



UNIVERSAL DESTINATIONS & EXPERIENCES UK PROJECT

Former Kempston Hardwick Brickworks
and adjoining land, Bedford

Appendix 5.1 Transport Assessment Annex 7 – Manor Road Level Crossing

Report reference: 4.5.1.8.0

Revision number: 00

Date: June 2025



Universal Destinations & Experiences UK Project

Transport Assessment – Annex 7 – Manor Road Level Crossing

226817A
June 2025

Introduction

1. The purpose of this note is to consider the implications of closing the level crossing on Manor Road as an alternative to a vehicular road bridge being delivered by National Rail (NR). This note includes an assessment of the effect of closing the level crossing instead of retaining it or delivering a road bridge in its place, in terms of traffic conditions in and around the Site.

Traffic Implications

2. In order to gain an initial understanding of the traffic implications of the closure of the Manor Road Level Crossing as an alternative to the NR road bridge, Scenario 5 within the Paramics model has been rerun but assuming that traffic cannot travel along Manor Road across the level crossing. This allows a comparison of predicted traffic flows and journey times on roads within the vicinity of the Site in the main Scenario 5 with and without the crossing.
3. In terms of vehicular accessibility to Manor Road, west of the Marston Vale Line (MVL), Manor Road provides access to a property located at the corner of Woburn Road and Manor Road and one farm access point on its southern side near the crossing of the MVL. There are also a small number of 'gates' on the northern side of Manor Road providing potential access points into the area of open space along the southern edge of the Marsh Leys Industrial Estate. These would continue to be accessible from Manor Road west of the MVL.
4. On the eastern side of the MVL, Manor Road would be significantly redesigned as part of the Proposed Development to provide access to development plots north and south while retaining access to existing properties. The redesigned Manor Road would form part of the Proposed Development's wider network delivering a new route between the B530 and the C94 crossing the MVL at a new road bridge in the West gateway Zone.
5. In summary, the closure of the Manor Road Level Crossing will not significantly affect vehicular accessibility to neighbouring properties. Whether or not the Manor Road vehicle connection over the MVL remains, or is severed, will not significantly affect traffic and highway characteristics in the local or wider area with the Universal Entertainment Resort Complex (ERC) delivered.

Changes in traffic flows

6. The model has been interrogated to provide a comparison of predicted traffic flows (two-way) on links closest to the Site, in order to understand the reassignment effect of the level crossing closure. **Figure 1** illustrates the links considered here. **Table 1** provides the relevant data for the period modelled, i.e. 07.00 to 22.00.

Figure 1 – Links considered

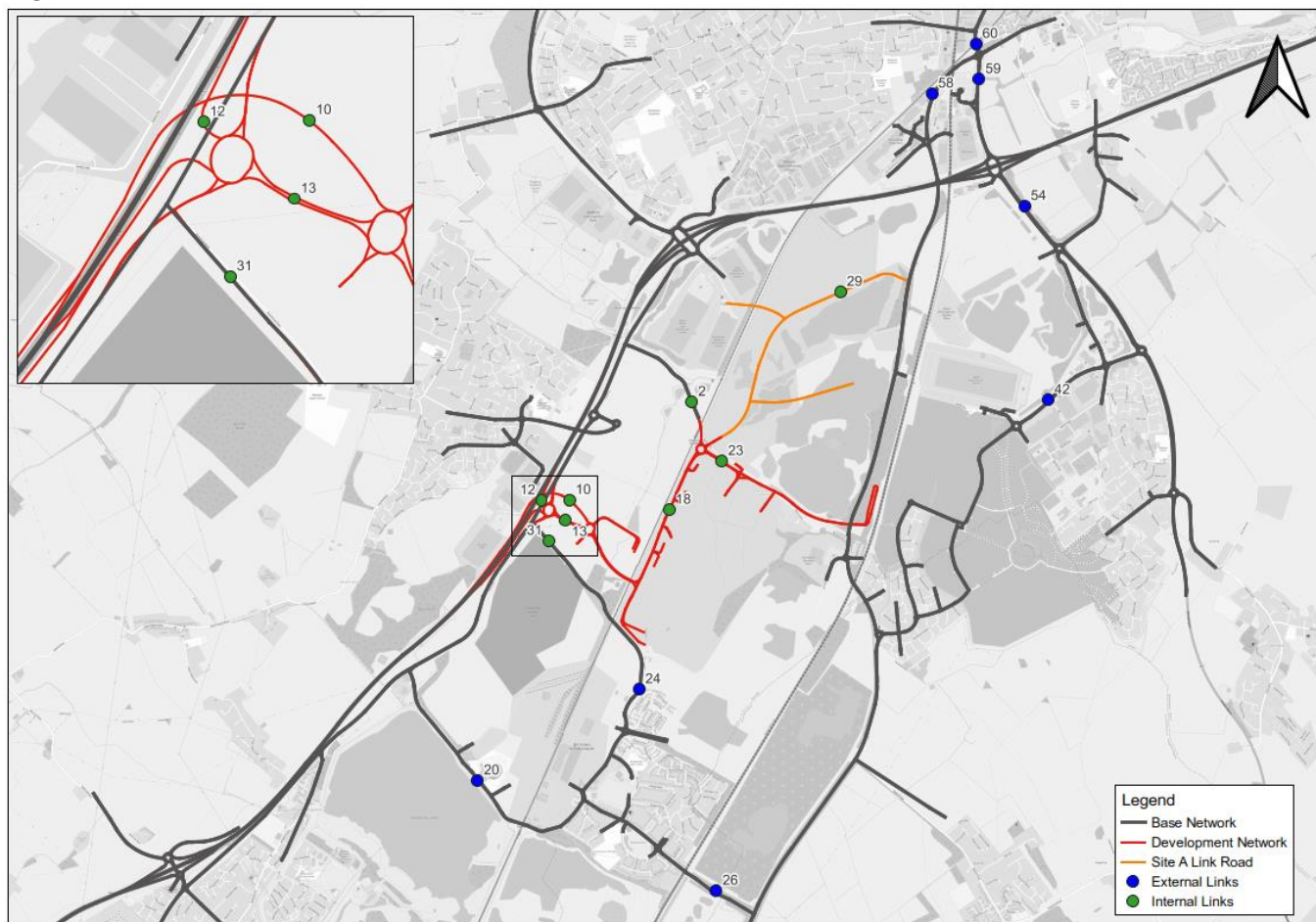


Table 1 – Traffic flow comparison – 07.00-19.00

Link ref	ext/int	Name	07.00-19.00			
			NR bridge	Lxing closed	Net Dif	%Dif
26	ext	Stewartby Way	6984	7715	731	10%
20	ext	Green Lane	5447	5706	259	5%
24	ext	Broadmead Rd E of MVL	5947	6464	517	9%
58	ext	B530 Ampthill Rd Bedford	23990	27279	3289	14%
59	ext	A5141 to A421 Elstow	31910	35303	3393	11%
60	ext	A5141 to Bedford	28046	28032	-14	0%
54	ext	A6 south of A421	29087	28754	-333	-1%
42	ext	Fisherwood Rd (Wixams through)	6189	6883	694	11%
29	int	Lake Zone spine road	3173	4060	887	28%
23	int	Manor Rd E of MVL	7447	5082	-2365	-32%
2	int	Manor Rd W of MVL	8150	0	-8150	-100%
18	int	Link A	2759	5882	3123	113%
13	int	Link to C94	5840	7880	2040	35%
10	int	A421 Nb offslip	4775	5091	316	7%
12	int	A421 Sb offslip	4705	5035	330	7%
31	int	Broadmead Rd W of MVL	5951	6473	522	9%

7. **Table 1** shows only the difference in traffic flows on the links as a result of the closure of the level crossing in terms of net and percentage difference. It suggests that:
- The majority of traffic on Manor Road east of the railway will redirect along the Proposed Development site infrastructure to find a route through to the A421 and the Proposed Development.
 - About a third of the traffic on Manor Road east would however use other routes, including the B530 Ampthill Road to access the A421 at Elstow but also the spine road through the Lake Zone to access the Proposed Development from the Elstow Interchange. The level crossing closure would result in a reassignment of traffic from Marsh Leys and Manor Road West to Elstow and the B530 Ampthill Road/Lake Zone spine road.
 - This adds traffic at the Elstow Interchange and some traffic on the A6 south of the Elstow interchange is rerouted through Wixams.
 - There is also a degree of reassignment through Stewartby Way, Broadmead Road and Green Lane. The percentage changes in traffic along these links remains within the range of day-to-day variations in traffic.
8. These changes in flows in the 3h AM peak period and 3h PM peak period are illustrated in **Figures 2** and **3**.

Figure 2 – Predicted changes in flows as a result of level crossing closure – 07.00-10.00

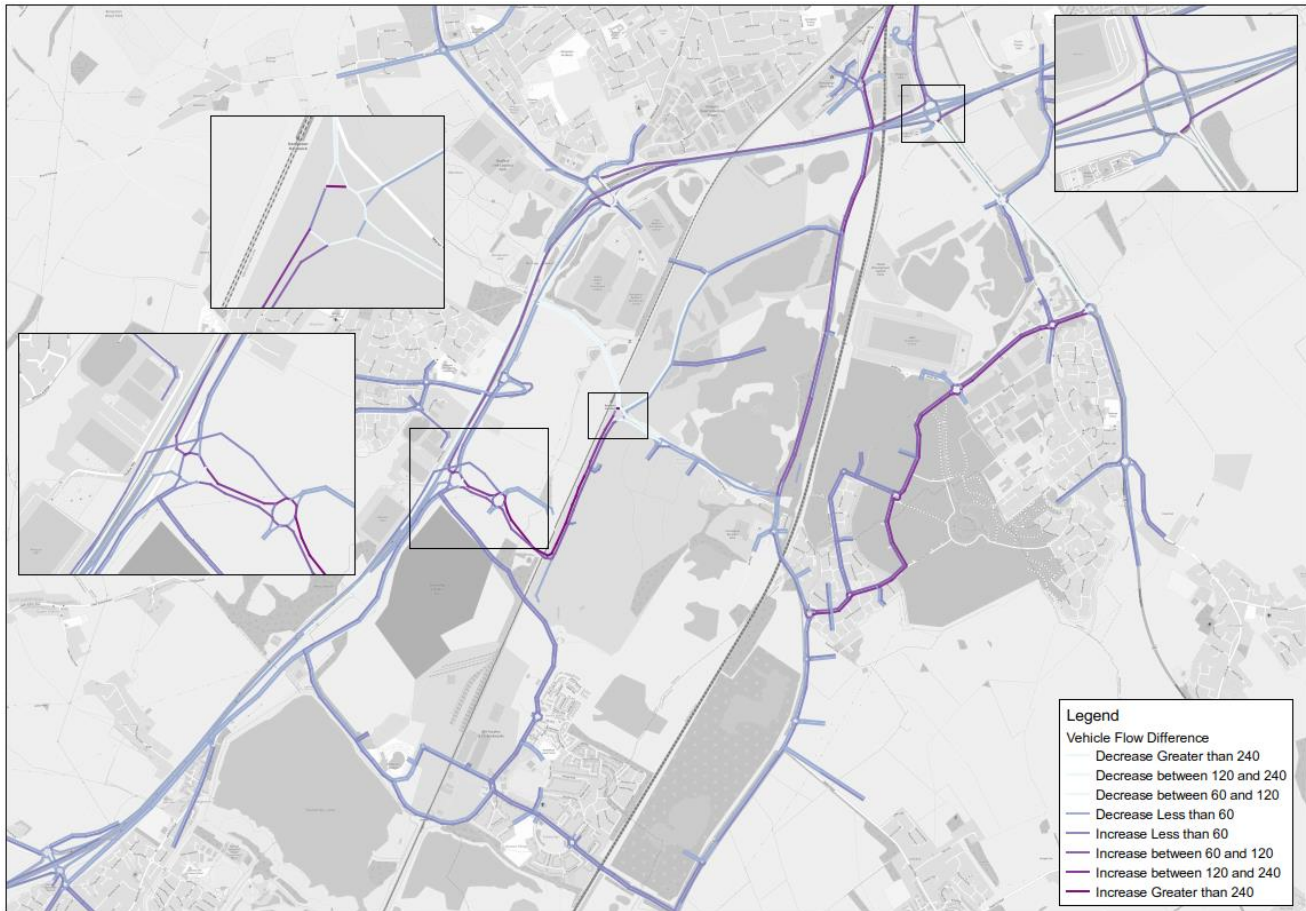
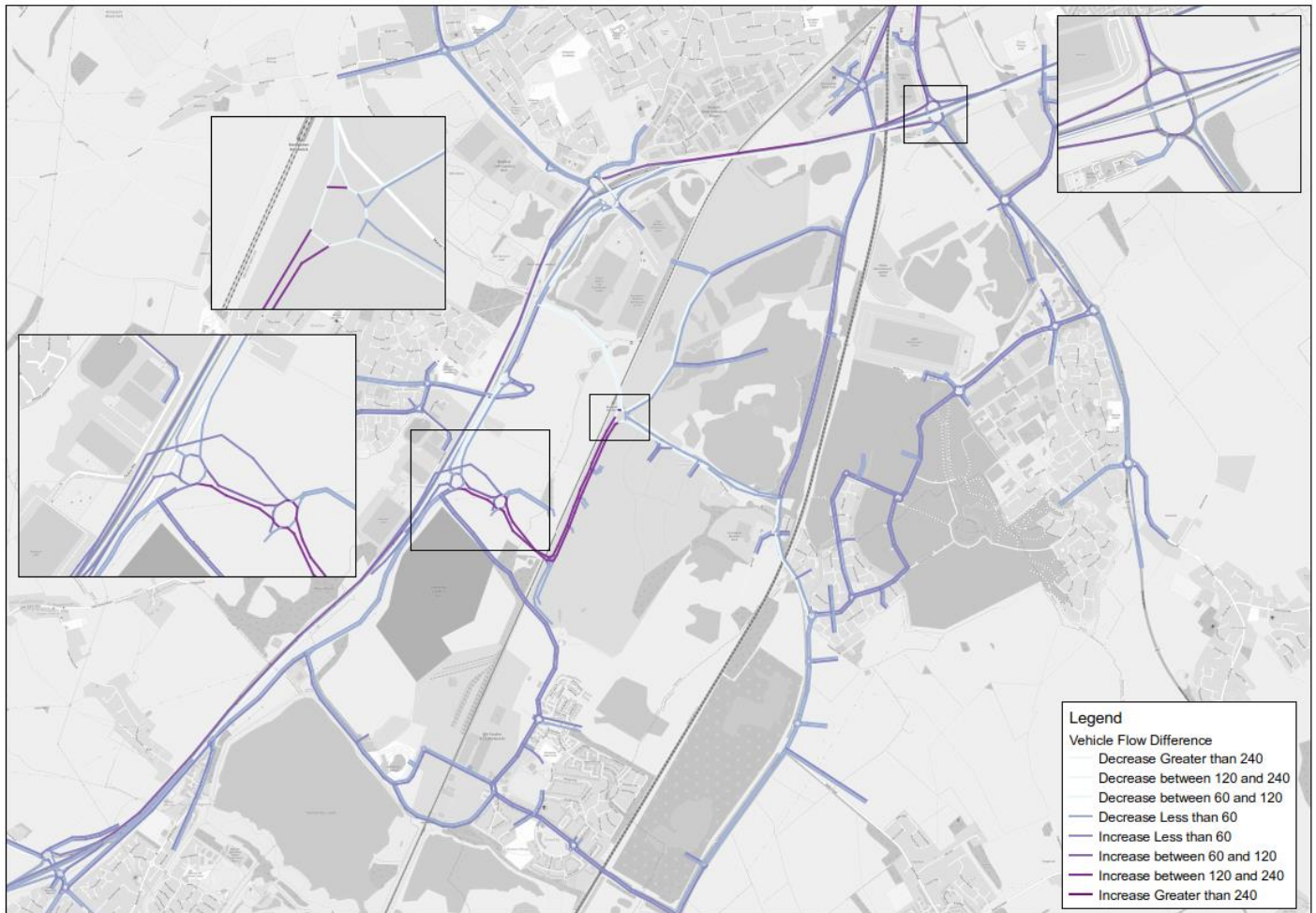


Figure 3 – Predicted changes in flows as a result of level crossing closure – 16.00-19.00



Changes in Journey Times

9. It is important to note that the metric that the Transport Assessment (**Appendix 5.1: Transport Assessment (Volume 3)** of the ES) has employed throughout to determine significance of effects is journey time, and judgements about the significance of journey time changes. The following section considers the significance of the changes in traffic flows set out above on the operation of the local road network.
10. The assessment carried out in terms of journey times considers a selection of routes illustrated in **Figures 4 and 5**. **Figure 4** shows the routes considered in the case of Scenario 5 with the NR road bridge delivered. The closure of the level crossing forces traffic on Route A8 to divert to an alternative route. **Figure 5** illustrates this alternative route.

Figure 4 – Routes assessed – NR road bridge in place

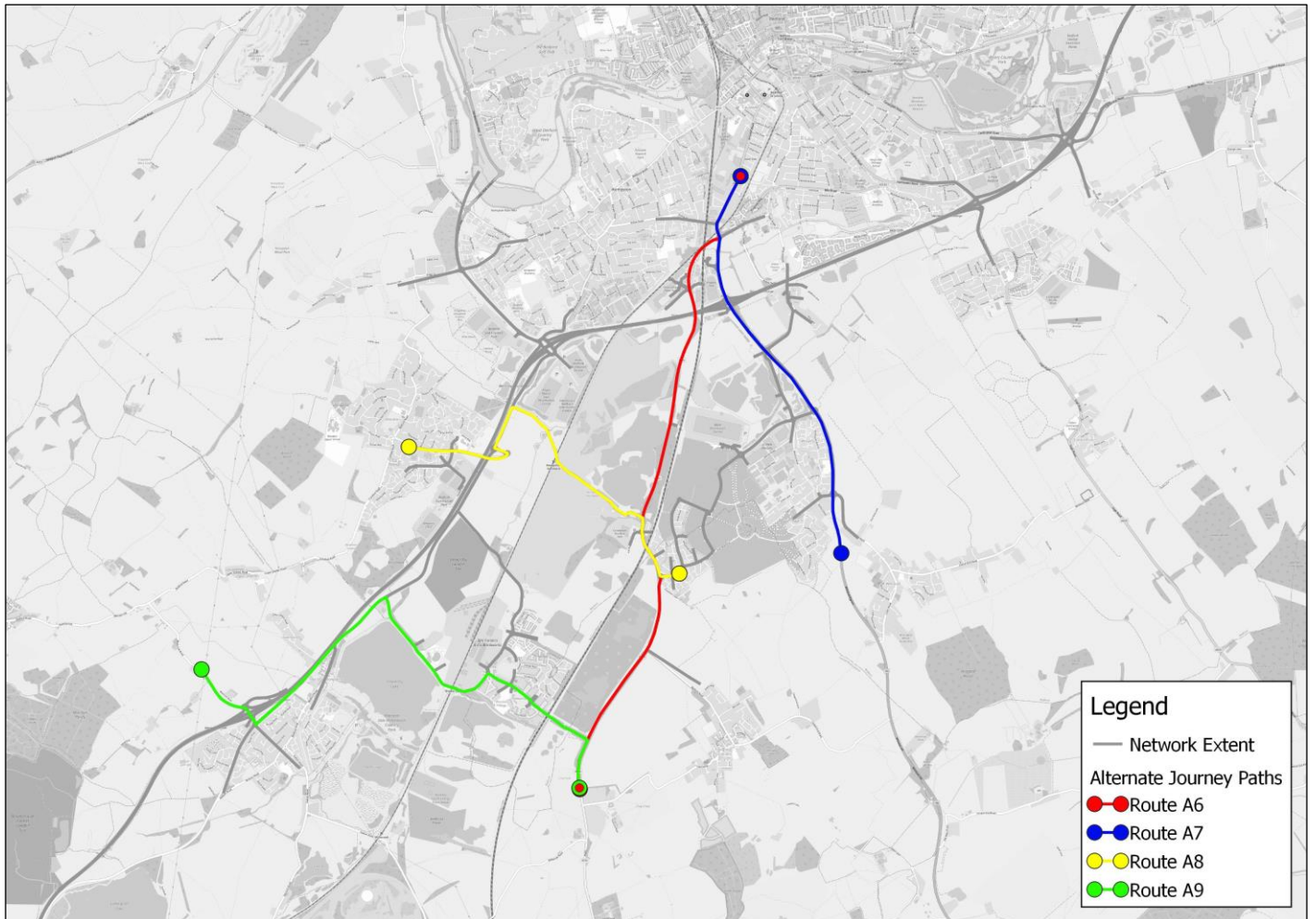
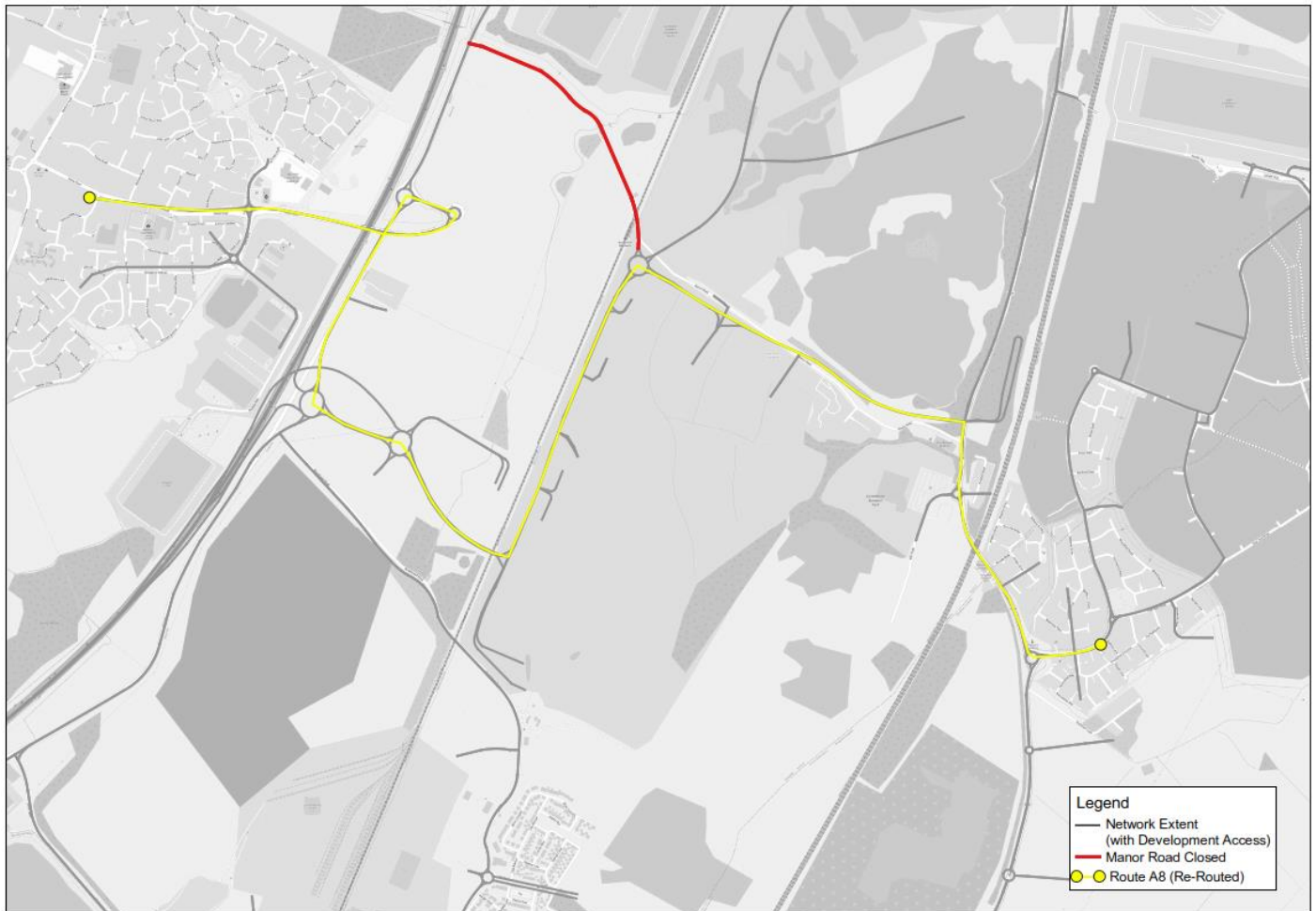


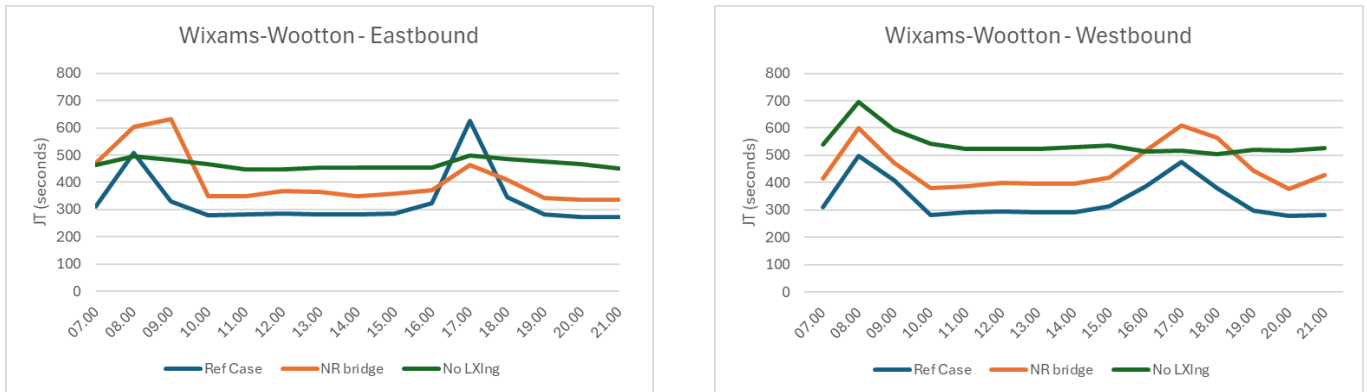
Figure 5 – Alternative A8 route with level crossing closure



Wixams-Wootton – Route A8

11. This route represents a cross Marston Vale route likely to use Manor Road as one of the routes available across the Vale with the NR road bridge in place. With the vehicular closure of the Manor Road level crossing, drivers that would use this route will instead take other actions. These actions may include for instance not making the trip or making the trip in a different way. For modelling purposes, the assumption is that every driver that would have used the level crossing reassigns elsewhere on the network at the same time.
12. In order to assess this route in the model, with the closure of the level crossing on Manor Road, an alternative route had to be specified within the model in order to record an alternative journey time between origin and destination. This is illustrated in **Figure 5**. As can be seen, the alternative route 'tested' is longer and includes more junctions than the initial Manor Road route. This has the most significant bearing on the difference in journey times reported here.
13. On that basis the change in journey time between Wixams and Wootton is as set out in **Figure 6**.

Figure 6 – Wixams-Wootton – JT comparison

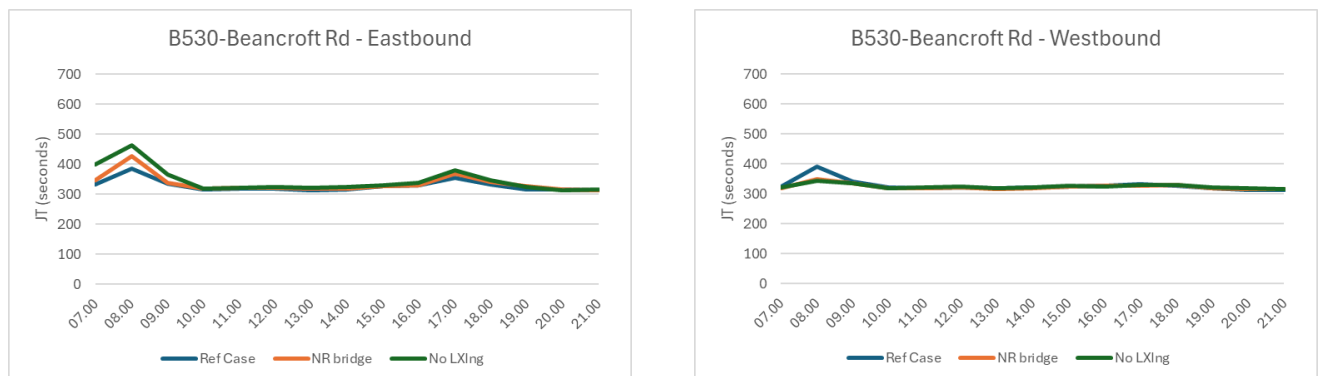


14. The closure of the level crossing and associated reassignment of trips along the proposed new road infrastructure through the Site would lead to a relatively constant increase in journey time on average across the day of 60 seconds in the eastbound direction and 87 seconds in the westbound direction. This is due to the increase in distance to travel. This does not present a severe cumulative highways impact, with reference to paragraph 116 of the National Planning Policy Framework, 2024.

B530 – Beancroft Road – Route A9

15. This route represents another cross Marston Vale route along Stewartby and Green Lane. **Figure 7** illustrates the predicted difference in journey time on the route as a result of the closure of the Manor Road level crossing.

Figure 7 – B530 – Beancroft Road – JT comparison

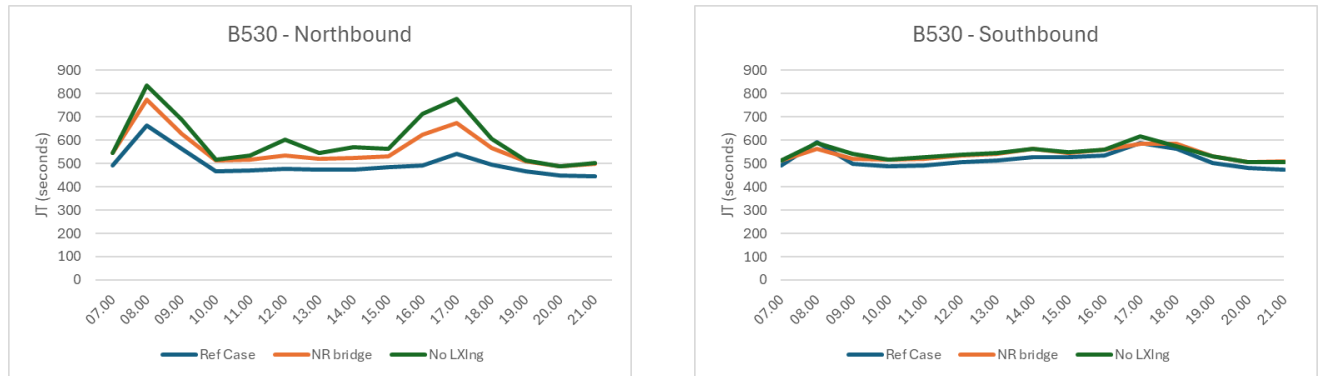


16. As shown in **Figure 7**, the closure of the level crossing would not noticeably affect journey time in either the eastbound or westbound direction along the B530 – Beancroft Road route.

B530 Ampthill Road – Route A6

17. This route runs along the eastern side of the development area from south of the junction with Stewartby Way to the A5141 just north of the Cowbridge junction. **Figure 8** illustrates the predicted difference in journey time on the route as a result of the closure of the Manor Road level crossing.

Figure 8 – B530 Ampthill Road – JT comparison

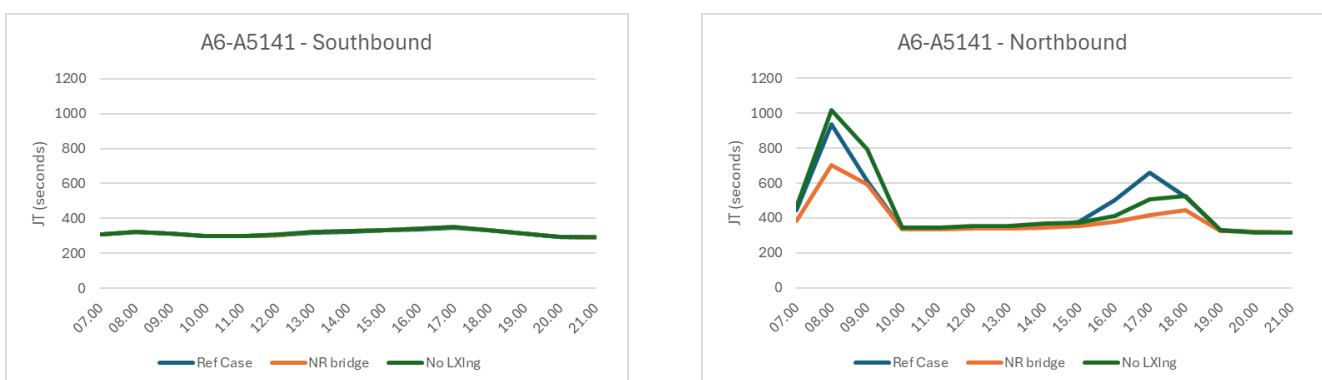


18. As shown on **Figure 8** the closure of the level crossing on Manor Road would not significantly affect journey time along the B530 corridor, and this despite the closure leading to a reassignment and increase in predicted trips along this corridor. In the northbound direction, journey time would increase on average across the day by 37 seconds, with a maximum increase of 104 seconds between 17.00 and 18.00 which is not significant. In the southbound direction, journey time would increase on average across the day by 6 seconds, with a maximum increase of 33 seconds between 17.00 and 18.00, which is not a severe impact.

A6 - A5141 – Route A7

19. This route is another north-south corridor further to the east of the Site, that runs across the A421 Elstow Interchange and into Bedford along the A5141. **Figure 9** illustrates the predicted difference in journey time on the route as a result of the closure of the Manor Road level crossing.

Figure 9 – A6 – A5141 – JT comparison



20. In the southbound direction, there is almost no difference between the predicted journey time on the A6-A5141 route with or without the level crossing closed. There is no change in journey time predicted on the route in the southbound direction on average across the day.

21. In the northbound direction, there is also almost no difference in journey time predicted for most of the day. The predicted change in journey time across the day in the northbound direction is an increase of 59 seconds on average as a result of the closure of the level crossing. However, it can be seen that increases in journey time are predicted in particular during the morning peak period, with a maximum increase of 316 seconds between 08.00 and 09.00.
22. As detailed in paragraph 7, the closure of the level crossing on Manor Road would lead to a reassignment of trips through the Elstow Interchange. The morning peak increase in journey time on the A6 northbound into the Interchange is the result of this trip reassignment. However, it is worth noting that the resulting delay on this route is similar to the delay that would be experienced on the route in the reference case, as illustrated in **Figure 9**. On that basis, the changes in journey time predicted in this assessment is not significant.

Conclusions

23. There is no substantial, and in most cases even noticeable, difference in the character of movement or performance of the road network as a result of closing the Manor Road Level Crossing connection to vehicular traffic. The road network as part of the proposed Universal ERC provides better and safer alternative vehicular routes.