

POPE of Major Schemes Summary Report

Scheme Title	A46 Newark to Widmerpool Improvement
Opening Date	April 2012
POPE Stage	One Year After

Scheme Description

The A46 Newark to Widmerpool Improvement scheme was a major Highway's Agency project in Nottinghamshire which opened to traffic in April 2012. The purpose of the scheme was to provide a 17.5 mile (28km) section of dual carriageway to replace a substandard section of single carriageway trunk road. Numerous low quality junctions were replaced by grade separated junctions, allowing the A46 to have no junctions for through traffic to stop at. The scheme also included retaining sections of the former A46 route as local access roads to settlements and downgrading other sections to be cycle/pedestrian and equestrian routes.

Scheme Objectives

Objectives (Statement of Case 2007)	Objective Achieved?
To reduce the number of accidents.	✓
To reduce congestion along the route.	✓
To improve links between Nottingham and Leicester to Newark, the A1 and Lincoln.	✓
To provide an improved strategic link between the M1 and A1.	✓
To relieve significant development pressures in Bingham.	Too early to quantify

Key Findings

- Average journey times along the A46 corridor have reduced (although not to the level forecast), and an improvement in journey time reliability is seen as a result of reduced congestion.
- Post opening, average weekday traffic flows have increased by between 14-22% along the scheme section, with evidence of reduced traffic on more minor alternative routes.
- Traffic forecasting at the appraisal stage generally overestimated traffic volumes on the A46 and some surrounding roads. This is partly due to an overestimation of traffic growth in the area, as well as the modelled area not allowing for rerouting from a wider area.
- Collision data indicates a saving of 7.8 personal injury collisions per year for the appraisal area, lower than the number forecast. A saving of 14.7 collisions per year is seen for the scheme key links, indicating that the scheme has had a beneficial impact on safety, even taking into account the background national reduction in collisions over the appraisal period.
- Monetary benefits are lower than expected, with outturn present value benefits of £502.35m compared to a forecast of £996.3m. This is primarily due to the journey time and collision savings being lower than forecast.

Summary of Scheme Impacts

Traffic

- Average weekday traffic flows on the A46 scheme key links have increased post opening with an increase of 14% (4,500 vehicles per day (vpd)) seen on the A46 between the A52 and A6097

junctions and an increase of 18% (5,500 vpd) seen on the northern section of the scheme. Proportionally, the highest increase is seen on the southern part of the scheme south of the A52 junction where an increase of 22% is seen, although this equates to a slightly lower 4,200 vpd.

- Traffic has reduced on alternative routes (the A612 and B6386) to the west of the scheme, with reductions also seen on minor roads to the east of the northern section of the scheme. This indicates that traffic has transferred onto the more suitable A46 route. An increase in flows on the A46 above the level of transference indicates that the scheme has also reduced ratrunning on smaller roads where counts were not available.
- Forecast traffic volumes were generally lower than observed, both with and without the scheme. However, the overall forecast impact of the scheme on traffic flows on the A46 was slightly underestimated, suggesting that rerouting was not as great as forecast, and that forecast housing development in the area has not progressed to the level expected for the original opening year of 2016.
- Along the A46 scheme section, average journey times have reduced significantly during all time periods, with greatest savings seen in the peak periods.
- Journey time reliability on the A46 has improved as a result of the scheme opening. This is a result of reduced congestion and reduced collisions along the route.

Safety

- Safety data for the modelled area indicates an annual collision saving of 7.8 collisions per year.
- When only the A46 scheme key links are considered, an annual collision saving of 14.7 collisions per year is seen (above that observed for the wider study area), therefore strongly indicating that the scheme has had a direct beneficial impact on safety on the A46 improved section.
- The savings observed on the scheme section are in line with the forecasts (around 30% reduction in annual collisions), but the forecast saving of 16% of annual collisions over the study area has not been met, with an observed reduction of 6% seen (when the national collision background decline over time is accounted for), although firm conclusions cannot be drawn from one year of data.
- Severity of collisions has reduced slightly, with a larger change seen post opening for the scheme key links than the wider study area.

Environment

- Based on traffic flows, the noise and local air quality impacts of the scheme are generally as expected, with some local variations.
- The observed increase in carbon emissions between the pre and post scheme periods is less than forecast. Observed total emissions are lower than forecast as the without scheme scenario forecast overestimated carbon emissions in the pre scheme period.
- The landscape measures are generally as expected (slight adverse). The effectiveness of planting for visual screening cannot be fully determined at the OYA stage due to the immaturity of the vegetation, however the planting is considered to be growing as expected of one year old planting.
- Biodiversity mitigation measures have been implemented as expected. The effectiveness of these measures cannot be fully evaluated at OYA, however monitoring reports should be available to inform future evaluation.
- The impacts on heritage are largely as expected at the OYA stage. Additional archaeological reports should be published by the five years after (FYA) stage, allowing for a full assessment of the scheme. Visual screening of affected heritage buildings/ sites, where applicable, should be maturing by FYA allowing for an assessment of the effectiveness of mitigation.
- No visible issues with water and drainage were found during the OYA site visit, although an issue remains unresolved with regard to drainage. This was raised by the Environment Agency and local parish councils.
- Physical fitness benefits have been largely as expected. There is an outstanding issue regarding reinstatement of certain footpaths that is the local authority responsibility. Overall the impact of the scheme is considered to be as expected.
- Journey ambience has improved as expected due to the removal of congestion along the route. The route is generally well sign-posted, aiding drivers, and grade separated junctions remove opposing movements across the carriageway reducing driver stress.

Accessibility and Integration

- The removal of traffic from the local settlements of East Stoke and Farndon has benefited these local communities by reducing severance and improving the quality of the environment in the local area. Local communities are further benefited by the conversion of some sections of the former A46 route to cycle and bridleways.
- As a result of the removal of traffic from villages, public transport interchange improvements are indirectly improved through an improvement to the waiting environment, although some services have been rerouted post opening.

Summary of Scheme Economic Performance

		Forecast	Outturn Re-forecast
Journey Time Benefits		£1,157.3m	£601.3m
Safety Benefits		£114.0m	£49.7m
Vehicle Operating Costs		-£239.8m	-£131.4m
Carbon benefits		-£35.2m	-£17.25m
Present Value Benefits (PVB)		£996.3m	£502.35m
Indirect Tax		£196.4m	£108.6m
Present Value Costs (PVC)		£274.5m	£265.3m
Benefit Cost Ratio (BCR)	Indirect Tax as a cost	12.8	3.2
	Indirect Tax as a benefit	4.3	2.3

- Journey time benefits are below that forecast, mainly due to lower traffic levels and speed changes.
- Outturn safety benefits of £49.7m are lower than that forecast as the number of observed collisions in the OYA period within the appraisal area are higher than forecast, particularly when the national background decline in the number of collisions is accounted for.
- Overall the outturn PVB of £502.35m is 49% lower than the forecast.
- The outturn investment costs are 3.5% lower than forecast.
- The outturn BCR indicates that the scheme is still considered to deliver value for money.
- The study has not identified any firm evidence to suggest that the scheme has had a discernible impact in terms of stimulating economic activity at this stage. However the reduced journey times and additional capacity are considered to support future growth around Bingham and Newark.

This document summarises the findings of the post opening evaluation study completed in August 2014.