

POPE of Major Schemes Summary Report

Scheme Title	A5117/ A550 Deeside Park Junctions Improvement	Major Schemes No:	81
Opening Date	March 2009		
POPE Stage	One Year After (OYA)		

Scheme Description

A5117 / A550 Deeside Park Junctions Improvement is a Highways Agency major scheme to provide grade-separation at two junctions on the A494 (formerly the A5117/A550), and to extend the M56 motorway so as to bypass a third junction. The scheme extends over three miles, almost all of which is in Cheshire, apart from a short section falling within Flintshire. Construction began in October 2006; all the junction improvements were operational by December 2008, with full scheme completion in March 2009.

Scheme Objective (source: Environmental Statement)	Achieved?
To improve safety for all users	Yes
To benefit the economy by reducing congestion and improving journey time reliability	Yes
To minimise adverse impacts to people, property, landscape, and sensitive ecological areas	Yes
To improve access to local communities and business	Yes
To provide a safe route for cyclists, pedestrians, and horse-riders	Yes

Main Findings

- The scheme is used by over 40,000 vehicles per day (vpd), and has significantly reduced the congestion in this area.
- On a route following the A494 through the improved junctions, journey times have been cut by about 6 minutes in the peak periods, and about one to two minutes inter-peak. There has also been an improvement to journey time reliability on this route.
- There is some evidence of reassignment of traffic to the improved route, but this is difficult to quantify because of the effects of the local development and the national recession.
- The 'Before' traffic flows are reasonably close to the Do-Minimum predictions, however the 'After' flows are lower than the Do-Something prediction, because background traffic growth has been less than predicted.
- The number of injury accidents has fallen from an average of 39 per year, in the five years preceding scheme construction, to 12 in the year following scheme opening. This is a statistically significant change.
- Before scheme construction, the accident rate was above the national average. In the year after opening, the rate fell by two-thirds but is still slightly higher than the national average.

- The Present Value Cost (PVC), which is expressed in market prices and takes into account loss of indirect tax revenue, is £73.3 million.
- The monetary benefit from time saving is re-forecast as £376.6 million in the A5117 corridor alone, and the accident saving is re-forecast as £9.6 million. The combined benefit is lower than predicted but represents a minimum level of benefits as it does not include all the impacts for reassigned traffic over the wider area used in the original appraisal.
- The provision for cyclists, pedestrians and horse riders is better than before the scheme through the inclusion of a continuous Public Right of Way (PRoW) route, an overbridge at Lodge Lane and improved crossing provision at junctions.

Summary of Scheme Impacts

Traffic

- The average daily traffic volume using the section of the A494 improved by the scheme, west of the A540, is about 40,800 vehicles per day (vpd). This is 1% higher than before the scheme.
- The average daily traffic volume using the section of the M56 extended by the scheme is 35,800 vpd. The volume remaining on the old A5117 east of the A540 is 12,900 vpd. The combined volume of the two parallel roads is 2% lower than on the old A5117 before the scheme.
- There is some evidence of reassignment of traffic to the improved route, but this is difficult to quantify because of the effects of local development and the national recession;
- The 'Before' traffic flows are reasonably close to the Do-Minimum predictions, however the 'After' flows are lower than the Do-Something prediction, because background traffic growth has been less than predicted.
- Journey times along the A494 through the improved junctions have improved by about 6 minutes in the peak period and up to 2 minutes in the inter-peak. There has also been an improvement to journey time reliability on this route.
- On other routes crossing the A494 junctions at surface level, there were peak period savings for north-westbound A540 traffic at Parkgate junction and for north-eastbound A550 traffic. Elsewhere, little overall improvement to journey times or reliability was identified.

Safety

- The number of injury accidents has fallen from an average of 39 per year, in the five years preceding scheme construction, to 12 in the year following scheme opening. This is a statistically significant change.
- Before scheme construction, the accident rate was 0.438 personal injury accidents per million vehicle kilometres (PIA/mvkm), well above the national average. In the year after opening, the rate fell to 0.134 PIA/mvkm, still slightly higher than the national average.
- Personal security has been improved by fact that more vehicles can travel straight through the junctions without stopping in queues, where drivers were potentially at risk of attack.

Environment

- The provision for cyclists, pedestrians and horse-riders is better than before the scheme and the opportunities for physical exercise are also improved.
- Drainage measures including attenuation and sedimentation ponds have been constructed as expected and POPE is not aware that they are performing other than as expected.
- Congestion on the A494 (previously the A5117) has improved, drivers views have altered in line with that expected and improvements in pedestrian crossing provision has occurred.
- It is likely that there is a balance of adverse effects and benefits on the local noise environment and local air quality as expected.
- No significant archaeological features were found and whilst there were changes to the location of the landscape mound, it is not considered to have affected the setting of Shotwick Conservation Area.
- Adverse impacts on landscape and biodiversity are likely to be as expected; subject to the successful establishment of the scheme planting and habitat areas in the longer term.

Accessibility

- The scheme has not led to any change in public transport provision.
- A non-motorised user route has been provided along the length of the scheme, with the new Lodge Lane bridge providing a route over the A494 (formerly A5117). This has reduced severance and improved accessibility.

Integration

- The scheme has had no impacts on transport interchange.
- The scheme supports regional and local land use policies.

Summary of Scheme Economic Performance

- The outturn cost was £51.4 million, at 2002 prices, about 17% higher than predicted.
- The Present Value Cost (PVC), which is expressed in market prices and takes into account indirect tax revenue, is £73.3 million.
- The monetary benefit from time saving is re-forecast as £376.6 million, and the accident saving is re-forecast as £9.6 million. The combined benefit is lower than predicted.
- The Benefit Cost Ratio of 5.3 is lower than predicted but still represents good value for money.

Costs and Benefits (2002 present value year)	Forecast	Outturn
Journey Time benefits	£937.1m	£376.6m ¹
Safety benefits	£3.5m	£9.6m
Present Value Benefits (PVB - 60 years)	£940.6m	£386.2m
Investment cost (2002 prices)	£43.8m	£51.4m
Investment cost (discounted & in market prices)	£45.1m	£52.9m
Indirect Tax (reduced by scheme)	£20.4m	£20.4m
Present Value Cost (PVC)	£65.5m	£73.3m
Benefit Cost Ratio (BCR)	14.4	5.3

¹ The evaluation of the journey time benefits is based on A5117 corridor only whereas the forecast covered a very wide area extending from Flint to Chester and Ellesmere Port. Hence this figure represents an underestimate of the true benefits.

This document summarises the findings of the one year after post opening evaluation study completed in April 2011.