

STAGE 1 ACCIDENT REPORT

MINI-ROUNDAABOUT JUNCTION OF GOODWOOD ROAD WITH WICKLOW DRIVE AND WESTMEATH AVENUE.

1. Site Description

The site under investigation is the mini-roundabout junction of Goodwood Road with Wicklow Drive and Westmeath Avenue. It is situated approximately 2.5 miles to the east of the city centre.

2. Accident Data

An investigation has been carried out into conditions at the junction for the period from 1st January 1994 to 31st December 2014. Appendix A shows accident locations at the junction. The recorded personal injury accident (casualty) record over this study period is as follows:-

	Fatal	Serious	Slight	All
1994	0	0	1 (1)	1 (1)
1995	0	0	0	0
1996	0	0	1 (1)	1 (1)
1997	0	0	3 (4)	3 (4)
1998	0	0	0	0
1999	N/A	N/A	N/A	N/A
2000	0	0	2 (2)	2 (2)
2001	0	1 (1)	0	1 (1)
2002	0	0	1 (2)	1 (2)
2003	0	0	2 (3)	2 (3)
2004	0	0	1 (1)	1 (1)
2005	0	0	1 (3)	1 (3)
2006	0	0	0	0
2007	0	0	6 (6)	6 (6)
2008	0	0	1 (1)	1 (1)
2009	0	0	3 (3)	3 (3)
2010	0	0	1 (1)	1 (1)
2011	0	0	3 (4)	3 (4)
2012	0	0	1 (1)	1 (1)
2013	0	0	2 (3)	2 (3)
2014	0	0	4 (5)	4 (5)
Total	0	1 (1)	33 (41)	34 (42)

A mini-roundabout was constructed at the junction during 1999. As such, all data from 1999 has been omitted from the study.

The average annual number of accidents at the site before the mini-roundabout was installed was 1.0, whilst the average annual number of accidents after the mini-roundabout was constructed is 1.93, an increase of 93%. Over the same period, total accidents in the City of Leicester decreased by 15.5%.

Of the 29 accidents since the mini-roundabout was constructed:-

- 23 (79%) involved vehicles failing to give way at the mini-roundabout
- 3 (10%) involved a pedal cycle
- 1 (3%) involved a motorcycle
- 12(41%) occurred on a wet/damp road surface
- 8 (28%) occurred during the hours of darkness

3. Accident Analysis – The Problem

The primary accident problem at the junction is vehicles failing to give way.

4. Possible Remedial Measures – The Solution

Central Government guidance does not encourage the provision of mini-roundabouts at four armed junctions. It is recommended that the junction reverts to a crossroads with Goodwood Road having priority as was the case prior to 1999. It would be anticipated that accidents could reduce to previous levels together with an additional reduction factor of 15% which is the difference between the accidents across the whole of Leicester in the before and after study period. It could therefore be argued that the remedial measure would reduce accidents at the site by 1.085 accidents per year.

It is estimated to cost £30,000 to revert the junction to a crossroads.

5. Economic Assessment

The following calculations are based on recorded personal injury accidents for the study period:-

The following calculation for the Estimated First Year Rate of Return uses the following formula:-

$$\text{EFYRR} = \frac{\text{Annual Collision Savings} \times 100}{\text{Scheme cost}}$$

Estimated accidents saved per year	1.085
Average cost of an urban accident (2012)	£62,250
Estimated annual collision savings	£67,541
Estimated scheme cost	£30,000

Estimated First Year Rate of Return (EFYRR)

225%%

6. Recommendations

It is recommended that the mini-roundabout at the junction of Goodwood Road/Wicklow Drive/Westmeath Avenue is removed and replaced with a priority crossroad junction with Goodwood Road having priority.

7. Background Papers

Reported Road Casualties in Great Britain: 2012 Annual Report. 2012. Department for Transport.

8. Author

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Transport Strategy

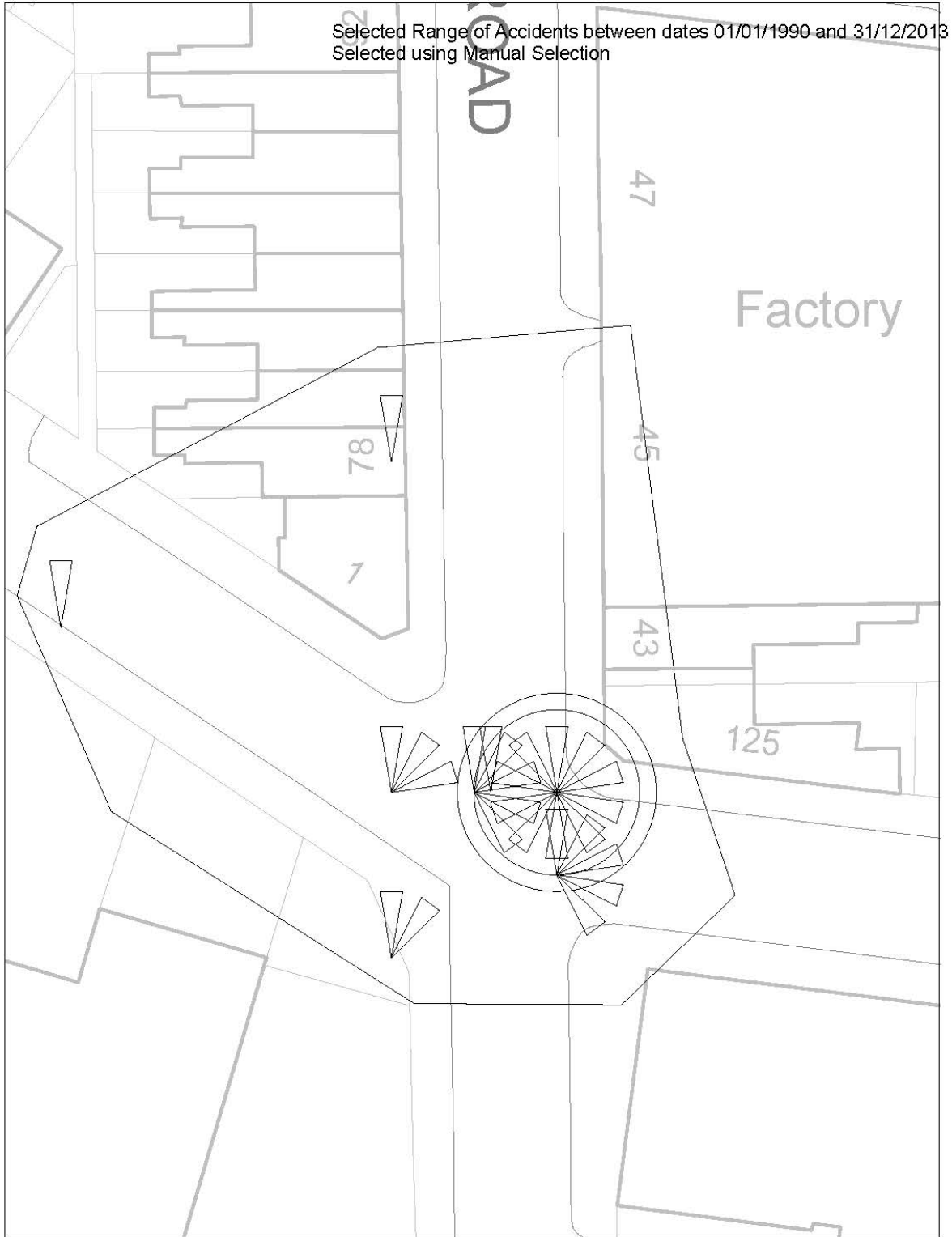
Planning, Transportation and Economic Development

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