

EAST AYRSHIRE COUNCIL

DEVELOPMENT SERVICES COMMITTEE – 6 JUNE 2000

ROAD SAFETY MEASURES – MONITORING REPORT

Report By Director of Development Services

1. PURPOSE OF REPORT

- 1.1 The purpose of the report is to inform the Committee of an initial appraisal of the road safety measures which have been implemented in East Ayrshire.

2. BACKGROUND

- 2.1 At its meeting on 3 June 1997 the Development Services Committee approved a programme of traffic calming schemes for various communities in the Council's area. Schemes have now been completed in Newmilns, Hurlford, Darvel, Galston, Auchinleck and Stewarton. A scheme to traffic calm the centre of Kilmaurs was completed earlier this year.
- 2.2 The Road Safety Capital Budget was £150,000 per year, including design fees in 1997/98 and 1998/99. The budget was reduced to £100,000 in the financial year to April 2000.
- 2.3 The following sections of the report provide:-
- (a) an early indication of the traffic calming measures in terms of accident reduction;
 - (b) an assessment of the speed reductions at the western traffic calming gateway in Newmilns; and
 - (c) a summary of the accident situation before and after safety measures were implemented at three locations in the trunk road network.

3. ACCIDENT MONITORING

- 3.1 It is normal practice to assess the effectiveness of road safety measures over a 3 or 5 year period after completion, to ensure that a representative sample of accident data has been considered. Although most of the traffic calming measures carried out in East Ayrshire were completed by the end of June 1998, it will be some time before a full three years of accident data are available for all of the schemes.
- 3.2 An early indication of the safety benefits has been obtained by comparing the numbers of Personal Injury Accidents (PIA's) which occurred during the five years before the end of June 1998 with the PIA's during the following 21 months to March 2000 (the most recent month for which accident records are available). Table 1 shows the average number of injury accidents in all of the communities

where traffic calming has been carried out fell from 24.4 per year during the five years to June 1998 to 17.8 for the following period to March 2000. This is equivalent to a fall of 27% in the number of injury accidents. The table also shows that there have been safety improvements in all of the communities except Newmilns and Auchinleck.

Table 1 – Personal Injury Accidents (PIA) Before and After Traffic Calming

	Five years to June 1998		21 Months, June 1998 to March 2000		Change (2) – (4)
	(1) All PIA's	(2) PIA's per year	(3) All PIA's	(4) PIA's per year	
Newmilns (A71)	28	5.6	12	6.9	+1.3
Hurlford (A71)	17	3.4	3	1.7	-1.7
Darvel (A71)	16	3.2	5	2.9	-0.3
Galston (A719)	20	4	1	0.6	-3.4
Auchinleck (B7083)	13	2.6	6	3.4	+0.8
Hurlford (B7073)	9	1.8	1	0.6	-1.2
Stewarton (A735/B769)	19	3.8	3	1.7	-2.1
	Total =	24.4	Total =	17.8	-6.6

3.3 A detailed analysis of the safety situation will be carried out when more information is available. However the following initial points have been noted:-

- (a) despite the improvements in safety, a quarter of the injury accidents on the A71 in the Irvine Valley communities continue to involve pedestrians, emphasising the difficulties people are experiencing crossing the busy A71 traffic route.
- (b) there have been no injury accidents in the traffic calmed sections of the A71, either end of Newmilns, since the measures were implemented. Nonetheless, the number of accidents has continued to rise elsewhere on the road. Eight out of the twelve recorded incidents in Newmilns, since June 1998, occurred on Loudoun Road between Gilfoot and Shields Road.

3.4 To address these issues, proposals for an additional pelican crossing on the A71 in Newmilns, near Gilfoot and further traffic calming in Darvel, Newmilns and Hurlford will be put forward for possible inclusion in a future road safety programme.

4. TRUNK ROAD SAFETY SCHEMES

- 4.1** Table 2 shows the longer term accident statistics for three road safety schemes on the A76 and A77 trunk roads. The measures were designed and supervised by Council Officials.

Table 2 – Personal Injury Accidents (PIA) Before and After Trunk Road Safety Schemes

	Before				After			
	Accident Severity				Accident Severity			
	Fatal	Serious	Slight	All Injury	Fatal	Serious	Slight	All Injury
	August 1992 to August 1995				December 1995 to December 1998			
A76, Mauchline traffic calming	0	3(2) ²	2(0) ²	5(2) ²	0	0	4(2) ²	4(2) ²
	January 1994 to January 1997				May 1997 to March 2000			
A76, New Cumnock traffic calming	0	5(3) ²	4(2) ²	9(5) ²	0	1(1) ²	5(0) ²	6(1) ²
	September 1993 to September 1996				October 1996 to October 1999			
A77, Floak Bend AIP ¹ measures	4	6	7	17	0	0	1	1

- Notes 1 AIP – Accident Investigation and Prevention
 2 the number of pedestrian accidents included in the total are shown in brackets

- 4.2** A traffic calming scheme with associated landscape works was implemented on the A76, through Mauchline, between August 1995 and November 1995. The project cost approximately £350,000 and was funded by the Scottish Office.

During the three years before implementation there were five accidents; three serious (including two pedestrian accidents) and two slight. In the three years to December 1998 after implementation, there were 4 slight injury accidents, two involving pedestrians. There were no further injury accidents during the 15 months between December 1998 and March 2000.

The statistics indicate that since the traffic calming was carried out there has been an overall reduction in injury accidents and a reduction in the severity of accidents, particularly for pedestrians. These improvements have been achieved against a background of traffic flows of approximately 14,000 vehicles per day in Mauchline, and traffic growth of 4% per year.

- 4.3** A traffic calming scheme with associated landscaping was implemented on the A76, through New Cumnock, between January 1997 and April 1997. The project cost approximately £290,000 and was funded by the Scottish Office.

During the three years before implementation there were nine accidents; 5 serious (including 3 pedestrian accidents) and 4 slight (including 2 pedestrians). In the 34 months after implementation, the total number of injury accidents had fallen to 6; 1 serious and 5 slight. The number of pedestrian accidents fell from 5 during the three years before the works to 1, in the period after.

Since the traffic calming was carried out, there has been a fall in the number of injury accidents, a significant reduction in the number of pedestrian accidents and also a reduction in the severity levels.

- 4.3** The Accident Investigation and Prevention (AIP) scheme on the A77 trunk road, at the bend south of the Floak access, was implemented in October 1996. The project cost £75,000 and was funded by the Scottish Office.

The project included the provision of:-

- (a) verge marker posts and chevron boards to better define the alignment of the road;
- (b) anti-skid road surfacing to increase skid resistance on the tight bend;
- (c) bend warning signs and road markings.

In the three years before the works, there were 17 injury accidents, which resulted in 11 people being slightly injured, 17 being seriously injured and 7 people losing their lives. During the three years to October 1999 which followed the implementation of the scheme there was only one injury accident, which resulted in two people being slightly hurt. There have been no further injury accidents in the period between October 1999 and March 2000.

5. TRAFFIC SPEEDS

- 5.1** The Roads Division traffic enumeration staff are fully committed to collecting traffic data for:-

- (a) the statutory report which has to be submitted to the Scottish Executive by 31 October 2000 under the terms of the Road Traffic Reduction Act, 1997.
- (b) the Scottish Executive at thirteen sites on the A76 and A77 trunk routes;
- (c) monitoring the 3 "Twenties Plenty" sites in East Ayrshire which are part of a national trial; and
- (d) ad-hoc speed, traffic and pedestrian surveys which are carried out when there is a request for a new or altered pedestrian crossing or a school crossing patrol.

- 5.2** Because of this considerable workload, it has not been possible to assess the speeds at all the locations where new traffic calming measures have been introduced. Nonetheless, a speed assessment has been carried out at the

western gateway at Newmilns, which is typical of a number of gateway treatments provided at other locations in East Ayrshire. This showed that the speed of traffic entering Newmilns has fallen by 10mph since the gateway was provided and outbound speeds have fallen by 7mph. At Mauchline and New Cumnock where similar arrangements have been used, speed reductions between 2 mph and 8 mph have been recorded.

- 5.3** An earlier national study by the Village Speed Control Working Group examined 24 communities where different types of traffic calming has been provided, on behalf of the County Surveyors Society, the Department of Transport, the Scottish Office and the Welsh Office. They found that for schemes without traffic calming measures in the village, but major gateway treatments (such as Newmilns), speed reductions of up to 10mph were possible. The gateway treatments that have been used in East Ayrshire are, therefore, capable of speed reductions which equal the best observed in the nation wide study.

6. CONCLUSIONS

- 6.1** The early indications are that the traffic calming schemes that have been carried out in East Ayrshire may have contributed to the recent improvements in safety which have been observed.
- 6.2** The longer term assessments of traffic calming in Mauchline and New Cumnock indicate that these comprehensive schemes have reduced injury accidents, reduced accident severity's and improved conditions for pedestrians.
- 6.3** The AIP scheme on the A77 south of Floak has largely overcome one of the worst accident problems in East Ayrshire.
- 6.4** An assessment of traffic speeds at the western gateway in Newmilns has shown there have been significant reductions in speed.
- 6.5** When adequate funding can be made available, appropriate engineering measures can achieve significant improvements in road safety.

7. FINANCIAL IMPLICATIONS

- 7.1** Nil

8. LEGAL IMPLICATIONS

- 8.1** Nil

9. RECOMMENDATIONS

- 9.1** It is recommended that the Committee notes the contents of the report.

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KO/NP

21 May 2000

List of Background Papers

Nil

For further information please contact Keith Orton on 01563 576310

AGENDA