# POPE of Major Schemes Summary Report

| | | | |
|---|---|---|---|
| Scheme Title | **M25 J12 to J15 widening** | Major Schemes No: | 36 |
| Opening Date | 13th December 2005 | | |
| POPE Stage | One Year After | | |

## Scheme Description

On-line widening of 11km of the M25 from J12 to J15 consisting of the following measures:

- Widening of J12 – J13 and J13 – J14 from four to five lanes per carriageway
- Widening of J14 – J15 from four to six lanes per carriageway
- Motorway through junctions J13 and J14 widened from three to four lanes
- Provision of new hard shoulders, except at some bridge locations

| Objectives | Objective Achieved? |
|---|---|
| To accommodate traffic growth on this section of motorway | Yes |
| To accommodate traffic associated with Heathrow Terminal Five which will add to this when it opens in 2008 | Too early to judge |
| To improve reliability and reduce journey times | Yes |

## Main Impacts

**Environment**

- Impacts were generally as expected
- Noise impacts were less than expected
- The scheme won a Considerate Constructors National Silver Award
- The scheme won an Excellence in Recycling Award

**Safety**

- Scheme successful in reducing total number of accidents
- Scheme successful in reducing accident rate per vehicle kilometres travelled

**Economy**

- Economic appraisal methodology has changed significantly and is now based upon 60 years rather than 30 years
- Actual traffic flows similar to predicted
- Journey time savings greater than expected
- Vehicle operating costs higher than expected but indirect taxation increases
- Although the scheme cost more that the 1998 cost forecast, the cost estimate rose before construction and therefore the contractor came in below this revised budget.
- Economic Benefits similar to predicted

**Accessibility**

- No increased severance
- Improved access for all road based modes to airport

**Integration**

- Consistent with regional planning guidance and plans to widen the majority of the M25.

## Detailed Traffic Impacts

- Before work commenced on the scheme, two-way Annual Daily Traffic (ADT) flow was approximately 173,000 vehicles per day (vpd) between J12 and J13, around 182,000 vpd between J13 and J14, and around 174,000 vpd between J14 and J15;
- After the scheme was completed, two-way ADT was approximately 181,000 vpd between J12 and J13, 193,000 vpd between J13 and J14, and around 189,000 vpd between J14 and J15. Between 2003 and 2006 traffic flow between J12 and J13 has increased by 5%, traffic 6% between J13 and J14 and 9% between J14 and J15;
- Traffic has generally risen in the neighbouring sections of the M25, although less so between J12 and J11 anti-clockwise due to congestion downstream;
- The proportion of HGVs on the road has generally remained the same after opening;
- It is 18% quicker to travel from J12 to J15 and 10% quicker to travel from J15 to J12 over the whole day whilst it is 25% quicker over this section in the morning peak and as much as 50% quicker in the evening peak in a clockwise direction;
- There has been an 8% increase in average daily journey times between J13 and J12 and a higher increase in journey times in the evening peak;
- There has been a considerable reduction in congestion hours (as measured by the number of hours the speed falls below 50mph). Clockwise, congestion hours have fallen from 91 hours per week to 32 hours per week. Anti-clockwise, congestion hours have fallen from 73 hours per week to 38 hours per week;
- The original traffic forecasts are reasonably close to the actual traffic volumes; and
- Traffic volumes on the M3 and M4 are largely similar to the before situation, however traffic volume changes on the slip roads suggest some re-routing as do changes on the A3113 and A30.

## Economic Summary

| | Forecast*[1] | Actual*[2] |
|---|---|---|
| 30 year Benefits (1998 prices) | £151m | £192m |
| Costs (1998 Prices) | £57m | £62m |
| Benefit Cost Ratio (BCR) | 2.65 | 3.10 |

*[1] 1998 AST values is based upon 30 year appraisal period
*[2] 1998 outturn assessment is based upon 30 years appraisal period.
Values are in present values discounted to 1998 at 6% pa

## Lessons Learnt

- Traffic predictions have turned out to be reliable for the scheme, however there is more congestion downstream of the scheme has occurred;
- Better lane management has led to decreases in the number and severity of accidents;
- Environmental impacts appear to be as expected after one year, although noise improvements are better than expected and local authorities were impressed with contractor liaison;
- Environmental approach to design and construction was appreciated and won awards;
- The original economic appraisal is reasonably comparable to the outturn assessment, however, given the complexity of the appraisal methodology, this is difficult to compare.