Agenda Item No: 4

ROAD SAFETY ACROSS CAMBRIDGESHIRE

To:	**Highways & Community Infrastructure Committee**
Meeting Date:	**13th March 2018**
From:	**Graham Hughes, Executive Director – Place & Economy**
Electoral division(s):	**All**
Forward Plan ref:	**2017/036** *Key decision:* **Yes**
Purpose:	**To update members on the current trends in road casualties and challenges related to road casualty reduction in Cambridgeshire. This report also sets out proposals for future delivery of road safety in Cambridgeshire to address these challenges and for the digitalisation of safety cameras.**
Recommendation:	**The Committee is recommended to:**

a) Adopt a new delivery model for road safety as outlined in section 2.3

b) Approve the new methodology for assessing collision hotspots and high risk routes outlined in section 2.4.11

c) Approve the commencement of negotiations with the Police regarding the future costs associated with the safety camera programme, in partnership with Peterborough City Council.

d) Approve the capital programme for safety schemes outlined in Appendix 5

	Officer contact:		***Member contacts:***
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1. BACKGROUND

1.1. From 2000-2010 road safety, nationally, received significant investment aligned to national five-year casualty reduction targets. The result was a reduction in the number of people killed and seriously injured (KSI), the number of children KSI and the slight injury rate. Following the removal of the national targets in 2010, funding directed towards road safety has steadily reduced year on year. This led to a 50% reduction in staff across the Road Safety Service in the 2011/12 business planning process.

1.2. Reductions in KSI road casualties across Cambridgeshire and Peterborough have fluctuated, but generally followed a downward trend, as per the national picture. However, over the past few years this downward trend has noticeably slowed and, more recently, shown a sharp increase.

1.3. In 2015 the Cambridgeshire and Peterborough Road Safety Partnership (CPRSP) set a new 5-year strategy (2015-2020) which outlined five aims for future activity in Cambridgeshire and Peterborough:

- To prevent road users from being killed or seriously injured through enabling behaviour change, delivering better education and delivering road engineering schemes
- 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 including identifying invest to save opportunities
- To undertake targeted road safety enforcement as part of a strategy to reduce KSI's
- To develop a financially sustainable model of delivering road safety activity across Cambridgeshire and Peterborough

1.4. This strategy recognised that the 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 expanded its membership beyond the emergency services and highway authorities to include Public Health, Addenbrooke's hospital and the Road Victims' Trust.

1.5. The CPRSP set a vision 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.

1.6. In order to work towards this vision, the following targets were adopted by the CPRSP reflecting those outlined in Cambridgeshire's LTP3 (all targeted reductions are compared to the 2005-09 average baseline):

- To reduce the number of KSIs in collisions by at least 40% by 2020.
- To reduce the number of child KSIs in collisions by at least 40% by 2020.
- To reduce the number of cycle and pedestrian KSIs in collisions by at least 40% by 2020.

1.7. Also in 2015, the government updated its road safety statement and adopted the 'safe system' approach to reducing road casualties. This approach recognises that:

- We can never entirely eradicate road collisions because there will always be some degree of human error;
- When collisions do occur the human body is inherently vulnerable to death or injury; and
- Because of this, we should manage our infrastructure, vehicles and speeds to reduce crash energies to levels that can be tolerated by the human body.

1.8. The Highway & Community Infrastructure committee (H&CI) on 21 February 2017 raised concerns regarding the number of reported collisions resulting in KSI casualties in Cambridgeshire. Following this, a brief commentary was provided within the Finance and Performance report to H&CI on 14 March 2017.

1.9. This report provides a more in depth commentary on the KSI figures as well as outlining recommendations for a change in approach in line with the government's updated road safety statement in order to address these challenges.

2. MAIN ISSUES

There are three main issues to be discussed in the following sections:

- Road casualty data and the emergence of an upward trend in casualties
- A change of approach in response to the challenges and opportunities the Council faces
- Future of the safety camera network

2.1. Road casualty data

2.1.1. KSI casualties in Cambridgeshire increased 21% from 286 in 2015 to 347 in 2016. This has further increased in 2017 with the latest available 12-month total to the end of July 2017 being 412 KSIs – 44% higher than in 2015. This means it is unlikely that we will meet the 40% reduction targets by 2020.

2.1.2. *Figure 1* shows the KSI trend over the last 10 years for Cambridgeshire compared to the East of England and the UK. The graph highlights the current 12-month rolling total is the highest it has been since early 2008. This is of significant concern. The recent trend in Cambridgeshire is very similar to that seen across the East of England but is a sharper increase than that seen nationally.

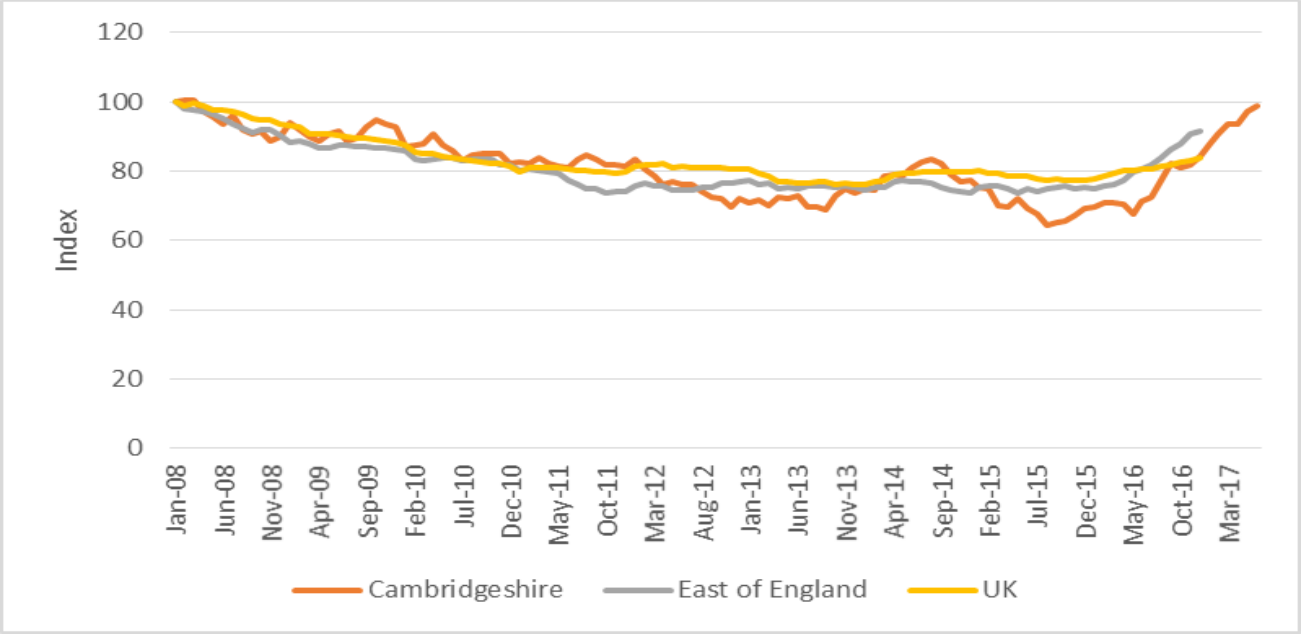


Figure 1 - Rolling 12-month total KSI in Cambs, East of England and UK, baselined against Jan 2008

2.1.3. As road collisions are affected by a large number of variables it is very difficult to attribute specific changes to any one factor without undertaking rigorous scientific investigation. However, based on the available evidence alongside the professional judgement and experience of the Council's officers, it is suggested the following factors may have contributed to the change in trend:

ECONOMY

Economic factors are known to affect traffic collisions, with the recession shown to have contributed significantly to the steep reduction in road casualties nationally from 2007-2010 due to reduced mileage and more economical driving.

Cambridgeshire has seen, and continues to encourage, significant economic growth and this is reflected in increased traffic volumes, with a recent study of the A142 showing an average 33% increase in traffic volume since 2010.

FUNDING

Alongside this growth we have seen public sector funding dramatically decrease, providing a significant challenge for maintenance of the highway network, reduced funding for safety improvement schemes, fewer traffic Police Officers and a reduction in road user education and public awareness information campaigns.

DRIVER BEHAVIOUR

Driver behaviour/error is by far the biggest factor in road traffic collisions. Driver error or reaction factors were cited in 74% of all collisions in Cambridgeshire 2010-2015, while road environment factors and vehicle defect factors were only cited in 18% and 2% of collisions respectively (see *Figure 2*).

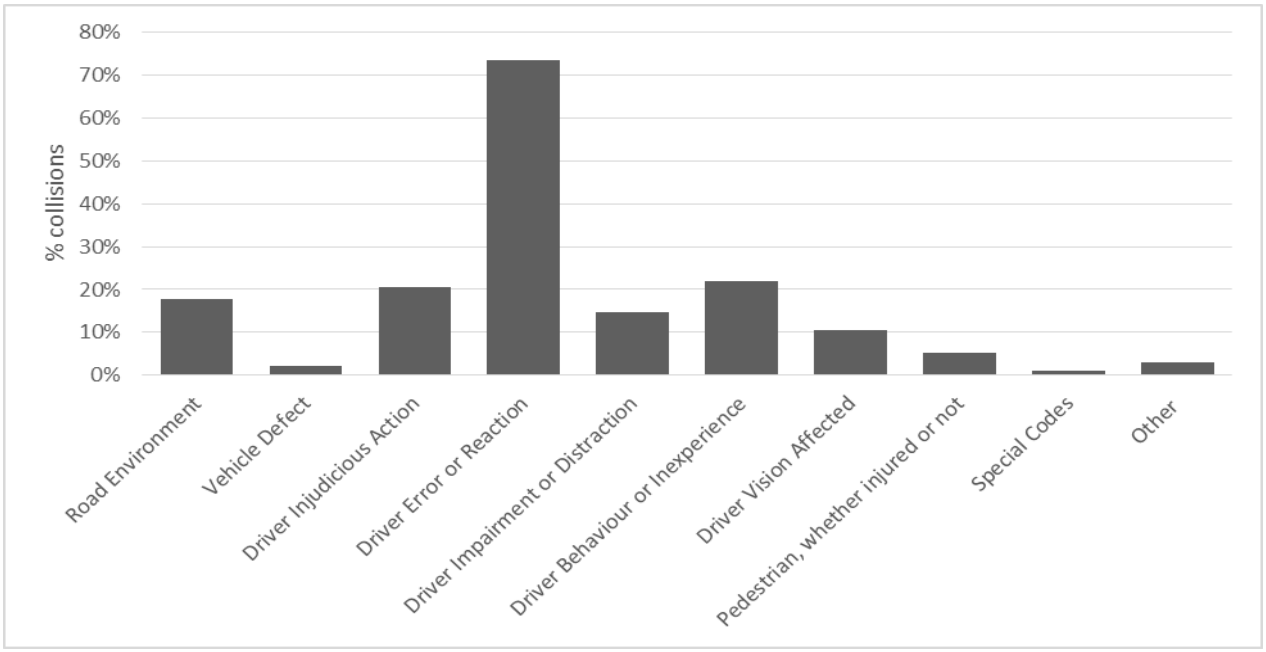


Figure 2 - Contributory factors by category in Cambridgeshire collisions 2010-2015

ENFORCEMENT/FEAR OF BEING CAUGHT

Evidence suggests that people's attitudes towards phone use has worsened over the last 10 years with only half of all people agreeing or strongly agreeing that "all use of mobile phones while driving is dangerous." Anecdotal evidence suggests that people feel less likely to be caught as there are fewer police officers. This, along with the reduction in funding for road user education and public awareness information campaigns provides a plausible theory behind the rising casualties, not just in terms of phone use but also speed, drink and drug driving and general driving standards.

CHANGE OF COLLISION REPORTING SYSTEM

The increase may, in part, be due to Police reporting changes in 2016 having an effect on the severity of injury recorded, which now requires the officer to record specific injuries that automatically populate the severity field. The Department for Transport (DfT) estimate there has been a 15-20% increase in the number of casualties recorded as seriously injured in forces that have switched to CRASH (a new road casualty reporting tool). However, while this may explain some of the increase it is believed other factors, including those above, have contributed too.

2.1.4. The Council is currently working with regional colleagues and the East of England Trauma Network to compare KSI data against hospital admissions to understand these changes in more detail, and specifically to try and quantify the effect of the new CRASH reporting system.

2.1.5. Tables showing summary data by road user type, age, traffic volume, district area and contributory factors can be found in **Appendix 1**. Key points are summarised below:

2.1.6. The vast majority of fatal collisions occur on Cambridgeshire's rural roads.

2.1.7. Casualties per 100 million vehicle kilometres have risen from 3.7 KSI in 2015 to 4.4 KSI in 2016. The Great Britain average for 2015 was 4.7.

2.1.8. *Figure 3* shows that nearly two thirds of all casualties in 2016 were car occupants, however the picture is very different between Cambridge and the rest of the county with 59% of all casualties in Cambridge being cyclists. Motorcyclists are also significantly overrepresented as national traffic figures suggest they comprise less than 1% of traffic.

Vehicle Type	Fatal	Serious	Slight	Total	% of total
Pedal Cycle	0	64	303	367	15%
Car	20	145	1171	1336	63%
Motorcycle	5	45	116	166	8%
Goods Vehicles	3	12	91	106	5%
Pedestrian	4	40	76	120	7%
Other	1	8	42	51	3%
Total	33	314	1799	2146	100%

Figure 3 - 2016 casualties by road user type

2.1.9. DfT produce a reference table each year for the value of preventing road traffic collisions which is used to undertake cost-benefit analysis of interventions. This includes, costs to emergency services, NHS, public health and other public services, loss of earnings and the societal value. The current value for preventing a fatal collision is approximately £2m and, using all severity values, **the value of preventing all collisions that occurred in 2016 in Cambridgeshire would be £163m.**

2.1.10. More recently the Institute of Advanced Motorists (IAM) produced a more tangible breakdown of this figure identifying the costs specifically to the public sector, and in particular to health and social care. Using these figures **the total cost to local health and social care budgets of all collisions occurring in Cambridgeshire in 2016 is £18m.**

2.1.11. Achieving the road safety partnership's 40% reduction target compared to the 2005-2009 baseline by 2020 would reduce this annual burden by approximately £5m. This demonstrates there is the potential to significantly reduce costs to other areas of Council spending by investing in road safety.

2.2. Change of approach

2.2.1. Using the United Nations' 2010 Global Plan for Road Safety 'five pillar' strategic approach to a safe system, the government identified major challenges and opportunities associated with this approach, shown in *Figure 4*.

Pillar of Action	Major Challenges and Opportunities
Road Safety Management	Maintaining investment in local road safety activity and management in a way that supports devolved local decision making (including the important contribution safer and more sustainable environments can make to improving health outcomes) and ensuring Highways England continues to improve road safety.
Safer Roads and Mobility	Maximising safety improvements to road infrastructure within given budgets and preparing roads and signage for increasingly connected and autonomous vehicles.
Safer Vehicles	Improving the road worthiness of the current vehicle fleet, accelerating safer vehicle adoption, legislating for connected and autonomous vehicles and tackling dangerous technological distractions.
Safer Road Users	Evaluating the most effective driver education interventions that can be incentivised by both the state and industry, improving compliance with current rules, and promoting safer driving behaviours and equipment choices.
Post Crash Response	Working with the emergency services and NHS to ensure that collisions are effectively responded to and investigated.

Figure 4 - Road safety challenges and opportunities identified in the Government's road safety statement

2.2.2. The Council has the opportunity to change its approach in response to these challenges and opportunities and address the current trend in collisions in Cambridgeshire.

2.2.3. Officers are proposing a new approach comprising the following elements, which are outlined in more detail below:

- A Road Safety Hub model for service delivery
- New processes for the identification of high risk routes/sites

2.3. Proposed Road Safety Hub approach

2.3.1. This proposal involves implementing a new delivery structure based around core expertise/functions in order to deliver an efficient and effective road safety service for Cambridgeshire, and maximise opportunities to offer services to others including, but not limited to, the Greater Cambridge Partnership, Combined Authority and Peterborough City Council.

2.3.2. The key principle of the approach is to provide the flexibility and expertise to source funding and commission delivery (internally and externally) while at the same time seeking opportunities to deliver commissioned work from others.

2.3.3. Alongside this a series of toolkits would be developed to enable communities to access a universal level of service for common road safety issues, and maintaining a level of consistency across the network.

2.3.4. The proposed model is shown in **Appendix 2** but in summary:

- The proposed approach recognises the value of the road safety expertise that exists within the Council and relies on developing and exploiting this to realise commercial opportunities as well as deliver the Council's responsibilities and objectives.

- The proposed approach would separate activity into **core**, **additional** and **commercial** elements.

- **Core** activity comprises our statutory duties under the Road Traffic Act 1988 to:

    - prepare and carry out a programme of measures designed to promote road safety
    - investigate accidents arising out of the use of vehicles
    - implement measures as appear to the authority to be appropriate to prevent such accidents

  Core activity would also include programmes that mitigate the risk of higher costs to another Council service area.

- **Additional** activity comprises those activities which would supplement core activity should additional funding be available/sourced for specific projects.

- **Commercial** services are charged-for activities that the Road Safety Team will deliver for others (internally or externally).

- The aim is to move as much activity as possible towards self-service (using the tiered service delivery model outlined in **Appendix 3**)

- Evidence suggests that a combination of interventions targeting high-risk groups as well as the population as a whole is the most effective approach to prevention.

2.3.5. Examples of activity under each heading are shown in Figure 5.

Core Activity	**Additional Activity**	**Commercial Services**
• Investigating causes of collisions • Interventions to address high risk routes / sites / road user groups • Child Road Safety Education at key ages / development stages (universal) • Behaviour Change Campaigns / Toolkits • Partnership working • School Crossing Patrols (meeting existing policy) • Route / risk assessments	• Research projects (grant funded) • Additional School Crossing Patrols • Training for school / partner agency staff • Direct delivery in schools • Project-based work (grant funded) • Community events	• Research (external) • Consultancy • Driver training services • Safety Audit • Replicate/ extend service model to other areas • Online shop for resources • Hire of resources to schools/community groups

Figure 5 - Example activities included under each category in the new road safety hub model

2.3.6. The hub approach pools the Council's road safety expertise under one team, which provides an opportunity to mitigate the impact from growth related issues, such as new school building, by providing a one-stop shop for other Council departments to access road safety information and advice.

2.3.7. The hub approach also allows for the possibility of other Council functions related to road safety being pulled into the hub e.g. the management of the Council's fleet and Bikeability cycle training.

2.3.8. The key benefits of this approach are its flexibility to expand and contract in response to additional funding, either through grants, sponsorship or income opportunities, whilst maintaining a core minimum level of activity to meet our statutory duties around road casualty prevention and reduction.

2.3.9. This approach will also provide external partners and communities a single point for road safety advice and toolkits to help themselves rather than rely on the limited capacity of officers for support.

2.3.10. The current Council funding for Road Safety in 2017/18 is:

- Total revenue £575k (inc. £105k Public Health Grant)
  - Education & School Crossing Patrols - £531k
  - Safety Cameras - £44k
- Total capital £594k - Road Safety capital programme (from LTP)

2.3.11. This follows a reduction of £84k in the Public Health grant from 2016/17 which has resulted in a reduction in safety and awareness messages in 2017/18.

2.3.12. The minimum revenue funding required to deliver the road safety hub model is £525k, a further saving of £50k compared to the current approach.

2.3.13. If this approach is approved one-off transformation funding of £50k would be required for the following elements to ensure an efficient transition to the new service model:

- 6 months analyst time to input polygons and set up dashboards and reporting templates – approximately 3 months temporary staff time.
- Development of the online platform for self-service resources, including 6 months temporary Project Officer/Manager time and IT support.

2.4. New processes for the identification of high risk routes/sites

2.4.1. The Council has a statutory duty to investigate collisions occurring on its network and this takes two forms:

- Investigating <u>every</u> fatal collision site within days of the collision occurring
- Investigating 'clusters' of collisions

2.4.2. The existing methodology for cluster site analysis, agreed by the Council, is shown in **Appendix 4**. In 2017/18 there were 88 collision cluster sites identified using this criteria.

2.4.3. The details of the collisions are reviewed for every site and ranked for further investigation. The ranking takes into account future development and projects that may have an effect on the issues identified in the collision types.

2.4.4. A stage 1 investigation is carried out on at least one third of the cluster site list. This ensures that every site will be reviewed at least every 3 years, if it remains on the cluster site list.

2.4.5. Where the stage 1 investigation reveals potential engineering remedial measures a full stage 2 investigation is undertaken. Feasible schemes are added to the annual £594k road safety capital programme for delivery.

2.4.6. A small proportion of the capital funding is allocated to minor improvements. This covers two elements of work:

- Small low cost works that are identified through the cluster site investigation process or the fatal investigation process.
- Small low cost measures at locations where there is a potential for high severity collisions, taking a proactive risk reduction approach.

2.4.7. The programme of planned safety schemes for 2018/19 can be found in **Appendix 5** for approval.

2.4.8. Using the existing methodology many of the sites have been on the cluster site list for a number of years. Some remain on the list as no viable intervention has been established within the resources available, however the limited resources also mean very few sites can be addressed each year.

2.4.9. The Government advocates a ‘safe system approach’ to road safety and recognises that to achieve this we should manage our infrastructure, vehicles and speeds to reduce crash energies to levels that can be tolerated by the human body. This proactive, risk-based approach should be used to maximise safety improvements to road infrastructure within given budgets.

2.4.10. Officers explored two different risk-based analysis tools (iRAP/ViDA and Agylisis) during 2017 to examine collisions on the county’s A-roads. It is proposed a new methodology would combine this type of risk-mapping with cluster analysis to provide a more proactive management of our infrastructure in terms of both reducing collisions at specific locations and reducing the risk of high-severity collisions on the wider network.

2.4.11. The proposed new methodology would comprise the following:

- A risk-based analysis of all A- and B-roads ranking sections in order of risk. This would use a 6-point analysis system developed and used by Devon County Council which allows for volume of traffic as well as number of injury collisions on a route.

- Cluster analysis based on 6 injury collisions OR 3 KSI collisions within 100m over 3 years. These would simply be ranked according to the number and severity of collisions (5x Fatal + 3x Serious + 1x Slight).
- A combination of education, engineering and enforcement interventions targeting the highest risk routes, sites and road user groups prioritised by those that offer the best cost-benefit return within the resources available.
- Larger-scale interventions outside the scope of the road safety capital budget would be put forward for other funding.

2.4.12. This methodology would be subject to annual review by officers, particularly while new software is embedded.

2.4.13. The benefit of this approach would be the ability to put more robust schemes forward to the Transport Investment Plan (TIP) for funding from other sources such as the Greater Cambridge Partnership, Combined Authority and Department for Transport grants. This is evidenced by the Council already having secured £1.3m from the Department for Transport Safer Roads Fund for the A1303 by using the iRAP/ViDA methodology.

2.4.14. This approach would also provide intelligence on specific routes and locations with higher concentrations of collisions in order to shape Council and partner priorities such as Transport Planning, Highways Maintenance, Highways Development Management, Public Health and Police enforcement. A similar approach has been successfully adopted by Devon County Council.

2.4.15. The main risk associated with this approach is in the way it is presented to the public, in particular risk-mapping, as it can be more easily misinterpreted. However, if presented correctly it could serve to provide much clearer context for our decision-making as every section of A- and B-road could be ranked, rather than just the locations meeting cluster site criteria.

2.5. Future of the safety camera network

2.5.1. The existing cameras must be updated to digital in order to remain active into 2019/20 and beyond, as technical support is being withdrawn by suppliers of wet film and the equipment to process the film is in increasingly short supply. Depending on the approach taken this could cost in excess of £500k. No Council funding is currently identified for this.

2.5.2. A review of the effectiveness of the existing safety camera operation (a total of 38 sites across Cambridgeshire) has been undertaken which has demonstrated that the existing deployment strategy for safety cameras since the mid-1990's has been effective in reducing fatal and serious road casualties at these sites.

2.5.3. The Council receives no revenue from the safety cameras, whilst currently being responsible for all upfront capital costs and ongoing revenue maintenance costs.

2.5.4. Initial discussion has taken place between Cambridgeshire County Council and Peterborough City Council to agree a common stance for approaching the Police to negotiate responsibility for future costs associated with continuing the safety camera programme.

3. ALIGNMENT WITH CORPORATE PRIORITIES

3.1 Developing the local economy for the benefit of all

The report above sets out the implications for this priority in section 2.1 and proposals to ensure safe infrastructure is in place for new and existing communities in the remainder of the document.

3.2 Helping people live healthy and independent lives

The following bullet points set out details of implications identified by officers:

- If a new model for road safety is adopted (as outlined in section 2.3) this will enhance the Council's ability to enable communities and other organisations to 'help themselves' in response to road safety concerns.

3.3 Supporting and protecting vulnerable people

There are no significant implications for this priority.

4. SIGNIFICANT IMPLICATIONS

4.1 Resource Implications

The report above sets out details of significant implications in sections 0, 2.3 & 2.5

4.2 Procurement/Contractual/Council Contract Procedure Rules Implications

There are no significant implications for this priority

4.3 Statutory, Legal and Risk Implications

The following bullet points set out details of significant implications identified by officers:

- Under Section 39 of the Road Traffic Act 1988 the Council has a statutory duty to "prepare and carry out a programme of measures designed to promote road safety… must carry out studies into accidents arising out of the use of vehicles on roads or parts of roads, other than trunk roads, within their area [and] in the light of those studies, **take such measures as appear to the authority to be appropriate to prevent such accidents**, including the dissemination of information and advice relating to the use of roads, the giving of practical training to road users or any class or description of road users, the construction, improvement, maintenance or repair of roads for which they are the highway authority and other measures taken in the exercise of their powers for controlling, protecting or assisting the movement of traffic on roads." [bold formatting added by author for emphasis]
- Serious road traffic collisions attract significant media attention and the Council's actions to reduce their occurrence comes under regular media scrutiny.
- If a Council employee was to be involved in a serious collision, the Council's work related road safety policy would come under scrutiny by the Health and Safety

Executive. The review by our insurers in 2014 made a number of recommendations as to how our practices should be improved to ensure compliance and the new model outlined in section 2.3 would aim to enhance this area.

4.4 Equality and Diversity Implications

The following bullet points set out details of significant implications identified by officers:

- Residents in lower IMD quintiles are at higher risk of being involved in a collision as are younger drivers.
- Older drivers are more likely to sustain serious or fatal injuries in collisions due to their frailty.
- It is essential that the Council maintains an element of targeting in its approach to delivering road safety as those most in need of prevention services often do not demand these services. For example, young drivers in Fenland have been highlighted as being at particular risk of being involved in road traffic collisions but would not be inclined to access road safety interventions themselves. The new model outlined in section 2.3 is designed to enable a balance of universal, self-service interventions for those seeking support (e.g. parishes looking to address speeding) with targeted interventions aimed at high-risk groups.
- A Community Impact Assessment (CIA) for the proposed new approach is included in **Appendix 6**.

4.5 Engagement and Communications Implications

The following bullet points set out details of significant implications identified by officers:

- The CPRSP carried out stakeholder engagement in the development of its new strategy resulting in a broadened approach to encompass post-crash outcomes, particularly in relation to health and social care.
- Potential for shared service arrangements with Peterborough City Council, and within the wider road safety partnership.
- Serious road traffic collisions attract significant media attention and the Council's actions to reduce their occurrence comes under regular media scrutiny.

4.6 Localism and Local Member Involvement

The following bullet points set out details of significant implications identified by officers:

- If the new model for road safety is adopted (section 2.3) this will enhance the Councils ability to enable communities and other organisations to 'help themselves' in response to road safety concerns.

4.7 Public Health Implications

The following bullet points set out details of significant implications identified by officers:

- Road traffic collisions have a significant burden on health services as outlined in section 2.1 in the report above. Failure to change our approach will likely see this burden increase.

- Public Health indicator 1.10, KSI casualties per 100,000 population, is currently red for Cambridgeshire, and specifically for East Cambs, Huntingdonshire and South Cambs districts (Fenland and Cambridge City are amber).
- The value to the NHS of active travel as a direct result of the Road Safety Education Team's sustainable travel to school interventions in 2015/16 is in excess of £300k; a cost-benefit return of over 550%. Future reductions would have a significant impact on this.
- A change in approach would have a positive impact in better targeting those most at risk.

Implications	**Officer Clearance**
Have the resource implications been cleared by Finance?	Yes Name of Financial Officer: Sarah Heywood
Have the procurement/contractual/ Council Contract Procedure Rules implications been cleared by Finance?	N/A Name of Financial Officer: Paul White
Has the impact on statutory, legal and risk implications been cleared by LGSS Law?	Yes Name of Legal Officer: Fiona McMillan
Have the equality and diversity implications been cleared by your Service Contact?	Yes Name of Officer: Tamar Oviatt-Ham
Have any engagement and communication implications been cleared by Communications?	Yes Name of Officer: Sarah Silk
Have any localism and Local Member involvement issues been cleared by your Service Contact?	Yes Name of Officer: Tamar Oviatt-Ham
Have any Public Health implications been cleared by Public Health	Yes Name of Officer: Stuart Keeble & Tess Campbell

Source Documents	**Location**
Department for Transport (2015) Working Together to Build a Safer Road System: British Road Safety Statement	https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/487949/british_road_safety_statement_web.pdf
Global Plan for the Decade of Action for Road Safety 2011-2020, World	http://www.who.int/roadsafety/decade_of_action/plan/plan_english.pdf?ua=1

Health Organisation, 2010	
CCC Safer Roads Fund Application A1303	https://www.cambridgeshire.gov.uk/transport-funding-bids-and-studies/transport-funding-bids/
CCC Cluster site criteria	https://ccc-live.storage.googleapis.com/upload/www.cambridgeshire.gov.uk/residents/travel-roads-and-parking/Cluster_site_criteria.pdf?inline=true
iRAP Methodology Papers and Fact Sheets	http://irap.org/en/about-irap-3/methodology
The Local Transport Plan 3 (2011-2031)	https://ccc-live.storage.googleapis.com/upload/www.cambridgeshire.gov.uk/residents/travel-roads-and-parking/The_Local_Transport_Plan_3%20%281%29.pdf?inline=true
Clifford, J., Theobald, C., Atkinson, S. & Burger, C.. (2016) *IAM Roadsmart: Evaluating the costs of incidents from the public sector perspective: a road safety policy research paper*, IAM Roadsmart	https://www.iamroadsmart.com/docs/default-source/research-reports/evaluating-the-costs-of-incidents-from-the-public-sector-perspective.pdf?sfvrsn=0
Department for Transport, Accident and casualty costs (RAS60)	https://www.gov.uk/government/statistical-data-sets/ras60-average-value-of-preventing-road-accidents
Motor Liability Review Report	1st Floor, Vantage House, Huntingdon (electronic copy available)
Cambridgeshire and Peterborough Road Safety Partnership Strategy 2015-2020	https://cprsp-live.storage.googleapis.com/upload/www.cprsp.co.uk/research-and-statistics/Cambridgeshire%20and%20Peterborough%20Road%20Safety%20Partnership%20Strategy%202015-2020.pdf?inline=true
Owen (2015) Northamptonshire Speed Cameras: Post Switch-Off Collision Analysis	http://www.roadsafetyobservatory.com/Evidence/Details/11679
Agilysis (2017) Cambridgeshire Route Analysis 2012-2016 v1.1	https://cprsp-live.storage.googleapis.com/upload/www.cprsp.co.uk/research-and-statistics/Cambridgeshire%20Route%20Analysis%20V1%201.pdf?inline=true
Staton (2014) Examining Differences in Attitudes Towards Road Safety and Crash Involvement According to Age Group, Gender and Socioeconomic Profile in Cambridgeshire, UK	1st Floor, Vantage House, Huntingdon (electronic copy available)

Appendix 1

ROAD TRAFFIC COLLISION/CASUALTY DATA TABLES

Table 1: Cambridgeshire- Summary

Measure	2005-09 average baseline	2015	2016	2020 target	Current Year percentage (%) change from baseline	Current Year percentage (%) change from last year
Number of KSIs	411	286	347	247	-16%	21%
Number of casualties	2935	1847	2146		-27%	16%
Number of child KSI*	28.4	16.3	17	17	-40%	4%
Number of KSIs resulting from collisions involving drivers under the age of 25	151	69	98		-35%	42%
Number of cyclist and pedestrian KSI casualties*	92.8	88	108	55.7	16%	23%

*3-year rolling totals

Table 2: Cambridgeshire - Collisions (trend)

Year	Fatal	Serious	Slight	Total	KSI
2006	50	310	1928	2288	360
2007	54	310	1790	2154	364
2008	41	281	1658	1980	322
2009	19	323	1594	1936	342
2010	30	276	1537	1843	306
2011	23	274	1439	1736	297
2012	26	234	1400	1660	260
2013	28	232	1215	1475	260
2014	23	257	1265	1545	280
2015	27	236	1147	1410	263
2016	28	265	1238	1531	293

Table 3: Cambridgeshire - Casualties (trend)

Year	Fatal	Serious	Slight	Total	KSI	KSI Target
2006	50	322	2031	2403	372	
2007	54	319	1889	2262	373	
2008	41	291	1766	2098	332	
2009	19	329	1671	2019	348	
2010	30	281	1611	1922	311	

2011	23	277	1501	1801	300	
2012	27	270	1911	2208	297	
2013	28	277	1664	1969	305	
2014	26	294	1728	2048	320	
2015	30	256	1561	1847	286	
2016	33	314	1799	2146	347	
2017						
2018						
2019						
2020						247

Table 4: Cambridgeshire- 2016 casualties by vehicle type

Vehicle Type	Fatal	Serious	Slight	Total	% of total
Pedal Cycle	0	64	303	367	15%
Car	20	145	1171	1336	63%
Motorcycle	5	45	116	166	8%
Goods Vehicles	3	12	91	106	5%
Pedestrian	4	40	76	120	7%
Other	1	8	42	51	3%
Total	33	314	1799	2146	100%

Table 5: Cambridgeshire - 2016 casualties by age and gender

Age	Gender	Fatal	Serious	Slight	Total	% of age group	% of total casualties
0-15	Male	4	22	87	113	54%	5%
	Female	1	15	81	97	46%	5%
16-25	Male	6	56	264	326	58%	15%
	Female	3	23	206	232	42%	11%
26-35	Male	5	38	214	257	59%	12%
	Female	2	14	162	178	41%	8%
36-45	Male	4	39	136	179	56%	8%
	Female	2	12	127	141	44%	7%
46-55	Male	3	29	126	158	57%	7%
	Female	0	18	102	120	43%	6%
56-65	Male	1	19	64	84	53%	4%
	Female	0	9	67	76	48%	4%
66+	Male	4	17	69	90	54%	4%
	Female	1	14	61	76	46%	4%
Total*	Male	25	219	983	1227	57%	57%
	Female	8	94	812	914	43%	43%

*Total includes unknown ages and excludes unknown gender

Table 6: Cambridgeshire- 2016 age and gender of drivers by severity of collision

Age	Gender	Fatal	Serious	Slight	Total	% of age group	% of total drivers
17-25	Male	7	43	249	299	63%	12%
	Female	3	24	151	178	37%	7%
26-35	Male	12	44	297	353	68%	15%
	Female	1	26	136	163	32%	7%
36-45	Male	10	48	215	273	61%	11%
	Female	4	24	148	176	39%	7%
46-55	Male	8	44	197	249	67%	10%
	Female	2	15	103	120	33%	5%
56-65	Male	4	40	136	180	71%	7%
	Female	1	9	63	73	29%	3%
66+	Male	6	22	116	144	67%	6%
	Female	1	12	59	72	33%	3%
Total*	Male	47	255	1306	1608	66%	66%
	Female	12	115	692	819	34%	34%

*Total includes only drivers over the age of 17 and excludes unknown gender

Table 7: Cambridgeshire - comparison to National data (per 100 million veh km)

Area	KSI	Slight	Total
Cambridgeshire 2016	4.4	22.8	27.2
Cambridgeshire 2015	3.7	20.4	24.1
Great Britain 2015*	4.7	31.8	36.5

*2016 not yet published

Table 8: 2016 casualties by district

District	Fatal	Serious	Slight	KSI	Total	% of total	KSI as % of all collisions
City	0	63	330	63	393	13%	16%
East	12	43	190	55	245	8%	22%
Fenland	1	47	249	48	297	10%	16%
Hunts	9	78	535	87	622	21%	14%
South	11	83	495	94	589	20%	16%
P'boro	4	86	726	90	816	28%	11%
Total	37	400	2525	437	2962	100%	15%

Table 9: Cambridge City - 2016 casualties by vehicle type

Vehicle Type	Fatal	Serious	Slight	Total	% of total
Pedal Cycle	0	40	190	230	59%
Car	0	3	81	84	21%
Motorcycle	0	5	28	33	8%
Goods Vehicles	0	0	1	1	0%
Pedestrian	0	13	22	35	9%
Other	0	2	8	10	3%
Total	0	63	330	393	100%

Table 10: East Cambridgeshire - 2016 casualties by vehicle type

Vehicle Type	Fatal	Serious	Slight	Total	% of total
Pedal Cycle	0	5	18	23	9%
Car	8	27	135	170	69%
Motorcycle	2	6	12	20	8%
Goods Vehicles	0	2	12	14	6%
Pedestrian	1	2	10	13	5%
Other	1	1	3	5	2%
Total	12	43	190	245	100%

Table 11: Fenland - 2016 casualties by vehicle type

Vehicle Type	Fatal	Serious	Slight	Total	% of total
Pedal Cycle	0	2	21	23	8%
Car	1	29	173	203	68%
Motorcycle	0	4	18	22	7%
Goods Vehicles	0	1	13	14	5%
Pedestrian	0	10	12	22	7%
Other	0	1	12	13	4%
Total	1	47	249	297	100%

Table 12: Huntingdonshire - 2016 casualties by vehicle type

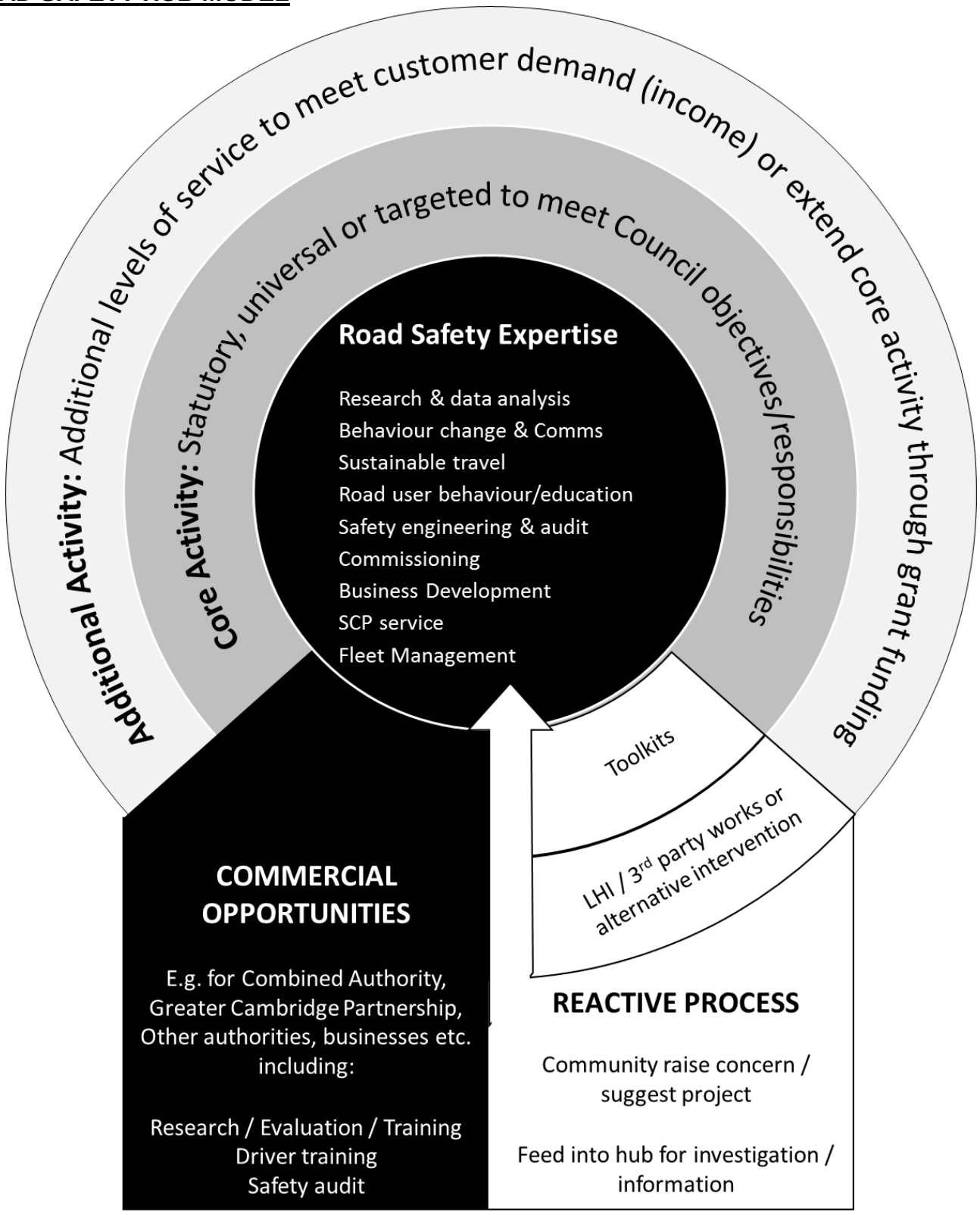
Vehicle Type	Fatal	Serious	Slight	Total	% of total
Pedal Cycle	0	10	37	47	8%
Car	6	43	396	445	72%
Motorcycle	2	10	29	41	7%
Goods Vehicles	0	4	40	44	7%
Pedestrian	1	9	20	30	5%
Other	0	2	13	15	2%
Total	9	78	535	622	100%

Table 13: South Cambridgeshire - 2016 casualties by vehicle type

Vehicle Type	Fatal	Serious	Slight	Total	% of total
Pedal Cycle	0	7	37	44	7%
Car	5	43	386	434	74%
Motorcycle	1	20	29	50	8%
Goods Vehicles	3	5	25	33	6%
Pedestrian	2	6	12	20	3%
Other	0	2	6	8	1%
Total	11	83	495	589	100%

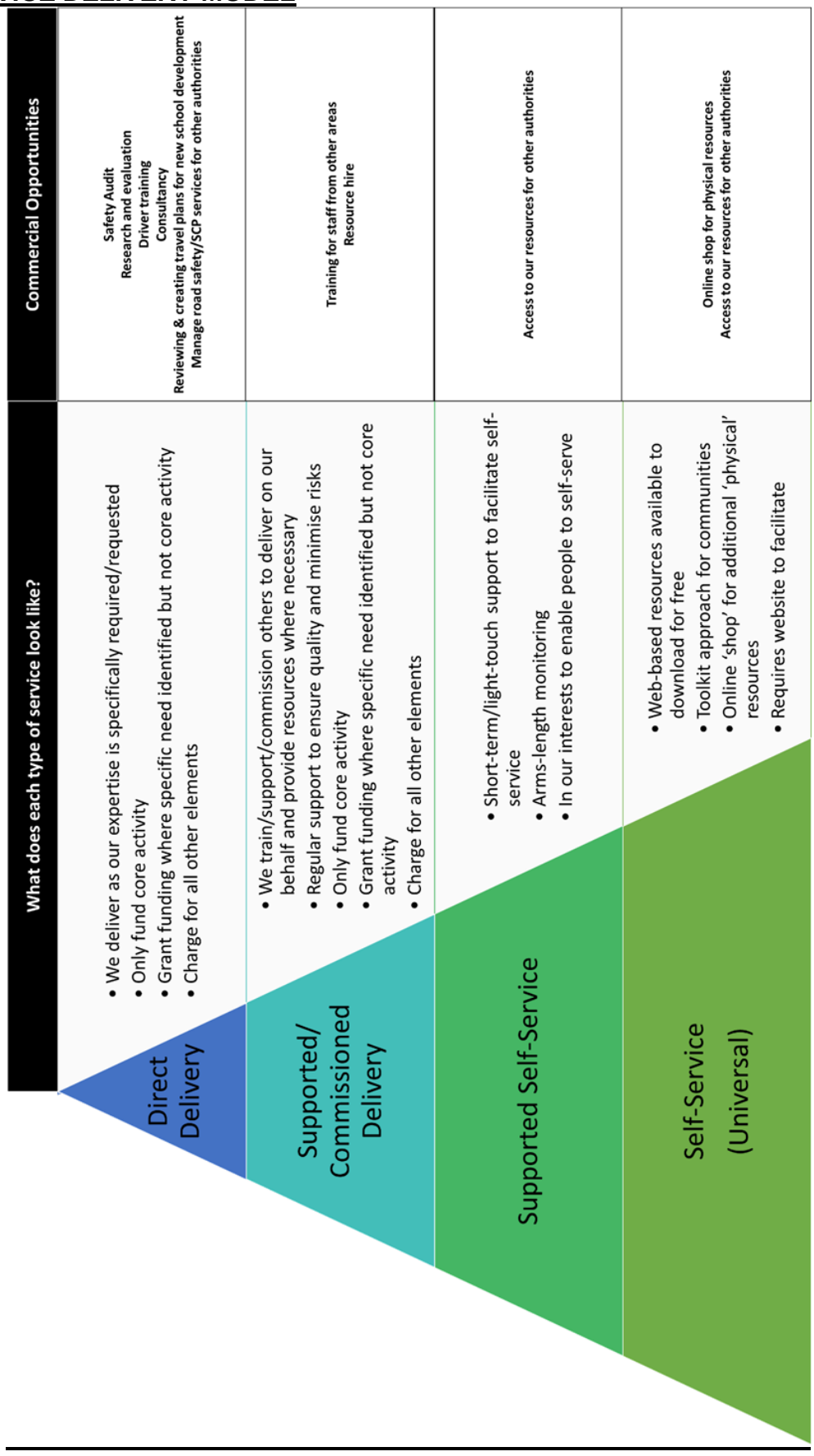
Appendix 2

ROAD SAFETY HUB MODEL



Appendix 3

TIERED SERVICE DELIVERY MODEL



Appendix 4

Cambridgeshire County Council
Approved Accident Cluster Site Criteria

Stage 1 - Site selection

Sites that meet the following criteria shall be designated cluster sites.

		Minimum number of injury accidents (3 years)		Minimum number of KSI injury accidents (3 years)
	Junction	5	Including	1
	Junction	6	OR	3
Length	100 metres	5	Including	1
	100 metres	6	OR	3
	200 metres	7	OR	3
	300 metres	8	OR	4
	400 metres	9	OR	4
	500 metres	10	OR	4
	600 metres	11	OR	5
	700 metres	12	OR	5
	800 metres	13	OR	6
	900 metres	14	OR	6
	1000 metres	15	OR	6
	1100 metres	16	OR	7
	1200 metres	17	OR	7
	1300 metres	18	OR	8
	1400 metres	19	OR	8
	1500 metres	20	OR	8

Stage 2 - Scoring

Once sites have been selected (using the above criteria), a score is attributed to each junction or length. For a junction or 100 metres length of road the score is simply the number of fatal accidents times 4 plus the number of serious accidents times 3 plus the number of slight accidents (4*Fatal + 3*Serious + Slight).

For longer sections or road the score is calculated using the following formula:

(4F+3Se+Sl)*(6/(5+L))

(F = Fatal, Se = Serious, Sl = Slight, and L = Length of road in metres divided by 100)

This gives the same score, for example, for a junction with 6 slight accidents and a 1500 metre length of road with 20 slight accidents, as per the criteria above.
The score is used to prioritise the sites, with the highest scoring site having the highest priority.

Appendix 5

2018/19 Safety Schemes for approval

	Parish/Town	Street	Location	Works	Budget 2018/19
CITY					
A1134	Cambridge	Lensfield Road	At junction with Trumpington Road	Trial - remedial measures	£20,000
A1134	Cambridge	Trumpington Road	Junction with Chaucer Street	Signalisation and pedestrian facilities	£50,000
EAST					
A142	Mepal	Mepal Road	A142 Mepal Road/Sutton Road junction	Route remedial implementation (islands, lining and signing)	£30,000
FENLAND					
A141	Wimblington	Isle of Ely Way	A141 Isle of Ely Way/Meane Road junction	Signalise the junction - (Part funded 2017/18 two year scheme)	£300,000
HUNTS					
UNC	Broughton	Crossroads	Huntingdon Road/Ramsey Road	Junction remedial measures	£50,000
COUNTY WIDE					
A1303	County wide	Quy to Bottisham	A1303	Contribution to Safer Roads Fund DfT Pathfinder Project (£1.3m)	£71,000
	County wide	Minor Improvements	Various	Cluster sites, fatals and non-injury potential for high severity	£45,000
	County wide	Advanced design	Various	AIP, design for future years	£28,000
					£594,000

Cambridgeshire County Council

Appendix 6

COMMUNITY IMPACT ASSESSMENT

Directorate / Service Area		**Officer undertaking the assessment**
Highways – Road Safety		Name: Matt Staton .....
Service / Document / Function being assessed		
Road Safety Hub Approach		Job Title: Road Safety Education Team Leader .....
Business Plan Proposal Number (if relevant)		Contact details: matt.staton@cambridgeshire.gov.uk .

Aims and Objectives of Service / Document / Function

This proposal involves implementing a new delivery structure based around core expertise/functions in order to deliver an efficient and effective road safety service for Cambridgeshire, and maximise opportunities to offer services to others including, but not limited to, the Greater Cambridge Partnership, Combined Authority and Peterborough City Council.

What is changing?

The proposed approach recognises the value of the road safety expertise that exists within the Council and relies on developing and exploiting this to realise commercial opportunities as well as deliver the Council's responsibilities and objectives.

The proposed approach would separate activity into **core**, **additional** and **commercial** elements.

Core activity comprises our statutory duties under the Road Traffic Act 1988 to:

- prepare and carry out a programme of measures designed to promote road safety
- investigate accidents arising out of the use of vehicles
- implement measures as appear to the authority to be appropriate to prevent such accidents

Core activity would also include programmes that mitigate the risk of higher costs to another Council service area.

Additional activity comprises those activities which would supplement core activity should additional funding be available/sourced for specific projects.

Commercial services are charged-for activities that the Road Safety Team will deliver for others (internally or externally).

The aim is to move as much activity as possible towards self-service (using the tiered service delivery model outlined in Appendix 3)

Evidence suggests that a combination of interventions targeting high-risk groups as well as the population as a whole is the most effective approach to prevention.

Who is involved in this impact assessment?
e.g. Council officers, partners, service users and community representatives.

The assessment is being undertaken by Council officers and reflects on research evidence and discussions with partners and stakeholders in the Road Safety Partnership.

What will the impact be?

Tick to indicate if the impact on each of the following protected characteristics is positive, neutral or negative.

Impact	Positive	Neutral	Negative
Age	x		
Disability		x	
Gender reassignment		x	
Marriage and civil partnership		x	
Pregnancy and maternity		x	
Race		x	

Impact	Positive	Neutral	Negative
Religion or belief		x	
Sex	x		
Sexual orientation		x	
The following additional characteristics can be significant in areas of Cambridgeshire.			
Rural isolation	x		
Deprivation	x		

For each of the above characteristics where there is a positive, negative and / or neutral impact, please provide details, including evidence for this view. Describe the actions that will be taken to mitigate any negative impacts and how the actions are to be recorded and monitored. Describe any issues that may need to be addressed or opportunities that may arise.

Positive Impact
Road traffic collisions are known to disproportionately affect young males and is of particular concern in areas of rural isolation where exposure is higher due to access to education/services often being reliant on vehicle ownership, higher annual mileage and higher speed roads. This new approach aims to enable better targeting of resources in areas of specific need while ensuring a greater basic level of service available to all through greater opportunities for self-service.
Negative Impact
If the new approach is adopted it is not expected to have any negative impact on the above protected characteristics
Neutral Impact
The change in approach is expected to have a neutral impact to characteristics not known to affect the risk of collision involvement in Cambridgeshire.
Issues or Opportunities that may need to be addressed
The introduction of more self-service elements to the programme will need to be monitored to ensure that these resources are easily accessible to all, particularly where the focus is likely to be on digital platforms. The approach should enable resource to be allocated in target areas where self-service is not being routinely utilised in order to either support self-service in the future or deliver on behalf of at-risk groups. The new approach has the opportunity to facilitate growth in the service through accessing external funding. These opportunities should be monitored and maximised.

Community Cohesion

If it is relevant to your area you should also consider the impact on community cohesion.

Toolkits for community self-service should support the Council's focus on community resilience and provide an opportunity for residents/local groups to 'help themselves' within a framework that provides consistency for road users across the county.