

**Table 1: Number of schemes incorporating measures from each treatment category  
Whole database to 31/12/1999**

Treatment Type	No. of schemes	No. of Schemes with "after" data	Average % Change in accidents per annum	Average cost (£) of scheme (1999 prices)	Average Annual Accidents Saved	Expenditure per accident saved per annum 1999 prices (£)	Average First Year Rate of Return (%) (1999)
Cycle scheme	30	12 (12)	-65 (-65)	59155	3.79 (3.79)	15607	444
Area-wide	45	12 (10)	-31	79312	1.86 (2.58)	30720	225
Route	283	77 (69)	-43 (-46)	22419	1.51 (1.68)	13331	520
Link-calming	321	78 (63)	-48 (-49)	39612	1.48 (1.48)	26764	260
Signalised junction	299	195 (159)	-37 (-37)	35206	1.43 (1.35)	26128	266
Bend	471	304 (265)	-48 (-54)	10753	1.14 (1.12)	8958	722
Roundabout	320	188 (164)	-33 (-35)	40502	1.09 (1.03)	39415	176
Pedestrian facility	579	317 (250)	-32 (-32)	27296	1.02 (0.97)	28036	246
Link (overall)	1368	674 (435)	-25 (-32)	28391	1.00 (1.13)	25072	276
Link-general	1157	636 (398)	-26 (-29)	27333	0.90 (1.05)	26262	266
Priority junction	830	519 (468)	-34 (-37)	11930	0.87 (0.90)	13231	523
Totals	4225	2298 (1832)	-38	23409	1.08 (1.13)	20726	372

Notes: The figures in round brackets () indicate the number of schemes for each treatment type where the cost of the scheme has been provided by the relevant Local Authority. The "before" and "after" period is typically 3 years. When the periods are not equal, the annual average number of accidents for "before" and "after" are compared.

The cost of each scheme has been adjusted to 1999 prices using adjustment factors presented in Table 2.1 of Economic Trends 2000 (Office of National Statistics, 2000).

The first year rate of return (1999) is calculated as follows:

Cost of Personal Injury Accident \* Average Annual Accidents Saved \* 100 / Cost of scheme (adjusted to 1999).

The Cost of Personal Injury Accident is taken as being £69390. This figure is taken from DETR's Highways Economics Note (HEN) No.1 and includes an element for damage only accidents.

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**Table 2: Treatments aimed at reducing child pedestrian casualties  
Whole database to 01/09/2000**

The table below shows the result of an analysis carried out on the database. Everyone contributing data to MOLASSES is asked to indicate what particular problems their schemes are addressing. In this case, schemes that address child pedestrian casualty problems have been identified. The table indicates the treatments used within each scheme, the number of occasions they have been used and the total average scheme cost. It should be noted that the total average scheme cost does not equal the cost of implementing the treatment. This is because there may be many treatments used in each scheme. Therefore the total average scheme cost is the average total cost of the schemes that contain the treatment indicated. The table is limited to schemes where the relevant Local Authority has indicated the cost of the scheme.

Treatment	Treatment sub-group	Number	Total Scheme Cost (£ Average)
Roundabout	New Mini	5	54719
Priority Junction	Geometric improvement	1	104000
Pedestrian facility	Other	1	104000
	New Zebra	1	23000
	New Pelican	2	14240
	Conspicuity	1	42000
	Refuge	3	93600
	Promontory	2	4000
Link	Road humps	5	21800
	Chicanes	1	26000
	Tables	1	50000
	Sheltered parking	1	38595
	Throttle narrowing	2	42050
	Carriageway Markings	1	104000
	Surfacing	1	104000
	Signing	1	104000
	Publicity	1	104000
Route Calming	Not specified	1	26000
	Road Humps	1	50000
	Throttle Narrowing	1	50000
	Other	1	38595
Area wide calming	Other	2	67750
	Road Humps	3	62333
	Tables	1	42000
	Carriageway marking	2	38500
	Surfacing	1	35000
	Signing	2	38500
	Signs and markings	2	38500
	Traffic Regulation Orders	1	110000
	Publicity	2	38500
	Drainage	2	38500
	Speed limits	2	38500

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**Table 3: Effectiveness ratings**

Whole database to 01/10/2000

Following an evaluation period (typically 3 years) each Local Authority is asked to evaluate the effectiveness of the scheme. The effectiveness rating ranges from 1 (very effective) to 5 (not at all effective). The table below shows that most schemes are rated positively. The table is limited to schemes where the cost of the scheme is known.

Effectiveness rating	Number of Schemes	Average Cost
1	145	76657
2	133	14845
3	134	24226
4	64	11338
5	84	11805

**Table 4: Effectiveness ratings with treatment types used**

Whole database to 01/10/2000

The table below covers all schemes where an effectiveness rating has been supplied. Here the treatment types within each scheme have been analysed. (It should be noted that there can be many treatment types within a scheme.)

The table shows the effectiveness ratings for main treatment categories such as Pedestrian facilities, and treatment sub-groups such as new pelican and refuges. In the case of treatment sub-groups, the information has only been presented if there are at least 20 examples. Therefore, the sub-groups shown are the most popular types of treatment where an effectiveness rating has been given.

The smaller the Average Effectiveness rating the better.

Please note that information was only available on 2 cycle schemes.

	Treatment	Total Number	Total number within each Effectiveness rating					Average Effectiveness rating
			1	2	3	4	5	
1	Signalised Junction New signals	68	20	22	9	8	9	2.47
		21	9	4	3	1	4	2.38
2	Roundabout New mini	92	29	22	24	5	12	2.45
		42	13	8	15	1	5	2.45
3	Priority Junction Specified Other Geometric Improvement Signing	150	28	39	41	15	26	2.79
		29	12	6	4	1	5	2.24
		21	5	9	4	2	1	2.29
		66	3	16	24	9	14	3.23
4	Bend Warning signs	107	27	21	34	7	17	2.65
		49	6	11	21	3	7	2.82
5	Pedestrian Facility New Pelican Refuges	93	14	23	16	20	19	3.04
		29	7	5	6	6	5	2.90
		29	1	6	6	7	8	3.41
6	Cycle schemes	2	-	2	-	-	-	2.00
7	Link Road humps Carriageway marks Signing	266	68	77	51	37	28	2.49
		37	17	10	7	1	-	1.68
		33	4	13	7	5	4	2.76
		21	5	7	4	5	-	2.43
8	Route	17	4	5	5	1	2	2.53
9	Area wide	20	2	17	-	1	-	2.00

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### Table 5: Vehicle Flows and Pedestrian flows

Whole database to 01/10/2000

In the table below brings together vehicle flow and pedestrian flow information. The table only contains schemes where this information was supplied by the relevant Local Authority and "after" accident data has also been supplied.

The numbers in round brackets ( ) indicate the number of schemes within each category. For example, there were 62 schemes where the AADT vehicle flow was more than 19,999 and the pedestrian flow was considered very light. (AADT = Average Annual Daily Total.)

The other figure presented in each category is the Average Annual Accidents Saved. This is defined as the average number of accidents per year "before" the scheme was implemented minus the average number of accidents per year "after" the scheme was implemented. The "before" and "after" periods are typically both 3 years long. Therefore, the larger the figure the more effective the scheme.

Average Annual Accidents saved	Pedestrian flow			
	Very light	Light	Medium	Heavy
More than 19,999	0.97 (62)	1.14 (33)	1.24 (46)	0.00 (28)
10,000 - 19,999	0.60 (145)	0.62 (105)	0.81 (102)	1.07 (35)
5,000 - 9,999	0.70 (175)	1.50 (85)	0.95 (48)	0.48 (18)
	0.63 (122)	1.00 (41)	1.27 (18)	1.24 (3)

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**Table 6: Location of Schemes  
Whole database to 01/10/2000**

The table below indicates how many schemes within the database are either urban or rural. The table is limited to schemes where "after" accident data is available. The Average Annual Accidents Saved is defined as the average number of accidents per year "before" the scheme was implemented minus the average number of accidents per year "after" the scheme was implemented. The "before" and "after" periods are typically both 3 years long. Therefore, the larger the figure the more effective the scheme.

Location	Number of Schemes	Average Annual Accidents Saved
Urban	1106	1.23
Rural	1203	1.07

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**Table 7: Treatment types by Location**

Whole database to 01/10/2000

The table below presents information for selected types of treatment for both urban and rural settings. The number of schemes refers to the number of schemes that contain the treatment type used. The treatment might be one of many applied at the same scheme. The Average Annual Accidents Saved, Total Accidents and % Change refer to the schemes and not the treatments.

The table is limited to schemes within the database that have been positively identified as either urban or rural. The table is limited to schemes where "after" accident data is available.

TREATMENT	TYPE	NUMBER OF SCHEMES	Average Annual Accidents Saved	TOTAL ACCIDENTS			% CHANGE
				BEFORE	AFTER	CHANGE	
Anti-skid surfaces	Urban	36	1.05	339	231	-108	-31.80
Speed cameras	Urban	1	3.55	97	89	-8	-10.69
Red-light cameras	Urban	4	-0.50	49	55	6	12.25
Markings	Urban	196	0.83	1721	1208	-513	-29.63
Chicanes/narrowings	Urban	18	1.27	189	86	-103	-46.91
Gateways	Urban	3	3.67	48	15	-33	-68.75
Guard-rail and pedestrian barriers	Urban	13	1.76	161	86	-75	-46.16
Lighting	Urban	44	1.30	608	416	-192	-30.90
Pedestrian crossings	Urban	70	1.10	808	490	-318	-36.01
Road humps	Urban	10	2.88	107	12	-95	-88.46
New roundabouts and mini-roundabouts	Urban	56	0.95	526	288	-238	-39.94
New signals	Urban	26	1.80	323	144	-179	-52.98
Modifications to signals	Urban	80	1.28	1130	697	-433	-33.06
Signing	Urban	222	0.66	1536	1044	-492	-30.71
Splitter islands	Urban	5	0.73	38	27	-11	-28.95
Yellow bar markings	Urban	2	1.83	15	4	-11	-73.33
Mass Action Schemes	Urban	40	1.23	644	472	-172	-25.07
Route Action Schemes	Urban	40	1.56	535	320	-215	-39.78
Area-wide schemes	Urban	9	2.46	153	81	-72	-45.1
Cycle schemes	Combined	5	4.87	150	52	-98	-58.00
Anti-skid surfaces	Rural	4	2.08	40	15	-25	-62.50
Markings	Rural	74	0.88	599	370	-229	-35.38
Guard-rail and pedestrian barriers	Rural	3	2.01	49	26	-23	-41.04
Lighting	Rural	5	0.22	44	38	-6	-7.88
Pedestrian crossings	Rural	2	1.88	18	3	-15	-83.33
New roundabouts and mini-roundabouts	Rural	15	2.62	216	45	-171	-76.15
New signals	Rural	8	1.93	93	20	-73	-75.03
Modifications to signals	Rural	10	1.96	135	66	-69	-47.96
Signing	Rural	136	0.70	879	521	-358	-37.37
Speed tables	Rural	1	0.00	1	1	0	0.00
Yellow bar markings	Rural	2	1.17	19	12	-7	-36.84
Mass Action Schemes	Rural	11	3.11	151	50	-101	-67.86
Route Action Schemes	Rural	15	1.31	128	64	-64	-48.94
Area-wide schemes	Rural	1	6.67	23	3	-20	-86.96

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