

Forward Plan reference number: Not applicable

Report title: Casualty Reduction Schemes 2019/2020	
Report to: Councillor Kevin Bentley - Deputy Leader and Cabinet Member for Infrastructure	
Report author: Andrew Cook – Director of Highways & Transportation	
Date: 23 rd May 2019	For: Decision
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County Divisions affected: All Essex	

1. Purpose of Report

- 1.1 The purpose of this report is to provide details of the outcome of the Casualty Reduction analysis that took place during 2018 and to seek approval for 37 casualty reduction sites (set out in Appendix 1) identified for priority funding in 2019/20, in order to implement the casualty reduction remedial measures as identified in the Appendix 2.

2. Recommendations

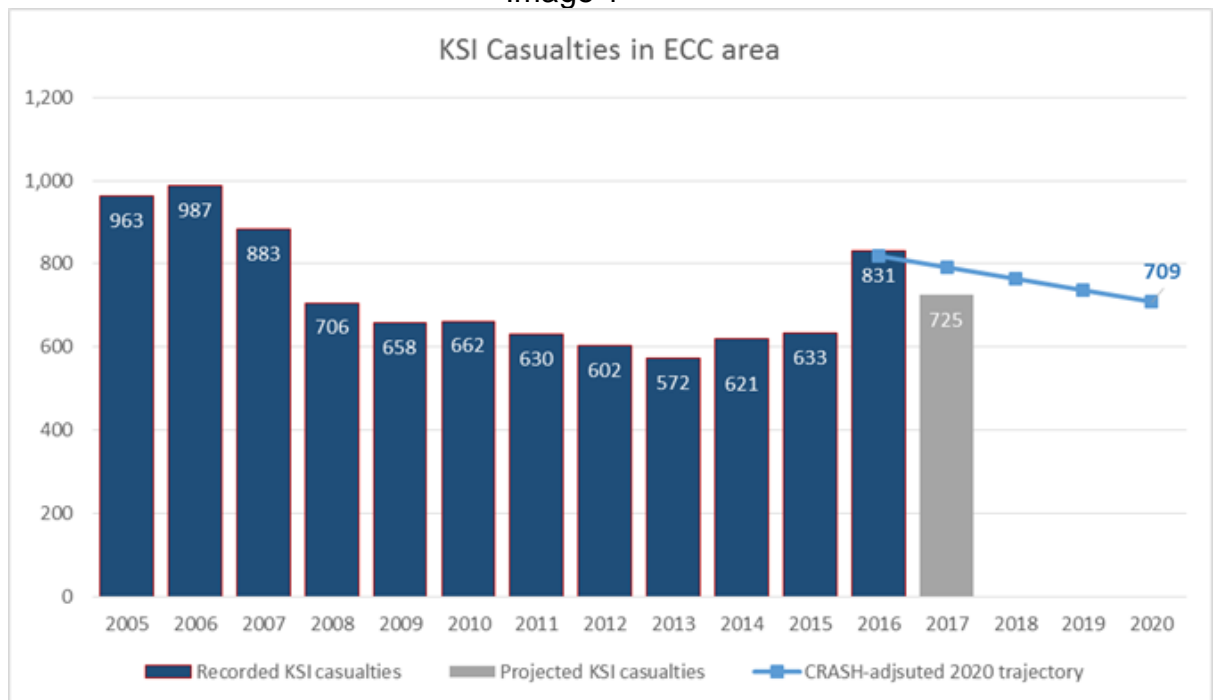
- 2.1 To agree the 37 prioritised casualty reduction sites as identified in Appendix 1.
- 2.2 To agree the funding allocations against each of the 37 prioritised casualty reduction sites based on local authority district weighting, with a total value of £550,750 to be utilised for the design / implementation of the casualty reduction remedial measures as identified in Appendix 2.

3. Summary of issue

- 3.1 Essex County Council (ECC) has set an interim annual target to have fewer than 709 deaths and serious injury casualties, (known as Killed and Seriously Injuries (KSI)) and fewer than 3,278 slight injury casualties on the roads in Essex by 2020.
- 3.2 The Essex road collision information between 2014 and 2017 is as follows:
- 144 road collisions were recorded where one or more people were fatally injured.
 - 2310 road collisions were recorded where one or more people were seriously injured.
 - 8994 road collisions were recorded where one or more people were slightly injured.
- 3.3 Previously, the methodology for prioritising sites resulted in a disproportionate number of sites being identified where there were only Slight Injuries recorded.

- 3.4 Historically there has been an under recording of collisions across the UK. As a result the method in which recording takes place has been updated, and the police have adopted this new approach, known as CRASH. CRASH stands for Collision Reporting And SHaring. It is principally for recording collisions and STATS19 data for reporting to highway authorities and Department of Transport (DfT). It can also record all other collisions reported to Police (non injury and private property etc, and a lot of additional details used for investigating the collisions.
- 3.5 Under CRASH the criteria for reporting injuries changed, for example, certain injuries would now be recorded as a KSI, rather than a slight injury as has previously been the case (known as the CRASH effect). As a result this has increased the numbers of KSI being recorded. The original target of 504 KSI has increased as a result of the CRASH effect, and the new target of 709 has been set, which accounts for the previous under recording of serious accidents which occurred during the 2005-09 baseline period when CRASH was not in place.
- 3.6 The 3,278 slight injury casualties target remains unchanged from the original target. In theory it could be reduced slightly to 3,073 to reflect the reduction in those incidents recorded as a slight injury casualty due to the CRASH effect (i.e. as some slight injury casualties have now recorded as serious). However, ECC has adopted the higher figure and the reduction in these collisions would be contributed through the proposed remedial works identified as part of this report.
- 3.7 The criteria for identification of the Sites was approved as part of the Local Highway Panel Terms of Reference on 9 November 2016. Accordingly Sites are now prioritised where:
- there is the highest severity ratio of killed or serious injury collisions;
 - ECC is responsible for the highway in question;
 - there is an identifiable pattern of the cause of the incidents; and
 - there is an engineering solution for treating the identified cause.
- 3.8 ECC is committed to reduce the numbers of KSI casualties on Essex roads in order to meet the trajectory for 2020, as indicated in Image 1 overleaf. In order to meet the 2020 target it is necessary to reduce the annual KSI casualties occurring between 2017 - 2020 by a total of 122 casualties. This means an annual reduction of 41 KSI casualties in each year going forward.

Image 1



2014 - 2017(*) casualty data (*2017 data is still provisional)

- 3.9 Essex Highways has conducted their annual review of road collisions across the Essex Network during 2018 reported through CRASH. As part of that review a number of Collision cluster sites were identified where there has been either: In urban areas, 4 or more personal injury collisions within a 50m radius over the past 3 years, and in rural areas 3 or more personal injury collisions within a 250 radius over the past 3 years.
- 3.10 Further analysis was carried out to rank these collision cluster sites by the severity of the recorded KSI. Those ranking the highest were then investigated further to identify locations with a clear and treatable pattern, and to identify the necessary remedial works required in order to address the collision pattern.
- 3.11 The analysis has identified 37 Sites across Essex with a collision pattern which could be effectively treated through the introduction of safety engineering measures.
- 3.12 Site investigations have been undertaken, and where safety engineering remedial measures to the Sites, that would result in reducing or ceasing future collisions have been identified, these have been given an initial costing, and is set out in Appendix 1. The design and/or implementation of Sites would contribute towards the required reduction in KSI casualties and move ECC towards meeting its 2020 target.

- 3.13 The DfT each year calculate the average value of prevention per road accident. This represents the whole society cost when a collision occurs, and the most up to date figures are set out in Table 1 below.

Table 1:

Table A 4.1.4: Average value of prevention per road accident by severity & road class £ (2017 prices and 2017 values)				
Accident severity	Road Class			
	Built-up ¹	Non Built-up ²	Motorway	All
Fatal	2,031,842	2,190,372	2,138,933	2,116,139
Serious	235,073	265,877	273,357	244,735
Slight	24,229	29,445	35,365	25,668
All injury	69,986	144,210	99,254	86,440
Damage only	2,157	3,152	3,029	2,279
Average cost per personal injury accident (PIA) ³	108,156	168,799	122,274	121,212
All accidents	5,784	19,182	14,218	7,455

- 3.14 ECC has used these figures to calculate a First Year Rate of Return (FYRR) using the predicted financial value of the annual collision savings that the Site would create (DfT values) divided by the overall Site cost. All Sites to be implemented, aim to have a target of a FYRR of 100 and above, indicating a considerable cost / benefit to society.
- 3.15 Following the FYRR calculations made in relation to the Sites, it is estimated that 13.6 collisions per year would not have occurred had the remedial measures, identified as part of the investigations, been in place at the time the collision occurred.
- 3.16 When placed against the DfT figures, this level of reduction in collisions would generate cost benefit saving to society on a whole of £1,648,483 per year. (as set out in Table 2).

Table 2:

PER YEAR number of collisions that would not have occurred had the remedial measures been implemented at start of the collision period	Average Cost per Injury Accident from Table 1:	Cost Benefit savings to society
13.6	£121,212	£1,648,483

- 3.17 Table 3 below details the breakdown of the design and construction costs required to implement all of the identified 2019/2020 Casualty Reduction sites as per the options detailed in section 4.

TABLE 3				
District	Budget	CR	Option 1 Panel Remainder	Option 2 Panel District Weighting
Basildon	£500,000	£109,000	£391,000	£431,156
Braintree	£407,789	£90,500	£317,289	£351,641
Brentwood	£224,938	£22,250	£202,688	£193,967
Castle Point	£228,675	£29,750	£198,925	£197,190
Chelmsford	£500,000	£46,500	£453,500	£431,156
Colchester	£500,000	£102,500	£397,500	£431,156
Epping	£349,775	£102,500	£247,275	£301,615
Harlow	£243,658	£13,250	£230,408	£210,109
Maldon	£200,000	£8,000	£192,000	£172,463
Rochford	£213,904	£1,750	£212,154	£184,452
Tendring	£395,240	£10,000	£385,240	£340,821
Uttlesford	£236,021	£14,750	£221,271	£203,523
Total	£4,000,000	£550,750	£3,449,250	£3,449,250

- 3.18 The full Casualty Reduction Report will be provided to the LHPs together with the list of schemes that are to be undertaken in 2019/20. This will indicate to the LHPs any other lower ranked CR schemes that the LHP may identify as meeting local community needs. These could then be included in their proposed annual program of work.
- 3.19 The costs provided for the Sites are indicative and are not confirmed. When the Sites are taken to detailed design there may be other factors that will impact on the overall costs. If a Sites cost increases significantly this will have an impact on the First Year Rate of Return, and any increases in costs outside those specified in the LHP Terms of Reference will be reported to the Cabinet Member for further decision.
- 3.20 The Casualty Reduction scheme costs detailed in table 3 also include £30,750 of costs required to undertake post construction safety audits and assessments on all Local Highways Schemes throughout the 12 districts.

4. Options

- 4.1 ECC has the following options available:

Option 1: to approve the 37 Sites and the funding from each districts specific allocations (Recommended Option)

- 4.1.1 To fund the sites from the districts allocation for 2019_2020. This means that the appropriate casualty reduction costs will be applied to each district where a Site has been identified. This is the recommended option, and allows for funding allocated to specific districts to be used within that district. The total remedial works is estimated to cost £550,750.

- 4.1.2 This would ensure that there is funding in place to carry out the remedial works identified at the 37 Sites which would assist ECC in moving towards achieving its KSI Target for 2020.

Option 2: to approve the 37 Sites and the funding prior to district weighting being applied.

- 4.1.3 ECC could consider funding the Sites prior to district weighting being applied from LHP capital allocation for 2019/2020. The overall total cost of the remedial works will not change, but the funding will be sourced across the district councils, and could result in one authority's allocation being used to fund a Site in another district council's area.

Option 3: Not approve the Sites or funding allocations

- 4.1.4 ECC could chose not to approve the Sites and the allocation as set out in paragraph 4.1.1. In doing so ECC would fail to meet its Statutory duty, and would fail to meet its own KSI target for 2020. In doing so the number of KSI reported at the identified Sites might increase where the remedial works is not carried out.

5. Issues for Consideration

5.1 Financial implications

- 5.1.1 Capital Funding: For casualty reduction schemes capital funding has been allocated via the existing LHP budget allocation.
- 5.1.2 Revenue: For Casualty Reduction schemes, there is no requirement for an additional revenue budget. However consideration needs to be given in that any new casualty reduction schemes implemented within the Highway will add to ECC asset and infrastructure, and will require maintenance as per any newly installed asset that is delivered as part of the existing LHP programme. The maintenance of this new asset would be contained within the existing highways maintenance budgets.

5.2 Legal implications

- 5.2.1 Section 39 of the Road Traffic Act 1988 places statutory responsibilities on Local Authorities in respect of Road Safety to carry out studies into accidents arising out of the use of vehicles on roads or parts of roads, within their area and for which they are the responsible Highway Authority and in the light of those studies, take such measures as appear to the authority to be appropriate to prevent such accidents.
- 5.2.2 The ECC process for considering Road Casualty Reduction Schemes was amended in 2016 to ensure that Sites are prioritised on a countywide basis and that proposals are prioritised on the basis of reduction in number of people killed or seriously injured against the cost of implementation of the

scheme. The current process will protect ECC's position if there is a future challenge regarding which Sites are prioritised.

- 5.2.3 The prioritisation process provides a transparent process which is as objective as possible and demonstrates that ECC monitors the safety of the roads for which it is responsible. Monitoring accident data and responding to changing trends is a key way of preventing road casualties and effective use of the process will reduce the risk of a prosecution under the Corporate Manslaughter and Corporate Homicide Act 2007 or under the Health and Safety at Work etc Act 1974.

6. Equality and Diversity implications

- 6.1 The Public Sector Equality Duty applies to the Council when it makes decisions. The duty requires us to have regard to the need to:
- (a) Eliminate unlawful discrimination, harassment and victimisation and other behaviour prohibited by the Act. In summary, the Act makes discrimination etc. on the grounds of a protected characteristic unlawful.
 - (b) Advance equality of opportunity between people who share a protected characteristic and those who do not.
 - (c) Foster good relations between people who share a protected characteristic and those who do not including tackling prejudice and promoting understanding.
- 6.2 The protected characteristics are age, disability, gender reassignment, pregnancy and maternity, marriage and civil partnership, race, religion or belief, gender, and sexual orientation. The Act states that 'marriage and civil partnership' is not a relevant protected characteristic for 9.1(b) or 9.(c) although it is relevant for 9.1(a).
- 6.3 The equality impact assessment at Appendix 3 indicates that the proposed decision will not have a disproportionately adverse impact on any people with a particular characteristic.

8. List of Appendices

- 8.1 Appendix 1 – Casualty Reduction Site List 2019/2020
- 8.2 Appendix 2 – Casualty Reduction Reports, Detailed site analysis and scheme proposals
- 8.3 Appendix 3 – Equalities Impact Assessment

9. List of Background papers

- 9.1 Detailed site investigations.

I approve the above recommendations for the reasons set out in the report:	Date
Councillor Kevin Bentley, Deputy Leader and Cabinet Member for Infrastructure	30/08/2019

In consultation with:

Role	Date
Director Highways and Transportation Andrew Cook	25/03/2019
Essex Traffic Manager /Head of Network Management Liz Burr	20/03/2019
Head of Design Services Vicky Presland	21/03/2019
Executive Director for Corporate and Customer Services (S151 Officer) Margaret Lee	N/A
Monitoring Officer Kim Cole, on behalf of Paul Turner	19/03/2019