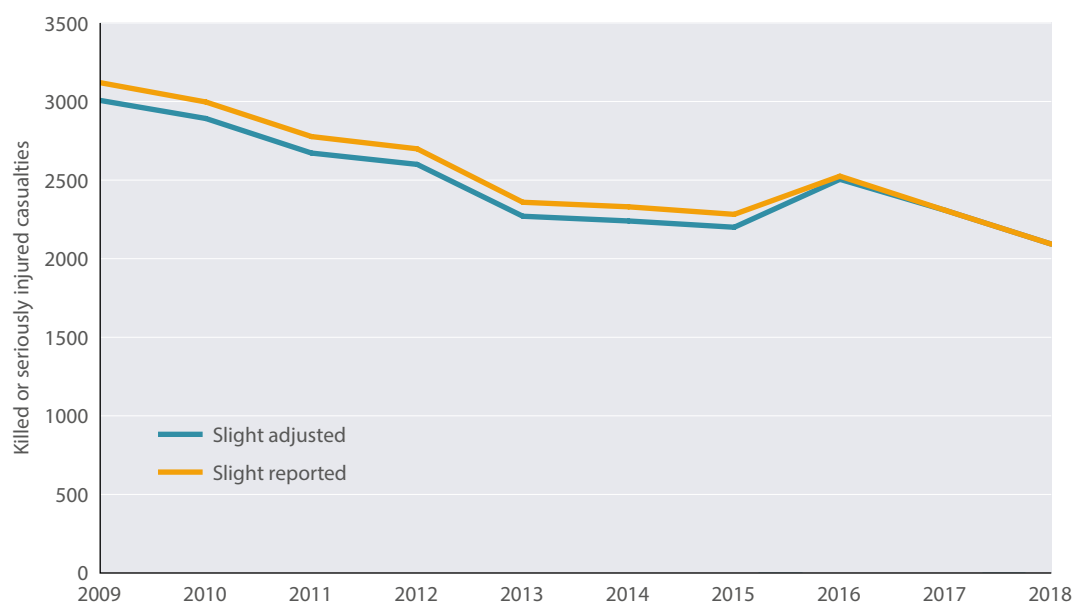


Figure 3 – Cambridgeshire and Peterborough Slight Casualties - Reported and Adjusted





Targets for the Vision Zero Partnership

To set targets for the future, the adjusted figures have been used in the analysis.

Given the international adoption of a 2030 target of a 50% reduction in road deaths and serious injuries, this is a suitable target for the Vision Zero Partnership.

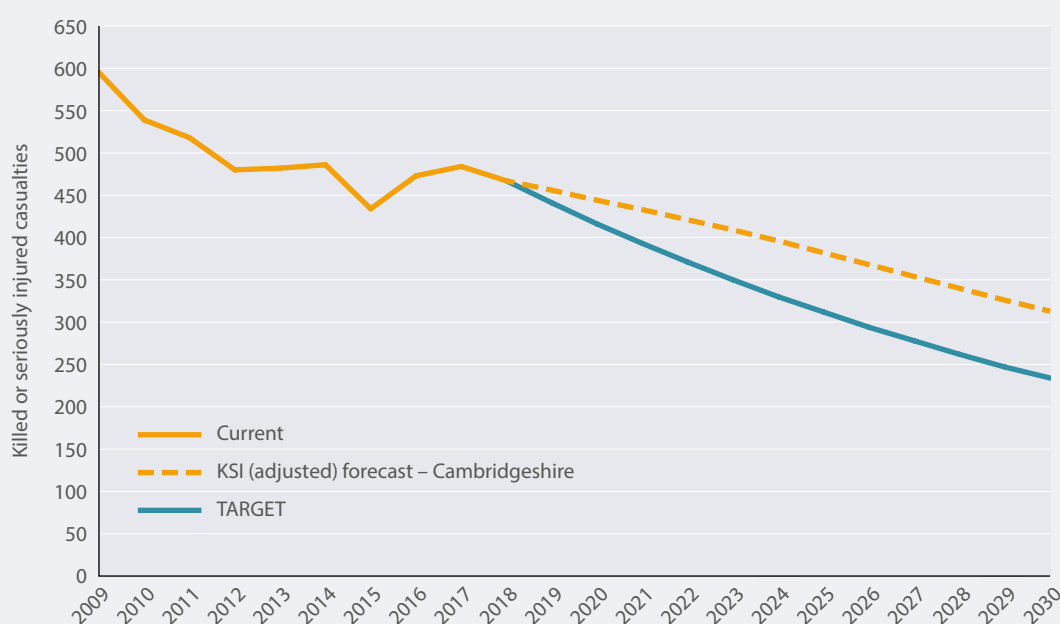
As detailed earlier, there were 595 people killed or seriously injured on Cambridgeshire and Peterborough's roads in 2009 (after the figures were adjusted) and 467 adjusted-KSI casualties in 2018. Between 2014 and 2018, there was an annual average of 469 KSI casualties.

Figure 4 shows the numbers of adjusted KSI casualties which occurred in the partnership area from 2009 to 2018, and the dashed line shows the number of KSI casualties that would be expected if the trend continued. The forecast line suggests that there would be 329 people killed or seriously injured in Cambridgeshire and Peterborough in 2030, which of course depends on a large number of influencing factors – many of which are beyond the control of the Partnership. The continued solid line shows the path that would need to be followed to achieve a 50% reduction in KSI casualties by 2030: **a target of 234**.

The overall vision, as detailed earlier, for the Vision Zero Partnership is to achieve Vision Zero, where no people are killed or severely seriously injured on the partnership's roads. This is the long-term goal. The adoption of local targets allows partners to measure progress towards that goal and identify where further work is necessary.

To achieve a long-term reduction of severely seriously injured casualties, it will be necessary to undertake additional analysis on the casualty data. STATS19 data includes 'serious' casualties in one category, covering life-changing injuries (such as a broken neck or back, severe head injuries or internal injuries) through to less serious injuries, which still require medical treatment (including burns, concussion and severe general shock). To determine the numbers of severely injured casualties, the Vision Zero Partnership will need to work with health partners to link hospital or trauma data and report these figures alongside the STATS19 data. Cambridgeshire has been leading the way in linking these data sources and a methodology has been established for identifying and matching trauma cases with STATS19. (Nunn, et al., 2018)

Figure 4 – Cambridgeshire and Peterborough KSI Targets to 2030 (based on adjusted KSIs)





Understanding changes in knowledge, attitudes and behaviour

This Strategy outlines, under each of the Safe System components, the activities which will be delivered, and the associated safety performance indicators (SPIs) for measuring success. In addition, to understand the overall impact of the Partnership on road users' attitudes, knowledge and behaviour, it is proposed that standard questions are asked of the local population and local road users annually. These can be used to track changes over time.

Using established questions will enable the Vision Zero Partnership to benchmark against national results and those from other areas, and be confident in the wording of the questions used. The Transport Survey Question Bank is a tool to search questions asked in main transport surveys conducted since 2000 (Department for Transport, 2017). The tool incorporates questions from a large number of existing surveys, including: Active People Survey, British Social Attitudes, THINK!, Transport Choices Segmentation Study, and young driver safety amongst others. Appendix A – Public Survey Questions on page 42 lists some example questions from the British Social Attitudes Survey, taken from the tool, which could be used by the Vision Zero Partnership annually.

An aerial photograph of a city landscape. In the foreground, there is a large, modern building complex with several interconnected structures and a large parking lot filled with cars. The building has a mix of brick and light-colored facades. To the right of the building, a multi-lane highway with an overpass runs diagonally across the frame. The surrounding area includes green fields, trees, and other smaller buildings. In the background, a dense urban area is visible, with a large stadium or arena in the center. The sky is hazy, and the overall tone of the image is somewhat muted, with a light green tint.

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Structure



Adopting a new approach

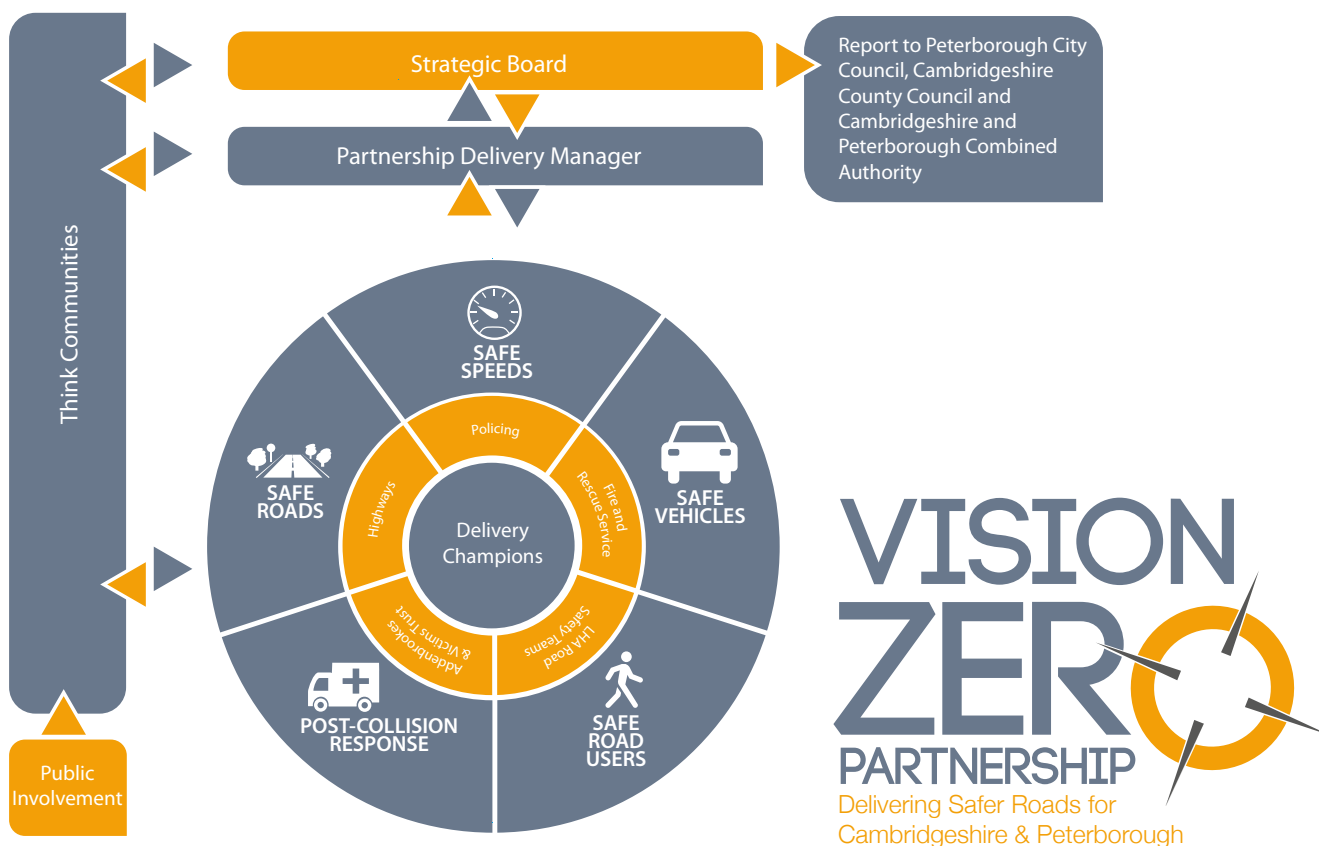
The adoption of a new strategy necessitates a review of the Partnership's structure. An appraisal of previous working practices was undertaken, thinking about strengths and weaknesses and where changes could be made to assist a complete move to a Safe System approach. Figure 5 shows the new Partnership's structure with more detail on the Terms of Reference on page 17.

The new structure formalises the relationship with the people of Cambridgeshire and Peterborough. More information on Think Communities is provided later in this Strategy, but essentially it is a mechanism for empowering and working with local communities to harness their energy to deliver local priorities, like road safety. It provides an opportunity for local communities to influence the activities undertaken by the partnership, in return for

providing a resource to enhance the capabilities of the partner organisations. It means that the public has an opportunity to influence all levels of the Partnership.

Day-to-day activities and partnership projects will be delivered by Safe System Workstreams, a new approach based on international best practice. The creation of these workstreams acknowledges the different skills and expertise of partner members, playing to their strengths and recognising the road safety activities delivered as part of core business, adding value through co-ordination of resources. It embeds the Safe System approach into working practices. Each workstream will have a 'lead' organisation, responsible for co-ordinating efforts and reporting upwards, through the Partnership Delivery Manager to the Strategic Board. The workstreams are represented in a circular relationship to demonstrate how all parts are needed to deliver the Safe System.

Figure 5 – New Partnership Structure





The Partnership Delivery Manager will oversee the work of the Safe Systems workstreams and support delivery, ensuring co-ordination between activities. The role will include challenging the workstreams to ensure that evidence and data are at the core of intervention and activity design. Each Safe System workstream will have SPIs to measure progress against and which will be reported on by the Partnership Delivery Manager to the Strategic Board. The Partnership Delivery Manager will lead on the implementation of best practice, using the latest research and evaluation results to ensure an evidence-led approach. The expertise, knowledge and experience pooled in Safe Systems Workstreams will be dedicated to co-ordinated problem solving, ensuring that a range of evidence-led solutions are implemented and are outcome-focused with reference to the SPIs and road safety targets.

The Strategic Board and the Safe System workstreams are independent from one another, to facilitate scrutiny and rigour. As such, the Partnership Delivery Manager (PDM) role is integral to communications and accountability. The PDM will report the activities of the Safe Systems Workstreams to the Strategic Board, whilst also co-ordinating, supporting, guiding and monitoring the workstreams delivered by the Safe Systems Workstreams.

The Strategic Board, as budget holder, will oversee the work of the Partnership, approving spend and 'Plans on a Page' for the forthcoming year. The Board will ensure that the direction of the Vision Zero Partnership is evidence-led and focused on achieving the SPIs, casualty targets and the ultimate aim of no deaths or serious injuries.





Safe System Workstreams

The creation of Safe System Workstreams is an innovative new way of formalising the Safe System approach into the Vision Zero Partnership. Whilst a fresh approach, it is a move based on international best practice and also plays to the strengths of the partners.

There are certain tasks which can only be performed by particular partners. For example, traffic enforcement primarily belongs to the police – other partners cannot process offence detections for prosecution. However, partners have supporting roles. Whilst the police undertake speed enforcement; the local highways authorities and Highways England have responsibility for setting appropriate speed limits; local communities can support enforcement through Community Speed Watch activities; and all partners can communicate with road users to promote compliance with those posted limits.

For each of the Safe System components, it means that there is a natural 'lead' within the Vision Zero Partnership, however, no lead can work in isolation. Multiple partners will be involved in each of the Safe System Workstreams and each Workstream must work with the other Workstreams and upwards and outwards from the Partnership in order to create the Safe System.

Terms of Reference

Vision

Our vision is for roads free from death and serious injury, where the people of Cambridgeshire and Peterborough can enjoy active lives and sustainable transport.

Structure

The Partnership will have two levels of operation, a Strategic Board and a set of Safe System Workstreams. Coordination and support will be provided by the Partnership Delivery Manager (PDM).

The structure is designed to ensure there is a clear distinction between the Safe System Workstreams and the Strategic Board. Whilst the same partner organisations will be represented at both levels, no individual representatives will sit at both the delivery level and on the Board. The connection between the two levels is the PDM.

Governance

The Strategic Board will report directly to PCC & CPCA² / CCC Highways Committee

Aims

- To prevent road users from being killed or seriously injured (KSI) through a coordinated approach, using Safe System principles.

² The CPCA has a Local Transport Plan, which aligns with this Road Safety Strategy. (Cambridgeshire & Peterborough Combined Authority, 2020)





- To reduce the social impact of road casualties, at an individual, family and community level.
- To reduce the cost to public agencies in dealing with the impact of road collisions.
- To develop a financially sustainable model of delivering road safety activity across Cambridgeshire and Peterborough.



Objectives

- To reduce year on year the numbers of people killed and seriously injured on Cambridgeshire and Peterborough roads, to a point where there are no fatalities or seriously injured casualties.
- To work within the Safe System to deliver a co-ordinated approach to achieve Vision Zero
- To support the victims of road collisions and reduce the social impact for individuals, families and communities.
- To undertake targeted road safety enforcement as part of a strategy to reduce KSIs.
- To identify vulnerable road users and deliver targeted initiatives to prevent collisions resulting in death and serious injuries.
- To provide the best possible post-incident response, both at the roadside and in the health setting.
- To identify high risk collision locations and develop preventative measures (including road engineering solutions) to decrease the risk of future collisions,

alongside reviewing the network to reduce road danger through a roads assessment programme.

- To encourage and facilitate utilisation of the safest possible vehicles and equipment.
- To share data and intelligence across public agencies to prevent future road collisions.
- To work across other Partnership areas to identify methods of reducing partnership costs.
- To lobby and influence organisations, companies and government departments where appropriate.

Strategic Board

Membership

- Cambridgeshire County Council
- Peterborough City Council
- Cambridgeshire Constabulary
- Tri-force road policing
- Highways England
- Cambridgeshire Fire and Rescue Service
- East of England Ambulance Service
- Public Health
- Addenbrooke's Hospital
- Roads Victim's Trust
- Magpas Air Ambulance

Frequency of Meetings

Quarterly

Elected Positions

Chair	<i>TBC</i>
Vice-Chair	<i>TBC</i>

The Strategic Board will elect one of its members to Chair the meetings for the year. A Vice-Chairman will also be elected for the year. Elections will take place annually in March and the existing Chairman and Vice-Chairman may be re-elected up to a maximum tenure of three-years.

A meeting will require the attendance of seven member organisations to be considered quorate.



Safe System Workstreams

Table 2 – Safe System Workstreams

Workstream	Lead Agencies
Safe Roads	Cambridgeshire County Council (Highways) / HE/Peterborough City Council (Highways)
Safe Speeds	Cambridgeshire Constabulary
Safe Vehicles	Cambridgeshire Fire & Rescue
Safe People	Cambridgeshire County Council / Peterborough City Council (Road Safety Teams).
Post Collision Response	Addenbrookes / Roads Victims Trust

The expectation is that the officers within each Workstream will routinely:

- Take ownership of and update the relevant 'Plan on a Page' for their area.
- Gather and analyse data from across partners
- Research national best practice, policy and trends and understand their implications for Cambridgeshire and Peterborough.
- Identify trends and common issues from Partnership data and intelligence
- Share data and best practice both regionally and nationally, feeding findings back into the partnership.

The Partnership will not have a dedicated communications function, instead each lead agency would be expected to utilise their own communications resource whilst keeping partner agencies and PDM fully involved and informed.



Approval for new schemes of work and / or funding will be made to the PDM using the approved template. Where appropriate the request will be considered by the Strategic Board.

The workstreams **must not** be considered as 'silos'; they are areas of responsibility that will interlink with each other and other organisations, areas and communities on a regular basis. Openness and clarity of communication will be essential to ensure the success of this model.

Partnership Delivery Manager (PDM)

The PDM will support, guide, advise and monitor the individual workstreams, as well as providing the liaison between the Strategic Board and Safe System Workstreams. The PDM will also ensure that the workstreams do not clash in terms of messaging, outputs, timings or resources, whilst looking for funding opportunities that could be accessed by elements of the Partnership.

Think Communities

Think Communities (Cambridgeshire County Council, 2020) has been developed through a collaboration between Cambridge City Council, Cambridgeshire Council, Peterborough City Council, Cambridgeshire Constabulary and the district councils of East Cambridgeshire, Fenland, Huntingdonshire and South Cambridgeshire.

It is a co-operation between those organisations to create a shared vision, approach and priorities for building Community Resilience across Cambridgeshire and Peterborough partner organisations.

The vision is based on three components, which align well to the Safe System approach:

- **People:** Resilient communities across Cambridgeshire and Peterborough where people can feel safe, healthy, connected and able to help themselves and each other.
- **Places:** New and established communities that are integrated, possess a sense of place, and which support the resilience of their residents.



- **System:** A system wide approach in which partners listen, engage and align with communities and with each other, to deliver public services and support community-led activity. (Cambridgeshire County Council, 2018)

This approach encourages an exchange between communities and the Vision Zero Partnership, where they can work together to create healthy, safe communities. The approach is evidenced-led and is a two-way exchange, where the Partnership is committed to work with communities to improve lives, whilst at the same time, empowering communities to identify and implement their own solutions.

The pledge of Think Communities partners is that together they:

- Empower and enable communities to support themselves and encouraging community-led solutions and intervention. (*People*)
- Work with communities to harness their local capacity targeted towards those in the community requiring the most help. (*Places*)
- Support active, healthy communities to play a clear and evidenced role in improving people's lives, thereby preventing, reducing or delaying the need for more intrusive and costly public services. (*Places*)
- Align resources to create multi-agency support which can flexibly meet the changing needs of our communities. (*Systems*)

- Be prepared to be experimental in our approach, in order to deliver individual local solutions and support ideas that can be replaced. (*Systems*) (Cambridgeshire County Council, 2018)

There are a variety of ways in which the Think Communities approach can support this Strategy, and it is envisaged that the opportunities will grow over time.

Community Speedwatch is a current example of how communities and partners work together through identifying a problem of speeding in a place-based approach and supporting local residents to take ownership of the solution.

Communities know their streets. This Strategy is about using evidence to create a Safe System. The knowledge held within communities can be harnessed to support the Strategy. Those within local communities can be empowered to collect data to inform activities undertaken by the Vision Zero Partnership and monitor its progress over time. Embedding data into the Think Communities process will ensure that residents understand the expectation that priorities need to be evidence-led and that there will be a process to collect data and interpret the findings.

Think Communities can be used to train residents to collect baseline and monitoring data on non-compliance levels on traffic offences, such as mobile phone use and seatbelt wearing rates, to inform the activities of the

Table 3 - Strategic Priorities and Actions

	Priority Area	Example Action
Priority 1:	Communities are connected and work together toward shared goals.	Develop a joined up, multi-agency campaign to promote the different ways vulnerable people and high-risk communities can be supported by community-led activity.
Priority 2:	Take a place-based approach to service design and delivery of services.	Identify key communities where a place-based approach in keeping with the Think Communities vision can be piloted
Priority 3:	Communities feel they are supported to help themselves.	Development of a shared toolkit which will offer access to consistent levels of support to community groups and organisations across Cambridgeshire and Peterborough.

(Cambridgeshire County Council, 2018)



Partnership and for long-term monitoring. In exchange for data collection services, the Vision Zero Partnership could commit to undertake suitable interventions, including specific enforcement activities or remedial engineering (not necessarily related to the data collection but based on evidence of an issue).

The power of schools and youth-based organisations could also be harnessed through Think Communities. There is an opportunity to work with local children to educate them on road safety whilst harnessing their influence on parents and local communities, getting the children to use data and evidence to develop targeted interventions, encouraging innovation.

One other existing example of a community-based exchange is Biker Down. This is a national Fire and Rescue Service led scheme, where motorcyclists attend a free course that offers them the opportunity to learn practical skills to help them themselves should they be involved in a collision, but also first-aid training and advice on what to do should they find themselves first on the scene of a collision where someone has been injured.

Think Communities provides an exciting opportunity for the Vision Zero Partnership to listen to the needs of local residents and encourage them to work within the Safe System to improve road safety for all. The three Strategic Priorities and Actions are well-suited to road safety and provide a mechanism to expand the interplay between partners and communities, which will develop with time, with pilots developed in particular places and rolled out more widely.

There are other mechanisms for community engagement that must be considered and engaged with, such as Community Safety Partnerships (CSP's). The PDM will ensure that workstreams are liaising with such groups at the appropriate time.

Plans on a Page

As repeatedly stressed, the activities of the Vision Zero Partnership must be evidence-led in order to build a Safe System. This requires an approval process for those activities, to ensure that work is consistent and collaborative across the Safe System workstreams.

There are two parts to this approval process. The first is to submit a workstream approval document, as shown in Appendix D - Workstream Approval Template. This form asks partners to:

- Describe the intervention
- Detail the evidence base and data sources to show the need for the intervention
- Indicate if the intervention links to air quality, health improvements and/or active travel
- Describe the resources required to deliver (funding and staff time) and the details of partner organisations' commitment to the intervention
- Describe the intended outcomes of the intervention (such as improvements in knowledge, skills, attitudes, behaviour change, training), including the links to any specific performance indicators
- Detail the timescales of the intervention
- Describe the evaluation plans, including methodologies, costs and timescales
- Detail who is proposing and approving the intervention

Each intervention conducted by partners under the Safe System workstreams should have a workstream approval document, whether it is business as usual, a current intervention or one proposed for the future. This allows the Partnership to review activities and understand how they align with the evidence and the safety performance indicators. The collated interventions will be summarised in a 'Plan on a Page', with one of these produced and updated annually to reflect current activities in each Safe System workstream. Partners will use a template 'Plan on a Page' for annual updates.



Figure 6 - Example Plan on a Page for Post Collision Response 2020





TOWARDS 2030
MAKING OUR ROADS SAFER FOR ALL

Safe System Workstreams



In the Safe System Explanation on page 7, it was stated that to create a Safe System in road safety, it requires a systematic, multi-disciplinary and multi-sectoral approach to address the safety needs of all users.

This section takes each Safe System workstream in turn, discussing a variety of activities which have been or could be undertaken by those within the Vision Zero Partnership, and with external organisations, to strengthen each part of the System.

For each Safe System workstream, there is case study which details a particular example of best practice activities. The case studies have been selected because they:

- Are based on evidence and data
- Have been evaluated (where appropriate)
- Are based on systems-thinking (working with partners and understanding the impact on other parts of the system)

Data and good quality information are at the heart of the Vision Zero Partnership. The PDM will co-ordinate access to data, with analysts and data managers from partner organisations working with the workstreams to ensure they have access to appropriate data to monitor performance and identify casualty issues. Some analysts will be embedded in all workstreams whereas others hold specialist data sets, not applicable to all.

Each Safe System workstream also has a number of safety performance indicators (SPIs), which can be monitored over time to see the contributions the activities are providing to moving towards Vision Zero.

There are two levels of SPIs: top-level indicators, which have been suggested by the Parliamentary Advisory Council for Transport Safety (PACTS) (Anderson, 2018); and local outcome measures, based on the types of data regularly collected.

Appendix C – Evaluation Stages sets out a number of stages to be considered when thinking about evaluating interventions. At the beginning of each project, partners should think about how data could be collected to monitor SPIs and also how evaluations could inform the Partnership (and others) as to what is most effective. Evaluations should be embedded into the thought process of starting a new project.

There are also a number of activities described in this section. The examples of activities included in this Strategy are not exhaustive. Instead, it outlines the types of activities and interventions which can be undertaken, prompting partners to think about the evidence base and how the workstreams sit within the wider Safe System. Plans on a Page will be updated annually, to reflect changes in collision data, SPIs, survey data and research into the effectiveness of interventions. This allows the Partnership to respond dynamically to local needs and international best practice.

Innovation is also encouraged within the Partnership and with partners, allowing new interventions to be tried and tested, thinking about the current evidence base and how an understanding of the issue or the intervention's effectiveness could improve what is known about best practice.





Figure 7 - Safe System Workstreams





Safe Road Users

Safety Performance Indicators

The following high-level safety performance indicators for the Safe Road Users workstream are:

- Percentage of traffic complying with speed limits on national roads
- Percentage of traffic complying with speed limits on local roads
- Percentage of drivers who do not drive after consuming alcohol or drugs
- Percentage of car occupants using a seatbelt/child seat
- Proportion of drivers not using an in-car phone (hand held or hands free)

These indicators will be monitored annually, using consistent data collection processes. Reference should be made to best-practice in the analysis of this data, both within the UK and globally. There is currently no defined methodology for any of the indicators mentioned, although work is taking place within the European Union and International Transport Federation to standardise collection, allowing international comparisons.

Outcome Measures

Ongoing data collection will be collected on the following:

- Numbers of road users receiving interventions
- Number of road traffic offences recorded
- Number of people reached through campaigns
- Number of people trained
- Brand awareness of publicity campaigns
- Number of people agreeing with questions in annual survey

Understanding mistakes and non-compliance

In a Safe System, it is acknowledged that people are vulnerable, and people make mistakes. The vulnerability of human beings cannot be changed, although vehicles and road environments can be improved to protect human beings and reduce levels of vulnerability. It is impossible to completely prevent people from making mistakes, but it is necessary to encourage the correct use of the road network. It is also essential to highlight the shared responsibility for the creation of a Safe System – road designers and vehicle manufacturers will strive to create the safest roads and vehicles but people need to ensure that they use them safely, and within the traffic laws.

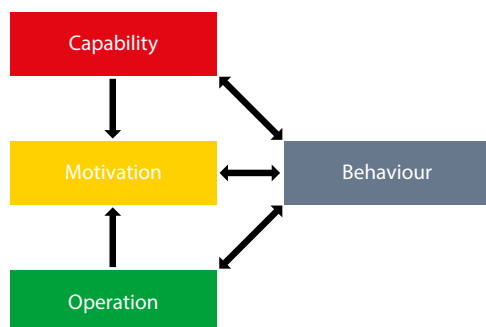
There are two approaches to the delivery and development of interventions to encourage road users to be safe: ensuring that people know how to use the system correctly; and ensuring that people are compliant with the rules of the system. The first approach is about using training and skills-based education to assist road users to know the rules of the road and how to physically use the facilities or vehicles provided. The second approach is about understanding why road users might not be complying with the rules of the road and identifying the correct mechanism for encouraging them to do so.

A useful tool for tailoring both types of approach is the COM-B model³, which states that capability, opportunity and motivation can all influence behaviour. (Michie, Atkins, & West, 2014) More information on how the model can be used to understand how to assist road users to comply with the rules and correctly use the system can be found in Appendix B – COM-B Model on page 46.

³ There are lots of different models to help road safety practitioners understand behaviour, and the Vision Zero Partnership will select the most appropriate for the problem behaviour in question. COM-B is provided here as an example to show there are lots of different influences on behaviour, and these need to be recognised before effective interventions can be designed and delivered.



Figure 8 – COM-B Model (Michie, Atkins, & West, 2014)



Activities being delivered

The Vision Zero Partnership is already using many of these tools described in COM-B to support Safe Road U Information campaigns such as 'I'm Des (Christmas Drink Drive)', 'Project Pictogram', 'Be Safe, Be Seen' campaign for cyclists and pedestrians, Highways England's 'Distressed' campaign and THINK resources are used to ensure that road users are aware of the rules of the road and the consequences of not following them. There are also promotional events, designed to inform the public about the activities of the Partnership and raise awareness of specific road safety topics, including safe motorcycling events and motorcycle week or month.

There are specific training resources provided, with the Partnership adopting a 'cradle to grave' approach where road users of all ages are given skills-training to use the roads correctly. These include 'Bikeability' (cycle training) and pedestrian, scooter and equestrian training. 'BikeSafe' is a national-scheme where motorcyclists have their riding assessed and are then sign-posted to post-test training to improve their skills. For novice riders, 'RideFree' offers enhanced Compulsory Basic Training and the Partnership's role here is to promote attendance of the scheme (more information on 'RideFree' is provided overleaf as a case study).

In schools, educational programmes include 'Drive IQ' and Highways England's young driver app and learning hub

for novice drivers and the 'Children's Traffic Club' and the 'Junior Travel Ambassador' scheme for younger road users.

Targeted enforcement is undertaken for those who choose not to comply with road rules, with 'Operation Dragoon' targeting the most dangerous drivers and 'Operation Velo' seeking to reduce the risk to cyclists through sharing road safety advice to drivers and cyclists.





RideFree

RideFree is an initiative developed in the East of England between Highways England, the Driver and Vehicle Standards Agency (DVSA), road safety partnerships (including the Vision Zero Partnership), motorcycle industry representatives and approved training bodies.

RideFree involved a lengthy evidence-led process. It started with a review of motorcycle initiatives in the East of England, alongside in-depth collision analysis. These revealed that young motorcyclists were often not the focus of road safety interventions, despite being involved in collisions.

Experts from the region came together to understand the reasons why young motorcyclists are involved in collisions, examining the casualty data and other research. A 'behavioural diagnosis' was performed, to understand the influences on behaviour and the opportunities to engage with them.

The result was the development of two enhanced versions of Compulsory Basic Training (CBT), created with industry experts and psychologists. These were tested in a randomised controlled trial (RCT) to understand the effect of the enhancements.

The results were positive, particularly for the version involving pre-eLearning. As such, DVSA is rolling out the scheme nationally to enable all young novice riders to benefit from being better prepared and having the time to improve their knowledge and attitudes before their training.

RideFree is a good example of partnership working and of looking out and up to other agencies who can support the development of an evidence-led scheme (national government, industry associations and research bodies). RideFree embedded data and evaluation in its development and has been recognised in national road safety awards.

The Vision Zero Partnership was heavily involved in the development of the scheme and its role now is to promote the benefits of RideFree and signpost new riders to local trainers who are delivering it. This makes it a low-cost but effective intervention for the Partnership.

<http://ridefree.co/pdf/RF-FullReport-LoRes-Web.pdf>



What to target

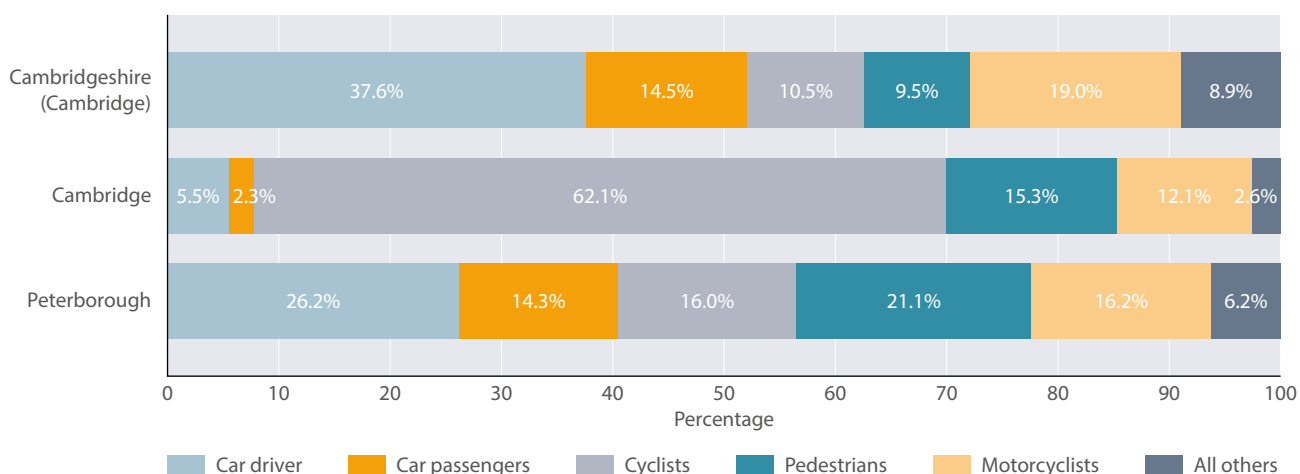
Whilst the overall goal is to reduce the severity of collisions across the Vision Zero Partnership area, it should be remembered that the risk of death or serious injury differs for various users. This is where data analysis is important for understanding where and for whom the system needs to be made safer.

Figure 9 shows the percentages of adjusted KSI casualties in the Partnership area by road user group and local

authority between 2014 and 2018. It splits out the rest of Cambridgeshire from Cambridge City. Each area has a different high-risk group: for Cambridge City, 62.1% of the KSI casualties were cyclists, whilst 21.1% of Peterborough's KSI casualties were pedestrians and 37.6% of the KSI casualties injured in Cambridgeshire outside of Cambridge were car drivers.



Figure 9 - Adjusted KSI Casualties by Road User Group (2014-2018) in the Vision Zero Partnership area



Age profiles are different in the various areas of the Partnership, with higher percentages of children killed or seriously injured (adjusted figures) in Peterborough than elsewhere and slightly higher percentages of adults and

older casualties in Cambridgeshire (outside of Cambridge) and young adults in Cambridge.

The data suggest that interventions will need to be tailored to local needs within the Partnership area.

Table 4 - Age Groups of Adjusted KSI Casualties (2014-2018)

Age Group	Peterborough	Cambridge	Cambridgeshire (-Cambridge)
Preschool Children (0-4 years)	2.6%	0.0%	0.9%
School Age Children (5-15 years)	7.9%	4.6%	4.5%
Young Adults (16-24 years)	19.4%	20.5%	19.2%
Mid-Age Adults (25-64 years)	59.5%	59.8%	62.7%
Senior Adults (65+ years)	8.7%	9.5%	11.1%





Safety Performance Indicators

The following high-level safety performance indicator for the Safe Roads workstream is:

- Percentage of roads with appropriate safety rating (broken into the following stages):
 - Establish baseline measure and 2030 target (2020/21)
 - 1st monitoring point (2023/24)
 - 2nd monitoring point (2026/27)
 - Final monitoring point (2029/2030)

There is no international standard on this indicator, although the iRAP system is widely used. In order to establish and monitor the percentage of roads that meet an appropriate safety rating, a phased approach is proposed. This means that the first stage of this indicator is to devise an appropriate methodology and determine what the baseline percentage of roads meeting the standard is. This will allow 2030 targets for improvement to be set, with three monitoring points over the time period.

Outcome Measures

Ongoing data collection will be collected on the following:

- Monitoring schemes against specified aims (if collision reduction is being measured, it should account for Regression to Mean (RTM) and over an appropriate length of time to the size of effect expected)
- Maintenance regimes
- The number of design and construction schemes delivered

Activities being delivered

Data analysis plays an important role in the Safe Roads workstream. Investment in road schemes and remedial measures is based on cluster analysis (the identification of specific locations on the road network where safety can be

improved) and route analysis (the identification of specific lengths of roads where safety can be improved).

Clusters could occur at specific junctions, bends or outside particular places, such as schools, libraries or shops. The purpose of the analysis is to understand what remedial actions would help to improve the safety of that location, which could range from improved signage and lining to a re-design of the road.

Route analysis uses a similar approach but takes in a much longer stretch of road, which might require a combination of treatments to improve safety. Often, there is a reliance on engineering measures to improve safety on a route, but the A1307 case study below shows how a partnership, holistic approach can be utilised.

Serious consideration needs to be given to assessing the relative and comparative risk of clusters and routes. Density analysis (treatable collisions per cluster, or collisions per mile) is a basic approach and is best used in conjunction with a risk analysis taking into account traffic levels. Traffic count data is a useful data source when considering prioritisation and aligns with other studies of risk published annually by the Road Safety Foundation.

There are a number of guidance and design manuals which set out how roads should be designed, assessed, maintained and operated. These provide clear standards on how changes to the road network are currently implemented in the UK.

Safe Systems guidance on road design also exists to support infrastructure that accounts for people making mistakes and aims to reduce their vulnerability.

Street design has a crucial effect on how people use and experience roads. When streets are designed and implemented for safety, they limit driving to appropriate speeds.

Street design has a strong interrelationship with speed management and enforcement. It can reduce or eliminate conflicts between modes of transport



and make it easier for people to understand how the space is divided or shared by different modes, which makes walking, cycling, and accessing public transport much safer and more appealing. Street design has a strong interrelationship with mobility and transport choice. By being more “forgiving” – that is, by reducing the opportunity for errors to occur and the impacts of those errors when they do occur – it can reduce the likelihood that a collision is fatal. (World Resources Institute and Global Road Safety Facility, 2018, p. 41)

The guidance provides suggestions on how to use proven distinct design techniques for the different needs of rural

roads, urban streets and highways, thinking about speed control, segregation of vulnerable road users and types of junction appropriate for the type of use and type of conflict. Taken alongside existing guidance on design, these suggestions provide an opportunity to re-engineer roads using a Safe System approach.

Partner organisations are also members of the National Modeshift STARS (Modeshift STARS, 2020) school travel planning scheme. This scheme encourages schools to undertake an audit of engineering and safety measures in the vicinity of the school, with the local highways authorities working with the schools to implement an action to plan to increase walking and cycling to school.

A1307 Fourwentways to County Boundary

The A1307 is 22.3 miles long from Girton in Cambridge to the Suffolk border near Haverhill. Apart from the villages of Linton and Abington, it was a national speed limit rural route, with high traffic flows and high numbers of serious and fatal incidents.

With a changed focus on route treatments and a more holistic approach to collision reduction, and closer working relationships across the various road safety service team and external partners, a range of interventions were deployed.

Although the approach to each individual element of the scheme was still to have the specialist team delivering their own part of the works, the innovation was to manage the funding and programme the works to target the same route within a relatively short period.

The theory was that by focusing on the route and interlinking the elements, the whole project would deliver greater results than the sum of its parts.

Engineering solutions included widening the road at a specific location to accommodate a ghost island right turn facility, pedestrian refuge islands and street lighting, alongside speed limit reductions, new safety camera sites and road safety message boards along the whole route.

Education and publicity were taken with a partnership approach, including with neighbours at Suffolk County Council and Suffolk RoadSafe. High levels of media coverage were attained from radio adverts, internet advertising, posters, bus backs and radio and telephone interviews.

Enforcement days were accompanied by a major media presence, including filming of a police drive along the route with accompanying commentary.

The combined effort resulted in significant reductions in casualties along the route and demonstrated that an evidence-led, partnership and Safe System approach can be highly successful.

<https://www.cambridgeshire.gov.uk/asset-library/imported-assets/Appendix%20-%20Complementary%20Education%20Measures.pdf>





What to target

As with road users, the Partnership covers a wide network of different road types. Figure 10 shows the number of adjusted KSI casualties across the Vision Zero Partnership area, according to whether the collision occurred on rural or urban roads. Rural roads are major and minor roads outside urban areas and having a population of less than 10 thousand, with urban roads being major and minor roads within an urban area with a population of 10 thousand or more. It shows that Cambridge City has predominantly

urban roads, with Peterborough being more evenly split between urban and rural. The rest of Cambridgeshire (outside of Cambridge) is predominantly rural, with two-thirds of the adjusted KSI casualties occurring on these roads. This information is reinforced in Table 5, which shows the road class where the casualties occurred and reflects the diverse nature of the Partnership area. It is interesting to note that for all areas of the Vision Zero Partnership, A roads have high percentages of KSI casualties in comparison to the percentage of the network they represent.

Figure 10- Adjusted KSI Casualties by Rural or Urban Roads (2014-2018) in the Vision Zero Partnership area

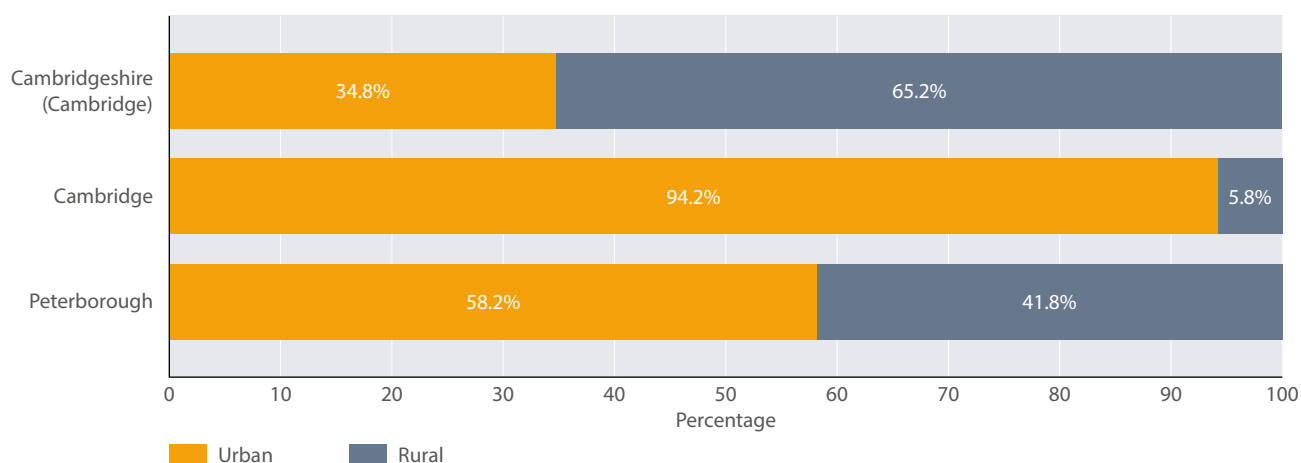


Table 5 – Road Class of Adjusted KSI Casualties (2014-2018) (with percentage of the network each class represents in brackets)

Road Class	Peterborough	Cambridge	Cambridgeshire (-Cambridge)
Motorway	0.0% (0.0%)	1.2% (0.0%)	1.3% (1.2%)
A (M) Road	0.0% (0.0%)	0.0% (0.0%)	0.7% (2.4%)
A Road	41.8% (13.1%)	40.2% (15.2%)	48.6% (15.0%)
B Road	3.2% (6.0%)	1.2% (1.1%)	18.8% (12.7%)
C Road	8.7% (21.8%)	9.8% (10.5%)	8.8% (24.2%)
Unclassified Road	46.5% (59.1%)	47.4% (73.2%)	21.9% (44.6%)



Safety Performance Indicators

The following high-level safety performance indicator for the Safe Vehicles workstream is:

- Percentage of new passenger cars achieving a sufficient safety rating, or equipped with specific technologies.

This indicator cannot be measured for the fleet of vehicles using the roads in Cambridgeshire at present and is not subject to an agreed international definition. One option, however, is to use the published Euro NCAP ratings for vehicles, or better still, the fitment of vehicle safety systems that align with Safe System principles. Again, this cannot currently be assessed for the vehicles using the roads in Cambridgeshire, but it could be adopted for a subset of the vehicles in use, as discussed later.

Outcome Measures

Ongoing data collection will be collected on the following:

- Numbers of car occupants using a seatbelt
- Numbers of children using correctly fitted child restraints
- Numbers of extended rear facing seats purchased
- Proportion of Partnership fleets which are NCAP5* rated vehicles
- Number of construction and use checks (Police and DVSA)

Activities being delivered

Traditionally, it may appear that road safety partnerships have focused on elements of road safety other than Safe Vehicles. However, as with the other workstreams, there are interrelationships with other elements of the Safe System, alongside distinct ways to ensure safe vehicles are used on the local network. It is about providing information on selecting the safest possible vehicles and equipment, as well as working with internal and external partners to influence the vehicles and equipment available.

Safe Vehicles is inextricably linked to Safe People, Safe Speeds and Post Collision Care. It encompasses all facets of ensuring that road users are accessing, maintaining, and correctly using safe vehicles on the network. This includes working with fleets and those who drive for work; heavy goods vehicle owners and drivers; motorcycles and equipment; lowering emissions and improving air quality; use of safety equipment within vehicles and the incorporation of automated vehicles into the fleet.

Working with the Safe People workstream, there is an educational arm to improving the standard of vehicle and equipment used on the roads. For parents, carers and health care professionals, information and training can be provided on the safest child car seats that can be purchased, what their benefits are, and how to fit them correctly. Fleet purchasing decisions can also be influenced, encouraging procurement, fleet and health and safety managers to choose vehicles with EuroNCAP5* ratings or cabs with improved visibility for urban lorries. It will also be important to engage with the agricultural community around ensuring loads are safe and secure. There are also potential opportunities to promote domestic vehicle checks in times of increased travel or poor weather.

Looking outside of the Partnership, the Safe Vehicle workstream can influence 'out and up' through advocacy and promotional activities. This can include the promotion of EuroNCAP5* and key safety measures in the procurement policies of partners, local transport services and the public. Local businesses have a key part to play with safe vehicles beyond procurement, and through membership of schemes such as CLOCS (Construction Logistics and Community Safety, 2020), FORS (Fleet Operator Recognition Scheme, 2020) and Driving for Better Business (Driving for Better Business, 2020) which support businesses in procurement and maintenance standards. There are also opportunities to work with child seat retailers to improve the quantity, range and promotion of 'extended rear facing' stock. Engaging with Governmental Departments and Agencies on legislative changes, regarding mobile phone regulations and the widespread installation of 'black boxes'



could be a role for this workstream, alongside working with vehicle manufacturers regarding the inclusion of information consoles in vehicles.

Enforcement operations can include targeted police campaigns to conduct intelligence-led vehicle checks, examining personal vehicles, as well as light and heavy goods vehicles, and passenger carrying vehicles. Tyre safety checks can be undertaken with accompanying

publicity campaigns, such as DfBB (DfBB, 2020), which is included as a case study. There is the promotion of the Vehicle Safety Checks campaign (Department for Transport, 2020) delivered by Highways England the Department for Transport's Think! team. This campaign provides advice on the vehicle checks that should take place before every journey and advises on what to do in a breakdown.

Driving for Better Business

Driving for Better Business is a government-backed Highways England programme to help employers in both the private and public sectors reduce work-related road risk, decrease the associated costs and improve compliance with current legislation and guidance. The programme works on the simple idea that employers have a role to play in the safety of drivers.

The programme provides information and resources to employers to help them make effective interventions with their drivers and vehicles to improve safety and risk management.

Working in partnership with organisations across all sectors that employ drivers for work, the programme ensures businesses understand and are compliant with the current legislation and appreciate the benefits this can bring. The effectiveness of the scheme is evidenced within individual case studies of those organisations who have completed the seven steps and are able to demonstrate ongoing commitment and good practice. These organisations will give prominence to the procurement of EuroNCAP5* vehicles, those that have employees using their own vehicles (grey fleet) will have robust policies governing their use. Many companies will benefit from the use of in-vehicle telematics to monitor driving behaviours, ideally rewarding positive actions before sanctioning negative ones. Scheduled maintenance, including daily & weekly checks will also be considered and included as part of the policy governing vehicle use.

With around 1 in 3 crashes involving someone who is at work¹, the Vision Zero Partnership should embrace this initiative, working proactively with local companies and organisations to signpost and facilitate engagement.

<https://www.drivingforbetterbusiness.com/>

¹ <https://www.brake.org.uk/facts-resources/15-facts/1292-work-related-road-safety>





Safety Performance Indicators

The following high-level safety performance indicators for the Safe Speeds workstream are:

- Percentage of traffic complying with speed limits on national roads
- Percentage of traffic complying with speed limits on local roads

These indicators will be monitored annually, using consistent data collection processes. Consideration should be given to whether compliance in individual speed limits should be measured in more detail e.g. 20mph. Also, the level of free-flow-traffic within urban areas would need to be measured to achieve a true estimate of compliance. This methodology has not yet been demonstrated to any great extent internationally, but it is recognised as the gold standard.

Outcome Measures

Ongoing data collection will be collected on the following:

- Number of speed offences recorded (through cameras and police enforcement)
- Number of people completing National Driver Offender Retraining Scheme (NDORS) courses
- Number of vehicles checked by Community Speed Watch

- Percentage of vehicles checked by Community Speed Watch exceeding enforcement threshold
- Number of Community Speed Watch communities
- Number of Vehicle Activated Signs (VAS) deployed

Activities being delivered

Ensuring safe speeds within the system involves a two-fold approach. Firstly, there is a need for appropriate and credible speed limits to be set. These need to be suitable for the desired function of the road, ensuring safety and encouraging compliance. Set a speed limit too high and the risk of collisions between different types of road users increases; set a speed limit too low and the risk of non-compliance increases if drivers don't believe it is appropriate for the location.

Speed determines the severity of crashes and injuries. It also affects the potential to avoid a crash, because higher speeds reduce drivers' capacity to stop in time, reduce manoeuvrability in evading a problem, make it harder to negotiate curves or corners, and cause others to misjudge the timing of approach vehicles. Even small increases in speed result in significant increases in risk. Speed management is increasingly recognised as a key mechanism for road safety.

Speed can be managed through many elements of the system, including sound road design and management, appropriate speed limits, speed limit regulation, and education on the impacts of vehicle speed. Speed also determines the level of safety features and physical separation between road users





required in the transport system. (World Resources Institute and Global Road Safety Facility, 2018, p. 44)

The Safe System approach makes speed management a focus for safety, using the other workstreams to assist by:

- ensuring that roads are designed to limit speeds to the safe limit (through the use of speed humps, roundabouts, chicanes, road narrowing and raised pedestrian crossings)
- using signs and gateways to stagger reduction to the limit and encourage compliance
- setting speed limits appropriate for the type of road and safety of the roads, with speeds on rural roads and highways managed to levels that favour the probability of survival in a side-impact, head on, and off-road crashes
- encouraging and advocating for vehicle-based speed limiting
- developing effective automated (camera) and police enforcement to discourage speeding, with strong communications in support of these programmes (World Resources Institute and Global Road Safety Facility, 2018)

Whilst local highways authorities will be responsible for reviewing and setting speed limits in this workstream and the police for enforcing those limits, they will need to work with those in the Safe Roads, Safe People and Safe Vehicles workstreams to co-ordinate a successful speed management plan.

The Safe Roads workstream will be responsible for designing a safe road network, which includes the installation of gateways to highlight the entrance to a parish, town or village and/or speed limit, making the change of limit and the need to slow down more prominent. It can also include using psychological traffic calming, through narrowing the road with kerb buildouts, central islands, coloured surfacing and lane markings; or installing speed cushions, humps or tables.

Research has shown that not all speeders are the same - Appendix B – COM-B Model talks about the different influences on behaviour and speeding is a good example of this. There are some speeders for whom there could be a knowledge gap who were unaware of the speed limit at the time they were detected or for whom it was a momentary lapse in concentration. For others, it could have been an intentional act, because they think they are better drivers than others or they feel that everyone speeds so it is acceptable behaviour. Communications are important to ensure that drivers are aware of how to recognise speed limits, understand the reasons why speed limits are in place and what the consequences are of not complying with them. Speed enforcement is obviously important for encouraging drivers to comply with the speed limit.

In the Partnership area, there are a variety of enforcement tools used to encourage compliance with the speed limit. Firstly, there is safety camera enforcement, managed by Cambridgeshire Constabulary, working alongside the partners in the Vision Zero Partnership. With the original Cambridgeshire Safety Camera Partnership established in 2001, the unit uses a variety of camera technologies, including fixed cameras, average speed cameras and mobile enforcement. Locations for camera enforcement are selected based on the history of the site, prioritising those with levels of collisions and speed issues. Average speed cameras are included as a case study.

Additional police speed enforcement is undertaken by the Tri Force Road Policing Unit (RPU) of the three police forces of Cambridgeshire, Hertfordshire and Bedfordshire. The unit works together across the three counties and consists of specialist teams who undertake forensic collision investigation; liaising with agencies and local authorities on traffic management; vehicle recovery and vehicle examination; and using Automatic Number Plate Recognition (ANPR) to locate stolen and uninsured vehicles, and those involved in crime. Alongside this work, the RPU also engages in intelligent tasking, where speed and other traffic offence enforcement is carried out at locations based



on casualty data or other intelligence, ensuring targeted use of resources. These collaborative functions of three police forces includes the Cameras Tickets Collisions team and Joint Protective Services Roads Policing, with shared responsibility for speed enforcement across these units.

Local policing teams manage local speed enforcement and Community Speedwatch schemes (CSW). The various police units work together to prioritise resources, identify sites and coordinate speed enforcement activities.

The community has a strong role to play in encouraging compliance with local speed limits. CSW is a community-led initiative to reduce speeding vehicles in cities, towns and villages. The CSW Scheme trains volunteers from the community to be actively involved in monitoring the speed of vehicles travelling through their neighbourhood. In Cambridgeshire, it is used in areas where speeding has been identified as a priority at quarterly neighbourhood panel meetings. In Peterborough, speedwatch volunteers can apply directly to the Police. Speed indicator devices

(SIDs) are used to display vehicle speeds and the registered owner of any vehicle seen exceeding the speed limit is sent an advisory letter by the Constabulary, explaining that speeding is unacceptable to the local community and asking them to be more considerate. This scheme has many benefits: it supports police activities and relieves their resources; it engages the community in taking ownership of road safety in their area; and it informs drivers and addresses negative attitudes and social norms by stressing how unacceptable it is to speed.

In Cambridgeshire, mobile vehicle-activated signs (VAS) are used in other locations and can be requested by parish and town councils. These signs are activated by a vehicle exceeding a certain speed and display the speed limit, or the actual speed of the vehicle (SID). VAS are most effective when they are rotated around different roads in a village or town to stop drivers becoming too familiar with them, and when positioned near downhill gradients to remind drivers who may be inadvertently speeding.

Speed Enforcement

Cambridgeshire and Peterborough Road Safety Partnership has operated a network of safety cameras for over 20 years. Between 2018 and 2020 Cambridgeshire County Council, Peterborough City Council and Beds, Cambs & Herts Police have worked jointly to review the sites and procure new digital camera systems. The partnership currently has 29 fixed camera sites and seven average speed camera systems, with a further average speed camera system expected to be installed in 2020/21. These are supplemented by the deployment of mobile camera vans at additional agreed sites across the network.

A review of the operation of the county's safety camera operations in 2018 supported national research (Allsop, 2013) highlighting that the use of safety cameras across Cambridgeshire and Peterborough has significantly reduced the number of fatal and serious collisions in the vicinity of fixed camera sites. Taking account of background reductions, on average, fixed camera sites saw fatal and serious collisions fall 29-51%.





Post Collision Care

Safety Performance Indicators

The following high-level safety performance indicator for the Post-Collision Care workstream is:

- Percentage of emergency medical services arriving at collision scene within 18 minutes

This indicator will be monitored annually, using consistent data collection processes. This will require working with partners to establish what data are available and how can these relate to collisions specifically.

Outcome Measures

Ongoing data collection will be collected on the following:

- Paramedic and/or ambulance response times
- Police response times
- Fire and rescue service response times
- Number of collisions where the air ambulance or

Magpas Air Ambulance attended

- Numbers of extractions from collisions (and methods used)
- Waiting times at A&E
- Network reinstatement rates
- Length of time for legal processes
- Numbers of road victim referral uptakes
- Number of people training in first aid through Biker Down
- Number of students receiving first aid in schools

Activities being delivered

Post-collision care is an integral part of the Safe System, with survivability and the impact of a collision on a person's future way of life linked to the physical and psychological support received in the aftermath of a collision.

One way of working with the local community to improve initial care at the scene of a collision is through Biker Down (Cambridgeshire Fire and Rescue Service, 2020). This is a national Fire and Rescue Service led scheme, where





motorcyclists attend a free course that offers them the opportunity to learn practical skills to help themselves should they be involved in a collision, but also first-aid training and advice on what to do should they find themselves first on the scene of a collision where someone has been injured. It includes initial scene management so that the motorcyclist and the casualty are both kept safe until the emergency services arrive.

The Vision Zero Partnership is fortunate to have the Road Victims Trust as a partner, providing specialist emotional and practical help to those affected by death or life

changing injuries resulting from a collision. Referrals come from the police, Police and Crime Commissioner Victim Support Services and from victims themselves, with a variety of support mechanisms used to assist with mental and physical health, bereavement and social interactions. Space is provided to express the feelings that come with the loss and horror following a fatal road collision and the repercussions of receiving life changing injuries. Support can be given in the investigation, inquest and court hearing process. They also provide advice on finances, benefits, education, skills, employment and housing.

Road Victims Trust

Each year, about 40 people die as a result of road collisions on Cambridgeshire's roads. This represents an enormous loss. Each person killed or injured will be someone's parent, partner, child, a favourite relative or best friend.

The need to provide effective, personal support to those affected by death or life changing injuries resulting from road collisions is a significant issue. There are formal legal processes following a serious road collision that involve the Police, Coroner, Crown Prosecution Service and personal injury lawyers.

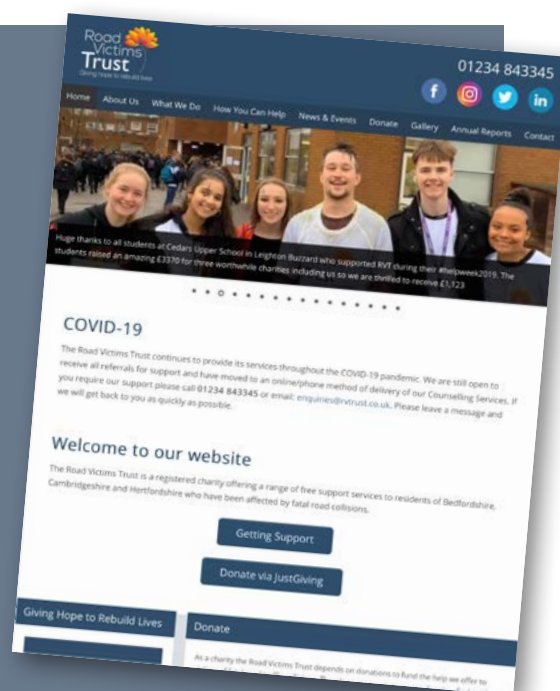
However, the work to complete these legal processes does not include the provision of specialist emotional and practical support that is so often needed by victims following the collision. Victims include bereaved individuals and families, those that were involved in the collision or who witnessed it.

The Road Victims Trust (RVT) seeks to fill the gap by providing support for the bereaved and people otherwise affected by road death or life changing injuries, who are resident in Bedfordshire, Cambridgeshire and Hertfordshire. Cambridgeshire has been involved in the scheme since 2013.

All fatal collisions in Bedfordshire, Cambridgeshire and Hertfordshire are referred directly to the RVT by the police Forensic Collision Investigation Unit and contain details of those that have been affected – bereaved individuals and families, those involved in the collision and witnesses.

They offer their service to all affected people unless they have indicated to the police that they do not want any contact. They also take referrals from GPs and other agencies or self-referrals from people who contact them directly. Initial contact following a police or agency referral will be by letter or a telephone call from a Trust Coordinator who will aim to get an understanding of what is needed. The majority of support is offered as weekly, one-hour sessions at the victim's home, in our office or by telephone.

www.rvtrust.org.uk





References

- Amos, L., Davies, D., & Fosdick, T. (2015). *Road Safety Since 2010*. London: RAC Foundation and PACTS.
- Anderson, E. (2018). *Developing Safe System Road Safety Indicators for the UK*. PACTS, in association with Ageas. Retrieved from http://www.pacts.org.uk/wp-content/uploads/sites/2/PactsReport_-Developing-Safe-System-Road-Safety-Indicators-for-the-UK_Oct18-FINAL.pdf
- Breen, J., McMahon, K., Robertson, E., Salter, E., Stephenson, C., Thomas, P., & Goodsell, B. (2018). *Road Safety Management Capacity Review*. SYSTRA.
- Cambridgeshire & Peterborough Combined Authority. (2020). *The Cambridgeshire & Peterborough Local Transport Plan*. London: Steer. Retrieved May 19, 2020, from <https://cambridgeshirepeterborough-ca.gov.uk/assets/Transport/LTP/CPCA-LTP-WEB250220.pdf>
- Cambridgeshire County Council. (2018, August). *Think Communities*. Retrieved April 15, 2020, from Cambridgeshire County Council: <https://www.cambridgeshire.gov.uk/council/communities-localism/community-resilience>
- Cambridgeshire County Council. (2020). *Community resilience*. Retrieved April 15, 2020, from Cambridgeshire County Council: <https://www.cambridgeshire.gov.uk/council/communities-localism/community-resilience>
- Cambridgeshire Fire and Rescue Service. (2020). *Biker Down*. Retrieved April 17, 2020, from Cambridgeshire Fire and Rescue Service: <https://www.cambsfire.gov.uk/community-safety/road-safety/biker-down/>
- Construction Logistics and Community Safety. (2020). *What is CLOCS*. Retrieved April 17, 2020, from CLOCS: <https://www.clocs.org.uk/>
- Department for Transport. (2015). *Estimating clinically seriously injured (MAIS3+) road casualties in the UK*. London: Department for Transport.
- Department for Transport. (2017, August 29). *Transport survey question bank*. Retrieved March 17, 2020, from Department for Transport: <https://www.gov.uk/government/publications/transport-survey-question-bank>
- Department for Transport. (2020). <https://www.think.gov.uk/campaign/vehicle-safety-checks/>. Retrieved April 17, 2020, from Think!: <https://www.think.gov.uk/campaign/vehicle-safety-checks/>
- Driving for Better Business. (2020). *Driving for Better Business*. Retrieved April 21, 2020, from Driving for Better Business: <https://www.drivingforbetterbusiness.com/>
- European Commission. (2019). *Commission Staff Working Document: EU Road Safety Policy Framework 2021-2030 - Next steps towards "Vision Zero"*. Brussels: European Commission.
- Fleet Operator Recognition Scheme. (2020). FORS. Retrieved April 17, 2020, from FORS: <https://www.fors-online.org.uk/cms/>
- ITF. (2016). *Zero Road Deaths and Serious Injuries: Leading a Paradigm Shift to a Safe System*. Paris: OECD Publishing.
- Michie, S., Atkins, L., & West, R. (2014). *The Behaviour Change Wheel: A Guide to Designing Interventions*. London: Silverback Publishing.
- Modeshift STARS. (2020). *What is a Travel Plan?* Retrieved April 16, 2020, from Modeshift STARS: <https://www.modeshiftstars.org/about/travel-planning/>



- Nunn, J., Barnes, J., Morris, A., Petherick, E., Mackenzie, R., & Staton, M. (2018). Identifying MAIS 3+ injury severity collisions in UK police collision records. *Traffic Injury Prevention*, 19(Sup 2), S142-S144.
- Office for National Statistics. (2019). *Estimating and adjusting for changes in the method of severity reporting for road accidents and casualty data: final report*. London.
- PACTS. (2016). *Safe System*. Retrieved March 9, 2020, from PACTS: <http://www.pacts.org.uk/safe-system/>
- RoadSafe. (2020). *The Safe System*. Retrieved March 9, 2020, from RoadSafe: <http://www.roadsafe.com/safesystem>
- ThirdGlobalMinisterialConferenceonRoadSafety: Achieving Global Goals 2030. (2020, February 21). *Stockholm Declaration*. Retrieved March 11, 2020, from Road Safety Sweden: <https://www.roadsafetysweden.com/contentassets/b37f0951c837443eb9661668d5be439e/stockholm-declaration-english.pdf>
- Towards Zero Foundation. (2020). *50 by 30 Memorandum*. Retrieved March 12, 2020, from Towards Zero Foundation: <http://www.towardszerofoundation.org/wp-content/uploads/2020/01/50by30-Memorandum.pdf>
- Towards Zero Foundation. (2020). *The Safe System*. Retrieved March 10, 2020, from Towards Zero Foundation: <http://www.towardszerofoundation.org/thesafesystem/>
- TyreSafe. (2020). *TyreSafe*. Retrieved April 17, 2020, from TyreSafe: <https://www.tyresafe.org/>
- United Nations. (2020). *Goal 3: Ensure healthy lives and promote well-being for all at all ages*. Retrieved March 11, 2020, from United Nations Sustainable Development Goals: <https://www.un.org/sustainabledevelopment/health/>
- World Resources Institute and Global Road Safety Facility. (2018). *Sustainable & Safe: A Vision and Guidance for Zero Road Deaths*. Washington D.C: World Resources Institute.



Appendix A – Public Survey Questions

Question Wording	Answer options
Please tell me how much you agree or disagree with the following statement: It is too dangerous for me to cycle on the roads	Agree strongly Agree Neither agree nor disagree Disagree Disagree strongly
Please tick one box for each of these statements to show how much you agree or disagree:	Agree strongly Agree Neither agree nor disagree Disagree Disagree strongly
Speed cameras save lives	Agree strongly Agree Neither agree nor disagree Disagree Disagree strongly
Speed cameras are mostly there to make money	Agree strongly Agree Neither agree nor disagree Disagree Disagree strongly
There are too many speed cameras	Agree strongly Agree Neither agree nor disagree Disagree Disagree strongly
People should drive within the speed limit	Agree strongly Agree Neither agree nor disagree Disagree Disagree strongly
The number of speed cameras should be increased	Agree strongly Agree Neither agree nor disagree Disagree Disagree strongly
It is perfectly safe to talk on a hand-held mobile phone while driving	Agree strongly Agree Neither agree nor disagree Disagree Disagree strongly



All use of mobile phones while driving, including hands-free kits is dangerous	Agree strongly
	Agree
	Neither agree nor disagree
	Disagree
	Disagree strongly
All use of mobile phones while driving, including hands-free kits should be banned	Agree strongly
	Agree
	Neither agree nor disagree
	Disagree
	Disagree strongly
The law on using mobile phones whilst driving is not properly enforced	Agree strongly
	Agree
	Neither agree nor disagree
	Disagree
	Disagree strongly
If someone has drunk any alcohol, they should not drive	Agree strongly
	Agree
	Neither agree nor disagree
	Disagree
	Disagree strongly
Anyone caught drink-driving should be banned for at least five years	Agree strongly
	Agree
	Neither agree nor disagree
	Disagree
	Disagree strongly
Most people don't know how much alcohol they can drink before being over the legal drink-drive limit	Agree strongly
	Agree
	Neither agree nor disagree
	Disagree
	Disagree strongly
If someone has taken any illegal drugs, they should not drive	Agree strongly
	Agree
	Neither agree nor disagree
	Disagree
	Disagree strongly
Average speed cameras measure speed based on the time taken to travel a distance between two camera sites. Fixed speed cameras measure speed at a single site. Please tick one box to show how much you agree or disagree.	Agree strongly
	Agree
	Neither agree nor disagree
	Disagree
	Disagree strongly
Average speed cameras are preferable to fixed speed cameras?	



How often do you cycle nowadays?	Every day
	More than twice a week but not every day
	Once or twice a week
	Once or twice a month
	Once or twice a year
	Less than once a year
	Never
How confident would you say you feel about cycling on the roads?	Very confident
	Fairly confident
	Not very confident
	Not at all confident
	Don't know
I would travel less by car if there more cycle lanes on roads	Strongly agree
	Tend to agree
	Neither agree nor disagree
	Tend to disagree
	Strongly disagree
I would travel less by car if there more and better sited secure cycle parking facilities	Strongly agree
	Tend to agree
	Neither agree nor disagree
	Tend to disagree
	Strongly disagree
I would cycle (more) if it was difficult to find somewhere to park the car	Strongly agree
	Tend to agree
	Neither agree nor disagree
	Tend to disagree
	Strongly disagree
On a scale of 0 to 10, where 0 is very dissatisfied and 10 is very satisfied, how would you score the overall quality of the cycling conditions in your area	0-10
What, if anything, would encourage you to walk or cycle for some of your journeys? (select up to 3 answers)	Better street lighting
	Better maintained pavements
	More road crossings
	More CCTV cameras
	More cycle lanes on roads
	More cycle tracks away from roads
	Less traffic on the roads
	Lower speed limits
	Having more time available



- No car available
- Higher costs of motoring
- Higher public transport fares
- More traffic congestion
- More direct walking routes
- Adult cycle training
- More secure and convenient cycle parking facilities
- A cycle mileage allowance for journeys to work or for business
- Better driver attitudes towards cyclists
- More local shops and other facilities
- More publicity about the benefits walking and cycling has on health, the environment and congestion
- Nothing would encourage me to walk or cycle for some of these journeys



Appendix B – COM-B Model

Understanding the influencers of behaviour (whether it is incorrect or non-compliant use of the system), is important. The following is a high level of summary of the COM-B model and identifies what might need to change (there are many other models of behaviour which could be used and the Partnership is encouraged to use the most appropriate for the target audience and/or problem):

Capability

- **Physical Capability** – this is having the skills to do the correct behaviour. This might be the skills to cross the road correctly, ride a bicycle safely, or learn to drive a car. Improving or developing skills can be achieved through providing training or through enablement.
- **Psychological Capability** – this is having the knowledge, skills, memory or behavioural regulation to do the correct behaviour; it means knowing how to perform the behaviour, understanding the consequences of doing/not doing it, and how to recognise and overcome the mental barriers that prevent the road user doing the right thing. It might be that road users don't know the consequences of using their mobile phone at the wheel – that it could result in a collision but it could also result in penalty points and a fine, and for new drivers, the revocation of their driving licence if they receive 6 or more penalty points in the first two years of driving. Training, education and enablement interventions can all be used to support psychological capability.

Opportunity

- **Physical Opportunity** – this is having the correct environmental context and resources to perform the right behaviour. Environmentally, it might be that there are not appropriate crossing facilities for a pedestrian to get across a busy road, or that a cyclist does not have access to a helmet. Training could be used to help the pedestrian in this situation by teaching them the skills to cross a busy road where the facilities are not available, or the road design could be changed to support that crossing. Restrictions can also be put in place to stop someone from misusing the system; for the pedestrian, high fences could be installed that prevent them crossing at that location. The cyclist could be encouraged to use a helmet, by helmets being provided or the benefits of them are explained and it is made easier for them to store and use one.
- **Social Opportunity** – this is about understanding the social influences on the way people act in the road network. If road users think that people they respect are not complying with road rules, they may think it is acceptable for them to do the same. The influences of peers and role models are important here, as is the language used when talking about the behaviour. If organisations talk about high levels of non-compliance, it normalises the behaviour and people could



make excuses for them doing the same, because “everyone else is doing it.” To change social opportunity, restrictions could include enforcement and the application of penalty points; it could mean changing the environment to limit the opportunities to engage in the behaviour; or it could entail using positive role models or encouraging social support and peer-led approaches to doing the right thing.

Motivation

- **Reflective Motivation** – this is about understanding what people believe they are capable of and what the consequences are of doing the right or wrong thing. It is wrapped up with goals and intentions and how the behaviour is related to their identity. There could be a number of reasons why a driver does not comply with the speed limit. For some, it could be related to psychological capability, in that they don’t know how to recognise the speed limits. For others, it could be that they believe that they are good drivers and are perfectly capable of driving at excessive speeds. It could be that they are unaware of the consequences of speeding behaviour; this is not only about the likelihood of a collision occurring, but also the impact of penalty points and a fine, damage to their vehicle and the related loss of freedom. It could be that they are goal-driven and believe that speeding will enable them to get to their destination significantly quicker. There are a variety of ways to address these, including using education, persuasion, incentivisation and coercion to increase knowledge about the behaviour and its consequences; help people plan ahead; encourage them to comply with the speed limit; and support their belief that they are capable of driving within the limit.
- **Automatic Motivation** – this is about understanding the role of optimism, reinforcement, identity and emotion in influencing behaviours, specifically through habits, routines and previous experience. There are lots of different ways to change habits and routines, including using role models and peer groups, encouraging the creation of better habits and providing rewards or incentives for doing the right thing.

As can be seen from this summary of the influencers on behaviour, there are times when education is appropriate because there is an information or skills deficit, or education could be used to influence social norms. Road users who are not complying with the rules of the road may benefit from education if it tells them the consequences of their behaviour or helps them form new habits. However, there are other times when other tools, such as restricting behaviour through enforcement or changing the road environment would be more suitable.



Appendix C – Evaluation Stages

Evaluations are an integral part of measuring effectiveness and understanding if road safety interventions are achieving what they set out to. In road safety, many interventions are not evaluated and the results of those that have been are not always publicly available.

The design of an evaluation will differ, depending on a number of factors, including the intervention type, budget, stage of delivery and type of data that can be collected to measure effectiveness. For example, a high-cost re-engineering of a major stretch of road will use different evaluation methodologies to a small-scale trial of a schools-based educational intervention. It means that there should be flexibility when thinking about evaluations.

However, there are some standardised steps that should be followed when designing a new intervention.

- 1** Firstly, think about the purpose of the evaluation. Is it to:
 - a** Demonstrate success?
 - b** Inform policy decisions?
 - c** Improve delivery of an intervention?
 - d** Share best practice?
 - e** Show value for money?
 - f** Ensure the intervention does no harm?
- 2** It is likely that the evaluation will measure many (perhaps all) of these, but it is useful to think about *why* the evaluation is taking place, in order to think about how to design it. A process evaluation is examining how to improve the delivery process whereas an outcome evaluation is looking to show the effectiveness of an intervention, and these will use different approaches.
- 3** All interventions should start with the data, identifying what the problem is and what the solution might entail. Data analysis will influence the shape of the evaluation – if it transpires that the problem is a behavioural one (like speeding) and the evidence suggests that it is related to attitudes, then the evaluation will need to measure how attitudes might change as a result of the intervention.
- 4** This leads on to setting aims and objectives. Aims are the overall goal of the intervention and objectives are the measurable outcomes. These should be SMART⁴ and directly related to what the intervention is seeking to achieve (e.g. a 20% improvement in attitudes towards driving at safe speeds after the intervention, compared to before).
- 5** Designing an evaluation is dependent on many different factors, including:
 - a** Where in the delivery cycle the intervention is at? If it is at the design stage, there will be an opportunity to collect baseline data, to compare with after delivery. This could be offending rates/attitudes/knowledge levels, for example.

⁴ Specific, Measurable, Achievable, Realistic and Time-bound



- b** What level of detail you want to learn from the evaluation? Qualitative data is rich, in-depth information collected from a small sample of people to get a deep understanding of the problem and/or the intervention. This could be used in trials to gain insight into how the delivery worked and what could be improved, including barriers to participation. Conversely, quantitative data is about collecting large amounts of data to analyse differences between conditions, for example, the number of vehicles travelling over the speed limit before a vehicle activated sign is installed, compared to after the sign was in place.
 - c** Can you compare to other conditions/groups of people? Control and comparison sites or groups can be used to compare the intervention with what might have happened without the intervention. Control groups are randomly assigned, whereas comparisons are where characteristics are similarly matched (for example, re-designing a junction and monitoring red-light running in comparison to a similar site where no changes were made).
- 6** There are many different types of evaluation design, depending on the answers to the questions above. These include:
 - a** Pre and post intervention (with or without a control or comparison group)
 - b** Post intervention only (with or without a control or comparison group)
 - c** Post then pre intervention
 - d** Randomised controlled trial
 - e** Case study
- 7** There are also a number of research methods which can be used, including:
 - a** Questionnaires
 - b** Interviews
 - c** Focus groups
 - d** Observations
 - e** Automatic data collection of speeds and volumes
 - f** Roadside tests
- 8** Other things to consider when designing include:
 - a** Calculating sample sizes
 - b** Recruiting and retaining participants
 - c** Using different sampling techniques
 - d** Timing of measurements
 - e** Creating questions (including using established question banks)
 - f** Ethical considerations
 - g.** Incentives
 - h.** Analytical techniques, including statistical testing

This website is a useful resource for assistance in planning evaluations in road safety:
www.roadsafetyevaluation.com



Appendix D - Workstream Approval Template

WORKSTREAM APPROVAL DOCUMENT

This document is to be completed and approval obtained in writing before any new schemes of work are undertaken within the Vision Zero Partnership Partnership. The document should be submitted to the Partnership Delivery Manager in the first instance, who will refer it to the Strategic Group if appropriate. Please note that this document should be completed for all schemes, regardless of whether funding is being requested. Please speak to the Partnership Delivery Manager for guidance.

Scheme Title

Scheme Owner

Scheme Description

What elements does your intervention include? Please select all that apply and provide details of your selection(s) in the space provided.

- Large scale presentation (e.g. Theatre in education)
- Small scale presentation (e.g. Presentation to a classroom of school children)
- Training courses (e.g. Older driver workshops)
- Stands at public events or in public places
- Poster or leaflet campaign
- Outdoor advertising
- Web-based publicity (e.g. YouTube video clip / website)
- Highways Engineering
- E-learning
- Enforcement
- Diversionary measure (e.g. Speed awareness)
- Radio / TV / Cinema advertising
- Social media
- Self-selecting training (e.g. Refresher driver training)
- One-to-one advice and / or training
- SMS messaging



- Lobbying
- Other

500 words maximum

Start writing here....

Justification

Why have you chosen to focus on this specific issue? (i.e. how can you demonstrate that there is a need for an intervention). Please select all that apply and provide details of your selection(s) in the space provided.

- Anecdotal observation
- Systematic observation
- Research and evaluation reports
- Complaints from the public
- Local knowledge
- Traffic speed data
- Traffic volume data
- Recorded traffic offences
- Demographic data
- Public consultation
- Stats 19 / CRASH data
- Academic research
- Road Safety Observatory / Knowledge Centre
- There is no evidence yet
- Other

500 words maximum, to include evidence of need, data and research. Please attach relevant documents as appendices.

Start writing here....

Action Plan

Does your intervention link to any of the following subject areas? Please select all that apply and provide details as part of the detail in the space provided.

Air quality

Health improvement (including mental health)

Active travel



1000 words maximum, to include details of funding requested, staff time required (with grade) and details of partner organisations' commitment. Please attach relevant documents as appendices.

Start writing here....

Intended Outcomes

What and who do you hope to change by your intervention? Your aim should relate to a **measurable** outcome. You should identify who or what you are trying to change or influence and who will benefit from it.

For example, are you trying to improve the knowledge, skills or attitude of your audience? Are you signposting to further training or promoting a specific change in behaviour? Is your goal to facilitate a change in a company policy or practice, or promote a different approach by a partner organisation?

Which Workstream Safety Performance Indicator does this scheme of work address?

500 words maximum, to feature any identified performance indicators. These should include quantitative indicators (numbers of people engaged) and qualitative outcomes (change to legislation).

Start writing here....

Timescale

500 words maximum, to include details of significant milestones in the scheme.

Start writing here....

Evaluation

500 words maximum, to include details of proposed output & outcome measurement.

Start writing here....



Proposed by:

Name:

Title:

Organisation:

Date:

Approved by:

Name:

Title:

Organisation:

Date:



Prepared by
Agilysis and Traject



Commissioned by
The Office of the Police and Crime Commissioner for Cambridgeshire and Peterborough
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