

POPE of Major Schemes Summary Report

Scheme Title	M40/A404 Handy Cross Junction	Major Schemes No:	059
Opening Date	March and May 2007 (2-stage opening)		
POPE Stage	One Year After		

Scheme Description

Junction improvement of the M40 Jn 4/A404 Handy Cross which lies on the southern outskirts of High Wycombe in Buckinghamshire. Scheme included a new 5 lane cross-link through the gyratory to assist traffic movements between the M40 and the A404(S) Marlow Bypass, and a new dedicated left turn slip lane between A404(S) Marlow Bypass and M40 towards Oxford. Approaches to the junction from the M40 were widened from 4 to 5 lanes, and signalised pedestrian crossings installed around the western side of the junction.

Scheme Status

The scheme is currently incomplete whilst awaiting implementation of SCOOT (a tool for managing and controlling traffic signals), and some final amendments to lane designations, signing and road markings. For this reason, it has not been possible to fully evaluate the impacts of the scheme at this stage.

Objectives

Objectives	Objective Achieved?
♦ To reduce journey times and reliability for users of the junction	Not yet known
♦ To improve safety	Too early to confirm
♦ To improve facilities for pedestrians and cyclists	Yes
♦ To minimise environmental impact where possible	Yes

Main Impacts

Environment	<ul style="list-style-type: none"> – Impacts largely as predicted. – Earthworks help screen traffic and integrate new slip roads into the landscape. – Retention of spoil on site during construction phase in large mound is not in keeping with the local landscape but does provide some screening. – Too soon to evaluate new landscape planting and replacement habitats
Safety	<ul style="list-style-type: none"> – Accident numbers at the junction itself have changed very little however number of accidents has reduced in the area surrounding the junction, on the C100 and A404(S) Marlow Bypass. – Fewer accidents involving pedestrians and none involving cyclists since scheme opened. – Fewer accidents associated with tailbacks along the M40 slip roads.
Economy	<ul style="list-style-type: none"> – Actual traffic flows lower than predicted. – Outturn costs of £13.5m align closely with forecast cost of £13.8m. – Shorter queues on most of the approaches to the junction in peak hours.
Accessibility	<ul style="list-style-type: none"> – Signalised pedestrian crossings on the western side of the junction have helped to reduce community severance by providing a safer route for pedestrians and cyclists from north to south across the junction from A4010 John Hall Way to C100(S) Wycombe Road.
Integration	<ul style="list-style-type: none"> – The scheme provides increased potential for improved bus/coach passenger interchange. – The scheme was supported in Wycombe District Local Plan, and aligns with local and national policy. – The scheme was built on Green Belt and falls within an Area of Outstanding Natural Beauty (AONB).

Detailed Traffic Impacts

- ◆ The amount of traffic using the junction has remained approximately the same since the scheme opened, at around 97,000 vehicles per day.
- ◆ Traffic has reduced on the C100 both north and south of the junction, and on the A404(N), however traffic has increased on the A404(S) and on the A4010 John Hall Way.
- ◆ Increased traffic on the A4010 John Hall Way may be linked to the opening of Wycombe Park and Ride Service in September 2005, and Cressex Link Road in 2007.
- ◆ Reduced flows on the C100(S) Wycombe Road and increased flows on the A404(S) Marlow Bypass suggests that some traffic has been encouraged back on to the A404(S) rather than using the C100(S) which was known as a rat-run prior to the scheme.
- ◆ The 10% reduction in traffic on the C100(S) is likely to have contributed to the reduction in accidents along this road, as fewer vehicles are now using this less appropriate route.
- ◆ Queues on the C100 north and south of the junction have reduced, and so have the queues on the A404(N) Marlow Hill and M40 east of the junction, indicating that the widened approaches from the M40 slips have helped to improve congestion.

Economic Summary

	Forecast	Actual
Costs (2002 Prices)	£13.8m	£13.5m

Note: Benefits have not been calculated at this stage, due to the incomplete status of the scheme

Lessons Learnt

- ◆ The incomplete status of the scheme means that it was not considered beneficial to collect new post-opening traffic survey data, and it has not been possible to calculate the scheme's 30 year economic benefits over the appraisal period.
- ◆ The 'Review of M40 Junction 4 Handy Cross' undertaken after scheme opening included post-opening journey time surveys, but they were not directly comparable with the POPE 'before' journey time surveys.
- ◆ Inconsistencies were apparent between the forecast flows provided in the Traffic Forecasting Report and the methodology described as the basis for these flows. There were also discrepancies between these forecast flows and the flows used in the TRANSYT and PARAMICS models which require further explanation.
- ◆ There are a number of Highways Agency loops on the approaches to the junction, which are not yet operational, and were unable to provide data for this evaluation.
- ◆ Although surveys of NMUs were undertaken before scheme appraisal, which informed the ES, this information was no longer available for this evaluation. No NMU surveys were undertaken post scheme opening, and therefore it has not been possible to quantify impacts upon these users and on community severance.
- ◆ The appraisal of the scheme did not forecast any safety benefits however findings indicate that safety benefits have occurred as a result of the scheme.
- ◆ Junction parameters within the COBA manual, for the valuation of accidents at junctions do not include 7-arm junctions. The maximum number of arms is 5/6.
- ◆ Outturn flows have been lower than forecast.
- ◆ Where schemes result in more surplus spoil than initially anticipated being retained on site in a scheme with limited landtake, this can result in localised but significant changes in landform which affect landscape character.

