

POPE of Major Schemes Summary Report

Scheme Title	A41 Aston Clinton Bypass
Opening Date	October 2003
POPE Stage	Five Years After

Scheme Description

The A41 Aston Clinton scheme is a dual carriageway bypass of the village of Aston Clinton in Buckinghamshire. The scheme opened in October 2003 and includes the following key features:

- A 4mile long dual carriageway road passing to the north of Aston Clinton between Woodlands roundabout in the west and Tring Hill roundabout in the east;
- Bridges carrying side roads over the bypass; and
- A local diversion of the Wendover Arm of the Grand Union Canal.

Objectives (Roads Review, 1997)

Objective Achieved?

- | | |
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| • To reduce the number of accidents in Aston Clinton by removing through traffic | Yes |
| • To improve journey times and journey time reliability | Yes |
| • To improve air quality for properties in Aston Clinton | Yes |
| • To reduce severance in Aston Clinton | Yes |

Key Findings

- The objectives of the scheme were to reduce accidents, improve journey times and reliability, air quality, and reduce severance in Aston Clinton. The bypass has achieved all of these objectives.
- The scheme has not resulted in the level of transfer of traffic from the former A41 to the bypass that was predicted. There are no clear reasons for this, as journey times are quicker on the bypass and there does not appear to be any congestion in the area.
- The traffic flows are lower than forecast, which could be due to the high traffic growth assumption used in the appraisal. No documentation was available to identify if a central or low growth case was also modelled.
- The monetary journey time benefit is considerably less than predicted because journey time savings were less than forecast and there are fewer vehicles using the route than predicted.
- The lower journey time benefits, coupled with the higher than forecast scheme cost results in a benefit – cost ratio (BCR) of 1.2 compared to a predicted BCR of 3.
- The availability of appraisal related documents limited the ability to gain a full understanding of the differences between predicted and observed impacts. The appraisal for this scheme was undertaken in the 1990's, and the HA has since introduced improved record keeping systems.
- There has been a 35% increase in carbon emissions as a result of the scheme. This is caused primarily by the increased speed of vehicles along the bypass and through Aston Clinton village, and the extra distance involved for vehicles now using the bypass.
- Environmental mitigation measures such as extra earth mounding have been implemented above the proposals set out in the Environmental Statement (ES).
- The former A41 and the bypass has now been de-trunked and ongoing responsibility for maintenance and management of this scheme now lies with the Local Highway Authority.

Summary of Scheme Impacts

Traffic

- There are 14,700 vehicles per day (vpd) travelling through Aston Clinton which is 15,400 less than before the scheme opened, representing a decrease of 59%. However, this is higher than predicted.
- There are 20,400 vpd using the bypass which is 28% lower than predicted.
- Traffic flows across the narrow corridor (old road and new road) are 15% lower than predicted. This is likely to be due to the high traffic growth assumption used in the appraisal.
- The traffic model predicted shorter journey times on the former A41 and longer journey times on the bypass than has actually been observed. This difference is likely to be related to the traffic flows as there is more traffic than predicted on the former A41 and less than predicted on the bypass.
- Journey time reliability (as measured by 'route stress') has improved considerably for A41 traffic.
- The local roads in the vicinity of Aston Clinton have experienced very little change in traffic volumes as a result of the scheme.

Safety

- There was an average of 74 accidents per year in the five years within the modelled area before the scheme was implemented. This reduced to 60 accidents per year since opening. This represents a larger saving than originally forecast.
- In the local area (old road and new road), there was an average of 18 accidents per year. This has decreased to 16 accidents per year (-11%), but is not statistically significant.
- The bypass only has lighting around the junctions whereas there was lighting along the whole route on the former A41 through Aston Clinton, therefore this could make road users feel more vulnerable.

Environment

- The expected improvement in traffic noise is likely to be less than expected due to higher than predicted traffic volumes in Aston Clinton village. However, impacts of the bypass likely to have been mitigated due to increased provision of mounding and use of low noise surfacing.
- The bypass has had a significant beneficial impact on air quality for the properties in Aston Clinton. However, this benefit is likely to be slightly less than expected due to higher than predicted traffic volumes through the village.
- Carbon emissions have reduced by 35% as a result of the scheme. This is mainly caused by the higher speeds possible both on the bypass and through the village now that congestion has been removed, plus the additional distance of the bypass compare to the old route.
- The impact on landscape can be considered to be better than expected due to the additional mitigation included since the Environmental Statement was published.
- The scheme has had a slight adverse impact on biodiversity and mitigation was implemented to minimise this impact but the effectiveness of the mitigation measures was not monitored during the aftercare period.
- There has been a negative impact on heritage of historic resources as expected due to the large adverse impact at Vatches Farm.
- Measures are in place, such as ponds, channels and the canal diversion, to mitigate the impacts on the water environment, resulting in only a slightly adverse impact, as expected.
- Although not appraised pre-scheme, the improved walking and cycling conditions through Aston Clinton have had a slight beneficial impact on physical fitness as pedestrians and cyclists are able to use these facilities.

Accessibility

- As expected, the bypass has had no impact on option values, as no new transport modes have been introduced as part of the scheme.
- Traffic volumes have considerably reduced in Aston Clinton thereby reducing severance.

Integration

- The scheme has had a beneficial impact on the reliability of buses through Aston Clinton village.
- The bypass is consistent with the Regional Planning Guidance and the Buckinghamshire Structure Plan.

Summary of Scheme Economic Performance

	Pre-scheme Forecast (2002 Prices)	Post Opening Re-forecast (2002 Prices)
Journey Time Benefit	£93.9m	£37.9m
Safety Benefit	£15.2m	£15.3m
Total 30 Year Benefits (PVB)	£109.1m	£53.2m
Costs (PVC)	£38.5m	£44.1m
Benefit Cost Ratio (BCR)	3.0	1.2

¹ Discounted to 2002: the year 2002 has been used as the standard base year

- The actual journey time benefits were considerably less than predicted due to journey time savings being less than forecast, and also fewer vehicles using the route than predicted.
- The monetary safety benefit is broadly as predicted.
- The outturn scheme cost was £44.1m which is 15% higher than predicted.
- The AST predicted a BCR of 3.0 compared to the re-forecast of 1.2. This difference is due to journey time benefits being less than forecast and the outturn scheme costs being higher than originally predicted.

This document summarises the findings of the five years after post opening evaluation study completed in October 2009.