

POPE of Major Schemes Summary Report

Scheme Title	A421 Great Barford Bypass
Opening Date	24 th August 2006
POPE Stage	One Year After

Scheme Description

The A421 Great Barford Bypass is located to the east of Bedford and is a major link in the Milton Keynes to Cambridge corridor. The scheme bypasses the villages of Great Barford and Roxton in the form of a 4.8 mile dual carriageway running between the A421/A428 junction near Bedford, and the A1 Black Cat Roundabout near Roxton. The key features of this scheme are:

- Construction of a new dual carriageway bypass to the east of Bedford and North of Great Barford;
- Improvements to Black Cat Roundabout;
- Construction of new roundabouts and lay-bys on the bypass;
- Provision of a new over bridges for pedestrians and cyclists; and
- Extensive landscaping and environmental mitigation measures.

Objectives (HA Statement of Case, January 2003)

- To improve local air quality and reduce traffic noise through the villages
- To reduce the number of accidents along the A421
- To improve strategic access from the M1 to the A1 (east of Bedford)
- To make the de-trunked route safer for pedestrians and cyclists and improve reliability for local bus services
- To improve journey times and reliability for the trunk road traffic

Objective Achieved?

Yes – but some local concerns in Renhold

Yes

Yes

Yes

Yes

Key Findings

- On the whole this scheme has met its initial objectives.
- The Environmental Statement did not take the environmental impacts of the scheme on the village of Renhold into account, although the scheme seems to have had a significant perceived affect on Renhold in terms of increased traffic.
- There is concern in Renhold and other locations near the bypass about the increase in noise, but elsewhere the noise impact has been beneficial.
- Reassignment impacts (local and strategic) were larger than anticipated at the appraisal stage resulting in out-turn traffic on both the old road and bypass being higher than forecast.
- Indirect tax benefits had a significant impact on the scheme costs, with tax revenues offsetting a large proportion of the Investment cost.
- Environmental measures were implemented in Great Barford and Roxton..
- The scheme received very positive feedback from residents in Great Barford and Roxton but not Renhold.
- Although no accidents have occurred in this area since the scheme opened, the approach to the improved Black Cat roundabout from the old A421 seems to have more delays and is perceived as a safety risk by residents.
- The scheme has improved strategic access from the M1 to the A1, but there is no evidence of extra traffic making this movement.

Summary of Scheme Impacts

Traffic

- There has been an observed 75% reduction in traffic through Great Barford and 89% through Roxton. However, these are 33% and 9% higher than predicted on the old road and bypass respectively.
- Traffic has increased in Renhold by 91%, (equivalent of an extra 1,200 vehicles per day).
- The number of HGVs travelling through Great Barford has dropped by 90% on pre-opening levels.
- Traffic on the old A421/ Bypass corridor has grown by 29% in 3 years (well above background growth of 6%) - this growth in traffic is attributable to re-assignment of east/westbound traffic between the Black Cat roundabout and Bedford; additional local trips; and, increased route usage by long distance traffic.
- The vast majority of Great Barford and Roxton residents believe the bypass has brought traffic relief benefits and made driving easier.
- Journey time reductions of 3-6 minutes per vehicle were observed during peak periods, this is broadly in line with forecasts. Off peak savings were more modest at 1.5 – 2.5 minutes per vehicle.
- Route stress (an indicator of journey time reliability) has reduced from 77% to 29% for trunk road traffic.

Safety

- One year after opening, the annual number of accidents saved over the appraised area was 17.6, this almost 3 times the forecast saving over the same area.
- Considering only the old and new road combined, the number of accidents has fallen from 11 to 7.2.
- There have been no recorded pedestrian or cyclist accidents on the old A421 following scheme opening.
- The replacement of the priority T junction with a roundabout has helped reduce accidents at the access point to Renhold Village.
- The majority of residents in Great Barford and Roxton believe that safety for road users and pedestrians has improved due to lower traffic levels. There was a perception amongst Renhold residents that safety here had worsened.

Environment

- The scheme has achieved its objective of improving the local environment along the old A421.
- Based on the information available, the environmental impacts for all the sub-objectives are likely to be in line with expectations, although some concerns have been raised by consultees relating to water and public rights of way. The Environmental Statement did not take the impacts of the scheme on the village of Renhold into account.
- It is too early to evaluate the overall success of the new seeding and planting, however it would appear to be generally establishing satisfactorily.
- On the whole the bypass has restored a better village environment in Great Barford and Roxton, however there are some concerns amongst residents in Renhold that traffic has had a detrimental impact on the village environment.
- Footways and bridleway links/diversionary routes have been maintained across the bypass and in some cases signage improved to encourage more cycling, walking and equestrian activity.

Accessibility

- The degree of severance caused by the A421 has reduced – particularly in the villages of Great Barford and Roxton.
- Findings from a resident survey show that 65% and 61% of residents in Roxton and Great Barford respectively felt that access to local facilities had improved following scheme opening.

Integration

- The benefits offered by the A421 Great Barford bypass align with key policy objectives set out in the latest Bedfordshire Local Transport Plan and the East Midlands Regional Spatial Strategy.

Summary of Scheme Economic Performance

All figures in 2002 Prices (Discounted to 2002)	Pre- Scheme Forecast	Post Opening Re-forecast
Investment Cost to Highways Agency	£56.5m	£51.9m
Indirect Tax Revenues	-£28.5m	-£17.7m
Present Value of Costs (Including Operating Costs*)	£30.9m	£37.1m
Journey Time Benefit	£216.8m	£240.3m
Safety Benefit	£27.9m	£74.3m
Present Value of Benefit	£244.7m	£314.6m
BCR	7.9	8.5

*It is assumed that out-turn operating costs were as forecast (£2.9m)

- Indirect taxation benefits offset a substantial proportion of the HA investment costs;
- Journey time benefits were 11% more than predicted mainly due to higher than predicted traffic volumes on the bypass and old road.
- The monetary safety benefits are nearly 3 times better than expected.
- The benefit cost ratio is higher than forecast – this is a cumulative effect of a lower than forecast cost and higher than expected journey time and accident savings.