East Midlands Gateway
Phase 2 (EMG2)

Document DCO 7.23

PRTM 2023 Sensitivity – Kegworth and Castle Donington

July 2026

The East Midlands Gateway Phase 2
and Highway Order 202X and The East Midlands Gateway
Rail Freight and Highway (Amendment) Order 202X

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PRTM 2023 SENSITIVITY – KEGWORTH AND CASTLE DONINGTON (DOCUMENT DCO 7.23)

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1 INTRODUCTION

1.1 The PRTM 2023 Sensitivity Test Technical Note and Local Road Network Impact Assessment Note (Document DCO 7.8 [**REP1-058**]) identified two possible impacts that Leicestershire County Council (LCC) consider have not already been mitigated by the EMG2 Highway Works. These are along Derby Road in Kegworth and Castle Donington High Street.

1.2 The purpose of this report is to review these impacts in more detail and identify if they require to be mitigated and if so, how.

2 POSSIBLE IMPACTS

Traffic impact

2.1 **Tables 1** and **2** summarise the 2038 forecast year traffic flows within Kegworth and Castle Donington during the morning and evening peak hours between the following scenarios:

- Scenario 1A: 2038 Without Development (WoD)
- Scenario 2A: 2038 With Development + Mitigation (WD + Mitigation)
- Scenario 3: 2038 With Development + Mitigation + Mezzanine (WD + Mitigation + Mezzanine)

2.2 Scenarios 1A and 2A are aligned with those within the Transport Assessment. Scenario 3 includes for an additional 100,000sqm of mezzanine, manually assigned on top of Scenario 2A flows. Full details of the methodology are presented in the PRTM 2023 Technical Note [**REP1-058**].

Table 1. Morning Peak Hour Traffic Flows (0800 to 0900) (two-way)

Route	WoD	WD + Mitigation	WD + Mitigation + Mezzanine	Difference ((WD + mitigation) – WoD)	Difference ((WD + Mitigation + Mezzanine) – WoD)
A6 Kegworth Bypass	750	617	617	-133 (-18%)	-114 (-15%)
Derby Road, Kegworth	1,287	1,450	1,450	163 (12.7%	163 (12.7%)
Castle Donington High Street	426	470	478	44 (10.3%)	52 (12.2%)
Hemington Lane, Hemington	313	292	293	-21 (-6.7%)	-20 (-6.4%)

Table 2. Evening Peak Hour Traffic Flows (1700 to 1800) (two-way)

Route	WoD	WD + Mitigation	WD + Mitigation + Mezzanine	Difference ((WD + mitigation) – WoD)	Difference ((WD + Mitigation + Mezzanine) – WoD)
A6 Kegworth Bypass	711	728	728	17 (2.4%)	29 (4.0%)
Derby Road, Kegworth	1,621	1,618	1,618	-3 (-0.2%)	-3 (-0.2%)
Castle Donington High Street	384	382	382	-2 (-0.5%)	-2 (-0.5%)
Hemington Lane, Hemington	207	206	207	-1 (-0.5%)	0 (0%)

2.3 It can be seen from the above that the impacts are within the morning peak hour and that Scenario 3 is not materially different to Scenario 2A. Therefore, the additional 100,000sqm of mezzanine would not materially affect traffic flows on the local road network, even when a worse than worst case assessment is carried out that applies the robust trip rates to this floorspace, because of the following reasons:

i. The mezzanine floorspace would be used for vertical racking/storage purposes only and would not increase the number of staff across in proportion to the ground floorspace, nor the number of HGV loading bays. The surveys undertaken at EMG1 confirm that the introduction of mezzanine floorspace has not resulted in any significant increase in traffic. Therefore, by applying the agreed trip rates (which are considered more relevant to the ground floorspace) to the mezzanine floorspace presents a highly robust set of trip generation figures.

ii. The EMG2 development traffic generation tested in PRTM 2023 does not account for the benefits of the Travel Plan and any reduction in car trips. The Travel Plan seeks to reduce single occupancy car journeys from 80% (baseline) to 56% across a 10-year period. The evidence from the surveys at EMG1 show that actual trip rates are significantly lower than what have been modelled in PRTM 2023 (33% lower in the morning peak hour) and the Travel Plan strategy proposes to follow a similar approach, given the success achieved at EMG1.

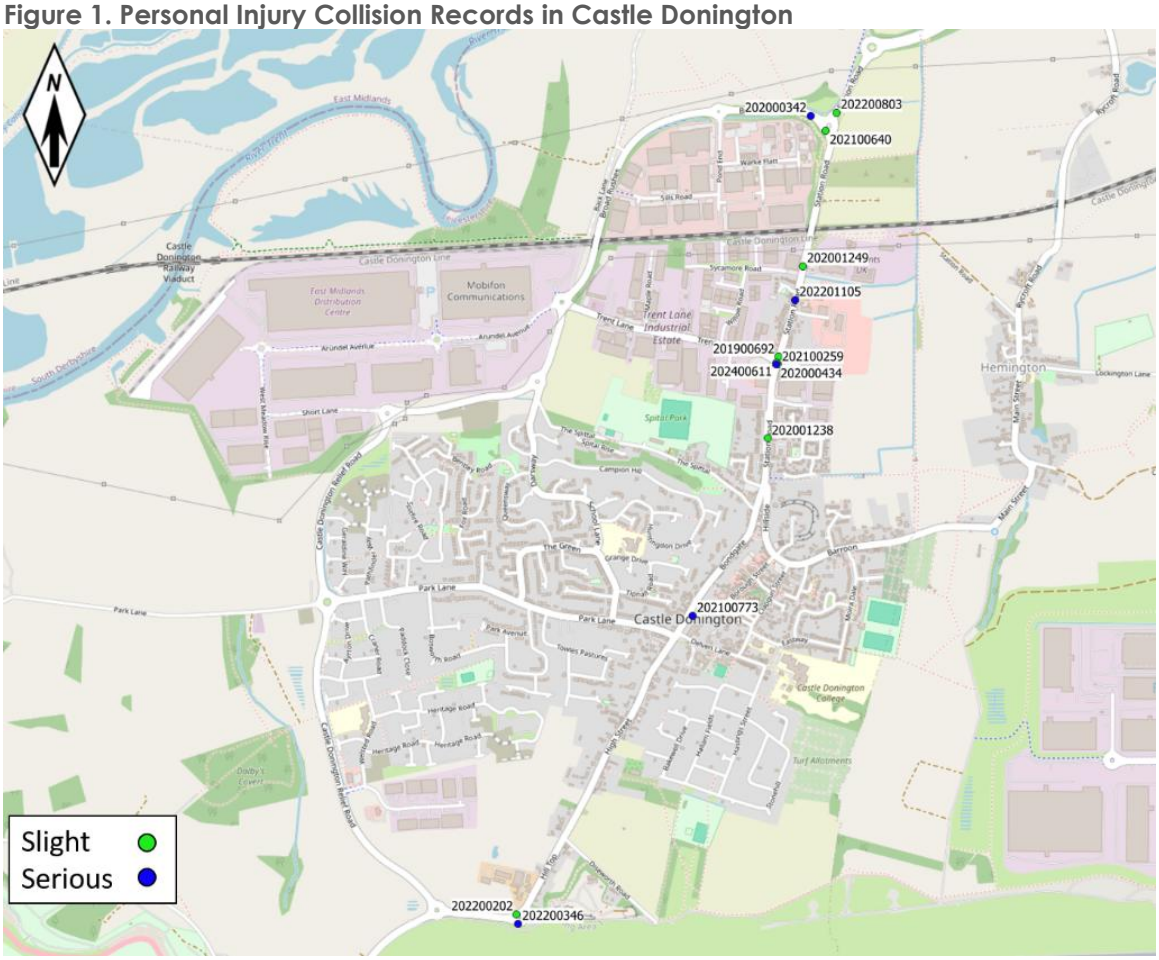
iii. In additon, the scenario tested ('A') considers all draft local plan development traffic together with the balance of the Uniper Ratcliffe on Soar site, but not any associated mitigation.

Personal Injury Collision Review

Introduction

2.4 **Figures 1** and **2** show the Personal Injury Collision (PIC) records along Castle Donington High Street and Derby Road, Kegworth. PIC data was obtained for a six-year period between 1 January 2019 and 23 October 2024 when the Transport Assessment was produced covering Castle Donington ([**REP1-033**] Appendix 14). New PIC data has been purchased from LCC for Kegworth covering the 5-year period between 1 January 2021 and 31 March 2026. A total of 21 PICs were recorded within the study area, of which 14 were classified as slight, 7 as serious and no fatal collisions. The raw PIC data for Kegworth is included in **Appendix 1**.

Figure 1. Personal Injury Collision Records in Castle Donington



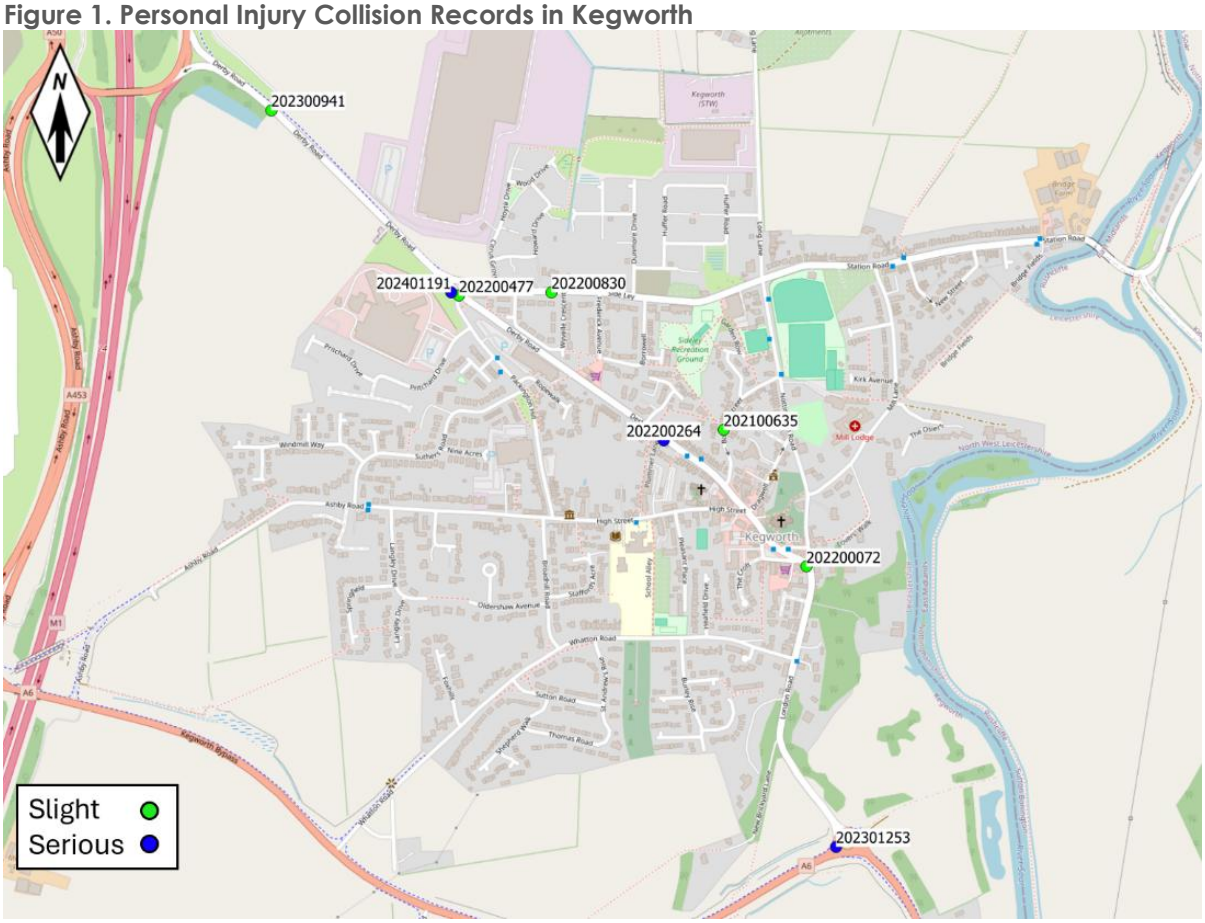
2.5 **Table 3** summarises the number of PICs that have occurred each year since 2019 along Castle Donington between Hill Top and Station Road, including the High Street.

Table 3. Number of Personal Injury Collisions by Year

	2019	2020	2021	2022	2023	2024
Slight	1	2	2	2	0	1
Serious	0	2	1	2	0	0
Total	**1**	**4**	**3**	**4**	**0**	**1**

2.6 The details show that there have been a low number of PICs occurring, which have reduced since 2023 in particular.

Figure 1. Personal Injury Collision Records in Kegworth



2.7 **Table 4** summarises the number of PICs that have occurred each year since 2021 along Derby Road, Kegworth.

Table 4. Number of Personal Injury Collisions by year

	2021	2022	2023	2024	2025	2026
Slight	1	3	1	0	0	0
Serious	0	1	1	1	0	0
Total	**1**	**4**	**2**	**1**	**0**	**0**

2.8 The details show that there has been a relatively low number of PICs recorded. From 2025 to date there has not been a single recorded PIC along Derby Road in Kegworth.

2.9 The following section of this Technical Note analyses the PIC data at the following locations/junctions, seeking to understand whether there are any existing safety problems that would be impacted by EMG2.

- Station Road/Broad Rushes Roundabout, Castle Donington
- Trent Lane/Station Road Priority Junction, Castle Donington
- Hill Top Roundabout, Castle Donington
- Station Road and High Street, Castle Donington
- Derby Road/Side Ley Signalised Junction, Kegworth

- A6 London Road Roundabout, Kegworth
- Derby Road and Borough Street, Kegworth

Station Road/Broad Rushes Roundabout, Castle Donington

2.10 **Figure 2** is an extract of the PIC records at the Station Road/Broad Rushes roundabout, this junction was considered in the Transport Assessment (Document **REP1-033**). The records showed that 3 PICs have been recorded over a 6-year period between 2019 and 2024, two of which were classified as slight and one as serious. **Table 5** provides a summary of each recorded PIC.

Figure 2. Personal Injury Collisions at the Station Road/Broad Rushes Roundabout

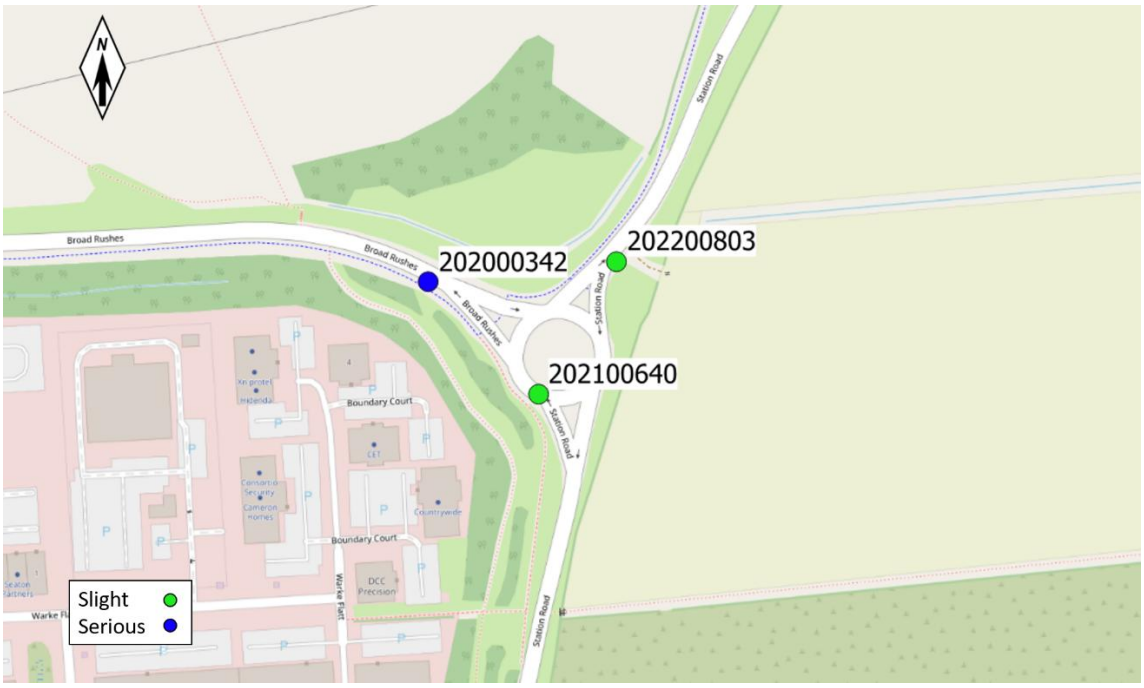


Table 5. Personal Injury Collision Data Summary (Station Road/Broad Rushes Roundabout)

Accident Number	Day/ Date	Weather / Road Surface	Severity	Description
202000342	23/06/2020	Fine / Dry	Serious	V1 (goods vehicle) collided with V2 (pedal cyclist) when attempting to overtake on Broad Rushes travelling east towards the roundabout
202100640	21/08/2021	Other / Dry	Slight	V1 (car) was on the circulatory exiting at Broad Rushes and decided to change lane to the right and collided with V2 (motorcycle) that was travelling in the same direction
202200803	26/09/2022	Wet / Damp	Slight	V1 (motorcycle) was travelling towards the roundabout from Station Road N and collided with V2 (car) travelling north on Station Road N

2.11 The details show that the 3 recorded PICs occurred at different locations of the roundabout. The PICs were caused due to a number of reasons (overtaking, lane changing and driver error). There have been no clusters of PICs occur at any specific location of the roundabout or the network in the vicinity; it is considered that there are no significant safety problems at this location. This position has already been agreed with LCC.

Trent Lane/Station Road Priority Junction, Castle Donington

2.12 **Figure 3** shows an extract of the PIC records at the Trent Lane/Station Road priority junction confirming that four PICs have been recorded over a 6 year period between 2019 and 2024, three of which were classified as slight and one as serious. **Table 6** provides a summary of each recorded PIC.

Figure 3. Personal Injury Collisions at Trent Lane/Station Road Priority Junction

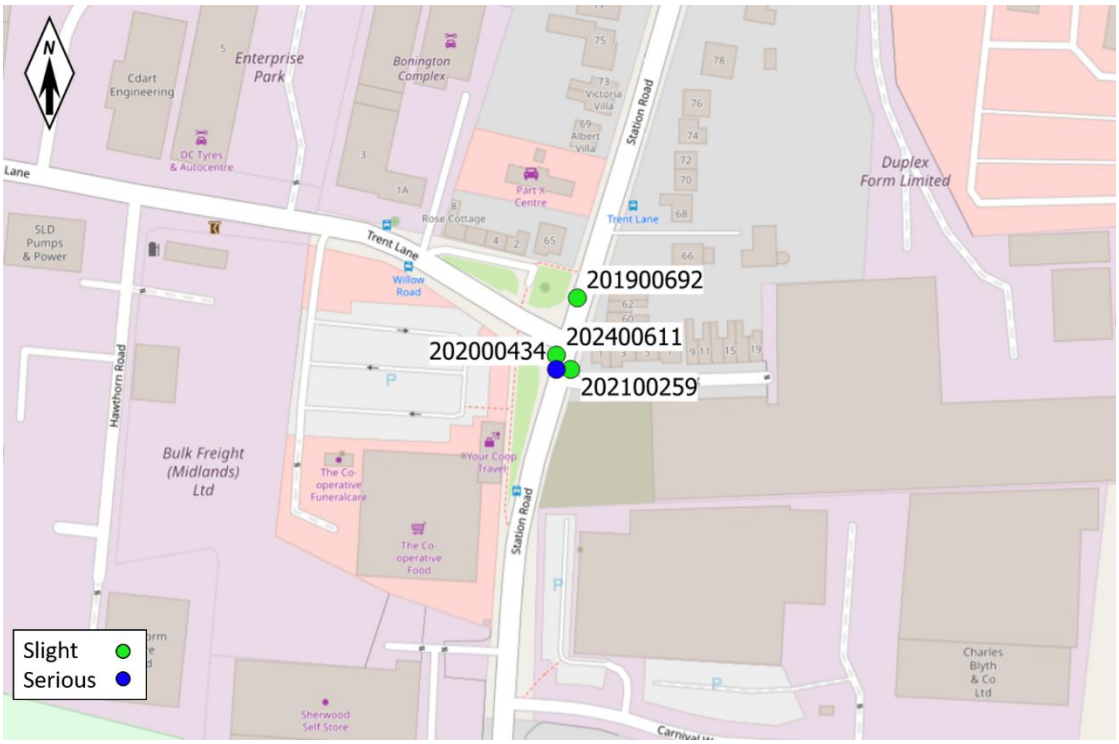


Table 6. Personal Injury Collision Data Summary (Trent Lane/Station Road Priority Junction)

Accident Number	Day/ Date	Weather / Road Surface	Severity	Description
201900692	23/07/2019	Fine / Dry	Slight	V1 (car) was clear of the junction at Station Road and collided with a pedestrian.
202000434	22/07/2020	Fine / Dry	Serious	V1 (car) was travelling on Station Road and turned right to park and collided with V2 (pedal cycle) which was travelling ahead south to north on Station Road.
202100259	29/04/2021	Fine / Dry	Slight	V1 (car) was turning right from Trent Lane to Station Road and collided with V2 (pedal cycle) which was going ahead north to south on Station Road.
202400611	27/06/2024	Fine / Dry	Slight	V1 (car) was mid-junction travelling south to north on Station Road. V2 (car) was entering the Station Road from Trent Lane and collided with V1.

2.13 The details show that the PICs were caused due to a number of reasons. There is one cluster of PICs that occurred within the junction with two of them involving a cyclist travelling on the main road although the cars were undertaking different manoeuvres (turning onto Station Road or pulling over to park). Therefore, it is considered that there are no significant safety problems at this location, and no further assessment of highway safety is required.

Hill Top Roundabout Castle Donington

2.14 **Figure 4** shows a detailed extract of the PIC records at the Hill Top Roundabout in Castle Donington confirming there have been two recorded PICs over a 6 year period between 2019 and 2024. Of the two recorded PICs, one was classified as slight and one was classified as serious. **Table 7** provides a summary of each recorded PIC.

Figure 4. Personal Injury Collisions at Hill Top Roundabout, Castle Donington

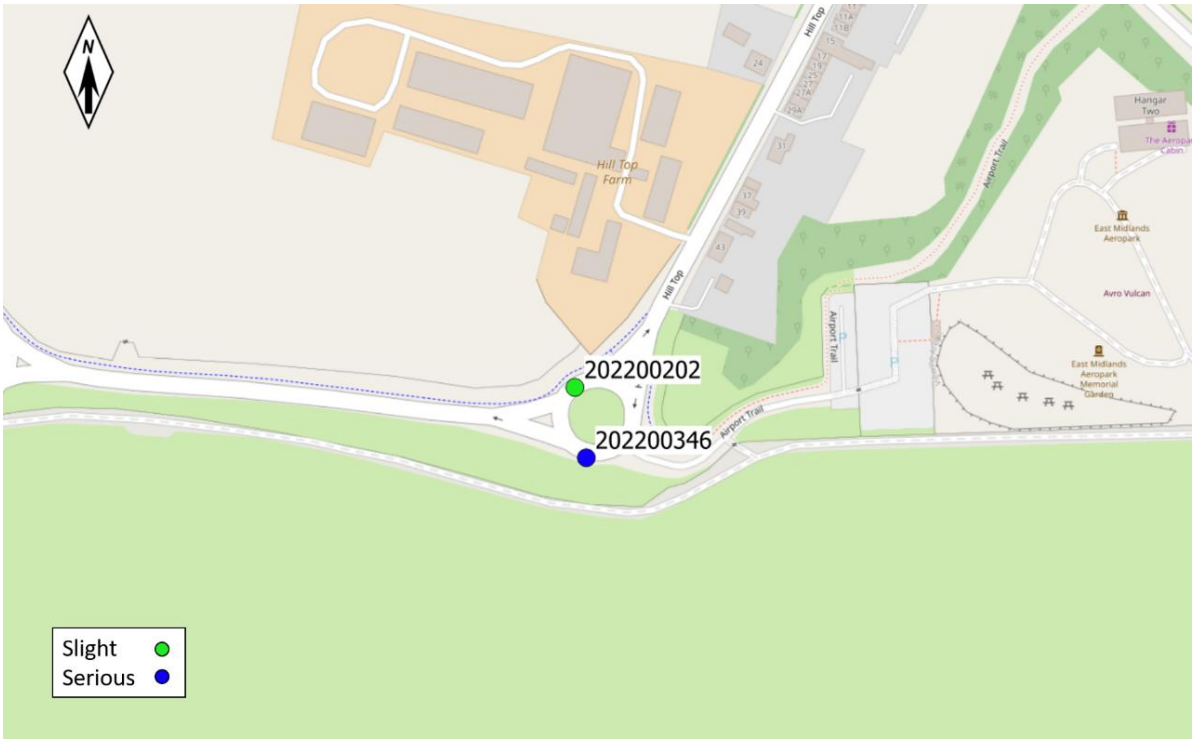


Table 7. Personal Injury Collision Data Summary (Hill Top Roundabout, Castle Donington)

Accident Number	Day/ Date	Weather / Road Surface	Severity	Description
202200202	08/03/2022	Frost / Ice	Slight	V1 (car) was turning left at the roundabout on to Hill Top when a collision occurred. There was no other vehicle involved and so it appears to be due to loss of control.
202200346	30/04/2022	Fine / Dry	Serious	V1 (motorcycle) was turning right at the roundabout from Hill Top and lost control.

2.15 The details show that the two recorded PICs occurred at different locations of the roundabout. There have been no clusters of PICs occur at any specific location of the roundabout and no PICs have occurred since 2022. For these reasons, it is considered that there are no significant safety problems at this location and no further assessment of highway safety is required.

Station Road and High Street, Castle Donington

2.16 **Figure 5** shows a detailed extract of the PIC records along Station Road and High Street Castle Donington confirming there have been four recorded PICs over a 6 year period between 2019 and 2024. Two of the PICs were classified as slight and the other two were classified as serious. **Table 8** provides a summary of the recorded PICs.

Figure 5. Personal Injury Collisions at Station Road and High Street Castle Donington

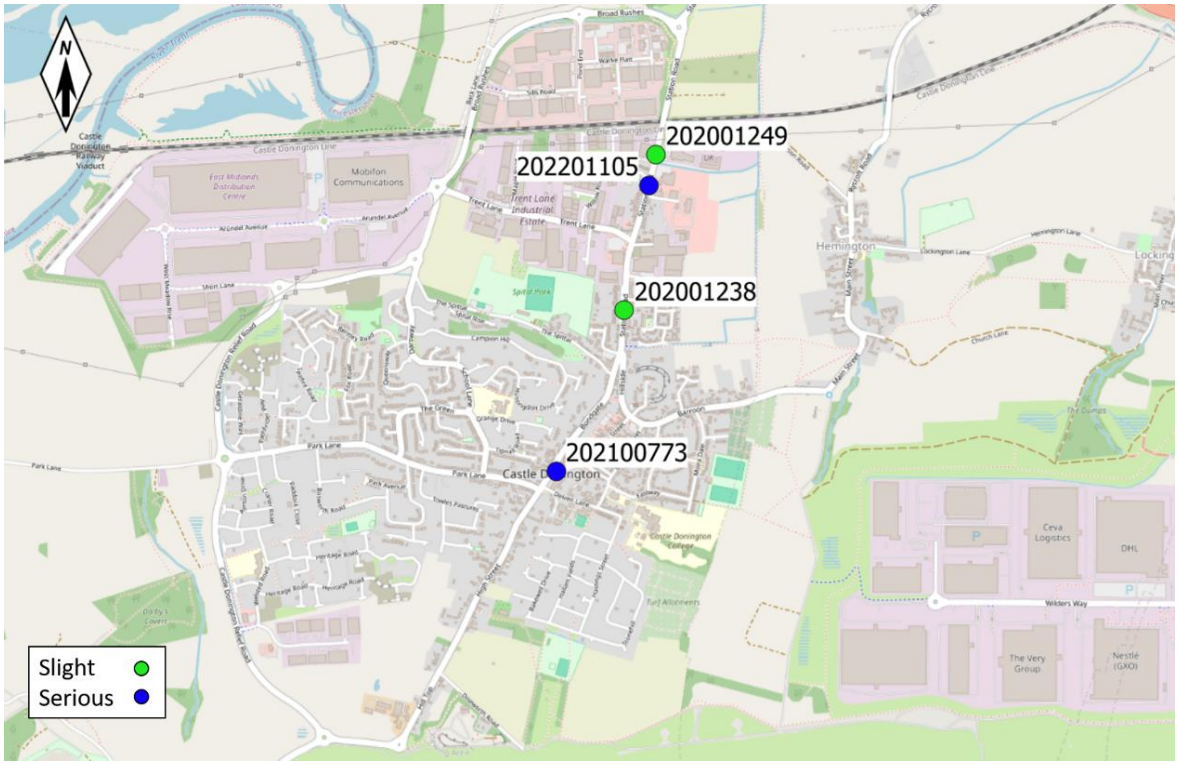


Table 8. Personal Injury Collision Data Summary (Station Road and High Street Castle Donington)

Accident Number	Day/ Date	Weather / Road Surface	Severity	Description
202001238	10/12/2020	Fine / Dry	Slight	V1 (motorcycle) was traveling south to north on Station Road Castle Donington when a collision occurred.
202001249	17/12/2020	Fine / Dry	Slight	V1 (car) and V2 (pedal cycle) were going ahead south to north on Station Road when a collision occurred.
202100773	28/09/2021	Fine / Dry	Serious	V1 (car) was turning right north to east on Market Street Castle Donington Junction with Bondgate when it collided with a pedestrian.
202201105	20/12/2022	Wet / Damp	Serious	V1 (car) was waiting to turn right southeast on Station Road, at the entrance to the petrol station, and V2 (car) was going ahead north to south when the collision occurred.

2.17 The details show that there have been four recorded PICs, all which occurred in different locations along the network. There have also been no recorded PICs since 2022. As a result, it is considered that there are no significant safety problems at this junction and no further assessment of highway safety is required.

Derby Road Side Ley Signalised Junction, Kegworth

2.18 **Figure 6** shows a detailed extract of the PIC records at Derby Road Side Ley Signalised Junction confirming there have been 3 recorded PICs over the latest 6-year period. Of the 3 recorded PICs, 2 were classified as slight and 1 was classified as serious, with no fatal collisions. **Table 9** summarises each of the recorded PICs in further detail.

Figure 6. Personal Injury Collisions at Derby Road/Side Ley Signalised Junction Kegworth

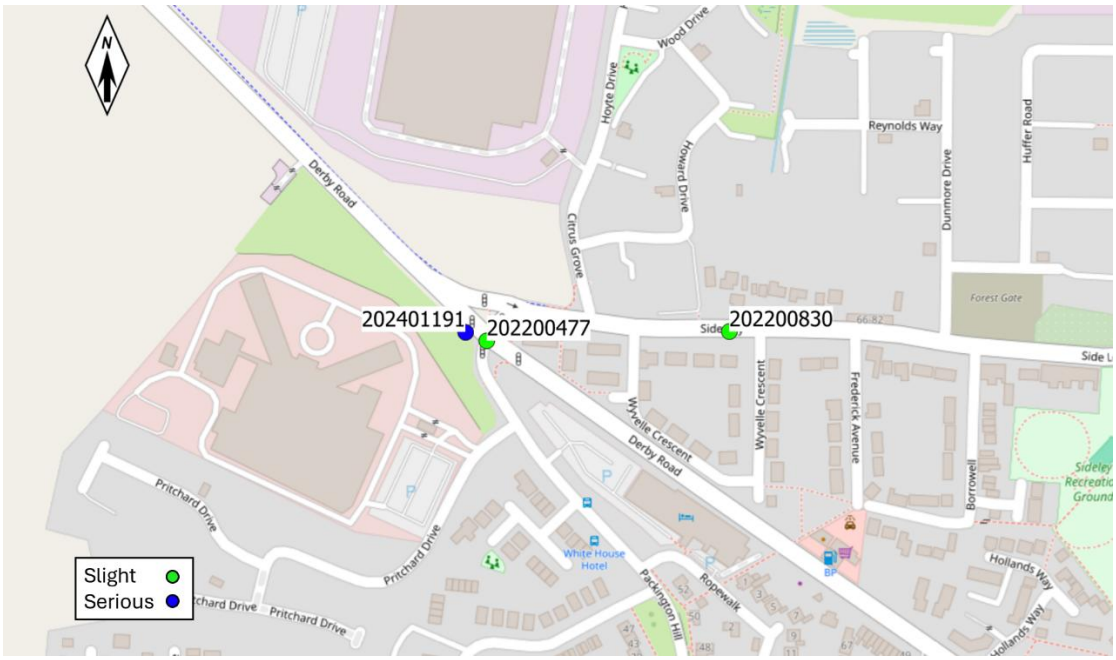


Table 9. Personal Injury Collision Data Summary (Derby Road/Side Ley Signalised Junction)

Accident Number	Day/ Date	Weather / Road Surface	Severity	Description
202200477	14/06/2022	Fine / Dry	Slight	V1 (car) was travelling ahead mid junction and collided with V2 (car) which was turning right onto Derby Road.
202200830	04/10/2022	Fine / Dry	Slight	V1 (car) was reversing out of a driveway onto Side Ley outside Property 87. No further details are provided about the cause of the collision.
202401191	04/12/2024	Wet / Damp	Less Serious	V1 (car) was travelling ahead to the northwest on Derby Road past the junction with Side Ley and collided with a pedestrian.

2.19 The details show that there have only been two recorded PICs at the junction itself but one involved a collision between two vehicles and another with a pedestrian. The other PIC was an isolated incident further afield of the junction. Given there is no cluster, nor any patterns between the PICs, it is considered that there are no significant safety problems at this location and no further assessment of highway safety is required.

A6 London Road Roundabout, Kegworth

2.20 **Figure 7** shows a detailed extract of the PICs that have been recorded at the A6 London Road roundabout, confirming there has been one recorded PICs over the latest 6-year period. **Table 10** provides a summary of the recorded PIC.

Figure 7. Personal Injury Collisions at A6 London Road Roundabout Kegworth

Table 10. Personal Injury Collision Data Summary (A6 London Road Roundabout Kegworth)

Accident Number	Day/ Date	Weather / Road Surface	Severity	Description
202301253	15/12/2023	Fine / Dry	Serious	V1 (car) was entering the A6 roundabout from the southwest and collided with a V2 (car) on the circulatory.

2.21 The details show that only one PIC has occurred at this junction, and it was due to a vehicle entering the roundabout collided with a vehicle already on the circulatory. This is an isolated PIC and therefore there are no existing safety problems at this location and no further assessment of highway safety is required.

Derby Road and Borough Street, Kegworth

2.22 **Figure 8** shows a detailed extract of the PIC records at Derby Road and Borough Street in Kegworth confirming there have been four recorded PICs over the latest 6-year period. Three of the PICs were classified as slight and one was classified as serious. **Table 11** provides a summary of the recorded PICs.

Figure 8. Personal Injury Collisions at Derby Road and Borough Street Kegworth

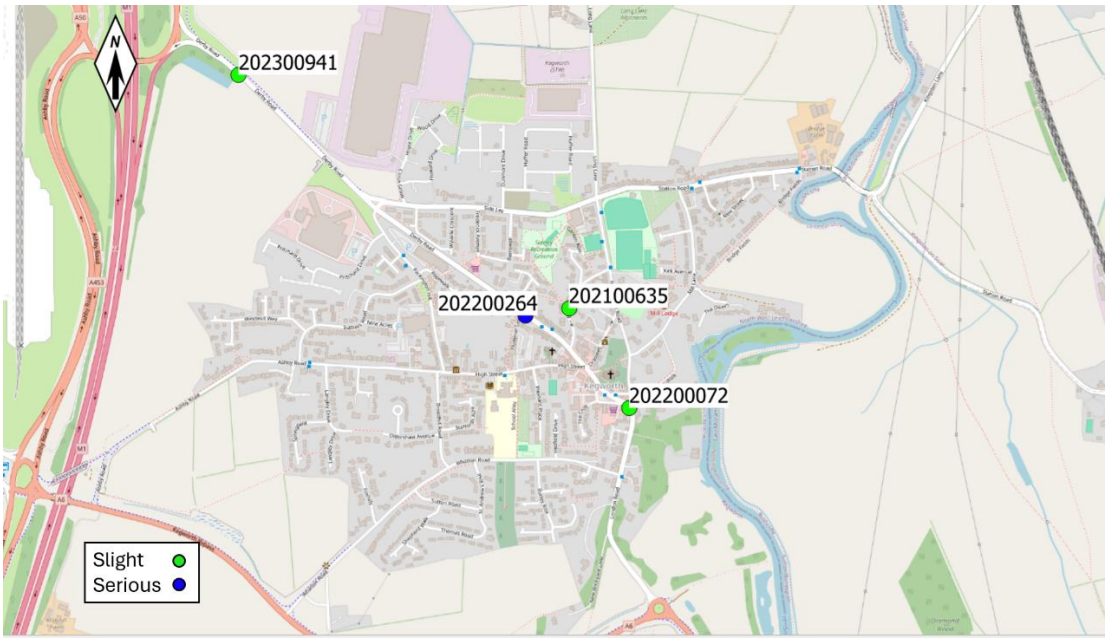


Table 11. Personal Injury Collision Data Summary (Derby Road and Borough Street)

Accident Number	Day/ Date	Weather / Road Surface	Severity	Description
202100635	21/08/2021	Fine / Dry	Slight	V1 (car) was travelling ahead moving from northeast to south on Borough Street. No other details are provided about the collision.
202200072	24/01/2022	Fine / Dry	Slight	V1 (car) was turning left out of Nottingham Road onto London Road and collided with V2 (goods vehicle) which was travelling ahead northwest on London Road.
202200264	29/03/2022	Fine / Dry	Serious	V1 (goods vehicle) was travelling northwest on Derby Road and collided with a pedestrian.
202300941	04/10/2023	Fine / Dry	Slight	V1 (car) was mid junction going ahead northwest on Derby Road and collided with V2 (car) which was turning right onto Derby Road.

2.23 The details show that there have been four recorded PICs, all of which were isolated incidents that occurred at different parts of the network. With this it is considered that there are no significant safety problems at this junction and no further assessment of highway safety is required.

Summary

2.24 The review of the PICs records through Castle Donington and Kegworth demonstrate that there are no on-going patterns or safety problems. Whilst there have been a small number of isolated PICs, the evidence shows that there are not due to any deficiencies in the highway layout and for these reasons it is considered that there are no safety problems that should be exacerbated by the EMG2 development. For this reason, no further consideration of PICs is undertaken in the following sections.

3 MITIGATION APPROACH

3.1 Based on the PIC records and robust assessment methodology, it is considered that no mitigation is necessary at either Castle Donington High Street or Derby Road, Kegworth. However, LCC consider that the traffic increases predicted in PRTM 2023 should be addressed and therefore the following section reviews impacts in more detail and proposes proportionate mitigation where there is an evidence base to support it.

4 ASSESSMENT OF NEED FOR MITIGATION MEASURES

Castle Donington

4.1 The PRTM 2023 modelling forecasted a 44 PCU increase along Castle Donington High Street between Scenario 1A and Scenario 2A in the morning peak hour (and a slight reduction in PCUs in the evening peak hour). In Scenario 3, and with the inclusion of an additional 100,000sqm of mezzanine floorspace, this figure could increase to 52 PCUs. The worst-case impact would therefore remain at less than one additional PCU per minute in either direction.

4.2 However, the worst-case increase of 52 PCUs along Castle Donington High Street is considered highly robust and unlikely to occur in reality for the reasons set out in paragraph 2.3.

4.3 It is therefore considered that the PRTM 2023 modelling is overly robust and in reality, there would not be a 52 PCU increase along Castle Donington High Street. Therefore, the Applicant holds the position that there would not be a severe residual impact along Castle Donington High Street. Notwithstanding this, given the concerns of LCC, the following sets out a potential mitigation scheme, that is proportionate to the worst-case impacts, to discourage traffic from travelling along Castle Donington High Street.

4.4 On the northbound approach to Castle Donington, the first junction after leaving the A453 is a roundabout with the Castle Donington Relief Road (CDRR). This was opened in 2020 to provide relief to Castle Donington village centre, which lies on the route of the former A453 (which used to run via Long Eaton to Nottingham before being rerouted via the east side of East Midlands Airport and via M1 J24). However, the signage provided on the approach to and the exit from this roundabout only signs the CDRR as being to the A50, and no other destinations. The village is signed as Village Centre as shown on **Figures 9** and **10** below.

Figure 9. Advance direction sign (ADS) on approach to roundabout

Figure 10. Direction sign onto CDRR from roundabout

4.5 It would therefore be of benefit to encourage greater use of the CDRR by changing this signage, The specific text can be agreed at detailed design but could include relevant local destinations (e.g. "Long Eaton"), strategic routes such as "(M1 North)" or could simply sign a more general "All through traffic" or "All routes".

4.6 The signage works can be secured by adding a requirement into the DCO undertaker to enter into an agreement under Article 18(1)(f) for the associated signage works. A suggested draft of this requirement is found in **Section 6** below.

4.7 The potential signage changes directing traffic along the CDRR is considered a reasonable and proportionate mitigation measure that will ensure there are no residual impacts in Castle Donington. The Applicant believes that this can be addressed within the time frame of the Examination and without giving rise to other issues or unexpected consequences.

Kegworth

4.8 The PRTM 2023 modelling forecasted a 163 PCU increase in the morning peak hour along Derby Road in Kegworth between Scenario 1A and Scenario 2A (and a slight reduction in the evening peak hour). The PCU flow would not increase within Scenario 3 because the increase of 163 PCUs relates entirely to background traffic re-assigning through Kegworth towards M1 Junction 24, rather than EMG2 traffic routing via the A6 Kegworth Bypass and then through Kegworth.

4.9 Discussions have been held with AECOM to understand why this re-assignment could be occurring within the PRTM 2023 model. AECOM confirmed the signal timings at the A453/A6 Kegworth Bypass roundabout and M1 Junction 24 are fixed in PRTM 2023 and unchanged between each of the scenarios. They also confirmed that the route along Derby Road has been coded with a speed flow curve of 25mph (i.e. it assumes an average vehicle speed of 25mph along the entire route), which is a typical input for this road type. However, the PRTM 2023 model is not able to accurately take account of varying traffic signal timings using MOVA, and nor is it able to take account of the existing traffic calming scheme, the signalised pedestrian crossings, and other general obstacles, such as on-street parking, that have the ability to delay drivers.

4.10 The purpose of the PRTM 2023 strategic modelling is to provide a general overview of the network performance under future traffic flow scenarios. Whilst the model is able to account for traffic re-assignment where congestion and delays are expected, the model is only validated at link flow level and so judgement is required as to where further detailed modelling is needed, such as VISSIM modelling in this case. Any mitigation should be based on the results of the detailed VISSIM modelling, as this provides a much more accurate representation of future network performance levels, including dynamic traffic signal timings, journey times, queues and delays.

4.11 The EMG2 Highway Works propose significant improvements to the Strategic Road Network, with the primary infrastructure improvement comprising a new free flow link between the M1 northbound and A50 westbound. This transfers traffic from the A453 northbound to the M1 northbound, creating more capacity for northbound vehicles travelling towards M1 Junction 24 along the A453. It has been agreed with National Highways that the EMG2 Highway Works will improve the overall performance of the SRN around M1 Junction 24.

4.12 The VISSIM modelling provides journey time results for each of the scenarios. These have been extracted for the routes along the A6 Kegworth Bypass/A453 northbound and Derby Road towards M1 Junction 24, to understand the difference between the Stage 1A and Stage 2A scenarios. The routes are shown on **Figure 11** and the journey times are summarised in **Table 12** for the 2038 morning peak hour scenario, which is when the 163 PCU increase is being identified in PRTM 2023.

Figure 11. VISSIM Journey Time Routes

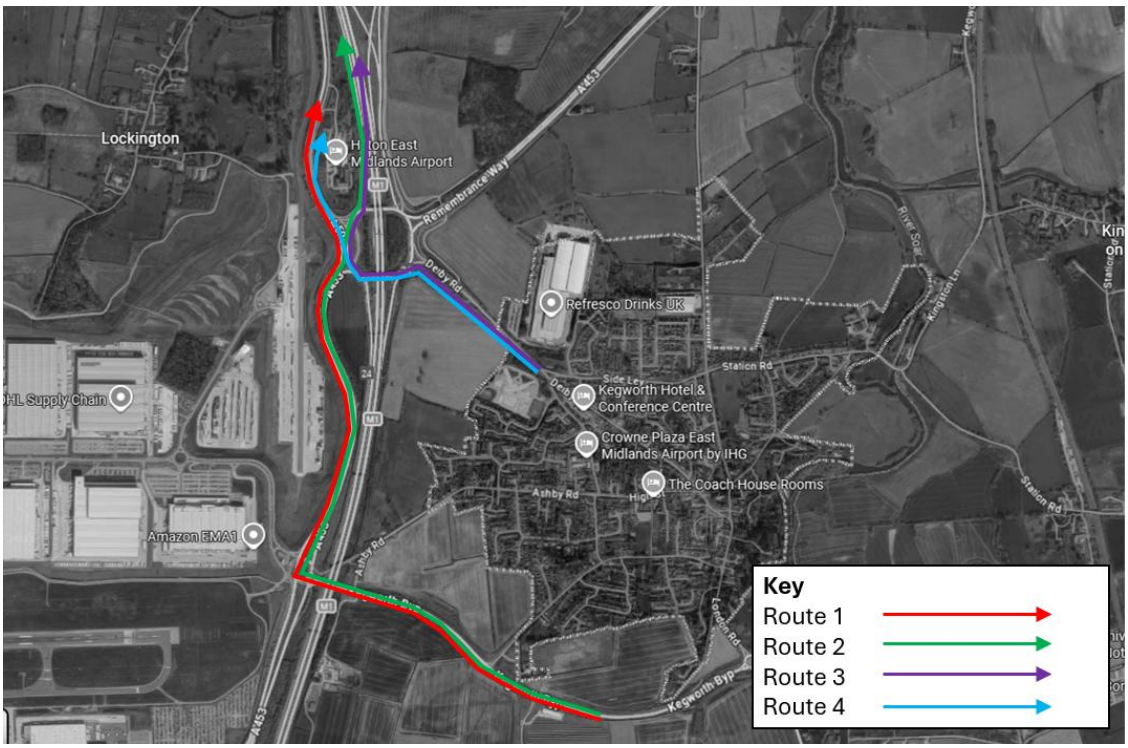


Table 12. 2038 Morning Peak Hour Journey Time Comparisons (in seconds)

Route	2038 WoD (Scenario 1A)	2038 WD + Mitigation (Scenario 2A)	Difference (WD + Mitigation – WoD)
Route 1	427	360	-67
Route 2	276	281	+5
Route 3	372	377	+6
Route 4	302	308	+6

4.13 The results show that the journey times between the A6 Kegworth Bypass and the A50 westbound (Route 1) are expected to significantly reduce by 67 seconds and in comparison, the route via Derby Road to A50 (Route 4) is expected to increase by 6 seconds. There is expected to be a small increase in journey time between the A6 Kegworth Bypass and M1 northbound of 5 seconds (Route 2) and an increase of 6 seconds along Derby Road to M1 Junction 24 (Route 3).

4.14 To provide further understanding, mean maximum queue lengths has been extracted from the VISSIM modelling and are summarised in **Table 13**.

Table 13. 2038 Morning Peak Hour Mean Max Queue Comparisons (in metres)

Arm	2038 WoD	2038 WD + Mitigation	Difference (WD + Mitigation – WoD)
A6 Kegworth Bypass towards EMG1 roundabout	947	344	-603
Derby Road towards M1 Junction 24	48	71	+23

4.15 The VISSIM modelling confirms that queues along the A6 Kegworth Bypass would significantly reduce by 603 metres, whilst queues on Derby Road would increase by 23 metres.

4.16 The evidence from the VISSIM modelling shows that journey times would be improved along the A6 Kegworth Bypass and A453 northbound route. Therefore, in reality, traffic travelling northbound on the A6 towards Kegworth is far more likely to route this way rather via Kegworth, which is not being accurately reflected in PRTM 2023. This is further supported by the fact PRTM 2023 is a strategic model that is unable to accurately take account of dynamic traffic signal timings and the existing traffic calming, signal-controlled crossings and general obstacles along the Derby Road, Kegworth route.

4.17 For these reasons, based on the VISSIM modelling, it is considered that the 163 PCU increase predicted in PRTM 2023 will not occur and instead this traffic would route via the A6 and A453 northbound. Therefore, no mitigation is proposed along Derby Road, Kegworth on the basis that there are not expected to be any severe residual impacts from the EMG2 development.

4.18 LCC provided a response in relation to the above Kegworth traffic review on the 15th July 2026. LCC commented as follows:

A reduction in journey time of 67 seconds on Route 1 (A6 Kegworth bypass and A50 westbound) is indicated, however the reduced journey time of 360 seconds is still greater than the 308 second journey time of Route 4 (Derby Road to A50).

Again, the change in mean max queue length is presented to demonstrate the attractiveness of the A6 Kegworth Bypass route. A significant reduction of -603m is observed vs an increase in +23m for Derby Road, Kegworth. However, in the 2038 WD + Mitigation column the remaining mean max queue on the A6 bypass route is still 344m vs 71m on Derby Road. It's also worth pointing out the two queue lengths are to different junctions (EMG1 roundabout vs M1 J24) so not a direct comparison. The A453

approach to M1 J24 would also be relevant to understand queuing impact on route choice given this route uses both junctions to access the A50. This figure isn't indicated however is unlikely to be insignificant and will impact the attractiveness of the A6 Kegworth bypass route the note supports.

4.19 In response to this, it is noted that the length of the routes included within the VISSIM model accord with the routes illustrated in **Figure 11** (as shown previously). On this basis, whilst the model indicates an actual journey time of 360 seconds for Route 1 compared with 308 seconds for Route 4, which therefore suggests it would be quicker to route via Derby Road versus the Kegworth Bypass, these journey times do not represent a like for like comparison.

4.20 As shown in **Figure 11**, the journey distance from Derby Road to the A50 is much shorter than that of the journey from the Kegworth By-Pass to the A50. Consequently, the differences in journey times are influenced by the differing route lengths used in the model at this location.

4.21 Furthermore, the Derby Road journey time section begins after vehicles have passed through Kegworth and therefore does not capture delays associated with travelling through the village itself. These include pedestrian crossings, numerous junction interactions and other localised factors, such as vehicle movements associated with on-street parking, local delivery and servicing activity, and increased morning pedestrian movements involving the escort of school children. The inclusion of these factors would therefore be expected to further increase journey times along the Derby Road route, making it less attractive to drivers. Additionally, the VISSIM model does not account for the Side Ley/Derby Road junction, and any resultant delay arising from the existing traffic signals at this location.

4.22 To further illustrate this, a review of the Google Maps Traffic function has been undertaken to show the existing differences in journey times for these routes. The journey times from the 'Paws at the Moors' local business on the A6 to the A50 have been compared at 8am on weekday mornings via the Kegworth Bypass and via Kegworth village using Derby Road. These are shown in **Figure 12** and **Figure 13** for clarity. Whilst the focus has been on Routes 1 and 4, the same outcome would be seen for Routes 2 and 3 because traffic heads in the same direction in both instances.

Figure 12. Route to A50 via Kegworth Bypass

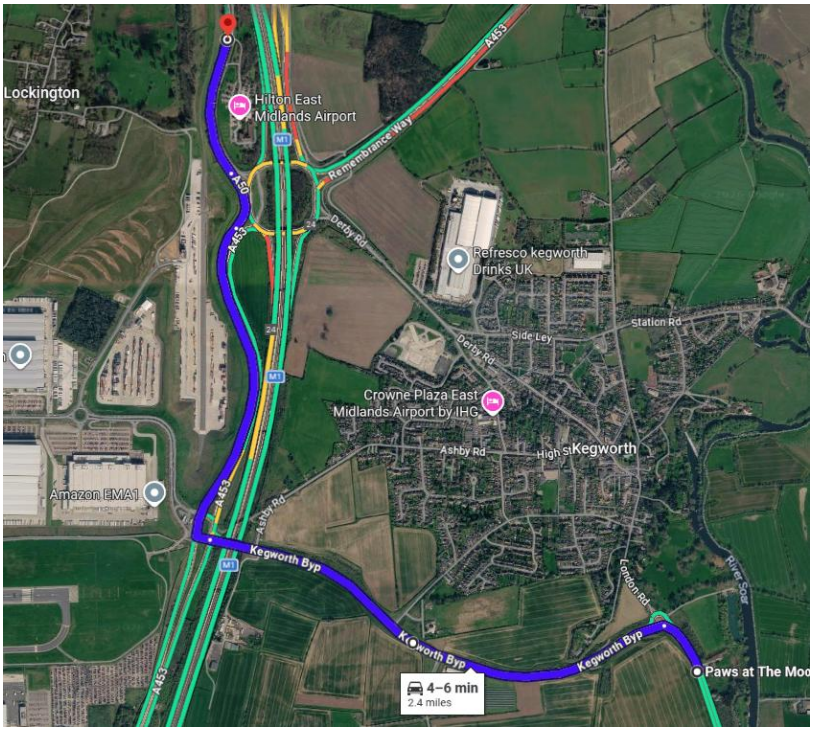
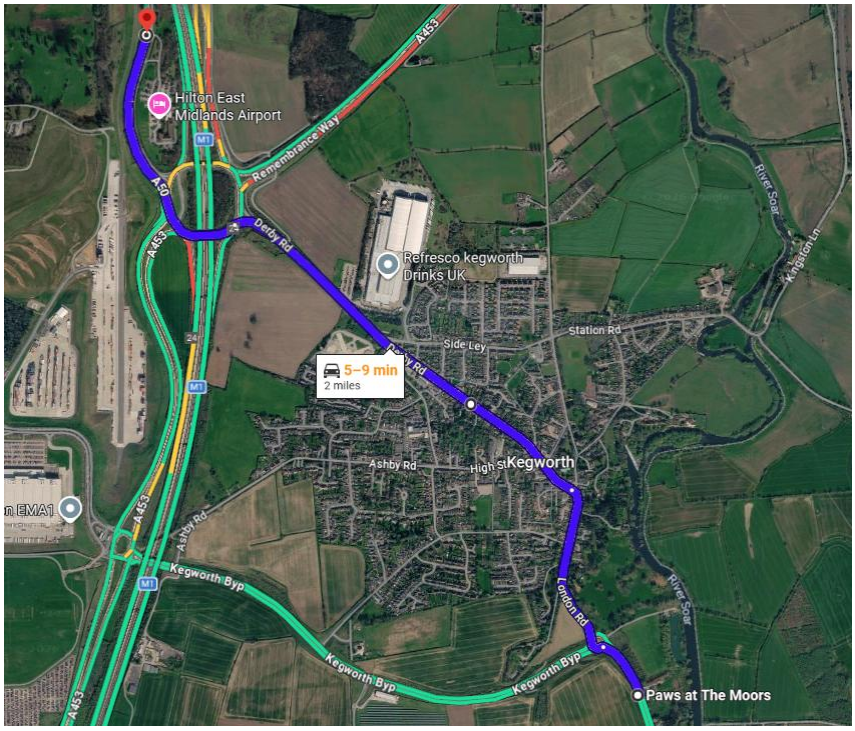


Figure 13. Route to A50 via Derby Road



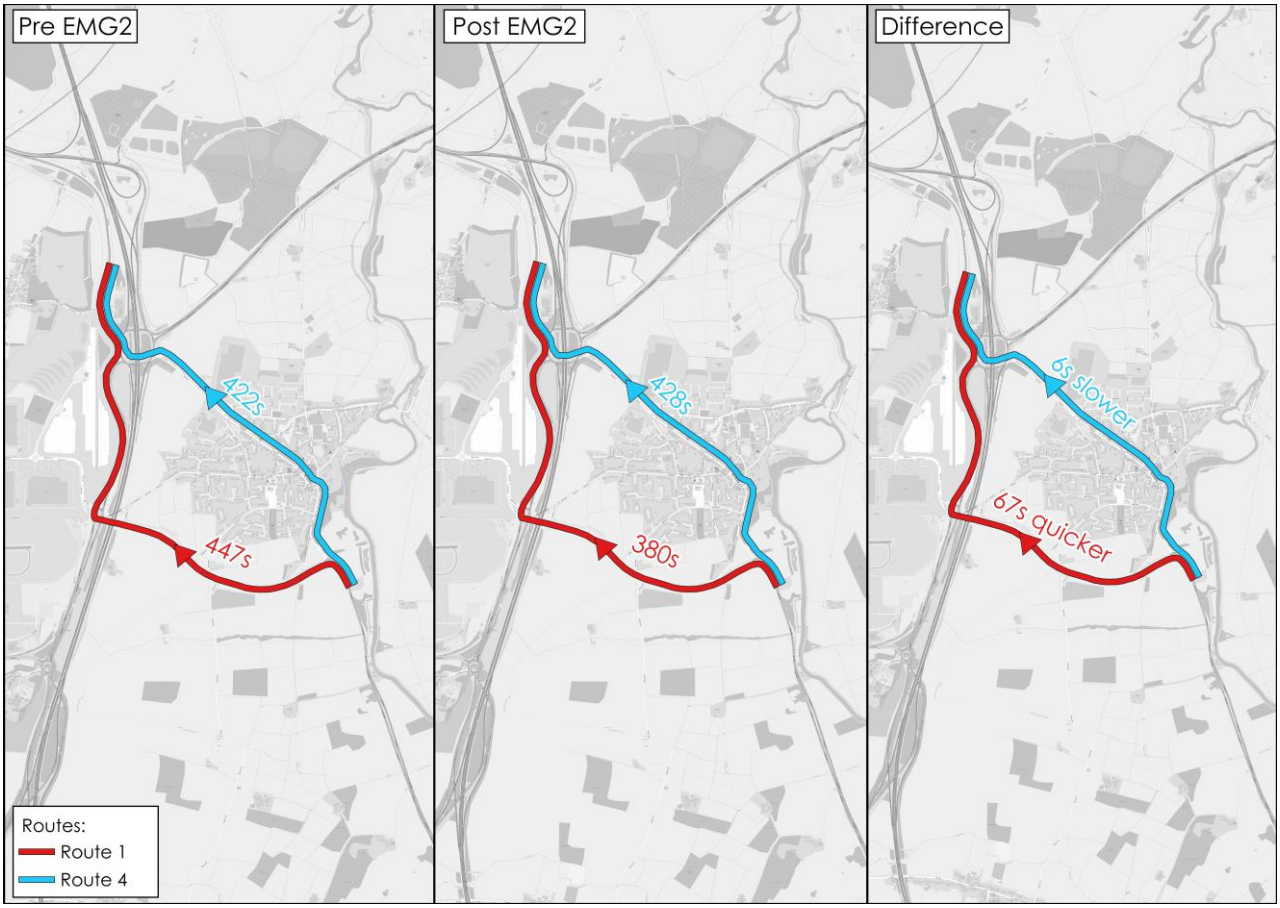
4.23 As shown above, the Kegworth Bypass route currently takes circa 4-6 minutes and the Derby Road route takes circa 5-9 minutes.

4.24 In light of the above, and to create a more accurate basis for comparison, Google Maps Traffic junction journey times have been used to fill the missing the sections of the route within the VISSIM model. This is detailed within **Table 14** below, with the respective differences in journey times between the 1A and 2A Scenarios also summarised in **Figure 14**.

Table 14. Journey Time Review with Inclusion of Google Traffic Sections

Route	Journey time from Paws at the Moors to start of VISSIM model (s)	Scenario 1A Journey time for route within VISSIM model (s)	Scenario 1A Total journey time (s) from Paws at the Moors to end of route	Scenario 2A Journey time for route within VISSIM model (s)	Scenario 2A Total journey time (s) from Paws at the Moors to end of route
1	20	427	447	360	380
2	20	276	296	281	301
3	120	372	492	377	497
4	120	302	422	308	428

Figure 14. Comparison of Journey Times to A50 Between 1A and 2A Scenarios (AM peak)



4.25 As shown above, the Kegworth Bypass route is forecast to be over a minute quicker than routing via Derby Road (which is forecast to also be circa 6 seconds slower), which again also does not consider any delay resulting from the Side Ley signal junction.

4.26 On this basis, it is maintained that there is no need to provide any mitigation in Kegworth.

5 SUMMARY AND NEXT STEPS

5.1 This Technical Note has provided further assessment of the residual impacts of the EMG2 development along Castle Donington High Street and Derby Road, Kegworth. It is considered that improved signage can be installed in Castle Donington to direct drivers to the bypass, which would reasonable and appropriate in line with the potential impacts of EMG2.

5.2 Further assessment of the VISSIM modelling and journey time analysis demonstrates that there are unlikely to be any severe residual impacts along Derby Road in Kegworth. For this reason, no mitigation is proposed.

5.3 The next steps are that the Applicant will amend the DCO to include a Requirement for signage improvements, with suggested wording set out in Section 6.

5.4 **The analysis in this note demonstrates that there is no technical basis to support further mitigation over and above that proposed**.

6 DRAFT REQUIREMENT FOR SIGNAGE WORKS

6.1 The following sets out the proposed wording for the Requirement for signage works:

(1) No warehouse shall be occupied until a signage scheme for the following signage works on the local road network to direct vehicular traffic onto the Castle Donington Relief Road has been submitted to and approved by the local highway authority:

a. Replacement of the advance directional sign on the northbound approach to the roundabout junction of Coppice Drive and the Castle Donington Relief Road; and

b. Replacement of the directional sign on the northbound exit onto the Castle Donington Relief Road at the roundabout junction of Coppice Drive and the Castle Donington Relief Road.

(2) The works must thereafter be carried out in accordance with the approved signage scheme.

APPENDIX 1

Personal Injury Collision Data (Kegworth)

Accidents between dates **01/01/2021** **and** **31/03/2026** (63) months

Selection: **Notes:**

; Refined using Accidents within selected Polygons -Data Requests 2026 ("BWB Kegworth 10.06.2026")

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity	Time
202100635	21/08/2021	448650	326885	Fine without high winds	Dry	Darkness: street lights present and lit	Slight	0130

Location: BOROUGH STREET KEGWORTH EXACT LOCATION UNKNOWN.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Going ahead left bend	NE	S

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity	Time
202200072	24/01/2022	448805	326635	Fine without high winds	Dry	Darkness: street lights present and lit	Slight	0630

Location: LONDON ROAD KEGWORTH JW NOTTINGHAM ROAD.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Entering main road	Turning left	N	S
Van / Goods 3.5 tonnes mgw and under	Mid Junction - on roundabout or main road	Going ahead left bend	S	NW

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2021** **and** **31/03/2026** (63) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2026 ("BWB Kegworth 10.06.2026")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity	Time
202200264	29/03/2022	448540	326865	Fine without high winds	Dry	Daylight	Serious	1630

Location: A6 DERBY ROAD KEGWORTH OUTSIDE NUMBER 52.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Van / Goods 3.5 tonnes mgw and under	Not at, or within 20M of Jct	Going ahead other	SE	NW

Casualties:

Class	Severity
Pedestrian	Serious

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity	Time
202200477	14/06/2022	448160	327127	Fine without high winds	Dry	Daylight	Slight	2000

Location: A6 DERBY ROAD KEGWORTH JW SIDE LEY.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Mid Junction - on roundabout or main road	Going ahead other	NW	SE
Car	Entering main road	Turning right	NE	NW

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2021** **and** **31/03/2026** (63) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2026 ("BWB Kegworth 10.06.2026")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity	Time
202200830	04/10/2022	448330	327135	Fine without high winds	Dry	Darkness: street lights present and lit	Slight	1840

Location: C8207 SIDE LEY KEGWORTH OUTSIDE NUMBER 87.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Entering main road	Reversing	S	W

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity	Time
202300941	04/10/2023	447810	327465	Fine without high winds	Dry	Daylight	Slight	1705

Location: A6 DERBY ROAD KEGWORTH AT ENTRANCE TO PAINTBALL CENTRE.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Mid Junction - on roundabout or main road	Going ahead other	SE	NW
Car	Entering main road	Turning right	NE	NW

Casualties:

Class	Severity
Vehicle Passenger	Slight

Accidents between dates **01/01/2021** **and** **31/03/2026** (63) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2026 ("BWB Kegworth 10.06.2026")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity	Time
202301253	15/12/2023	448865	326120	Fine without high winds	Dry	Darkness: street lights present but unlit	Serious	2244

Location: A6 KEGWORTH AT ROUNDABOUT WITH KEGWORTH BY-PASS.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Entering roundabout	Going ahead other	SW	NE

Casualties:

Class	Severity
Driver / Rider	Serious

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity	Time
202401191	04/12/2024	448145	327133	Fine without high winds	Wet/Damp	Darkness: street lighting unknown	Less serious	0725

Location: A6 DERBY ROAD KEGWORTH JW SIDE LEY.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Mid Junction - on roundabout or main road	Going ahead	SE	NW

Casualties:

Class	Severity
Pedestrian	Less serious

Number of records in selection: **8**