

POPE of Major Schemes Summary Report

Scheme Title	M27 Junction 3-4 Widening
Opening Date	January 2009
POPE Stage	Five Years After

Scheme Description

The M27 Junction 3 to 4 widening scheme opened in January 2009. This was a Highways England Major Scheme to widen approximately 2.9 miles (4.6 km) of the M27 between junctions 3 & 4 near Southampton. The number of lanes was increased from three to four in each direction.

Heavy goods vehicles and traffic changing lanes associated with the two junctions and the motorway service area were identified as factors contributing to the disruption of traffic on the main carriageway leading to congestion and unreliable journey times. The purpose of the scheme was to improve journey times and improve safety for all road users, thereby providing more reliable journey times.

Objective (Source: Environmental Statement)	Objective Achieved?
To provide additional capacity and reduce congestion.	✓
To improve safety.	✗
To give improved and more reliable journey times.	✓
Achieve no significant worsening of the previous environmental assessments and improve on them where possible.	✓

Summary of Scheme Impacts

Key Findings

- Traffic volumes using the scheme have been lower than forecast and this was primarily due to overestimation of background traffic growth in the original appraisal forecasts, and the impacts of the economic downturn reducing traffic flows.
- Journey times in the AM Peak eastbound direction and PM peak westbound direction along the scheme length are shorter at Five Years After opening than they were before the scheme. However AM peak westbound direction and PM peak eastbound direction journey times are slightly longer.
- The scheme has had a moderate beneficial effect on journey time reliability.
- The forecast safety benefit has not materialised based on five years of post-opening data.
- Monetary benefits of the scheme have been lower than predicted due to lower than expected journey time benefits. This is because traffic volumes have been lower than forecast. Costs of the scheme were broadly in line with forecast, and the outturn Benefit Cost Ratio (BCR) is lower than forecast.

Traffic

- The traffic on the M27 between J3 and J4 where the carriageway has been widened from three to four lanes increased by 3% at Five Years After Opening compared to pre-scheme. This represents about 4,200 additional vehicles per weekday.
- Traffic on other motorway sections in the scheme vicinity has also seen increases in traffic compared to pre-scheme (0 to 5%).
- Changes in the hourly traffic trend indicated that the scheme has attracted more traffic in the morning and evening peak periods when the pre-scheme congestion levels were high enough for some traffic to choose alternate routes.
- The level of traffic forecast along the scheme section was overestimated as this assumed background growth in traffic whereas the observed changes in traffic nationally and regionally has shown little change in traffic.
- The extra traffic due to the scheme (i.e. in addition to background growth) was predicted relatively accurately.
- Large journey time savings are observed in the AM peak eastbound direction and PM peak westbound direction. There appears to be a slight increase in journey time in the AM peak westbound direction and PM peak eastbound direction.
- The scheme has had a moderate beneficial effect on journey time reliability in line with that forecast in the appraisal and the route stress has reduced from 91% in the pre-scheme to 76% post opening.

Safety

- The annual average number of collisions on the scheme key links, i.e. M27 J3-4, has seen an increase of 1.7 collisions per annum over what would have been expected having accounted for the background trend in collision reduction. This is not a statistically significant change.
- Post opening collision rates along the scheme section show no observable change when compared to pre-scheme counterfactual rate.
- The forecast safety benefit has not materialised based on five years of post-opening data.

Environment

- Based on lower than expected heavy goods vehicle numbers observed at the five year after opening stage, it likely that Noise and Air Quality are better than expected.
- Tree and shrub planting undertaken as a part of the scheme indicates that the visual screening and landscape integration functions of the mitigation measures are not developing as expected. It is concluded that the intended functions of integration, screening and habitat enhancement will not be fully realised by the Design Year for this scheme without active maintenance/management.
- The Environment Statement required that potential long-term impacts (> 15 years) on reptiles would be linked to cutting/management by the highway Managing Agents. It is noted that maintenance of grassland required for reptile habitat within the scheme is not being maintained as advised in the ES. Invasive species, especially thistles and gorse are threatening to overrun areas of planting if left uncontrolled. The landscape management plan states that species such as gorse, sycamore, ash, poplar and willow should be controlled.
- The impact of the scheme on water quality and biodiversity is considered as expected.

Accessibility and Integration

- The scheme's impact on the Option Values, Severance and Access to the Transport System sub objectives of neutral is consistent in the forecast and the outturn evaluation.
- This scheme is compatible with regional and national transport policies and most local policies.

Summary of Scheme Economic Performance

All monetary figures in 2002 Prices and values	Forecast	Outturn Re-forecast
Journey Times	320.8	100.3
Vehicle Operating Costs	-2.5	-0.9
Safety	37.5	0.0
Total Present Value of Benefits (PVB)	355.8	99.4
Investment Cost	30.1	28.3
Indirect Tax	-5.6	-2.0
Total Present Value of Costs (PVC)	24.5	26.3
Benefit Cost Ratio (BCR)-Indirect Tax as Cost	14.5	3.8
Benefit Cost Ratio (BCR)-Indirect Tax as Benefit	12.0	3.6

- The outturn assessment of the scheme benefits is £99.4m, lower than predicted. This is due to lower than expected journey time savings (as a result of lower than forecast traffic volumes).
- The outturn investment cost is 8% lower than forecast.
- The outturn BCR of 3.6 is lower than forecast due to the lower than expected benefits accrued. However the scheme still represents high value for money.

This document summarises the findings of the Five Year After (FYA) post opening evaluation study completed in October 2015.