

## STAGE 1 ACCIDENT REPORT

### MINI-ROUNDAABOUT JUNCTION OF FOREST ROAD WITH HAMMERCLIFFE ROAD AND FRISBY ROAD.

#### 1. Site Description

The site under investigation is the mini-roundabout junction of Forest Road with Hammercliffe Road and Frisby Road. It is situated approximately 1.5 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 1<sup>st</sup> January 1990 to 31<sup>st</sup> December 2013. 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
1990	0	0	1 (1)	1 (1)
1991	0	0	1 (1)	1 (1)
1992	0	0	1 (2)	1 (2)
1993	0	0	0	0
1994	0	0	0	0
1995	0	0	1 (1)	1 (1)
1996	0	0	0	0
1997	0	0	1 (1)	1 (1)
1998	0	0	1 (1)	1 (1)
1999	0	0	3 (3)	3 (3)
2000 (to 31/8/2000)	0	0	1 (1)	1 (1)
2000 (from 01/11/2000)	0	0	1 (1)	1 (1)
2001	0	0	2 (3)	2 (3)
2002	0	0	0	0
2003	0	0	2 (2)	2 (2)
2004	0	0	0	0
2005	0	0	1 (1)	1 (1)
2006	0	0	1 (3)	1 (3)

2007	0	0	3 (9)	3 (9)
2008	0	0	1 (3)	1 (3)
2009	0	0	2 (4)	2 (4)
2010	0	0	1 (1)	1 (1)
2011	0	0	2 (2)	2 (2)
2012	0	0	2 (3)	2 (3)
2013	0	0	1 (1)	1 (1)
<b>Total</b>	<b>0</b>	<b>0</b>	<b>29 (44)</b>	<b>29 (44)</b>

A mini-roundabout was constructed at the junction between September 2000 and October 2000.

The average annual number of accidents at the site before the mini-roundabout was installed was 0.937, whilst the average annual number of accidents after the mini-roundabout was constructed is 1.443, an increase of 54%. Over the same period, total accidents in the City of Leicester decreased by 15.25%.

Of the 19 accidents since the mini-roundabout was constructed:-

- 16 (80%) involved vehicles failing to give way at the mini-roundabout
- 3 (16%) involved a pedal cycle
- 0 (0%) involved a motorcycle
- 8 (42%) occurred on a wet/damp road surface
- 6 (32%) occurred during the hours of darkness

### 3. Accident Analysis – The Problem

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

### 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 Forest Road having priority as was the case prior to September 2000. 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 0.65 accidents per year.

An estimated cost of £5000 to revert the junction to a crossroads has been obtained.

## 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	0.65
Average cost of an urban accident (2012)	£62,250
Estimated annual collision savings	£40.463
Estimated scheme cost	£5,000
Estimated First Year Rate of Return (EFYRR)	809%

## 6. Recommendations

It is recommended that the mini-roundabout at the junction of Forest Road/Hammercliffe Road/Frisby Road is removed and replaced with a priority crossroad junction with Forest Road having priority.

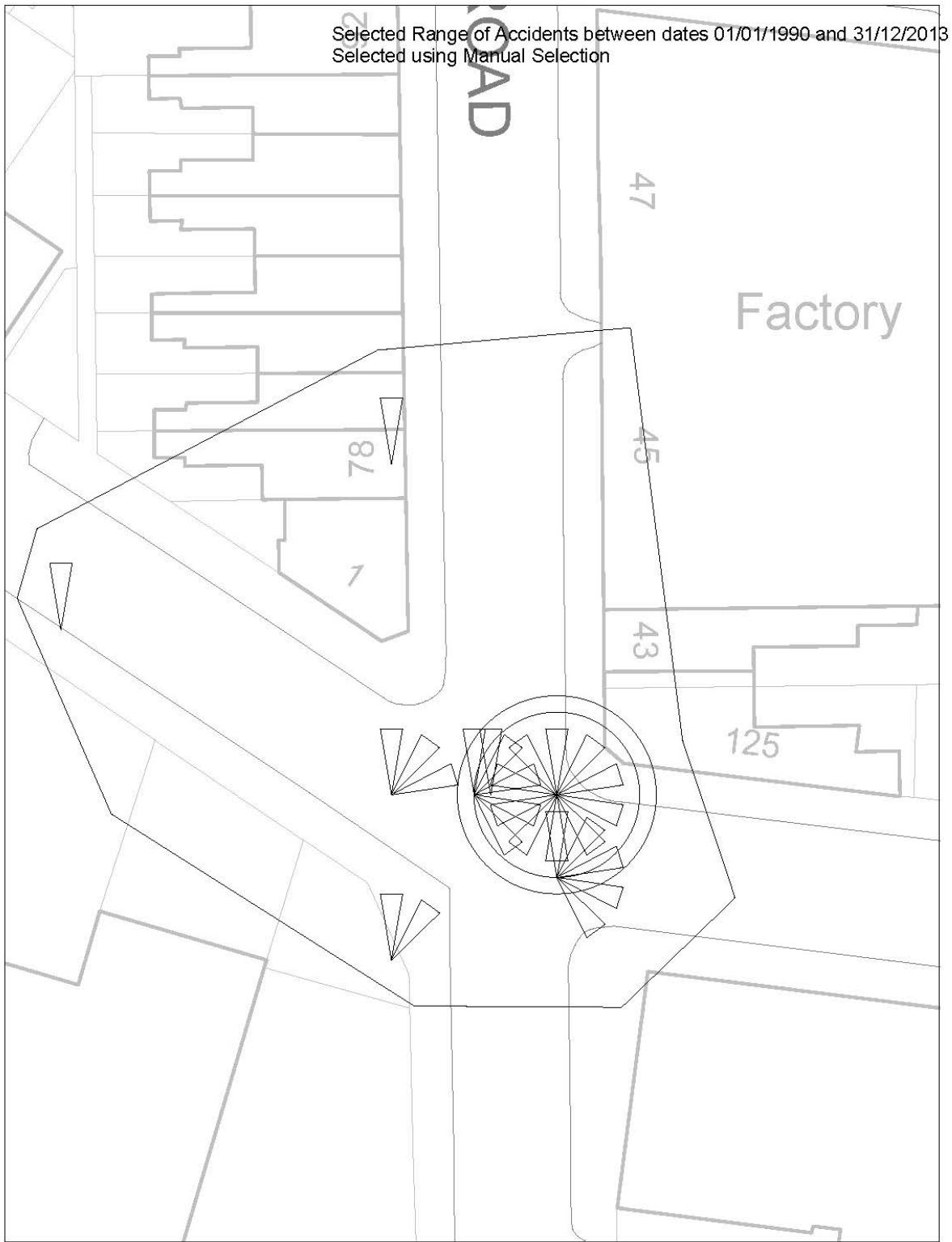
## 7. Background Papers

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

## 8. Author

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