

Road Safety Remedial Measures Programme

Evaluation of Programme 3 to 8
Schemes Implemented between
1998 & 2003



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RS 473

Road Safety Engineering

Road Safety Remedial Measures Programme

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Schemes Implemented between
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Many people contributed to the success of these programmes. Particular thanks are due to the NRA Road Safety Section, the NRA Regional Road Safety Engineers and to the many Local Authority engineers who have identified, submitted the schemes and subsequently implemented the appropriate remedial measures.

FOREWORD

This report is the third in a series and it presents the results for the road safety remedial schemes that were completed between 1998 and 2003. Preliminary results for 2004 and 2005 are shown but sufficient time has not yet elapsed to fully evaluate these two years.

The results have exceeded targets set for the rate of return for the schemes.

EXECUTIVE SUMMARY

The National Roads Authority (NRA) was formally established as an independent statutory body under the Roads Act, 1993 with effect from 1st of January, 1994. The Authority's primary function, under the Roads Act 1993, is 'to secure the provision of a safe and efficient network of national roads'. For this purpose, it has overall responsibility for planning and supervision of construction and maintenance works on these roads.

The NRA Road Safety Section is charged with a number of tasks under the last Government Road Safety Strategy. Two of these tasks are to have a yearly programme of road safety remedial schemes on national roads and to carrying out a review of these road safety remedial schemes.

Since 1994 the Authority has operated a programme whereby, for limited financial outlay, deficiencies at high risk collision locations can be identified and remedied. The works concerned are intended to enhance the safety of the roads system through changes in road layout, junction control and improvements in signage and road markings. The results of Programme 1 (RS 456) & Programme 2 (RS465) are available on the NRA website.

This report analyses the Before & After results for Programmes 3 to 8. It also lists the schemes undertaken in Programmes 9 and 10, as sufficient time has not yet elapsed to analyse fully these schemes.

It outlines the road safety remedial schemes that have been undertaken in Ireland on National Roads since 1998. It lists the schemes undertaken each year and summarises the performance of the road safety remedial schemes completed up to 2005. The report also provides an overview of the effectiveness of the different types of schemes up to 2002 with a view to ensuring future programs deliver value for money. The collision data is not yet available for subsequent years. The report measures the effectiveness of the programmes based on collision data for a 5 year before period and a 3 to 5 year after period.

ROAD SAFETY REMEDIAL SCHEMES

The target of the road safety remedial programme was to reduce by 30 to 40% the number of collisions occurring at treated sites and to achieve a first year rate of return of 100%.

The first in the series, Programme 1- 1994/1995, had 128 road safety remedial schemes completed at a cost of £1.34 million. In the four year after period there was a reduction of 25 Fatal and 41 Serious injury collisions relative to the before figures. This represented a saving of 6 fatal and 9 serious injury collisions per annum in the after period. This represents 18% fewer collisions. An annual average rate of return of 595% was achieved compared to the target of 100%. Ref (8)

Programme 2- 1996/1997 had 151 road safety remedial schemes completed at a cost of £1.83 million. In the 3 year after period there was a reduction of 18 Fatal and 43 Serious Injury collisions relative to the expected numbers. In the three years following completion of the works, there were 108 fewer collisions at these sites than in the equivalent before period. This represents 31% fewer collisions. An annual average rate of return of 408% was achieved compared to the target of 100%. Ref (9)

Both of the above programmes have had a detailed analysis done on the implemented schemes and are available on the NRA website.

Programme 3 to 8 –1998 to 2003 had 521 road safety remedial schemes completed, the results of which are shown below.

Year of Treatment	Programme No.	Number of Schemes Assessed	Cost (€M)	After period (Yrs)	Accident Savings (-Reduction, +Increase)			Annual Average Rate of Return	%Fewer Collisions (-Reduction, +Increase)	Cost Saving in After Period (€M)
					Fatal	Serious	Minor			
1998	3	60	1.6	5	-14	18	-70	338%	-13%	28
1999	4	81	2.6	5	-27	-10	-71	513%	-22%	68
2000	5	53	1.9	5	-20	-30	2	582%	-15%	55
2001	6	54	2.0	5	-12	-18	8	329%	-6%	33
2002	7	54	1.8	4	-10	-18	-48	422%	-30%	30
2003	8	71	1.5	3	-14	-11	-51	830%	-40%	37
2004	9	91	1.6	2	-8	0	-27	*		
2005	10	82	1.5	1	2	1	22	*		
Total of Programmes 3 to 8			11.4		-97	-69	-229			251

* The after period is considered too short for assessment

The above table shows that in the after period assessed for Programmes 3 to 8 there was an over all reduction of 97 Fatal collisions, 69 Serious and 229 Minor injury collisions. For an outlay of just under €11.5 Million there was an overall cost saving of €251 Million. The target of a First Year Rate of Return of 100% was exceeded each year. The target of reducing collisions by between 30 to 40% was only achieved in Programmes 7 and 8. The results for this are the subject of further review.

The Authority will continue to research, recommend, and implement engineering road safety schemes with our counterparts in the local authorities around the country. These engineering solutions will assist in minimising risk factors across the national road network.

Ireland has 3 times the length of roads per head of population as the EU average. There are many older sections of the road network that were not built to modern standards. Growth in traffic on these roads and changes in traffic patterns due to the new motorway network and commercial/residential developments will mean that new collision clusters will appear with every annual review of the collision data. Our aim is to improve the safety on these road sections wherever possible by road safety remedial measures programmes, but motorists should always remember to modify their driving behaviour to take account of the prevailing road geometry and driving conditions.

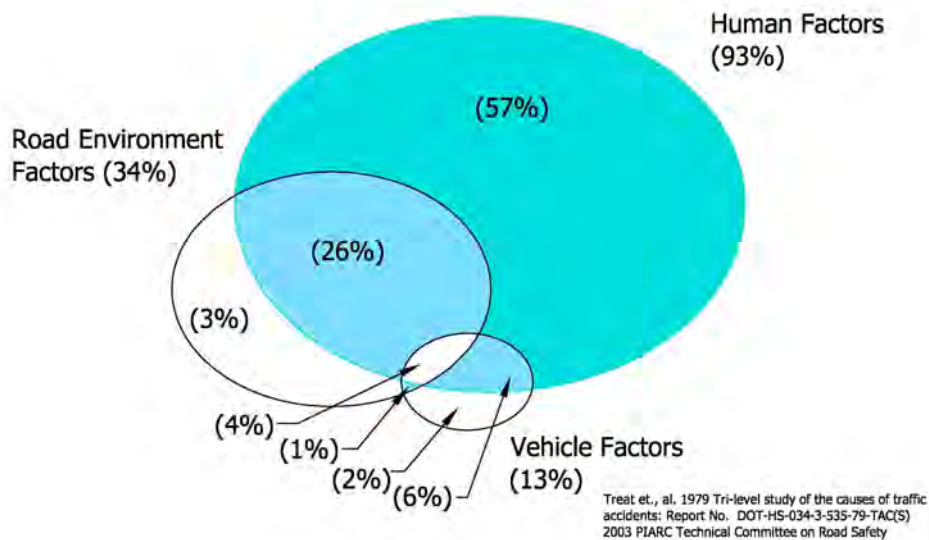
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1 INTRODUCTION

1.1 Background

Most road traffic collisions are caused by excessive speed and/or human error, although the road environment is also a contributory factor. See Figure 1 below.

Figure 1 Tri-Level Study of the cause of Collisions.



Engineering works to reduce collisions on the existing national road network are implemented through road safety remedial programs and traffic calming programs and are funded by the National Roads Authority.

The location of these collisions and the prioritising of these schemes is based on an analysis of the Garda collision database.

The National Roads Authority is committed to considering the potential for collision reduction in all aspects of its work. Within the road safety remedial program we undertake work at individual sites and along routes to reduce collisions.

Under the terms of the Road to Safety Strategy the Authority is required to undertake a number of specific tasks, including the implementation of an engineering countermeasures program. Under this program, the Authority undertook to complete an annual programme of road safety remedial schemes.

The assessment of Programme 1 & 2, schemes completed in 1994/1995 (Ref (8)) and 1996/1997 (Ref (9)) respectively, can be found on the NRA web site. This report assesses the effectiveness of the road safety remedial programmes which have been completed since then.

A road safety remedial scheme is where an engineering solution is applied to a site with an identified road traffic collision problem. Table A summarises the total number of schemes that have been completed to date, and their cost.

Table A- Road Safety Remedial Costs from 1993 to 2005

Year	Programme Number	Number of Schemes Completed	Total Cost (€M) in the Year of Construction	Average Cost of a Scheme (€)
1994/95	1	128	1.7	€13,332
1996/97	2	151	2.36	€15,389
1998	3	93	1.73	€18,620
1999	4	100	2.1	€20,966
2000	5	74	2.02	€27,239
2001	6	74	2.48	€33,523
2002	7	76	2.06	€27,101
2003	8	104	2.03	€19,518
2004	9	123	2.47	€20,100
2005	10	114	2.28	€19,971

1.2 Key Facts

Table B details the total number of collisions and the number of people killed and injured in these collisions on our roads in 2005.

Table B- 2006 Road Collision Facts

Persons Killed	365
Persons Injured	8575
Total Casualties	8940
Fatal Collisions	321
Injury Collisions	5697
Total Collisions	6018

Ref 1

1.3 Scope

The general guideline parameters for putting schemes into the programme were that each scheme should have an identifiable collision pattern, with at least one reported injury collision per year in the before period. The scheme should have the potential to reduce collisions by 30 to 40% and cost in the region of €1,000 to €50,000

1.4 Target

Proposed road safety remedial schemes are prioritised on a first year economic rate of return (FYERR) basis. This compares the expected value of collision reduction with the estimated cost of the remedial works. For the period covered in this report the minimum FYERR level to attract funding was 100%.

1.5 Collision Reports

Up to recently the Road Collision Bureau at the NRA received the collision report forms from the Gardai and entered them in a national database. The original copy of the collision report form was then forwarded on to the relevant Local Authority. The electronic database was then distributed to the relevant local authorities through the Local Government Computer Services Board. This system facilitates the identification, and analysis, of collision clusters as well as providing a history of collision statistics. Since early 2006 this function has been taken over by the newly established Road Safety Authority

1.6 Road Safety Remedial Scheme Assessment

- | | |
|---------------------|--|
| Programme 1 | 1994/1995 has been assessed in detail in "Evaluation of Programme 1", which was published in 2001. |
| Programme 2 | 1996/1997 is assessed in detail and is available on the NRA web site. |
| Programmes 3 to 10. | 1998 and 2005 has each years schemes listed and their assessment summarised, where collision data available, in this report. |

2 EVALUATION

2.1 Road Safety Remedial Schemes 1998-2005 - Programmes 3 to 10

Of the schemes completed under Programme 3 to 10 only a certain number of them have been assessed in this report. The reasons for the non assessment of some of the schemes is varied but in general includes the following:

- Schemes, such as improved pedestrian facilities, were granted funding even though there was no collision history associated with the scheme. This was done where local authorities had more recent information on collisions than was available in the collision database, or where it was felt that pedestrian safety would be improved by the implementation of such schemes.
- Some of the schemes listed in a particular year were a continuation on the previous year's schemes where additional funding was required.
- Schemes did not indicate any collision history when the national database was checked.

This can occur in the following instances:

- a) where the relevant local authority has looked at the collision database in detail and corrected the location of collisions which may have been mapped incorrectly on the national database.
- b) where the collisions that had occurred had not been reported to Gardai.
- c) where a scheme was granted funding in association with other improvement works being carried out at that location by the local authority.

Table C details the number of schemes that were assessed each year.

Table C– Total Costs of Assessed Schemes from 1998 to 2005

Year of Treatment	Programme No.	Number of years used in the Assessment		Number of Schemes Assessed	Cost of assessed schemes. (Yr 2002 costs-Ref 3)
		Before	After		
1998	3	5	5	60	€1,628,324
1999	4	5	5	81	€2,640,805
2000	5	5	5	53	€1,901,952
2001	6	5	5	54	€1,988,138
2002	7	5	4	54	€1,770,382
2003	8	5	3	71	€1,498,047
2004	9	5	2	91	€1,643,764*
2005	10	5	1	82	€1,523,902*

*Enough after collision data is not available to fully assess Program 9 and 10

2.2 Methodology of assessment

All costs were converted to year 2002 figures to enable comparison between the various years. Figures for this were taken from the CSO. See Appendix 4

Collision costs for 2002 taken from the Goodbody Report, 2004. See Appendix 3.

The assessment did not take into account collisions that occurred in the year of construction as the exact date of completion of the scheme was unknown.

Results were controlled for collision trends on the Irish national road network. A Statistical test “the k test” was done on the data. The “k test” is another way of showing the degree of changes that have occurred at a site and whether the change was an increase or decrease. If $k > 1$ there is an increase relative to controls. Ref (4).

The controls used were trends on the National Road network.

2.3 Controlling for Confounding Factors

Most studies that evaluate the effect of road safety remedial measures are observational the most common of which is the before-and -after study. These studies take a comparison of the before and after collision figures at the treated sites and make an assessment of the effectiveness of the measure. It is believed by some that simple before-and-after studies, which do not control for any confounding factors should never be trusted as they can result in misleading figures.

For example, the general collision trend in a region may have increased or decreased which would have an effect on the after results at a treated site. A confounding factor is one that is not influenced by the road safety measure but has an effect on the collision rate at a site, and a resultant effect on the evaluation of the remedial measure.

This report takes account of the general collision trend on Irelands national roads through out the before and after periods and makes allowances for them in the assessment of the effectiveness of the road safety remedial schemes. In this case it is reasonable to assume that the comparison group (the relative increase/decrease in collision trends on Ireland’s national roads over the same assessment period) captures the effects on collisions of traffic increases/decreases. Ref (2)

2.4 Regression to mean

The random nature of road collisions tends to cause collision frequencies at specific locations to fluctuate. The selection of sites for treatment on the basis of their past collision record can introduce a source of potential bias in measuring the effectiveness of road safety remedial schemes. This arises as the selection process tends to introduce sites at the peak of their fluctuations in collision frequencies, and such sites may tend to experience reductions in collision frequency even if no treatment is applied.

This effect is commonly referred to as “regression to mean”. An allowance for the effect of the regression to mean could be made by comparing the change in collision frequency at treated sites against a number of similar untreated control sites. This, however, would involve not treating sites with an identified collision history which is felt would be unacceptable.

A study by Mountain et al (1998) suggested that up to half the observed reduction in collisions at treated sites could be due to the regression to mean effect. Ref (3).

Another study by Rune Elvik (2002) calculated the effect of “regression-to mean” for a number of different types of road safety measures. Its effect was calculated as a reduction of 20-30% in three of the seven road safety measure types studied, but was negligible in the other four road safety measure types. Ref (2).

This report does not take account of regression to mean but as an exercise Appendix 3 shows the effect on the overall results assuming a **worst-case scenario** of an effect of 30% for all scheme types. The result still shows an overall positive result.

2.5 Economic Evaluation

The “willingness to pay method” is taken to be the most appropriate economic evaluation tool, since it takes account of the benefits arising from reductions in collision severity as well as reductions in frequency.

The effectiveness is analysed by comparing the changes in the before and after period and taking account of the national trends over the same periods of time where available. The overall results are detailed in the chart below.

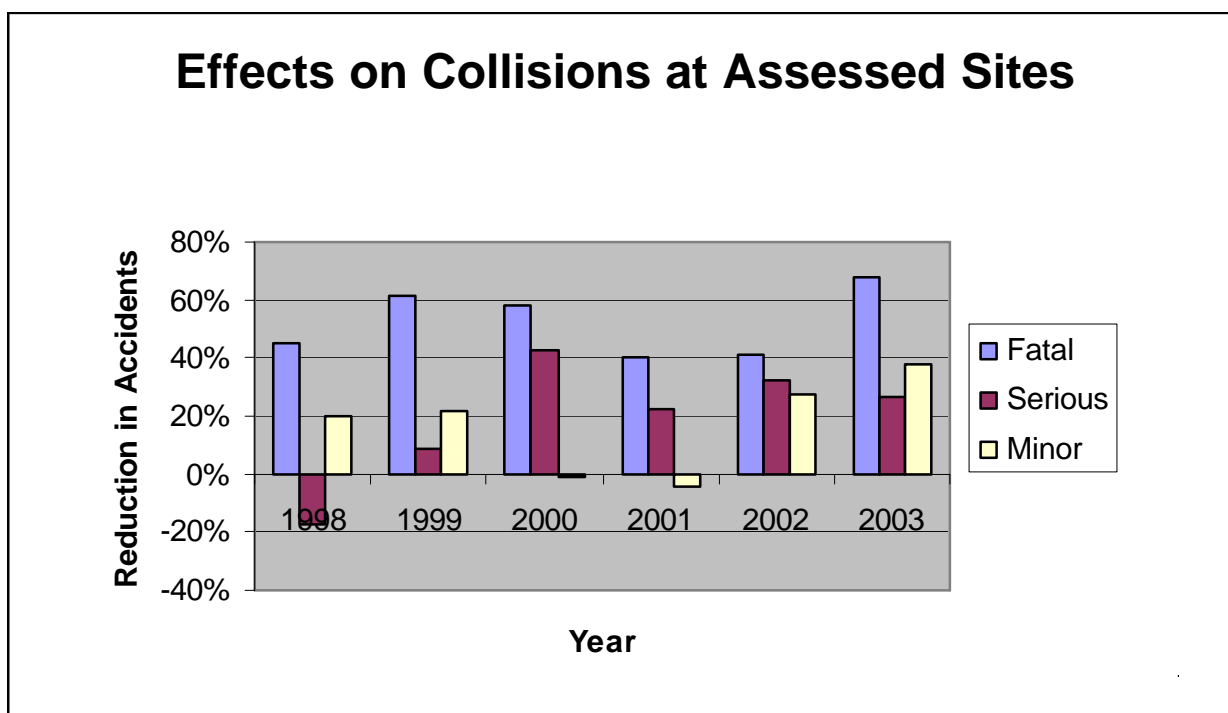


Table D indicates the cost saving, the rate of return and the reduction/increase in number of collisions at the sites for each of the Programme years assessed

Table D: Annual Average Rate of Return

Year of Treatment	Programme	%Reduction in Collisions (-Reduction, +Increase)			Total Cost Saving in assessed period	Annual Average Rate of Return	%Fewer Collisions (-Reduction, +Increase)
		Fatal	Serious	Minor			
1998	3	-45%	18%	-20%	€25,907,945	338%	-13%
1999	4	-61%	-9%	-21%	€65,081,831	513%	-22%
2000	5	-58%	-42%	1%	€53,434,887	582%	-15%
2001	6	-40%	-23%	4%	€30,707,786	329%	-6%
2002	7	-41%	-33%	-27%	€27,670,876	422%	-30%
2003	8	-68%	-26%	-38%	€35,810,044	830%	-40%
2004	9	-79%	2%	-29%	€17,087,187	*	
2005	10	51%	5%	41%	-€7,057,773	*	
* the after period is considered too short to assess					Average	502%	

The results show that for the annual expenditure of a little over two million euros, an Average Annual Rate of Return of 502% has been achieved. This is well in excess of the target first year rate of return of 100%.

The combined effect of Programmes 3 to 8 at a total cost of €11.4M is an annual saving of €56M in collision costs, arising from an annual reduction in the after periods of approximately 22 fatal, 16 serious and 55 minor injury collisions.

Table E indicates the Annual Reduction in Collisions for the Programme Years Assessed.

Table E: Annual Reduction in Collisions

Year of Treatment	Programme	Collision Saving / Year (-Reduction +Increase)		
		F	S	M
1998	3	-2.7	+3.5	-13.9
1999	4	-5.5	-2.0	-14.2
2000	5	-4.1	-5.9	+0.4
2001	6	-2.4	-3.6	+1.6
2002	7	-2.5	-4.6	-11.9
2003	8	-4.7	-3.7	-17.1
Total		22	16	55

Table F indicates the Annual Collision Cost Saving for the Programme Years Assessed

Table F: Annual Collision Cost SAVings

Total Cost Saving in Collisions / Year	Number	Cost Of Collision (€)	Total Cost (€M)
F	22	2,280,000	50.0
S	16	304,600	5.0
M	55	30,000	1.5
Total			56.5

Looking in more detail at the results it is clear that Programme 6 - 2001 was least successful and Programme 8 - 2003 was most successful.

Programme 9 & 10 had less than three years after data available for analysis which is considered too short a time period for assessment.

2.6 Results by Solution Type

The solutions applied to individual schemes often involved two or more different measures. The most common combination was lining and signing. For the purpose of this assessment a primary solution was given to each scheme based on the information available for the schemes. This is called the Short Solution Description.

The assessment can be seen in Table G.

Table G: Rate of Return by Solution Type

Urban/Rural Area	Short Solution Description	Number of schemes	Total Cost	Avg Cost	% Over all Expenditure	Rate of Return
Urban	Antiskid	10	€232,397	€23,239.74	2%	1333%
Urban	Mini Roundabout	3	€35,160	€11,719.94	0%	2648%
Urban	Pedestrian Facilities	21	€415,300	€19,776.17	4%	259%
Urban	RTL	11	€449,761	€40,887.39	4%	692%
Urban	Signing and lining	32	€519,769	€16,242.78	5%	1570%
Urban	Signing & Lining plus other such as-Surfacing, rumbles, sight distance etc	9	€353,046	€39,227.29	3%	-16%
Urban	Traffic Calming	7	€621,149	€88,735.61	6%	138%
Rural	Camber & Signing & Lining	6	€647,689	€107,948.10	6%	231%
Rural	Safety Barrier plus other	9	€343,976	€38,219.60	3%	866%
Rural	Lighting plus other	8	€400,723	€50,090.38	4%	1224%
Rural	Right Turn Lane	45	€2,153,010	€47,844.67	20%	142%
Rural	Rumble strips plus Signing & Lining	4	€72,973	€18,243.16	1%	-279%
Rural	Sight Distance plus other	20	€575,631	€28,781.55	5%	300%
Rural	Signing& Lining	140	€2,613,395	€18,667.11	25%	1089%
Rural	Surfacing & Signing& Lining	18	€880,227	€48,901.52	8%	39%
Rural	Width Increase/Reduction	5	€232,560	€46,512.04	2%	758%

The above results show that some solution types have been much more effective in reducing collisions than others. The best results were shown in Signing and Lining, Antiskid, Mini Roundabouts and Lighting schemes. Right Turn Lane Programmes also achieved consistently good results in both urban and rural areas. The worst results were shown in schemes involving Rumble Strips and Surfacing.

Regarding the outcome of the results based on solution type it is clear that further detailed analysis will need to be done on the schemes that have produced a negative rate of return to investigate why the solution type was not effective and if the scheme that was implemented needs to be revised.

2.7 Examples of Road Safety Remedial Schemes

Corracunna Cross (N8), Programme 8, 2003



Before road safety remedial measure implemented

Problem:

Collisions involving right turning vehicles being pushed into oncoming traffic.

Collisions in the before period:

- 1 Fatal,
- 2 Serious &
- 3 Minor.



After road safety remedial measure implemented

Measure implemented:

Right Turn Lane

Collisions in the after period:

None

O'Rourke's Cross (N8), Programme 6, 2001.



Before road safety remedial measure implemented

Problem:

Collisions involving turning vehicles

Collisions in the before period:

1 Serious &
3 Minor.



After road safety remedial measure implemented

Measure

implemented:

Right Turn Lane and
central islands on
side roads.

**Collisions in the
after period:**

3 Minor

Church Cross (N71), Programme 8, 2003.



Before road safety remedial measure implemented

Problem:

Variety of collisions occurring in hours of darkness.

Collisions in the before period:

1 Fatal,
2 Serious &
1 Minor..



After road safety remedial measure implemented

Measure implemented:

Lighting

Collisions in the after period:

None

Clarinbridge (N18), Programme 7, 2002



Before road safety remedial measure implemented

Problem:

Difficulty for pedestrians crossing the road.

Collisions in the before period:

1 Minor.



After road safety remedial measure implemented

Measure implemented:

Zebra Crossing with central refuge island

Collisions in the after period:

1 Minor

Murphys Cross (N21), Programme 9, 2004.



Before road safety remedial measure implemented

Problem:

Junction Collisions.
Drivers turning right at the junction were being rear ended or overtaken by follow on drivers.

Collisions in the before period:

1 Fatal and
3 Minor.



After road safety remedial measure implemented

Measure implemented:

Warning Gateway type signage and road markings to highlight junction to approaching drivers.

Collisions in the after period:

1 Minor

Main Street Longford (N5), Programme 7, 2002.



Before road safety remedial measure implemented

Problem:

Difficulty for pedestrians in crossing the road

Collisions in the before period:

1 Serious and
1 Minor.



After road safety remedial measure implemented

Measure implemented:

Buildouts and Zebra Crossing

Collisions in the after period:

2 Fatal,
1 Serious and
1 Minor.

3 CONCLUSIONS

The combined effect of Programmes 3 to 8 at a total cost of €11.4M is an annual saving of €45M in collision costs, arising from an annual reduction in the after periods of approximately 22 fatal, 16 serious and 55 minor injury collisions.

The results show that some solution types have been much more effective in reducing collisions than others. The best results were shown in Signing and Lining, Antiskid, Mini Roundabouts and Lighting schemes. Right Turn Lane Programmes also achieved consistently good results in both urban and rural areas. The schemes with the least satisfactory results were Rumble Strips and Surfacing.

From the results outlined in the evaluation it is clear that the road safety remedial schemes as a whole are economically justified, exceeding the target 100% rate of return.

The second target though, of reducing the overall number of collisions at the treated sites by between 30% and 40%, was only achieved in Programme 7 & 8. The programmes before 7 and 8, while showing that treatment of the sites had a very positive effect in reducing the severity of collisions, it was not as good as expected at reducing the overall level of collisions at the sites.

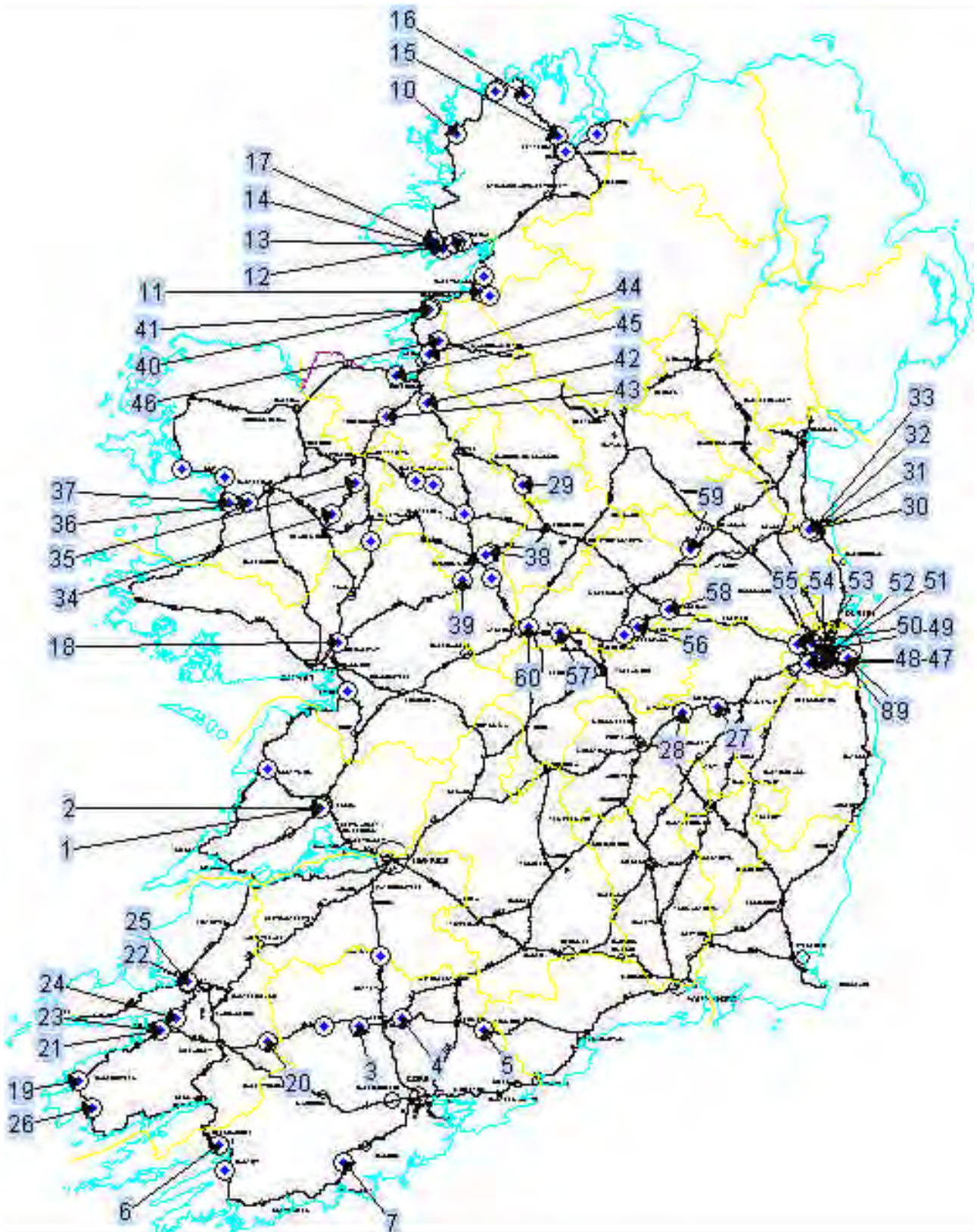
The fact that Programmes 7 & 8 met the collision reduction target may be an indication that intensive efforts by the Authority in the selection of collision cluster sites is beginning to show positive results. It is expected that the new work being done to present this data in a GIS environment will further aid the identification of collision clusters.

Regarding the outcome of the results based on solution type it is clear that further detailed analysis will need to be done on the schemes that have produced a negative rate of return to investigate why the solution type was not effective and if the scheme that was implemented needs to be revised.

This report provides the basis for which road safety engineers can look back at solution types that have not performed well in order to assess if an alternative solution is required or whether engineering measures are not suitable to treat certain collision problems. It also helps in deciding on the best solution type for future schemes to ensure that future programs deliver value for money.

Ireland has 3 times the length of roads per head of population as the EU average. There are many older sections of the road network that were not built to modern standards. Growth in traffic on these roads and changes in traffic patterns due to the new motorway network and commercial/residential developments will mean that new collision clusters will appear with every annual review of the collision data. Our aim is to improve the safety on these road sections wherever possible by road safety remedial measures programmes, but motorists should always remember to modify their driving behaviour to take account of the road geometry and driving conditions prevailing.

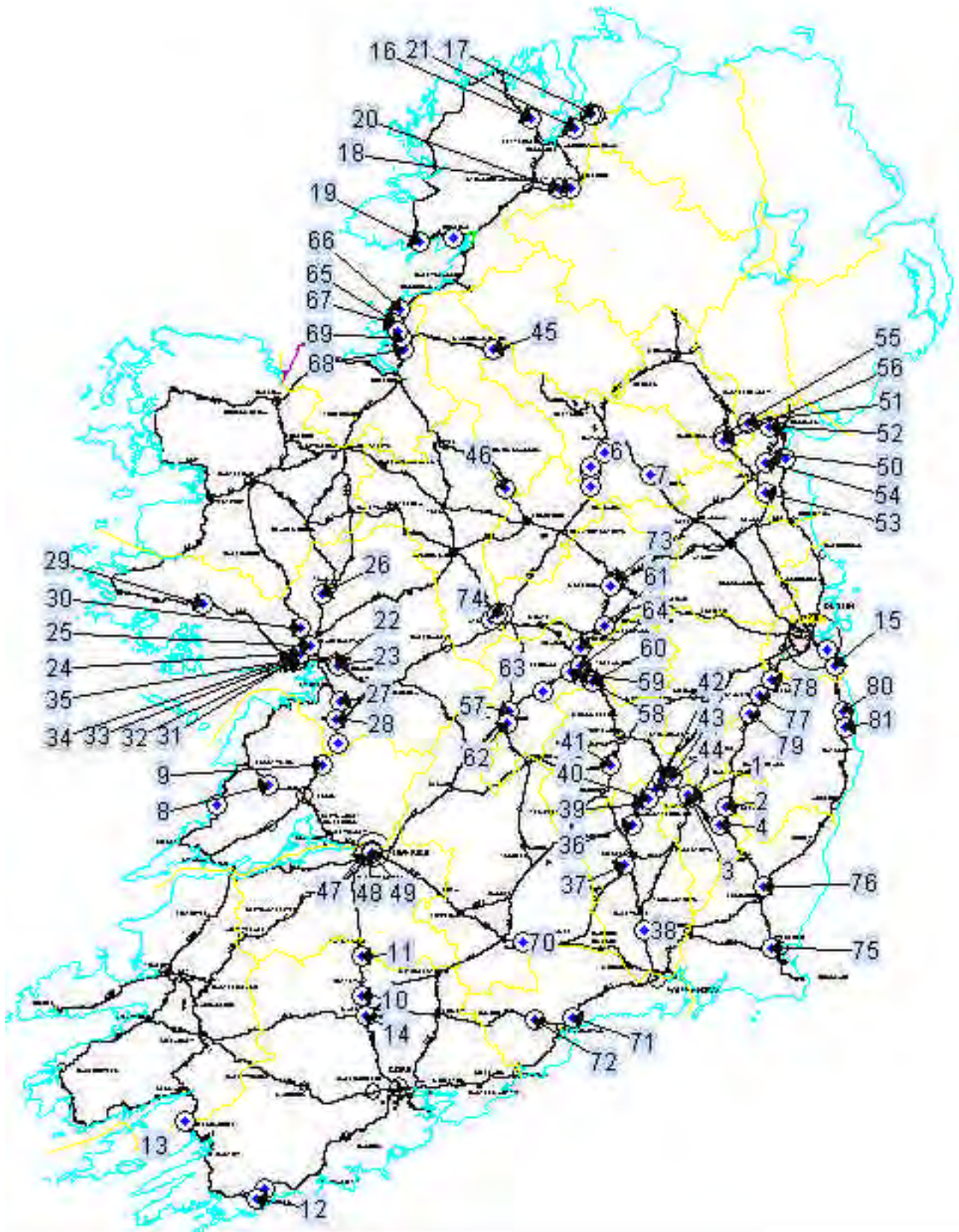
APPENDIX 1 - Site location maps and scheme details with collision data



Assessed Schemes 1998

60 Schemes Assessed in 1998			Total Cost in year of construction	€96,950	Before (5Yr data)			After (5yr data)		
			Number of collisions per year		6	20	69	3	14	60
Sch No	LA	Rt	Scheme Description	Cost	F	S	M	F	S	M
1	Clare	68	Cahercalla	€3,809	0	2	2	0	1	1
2	Clare	68	Rockmount Cross	€31,743	1	1	0	0	0	2
3	Cork	72	Lombardstown Cross	€23,236	0	2	3	0	0	1
4	Cork	72	Carrig Townland	€21,586	0	0	1	0	0	0
5	Cork	72	Currabea	€6,349	1	0	0	0	1	0
6	Cork	71	Derrycreigh	€7,618	0	1	0	0	2	0
7	Cork	71	Pedlar's Cross to Skibbereen - Route Treatment	€12,697	5	12	18	3	18	30
8	DL/Rathdown	11	N11 at junction with Brewery Road	€29,204	0	2	8	0	3	5
9	DL/Rathdown	31	Frascati Road, Blackrock	€12,697	1	5	36	0	1	22
10	Donegal	56	Loughanure	€1,270	1	3	1	0	1	0
11	Donegal	3	Camlin/Cherrymount	€3,809	0	2	5	0	2	2
12	Donegal	56	Milltown/Drumbeg	€4,247	0	2	0	0	0	1
13	Donegal	56	Darney	€5,117	0	3	1	0	1	1
14	Donegal	56	Dunkineely Junction	€3,809	0	1	1	0	0	1
15	Donegal	56	Dunnes, Illistrim	€3,809	0	1	1	0	1	1
16	Donegal	56	Carrowowen Bridge	€5,142	0	0	1	0	0	1
17	Donegal	56	Aghyavougee '4-points'	€6,349	0	0	1	0	0	0
18	Galway	17	Loughgeorge	€86,921	3	2	6	0	3	2
19	Kerry	70	Renard Cross	€50,790	0	1	2	0	0	0
20	Kerry	72	Rathbeg, Rathmore	€34,918	0	2	1	1	0	0
21	Kerry	70	Tullig, Killorglin	€10,793	0	2	6	0	0	2
22	Kerry	70	Camp Cross, Tralee	€10,793	0	2	0	0	3	0
23	Kerry	70	Laharn, Killorglin	€6,349	0	1	2	0	1	4
24	Kerry	70	Kilderry, Milltown	€7,618	0	1	2	0	0	2
25	Kerry	70	Killerisk	€3,174	0	2	2	0	0	2
26	Kerry	70	Murreagh, Waterville	€2,539	0	3	1	0	0	0
27	Kildare	7	Rowanville	€34,283	1	0	2	0	1	4
28	Kildare	7	Clogheen, Monasterevin	€86,342	1	3	3	1	1	4
29	Leitrim	4	Faulties Bridge/Rooskey	€38,092	0	1	5	1	2	8
30	Louth	1	George's Square	€17,776	1	3	13	1	2	5
31	Louth	1	Rail Station	€10,793	1	1	5	0	0	4
32	Louth	1	Donore Road	€16,507	0	1	2	0	0	3
33	Louth	1	Rathmullin	€17,141	0	1	8	0	0	3
34	Mayo	17	Ballyfarnagh/Ballyhowly/ Eskermorilly	€25,395	0	2	3	0	0	4
35	Mayo	17	Kilkelly	€19,046	0	1	0	0	0	1
36	Mayo	5	Kilbree/Knockbrack/Dooncastle	€22,855	0	1	9	1	2	8
37	Mayo	59	Deerpark East/Barleyhill	€22,855	0	2	3	0	2	0
38	Roscommon	63	Kilrooskey Junction	€19,046	0	0	1	0	0	0
39	Roscommon	63	Athleague / Rahara Junction	€15,237	0	0	2	0	0	1
40	Sligo	15	Shannon Eighter	€5,079	1	0	1	0	1	0
41	Sligo	15	Creevykeel Cross-Roads	€25,395	0	2	3	0	0	3
42	Sligo	4	Drumfin	€6,984	0	1	2	1	4	5
43	Sligo	17	Carrowclare	€10,158	0	0	2	0	0	4
44	Sligo	16	Dunally	€10,158	0	0	2	0	0	0

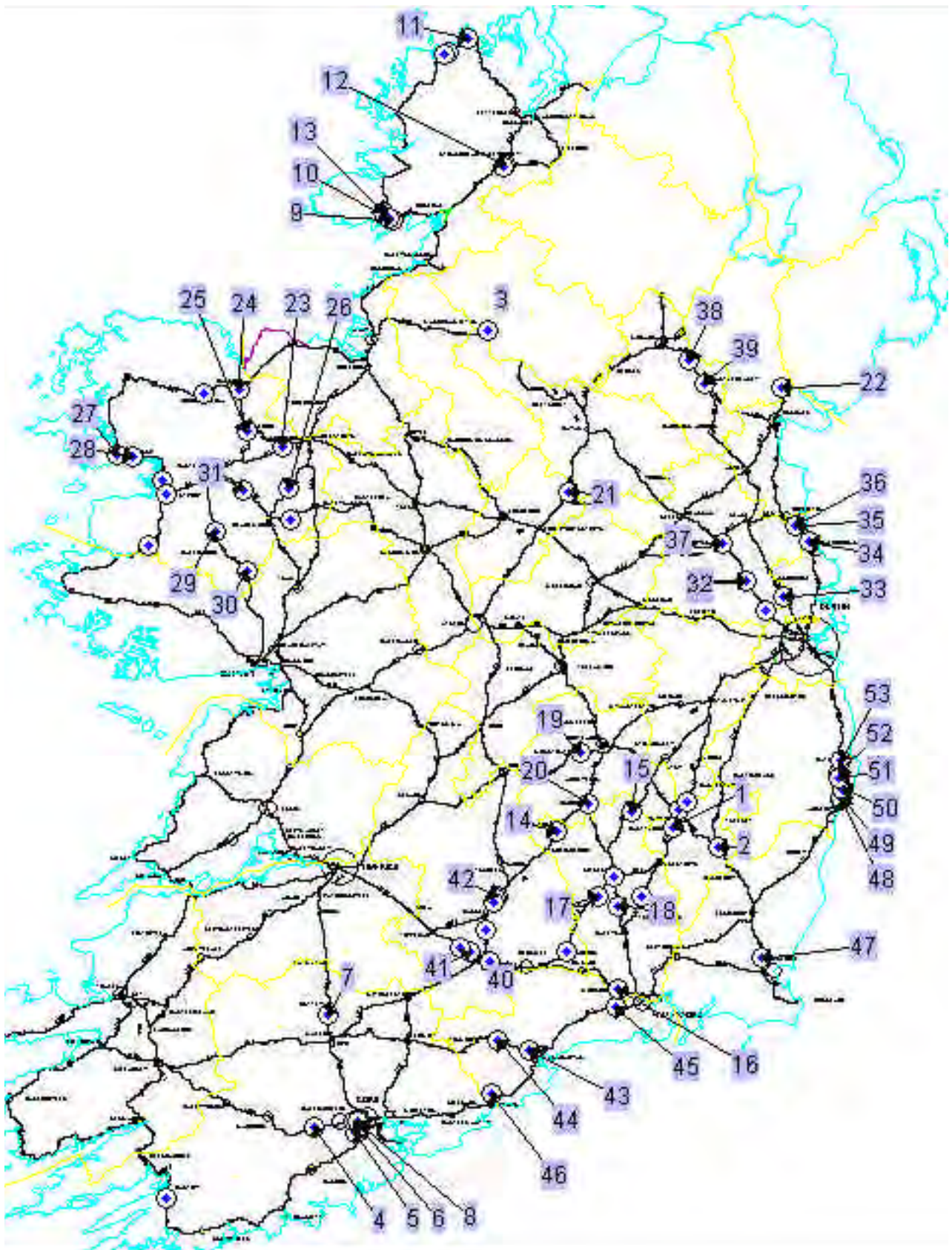
60 Schemes Assessed in 1998			Total Cost in year of construction	€96,950	Before (5Yr data)			After (5yr data)		
			Number of collisions per year		6	20	69	3	14	60
Sch No	LA	Rt	Scheme Description	Cost	F	S	M	F	S	M
45	Sligo	59	Tanrggo West	€5,714	1	0	2	0	0	0
46	Sligo	16	N16 Route Counter Measures	€29,204	0	1	4	1	2	2
47	South Dublin	81	Killinarden to Cheeverstown	€10,681	1	0	4	0	1	8
48	South Dublin	81	Glenview Roundabout	€1,140	2	0	12	0	0	9
49	South Dublin	7	N7/Old Killeen Road	€11,481	0	1	2	0	1	3
50	South Dublin	4	N4/Newcastle Road	€8,222	1	1	14	1	0	11
51	South Dublin	81	Cheeverstown to Westbrook	€3,859	0	1	12	0	1	20
52	South Dublin	81	N81/Cypress Grove/Templeogue Bridge	€2,286	0	1	12	1	1	14
53	South Dublin	7	N7/Longmile Road	€3,174	0	10	65	0	4	44
54	South Dublin	81	N81/Springfield Avenue	€987	1	2	7	0	0	4
55	South Dublin	4	N4/Kennelsfort Road	€2,589	1	4	19	1	0	21
56	Westmeath	6	Rotchfordbridge	€38,092	0	2	6	0	0	6
57	Westmeath	6	Church Street, Moate	€26,664	0	1	2	0	1	3
58	Westmeath	4	Griffinstown, Kinnegad	€6,349	0	0	2	0	0	4
59	Westmeath	52	Clonmellon	€2,539	0	0	1	0	0	0
60	Westmeath	6	N6 Junctions - Moate to Athlone	€44,441	5	5	14	0	4	12



Assessed Schemes 1999

81 Schemes Assessed 1999			Total Cost in year of construction	€1,764,301	Before (5Yr data)			After (5yr data)		
			Number of collisions per year		9	22	66	3	11	51
Sch No	LA	Rt	Scheme Description	Cost	F	S	M	F	S	M
1	Carlow	80	Stablestown Road	€10,158	1	1	1	0	0	0
2	Carlow	81	Bridge in Tullow	€7,618	0	1	1	0	1	0
3	Carlow	80	Sharkeys to Murnanes	€5,714	1	0	2	0	0	1
4	Carlow	80	Ballon Village	€6,984	1	0	0	0	0	1
5	Cavan	55	Corlurgan	€33,013	0	0	2	0	0	1
6	Cavan	55	Killicannon	€40,632	0	1	3	0	0	0
7	Cavan	3	Cornaslieve, Virginia	€3,809	2	0	0	0	0	2
8	Clare	85	Inagh	€64,757	1	0	2	0	0	0
9	Clare	18	Crusheen	€20,316	0	0	1	0	1	0
10	Cork	20	Boherash Cross	€6,984	0	0	4	0	0	1
11	Cork	20	Pike Cross	€10,158	0	1	3	0	0	1
12	Cork	71	DerryLeigh Cross	€38,092	0	0	1	0	1	5
13	Cork	71	Skibbereen Tunnel	€19,046	5	11	19	1	8	22
14	Cork	72	Park Road, Mallow	€11,428	0	0	1	0	0	0
15	DL/Rathdown	11	Wyattville Junction Southbound Approach	€29,839	2	2	14	0	0	10
16	Donegal	56	Ballykeernan	€5,714	0	2	0	1	0	3
17	Donegal	13	Speeneog Cottages	€26,030	0	1	1	1	0	4
18	Donegal	15	Ballylast School	€7,618	0	0	1	0	0	2
19	Donegal	56	Bruckless	€25,395	0	2	0	0	1	1
20	Donegal	15	C'Finn to Cavan Lower	€12,697	3	4	5	0	2	8
21	Donegal	13	Newtown Cunningham	€58,408	1	5	4	0	0	7
22	Galway	6	Moyveela Cross	€6,349	0	2	1	0	1	1
23	Galway	6	Coldwood Junction	€6,984	0	1	2	0	0	0
24	Galway	17	Parkmore	€8,888	1	1	3	0	0	2
25	Galway	17	Cregboy Junction, Rockwood Jnct	€5,079	1	0	1	0	0	2
26	Galway	17	Claretuam Junction	€3,809	0	1	2	0	1	2
27	Galway	18	Labane Junction	€36,822	0	0	2	0	0	1
28	Galway	18	Coolepark Junction	€24,125	1	0	1	0	0	1
29	Galway	59	Maam Cross	€4,444	0	2	3	0	0	0
30	Galway	84	Cloonboo Cross	€9,523	1	1	5	0	0	2
31	Galway Corp	6	Shopping Centre Roundabout	€10,158	0	0	12	0	0	6
32	Galway Corp	6	Junction @ Renmore Road / Dublin Road	€6,984	2	2	2	0	1	2
33	Galway Corp	6	Moneenageisha Roundabout	€7,618	0	0	8	0	1	2
34	Galway Corp	6	Junction N6 / N59	€10,793	0	0	4	0	0	1
35	Galway Corp	59	Junction of Circular Road / Bushypark	€6,349	0	1	8	0	1	3
36	Kilkenny	78	Webbsborough	€66,280	0	0	1	0	0	0
37	Kilkenny	76	Parkmore	€82,533	1	4	9	0	0	5
38	Kilkenny	9	Lukeswell/Knockmoylan	€5,714	1	3	9	0	0	9
39	Kilkenny	78	Coolbaun	€11,174	0	0	1	0	1	0
40	Kilkenny	78	Curteen	€18,411	1	0	4	0	1	1
41	Laois	8	Corbally	€7,618	2	0	2	0	0	4
42	Laois	78	Farnans	€33,013	0	4	5	1	0	0

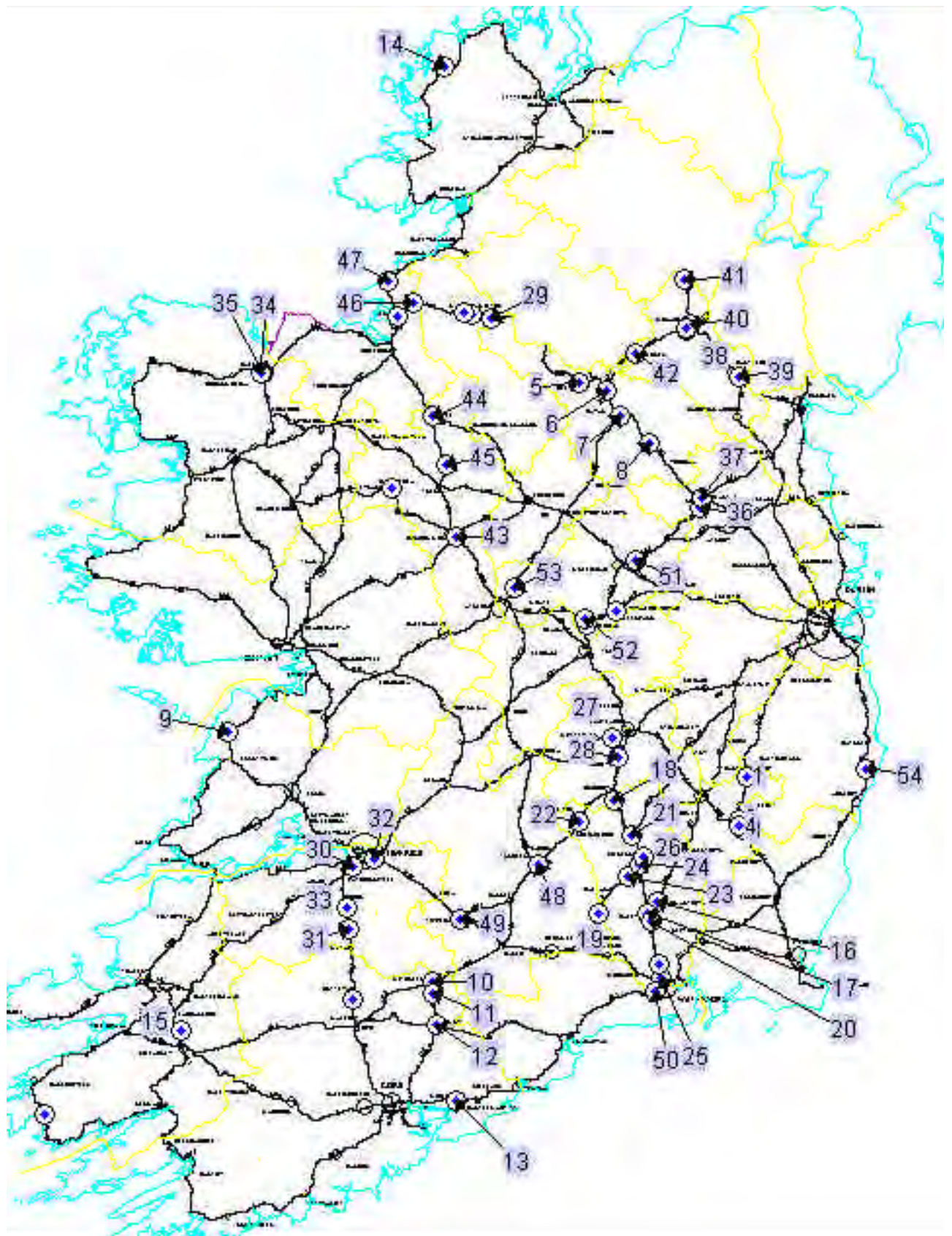
81 Schemes Assessed 1999			Total Cost in year of construction	€1,764,301	Before (5Yr data)			After (5yr data)		
			Number of collisions per year		9	22	66	3	11	51
Sch No	LA	Rt	Scheme Description	Cost	F	S	M	F	S	M
43	Laois	80	Glenmore	€9,523	0	1	1	1	1	2
44	Laois	78	Newtown Cross	€14,602	0	2	3	0	2	3
45	Leitrim	16	N16 Route Counter Measures	€85,072	0	1	15	1	6	19
46	Leitrim	4	Junction at Rooskey	€38,092	0	2	0	0	0	1
47	Limerick	69	Dock Road/Courtbrack Avenue	€27,934	0	2	8	0	1	10
48	Limerick	7	Dublin Road - length	€4,444	2	5	25	0	2	32
49	Limerick	20	Roches Street/O'Connell Street Junction	€4,063	0	0	4	0	0	3
50	Louth	1	Mooretown	€13,967	2	4	15	0	1	2
51	Louth	53	Rassan	€9,523	1	4	10	2	0	10
52	Louth	53	Rathmore Cross	€4,444	0	0	2	0	0	1
53	Louth	2	Funshog	€12,063	1	2	0	1	1	2
54	Louth	52	Duffy's Cross	€9,523	0	0	2	0	0	0
55	Monaghan	2	Aghavilla Junction	€13,967	0	0	2	1	1	3
56	Monaghan	2	Cloughvalley, Carrickmacross	€45,076	0	5	3	0	1	4
57	Offaly	52	Kennedy's Cross - Junction of N62/52	€25,395	0	3	2	0	0	2
58	Offaly	52	Screggan Cross - Junction with Mountbolus Road	€6,349	0	1	1	0	0	0
59	Offaly	80	Killeigh Northwest, outside village	€8,888	1	1	4	0	0	1
60	Offaly	80	Killeigh Southeast, outside village	€3,809	1	0	1	0	0	0
61	Offaly	52	Durrow Cross	€20,316	0	1	1	0	0	2
62	Offaly	62	Crinkill - junction with LT80241 to Crinkill	€30,474	0	0	2	0	0	0
63	Offaly	52	Ballywilliam	€7,618	0	0	3	0	0	0
64	Offaly	52	Charleville Rd	€7,618	0	1	0	0	0	1
65	Sligo	15	Mullaghneane	€12,697	1	2	10	1	2	3
66	Sligo	15	Mount Temple	€5,079	0	1	0	0	0	0
67	Sligo	15	Cashelgarren	€7,618	0	1	3	1	0	0
68	Sligo	15	Bundoran Rd	€2,286	1	0	1	0	0	0
69	Sligo Co Co	15	Rathcormack	€63,487	0	1	7	0	0	2
70	Tipperary SR	24	Surehaul Junction	€26,664	0	1	3	0	0	0
71	Waterford	25	The Pike/Garranbaun	€34,918	1	5	4	1	9	8
72	Waterford	72	Finisk Bridge, Cappagh	€8,888	0	1	3	0	0	1
73	Westmeath	52	Delvin Road	€6,349	0	0	1	0	0	0
74	Westmeath	55	Ballymahon Road, Athlone	€69,836	1	0	4	0	0	10
75	Wexford	11	Ferrycarrig/Kitestown	€36,822	0	2	14	1	2	4
76	Wexford	11	Scarawalsh	€7,618	0	2	4	0	2	0
77	Wicklow	81	Nolans Bends	€171,415	1	0	3	0	0	2
78	Wicklow	81	Hempstown Bends	€36,822	0	1	2	0	1	3
79	Wicklow	81	Hearns Cross	€15,872	1	2	5	1	1	5
80	Wicklow	11	Kilpedder/Kilquade Junction	€31,743	1	0	5	0	2	4
81	Wicklow	11	Coynes Cross	€6,349	0	1	5	0	0	0



Assessed Schemes 2000

53 Schemes Assessed 2000			Total Cost in year of construction	€1,432,896	Before (5Yr data)			After (5yr data)		
			Number of collisions per year		7	14	34	2	4	32
Sch No	LA	Rt	Scheme Description	Cost	F	S	M	F	S	M
1	Carlow	9	Milford Cross	€33,013	0	0	1	0	0	0
2	Carlow	80	Kilbride Cross	€41,901	1	0	0	0	0	0
3	Cavan	16	N16 Route Counter Measures	€7,618	0	2	7	0	0	3
4	Cork	22	Currahaly	€29,839	0	2	5	1	1	1
5	Cork	71	Castlewhite Junction	€21,586	0	0	3	0	0	0
6	Cork	22	Inchigaggin	€1,905	0	0	1	0	1	1
7	Cork	20	Ballybeg	€129,513	1	2	2	0	0	0
8	Cork Corp	22	Carrigrohane Road	€133,322	0	1	11	1	0	7
9	Donegal	56	N56 Jnt L1435-1 Junction	€19,046	0	0	1	0	0	1
10	Donegal	56	N56 Bends (Bruckless)	€19,046	0	1	0	0	1	0
11	Donegal	56	N56 Junction (Dunfanaghy)	€29,204	0	0	1	0	0	0
12	Donegal	15	Ballybofey Main Street	€12,697	0	1	1	0	0	3
13	Donegal	56	Four Points Jnt	€38,092	0	0	1	0	0	0
14	Kilkenny	8	Beggars Cross	€10,793	2	6	5	1	0	3
15	Kilkenny	78	Coolbaun to Moneenroe	€113,007	1	0	6	0	1	2
16	Kilkenny	24	RathKieran	€12,697	0	1	1	1	0	1
17	Kilkenny	76	Ballymack Cross	€11,428	0	2	0	0	1	4
18	Kilkenny	10	Ennisnag	€5,714	0	0	1	0	0	2
19	Laois	7	Clonneagh	€6,984	1	1	1	1	1	2
20	Laois	8	Castlewood, Durrow	€3,174	0	0	2	0	0	1
21	Longford	55	cloghchurnel	€44,441	1	0	2	0	0	0
22	Louth	1	Dublin Road	€19,046	6	8	22	0	3	30
23	Mayo	5	Swinford, Castlebar/Charlestown Junction	€31,743	0	0	1	0	1	1
24	Mayo	59	Lord Edward St., Ballina	€25,395	1	5	8	0	0	9
25	Mayo	26	Shraheen (Foxord / Ballina)	€12,697	0	3	6	0	0	3
26	Mayo	17	Shanvaghera & Meeltran	€19,046	0	1	3	1	0	4
27	Mayo	59	Corraun Junction, Mulranny	€38,092	0	0	1	0	0	0
28	Mayo	59	Rosturk, Mulranny	€7,618	0	0	1	0	0	2
29	Mayo	84	Carrig, Ballinrobe - Castlebar Road	€15,237	0	1	1	0	0	0
30	Mayo	84	Ballyhenry / Carton, Shrule	€12,697	1	0	0	0	0	0
31	Mayo	60	Ardboley, Balla	€19,046	1	2	2	0	0	0
32	Meath	3	Roestown	€32,378	2	0	1	0	1	0
33	Meath	2	Newtown & Muckerstown	€25,395	0	3	6	0	0	7
34	Meath	1	Gormanstown	€8,253	1	2	1	1	0	3
35	Meath	1	Smithstown	€4,444	0	1	6	0	0	1
36	Meath	1	Painestown	€55,868	0	0	0	0	0	1
37	Meath	3	Academy Street	€25,395	0	2	1	0	0	3
38	Monaghan	2	Cashel/Avalreagh	€36,188	1	4	8	1	1	5
39	Monaghan	2	Corracloghan	€113,007	0	1	3	0	1	0
40	Tipperary SR	24	Fethard Junction to Molls Cross	€8,253	0	0	2	0	0	5
41	Tipperary SR	24	Ballydrehid School N24	€7,618	1	2	2	0	0	3
42	Tipperary SR	8	Ballytarsna School	€11,428	1	1	4	0	0	3

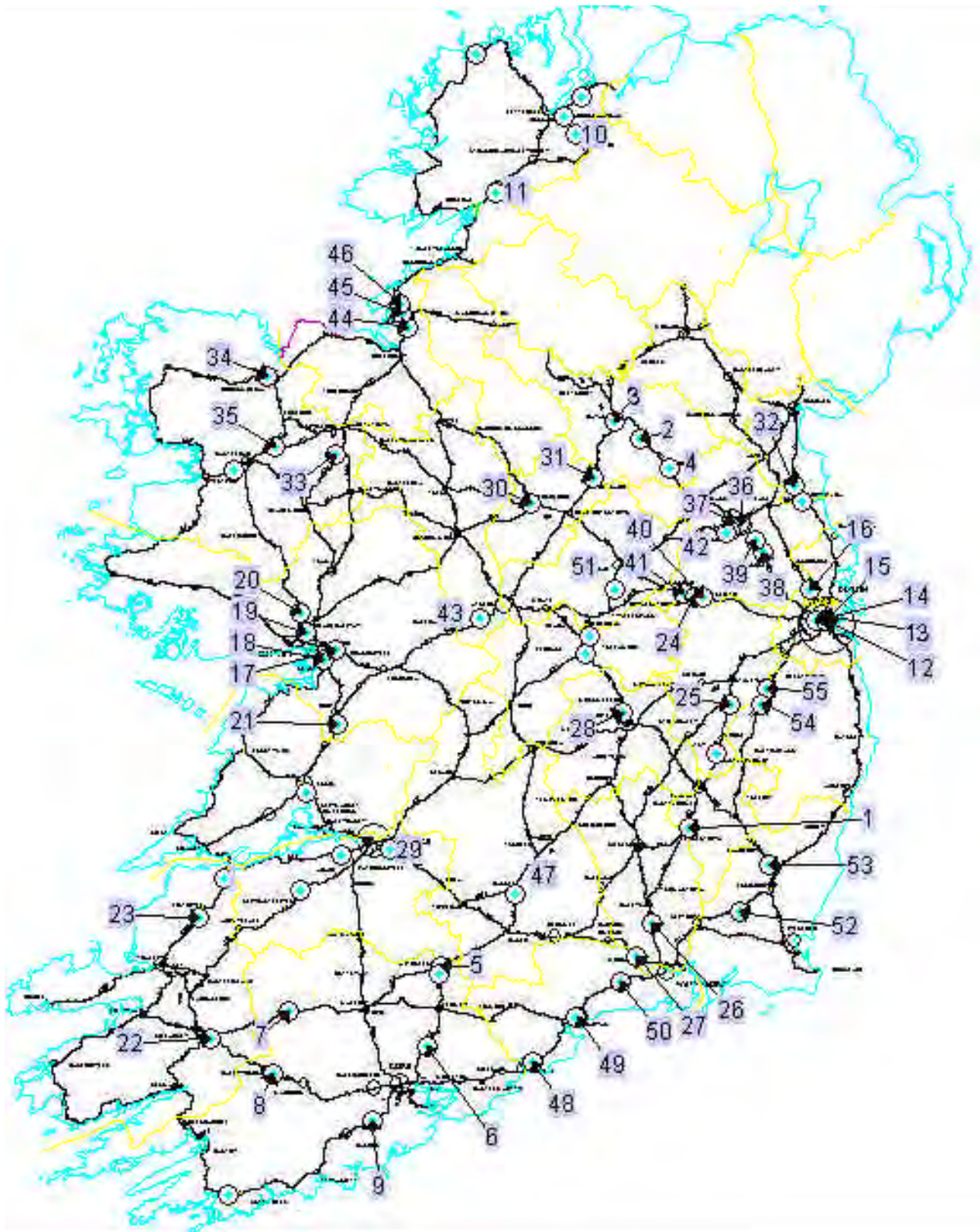
53 Schemes Assessed 2000			Total Cost in year of construction	€1,432,896	Before (5Yr data)			After (5yr data)		
			Number of collisions per year		7	14	34	2	4	32
Sch No	LA	Rt	Scheme Description	Cost	F	S	M	F	S	M
43	Waterford	72	Ballymacmague	€47,615	1	2	2	0	0	4
44	Waterford	72	Affane Cross Roads	€15,872	0	2	0	0	1	4
45	Waterford	25	Mullins Cross	€15,872	1	1	3	0	0	3
46	Waterford	25	Rincrew Junction	€15,872	0	2	5	0	1	0
47	Wexford	11	Kyle Cross	€22,220	2	0	1	0	0	4
48	Wicklow	11	Scratenagh Cross	€2,539	1	1	2	0	0	4
49	Wicklow	11	Cronakip	€3,174	1	3	5	1	1	6
50	Wicklow	11	Kilmurray North	€2,539	1	0	1	0	0	2
51	Wicklow	11	The Tap	€44,441	2	3	12	3	1	14
52	Wicklow	11	The Beehive	€2,539	2	2	5	0	2	6
53	Wicklow	11	Ballinabarney	€6,349	0	1	5	0	2	4



Assessed Schemes 2001

54 Schemes Assessed 2001			Total Cost in year of construction	€1,773,978	Before (5Yr data)			After (5yr data)		
			Number of collisions per year		6	16	41	3	8	48
Sch No	LA	Rt	Scheme Description	Cost	F	S	M	F	S	M
1	Carlow	81	Cuckoo Corner, Rathvilly	€15,999	0	0	1	0	0	2
2	Carlow	81	Bang-up Cross	€6,857	1	0	0	0	0	1
3	Carlow	80	Boggan Hill	€44,441	1	0	0	0	0	0
4	Carlow	80	Closh Cross, Junction between N80 & N81	€21,586	0	1	4	0	0	2
5	Cavan	87	BallyHugh	€38,319	0	2	3	0	0	3
6	Cavan	3	Butlers Bridge to Belturbet	€17,395	0	2	2	3	1	10
7	Cavan	3	Pollamore/Killygarry	€70,963	0	10	10	0	1	13
8	Cavan	3	New Inns Junction	€26,047	0	1	0	1	1	1
9	Clare	67	Benn's Cross, Lisdoonvarna	€108,048	0	1	0	0	0	1
10	Cork	8	Mitchelstown, Galtee meats	€16,507	1	1	2	0	0	4
11	Cork	8	Gortnahown Bends, Flagstaff Hill	€10,793	0	0	1	1	0	2
12	Cork	72	Fermoy Hospital Bends	€25,242	0	0	1	0	0	0
13	Cork	25	N25 Right turn lanes	€121,844	2	10	15	0	2	21
14	Donegal	56	Bridge at Gweedore river south for 200m	€38,092	1	0	0	0	1	0
15	Kerry	22	Lawlor's Cross	€83,735	0	3	2	0	1	1
16	Kilkenny	9	Jerpoint	€51,635	0	0	3	0	0	4
17	Kilkenny	9	Barretstown	€5,073	0	1	1	0	0	1
18	Kilkenny	77	Ballynasiee	€24,122	0	0	2	0	0	1
19	Kilkenny	76	Kilamery	€5,073	0	1	1	0	0	0
20	Kilkenny	9	Knockwilliam	€14,683	0	1	6	0	1	2
21	Kilkenny	77	Dinin Bridge (Ardaloo)	€44,593	0	1	4	0	0	4
22	Kilkenny	8	Ballyspellan	€5,079	1	1	1	0	0	1
23	Kilkenny	76	Ballynur	€7,429	0	0	2	0	0	2
24	Kilkenny	10	Faulkstown	€38,161	2	0	1	0	0	3
25	Kilkenny	9	Grannagh Junction "Part 1"	€12,459	2	1	3	0	1	7
26	Kilkenny	77	Heneberry's Cross	€32,444	0	0	3	1	1	2
27	Laois	7	Clondouglas, Oak School	€4,838	0	1	2	0	0	2
28	Laois	8	Raheen / Corbally, Junction	€7,142	0	1	3	0	0	0
29	Leitrim	16	N16 Route Treatment, Junction Warning Signs	€69,589	0	4	19	1	3	22
30	Limerick	20	Caher Road / Van Veens Junction	€104,432	1	1	0	0	0	3
31	Limerick	20	O'Rouke's Cross	€101,420	0	1	3	0	0	3
32	Limerick	24	Morrisons	€9,166	1	2	10	0	0	4
33	Limerick	20	Cherrygrove Bend, Croom	€21,382	0	2	1	0	0	0
34	Mayo	59	Fahys Corner, Ballina(Hospital Rd.)	€25,395	1	3	5	0	0	3
35	Mayo	59	Fonts Cross, Ballina	€25,395	0	0	4	0	0	4
36	Meath	52	Balrath Cross roads	€7,103	0	1	1	0	0	0
37	Meath	3	Commons of Lloyd, Kells, T-junction into Ind Est	€37,147	0	1	0	1	0	1
38	Monaghan	2	Traffic Lights - N2/N54 Jct, Broad Road/Dawson St	€20,951	0	0	2	0	0	8

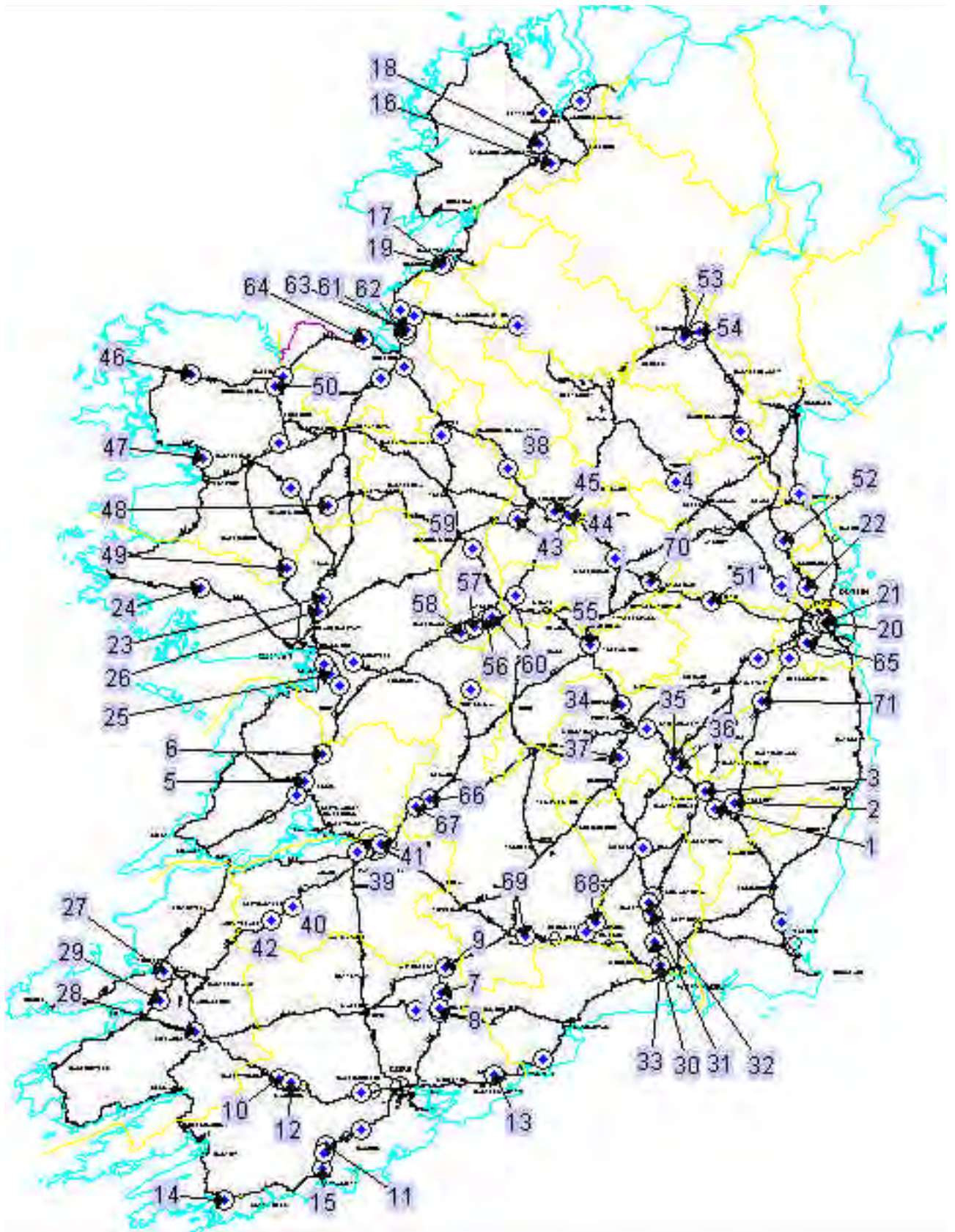
54 Schemes Assessed 2001			Total Cost in year of construction	€1,773,978	Before (5Yr data)			After (5yr data)		
			Number of collisions per year		6	16	41	3	8	48
Sch No	LA	Rt	Scheme Description	Cost	F	S	M	F	S	M
39	Monaghan	53	N53 - Castleblaney to border, JDP Scheme	€3,974	1	1	3	0	3	5
40	Monaghan	12	Monaghan to Armagh Border, JDP Installation	€5,167	1	2	3	0	0	6
41	Monaghan	2	Monaghan to Tyrone Border	€11,525	2	1	10	1	7	18
42	Monaghan	54	Monaghan to Clones	€10,333	0	3	13	1	4	15
43	Roscommon	61	Athlone to Roscommon Bends	€19,681	2	1	4	1	0	7
44	Roscommon	61	Roscommon to Boyle	€37,838	1	3	7	1	3	19
45	Roscommon	61	Shankill Crossroads	€45,711	0	0	4	0	0	1
46	Sligo	16	Ballinode / Lughnagall	€15,237	1	2	5	0	2	6
47	Sligo	15	Grange & Rathcormack	€25,395	2	3	25	1	5	8
48	Tipperary NR	8	Parkstown	€37,095	0	4	4	0	0	0
49	Tipperary SR	24	Fawnagowan	€90,963	2	0	3	1	1	4
50	Waterford	25	Holy Cross T-Junction	€54,233	0	2	4	0	0	2
51	Westmeath	52	Macetown/Cookesborough	€38,092	0	1	1	1	0	1
52	Westmeath	6	Kilbeggan Main Street	€16,889	0	2	0	1	2	2
53	Westmeath	55	Glasson	€9,523	0	1	0	0	0	0
54	Wicklow	11	Barndarrig	€31,743	2	0	2	0	0	4



Assessed Schemes 2002

55 Schemes Assessed 2002			Total Cost in year of construction	€1,740,382	Before (5Yr data)			After (4yr data)		
			Number of collisions per year		6	14	44	3	5	28
Sch No	LA	Rt	Scheme Description	Cost	F	S	M	F	S	M
1	Carlow	9	Royal Oak Junction	€39,052	0	2	4	0	0	1
2	Cavan	3	Drumgora	€50,603	2	1	2	0	0	0
3	Cavan	3	Tullymongan - Pollamore	€42,611	1	7	9	0	0	8
4	Cavan	3	Maghera - Virginia	€133,242	3	2	15	0	1	5
5	Cork N	8	Mitchelstown, Galtee Meats - Assessed in 2001	€34,199	0	0	0	0	0	0
6	Cork N	8	Condonstown	€10,945	0	0	4	0	0	0
7	Cork N	72	Forge Cross	€1,044	0	0	1	0	0	1
8	Cork S	22	Coolnacaheragh	€6,903	0	2	0	0	0	0
9	Cork S	71	Bends at Rigsdale	€6,883	1	0	3	0	0	0
10	Donegal	14	Drumbeg / Dromore	€26,693	2	1	2	0	0	0
11	Donegal	15	Keadew Bridge	€16,537	0	0	0	0	0	0
12	Dublin	11	College Green - Grafton St	€27,206	0	0	12	0	0	4
13	Dublin	3	Phibsborough Road / North Circular Road	€16,584	0	3	18	0	0	11
14	Dublin	4	South Circular Road - Con Colbert Road / St. John	€21,038	0	2	27	0	1	8
15	Dublin	4&11	Aston Quay - Westmoreland St	€28,531	0	2	17	0	1	5
16	Fingal	2	Wards Cross	€3,065	1	1	4	0	1	2
17	Galway	6	Coldwood	€15,147	0	3	1	0	0	1
18	Galway	18	Clarinbridge	€20,540	0	0	1	0	0	1
19	Galway	17	Cloonacauneen	€28,972	0	1	2	1	0	1
20	Galway	84	Cloonboo	€11,078	1	1	4	0	0	1
21	Galway	18	Lough Cultra	€35,305	1	2	6	1	0	2
22	Kerry	22	Minish Level Crossing	€4,870	0	0	4	0	0	2
23	Kerry	69	Six Crosses	€27,523	0	0	1	0	0	1
24	Kildare	4	Callaghy's Garage, Royal Oak	€61,200	0	2	1	0	0	0
25	Kildare	9	Halverstown Junction (School)	€4,500	0	1	3	0	0	1
26	Kilkenny	9	Lukeswell/Knockmolyan	€165,066	0	3	8	0	0	9
27	Kilkenny	24	Mooncoin to Clonmore	€19,467	0	1	2	1	0	0
28	Laois	80	Kyletaleasha / Rossleighan / Crookedy	€5,843	1	4	4	0	2	5
29	Limerick	24	Killonan Cross	€11,200	0	0	2	0	0	2
30	Longford	5	Main St. Longford	€12,765	0	1	1	2	1	1
31	Longford	55	Cloghchurnel Part 2	€9,974	1	2	1	0	0	0
32	Louth	1	Monasterboice to Killineer	€101,730	3	3	9	0	0	1
33	Mayo	17	Kiltimagh junction	€9,000	1	0	2	0	1	3
34	Mayo	59	Cloontykillow junction	€8,225	0	0	2	0	1	1
35	Mayo	5	Ballyvary	€10,320	0	0	2	0	0	1
36	Meath	3	Athlumney Junction	€46,599	1	0	1	0	0	3
37	Meath	3	Whistlemount	€3,074	2	1	1	0	0	0
38	Meath	3	Ross Cross (N3)	€203,003	0	0	4	1	0	3
39	Meath	3	Garlow cross	€115,286	0	0	1	1	0	2
40	Meath	4	Blackwater Bridge	€20,041	0	1	2	2	0	4
41	Meath	4	Leinster Bridge	€4,191	1	0	0	0	0	0
42	Meath	51	HallTown	€3,876	3	0	2	0	0	0

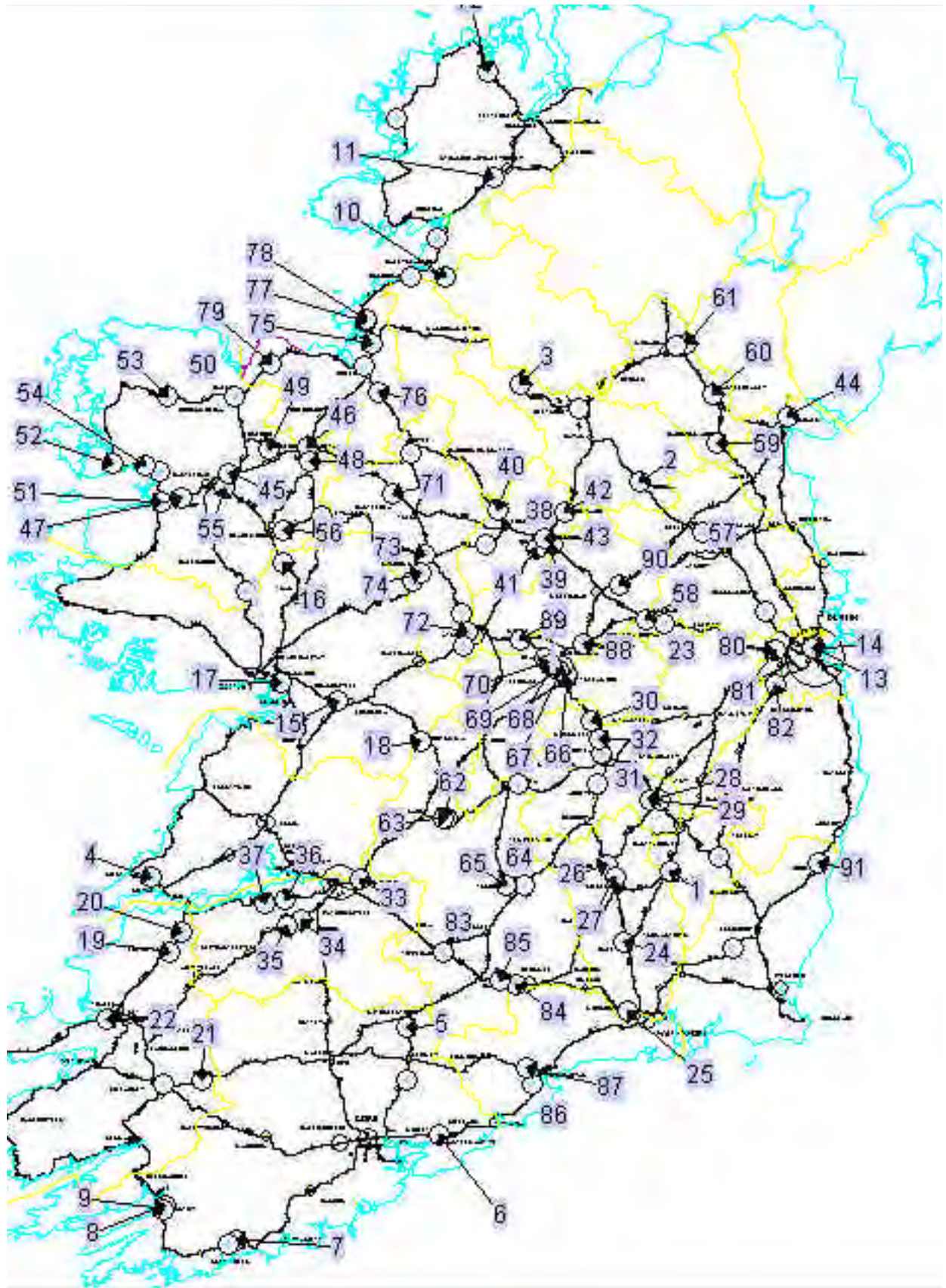
55 Schemes Assessed 2002			Total Cost in year of construction	€1,740,382	Before (5Yr data)			After (4yr data)		
			Number of collisions per year		6	14	44	3	5	28
Sch No	LA	Rt	Scheme Description	Cost	F	S	M	F	S	M
43	Roscommon	6	Thomastown (Shannonbridge jcn)	€7,000	0	0	1	0	0	0
44	Sligo	16	(N16) - (R286) Mollaway hill/ Ashlane - Hazelwood Rd (Sligo City)	€20,000	0	0	0	0	0	2
45	Sligo	15	Rathcormack Wall and Footpath Part 2	€43,526	0	1	2	0	0	3
46	Sligo	15	Road section along bend at Urlar Td	€39,723	1	1	3	0	2	3
47	Tipperary SR	8	Owens & Biggs Lot	€12,180	1	0	2	0	0	1
48	Waterford	25	Pilltown Cross (R671 / L-2007)	€8,840	0	3	2	1	0	3
49	Waterford	25	The Pike Hill	€4,223	0	6	2	0	4	3
50	Waterford	25	Carrolls Cross	€71,434	0	1	2	0	0	2
51	Westmeath	52	Carrick	€47,008	1	2	3	0	0	1
52	Wexford	30	Coolnacon (Teagasc Research Station)	€2,846	0	1	2	0	0	2
53	Wexford	80	Ballycarney - Junction with R745	€10,067	0	1	2	0	1	2
54	Wicklow	81	Knockroe	€6,349	0	3	6	1	1	1
55	Wicklow	81	Russborough Bends	€77,454	2	2	6	0	1	0



2003 Assessed Schemes

71 Schemes Assesed 2003			Total Cost in year of construction	€1,612,745	Before (5Yr data)			After (2yr data)		
			Number of collisions per year		7	14	45	2	6	25
Sch No	LA	Rt	Scheme Description	Cost	F	S	M	F	S	M
1	Carlow	80	Graingenaspidogue	€12,123	0	0	1	0	0	1
2	Carlow	81	Road Widening outside Tullow	€18,978	1	2	3	0	1	1
3	Carlow	80	Wallsforge Junction	€18,525	0	1	5	0	0	2
4	Cavan	3	Road Widening from Maghera to Virginia (Part Funding)	€31,008	3	3	15	1	0	4
5	Clare	18	Gort Road, Ennis	€7,281	0	0	3	0	1	1
6	Clare	18	Crusheen	€55,120	1	0	0	0	0	1
7	Cork N	8	South of Corbett Cross	€7,968	1	0	0	0	0	2
8	Cork N	72	Patrick St Fermoy (Pedestrian Crossing)	€9,435	0	0	1	0	0	0
9	Cork N	8	Coracunna Cross	€96,794	1	2	2	0	0	0
10	Cork S	22	Coolavokig	€4,472	0	4	7	0	0	3
11	Cork S	71	Bend & junction at Cashelmore	€3,638	1	1	1	0	0	0
12	Cork S	22	Bend & junction at Carrigaphooca	€5,788	1	1	0	0	0	0
13	Cork S	25	Killeagh	€8,923	0	0	1	0	1	1
14	Cork W	71	Church Cross, Skibbereen	€31,086	1	2	1	0	0	0
15	Cork West	71	Shannonvale Cross	€25,743	1	0	0	0	0	0
16	Donegal	15	Kiltown / Killygordon	€11,071	3	0	2	0	0	2
17	Donegal	15	Finner	€22,342	0	3	5	1	1	0
18	Donegal	13	Callan Junction	€26,739	0	1	4	0	0	0
19	Donegal	15	Bundoran Main St (straight)	€29,750	0	4	5	0	0	0
20	Dublin	4	Ushers Quay - Ushers Island approaching Bridgefoot St Lwr	€10,405	2	0	6	0	1	1
21	Dublin	1	Bachelors Walk - Eden Quay - O'Connell Bridge - O'Connell St	€16,552	0	3	6	0	0	3
22	Fingal	2	Coolquay Junction	€13,891	0	0	1	0	0	1
23	Galway	17	Caherlea Jn	€8,123	0	0	1	0	0	2
24	Galway	59	Maam Cross	€14,820	0	1	1	0	0	0
25	Galway	18	Kiltiernan	€14,711	0	2	6	0	0	3
26	Galway	17	Knockdoe	€21,693	1	0	6	0	1	0
27	Kerry	70	Skehanagh	€32,803	0	2	0	0	0	0
28	Kerry	72	Ballydowney to Fossa	€28,620	1	1	5	1	1	1
29	Kerry	70	Brackhill, Castlemaine	€54,903	0	0	5	0	0	0
30	Kilkenny	9	Deerpark	€7,819	0	1	4	0	0	1
31	Kilkenny	9	Castlebanay	€15,098	0	1	2	0	0	0
32	Kilkenny	9	Moanroe - Derrynahinch	€15,312	0	0	1	0	0	1
33	Kilkenny	9	Dunkitt to Grannagh	€18,406	1	2	2	0	0	2
34	Laois	80	Derrycloney	€5,153	0	1	5	0	0	0
35	Laois	80	N80 - N78 Simons Cross	€8,930	0	1	1	0	0	0
36	Laois	80	Glen Mor - Arles - Ballickmoyler	€15,115	1	2	2	0	0	2
37	Laois	8	Tonduff - Colt - Raheen - Bondra	€15,730	1	1	8	0	2	8
38	Leitrim	4	Killaniker Bridge N4	€25,177	0	0	1	0	1	0
39	Limerick	69	Boland's Cross	€4,842	0	1	0	0	0	1
40	Limerick	21	Cregan's Cross	€47,315	0	1	2	1	0	1

71 Schemes Assesed 2003			Total Cost in year of construction	€1,612,745	Before (5Yr data)			After (2yr data)		
			Number of collisions per year		7	14	45	2	6	25
Sch No	LA	Rt	Scheme Description	Cost	F	S	M	F	S	M
41	Limerick	7	Groody rbt	€27,798	0	0	11	0	1	2
42	Limerick	21	Barnagh Gardens	€39,069	2	0	1	1	0	1
43	Longford	63	Killashee Bridge	€13,557	0	1	0	0	0	0
44	Longford	4	Edgeworthstown ped crossing	€27,782	0	0	2	0	0	0
45	Longford	4	Ballynagoshen junction	€27,203	0	0	4	0	1	0
46	Mayo	59	Bellacorick at Jn NW of Bellacorick	€7,475	0	1	0	0	0	0
47	Mayo	59	Carrowmore	€6,179	0	1	2	0	0	0
48	Mayo	60	N60 at Brickens Crossroads and Cuilbeg Bridge	€5,102	0	1	0	0	0	0
49	Mayo	84	Bullaun	€14,513	1	1	1	0	0	0
50	Mayo	26	Foxford road	€24,974	0	0	1	0	0	0
51	Meath	4	Newcastle	€15,466	1	1	1	0	0	0
52	Meath	4	Rathfeigh	€18,960	0	0	4	0	1	0
53	Monaghan	54	At Junction of R186 & N54 in Monaghan Town	€12,049	0	0	1	0	0	0
54	Monaghan	12	Killyneil	€41,417	1	0	2	0	0	1
55	Offaly Co Co	52	Junction of Collins' Lane and N52, Arden	€10,207	2	1	0	0	0	1
56	Roscommon	6	Cloonark Junction	€7,388	0	0	1	0	0	0
57	Roscommon	6	Ballydangan - Moore & Lowtown jcn	€5,697	0	0	2	0	1	1
58	Roscommon	6	Beagh - Brabazon	€5,332	0	2	0	0	0	0
59	Roscommon	61	Carrigeens	€4,555	0	0	2	0	0	0
60	Roscommon	6	Cornafulla	€27,436	0	0	1	0	1	2
61	Sligo City	4	Junction markings at five locations	€9,261	0	3	18	1	1	7
62	Sligo City	4	Pease Rd Cemetry Road Junction	€18,777	0	0	0	0	0	0
63	Sligo City	16	Ashlane Duck St Roundabout	€32,428	0	0	0	0	0	0
64	Sligo	59	T junction of Local Rd L-2203 and Nat Sec Route N59	€27,783	0	0	1	0	0	0
65	Sth Dublin	81	N81 Oldbawn Rd Junction	€97,880	2	3	26	0	2	7
66	Tipperary Nth	7	Junctions Ballywilliam to Carrigatogher	€35,909	0	1	7	0	0	3
67	Tipperary Nth	7	Kilmastulla Bend (& Bashfield??)	€10,808	1	1	1	0	0	0
68	Tipperary SR	76	Junction of N76 and L2410-0 at South Lodge	€9,303	0	1	0	0	0	0
69	Tipperary SR	24	Apple Farm Junction (Land Purcahse)	€125,623	0	2	3	0	0	1
70	Westmeath	4	Crossanstown	€22,049	0	1	2	0	0	3
71	Wicklow	80	Hearns Cross Part 2	€58,563	1	3	8	0	0	1

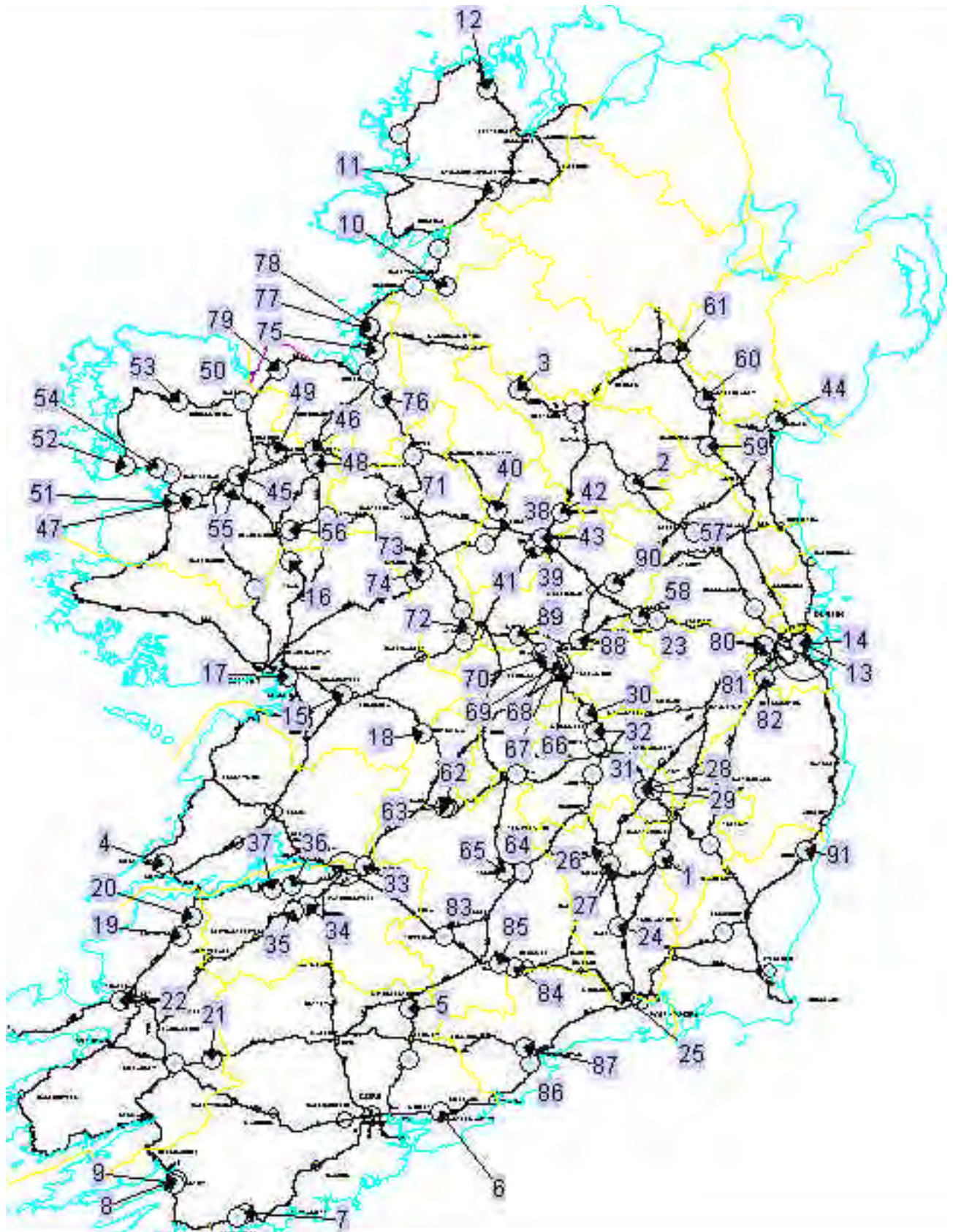


2004 Assessed Schemes

91 Schemes Assessed, 2004			Total Cost in year of construction	€1,800,744	Before (5Yr data)			After (2yr data)		
			Number of collisions per year		5	12	47	1	8	32
Sch No	LA	Rt	Scheme Description	Cost	F	S	M	F	S	M
1	Carlow	9	Wells Cross South of Royal Oak Junction	€8,553	0	0	2	0	0	0
2	Cavan	3	Lisgrey	€15,427	0	2	1	0	0	1
3	Cavan	87	Bawnmore to Derrynagrieve	€10,000	0	0	4	0	0	0
4	Clare	67	Moyasta	€7,008	0	1	4	0	1	2
5	Cork N	8	Gortnahown	€16,033	0	0	0	0	0	0
6	Cork S	25	Churchtown	€5,298	0	0	3	0	1	1
7	Cork W	71	Connonagh signs & barrier	€8,799	0	3	1	0	0	0
8	Cork W	71	Donemark Bridge, Bantry.	€5,798	0	1	0	0	0	0
9	Cork W	71	Bantry Town	€27,460	0	0	2	0	2	0
10	Donegal	3	Beeleek Road	€1,429	2	0	0	0	0	0
11	Donegal	15	Meencarragh	€15,000	0	1	3	0	0	0
12	Donegal	56	Straggedy - Derrislig	€10,021	2	0	0	0	0	0
13	Dublin	1	Drumcondra - Clonliffe Road North Junction	€1,389	0	1	10	0	0	1
14	Dublin	1	Dorset St Junction - Granby row - St. Marys Place North Junction	€9,996	0	0	12	0	0	3
15	Galway	6	Meadow court jcn additional (Capped)	€2,080	0	1	1	0	0	0
16	Galway	17	Cloonacross	€3,867	0	1	1	0	0	1
17	Galway	18	Rocklands Junction	€4,503	0	3	8	0	0	1
18	Galway	65	Portumna	€3,607	0	1	2	0	1	0
19	Kerry	69	Bolton's Cross	€1,000	0	1	0	0	0	1
20	Kerry	69	Leitrim	€7,519	0	0	4	0	0	0
21	Kerry	72	Gortnahaneboy (Shrone Cross)	€16,897	0	1	0	0	0	0
22	Kerry	86	Tonavane (Small scale)	€6,709	1	0	0	0	0	0
23	Kildare	4	Leinster Bridge to Blackwater Bridge Junction	€20,000	5	7	12	0	1	11
24	Kilkenny	10	Floodhall to Whitecastle	€35,619	0	2	4	0	0	0
25	Kilkenny	24	Ballygriffin to Aglish	€38,147	1	0	4	0	0	0
26	Kilkenny	77	Georges Tree to Ardaloo	€65,450	2	2	4	0	0	1
27	Kilkenny	77	Baun to Dunmore	€2,584	0	0	1	1	0	0
28	Laois	78	Wandesford Bridge	€9,805	0	0	3	0	0	0
29	Laois	80	Coolanowle	€10,988	1	1	0	0	0	0
30	Laois	80	Nyra	€9,962	1	0	5	0	0	0
31	Laois	80	Clonreher	€4,187	0	1	1	0	1	0
32	Laois	80	Clonsoghey	€10,022	1	1	9	0	0	0
33	Limerick	7	Howley's Cross	€6,780	0	0	2	0	0	1
34	Limerick	21	Murphy's Cross, Adare	€30,000	1	0	3	0	0	1
35	Limerick	21	Croagh bypass	€40,843	1	1	9	0	0	3
36	Limerick	69	Cowpark	€4,001	0	0	1	0	0	0
37	Limerick	69	Wyeth Junction	€7,074	0	0	1	0	0	0
38	Longford	4	Garryandrew (1 material damage collision)	€17,801	1	0	3	0	1	0
39	Longford	4	Killsallagh	€25,574	0	1	5	0	0	1

91 Schemes Assessed, 2004			Total Cost in year of construction	€1,800,744	Before (5Yr data)			After (2yr data)		
			Number of collisions per year		5	12	47	1	8	32
Sch No	LA	Rt	Scheme Description	Cost	F	S	M	F	S	M
40	Longford	4	Ballagh (5 material damage collisions reported)	€5,571	0	0	2	0	0	0
41	Longford	55	Crossea (2 material damage collisions reported)	€20,241	0	1	2	0	0	0
42	Longford	55	Granard / Lisryan junction	€14,353	0	1	0	0	0	0
43	Longford	55	Castlepollard junction	€10,947	0	0	3	0	0	0
44	Louth	1	Aghnaskeagh Jnt	€1,729	0	0	1	0	0	0
45	Mayo	5	Gortnafolla junction	€15,203	0	1	2	0	0	0
46	Mayo	5	junction at Charlestown	€5,250	0	0	1	0	0	1
47	Mayo	5	Kilbree	€5,986	0	1	4	0	0	0
48	Mayo	17	Lurga	€5,248	0	0	0	0	0	0
49	Mayo	26	Cloongullaun Bridge	€17,809	0	1	0	0	0	0
50	Mayo	59	N59 Crossmolina Road Ballina at Carrs Corner	€10,262	0	0	2	0	0	0
51	Mayo	59	N59 Junction with R335 at Westport	€2,982	0	0	2	0	0	0
52	Mayo	59	Mulranny Village	€26,078	0	1	1	0	0	0
53	Mayo	59	Dooleeg	€12,530	0	1	3	0	0	0
54	Mayo	59	Knockbreagan, Newport to Mulranny Road	€4,317	0	1	1	0	0	0
55	Mayo	60	Kilknock	€16,100	1	0	2	0	0	0
56	Mayo	60	Cullmore junction	€38,000	0	0	0	0	0	0
57	Meath	3	Bloomsbury	€18,881	1	0	4	0	0	0
58	Meath	4	Edenderry Road (R 401) Junction, Kinnegad	€28,349	0	1	2	0	0	0
59	Monaghan	2	Carrickmacross Main Street	€11,096	0	2	2	0	0	1
60	Monaghan	2	LCRM Castleblayney Pedestrian Crossing	€45,112	1	0	3	0	0	1
61	Monaghan	12	Tamlat Jnt	€4,707	0	0	1	0	0	0
62	Nth Tipperary	7	Lissanisky Cross	€18,129	0	0	1	0	0	1
63	Nth Tipperary	7	Shanbally Cross	€27,484	0	0	2	0	0	0
64	Nth Tipperary	8	Newhill Junction	€47,566	1	0	1	0	0	0
65	Nth Tipperary	62	Turtulla Cross	€30,970	0	0	1	0	0	1
66	Offaly	52	Pedestrian crossing outside Tullamore Hospital	€22,901	0	1	1	0	0	0
67	Offaly	52	N52, Durrow Crossroads	€4,004	0	0	1	0	0	1
68	Offaly	80	N80, Coolnahely Junction	€3,399	0	1	0	0	0	0
69	Offaly	80	N80, Kildangan Junction	€2,589	0	0	3	0	0	0
70	Offaly	80	N80, Ashfield Junction and Bends	€2,681	0	1	0	0	0	1
71	Roscommon	5	Gortnagoyne (Elphin junction)	€56,695	0	0	0	0	0	0
72	Roscommon	6	Crannagh - Summerhill	€61,792	0	2	2	0	0	0
73	Roscommon	63	Ranelagh	€7,279	0	1	2	0	0	1
74	Roscommon	63	Ballgalda or Trust	€10,601	0	0	5	1	0	1
75	Sligo City	15	Duck Street Junction (N16)	€103,683	0	0	5	0	1	3
76	Sligo	4	Drumfin X Rds (L1401 and L5502)	€39,678	0	3	4	0	0	1
77	Sligo	15	Milltown X Rds (L3404)	€25,168	0	0	1	0	0	0

91 Schemes Assessed, 2004			Total Cost in year of construction	€1,800,744	Before (5Yr data)			After (2yr data)		
			Number of collisions per year		5	12	47	1	8	32
Sch No	LA	Rt	Scheme Description	Cost	F	S	M	F	S	M
78	Sligo	15	Gortarowry X Rds (L7403 and L7308)	€40,825	1	1	2	0	0	2
79	Sligo	59	Culleens	€39,993	0	0	2	0	1	2
80	Sth Dublin	4	N4 at Kennelsfort Road Junction	€69,357	0	0	1	0	0	0
81	Sth Dublin	4	N4 at Newcastle / Adamstown	€80,257	0	0	10	0	2	4
82	Sth Dublin	81	N81 Embankment Road (Signing and Lining)	€48,758	0	3	12	0	3	8
83	Sth Tipperary	24	Kilshane	€45,602	0	0	1	0	1	1
84	Sth Tipperary	24	Condons Cross, Ballingarrane	€14,160	0	0	1	0	0	0
85	Sth Tipperary	24	Derrygrath (Part Funding)	€89,807	1	0	2	0	0	1
86	Waterford	25	The Sweep	€2,208	0	0	5	0	0	1
87	Waterford	72	Ballylemon	€4,298	0	0	3	0	0	2
88	Westmeath	6	Torque, west of Tyrrellspass	€11,652	0	1	1	0	0	0
89	Westmeath	6	Moate	€11,908	0	1	0	0	0	0
90	Westmeath	52	Kilynan	€9,610	0	0	1	0	0	0
91	Wexford	11	Tinnock N11	€19,709	0	1	0	0	0	0



005 Assessed Schemes

82 Schemes Assessed 2005			Total Cost in year of construction	€1,662,505	Before (5Yr data)			After (1yr data)		
			Number of collisions per year		4	12	54	5	7	58
Sch No	LA	Rt	Scheme Description	Cost	F	S	M	F	S	M
1	Carlow	81	RSRM Closh Cross Junction with the N80	€6,321	0	1	4	0	0	0
2	Carlow	81	RSRM Cuckoo Corner	€40,000	0	0	2	0	0	0
3	Cavan	3	RSRM N3 / R165-9/ R165-9 / L-3001. Knockanoark	€20,000	0	4	2	0	1	0
4	Cavan	54	RSRM N54 / L-1502 / R197 Gannon's "X" at Corradod	€15,000	0	0	2	0	0	1
5	Cavan	55	RSRM N55 / L-65662 at Clarebane Bridge	€2,000	0	0	2	0	0	0
6	Cavan	87	RSRM N87 / L-1043 Jnt at Petrol Station at Ballyconnell Bridge	€15,000	0	0	1	0	0	1
7	Clare	68	RSRM N68/R486 Derycrossaun Cross Junction and Approach	€8,000	0	2	0	0	0	0
8	Cork N	8	RSRM Traffic Lights at Mitchelstown	€25,817	0	0	3	0	0	2
9	Cork S	20	RSRM Kilnamona N20, Junction to Grenagh	€19,413	0	2	2	0	0	0
10	Cork W	71	RSRM Curragh, East of Lissarda. Junction on bend.	€8,500	0	1	3	0	0	0
11	Cork W	71	RSRM Newmills E of Roscarbery. 1.2km series of bends.	€9,569	0	0	2	0	0	0
12	Donegal	13	RSRM N-13-20, Slab road junction Burt chapel	€8,000	0	0	2	0	0	0
13	Donegal	13	RSRM Newtown to Drumbarney	€20,000	1	0	5	0	0	1
14	Donegal	15	RSRM N15-36 / 37, Cloughfin/Clady junction	€25,000	1	0	0	0	1	0
15	Donegal	56	RSRM Lurgybrack School	€83,459	1	0	0	0	0	0
16	Donegal	56	RSRM N-56-5, Drumbeagh	€4,994	1	0	1	0	0	0
17	Donegal	56	RSRM N-56-52, Smullen's corner, Falcarragh	€3,000	0	2	1	0	0	1
18	Donegal	56	RSRM N56-53/4 ray, Ballyboe, Falcarragh	€12,000	0	0	2	0	1	0
19	Donegal	56	RSRM N-56-74 / L-5872-1 Mullaheep junction	€6,341	0	0	1	0	0	0
20	Dublin	1	RSRM Dorset Street - Circular Road North	€24,106	0	0	10	0	0	3
21	Dublin	4	RSRM Merchants quay - Ushers Quay - Bridge St Lower	€6,834	0	0	6	0	1	0
22	Galway	18	RSRM Tulla Road R462 Junction	€22,898	0	0	1	1	0	0
23	Galway	63	RSRM Roanmore Cross	€18,644	0	0	3	0	0	0
24	Kerry	69	RSRM Rea	€14,251	0	1	0	0	0	0
25	Kerry	70	RSRM Knockaunrory junction, Cahersiveen	€220	0	1	0	0	0	0
26	Kildare	9	RSRM Ballymount Construction	€58,415	0	0	1	0	0	0
27	Kilkenny	10	RSRM Lyrath to Scart	€8,099	1	2	3	0	0	2
28	Kilkenny	10	RSRM Outrath	€10,000	0	0	2	0	0	2
29	Kilkenny	76	RSRM Kilbride to Ahanure	€18,000	0	1	3	0	0	0
30	Laois	7	RSRM Redcastle to Clonenagh	€40,000	1	1	2	0	0	0
31	Laois	8	RSRM Togher Roundabout	€20,000	0	1	2	0	0	0
32	Laois	78	RSRM The Rushes	€5,884	1	1	2	0	0	0
33	Laois	80	RSRM Laught Cross	€9,000	1	0	0	0	0	0

82 Schemes Assessed 2005			Total Cost in year of construction	€1,662,505	Before (5Yr data)			After (1yr data)		
			Number of collisions per year		4	12	54	5	7	58
Sch No	LA	Rt	Scheme Description	Cost	F	S	M	F	S	M
34	Limerick	20	RSRM Creggane	€10,000	0	0	2	0	0	0
35	Limerick	21	RSRM Garryduff Cross	€150,000	1	0	0	0	0	0
36	Limerick	21	RSRM Junction with R515	€7,500	0	0	1	0	0	1
37	Longford	4	RSRM East approach to Dublin roundabout	€69,004	0	0	2	0	0	0
38	Longford	4	RSRM Lissardowan	€14,000	0	0	1	0	0	0
39	Longford	63	RSRM Barnacor	€10,000	0	0	4	0	0	0
40	Longford	63	RSRM Kilashee West	€4,424	0	0	2	0	0	0
41	Longford	63	RSRM Rappareehill bends	€7,285	0	1	1	0	0	0
42	Mayo	5	RSRM Clonkeen	€6,000	0	0	2	0	0	0
43	Mayo	5	RSRM Knockaphunta	€15,000	0	0	3	0	0	1
44	Mayo	26	RSRM Coolcronan	€15,000	0	0	1	0	0	0
45	Mayo	59	RSRM Bellacorick PS	€15,000	0	0	1	0	0	0
46	Mayo	59	RSRM Erriff Bridge	€5,000	1	0	0	0	0	0
47	Mayo	83	RSRM Corraun to Grallagh	€8,896	0	1	1	0	0	0
48	Meath	3	RSRM Kilcarn - Cannistown	€30,000	0	0	7	0	0	0
49	Meath	51	RSRM Halltown junction at post N51-0150	€12,852	1	0	2	0	0	0
50	Meath	52	RSRM Maudlin Bridge	€16,066	0	2	2	0	0	2
51	Monaghan	2	RSRM Broomfield Junction	€5,518	0	0	1	0	0	1
52	Monaghan	2	RSRM Coolshannagh, Monaghan Town	€19,745	0	0	2	0	0	0
53	Nth Tipperary	7	RSRM Roscrea Golf club Racht Hall	€29,992	0	1	2	0	0	0
54	Nth Tipperary	8	RSRM Lackins Cross Littleton Thurles	€40,000	0	0	1	0	0	0
55	Nth Tipperary	52	RSRM Puckaun Junction,	€9,278	0	1	1	0	0	0
56	Offaly	52	RSRM Charleville Gate	€6,000	0	0	1	0	0	1
57	Offaly	62	RSRM Drumakeenan School	€50,000	0	1	0	0	0	0
58	Offaly	80	RSRM Clonminch to Derrybeg	€8,000	0	2	1	0	0	2
59	Roscommon	5	RSRM Cloonfree east	€30,000	0	1	1	0	0	0
60	Roscommon	5	RSRM Cloonfree west	€25,333	0	0	1	0	1	0
61	Roscommon	6	RSRM Creggan	€40,000	0	0	1	0	0	0
62	Roscommon	61	RSRM Four mile house	€40,000	1	0	3	0	0	0
63	Roscommon	61	RSRM Grange	€21,306	0	0	1	0	0	0
64	Roscommon	61	RSRM Shankill	€17,391	0	0	2	0	0	0
65	Sligo City	4	RSRM Pearse Rd, Kierans Rd. Junction	€25,000	0	0	2	0	0	0
66	Sligo City	4	RSRM Pearse Rd, Mail Coach Rd, Junction	€20,000	0	0	2	0	0	0
67	Sligo City	15	RSRM Rosses Point, Bundoran	€15,000	0	0	2	0	0	0
68	Sligo City	16	RSRM Duck Street Junction (N16) Part 2	€15,000	0	0	5	0	0	2
69	Sligo	15	RSRM Cashelgarran	€25,000	1	0	1	0	0	0
70	Sligo	17	RSRM Muckelty, Tubbercurry	€10,000	0	0	1	0	0	0
71	Sligo	17	RSRM Ropefied junction	€14,422	0	2	3	0	0	0
72	Sth Dublin	4	RSRM N4/M50 Roundabout	€20,000	1	1	21	0	1	8
73	Sth Dublin	81	RSRM N81 Belgard Road Junction	€21,701	0	0	12	0	0	2
74	Sth Dublin	81	RSRM N81 Glenview Roundabout	€18,945	0	0	4	0	0	0
75	Sth Dublin	81	RSRM N81/M50 Roundabout	€5,999	0	0	6	0	0	3

82 Schemes Assessed 2005			Total Cost in year of construction	€1,662,505	Before (5Yr data)			After (1yr data)		
			Number of collisions per year		4	12	54	5	7	58
Sch No	LA	Rt	Scheme Description	Cost	F	S	M	F	S	M
76	Waterford City	25	RSRM Cork Road, at Land Registry Waterford	€18,307	0	0	12	0	0	0
77	Waterford	25	RSRM N25 Traffic Route Treatment	€38,000	7	23	70	3	1	20
78	Westmeath	55	RSRM Ballykeeran	€9,000	1	0	0	0	0	0
79	Wexford	11	RSRM Inch N11	€27,000	0	0	2	0	0	1
80	Wexford	25	RSRM Clonard	€6,000	0	0	2	0	0	0
81	Wexford	25	RSRM Larkins Cross	€30,000	0	2	4	1	0	1
82	Wicklow	11	RSRM Kilarney Rd Western Roundabout, Anti Skid Surface	€15,776	0	0	2	0	0	0

APPENDIX 2

Solution Type

In/Out BUA	Road Type	Local Authority	Rt	Scheme Description	Year 2002 Costs	Sch No.	Before per Year			After per Year			Short Solution Description	Year
							F	S	M	F	S	M		
I	Junction	Clare	68	Cahercalla	€5,110	1	0.00	0.40	0.40	0.00	0.17	0.17	Signing & Lining	1998
O	Length	Clare	68	Rockmount Cross	€42,646	2	0.20	0.20	0.00	0.00	0.00	0.33	RTL	1998
O	Junction	Cork	72	Carrig Townland	€28,998	3	0.00	0.00	0.20	0.00	0.00	0.00	Sight Distance & signing & Lining	1998
O	Junction	Cork	72	Lombardstown Cross	€31,215	4	0.00	0.40	0.60	0.00	0.17	0.17	Signing & Lining	1998
O	Length	Cork	72	Currabeha	€8,524	5	0.20	0.00	0.00	0.00	0.17	0.00	Signing & Lining	1998
O	Length	Cork	71	Derrycreigh	€10,229	6	0.00	0.20	0.00	0.00	0.33	0.00	Signing & Lining	1998
O	Length	Cork	71	Pedlar's Cross to Skibbereen - Route Treatment	€17,053	7	1.00	2.40	3.60	0.50	3.17	6.33	Signing & Lining	1998
I	Junction	DL/Rathdown	11	N11 at junction with Brewery Road	€39,234	8	0.00	0.40	1.60	0.00	0.50	1.50	Antiskid	1998
I	Junction	DL/Rathdown	31	Frascati Road, Blackrock	€17,053	9	0.20	1.00	7.20	0.00	0.17	4.33	Antiskid	1998
O	Bends	Donegal	56	Carrowowen Bridge	€6,902	10	0.00	0.00	0.20	0.00	0.00	0.17	Crash Barrier & Signing & Lining	1998
O	Length	Donegal	3	Camlin/Cherrymount ck with stephen mp loc does not exist	€5,110	11	0.00	0.40	1.00	0.00	0.50	0.67	Sight Distance & signing & Lining	1998
O	Length	Donegal	56	Aghyavougee '4-points'	€8,524	12	0.00	0.00	0.20	0.00	0.00	0.00	Sight Distance & signing & Lining	1998
O	Bends	Donegal	56	Loughanure	€1,699	13	0.20	0.60	0.20	0.00	0.17	0.00	Signing & Lining	1998
O	Bends	Donegal	56	Dunkineely Junction	€5,110	14	0.00	0.20	0.20	0.00	0.00	0.17	Signing & Lining	1998
O	Bends	Donegal	56	Darney	€6,868	15	0.00	0.60	0.20	0.00	0.17	0.17	Signing & Lining	1998
O	Junction	Donegal	56	Dunnes, Illistrim	€5,110	16	0.00	0.20	0.20	0.00	0.17	0.17	Signing & Lining	1998

In/Out BUA	Road Type	Local Authority	Rt	Scheme Description	Year 2002 Costs	Sch No.	Before per Year			After per Year			Short Solution Description	Year
							F	S	M	F	S	M		
O	Length	Donegal	56	Milltown/Drumbeg	€5,699	17	0.00	0.40	0.00	0.00	0.17	0.17	Signing & Lining	1998
O	Length	Galway	17	Loughgeorge	€116,790	18	0.60	0.40	1.20	0.00	0.50	0.50	Lighting & Signing & Lining	1998
I	Junction	Kerry	70	Killerisk	€4,257	19	0.00	0.40	0.40	0.00	0.00	0.50	Signing&Lining	1998
I	Length	Kerry	72	Rathbeg, Rathmore	€46,912	20	0.00	0.40	0.20	0.17	0.00	0.00	Traffic Calming	1998
O	Length	Kerry	70	Kilderry, Milltown	€10,229	21	0.00	0.20	0.40	0.00	0.00	0.33	RTL	1998
O	Junction	Kerry	70	Camp Cross, Tralee	€14,495	22	0.00	0.40	0.00	0.00	0.50	0.00	Sight Distance & signing & Lining	1998
O	Junction	Kerry	70	Renard Cross	€68,240	23	0.00	0.20	0.40	0.00	0.00	0.00	Sight Distance & signing & Lining	1998
O	Junction	Kerry	70	Murreagh, Waterville	€3,404	24	0.00	0.60	0.20	0.00	0.00	0.00	Signing & Lining	1998
O	Length	Kerry	70	Tullig, Killorglin	€14,495	25	0.00	0.40	1.20	0.00	0.00	0.33	Signing & Lining	1998
O	Length	Kerry	70	Laharn, Killorglin	€3,524	26	0.00	0.20	0.40	0.00	0.17	0.67	Signing & Lining	1998
I	Junction	Kildare	7	Rowanville	€46,059	27	0.20	0.00	0.40	0.17	0.17	0.67	RTL & Camber	1998
O	Length	Kildare	7	Clogheen, Monasterevin	€116,012	28	0.20	0.60	0.60	0.17	0.17	0.83	Traffic Calming	1998
O	Length	Leitrim	4	Faulties Bridge/ Rooskey	€51,177	29	0.00	0.20	1.00	0.17	0.50	1.50	Surface & Signing & Lining	1998
I	Length	Louth	1	Rail Station	€14,495	30	0.20	0.20	1.00	0.00	0.00	1.00	Signing & Lining	1998
I	Junction	Louth	1	Donore Road	€22,173	31	0.00	0.20	0.40	0.00	0.00	0.50	Signing & Lining & Surface	1998
I	Junction	Louth	1	Rathmullin	€23,025	32	0.00	0.20	1.60	0.00	0.00	1.17	Signing & Lining & Surface	1998
I	Junction	Louth	1	George's Square	€23,878	33	0.20	0.60	2.60	0.17	0.33	1.00	Signing, Lining & Surface	1998
O	Junction	Mayo	17	Kilkelly	€25,585	34	0.00	0.20	0.00	0.00	0.00	0.17	Signing & Lining	1998
O	Length	Mayo	17	Ballyfarnagh/Ballyhowly/ Eskermorilly	€34,116	35	0.00	0.40	0.60	0.00	0.00	1.00	Surface & Signing & Lining	1998

In/Out BUA	Road Type	Local Authority	Rt	Scheme Description	Year 2002 Costs	Sch No.	Before per Year			After per Year			Short Solution Description	Year
							F	S	M	F	S	M		
O	Length	Mayo	5	Kilbree/Knockbrack/Dooncastle	€30,703	36	0.00	0.20	1.80	0.33	0.33	1.33	Surface & Signing & Lining	1998
O	Length	Mayo	59	Deerpark East/Barleyhill	€30,703	37	0.00	0.40	0.60	0.00	0.33	0.33	Surface & Signing & Lining	1998
I	Junction	Roscommon	63	Athleague / Rahara Junction	€20,467	38	0.00	0.00	0.40	0.00	0.00	0.17	Signing & Lining & Realign	1998
O	Junction	Roscommon	63	Kilrooskey Junction	€25,585	39	0.00	0.00	0.20	0.00	0.00	0.00	Surface & Signing & Lining	1998
O	Length	Sligo	15	Creevykeel Cross-Roads	€34,116	40	0.00	0.40	0.60	0.00	0.00	0.50	Lighting & Sight Distance & Signing & Lining &	1998
O	Length	Sligo	4	Drumfin	€9,377	41	0.00	0.20	0.40	0.17	0.67	1.00	Sight Distance & signing & Lining	1998
O	Length	Sligo	15	Shannon Eighter	€6,817	42	0.20	0.00	0.20	0.00	0.17	0.00	Signing&Lining	1998
O	Length	Sligo	17	Carrowclare	€13,642	43	0.00	0.00	0.40	0.00	0.00	0.83	Signing&Lining	1998
O	Length	Sligo	16	Dunally	€13,642	44	0.00	0.00	0.40	0.00	0.00	0.00	Signing&Lining	1998
O	Length	Sligo	59	Tanrggo West	€7,670	45	0.20	0.00	0.40	0.00	0.00	0.00	Signing&Lining	1998
O	Length	Sligo	16	N16 Route Counter Measures	€39,234	46	0.00	0.20	0.80	0.17	0.33	0.83	Signing&Lining	1998
I	Length	South Dublin	7	N7/Old Killeen Road	€15,420	47	0.00	0.20	0.40	0.00	0.17	0.50	Ped facilities Flashing Warning Signs	1998
I	Junction	South Dublin	81	Killinarden to Cheeverstown	€14,345	48	0.20	0.00	0.80	0.00	0.17	1.33	Signing&Lining	1998
I	Junction	South Dublin	81	Glenview Roundabout	€1,524	49	0.40	0.00	2.40	0.00	0.00	1.67	Signing&Lining	1998
I	Junction	South Dublin	4	N4/Newcastle Road	€11,040	50	0.20	0.20	2.80	0.17	0.00	2.67	Signing&Lining	1998
I	Junction	South Dublin	81	N81/Cypress Grove/Templeogue Bridge	€3,064	51	0.00	0.20	2.40	0.17	0.17	2.67	Signing&Lining	1998
I	Junction	South Dublin	7	N7/Longmile Road	€4,257	52	0.00	2.00	13.00	0.00	0.67	8.17	Signing&Lining	1998
I	Junction	South Dublin	81	N81/Springfield Avenue	€1,318	53	0.20	0.40	1.40	0.00	0.00	1.00	Signing&Lining	1998

In/Out BUA	Road Type	Local Authority	Rt	Scheme Description	Year 2002 Costs	Sch No.	Before per Year			After per Year			Short Solution Description	Year
							F	S	M	F	S	M		
I	Junction	South Dublin	4	N4/Kennelsfort Road	€3,471	54	0.20	0.80	3.80	0.17	0.00	3.50	Signing&Lining	1998
I	Length	South Dublin	81	Cheeverstown to Westbrook	€5,178	55	0.00	0.20	2.40	0.00	0.33	4.50	Signing&Lining	1998
I	Length	Westmeath	6	Rotchfordbridge	€51,177	56	0.00	0.40	1.20	0.00	0.17	1.50	Pedestrian Crossing	1998
I	Length	Westmeath	52	Clonmellon	€3,404	57	0.00	0.00	0.20	0.00	0.00	0.00	Signing&Lining	1998
I	Length	Westmeath	6	Church Street, Moate	€35,821	58	0.00	0.20	0.40	0.17	0.17	0.50	Signing&Lining&Kerbing	1998
O	Length	Westmeath	4	Griffinstown, Kinnegad	€8,524	59	0.00	0.00	0.40	0.00	0.00	0.83	Signing&Lining	1998
O	Length	Westmeath	6	N6 Junctions - Moate to Athlone	€59,709	60	1.00	1.00	2.80	0.00	0.83	2.83	Signing&Lining	1998
I	Junction	Carlow	80	Stablestown Road	€15,204	1	0.20	0.20	0.20	0.00	0.00	0.00	Mini-Roundabout	1999
I	Junction	Carlow	81	Bridge in Tullow	€11,403	2	0.00	0.20	0.20	0.00	0.20	0.00	Mini-Roundabout	1999
I	Length	Carlow	80	Sharkeys to Murnanes	€8,553	3	0.20	0.00	0.40	0.00	0.00	0.20	Mini-Roundabout	1999
I	Length	Carlow	80	Ballon Village	€10,454	4	0.20	0.00	0.00	0.00	0.00	0.20	Pedestrian Facilities	1999
O	Length	Cavan	3	Cornaslieve, Virginia(double check this prob second co ord dir 1 not dir 2	€5,701	5	0.40	0.00	0.00	0.00	0.00	0.40	Signing&Lining	1999
O	Junction	Cavan	55	Corlurgan	€49,414	6	0.00	0.00	0.40	0.00	0.00	0.20	Surface&Signing&Lining	1999
O	Junction	Cavan	55	Killycannon	€60,818	7	0.00	0.20	0.60	0.00	0.00	0.00	Surface&Signing&Lining	1999
I	Length	Clare	18	Crusheen	€30,409	8	0.00	0.00	0.20	0.00	0.20	0.00	Signing&Lining&Rumble Strips&Footpath	1999
I	Length	Clare	85	Inagh	€96,928	9	0.20	0.00	0.40	0.00	0.00	0.00	TC	1999
I	Length	Cork	72	Park Road, Mallow	€17,105	10	0.00	0.00	0.20	0.00	0.00	0.00	Pedestrian Crossing	1999

In/Out BUA	Road Type	Local Authority	Rt	Scheme Description	Year 2002 Costs	Sch No.	Before per Year			After per Year			Short Solution Description	Year
							F	S	M	F	S	M		
O	Junction	Cork	20	Pike Cross	€15,204	11	0.00	0.20	0.60	0.00	0.00	0.20	RTL	1999
O	Junction	Cork	20	Boherash Cross	€10,454	12	0.00	0.00	0.80	0.00	0.00	0.20	Signing&Lining	1999
O	Junction	Cork	71	DerryLeigh Cross	€57,016	13	0.00	0.00	0.20	0.00	0.20	1.00	Signing&Lining	1999
O	Length	Cork	71	Skibbereen Tunnel	€28,508	14	1.00	2.20	3.80	0.20	1.60	4.40	Signing&Lining	1999
I	Junction	DL/Rathdown	11	Wyattville Junction Southbound Approach	€44,663	15	0.40	0.40	2.80	0.00	0.00	2.00	Antiskid	1999
I	Length	Donegal	15	Ballylast School	€11,403	16	0.00	0.00	0.20	0.00	0.00	0.40	Pedestrian Facilities	1999
O	Length	Donegal	13	Speeneog Cottages	€38,962	17	0.00	0.20	0.20	0.20	0.00	0.80	RTL&Pedestrian Crossing	1999
O	Junction	Donegal	56	Ballykeernan	€8,553	18	0.00	0.40	0.00	0.20	0.00	0.60	Sight Distance & signing & Lining	1999
I	Length	Donegal	13	Newtown Cunningham	€87,425	19	0.20	1.00	0.80	0.00	0.00	1.40	RTL&Realignment	1999
O	Bends	Donegal	56	Bruckless	€38,011	20	0.00	0.40	0.00	0.00	0.20	0.20	Sight Distance & signing & Lining	1999
O	Length	Donegal	15	C'Finn to Cavan Lower	€19,005	21	0.60	0.80	1.00	0.00	0.40	1.60	Signing&Lining	1999
I	Junction	Galway	17	Parkmore	€13,304	22	0.20	0.20	0.60	0.00	0.00	0.40	RTL	1999
I	Junction	Galway	17	Cregboy Junction, Rockwood Jnct	€7,602	23	0.20	0.00	0.20	0.00	0.00	0.40	RTL	1999
I	Junction	Galway	17	Claretuam Junction	€5,701	24	0.00	0.20	0.40	0.00	0.20	0.40	RTL	1999
O	Junction	Galway	18	Labane Junction	€55,115	25	0.00	0.00	0.40	0.00	0.00	0.20	RTL	1999
O	Junction	Galway	18	Coolepark Junction	€36,110	26	0.20	0.00	0.20	0.00	0.00	0.20	RTL	1999
O	Junction	Galway	6	Moyveela Cross	€9,503	27	0.00	0.40	0.20	0.00	0.20	0.20	Signing&Lining	1999
O	Junction	Galway	6	Coldwood Junction	€10,454	28	0.00	0.20	0.40	0.00	0.00	0.00	Signing&Lining	1999
O	Junction	Galway	59	Maam Cross	€6,652	29	0.00	0.40	0.60	0.00	0.00	0.00	Signing&Lining	1999

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O	Junction	Galway	84	Cloonboo Cross	€14,254	30	0.20	0.20	1.00	0.00	0.00	0.40	Signing & Lining	1999
I	Junction	Galway Corp	6	Shopping Centre Roundabout	€15,204	31	0.00	0.00	2.40	0.00	0.00	1.20	Signing & Lining	1999
I	Junction	Galway Corp	6	Junction @ Renmore Road / Dublin Road	€10,454	32	0.40	0.40	0.40	0.00	0.20	0.40	Signing & Lining	1999
I	Junction	Galway Corp	6	Moneenageisha Roundabout	€11,403	33	0.00	0.00	1.60	0.00	0.20	0.40	Signing & Lining	1999
I	Junction	Galway Corp	6	Junction N6 / N59	€16,155	34	0.00	0.00	0.80	0.00	0.00	0.20	Signing & Lining	1999
I	Junction	Galway Corp	59	Junction of Circular Road / Bushypark	€9,503	35	0.00	0.20	1.60	0.00	0.20	0.60	Signing & Lining	1999
I	Length	Kilkenny	78	Curteen	€27,558	36	0.20	0.00	0.80	0.00	0.20	0.20	Ped facilities-Footpath	1999
O	Bends	Kilkenny	78	Webbsborough	€99,208	37	0.00	0.00	0.20	0.00	0.00	0.00	Camber & Signing & Lining	1999
O	Bends	Kilkenny	76	Parkmore	€123,535	38	0.20	0.80	1.80	0.00	0.00	1.00	Signing & Lining	1999
O	Bends	Kilkenny	9	Lukeswell/Knockmoylan	€8,553	39	0.20	0.60	1.80	0.00	0.00	1.80	Signing & Lining	1999
O	Bends	Kilkenny	78	Coolbaun	€16,725	40	0.00	0.00	0.20	0.00	0.20	0.00	Signing & Lining	1999
O	Bends	Laois	80	Glenmore	€14,254	41	0.00	0.20	0.20	0.20	0.20	0.40	Camber & Signing & Lining	1999
O	Bends	Laois	78	Farnans	€49,414	42	0.00	0.80	1.00	0.20	0.00	0.00	Crash Barriers & Signing & Lining & Surface	1999
O	Bends	Laois	8	Corbally	€11,403	43	0.40	0.00	0.40	0.00	0.00	0.80	Signing & Lining	1999
O	Junction	Laois	78	Newtown Cross	€21,856	44	0.00	0.40	0.60	0.00	0.40	0.60	Signing & Lining	1999
O	Junction	Leitrim	4	Junction at Rooskey	€57,016	45	0.00	0.40	0.00	0.00	0.00	0.20	Sight Distance & Surface & Signing & Lining &	1999

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O	Length	Leitrim	16	N16 Route Counter Measures	€127,336	46	0.00	0.20	3.00	0.20	1.20	3.80	Signing & Lining	1999
I	Junction	Limerick	20	Roches Street/O'Connell Street Junction	€6,081	47	0.00	0.00	0.80	0.00	0.00	0.60	Pedestrian Crossing	1999
I	Length	Limerick	69	Dock Road/Courtbrack Avenue	€41,812	48	0.00	0.40	1.60	0.00	0.20	2.00	Pedestrian Crossing	1999
I	Length	Limerick	7	Dublin Road - length	€6,652	49	0.40	1.00	5.00	0.00	0.40	6.40	Signing & Lining	1999
O	Junction	Louth	1	Mooretown	€20,906	50	0.40	0.80	3.00	0.00	0.20	0.40	Signing & Lining	1999
O	Junction	Louth	53	Rathmore Cross	€6,652	51	0.00	0.00	0.40	0.00	0.00	0.20	Signing & Lining	1999
O	Junction	Louth	52	Duffy's Cross	€14,254	52	0.00	0.00	0.40	0.00	0.00	0.00	Signing & Lining	1999
O	Length	Louth	53	Rassan	€14,254	53	0.20	0.80	2.00	0.40	0.00	2.00	Signing & Lining	1999
O	Length	Louth	2	Funshog	€18,056	54	0.20	0.40	0.00	0.20	0.20	0.40	Signing & Lining	1999
I	Length	Monaghan	2	Cloughvalley, Carrickmacross	€67,470	55	0.00	1.00	0.60	0.00	0.20	0.80	TC	1999
O	Junction	Monaghan	2	Aghavilla Junction	€20,906	56	0.00	0.00	0.40	0.20	0.20	0.60	Signing & Lining	1999
I	Junction	Offaly	62	Crinkill - junction with LT80241 to Crinkill	€45,613	57	0.00	0.00	0.40	0.00	0.00	0.00	RTL & Lighting	1999
I	Bend	Offaly	52	Charleville Rd	€11,403	58	0.00	0.20	0.00	0.00	0.00	0.20	Signing & Lining	1999
I	Junction	Offaly	52	Screggan Cross - Junction with Mountbolus Road	€9,503	59	0.00	0.20	0.20	0.00	0.00	0.00	Signing & Lining	1999
O	Junction	Offaly	52	Durrow Cross	€30,409	60	0.00	0.20	0.20	0.00	0.00	0.40	Signing & Lining	1999
O	Length	Offaly	80	Killeigh Northwest, outside village	€13,304	61	0.20	0.20	0.80	0.00	0.00	0.20	Signing & Lining	1999
O	Length	Offaly	80	Killeigh Southeast, outside village	€5,701	62	0.20	0.00	0.20	0.00	0.00	0.00	Signing & Lining	1999

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O	Length	Offaly	52	Ballywilliam	€11,403	63	0.00	0.00	0.60	0.00	0.00	0.00	Signing & Lining	1999
O	Junction	Offaly	52	Kennedy's Cross - Junction of N62/52	€38,011	64	0.00	0.60	0.40	0.00	0.00	0.40	Surface & Signing & Lining	1999
I	Junction	Sligo	15	Cashelgarren	€11,403	65	0.00	0.20	0.60	0.20	0.00	0.00	Signing & Lining	1999
O	Junction	Sligo	15	Mullaghneane	€19,005	66	0.20	0.40	2.00	0.20	0.40	0.60	RTL	1999
O	Length	Sligo	15	Bundoran Rd	€3,422	67	0.20	0.00	0.20	0.00	0.00	0.00	Rumble Strips	1999
O	Junction	Sligo	15	Mount Temple	€7,602	68	0.00	0.20	0.00	0.00	0.00	0.00	Signing & Lining	1999
I	Length	Sligo Co Co	15	Rathcormack	€95,027	69	0.00	0.20	1.40	0.00	0.00	0.40	Signing & Lining	1999
O	Junction	Tipperary SR	24	Surehaul Junction	€39,911	70	0.00	0.20	0.60	0.00	0.00	0.00	RTL	1999
O	Bends	Waterford	72	Finisk Bridge, Cappagh	€13,304	71	0.00	0.20	0.60	0.00	0.00	0.20	Signing & Lining	1999
O	Length	Waterford	25	The Pike/Garranbaun	€52,265	72	0.20	1.00	0.80	0.20	1.80	1.60	Signing & Lining	1999
I	Length	Westmeath	52	Delvin Road	€9,503	73	0.00	0.00	0.20	0.00	0.00	0.00	Ped facilities-Footpath	1999
I	Length	Westmeath	55	Ballymahon Road, Athlone	€104,531	74	0.20	0.00	0.80	0.00	0.00	2.00	RTL & Cycleway	1999
O	Junction	Wexford	11	Ferrycarrig/Kitestown	€55,115	75	0.00	0.40	2.80	0.20	0.40	0.80	RTL	1999
O	Junction	Wexford	11	Scarawalsh	€11,403	76	0.00	0.40	0.80	0.00	0.40	0.00	Signing & Lining	1999
O	Length	Wicklow	81	Nolans Bends	€256,574	77	0.20	0.00	0.60	0.00	0.00	0.40	Camber & Signing & Lining	1999
O	Junction	Wicklow	81	Hearns Cross	€23,757	78	0.20	0.40	1.00	0.20	0.20	1.00	Sight Distance & signing & Lining	1999
O	Length	Wicklow	81	Hempstown Bends	€55,115	79	0.00	0.20	0.40	0.00	0.20	0.60	Signing & Lining	1999
O	Junction	Wicklow	11	Coynes Cross	€9,503	80	0.00	0.20	1.00	0.00	0.00	0.00	RTL	1999

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O	Junction	Wicklow	11	Kilpedder/Kilquade Junction	€47,513	81	0.20	0.00	1.00	0.00	0.40	0.80	Surface & Signing & Lining	1999
O	Junction	Carlow Co Co	9	Milford Cross	€43,820	1	0.00	0.00	0.20	0.00	0.00	0.00	RTL	2000
O	Junction	Carlow Co Co	80	Kilbride Cross	€55,617	2	0.20	0.00	0.00	0.00	0.00	0.00	Surface & Signing & Lining	2000
O	Length	Cavan Co Co	16	N16 Route Counter Measures	€10,112	3	0.00	0.40	1.40	0.00	0.00	0.60	Signing & Lining	2000
O	Bends	Cork Co Co	20	Ballybeg	€171,910	4	0.20	0.40	0.40	0.00	0.00	0.00	Camber	2000
O	Junction	Cork Co Co	71	Castlewhite Junction	€28,652	5	0.00	0.00	0.60	0.00	0.00	0.00	RTL	2000
O	Junction	Cork Co Co	22	Inchigaggin	€2,529	6	0.00	0.00	0.20	0.00	0.20	0.20	Signing & Lining	2000
O	Junction	Cork Co Co	22	Currahaly	€39,607	7	0.00	0.40	1.00	0.20	0.20	0.20	regrade side road & Signing & Lining &	2000
I	Length	Cork Corporation	22	Carrigrohane Road	€176,965	8	0.00	0.20	2.20	0.20	0.00	1.40	TC	2000
I	Length	Donegal Co Co	15	Ballybofey Main Street	€16,853	9	0.00	0.20	0.20	0.00	0.00	0.60	Ped Crossing	2000
O	Junction	Donegal Co Co	56	Four Points Jnt	€50,562	10	0.00	0.00	0.20	0.00	0.00	0.00	RTL	2000
O	Junction	Donegal Co Co	56	N56 Jnt L1435-1 Junction	€25,281	11	0.00	0.00	0.20	0.00	0.00	0.20	Sight Distance	2000
O	Bends	Donegal Co Co	56	N56 Bends (Bruckless)	€25,281	12	0.00	0.20	0.00	0.00	0.20	0.00	Width Increase	2000
I	Junction	Donegal Co Co	56	N56 Junction (Dunfanaghy)	€38,764	13	0.00	0.00	0.20	0.00	0.00	0.00	Realignment	2000
I	Length	Kilkenny Co Co	78	Coolbaun to Moneenroe	€150,000	14	0.20	0.00	1.20	0.00	0.20	0.40	TC	2000
O	Junction	Kilkenny Co Co	8	Beggars Cross	€14,326	15	0.40	1.20	1.00	0.20	0.00	0.60	RTL	2000
O	Junction	Kilkenny Co Co	10	Ennisnag	€7,584	16	0.00	0.00	0.20	0.00	0.00	0.40	Sight Distance & signing & Lining	2000
O	Junction	Kilkenny Co Co	24	RathKieran	€16,853	17	0.00	0.20	0.20	0.20	0.00	0.20	Signing & Lining	2000

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O	Junction	Kilkenny Co Co	76	Ballymack Cross	€15,169	18	0.00	0.40	0.00	0.00	0.20	0.80	Signing & Lining	2000
O	Bends	Laois Co Co	7	Clonneagh	€9,270	19	0.20	0.20	0.20	0.20	0.20	0.40	Signing & Lining	2000
O	Junction	Laois Co Co	8	Castlewood, Durrow	€4,213	20	0.00	0.00	0.40	0.00	0.00	0.20	Signing & Lining	2000
O	Bends	Longford Co Co	55	cloghchurnel	€58,989	21	0.20	0.00	0.40	0.00	0.00	0.00	CrashBarriers & Signing & Lining & Surface	2000
I	Length	Louth Co Co	1	Dublin Road	€25,281	22	1.20	1.60	4.40	0.00	0.60	6.00	Signing & Lining	2000
I	Junction	Mayo Co Co	59	Lord Edward St., Ballina	€33,708	23	0.20	1.00	1.60	0.00	0.00	1.80	Pedestrian Crossing	2000
O	Junction	Mayo Co Co	60	Ardboley, Balla	€25,281	24	0.20	0.40	0.40	0.00	0.00	0.00	Lighting & Sight Distance & Signing & Lining &	2000
O	Length	Mayo Co Co	84	Carrig, Ballinrobe - Castlebar Road	€20,225	25	0.00	0.20	0.20	0.00	0.00	0.00	Lighting & Signing & Lining	2000
O	Length	Mayo Co Co	84	Ballyhenry / Carton, Shrule	€16,853	26	0.20	0.00	0.00	0.00	0.00	0.00	Lighting & Signing & Lining	2000
O	Junction	Mayo Co Co	5	Swinford, Castlebar/Charlestown Junction Check with pat which junction	€42,134	27	0.00	0.00	0.20	0.00	0.20	0.20	Rumble Strips & Signing & Lining	2000
O	Length	Mayo Co Co	26	Shraheen (Foxord / Ballina)	€16,853	28	0.00	0.60	1.20	0.00	0.00	0.60	Signing & Lining	2000
O	Length	Mayo Co Co	17	Shanvaghera & Meeltran	€25,281	29	0.00	0.20	0.60	0.20	0.00	0.80	Signing & Lining	2000
O	Length	Mayo Co Co	59	Rosturk, Mulranny	€10,112	30	0.00	0.00	0.20	0.00	0.00	0.40	Signing & Lining	2000
O	Junction	Mayo Co Co	59	Corraun Junction, Mulranny	€50,562	31	0.00	0.00	0.20	0.00	0.00	0.00	Signing & Lining	2000
I	Junction	Meath Co Co	3	Academy Street	€33,708	32	0.00	0.40	0.20	0.00	0.00	0.60	Signing & Lining & Sight Distance	2000

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O	Bends	Meath Co Co	3	Roestown	€42,977	33	0.40	0.00	0.20	0.00	0.20	0.00	Crash Barriers & Signing & Lining & Rumble Strips & Superelev	2000
O	Junction	Meath Co Co	2	Newtown & Muckerstown	€33,708	34	0.00	0.60	1.20	0.00	0.00	1.40	Signing & Lining	2000
O	Junction	Meath Co Co	1	Painestown	€74,157	35	0.00	0.00	0.00	0.00	0.00	0.20	Signing & Lining	2000
O	Length	Meath Co Co	1	Smithstown	€5,899	36	0.00	0.20	1.20	0.00	0.00	0.20	Signing & Lining	2000
O	Junction	Meath Co Co	1	Gormanstown	€10,955	37	0.20	0.40	0.20	0.20	0.00	0.60	Surface & Signing & Lining	2000
I	Length	Monaghan Co Co	2	Corracloghan	€150,000	38	0.00	0.20	0.60	0.00	0.20	0.00	Signing & Lining & Surface	2000
O	Length	Monaghan Co Co	2	Cashel/Avalreagh	€48,034	39	0.20	0.80	1.60	0.20	0.20	1.00	Signing & Lining	2000
I	Length	Tipperary SR Co Co	8	Ballytarsna School	€15,169	40	0.20	0.20	0.80	0.00	0.00	0.60	Signing & Lining	2000
O	Length	Tipperary SR Co Co	24	Fethard Junction to Molls Cross	€10,955	41	0.00	0.00	0.40	0.00	0.00	1.00	Signing & Lining	2000
O	Length	Tipperary SR Co Co	24	Ballydrehid School N24	€10,112	42	0.20	0.40	0.40	0.00	0.00	0.60	Signing & Lining	2000
I	Junction	Waterford Co Co	25	Mullins Cross	€21,068	43	0.20	0.20	0.60	0.00	0.00	0.60	RTL	2000
O	Junction	Waterford Co Co	25	Rincrew Junction	€21,068	44	0.00	0.40	1.00	0.00	0.20	0.00	Rumble Strips & Signing & Lining	2000
O	Junction	Waterford Co Co	72	Affane Cross Roads	€21,068	45	0.00	0.40	0.00	0.00	0.20	0.80	Sight Distance & signing & Lining	2000
O	Junction	Waterford Co Co	72	Ballymacmague	€63,202	46	0.20	0.40	0.40	0.00	0.00	0.80	Signing & Lining	2000
O	Junction	Wexford Co Co	11	Kyle Cross	€29,494	47	0.40	0.00	0.20	0.00	0.00	0.80	Signing & Lining	2000
O	Junction	Wicklow Co Co	11	Scratenagh Cross	€3,370	48	0.20	0.20	0.40	0.00	0.00	0.80	RTL	2000

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O	Junction	Wicklow Co Co	11	Kilmurray North	€3,370	49	0.20	0.00	0.20	0.00	0.00	0.40	Signing & Lining	2000
O	Junction	Wicklow Co Co	11	Ballinabarney	€8,427	50	0.00	0.20	1.00	0.00	0.40	0.80	Signing & Lining	2000
O	Length	Wicklow Co Co	11	Cronakip	€4,213	51	0.20	0.60	1.00	0.20	0.20	1.20	Signing & Lining	2000
O	Length	Wicklow Co Co	11	The Tap	€58,989	52	0.40	0.60	2.40	0.60	0.20	2.80	Signing & Lining	2000
O	Length	Wicklow Co Co	11	The Beehive	€3,370	53	0.40	0.40	1.00	0.00	0.40	1.20	Signing & Lining	2000
O	Junction	Carlow Co Co	81	Cuckoo Corner, Rathvilly	€17,930	1	0.00	0.00	0.20	0.00	0.00	0.50	Signing & Lining	2001
O	Junction	Carlow Co Co	81	Bang-up Cross	€7,685	2	0.20	0.00	0.00	0.00	0.00	0.00	solid island & Signing & Lining	2001
O	Junction	Carlow Co Co	80	Closh Cross, Junction between N80 & N81	€24,192	3	0.00	0.20	0.80	0.00	0.00	0.50	RTL	2001
O	Length	Carlow Co Co	80	Boggan Hill	€49,806	3	0.20	0.00	0.00	0.00	0.00	0.00	Signing & Lining	2001
O	Junction	Cavan Co Co	87	BallyHugh	€42,945	5	0.00	0.40	0.60	0.00	0.00	0.75	CrashBarriers & Signing & Lining & Camber	2001
O	Length	Cavan Co Co	3	Butlers Bridge to Belturbet	€19,495	6	0.00	0.40	0.40	0.75	0.25	2.00	Signing & Lining	2001
O	Junction	Cavan Co Co	3	Pollamore/Killygarry	€79,529	7	0.00	2.00	2.00	0.00	0.25	2.25	RTL	2001
O	Junction	Cavan Co Co	3	New Inns Junction	€29,191	8	0.00	0.20	0.00	0.25	0.25	0.25	RTL	2001
O	Junction	Clare Co Co	67	Benn's Cross, Lisdoonvarna	€121,091	9	0.00	0.20	0.00	0.00	0.00	0.25	Sight Distance & Realignment	2001
I	Junction	Cork Co Co	8	Mitchelstown, Galtee meats (Pt1&2 added here, removed from 2002)	€56,827	10	0.20	0.20	0.40	0.00	0.00	1.00	RTL & Pedestrian Crossing	2001
O	Bends	Cork Co Co	8	Gortnahown Bends, Flagstaff Hill	€12,096	11	0.00	0.00	0.20	0.25	0.00	0.50	Signing & Lining	2001

In/Out BUA	Road Type	Local Authority	Rt	Scheme Description	Year 2002 Costs	Sch No.	Before per Year			After per Year			Short Solution Description	Year
							F	S	M	F	S	M		
O	Bends	Cork Co Co	72	Fermoy Hospital Bends	€28,289	12	0.00	0.00	0.20	0.00	0.00	0.00	Camber	2001
O	Length	Cork Co Co	25	N25 Right turn lanes	€136,553	13	0.40	2.00	3.00	0.00	0.50	3.25	RTL	2001
I	Length	Donegal Co Co	56	Bridge at Gweedore river south for 200m	€42,690	14	0.20	0.00	0.00	0.00	0.25	0.00	Signing & Lining	2001
O	Junction	Kerry Co Co	22	Lawlor's Cross	€93,843	15	0.00	0.60	0.40	0.00	0.25	0.00	RTL	2001
O	Length	Kilkenny Co Co	9	Jerpoint	€57,868	16	0.00	0.00	0.60	0.00	0.00	1.00	Surface & Signing & Lining	2001
O	Bends	Kilkenny Co Co	9	Barretstown	€5,685	17	0.00	0.20	0.20	0.00	0.00	0.25	Signing & Lining	2001
O	Length	Kilkenny Co Co	77	Ballynasiee	€27,034	18	0.00	0.00	0.40	0.00	0.00	0.25	Signing & Lining	2001
O	Junction	Kilkenny Co Co	76	Kilamery	€5,685	19	0.00	0.20	0.20	0.00	0.00	0.00	Signing & Lining	2001
O	Length	Kilkenny Co Co	9	Knockwilliam	€16,455	20	0.00	0.20	1.20	0.00	0.25	0.00	Surface & Signing & Lining	2001
O	Bends	Kilkenny Co Co	77	Dinin Bridge (Ardaloo)	€49,976	21	0.00	0.20	0.80	0.00	0.00	1.00	Surface & Signing & Lining	2001
O	Junction	Kilkenny Co Co	8	Ballyspellan	€5,692	22	0.20	0.20	0.20	0.00	0.00	0.25	Signing & Lining	2001
O	Junction	Kilkenny Co Co	76	Ballynur	€8,326	23	0.00	0.00	0.40	0.00	0.00	0.25	Signing & Lining	2001
O	Length	Kilkenny Co Co	10	Faulkstown	€42,768	24	0.40	0.00	0.20	0.00	0.00	0.75	Signing & Lining	2001
O	Junction	Kilkenny Co Co	9	Grannagh Junction "Part 1"	€13,963	25	0.40	0.20	0.60	0.00	0.25	1.50	Signing & Lining	2001
O	Junction	Kilkenny Co Co	77	Heneberry's Cross	€36,361	26	0.00	0.00	0.60	0.25	0.00	0.50	Signing & Lining	2001
O	Junction	Laois Co Co	7	Clondouglas, Oak School	€5,422	27	0.00	0.20	0.40	0.00	0.00	0.25	Signing & Lining	2001
O	Junction	Laois Co Co	8	Raheen / Corbally, Junction	€8,004	28	0.00	0.20	0.60	0.00	0.00	0.00	Signing & Lining	2001

In/Out BUA	Road Type	Local Authority	Rt	Scheme Description	Year 2002 Costs	Sch No.	Before per Year			After per Year			Short Solution Description	Year
							F	S	M	F	S	M		
O	Length	Leitrim Co Co	16	N16 Route Treatment, Junction Warning Signs	€77,990	29	0.00	0.80	3.80	0.25	0.75	4.25	Signing & Lining	2001
O	Junction	Limerick Co Co	20	Caher Road / Van Veens Junction	€117,039	30	0.20	0.20	0.00	0.00	0.00	0.50	RTL	2001
O	Junction	Limerick Co Co	20	O'Rouke's Cross	€113,663	31	0.00	0.20	0.60	0.00	0.00	0.50	RTL	2001
O	Length	Limerick Co Co	24	Morrisons	€10,272	32	0.20	0.40	2.00	0.00	0.00	0.75	Signing & Lining	2001
O	Bends	Limerick Co Co	20	Cherrygrove Bend, Croom	€23,963	33	0.00	0.40	0.20	0.00	0.00	0.00	Crash Barrier & Rumble Strips & Signing & Lining	2001
I	Length	Mayo Co Co	59	Fahys Corner, Ballina(Hospital Rd.)	€28,461	34	0.20	0.60	1.00	0.00	0.00	0.75	Pedestrian Crossing	2001
I	Length	Mayo Co Co	59	Fonts Cross, Ballina	€28,461	35	0.00	0.00	0.80	0.00	0.00	1.00	Pedestrian Crossing	2001
O	Junction	Meath Co Co	52	Balrath Cross roads	€7,960	36	0.00	0.20	0.20	0.00	0.00	0.00	Surface	2001
I	Junction	Meath Co Co	3	Commons of Lloyd, Kells, T-junction into Ind Est	€41,631	37	0.00	0.20	0.00	0.00	0.00	0.25	RTL	2001
I	Junction	Monaghan Co Co	2	Traffic Lights - N2/N54 Jct, Broad Road/Dawson St	€23,480	38	0.00	0.00	0.40	0.00	0.00	2.00	Pedestrian Facility	2001
O	Length	Monaghan Co Co	53	N53 - Castleblaney to border, JDP Scheme	€4,454	39	0.20	0.20	0.60	0.00	0.75	1.00	Signing & Lining	2001
O	Length	Monaghan Co Co	12	Monaghan to Armagh Border, JDP Installation	€5,791	40	0.20	0.40	0.60	0.00	0.00	1.25	Signing & Lining	2001
O	Length	Monaghan Co Co	2	Monaghan to Tyrone Border	€12,916	41	0.40	0.20	2.00	0.00	1.00	3.25	Signing & Lining	2001
O	Length	Monaghan Co Co	54	Monaghan to Clones	€11,580	42	0.00	0.60	2.60	0.00	0.50	2.50	Signing & Lining	2001
O	Bends	Roscommon Co Co	61	Athlone to Roscommon Bends	€22,057	43	0.40	0.20	0.80	0.00	0.00	1.00	Signing & Lining	2001
O	Bends	Roscommon Co Co	61	Roscommon to Boyle	€42,406	44	0.20	0.60	1.40	0.25	0.25	2.25	Signing & Lining	2001

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							F	S	M	F	S	M		
O	Junction	Roscommon Co Co	61	Shankill Crossroads	€51,229	45	0.00	0.00	0.80	0.00	0.00	0.25	Width Reduction	2001
O	Length	Sligo Co Co	16	Ballinode / Lughnagall	€17,076	46	0.20	0.40	1.00	0.00	0.50	1.50	Signing & Lining	2001
O	Junction	Sligo Co Co	15	Grange & Rathcormack	€28,461	47	0.40	0.60	5.00	0.25	1.25	2.00	Crash Barrier & solid islands	2001
O	Junction	Tipperary NR Co Co	8	Parkstown	€41,573	48	0.00	0.80	0.80	0.00	0.00	0.00	RTL	2001
O	Length	Tipperary SR Co Co	24	Fawnagowan	€101,944	49	0.40	0.00	0.60	0.25	0.00	0.50	Width Increase & Signing & Lining	2001
O	Junction	Waterford Co Co	25	Holy Cross T-Junction	€60,780	50	0.00	0.40	0.80	0.00	0.00	0.50	RTL	2001
O	Junction	Westmeath Co Co	52	Macetown/Cookesborough	€42,690	51	0.00	0.20	0.20	0.25	0.00	0.25	Signing & Lining	2001
I	Length	Westmeath Co Co	6	Kilbeggan Main Street	€18,928	52	0.00	0.40	0.00	0.25	0.25	0.00	Pedestrian Crossing	2001
I	Length	Westmeath Co Co	55	Glasson	€10,673	53	0.00	0.20	0.00	0.00	0.00	0.00	Signing & Lining	2001
O	Length	Wicklow Co Co	11	Barndarrig	€35,575	54	0.40	0.00	0.40	0.00	0.00	1.00	Width Reduction	2001
O	Junction	Carlow Co Co	9	Royal Oak Junction	€39,052	1	0.00	0.40	0.80	0.00	0.00	0.33	solid island & gradient & Signing & Lining	2002
O	Length	Cavan Co Co	3	Drumgora	€50,603	2	0.40	0.20	0.40	0.00	0.00	0.00	Crash Barrier	2002
O	Length	Cavan Co Co	3	Tullymongan - Pollamore	€42,611	3	0.20	1.40	1.80	0.00	0.00	1.67	RTL	2002
O	Length	Cavan Co Co	3	Maghera - Virginia	€133,242	4	0.60	0.40	3.00	0.00	0.33	1.67	Lighting and pedestrian facilities	2002
O	Junction	Cork North	8	Condonstown	€10,945	6	0.00	0.00	0.80	0.00	0.00	0.00	RTL	2002
O	Junction	Cork North	72	Forge Cross	€1,044	7	0.00	0.00	0.20	0.00	0.00	0.33	Signing & Lining	2002
O	Length	Cork South	22	Coolnacaheragh	€6,903	8	0.00	0.40	0.00	0.00	0.00	0.00	Signing & Lining	2002

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							F	S	M	F	S	M		
							F	S	M	F	S	M		2001
O	Length	Cork South	71	Bends at Rigsdale	€6,883	9	0.20	0.00	0.60	0.00	0.00	0.00	Signing & Lining	2002
O	Length	Donegal Co Co	14	Drumbeg / Dromore	€26,693	10	0.40	0.20	0.40	0.00	0.00	0.00	Lighting & Sight Distance & Signing & Lining &	2002
O	Length	Donegal Co Co	15	Keadew Bridge	€16,537	11	0.00	0.00	0.00	0.00	0.00	0.00	surfacing & widening & Signing & Lining &	2002
I	Length	Dublin City	11	College Green - Grafton St	€27,206	12	0.00	0.00	2.40	0.00	0.00	1.00	Antiskid	2002
I	Junction	Dublin City	3	Phibsborough Road / North Circular Road	€16,584	13	0.00	0.60	3.60	0.00	0.00	2.33	Antiskid	2002
I	Junction	Dublin City	4	South Circular Road - Con Colbert Road / St. John	€21,038	14	0.00	0.40	5.40	0.00	0.33	1.67	Antiskid	2002
I	Junction	Dublin City	11*4	Aston Quay - Westmoreland St	€28,531	15	0.00	0.40	3.40	0.00	0.33	1.33	Antiskid	2002
O	Junction	Fingal Co Co	2	Wards Cross	€3,065	16	0.20	0.20	0.80	0.00	0.00	0.67	solid island & Signing & Lining	2002
O	Junction	Galway Co Co	6	Coldwood	€15,147	17	0.00	0.60	0.20	0.00	0.00	0.33	RTL & Sight Distance	2002
O	Junction	Galway Co Co	18	Clarinbridge	€20,540	18	0.00	0.00	0.20	0.00	0.00	0.33	Sight Distance and Rumble strips	2002
O	Junction	Galway Co Co	17	Cloonacauneen	€28,972	19	0.00	0.20	0.40	0.33	0.00	0.00	RTL & Sight Distance & gradient	2002
O	Junction	Galway Co Co	84	Cloonboo	€11,078	20	0.20	0.20	0.80	0.00	0.00	0.33	Sight Distance	2002
O	Length	Galway Co Co	18	Lough Cultra	€35,305	21	0.20	0.40	1.20	0.00	0.00	0.00	Signing & Lining	2002
O	Rail crossinfg	Kerry Co Co	22	Minish Level Crossing	€4,870	22	0.00	0.00	0.80	0.00	0.00	0.67	Signing & Lining	2002
O	Junction	Kerry Co Co	69	Six Crosses	€27,523	23	0.00	0.00	0.20	0.00	0.00	0.33	Lighting & Rumbles & Signing & Lining	2002
O	Junction	Kildare Co Co	4	Callaghy's Garage, Royal Oak	€61,200	24	0.00	0.40	0.20	0.00	0.00	0.00	kerbing & Signing & Lining	2002
O	Junction	Kildare Co Co	9	Halverstown Junction (School)	€4,500	25	0.00	0.20	0.60	0.00	0.00	0.33	Signing & Lining	2002

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							F	S	M	F	S	M		
O	Junction	Galway Co Co	17	Knockdoe	€21,183	26	0.20	0.00	1.20	0.00	0.33	0.00	Sight Distance plus other	2002
O	Junction	Kilkenny Co Co	9	Lukeswell/Knockmolyan	€165,066	26	0.00	0.60	1.60	0.00	0.00	2.67	surfacing & Signing & Lining	2002
O	Length	Kilkenny Co Co	24	Mooncoin to Clonmore	€19,467	27	0.00	0.20	0.40	0.33	0.00	0.00	Signing & Lining	2002
O	Length	Laois Co Co	80	Kylealeasha / Rossleighan / Crookedy	€5,843	28	0.20	0.80	0.80	0.00	0.33	0.67	Sight Distance & signing & Lining	2002
O	Junction	Limerick Co Co	24	Killonan Cross	€11,200	29	0.00	0.00	0.40	0.00	0.00	0.33	Signing & Lining	2002
I	Length	Longford Co Co	5	Main St. Longford	€12,765	30	0.00	0.20	0.20	0.67	0.33	0.33	Pedestrian crossing	2002
O	Bends	Longford Co Co	55	Cloghchurnel Part 2	€9,974	31	0.20	0.40	0.20	0.00	0.00	0.00	Signing & Lining	2002
O	Length	Louth Co Co	1	Monasterboice to Killineer	€101,730	32	0.60	0.60	1.80	0.00	0.00	0.33	RTL an junction rationalisation	2002
O	Length	Mayo Co Co	17	Kiltimagh junction	€9,000	33	0.20	0.00	0.40	0.00	0.33	0.33	Signing & Lining	2002
O	Length	Mayo Co Co	59	Cloontykillow junction	€8,225	34	0.00	0.00	0.40	0.00	0.33	0.33	Sight Distance & signing & Lining	2002
I	Length	Mayo Co Co	5	Ballyvary	€10,320	35	0.00	0.00	0.40	0.00	0.00	0.33	Lighting and Rumble strips	2002
I	Junction	Meath Co Co	3	Athlumney Junction	€46,599	36	0.20	0.00	0.20	0.00	0.00	1.00	Realignment and upgrading of TL's	2002
O	Junction	Meath Co Co	3	Whistlemount	€3,074	37	0.40	0.20	0.20	0.00	0.00	0.00	Signing & Lining	2002
O	Junction	Meath Co Co	3	Ross Cross (N3)	€203,003	38	0.00	0.00	0.80	0.33	0.00	1.00	RTL	2002
O	Junction	Meath Co Co	3	Garlow cross	€115,286	39	0.00	0.00	0.20	0.00	0.00	0.33	RTL	2002
O	Junction	Meath Co Co	4	Blackwater Bridge	€20,041	40	0.00	0.20	0.40	0.67	0.00	0.33	RTL	2002
O	Narrow bridge	Meath Co Co	4	Leinster Bridge	€4,191	41	0.20	0.00	0.00	0.00	0.00	0.00	Signing & Lining	2002
O	Junction	Meath Co Co	51	Hall Town	€3,876	42	0.60	0.00	0.40	0.00	0.00	0.00	Signing & Lining	2002
O	Junction	Roscommon Co Co	6	Thomastown (Shannonbridge jcn)	€7,000	43	0.00	0.00	0.20	0.00	0.00	0.00	RTL	2002

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I	Junction	Sligo Co Co	16	(N16) - (R286) Mollaway hill/ Ashlane - Hazelwood Rd (Sligo City)	€20,000	44	0.00	0.00	0.00	0.00	0.00	0.67	RTL	2002
I	Junction	Sligo Co Co	15	Rathcormack Wall and Footpath Part 2	€43,526	45	0.00	0.20	0.40	0.00	0.00	1.00	footpath & cyclelane	2002
O	Bends	Sligo Co Co	15	Road section along bend at Urlar Td	€39,723	46	0.20	0.20	0.60	0.00	0.67	0.00	Crash Berrier & Signing & Lining & widening	2002
O	Junction	Tipperary SR	8	Owens & Biggs Lot	€12,180	47	0.20	0.00	0.40	0.00	0.00	0.00	RTL	2002
O	Junction	Waterford Co Co	25	Pilltown Cross (R671 / L-2007)	€8,840	48	0.00	0.60	0.40	0.33	0.00	1.00	Signing & Lining	2002
O	Length	Waterford Co Co	25	The Pike Hill	€4,223	49	0.00	1.20	0.40	0.00	1.33	0.67	Signing & Lining	2002
O	Junction	Waterford Co Co	25	Carrolls Cross	€71,434	50	0.00	0.20	0.40	0.00	0.00	0.33	RTL	2002
O	Bends	Westmeath Co Co	52	Carrick	€47,008	51	0.20	0.40	0.60	0.00	0.00	0.33	Signing & Lining	2002
O	Bends	Wexford Co Co	30	Coolnacon (Teagasc Research Station)	€2,846	52	0.00	0.20	0.40	0.00	0.00	0.33	Signing & Lining	2002
O	Junction	Wexford Co Co	80	Ballycarney - Junction with R745	€10,067	53	0.00	0.20	0.40	0.00	0.33	0.33	Signing & Lining	2002
O	Bends	Wicklow Co Co	81	Knockroe	€6,349	54	0.00	0.60	1.20	0.33	0.33	0.33	Rumbles & Signing & Lining	2002
O	Bends	Wicklow Co Co	81	Russborough Bends	€77,454	55	0.40	0.40	1.20	0.00	0.33	0.00	Camber & Signing & Lining &	2002
O		Cork North	8	Mitchelstown, Galtee Meats assessed under 2001 program	€34,199	remove 5	0.00	0.00	0.00	0.00	0.00	0.00	RTL & ped fac	2002
O	Bend	Carlow Co Co	80	Graingenaspideogue	€11,838	1	0.00	0.00	0.20	0.00	0.00	0.33	Signing & Lining	2003
O	Length	Carlow Co Co	81	Road Widening outside Tullow	€18,532	2	0.20	0.40	0.60	0.00	0.33	0.33	Width Increase	2003
O	Bend	Carlow Co Co	80	Wallsforge Junction	€18,089	3	0.00	0.20	1.00	0.00	0.00	0.67	RTL	2003

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							F	S	M	F	S	M		
O	Length	Cavan Co Co	3	Road Widening from Maghera to Virginia (Part Funding)	€30,279	4	0.60	0.60	3.00	0.33	0.00	1.33	Pedestrian Facilities	2003
I	Length	Clare Co Co	18	Gort Road, Ennis	€7,110	5	0.00	0.00	0.60	0.00	0.33	0.33	Pedestrian Facilities	2003
I	Length	Clare Co Co	18	Crusheen	€53,823	6	0.20	0.00	0.00	0.00	0.00	0.33	Traffic Calming	2003
O	Bend	Cork North	8	South of Corbett Cross	€7,781	7	0.20	0.00	0.00	0.00	0.00	0.67	Signing&Lining	2003
I	Length	Cork North	72	Patrick St Fermoy (Pedestrian Crossing)	€9,213	8	0.00	0.00	0.20	0.00	0.00	0.00	Pedestrian Facilities	2003
O	Junction	Cork North	8	Coracunna Cross	€94,517	9	0.20	0.40	0.40	0.00	0.00	0.00	RTL	2003
O	Bend	Cork South	22	Coolavokig	€4,367	10	0.00	0.80	1.40	0.00	0.00	1.00	Signing&Lining	2003
O	Bend	Cork South	71	Bend & junction at Cashelmore	€3,552	11	0.20	0.20	0.20	0.00	0.00	0.00	Signing&Lining	2003
O	Bend	Cork South	22	Bend & junction at Carrigaphooca	€5,652	12	0.20	0.20	0.00	0.00	0.00	0.00	Signing&Lining	2003
I	Length	Cork South	25	Killeagh	€8,713	13	0.00	0.00	0.20	0.00	0.33	0.33	Pedestrian Facilities	2003
O	Length	Cork West	71	Church Cross, Skibbereen	€30,355	14	0.20	0.40	0.20	0.00	0.00	0.00	Lighting	2003
O	Length	Cork West	71	Shannonvale Cross	€25,137	15	0.20	0.00	0.00	0.00	0.00	0.00	Lighting	2003
O	Length	Donegal Co Co	15	Kiltown / Killygordon	€10,811	16	0.60	0.00	0.40	0.00	0.00	0.67	Signing&Lining	2003
O	Length	Donegal Co Co	15	Finner	€21,816	17	0.00	0.60	1.00	0.33	0.33	0.00	Signing&Lining	2003
O	Junction	Donegal Co Co	13	Callan Junction	€26,110	18	0.00	0.20	0.80	0.00	0.00	0.00	RTL	2003
I	Length	Donegal Co Co	15	Bundoran Main St (straight)	€29,050	19	0.00	0.80	1.00	0.00	0.00	0.00	Traffic Calming	2003
I	Junction	Dublin City	4	Ushers Quay - Ushers Island approaching Bridgefoot St Lwr	€10,160	20	0.40	0.00	1.20	0.00	0.33	0.33	Antiskid	2003
I	Junction	Dublin City	1	Bachelors Walk - Eden Quay - O'Connell Bridge - O'Connell St	€16,163	21	0.00	0.60	1.20	0.00	0.00	1.00	Antiskid	2003

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							F	S	M	F	S	M		
I	Junction	Fingal Co Co	2	Coolquay Junction	€13,564	22	0.00	0.00	0.20	0.00	0.00	0.33	Signing&Lining plus other such as Surfacing, rumbles, sight distance etc	2003
O	Junction	Galway Co Co	17	Caherlea Jn	€7,932	23	0.00	0.00	0.20	0.00	0.00	0.67	Signing&Lining	2003
O	Junction	Galway Co Co	59	Maam Cross	€14,471	24	0.00	0.20	0.20	0.00	0.00	0.00	Sight Distance plus other	2003
O	Junction	Galway Co Co	18	Kiltiernan	€14,365	25	0.00	0.40	1.20	0.00	0.00	1.00	Signing&Lining	2003
I	Junction	Kerry Co Co	70	Skehanagh	€32,031	27	0.00	0.40	0.00	0.00	0.00	0.00	Signing&Lining	2003
I	Length	Kerry Co Co	72	Ballydowney to Fossa	€27,947	28	0.20	0.20	1.00	0.33	0.33	0.33	Signing&Lining	2003
O	Junction	Kerry Co Co	70	Brackhill, Castlemaine	€53,611	29	0.00	0.00	1.00	0.00	0.00	0.00	Signing&Lining	2003
O	Length	Kilkenny Co Co	9	Deerpark	€7,635	30	0.00	0.20	0.80	0.00	0.00	0.33	Signing&Lining	2003
O	Length	Kilkenny Co Co	9	Castlebanny	€14,743	31	0.00	0.20	0.40	0.00	0.00	0.00	Signing&Lining	2003
O	Length	Kilkenny Co Co	9	Moanroe - Derrynahinch	€14,952	32	0.00	0.00	0.20	0.00	0.00	0.33	Signing&Lining	2003
O	Length	Kilkenny Co Co	9	Dunkitt to Grannagh	€17,973	33	0.20	0.40	0.40	0.00	0.00	0.67	Signing&Lining	2003
O	Length	Laois Co Co	80	Derrycloney	€5,032	34	0.00	0.20	1.00	0.00	0.00	0.00	Signing&Lining	2003
O	Junction	Laois Co Co	80	N80 - N78 Simons Cross	€8,720	35	0.00	0.20	0.20	0.00	0.00	0.00	Signing&Lining	2003
O	Bend	Laois Co Co	80	Glen Mor - Arles - Ballickmoyler	€14,759	36	0.20	0.40	0.40	0.00	0.00	0.67	Signing&Lining	2003
O	Length	Laois Co Co	8	Tonduff - Colt - Raheen - Bondra	€15,360	37	0.20	0.20	1.60	0.00	0.67	2.67	Signing&Lining	2003
O	Length	Leitrim Co Co	4	Killaniker Bridge N4	€24,585	38	0.00	0.00	0.20	0.00	0.33	0.00	Safety Barrier	2003
I	Junction	Limerick Co Co	69	Boland's Cross	€4,728	39	0.00	0.20	0.00	0.00	0.00	0.33	Signing&Lining	2003
O	Junction	Limerick Co Co	21	Cregan's Cross	€46,202	40	0.00	0.20	0.40	0.33	0.00	0.33	RTL	2003
I	Junction	Limerick Co Co	7	Groody rbt	€27,144	41	0.00	0.00	2.20	0.00	0.33	0.67	Signing & Lining	2003

In/Out BUA	Road Type	Local Authority	Rt	Scheme Description	Year 2002 Costs	Sch No.	Before per Year			After per Year			Short Solution Description	Year
							F	S	M	F	S	M		
O	Junction	Limerick Co Co	21	Barnagh Gardens	€38,150	42	0.40	0.00	0.20	0.33	0.00	0.33	RTL	2003
O	Length	Longford Co Co	63	Killashee	€13,238	43	0.00	0.20	0.00	0.00	0.00	0.00	Signing&Lining	2003
I	Length	Longford Co Co	4	Edgeworthstown ped crossing	€27,128	44	0.00	0.00	0.40	0.00	0.00	0.00	Pedestrian Facilities	2003
O	Junction	Longford Co Co	4	Ballynagoshen junction	€26,563	45	0.00	0.00	0.80	0.00	0.33	0.00	RTL	2003
O	Junction	Mayo Co Co	59	Bellacorick at Jn NW of Bellacorick	€7,299	46	0.00	0.20	0.00	0.00	0.00	0.00	Signing&Lining	2003
O	Length	Mayo Co Co	59	Carrowmore	€6,034	47	0.00	0.20	0.40	0.00	0.00	0.00	Signing&Lining	2003
O	Length	Mayo Co Co	60	N60 at Brickens Crossroads and Cuilbeg Bridge	€4,982	48	0.00	0.20	0.00	0.00	0.00	0.00	Signing&Lining	2003
I	Junction	Mayo Co Co	84	Bullaun	€14,172	49	0.20	0.20	0.20	0.00	0.00	0.00	Signing&Lining	2003
I	Length	Mayo Co Co	26	Foxford road	€24,387	50	0.00	0.00	0.20	0.00	0.00	0.00	Signing&Lining	2003
O	Junction	Meath Co Co	4	Newcastle	€15,102	51	0.20	0.20	0.20	0.00	0.00	0.00	RTL	2003
O	Junction	Meath Co Co	4	Rathfeigh	€18,514	52	0.00	0.00	0.80	0.00	0.33	0.00	RTL	2003
I	Junction	Monaghan Co Co	54	At Junction of R186 & N54 in Monaghan Town	€11,766	53	0.00	0.00	0.20	0.00	0.00	0.00	Antiskid	2003
O	Length	Monaghan Co Co	12	Killyneil	€40,443	54	0.20	0.00	0.40	0.00	0.00	0.33	Traffic Calming	2003
I	Junction	Offaly Co Co	52	Junction of Collins' Lane and N52, Arden	€9,967	55	0.40	0.20	0.00	0.00	0.00	0.33	Pedestrian Facilities	2003
O	Junction	Roscommon Co Co	6	Cloonark Junction	€7,214	56	0.00	0.00	0.20	0.00	0.00	0.00	Signing&Lining	2003
O	Junction	Roscommon Co Co	6	Ballydangan - Moore & Lowtown jcn	€5,563	57	0.00	0.00	0.40	0.00	0.33	0.33	Signing&Lining	2003
O	Length	Roscommon Co Co	6	Beagh - Brabazon	€5,207	58	0.00	0.40	0.00	0.00	0.00	0.00	Signing&Lining	2003

In/Out BUA	Road Type	Local Authority	Rt	Scheme Description	Year 2002 Costs	Sch No.	Before per Year			After per Year			Short Solution Description	Year
							F	S	M	F	S	M		
O	Junction	Roscommon Co Co	61	Carrigeens	€4,448	59	0.00	0.00	0.40	0.00	0.00	0.00	Signing&Lining	2003
O	Junction	Roscommon Co Co	6	Cornafulla	€26,791	60	0.00	0.00	0.20	0.00	0.33	0.67	RTL	2003
I	Length	Sligo City	4	Junction markings at five locations	€9,043	61	0.00	0.60	3.60	0.33	0.33	2.33	Signing&Lining	2003
I	Junction	Sligo City	4	Pease Rd Cemetry Road Junction	€18,335	62	0.00	0.00	0.00	0.00	0.00	0.00	Signing&Lining	2003
O	Junction	Sligo City	16	Ashlane Duck St Roundabout	€31,665	63	0.00	0.00	0.00	0.00	0.00	0.00	Antiskid	2003
I	Junction	Sligo Co Co	59	T junction of Local Rd L-2203 and Nat Sec Route N59	€27,129	64	0.00	0.00	0.20	0.00	0.00	0.00	Sight Distance	2003
O	Junction	Sth Dublin Co Co	81	N81 Oldbawn Rd Junction	€95,577	65	0.40	0.60	5.20	0.00	0.67	2.33	Antiskid	2003
O	Length	Tipperary Nth Co Co	7	Junctions Ballywilliam to Carrigatogher	€35,064	66	0.00	0.20	1.40	0.00	0.00	1.00	Signing&Lining	2003
O	Bend	Tipperary Nth Co Co	7	Kilmastulla Bend (&Bashfield??)	€10,554	67	0.20	0.20	0.20	0.00	0.00	0.00	Signing&Lining	2003
O	Junction	Tipperary SR Co Co	76	Junction of N76 and L2410-0 at South Lodge	€9,084	68	0.00	0.20	0.00	0.00	0.00	0.00	Surfacing & Signing&Lining	2003
O	Length	Tipperary SR Co Co	24	Apple Farm Junction (Land Purcahse)	€122,668	69	0.00	0.40	0.60	0.00	0.00	0.33	Surfacing & Signing&Lining	2003
O	Junction	Westmeath Co Co	4	Crossanstown	€21,530	70	0.00	0.20	0.40	0.00	0.00	1.00	RTL	2003
O	Junction	Wicklow Co Co	80	Hearns Cross Part 2	€57,185	71	0.20	0.60	1.60	0.00	0.00	0.33	Sight Distance & Other	2003

Appendix 3 : Assuming "Regression to Mean" effect of 30%					
Year of Treatment	% Reduction in collisions			Cost Saving per annum	Avg Annual Rate of Return "Willingness to Pay" ("k-test" method, k>1 increase relative to controls)
	F	S	M		
1998	-21%	68%	14%	-€3,121,676	-92%
1999	-44%	30%	12%	€4,193,719	259%
2000	-40%	-18%	-29%	€5,559,271	392%
2001	-15%	11%	35%	-€992,623	50%
2002	-16%	-10%	2%	€830,346	148%
2003	-42%	-4%	-11%	€5,579,334	472%
Overall				€12,048,372	205%

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RS 465 The Accident Remedial Measures Programme - Evaluation of Programme 2

