



COUNCIL EXECUTIVE

ACCIDENT INVESTIGATION AND PREVENTION (AIP) CASUALTY REDUCTION PROGRAMME 2018/19

REPORT BY HEAD OF OPERATIONAL SERVICES

A. PURPOSE OF REPORT

The purpose of this report is to approve the list of proposed prioritised casualty reduction schemes for the 2018/19 programme.

B. RECOMMENDATION

It is recommended that the Council Executive approves the list of prioritised casualty reduction schemes for implementation in 2018/19.

C. SUMMARY OF IMPLICATIONS

I	Council Values	Making best use of our resources and working in partnership
II	Policy and Legal (including Strategic Environmental Assessment, Equality Issues, Health or Risk Assessment)	Policy: The Accident Investigation and Prevention (AIP) casualty reduction programme is identified in the Community Safety Strategy and in the Road Safety Plan. The council has a statutory responsibility for road safety under the Road Traffic Act 1988. Legal: None
III	Implications for Scheme of Delegations to Officers	None
IV	Impact on performance and performance Indicators	The AIP casualty reduction programme contributes to the casualty reduction performance indicators.
V	Relevance to Single Outcome Agreement	The AIP casualty reduction programme contributes to the outcome: "We live in resilient, cohesive and safe communities."
VI	Resources - (Financial, Staffing and Property)	Financial: The proposed schemes will be funded from the council's road casualty reduction budget with £200,000 allocated in 2018/19.

Maintenance costs relating to the

schemes will be accommodated in future Roads and Transportation revenue budgets.

Schemes will be designed to minimise these future revenue costs as far as is practicable.

VII Consideration at PDSP

The casualty reduction programme was considered at the Environment PDSP at its meeting on 5 June 2018.

The panel members agreed to note the report and its recommendations be forwarded to the Council Executive for approval.

VIII Other consultations

Consultation will be carried out with Police Scotland on the programme as a whole and with any frontagers directly affected by any of the proposed schemes.

Schemes which require a traffic regulation order will have additional statutory consultation and a period for objections. Further reports will be prepared for the council executive in these cases.

D. TERMS OF REPORT

Background

The council's Community Safety Strategy identifies the need for a road casualty reduction programme utilising accident investigation and prevention (AIP) techniques.

Research for the Department for Transport has found that local safety schemes which tackle proven casualty problems represent very good value for money and make a significant contribution to casualty reduction.

Progress to date

The current casualty reduction programme commenced in 2007/08 and since then, a total of 85 schemes have been completed.

It is too early to assess fully the effects of all of these schemes on casualty reduction. However, full monitoring (more than 36 months of after data) has now been carried out for the schemes introduced in 2007/08, 2008/09, 2009/10, 2010/11, 2011/2012, 2012/2013 and 2013/2014. Initial monitoring (less than 36 months of after data) has been carried out on schemes introduced in 2014/15 and 2015/16.

The results of the first nine years are provided in Table 1.

The results of this monitoring continue to be very encouraging and indicate an overall reduction in accidents at treated sites of approximately 56% giving a first year rate of return of 411%. A full explanation of the first year rate of return calculation is given in Appendix 1.

Year	Number of schemes	Accident reduction at schemes	First year rate of return
2007/08 (full monitoring)	9	38%	863%
2008/09 (full monitoring)	12	54%	323%
2009/10 (full monitoring)	13	40%	468%
2010/11 (full monitoring)	11	41%	647%
2011/12 (full monitoring)	7	67%	284%
2012/13 (full monitoring)	5	67%	439%
2013/14 (full monitoring)	4	87%	355%
2014/15 (initial results)	4	55%	80%
2015/16 (initial results)	12	53%	241%
2007-2017 Overall	77	56%	411%

Table 1 – AIP programme monitoring results

Prioritised schemes for 2018/19

For the 2018/19 programme, officers identified so-called 'sites for concern' in four ways. Firstly, 49 single sites where there were four or more accidents in a five year period were identified. Secondly, the accident rates on all rural class A and B class routes and on urban routes were analysed with the 10 urban and rural routes with the highest accident rates investigated in detail. Finally, all residential areas in West Lothian were mapped, the accident rates and total number of accidents calculated and detailed investigations carried out on the top five areas for both categories.

The investigation / analysis work undertaken involved using the recorded injury accident data collected by the police to identify sites for concern and analyse crash patterns to develop remedial measures. The process is used nationally and is endorsed by The Royal Society for the Prevention of Accidents (RoSPA) through its Road Safety Engineering Manual.

Some elected members have suggested that the AIP process should be reviewed to consider sites where there is a 'perception' that accidents will happen. Officers advice is that the RoSPA endorsed methodology is the one that the council should continue to use.

The accident patterns at each of these sites for concern were investigated and a total of 8 sites taken forward for development of remedial measures. These remedial measures have been prioritised based upon value for money criteria. Appendix 1 shows the list of schemes taken forward and prioritised.

The available funding will allow the introduction of around 7 schemes in 2018/19, subject to final scheme costs. As the accident data is analysed on an annual basis, the programme will be re-ordered next year to take account of up-to-date accident problems.

Discussion at Environment PDSP

It is anticipated that results from the 2015/16 programme will be available in 2018 and the 2016/17 programme will be available in early 2019.

Councillors Calder and Horne asked questions around the use of recorded injury accident data for scheme identification and prioritisation.

Councillor Calder expressed her view that the programme should take into account community perception of danger areas rather than having to wait for an accident to happen.

Councillor Horne noted that the rate of return on the programme was steadily falling and asked when the current process would no longer be appropriate.

Officers explained the principles behind the use of reported injury accident data as the best way to objectively identify and prioritise schemes, in line with national research and best practice guidance.

In reference to the rates of return, officers agreed that the trend was downward and that at some point the process would likely need to be reviewed. However, whilst positive rates of return were achieved, the programme represented good value for money.

E. CONCLUSION

The AIP casualty reduction programme is the council's main opportunity to make a significant impact in meeting casualty reduction targets and this is backed up by national research and local results.

The schemes prioritised for this financial year maximise the council's investment through first year rate of return prioritisation and will deliver improvements across West Lothian.

F. BACKGROUND REFERENCES

Department for Transport (2009). Road Safety Research Report No. 108 – Contribution of Local Safety Schemes to Casualty Reduction. DfT, London. Available from: <http://www.dft.gov.uk/pgr/roadsafety/research/rsrr/theme5/rsrr108.pdf>

Appendices/Attachments:

Appendix 1 – Casualty Reduction Schemes 2018/19 – Prioritised list

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Date of meeting: 26 June 2018

APPENDIX 1 – CASUALTY REDUCTION SCHEMES 2018/19 – PRIORITISED LIST

Schemes have been prioritised using an economic assessment method known as First Year Rate of Return (FYRR). It is a simple way of calculating whether a scheme can be justified in economic terms.

The FYRR is calculated using the formula:

$$\%FYRR = \frac{\text{Annual_Accident_Savings} \times 100}{\text{Scheme_cost}}$$

The annual accident savings are calculated using accident costs from Road Accidents Scotland 2016 and are weighted based upon whether the site is in an urban or rural location. This mechanism reflects that the cost to society of road accidents is higher in rural areas. As a decreasing number of identified sites include fatal or serious accidents, the severity weighting applied in previous years has not been used.

An estimated FYRR of more than 100% indicates that the scheme benefits will outweigh the costs within the first year. An estimated FYRR of less than 100% indicates that the scheme is still beneficial but the benefits take more than a year to outweigh the costs.

Schemes will be implemented in priority order until the available funding is exhausted. It will not be possible to implement every scheme in 2018/19 due to budget constraints. It is anticipated that the first 7 schemes will be implemented this year.

Rank	Ref	Location	Ward	Proposals	Estimated Scheme Cost	Estimated Annual Cost Saving to Society ¹	Estimated FYRR (%)
1	AIP/2018/019	B7015 junction with the C13 east of Freeport	7	Resurface bend, drainage and road marking improvement works .	£30,000	£76,492	255.0
2	AIP/2018/079	B8020 from A904 to Winchburgh	2	Advanced warning signs, possible resurfacing and the introduction of hazard marker posts	£30,000	£63,743	212.5
3	AIP/2018/048	B7031 bend at Kirknewton House Cottage, Kirknewton (near RAF Kirknewton)	5	Resurface bend, build out to with hazard marker posts either side of access and drainage improvements.	£25,000	£50,995	204.0

Rank	Ref	Location	Ward	Proposals	Estimated Scheme Cost	Estimated Annual Cost Saving to Society ¹	Estimated FYRR (%)
4	AIP/2018/008	Livingston East Roundabout (at Deer Park)	3	Update road markings, cut back vegetation and replace signage.	£20,000	£27,120	135.6
5	AIP/2018/021	Almondvale Boulevard / Almondvale Avenue at Bubbles Roundabout	4	Refurbish zebra crossing new beacons, refresh road markings.	£15,000	£18,080	120.5
6	AIP/2018/12	Menzies Road junction with B7002 Whitburn Road	8	Declutter signage on roundabout and traffic splitting islands and road marking improvements.	£15,000	£18,080	120.5
7	AIP/2018/028	Knightsridge East Road junction with Ladywell East Road, Knightsridge, Livingston	3	Removal of deceleration lane and junction alterations	£50,000	£18,080	36.2
8	AIP/2018/033	Avon Gorge A801 junction with A706	9	Signalisation of rural junction	£257,500	£38,246	14.9

¹ The cost savings identified are not directly recouped by the council but are savings to society as a whole. The costs include both human costs and direct economic costs