

POPE of LNMS - Summary Report

Scheme Title:	A45/A445 Ryton-on-Dunsmore Junction Improvement Scheme
HA Number:	D86131
Opening Date:	August 2005
POPE Stage:	One Year After

Scheme Description

The junction of the A45, A445 and B4029 (Wolston Lane) lies within Area 11 near the village of Ryton-on-Dunsmore, south of Coventry in Warwickshire. Prior to scheme opening, the junction (a staggered crossroads) had a poor safety record with 4 fatal, 7 serious and 20 slight accidents occurring between 1999 and 2004. The majority of these accidents occurred as a result of conflicting movements between side road traffic and through traffic on the A45. Speed cameras were installed along the A45 in April 2001 in an effort to reduce speeds and therefore accidents at the junction. Following the introduction of the speed cameras, safety concerns at the junction remained. Traffic using side roads also experienced continued queuing and delay (estimated at 9 minutes for side road traffic). The outturn scheme had three main components, as follows:

- ◆ Replacement of the existing staggered layout with a four arm roundabout;
- ◆ Realignment of Wolston Lane to approach the junction opposite the A445 approach and the old section of Wolston Lane closed off; and
- ◆ Closure of the central reservation gaps.

Scheme Objectives and Attainment

	Objectives	Objective Achieved?
1.	To reduce the number of accidents at the junction by removing the need for vehicles to cross the A45 via the gaps.	Yes
2.	To reduce the speed of A45 traffic in order to negotiate the junction.	Yes

Economic Summary

All figures are in 2002 prices, discounted to 2002	Predicted	Predicted Corrected	Actual
First Year Benefit	-£1.17	£0.375m	£0.508m
30 Year Benefits (PVB)	-£29.32m	£8.632m	£14.105m
Cost*	£3.082m	£3.055m	£4.520m
Benefit Cost Ratio (BCR)	N/A	1.83	2.1
% FYRR	N/A	12.3%	11%

(Predicted Corrected and Outturn values are for the AM and PM peak hours only)

Main Scheme Impacts

Economy	<ul style="list-style-type: none"> - The closure of the Ryton car plant in December 2006 appears to have had an influence on total traffic flows at the junction during peak hours (2% reduction (AM) and 5% reduction in the PM peak) between 2001 to 2007; - HGV movements have reduced at the junction by 33% in the AM peak and 40% in the PM peak; - The junction improvements appear to have attracted new trips to the junction from the A445 and Wolston Lane approaches, largely as a result of the reduction in speed of through traffic on the A45; - Peak hour journey time benefits on the side roads (8 minutes per vehicle) together with the accident benefits far out-weighed the peak hour disbenefits experienced by the through traffic on the A45 (22 second geometric delay per vehicle); - The original PAR assessed impacts for all periods and predicted substantial economic disbenefits (-£33.67m over 30 years). The POPE considered peak hours only and the scheme evaluation resulted in positive peak hour economic benefits (£4.35m over 30 years compared to predicted corrected of £4.28m); and - The out-turn BCR is 2.1 (slightly better than predicted)
Safety	<ul style="list-style-type: none"> - The speed cameras saved 1.27 accidents in their first year (from 5.8 to 4.53) and reduced the accident severity from 54% to 24%; - The additional junction improvements saved 4.53 accidents in the opening year; - The junction improvements have resulted in safety benefits 3.5 times greater than achieved by the speed cameras; and - The total out-turn safety benefit over 30 years (£9.856m) is more than twice than that predicted (£4.348m).
Environment	<ul style="list-style-type: none"> - As predicted, the environment has been largely unaffected by the junction improvements as a result of suitable mitigation measures; and - There has however been a large beneficial impact on journey ambience largely as a result of the reduction in speeds and fear of accidents.
Accessibility	<ul style="list-style-type: none"> - The scheme has had a slight beneficial impact on severance as a result of the implementation of new pedestrian crossing facilities and cycle paths.
Integration	<ul style="list-style-type: none"> - The objectives of the scheme were in alignment with policy priorities identified in the Warwickshire LTP 2006-2011 as well as recommendations set out in the M1 to Birmingham Route Management Strategy (RMS).

Lessons Learnt

- ◆ The junction improvements have reduced speeds and provided better facilities and conditions for side road traffic (evident through the journey time savings experienced by users from these approaches). Such a trend suggests that the perception of safety at this location has improved;
- ◆ New geometric delay alone, is unlikely to result in re-routing away from the junction affected;
- ◆ Traffic growth at this location has been suppressed by the closure of the Ryton car plant. Regeneration of the site may result in future traffic growth at the junction;
- ◆ Safety benefits were under-predicted, accident savings in the first year were almost twice that predicted by the PAR
- ◆ The speed cameras implemented in April 2001 provided a small reduction in accidents (1.27 accidents saved in opening year) and reduced accident severity significantly (from 54% to 24%);
- ◆ The junction improvements had a greater affect than the speed cameras, with no accidents occurring following scheme opening;
- ◆ Cycling facilities at the junction may have required more thought and consultation;
- ◆ The scheme has made a positive contribution to regional and local transport policies;
- ◆ The original PAR was poorly supported with relevant technical notes and empirical data to support the impacts claimed in the pre-opening appraisal. Consequently this assessment has largely focused upon peak hour benefits using a combination of modelled and observed delay/journey time data.