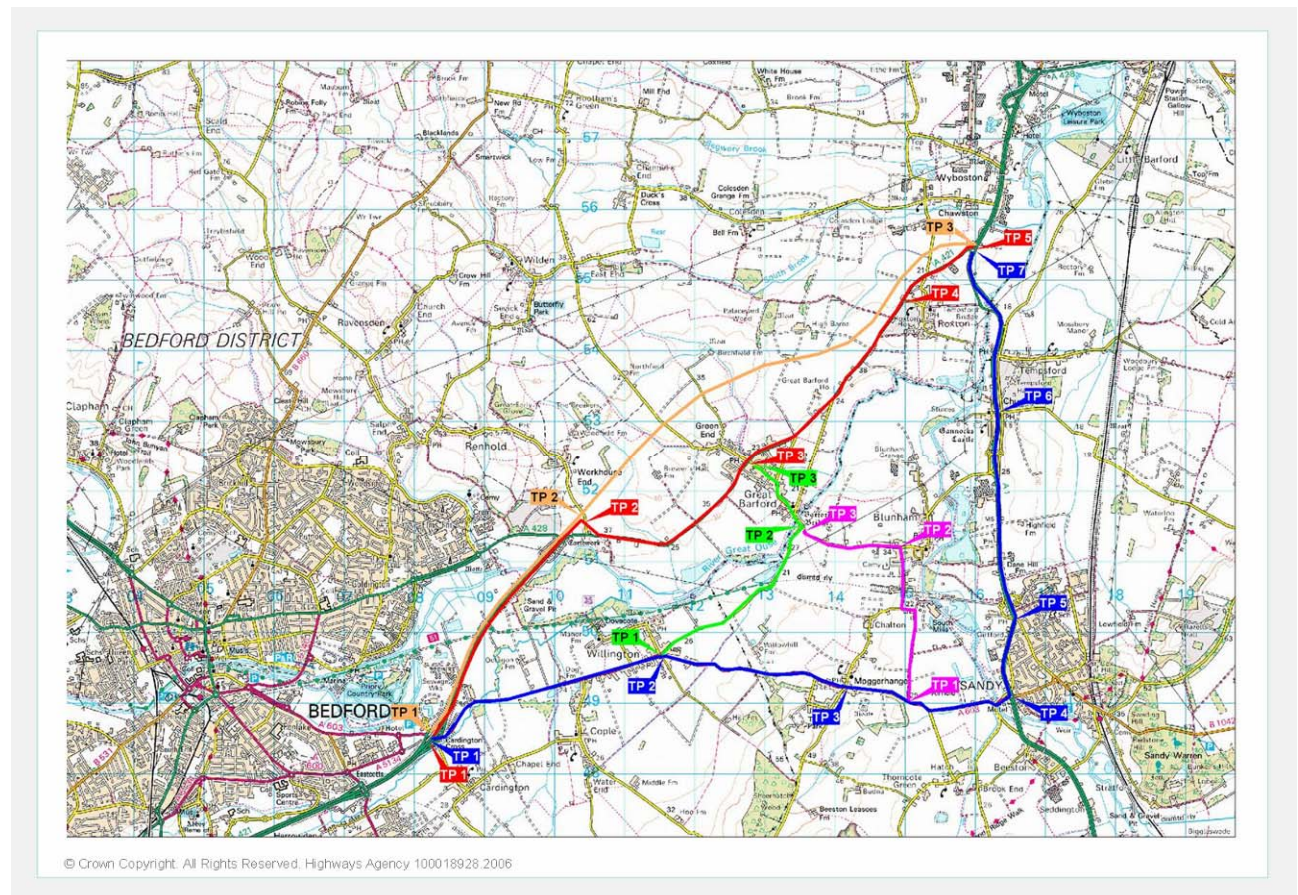


Journey Times

3.30 Journey time runs were undertaken before and after the scheme's opening to establish any economic (dis)benefits. As shown in Figure 3.11, five routes were tested these were:

- ◆ Route 1 (Red)- Old A421 between A603 Cardington Cross and A1 Wyboston;
- ◆ Route 2 (Blue)-A1/A603 between Wyboston and Cardington Cross;
- ◆ Route 3 (Green)-Unclassified between A603 Willington and A421 Great Barford;
- ◆ Route 4 (Pink)-Unclassified between Barford Bridge and A603 east of Moggerhanger; and
- ◆ Route 5 (Orange)-Along the Bypass (A421) Cardington Cross to Wyboston (After survey only).

Figure 3.11 – Journey Time Routes (JTRs)



3.31 Before and after data is available for Routes 1-4 and after data is available for Route 5, to assess if the opening of the bypass has impacted upon journey times along these routes. Route 5 with after data only, has been compared against Route 1's before data to assess if the bypass route is quicker than the old route. The comparative results are shown in Table 3.2.

3.32 The data collected shows the following key observations:

- ◆ On average 2.5 to 6.5 minutes can be saved per vehicle travelling on the bypass compared to the old A421 route through Great Barford;
- ◆ The journey times on the old A421 through Great Barford show little difference between the 'before' and 'after' results. However, in one case there was a 3.5 minute decrease in the AM peak southbound which was the most trafficked time period and direction, showing that the transfer of traffic has led to improvements in conditions on the old road;
- ◆ The journey time between Cardington Cross and Wyboston has decreased by up to 4.5 minutes, although on average the saving is between 0.5 and 1 minute; and
- ◆ Between A603 Willington and A421 Great Barford and Barford Bridge and Moggerhanger there has been slight increases in journey time, on average under one minute.

3.33 The results for route 1 through the village of Great Barford indicate that the journey times are slightly longer after the bypass has opened in some cases. However this is likely to be due to temporary traffic lights which were in place at the time of the survey.

3.34 In summary, initial findings are that journey times have generally reduced as a result of the bypass opening. Where journey times have increased this is only by a small amount (usually less than 1 minute). Attention will be given to this in the one year after report.

Journey Speeds

3.35 Using the journey times for before and after the opening of the bypass any changes in speed can be measured, Figure 3.11 shows the routes that have been taken. Table 3.3 shows the before and after average journey speeds with exception of route 5 whereby only after speeds are available as this route uses the new bypass.

Table 3.2 – Comparative Before and After Journey Times

A1/A421 between Cardington Cross and Wyboston using bypass

Route 5	Period	Before (old A421)	After (using bypass)	Difference
N/B	AM	10:20	06:30	-03:50
	Inter	09:27	06:06	-03:21
	PM	09:31	06:24	-03:07
S/B	AM	13:04	06:30	-06:34
	Inter	09:03	06:23	-02:38
	PM	09:41	06:26	-03:15

Old A421 between A603 Cardington Cross and A1 Wyboston

Route 1	Period	Before	After	Difference
N/B	AM	10:20	10:42	00:22
	Inter	09:27	10:05	00:38
	PM	09:31	10:14	00:43
S/B	AM	13:04	09:27	-03:37
	Inter	09:03	09:07	00:04
	PM	09:41	09:24	-00:17

A1/A603 between Cardington Cross and Wyboston

Route 2	Period	Before	After	Difference
N/B	AM	15:01	14:39	-00:22
	Inter	13:47	13:20	-00:27
	PM	16:50	15:00	-01:10
S/B	AM	19:01	14:33	-04:28
	Inter	13:11	14:18	01:27
	PM	13:58	14:45	00:47

Unclassified between A603 Willington and A421 Great Barford

Route 3	Period	Before	After	Difference
N/B	AM	05:30	06:12	00:42
	Inter	04:46	05:36	00:50
	PM	05:30	05:42	00:12
S/B	AM	05:36	05:24	-00:12
	Inter	05:11	06:11	01:00
	PM	04:45	06:20	01:35

Unclassified between Barford Bridge and A603 east of Moggerhanger

Route 4	Period	Before	After	Difference
N/B	AM	05:06	05:56	00:50
	Inter	04:32	05:35	01:03
	PM	04:59	05:39	00:40
S/B	AM	04:26	05:03	00:37
	Inter	04:20	05:00	00:40
	PM	04:35	05:01	00:26

Table 3.3 – Comparative before and after Journey Speeds (kph)

A1/A421 between Cardington Cross and Wyboston using bypass

Route 5	Period	Before (old A421)	After (using bypass)	Difference (kph)
N/B	AM	64	99	35
	Inter	70	105	35
	PM	69	100	31
S/B	AM	51	99	48
	Inter	73	100	27
	PM	68	100	32

Old A421 between A603 Cardington Cross and A1 Wyboston

Route 1	Period	Before	After	Difference (kph)
N/B	AM	64	62	-2
	Inter	70	65	-5
	PM	69	64	-5
S/B	AM	51	70	19
	Inter	73	72	-1
	PM	68	70	2

A1/A603 between Cardington Cross and Wyboston

Route 2	Period	Before	After	Difference (kph)
N/B	AM	61	63	2
	Inter	67	69	2
	PM	54	61	7
S/B	AM	48	63	15
	Inter	70	64	-6
	PM	66	62	-4

Unclassified between A603 Willington and A421 Great Barford

Route 3	Period	Before	After	Difference (kph)
N/B	AM	45	40	-5
	Inter	52	44	-8
	PM	45	44	-1
S/B	AM	44	46	2
	Inter	48	40	-8
	PM	52	39	-13

Unclassified between Barford Bridge and A603 east of Moggerhanger

Route 4	Period	Before	After	Difference (kph)
N/B	AM	45	38	-7
	Inter	50	41	-9
	PM	46	40	-6
S/B	AM	51	45	-6
	Inter	53	46	-7
	PM	50	45	-5

3.36 From Table 3.3 the following points can be noted:

- ◆ Before opening the speeds on the A421 varied between 51kph and 73kph during different times of the day, whereas from the same start and finish points afterwards, average speeds are shown to be between 99-105kph which represents up to 50kph improvement but also clearly shows the improvement in journey time/speed reliability.
- ◆ The old route of the A421 through Great Barford shows that there is little difference in speed as a result of the opening of the Bypass. This is with the exception of the AM peak southbound where a 19kph increase in traffic speed is observed. However it should be noted that speed cameras are placed along the A421 Bedford Road through Great Barford, which will help to deter speeding above the 30mph speed limit;
- ◆ Journey speeds between Cardington Cross and Wyboston, located south of the scheme has shown almost no change both northbound and southbound, however there is a 15kph increase in speed in the AM southbound;
- ◆ In the case of route 3 and 4 south of Great Barford which are both on unclassified roads, the speed has decreased in both directions. However, this is only up to 13kph; and

3.37 The general findings of the average speeds post opening is that the bypass has made little difference to the speeds on most of the routes surveyed. These routes will be resurveyed for the one year after report to determine any further changes in speed.

Key Points from Section 3:

- ◆ **There are 25,600vpd using the Great Barford Bypass;**
- ◆ **Before the opening of the bypass there was 26,200vpd on the A421 through Great Barford, after the bypass opening this has reduced to 6,200vpd a reduction of around 75%;**
- ◆ **At Renhold there was 1,300vpd before the opening of the bypass, after opening 2,100vpd has been observed, this equates to a 60% increase in traffic. The A428 and the A421 west of the bypass have had an increase in traffic of 2%;**
- ◆ **Screenline analysis has revealed that there has been an increase in traffic across all three screenlines. The most significant increase was at screenline 2 where there was an increase of 4,300vpd;**
- ◆ **Journey times have improved, with approximately 2.5-6.5 minutes being saved by using the bypass rather than the A421 Bedford Road, with journey times and speeds showing a significant improvement in reliability as times vary very little in different periods of the day;**
- ◆ **Turning counts carried out in Great Barford itself revealed that traffic has also decreased by 25% on Silver Street, other arms off the A421 are almost unchanged; and**
- ◆ **The numbers of HGV's travelling through Great Barford has decreased proportionately to the traffic, resulting in an average reduction of 1200 HGV's per day using the A421 Bedford Road.**

