Pell Frischmann

Project	Land West of Ratby
Document Title or Subject	Pell Frischmann Response to Highways Comments
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1 Introduction

1.1.1 Pell Frischmann (PF) has been instructed by Lagan Homes (the Client) to provide highways and transport advice and prepare a Transport Assessment (TA) report to support an outline planning application (with all matters reserved apart from access) for a phased, mixed-use development comprising about 470 dwellings (Use Class C3) or, in the alternative, up to about 450 dwellings and care home (Use Class C2). Provision of land for community hub (Use Class F2); provision of land for 1FE primary school (Use Class F1); and associated operations and infrastructure including but not limited to site re-profiling works, sustainable urban drainage system, public open space, landscaping, habitat creation, internal roads/routes, and upgrades to the public highway.

1.1.2 Leicestershire County Council (LCC), National Highways (NH), and Active Travel England (ATE) provided comments based on the Transport Assessment and the Travel Plan. LCC supplied these on 12th November 2024, whilst NH and ATE responded on 3rd December 2024. Pell Frischman provided the reports to all three of them on 4th October 2024. LCC, NH and ATE's comments are presented within **Appendix A**, **Appendix B**, and **Appendix C** respectively.

1.1.3 The access drawing has also been updated to include a short extended 3m wide shared section of footway/cycleway east on Desford Lane (in the direction of central Ratby) to allow for the implementation of a new uncontrolled crossing point. This allows cyclists to exit off Desford Lane westbound onto the shared footway/cycleway and then cross onto the shared footway/cycleway which routes on the eastern side of the site access. The revised access design is shown in Drawing **109003-PEF-ZZ-ZZ-XX-DR-TP-00001** presented in **Appendix D**. The revised proposals have then been subject to an independent Stage 1 Road Safety Audit, the results of which are presented within **Appendix E**.

2 Response to Leicestershire County Council Comments

2.1 Comment 1

"undertake a crossing assessment in line with the guidance in Traffic Signs Manual (TSM) Chapter 6."

2.1.1 Based off LCCs Pan-Regional Transport Model (PRTM) that forecast the anticipated the traffic volumes on the road network, **Table 1** shows the resulting gaps between vehicles and their direction of travel for the Desford Lane/Site Access junction.

Table 1. Gap Acceptance

Direction	Time Period	Weekday Average	Average Gap Between Vehicles (s)
Eastbound	08:00 – 09:00	420	9
	17:00 – 18:00	474	8
	Daily	8,083	11
Westbound	08:00 – 09:00	463	8
	17:00 – 18:00	220	16

	Daily	6,071	14
Total	08:00 – 09:00	883	4
	17:00 – 18:00	694	5
	Daily	14,154	6

2.1.2 A gap acceptance of 4 seconds between vehicles in the AM peak, 5 seconds in the PM peak and 6 seconds across the day are all considered acceptable given the size of the development and the village in which the development is in. it should also be noted that these are average gap in traffic and in reality, there is likely to be a platooning effect with traffic with larger gaps between traffic usually forming. It should be noted this is based on the future 2031 with development scenario and so represents a reasonable future worst case assessment.

2.1.3 A gap in traffic of at least 4 seconds in considered sufficient for most groups to cross. It should be noted that the crossing is proposed within the re-located 30mph zone and directly adjacent to the raised table as built as part of the recently constructed medical centre access. The medical centre access also includes a similar uncontrolled crossing on the eastern side of the access, demonstrating the acceptability of this type of crossing in principle in this context.

2.1.4 Subsequently, the Desford Lane/Site Access crossing form is considered acceptable in terms of sufficient gaps in traffic for pedestrians to cross.

2.2 Comment 2

"Drawing 109003-PEF-ZZ-XX-DR-TP-00001, if a Toucan crossing is required, TSM Chapter 6 paragraph 20.1.5 states that the minimum permitted width of a Toucan crossing is 3m, where as a width of 2.4m is shown on the drawing. This should be shown on an amended plan."

2.2.1 The toucan crossing forms part of the committed works for planning application 21/01295/OUT and is not required to facilitate the access proposals. As such they should be subject to a stage 1 RSA and any subsequent design requirements will be the responsibility of the applicant for that planning applicant to make it safe and suitable should that site come forward.

2.3 Comment 3

"The visibility to the proposed traffic signal heads should be shown on Drawing 109003-PEF-ZZ-XX-DR-TP-00001, in accordance with TSM Chapter 6 Table 15-1."

2.3.1 The toucan crossing forms part of the committed works for planning application 21/01295/OUT and is not required to facilitate the access proposals. As such they should be subject to a stage 1 RSA and any subsequent design requirements will be the responsibility of the applicant for that planning applicant to make it safe and suitable should that site come forward.

2.4 Comment 4

"Dimensions should be added to Drawing 109003-PEF-ZZ-XX-DR-TP-00001 showing that the junction corner radii and carriageway width are in accordance with the LHDG Tables DG1 and DG5."

2.4.1 **Drawing 109003-PEF-ZZ-XX-DR-TP-00001** presented within **Appendix D** shows the junction corner radii and carriageway width. Currently the access serves pear tree business park as well as a minor industrial use unit and allotment gardens, hence currently the appropriateness of the 8m corner radii in line with the LHDG. This access will continue to be appropriate with the incorporation of the development proposals.

2.5 Comment 5

"swept path analysis is undertaken for an 11.2m length refuse vehicle, fire tender and pantechnicon / removal lorry, at a speed of 15kph. Ideally 0.5m clearance to kerbs should be provided. A note should be added to Drawing 109003-PEF-ZZ-XX-DR-TP-00001 showing that vehicle speeds of 15kph have been used."

2.5.1 **Drawing 109003-PEF-ZZ-XX-DR-TP-00014** presented within **Appendix D** demonstrates vehicle tracking for a 11.2m length refuse vehicle, a fire tender and a removal vehicle and includes a note confirming speeds of 15kph has been used.

2.6 Comment 6

"2m wide footways should be provided on both sides of the carriageway on Drawing 109003-PEF-ZZ-XX-DR-TP-00008".

2.6.1 Phase 1 currently does not have a footway on the northern side of the road here and therefore, any footway provision would not tie in with any existing provision. Furthermore, existing land constraints do not allow the provision of 2m wide footways on both sides of the road. Subsequently, the existing provision of a 2m wide footway on the western side of the road and a 1m wide service margin being retained on the eastern side has been provided for consistency.

2.7 Comment 7

"submit a drawing which shows the full extent of the 'stopping up' proposals so the LHA can review and provide further comments on the implications of stopping up part of Burroughs Road."

2.7.1 **Drawing 109003-PEF-ZZ-XX-DR-TP-00015** presented within **Appendix D** shows the stopping up proposals.

2.8 Comment 8

"Consider the trip distribution / assignment based on the results from the PRTM modelling including the Botcheston Road / Desford Lane junction."

2.8.1 The PRTM modelling through the Botcheston Road/Desford Lane junction shows a net change of +2 in the AM peak and +30 in the PM which is not a significant number of development trips through the junction.

2.8.2 Furthermore, development trips are anticipated to travel straight through the junction. Therefore, with no right turners there will not be any additional conflicting movements through the junction. Subsequently, the development proposals will not result in an unacceptable decline of the road safety conditions at this junction.

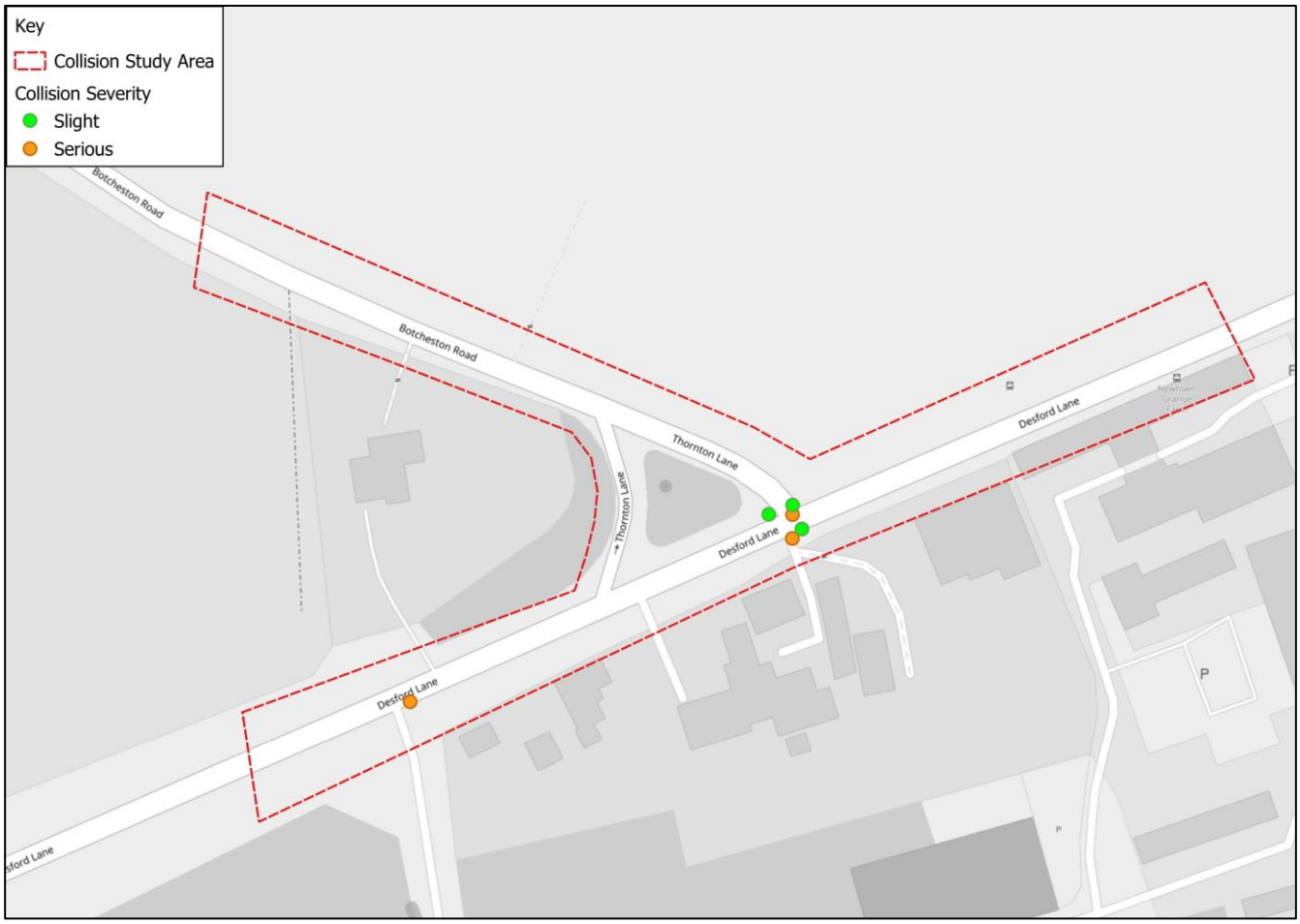
2.9 Comment 9

"…Botcheston Road/Desford Lane junction. The PIC data will need to be analysed by the applicant to see I there are any emerging patterns/trends that could be exacerbated by the proposed development."

2.9.1 Personal Injury Collision (PIC) data has been reviewed for the most recent full 5-year period (2019 - 2023) as well as eleven months of 2024 in the vicinity of the Botcheston Road/Desford Lane junction.

2.9.2 In summary, a total of six PICs were recorded across the study area. The study area is shown in **Figure 1**.

Figure 1. Collision Study Area



2.9.3 The study area is uniform as both Botcheston Road and Desford Lane are limited to 40mph. The Botcheston Road/Desford Lane junction has two auxiliary lanes for eastbound vehicles to efficiently enter/depart Desford Lane. Once vehicles have travelled on the auxiliary lane that leaves Desford Lane, there is a priority junction to enter Botcheston Road. Westbound drivers on Desford Lane from Botcheston Road is also made up of a priority junction.

2.9.4 Across the study area, there were six collisions, in which three collisions were classed as slight in severity and the other three were considered as slight. **Table 2** provides a summary of collisions. This represents a collision rate of approximately one collision per year.

Table 2. Collision Summary

Collision Severity	Year						
	2019	2020	2021	2022	2023	2024	Total
Serious	1	0	2	0	0	0	**3**
Slight	0	0	1	0	1	1	**3**
Total	**1**	**0**	**3**	**0**	**1**	**1**	**6**

Botcheston Road/Desford Lane Priority Junction Cluster

2.9.5 The Botcheston Road/Desford Lane priority junction has a cluster of five collisions within the vicinity of the junction. **Figure 2** shows the location of the cluster.

2.9.6 All five of these collisions occurred following the same turning manoeuvre through the junction, where one vehicle attempted to right from Desford Lane onto Botcheston Road but collided with another vehicle who was travelling through the junction on Desford Lane in the opposite direction.

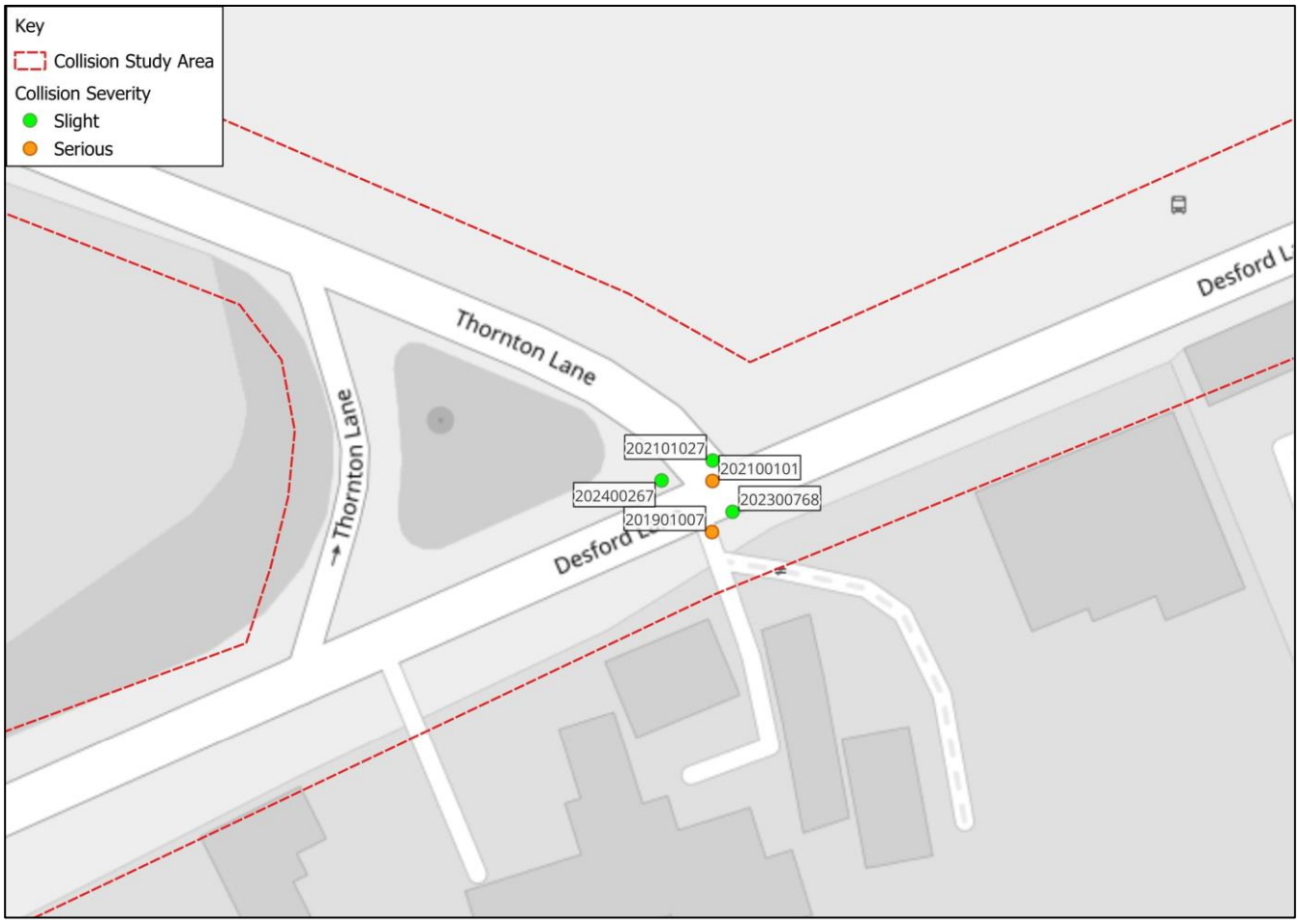
2.9.7 The first serious collision to take place occurred in 2019 between two cars when one car attempted to make the turn right manoeuvre from Desford Lane but collided with the other car who was travelling through the junction. One driver sustained serious injuries whilst the other suffered slight injuries. At the time of the collision, the weather was fine, and the road was dry.

2.9.8 The other serious collision happened in 2021, where a car was attempting to turn right onto Botcheston Road but collided with a motorcycle (over 50cc and up to 125cc) under the same conditions. The driver/rider of one of the vehicles suffered a serious injury.

2.9.9 In 2019, the first of three slight collisions occurred when a van/goods vehicle (3.5 tonnes and under) collided with a car who was driving along Desford Road through the junction. The road was wet/damp, and the collision took place during darkness with streetlights on. Both drivers sustained slight injuries.

2.9.10 The slight collisions in both 2023 and 2024 occurred between two cars as one attempted to reach Botcheston Road, leaving one driver with slight injuries. The weather was fine, and the road was dry during both events.

Figure 2. Botcheston Road/Desford Lane Priority Junction Cluster



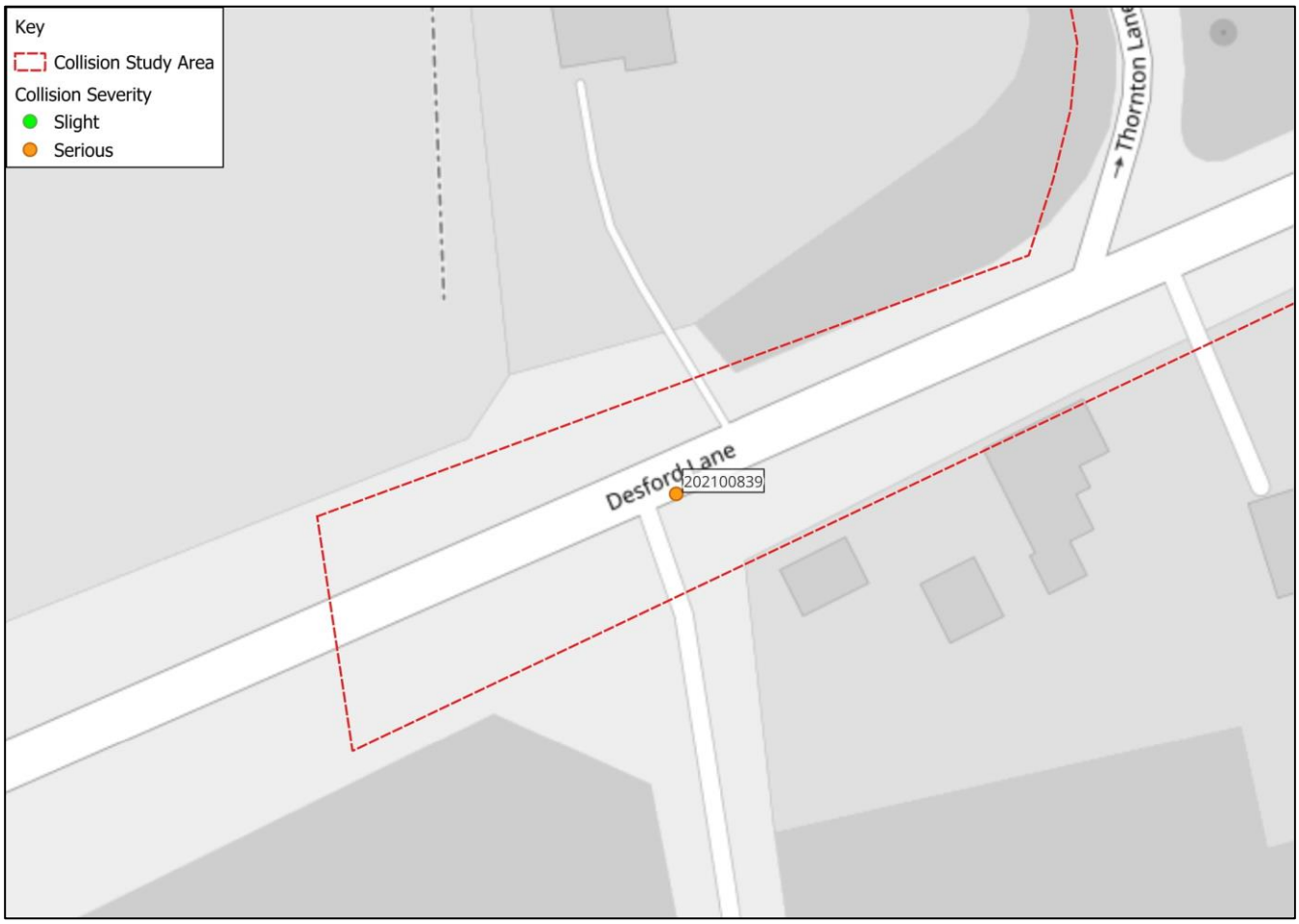
Desford Lane/Newton Grange Farm Business Park

2.9.11 There is one collision at the Desford Lane/Newton Grange Farm Business Park junction. This junction has been classed as serious. **Figure 3** shows the location of the collision.

2.9.12 The collision occurred in 2021 when a car was attempting to turn right into the Newton Grange Farm Business Park access when it collided with a motorcycle (over 50cc and up to 125cc) who was slowing down on Desford Lane. It was raining at the time of the collision, and the road was wet/damp. It was dark but the street lighting is unknown. The driver/rider of one of the vehicles suffered a serious injury.

2.9.13 No further collisions were recorded at this location which suggested that there is no indication that the collisions occurred due to the road geometry.

Figure 3. Desford Lane/Newton Grange Farm Business Park Junction Collisions



PIC Summary

2.9.14 A review of the recorded traffic collisions resulting in personal injury has been undertaken for the most recently available five full years (2019 – 2023) as well as eleven months of 2024 in the vicinity of the Botcheston Road/Desford Lane junction.

2.9.15 There were six recorded collisions in total, three of which were slight and three which were serious, five of which (three slight, two serious) occurred in a single cluster. The analysis shows there was a common cause of right turn collision turning from Desford Lane westbound to enter Botcheston Road northbound.

2.9.16 Notwithstanding this, due to the anticipated low numbers of proposed development traffic travelling through the junction and given there will be no conflicting movements as this traffic will be travelling straight through the junction. No highway safety specific mitigation measures are required to accommodate development proposals. Subsequently, any highway safety measures to address any existing issues should be examined by the local highway authority.

2.10 Comment 10

"The LHA would recommend that the stop on Charnwood has a raised kerb installed and the stop on Main Street (opposite Burroughs Road) have a bus stop road marking implemented to encourage the use of public transport."

2.10.1 Agreed and acknowledged.

2.11 Comment 11

"*the LHA would ask the applicant to investigate and put forward suggestions to improve the bus services in the village.*"

2.11.1 To improve the bus services within Ratby, the following improvements have been suggested:

- Raise the kerb at the bus stop on Charnwood
- Marked bus stop road marking on Main Street bus stop

2.11.2 The applicant is happy to engage with LCC on providing appropriate contributions towards improvements towards public transport provision as appropriate.

2.12 Comment 12

"SMART targets have been identified in the FTP, but the LHA would ask the applicant to start surveying occupants within six months of first occupation."

2.12.1 Agreed and acknowledged.

2.13 Comment 13

"Detail what upgrades they will be making to Burroughs Road to make it suitable for pedestrians, cyclists and motorists"

2.13.1 Burroughs Road will be improved and repaired as required in terms of surfacing to ensure the structure is suitable for use by pedestrians and cyclists. Overgrown areas of vegetation will also be cut back as required. However, due to the ecological constraints of the adjacent hedgerow and trees, Burroughs Road cannot be widened to remove the hedge/trees nor can direct streetlighting be implemented along this stretch of the road. Notwithstanding this, there will be overspill lighting and natural surveillance from adjacent development.

2.13.2 Burroughs Road subsequently provides a direct, convenient and appropriate route into central Ratby which can be improved with surface improvements, natural surveillance and overspill lighting from the development proposals which will also provide an improved pedestrian/cycle environment when compared to the existing situation.

2.14 Comment 14

Implemented a raised kerb at the stop on Charnwood"

2.14.1 Agreed and acknowledged.

2.15 Comment 15

"Bus stop road markings implemented on Main Street (opposite Burroughs Road)"

2.15.1 Agreed and acknowledged.

2.16 Comment 16

"The applicant should state how many parking spaces each dwelling will have; how many unallocated parking spaces and the number of overall spaces on the site… The applicant should consider installation of EV charging points at dwellings, the community centre and the school as well as accessible parking bays"

2.16.1 LCC's Highway Design Guide sets out the relevant parking guidance in **Table 3**.

Table 3. LCC Residential Parking Guidance

Number of Bedrooms	Minimum Required Number of Parking Spaces
Up to 3 bedrooms	2 per dwelling
4 or more bedrooms	3 per dwelling

2.16.2 LCC Highway Design Guide states that residential visitor parking is calculated on the basis of 0.25 visitor spaces per dwelling.

2.16.3 The installation of EV charging points must align with LCC Electric Vehicle Charging Strategy which works alongside the Governments Electric Vehicle Infrastructure Strategy. This includes EV charging points at residential areas, educational facilities and community areas.

2.16.4 The accessible parking standards for retail/recreation/leisure and education facilities as set out in LCC's Highway Design Guide is shown in **Table 4**.

Table 4. LCC Accessible Parking Guidance

Car Park Purpose	Car Park Size	
	Up to 200 Spaces	Over 200 Spaces
Shopping, recreation and leisure land uses	Three accessible bays or 6% of total parking spaces, whichever is greater	Four accessible bays plus 4% of total parking spaces
Schools and higher and further education	1 accessible bay or 5% of total capacity, whichever is greater	-

2.16.5 The overall number of parking spaces at the development is to be considered at detailed design stage. However, appropriate parking will be agreed and provided on site to ensure no overspill onto the local public highway network.

2.17 Comment 17

"The applicant should indicate how much cycle parking will be made available within dwellings and include the number of cycle parking spaces the community centre, school and any green spaces will have"

2.17.1 The minimum provision for cycle parking as required by LCC's Highway Design Guide is shown in **Table 5**.

Table 5. LCC Cycle Parking Guidance

Land Use Description (Use Class)	Provision
Residential (C3)	One space for every bedroom – parking to be undercover and secure
Suis Generis (Ea & Eb)	One long stay space per 500m² gross floor area (GFA) for staff and operational use – parking to be undercover and secure One short stay space for every 250m
Education (F1a)	One space per 20 staff members One space per 10 students Staff and Student parking to be provided separately

2.17.2 The overall number and specification of cycle parking spaces at the development is to be considered at detailed design stage. However, it is anticipated that these will be provided in line with the minimum standards as set out above.

3 Response to National Highways Comments

3.1 Comment 1

"The primary school trip rates analysis requires the confirmation of the following key details

- *Total number of pupils*
- *How trip rates were derived*
- *Internalisation calculations".*

3.1.1 As previously discussed with Leicestershire County Council (LCC), the primary school was originally assessed as 2 Form-Entry (FE) school. The following assumptions were then made based on discussions made with the education authority on the likely demand of any new school. It was assumed that only 1-Form would serve the development, in which all will be served by either internal sustainable trips or as part of an onward journey (residential arrival/departure related) and have therefore been modelled as part of the residential trips. The other form was therefore assumed to serve the wider area and result in multi-modal off-site trips so are included within the off-site trip generation calculations. Internalisation trips to the development therefore account for 50% of all forecasted school trips. Since then, the development proposals have changed to a 1FE primary school which therefore results in a robust worst-case scenario as all trips have therefore been assessed to travel off-site.

3.2 Comment 2

"provide the full NOMIS output."

3.2.1 The full NOMIS output is included within **Appendix F.**

3.3 Comment 3

"Care home trip rates; include trip rate calculations."

3.3.1 **Table 6** below shows the trip rates and subsequent trip generation for the care home. The TRICS output is within **Appendix G**.

Table 6. Care Home Trip Rates and Generation

Time Period	Vehicle Trip Rates (Per Dwelling)			Traffic generation (20 Dwellings)		
	Arrival	Departure	Two-way	Arrival	Departure	Two-way
AM Peak (08:00 – 09:00)	0.088	0.044	0.132	2	1	3
PM Peak (17:00 – 18:00)	0.052	0.078	0.130	1	2	3

*Note this on the assumption that the care home has 20 dwellings to account for the difference between the total number of dwellings across the two development options

3.3.2 **Table 6** shows that the proposed care home could expect to generate up to 3 two-way vehicle trips during the AM and PM highway peaks.

3.4 Comment 4

"calculate trip generation for both proposals, one for 470 dwellings and another for 450 dwellings and care home"

3.4.1 Following discussions with LCC, it was agreed that the trip rates used within the 21/01295/OUT would be used for the purposes of this assessment. These trip rates are higher than the adjacent (20/00462/FUL) and other nearby (20/01283/FUL) approved sites off Markfield Road and therefore, represent a robust worst-case assessment.

3.4.2 **Table 7** shows the residential trip rates and trip generation for the proposed development option with 470 dwellings.

Table 7. Residential Trip Rates and Generation 470 Dwellings

Time Period	Vehicle Trip Rates (Per Dwelling)			Traffic generation (470 Dwellings)		
	Arrival	Departure	Two-way	Arrival	Departure	Two-way
AM Peak (08:00 – 09:00)	0.175	0.455	0.630	82	214	296
PM Peak (17:00 – 18:00)	0.44	0.218	0.658	207	102	309

3.4.3 **Table 7** shows that the development proposals for the 470 dwelling options could generate up to 296 two-way vehicle trips in the AM peak and 309 two-way vehicle trips in the PM peak.

3.4.4 **Table 8** shows the residential trip rates and trip generation for the proposed development option with 450 dwellings.

Table 8. Residential Trip Rates and Generation - 450 Dwellings

Time Period	Vehicle Trip Rates (Per Dwelling)			Traffic generation (450 Dwellings)		
	Arrival	Departure	Two-way	Arrival	Departure	Two-way
AM Peak (08:00 – 09:00)	0.175	0.455	0.630	79	205	284
PM Peak (17:00 – 18:00)	0.44	0.218	0.658	198	98	296

3.4.5 **Table 8** shows that the development proposals for the 450 dwelling option could generate up to 284 two-way vehicle trips in the AM peak and 296 two-way vehicle trips in the PM peak.

3.4.6 Taking into account the care home trip generation in Table 6 and the 450 dwelling residential trip generation in **Table 8** results in a total development trip generation shown in Table 9.

Table 9. Total Development Trip Generation

Time Period	AM Peak (08:00 – 09:00)			PM Peak (17:00 – 18:00)		
	Arrival	Departure	Two-way	Arrival	Departure	Two-way
Total Development Proposals	81	206	287	199	100	299

3.4.7 **Table 9** shows that the combined development proposals could expect to generate up to 287 two-way vehicle trips in the AM peak and 299 two-way vehicle trips in the PM peak. As the care home option is less than the full residential option, the residential only option is the scenario used for modelling.

3.5 Comment 5

"what methodology is adopted to determine the distribution".

3.5.1 As part of the impact assessment of the development sites in Ratby, discussions were made with Leicestershire's NDI team to utilise the PRTM to forecast traffic volumes on the road network. The PRTM forecasting report provided is dated June 2024. The Technical Note that summarises the findings of the PRTM report and is included within **Appendix H**.

3.6 Comment 6

"There is an inconsistency on page 23 of the TA addendum Part 1, where it states PICADY was used for the roundabout modelling instead of LINSIG."

3.6.1 Agreed and acknowledged, for clarity LINSIG was used for this modelling.

3.7 Comment 7

"Base Model Calibration & Validation: Section 5 of the PRTM base report indicates, the base model developed using count data collected between 2010 and 2015. Additionally, some new count data was collected in 2019. This requires some high-level analysis comparing 2024/2023 with 2019 to confirm the suitability of using this base model."

3.7.1 Paragraph 1.1.5 of the PRTM Base Year Model Review states that "*PRTM2019 is a strategic model which validates well to Government Transport Analysis Guidance (TAG) over the wider area. Despite this, and as TAG makes clear, it is necessary to review model validation in the context of the specific project being undertaken to ensure its suitability.*" The Base Year Model Review is included within **Appendix I**.

3.8 Comment 8

"Traffic count and queue survey data was collected, and this is utilised in developing Junction 9 and LinSig models to determine the junction delays and Ratio to Flow Capacity (RFC). However, the report does not indicate if any base model calibration and validation exercise was carried out."

3.8.1 The junction model for the Brantings Roundabout (Junction 6) has been developed based on the traffic analysis and design specifications outlined in planning application P/21/2668/2, which was submitted to Charnwood Borough Council. While a formal planning determination has not yet been made regarding this application, the model itself is directly derived from a Leicestershire County Council LinSig model of the junction. As a result, this model is deemed acceptable for use within the context of the planning application, as it aligns with established methodologies and official traffic assessments.

3.8.2 The following junction models used in the Transport Assessment have been sourced from the approved planning application 22/00648/OUT, which pertains to Phase 2 of the Ratby development. This application was granted planning permission in September 2023 and was approved by Leicestershire County Council. As a result, the junction models are based on an officially consented scheme, ensuring their appropriateness for use in this context and maintaining consistency with the approved development plans.

- Junction 3 – Markfield Road/ Groby Road/ Main Street mini roundabout
- Junction 4 – Groby Road/ Sacheverell Way Junction
- Junction 5 - Leicester Road/ Sacheverell Way Roundabout

3.8.3 For the newly created junctions included in the planning application, the traffic models have been carefully developed to replicate observed traffic conditions. Each model accurately reflects queue lengths within 1 Passenger Car Unit (PCU) of real-world observations, ensuring a high level of reliability in representing existing traffic flows. Consequently, the models are considered both validated and calibrated in accordance with current traffic conditions.

3.8.4 It is important to note that Junction 1 is subject to proposed mitigation measures designed to alleviate any potential impacts arising from the development. These measures aim to enhance traffic flow and minimise congestion, ensuring that the development does not adversely affect the surrounding road network.

- Junction 1 – Desford Lane/ Desford Lane junction
- Junction 2 – Main Street/ Desford Lane junction
- Junction 7 – Thornton Lane/ Ratby Lane junction

4 Response to Active Travel England Comments

4.1 Comment 1

"consider all day trips to ensure a more accurate picture of all likely trips"

4.1.1 **Table 10** shows the daily residential trip rates and trip generation for the proposed development.

Table 10. Daily Residential Trip Rates and Trip Generation

Time Period	Vehicle Trip Rates (Per Dwelling)			Traffic generation (509 Dwellings)		
	Arrival	Departure	Two-way	Arrival	Departure	Two-way
Daily	2.625	2.638	5.263	1,336	1,343	2,679

4.1.2 **Table 10** shows that the development proposals could expect to generate up to 2,679 two-way vehicle trips across the day.

4.2 Comment 2

"Only 11% likely with this base data to be by active travel modes and only 8% by public transport is not aspirational…vehicle trips are forecast only for the primary school, when walking, wheeling and cycling to school should be the default option for those new residents living close to this amenity."

4.2.1 The modal shares of 11% for active travel modes and 8% for public transport are from the base data. Measures in the Travel Plan as well as additional infrastructure being provided, it is expected that there will be increases in these modal shares when compared to the base data. The targets in the Travel Plan aim to increase the number of Active Travel modes.

4.2.2 Comment 15 also sets out the aspirational longer term aims for active travel modes.

4.2.3 **Table 11** and **Table 12** show the primary school trip rates and subsequent trip generation for walking and cycling respectively. It was originally understood that the demand or the school would be 1 form from on-site and one form from off-site which the off-site traffic generation was based on. As the school now is a 1FE school, it is likely that a significant proportion of the below 1FE assessment will remain on-site.

Table 11. Primary School Trip Rates and Generation – 1FE Pedestrians

Time Period	Pedestrian Trip Rates (Per Dwelling)			(210 students)		
	Arrival	Departure	Two-way	Arrival	Departure	Two-way
AM Peak (08:00 – 09:00)	0.558	0.167	0.725	117	35	152
PM Peak (17:00 – 18:00)	0.005	0.02	0.025	1	4	5

Table 12. Primary School Trip Rates and Generation – 1 FE Cyclists

Time Period	Pedestrian Trip Rates (Per Dwelling)			(210 students)		
	Arrival	Departure	Two-way	Arrival	Departure	Two-way
AM Peak (08:00 – 09:00)	0.016	0.004	0.02	3	1	4
PM Peak (17:00 – 18:00)	0.003	0.003	0.006	1	1	2

4.2.4 **Table 11** and **Table 12** shows that the primary school will have 156 two-way active travel trips in the AM peak and 7 two-way active travel trips in the PM peak.

4.3 Comment 3

"No traffic impact is presented for active modes"

4.3.1 The volumes and subsequent traffic impact active travel modes have had been examined around the Desford Lane/Site Access in relation to the proposed crossing, shown in Drawing **109003-PEF-ZZ-XX-DR-TP-00001** included in **Appendix D**. A Stage 1 Road Safety Audit and Designers Response has also been completed and all 'problems' being addressed. Based off the PRTM forecast of the anticipated traffic volumes on the road network. Table 1 shows the resulting gaps between vehicles and their direction of travel for the Desford Lane/Site Access junction. Subsequently, the Desford Lane/Site Access crossing form is considered acceptable in terms of sufficient gaps in traffic for pedestrians to cross.

4.3.2 In terms of the distribution of active travel modes from the site, it is likely that 66% of all active travel trips (based on the likely dwelling and parcel location) will travel along Burroughs Road to reach the amenities in Ratby and beyond. In the base case, this is likely to be equivalent to up to between approximately 55-81 active travel movements (depending on if including up to 25% of primary school movements which represents the higher number). Which would be equivalent of approximately 1-2 movements per minute, or approximately 459-485 active travel movements over a day. Including for the aspirational 50% active travel aim, peak hour movements along Burroughs Lane will still be <200 in total.

4.3.3 The remaining trips will be spread across the PROW's accessing the site primarily to the east and Desford Lane. Comment 13 describes the active travel improvements that Burroughs Road has had in order to withstand the proposed demand.

4.4 Comment 4

"New access points are not assessed to ascertain whether traffic volumes mean shared used infrastructure is appropriate, continuous, meets desire lines and meets the other principles of LTN 1/20."

4.4.1 The spine road is proposed to have LTN 1/20 compliant infrastructure through to the Burroughs Road intersection. A parallel crossing will tie together the 5m segregated footway/cycleway from the spine road/Phase 2 to Burroughs Road. Most of the demand will be along Burroughs Road (measuring approximately 3m in width) and out of towards the east of the site. Burroughs Road will be an offroad active travel corridor as part of the 'stopping up' of Burroughs Road, shown in **Drawing 109003-PEF-ZZ-XX-DR-TP-00002** included within **Appendix D**. Burroughs Road is restricted in its potential for active travel improvements due to surrounding ecological constrains as previously discussed in this report.

As per comment 6, the mixture of proposed LTN1/20 and shared use infrastructure is appropriate as less than 300 pedestrians / cyclists per hour will use those facilities (in line with LTN 1/20 guidance), which the proposed numbers

for both pedestrians and cyclists are extremely low compared to the threshold and Burroughs Road is subject to wider ecological considerations.

4.5 Comment 5

"the application has not determined how local secondary schools and colleges will be accessed by active travel modes.

4.5.1 From all site access, active travel modes will travel along Main Street and Groby Road to reach Brookvale Groby Learning Campus. From the eastern side of the bridge over the M1 on Groby Road, both pedestrians and cyclists spend the rest of the journey along the shared footway/cycleway to Brookvale Groby Learning Campus. Approximately the first 195m of the shared footway/cycleway is segregated from the carriageway. The entire route is part of the link route for National Cycle Network route 63 and forms a mixture of on and off road sections. NCN 63 continues in towards central Leicester where other learning opportunities are available which the local bus service also provides access into.

4.6 Comment 6

"shared use routes for pedestrians and cyclists are proposed and these have not been shown to do meet the limited situations listed in paragraph 6.5.6 of LTN 1/20… The Desford Lane access includes shared infrastructure with cycle off shoot the east of the access point. No onward additional infrastructure is proposed to help routing to key amenities within Ratby or beyond. Routing into the site requires the use of a proposed toucan crossing to the west of the access beyond the direct desire line. It also appears to require a further uncontrolled crossing of a further side road."

4.6.1 As previously noted, the updated proposals now include a section of LTN 1/20 segregated infrastructure along the spine road through from the phase 2 proposals down to Burroughs Road. Due to the aforementioned constraints, Burroughs Road will then be pedestrianised through to the football fields entrance near the pub where there are limited movements on this section of the road and so this section will form a shared use footway/cycleway. The southern section of the spine road through to Desford Lane will also form a shared footway/cycleway. This is considered appropriate due to the very low numbers of pedestrians/cyclists which is well below the 300 movements per hour threshold noted within LTN1/20.

4.6.2 **Drawing 109003-PEF-ZZ-XX-DR-TP-00001**, included in **Appendix D**, shows the revised proposals which include a more direct crossing for cyclists approaching the site from central Ratby.

4.7 Comment 7

"It appears this access will be shared with Pear Tree business park, a small employment site. There appears to be many parked cars on this access on Streetview images which could jeopardise the shared use infrastructure. A method of parking control maybe required to prevent pavement parking."

4.7.1 **Drawing 109003-PEF-ZZ-XX-DR-TP-00001** included in **Appendix D** shows that the Desford Lane site access will have double yellow lines on both sides of the road.

4.8 Comment 8

"Will national speed limit sign be moved beyond the site entrance?"

4.8.1 Drawing B/WHPRATBYMC.1/01 as part of Planning Application 20/00786/FUL proposes that the existing 30mph/national speed limit sign will be relocated to the southwest of the Desford Lane/Site Access junction. The photos as part of the site visit of the Stage 1 RSA indicate that the speed limit signage has already been re-located to the west of the proposed access.

4.9 Comment 9

"No designs are apparent in the TA to show any improvements to Burroughs Lane, despite this being narrow and sloping with no footways and only limited lighting. Does the gradient meet the requirements of Inclusive Mobility (2022) to be able to support access by wheelers? There could be conflict between modes and users of the pub car park, how will this be managed or signage used to support active modes. It seems a shame the turning head has taken priority in the designs so far tabled."

4.9.1 The largest gradient of Burroughs Road is approximately 6%, which is less than the absolute maximum for wheelchair users, which is 1 in 12 (8.3%), which as stated in Inclusive Mobility (2022) is within *"the physical effort of getting up a steeper gradient"*. Furthermore, there are alternate routes from the site that in the same direction of the desire lines including via Desford Lane.

4.9.2 Appropriate signage will be implemented to warn vehicles of pedestrians and cyclists on Burroughs Road by the access to the pub car park. There is approximately 60m between the car park access and the existing footway at the eastern of Burroughs Road, so given the number of vehicle movements to/from the car park are low and the vehicles will be travelling at slow speeds, there will be very little conflict between vehicles and pedestrians/cyclists.

4.10 Comment 10

"the spine road intersection with Burroughs Road offers very little for active travellers and does nothing to help prioritise their movements"

4.10.1 **Drawing 109003-PEF-ZZ-XX-DR-TP-00002** included in **Appendix D** shows the active travel improvements to the Burroughs Road intersection with the development's spine road. Following changes as part of the Phase 2 Development, a 5m wide segregated footway/cycleway is proposed on the western side of the spine road. To the north, this segregated facility ties into Phase 2 and to the south, a parallel crossing ensures pedestrians and cyclists can cross the spine road to reach the 5m segregated facility on the eastern side of the road.

4.10.2 This segregated footway/cycleway allows access to continue to the likely position of the proposed primary school. On the western side of the spine road, the 5m segregated facility transitions into a 3m wide shared footway/cycleway that travels west onto Burroughs Road and then discharges cyclists into the road. On the eastern side of the road, the 5m segregated facility provides access to Burroughs Road which is to make up the Active Travel corridor as part of the 'stopping up' of Burroughs Road, shown in **Drawing 109003-PEF-ZZ-XX-DR-TP-00015** presented within **Appendix D** To the south on the eastern side of the spine road, the 5m wide segregated facility becomes a 3m wide shared facility.

4.11 Comment 11

"The standard of cycle parking must meet the locally adopted cycle parking standard or those within LTN 1/20 that proposes 1 space per bedroom for dwellings and short stay visitors at care homes of 0.05 space per bedroom and matched for long stay."

4.11.1 Standards within LTN 1/20 that proposes 1 space per bedroom for dwellings and short stay visitors at care homes of 0.05 space per bedroom and matched for long stay will be adhered to as a minimum or in line with local standards if those are higher.

4.11.2 The minimum provision for cycle parking as required by LCC's Highway Design Guide is shown in **Table 13**.

Table 13. LCC Cycle Parking Guidance

Land Use Description (Use Class)	Provision
Residential (C3)	One space for every bedroom – parking to be undercover and secure

Suis Generis (Ea & Eb)	One long stay space per 500m² gross floor area (GFA) for staff and operational use – parking to be undercover and secure One short stay space for every 250m
Education (F1a)	One space per 20 staff members One space per 10 students Staff and Student parking to be provided separately

4.12 Comment 12

"no clear direction at this stage is presented for mode shift and the Government's target that by 2030 50% of all journeys in towns and cities should be by active modes."

4.12.1 The Second Cycling and Walking Investment Strategy (CWIS2) sets out Active Travel England's aim by 2030, "50% of all journeys in towns and cities should be by active travel modes". In relation to the aspirational aim of this TP, 50% of the total trips should be by active travel modes in 2030.

4.12.2 The development baseline modal splits are developed from the method of travel data from the TRICS survey relating to appropriate sites, within the 'C3 – Houses – Privately Owned' category. The 50% active travel data is based on the National Travel Survey dataset NTS0409a, which forms the average number of trips by purpose and main model, and dataset NTS0502a, which was the trip purpose by trip start time. These two datasets were combined with the base census data to work out the 50% active travel modal splits. **Table 14** shows the aspirational modal split for a 50% active travel modal share for the development proposals.

Table 14. Modal Splits - 50% Active Travel

Mode	Mode Percentage – Base	Mode Percentage – 50% Active Travel
Pedestrian	8%	36.35%
Car Driver	73%	34.02%
Cycle	3%	13.65%

4.12.3 The original trip rate for each mode outlined in the Transport Assessment has been combined with the new modal shares to calculate the new trip rates for the above travel modes following the 50% change of active travel methods, shown in **Table 15**.

Table 15. Trip Rates - 50% Active Travel

Mode	AM Peak (08:00 – 09:00)			PM Peak (17:00 – 18:00)			Daily		
	Arrival	Departure	Two-Way	Arrival	Departure	Two-Way	Arrival	Departure	Two-Way
Pedestrian	0.086	0.222	0.309	0.222	0.106	0.328	1.305	1.315	2.620
Cycle	0.035	0.089	0.123	0.080	0.044	0.124	0.492	0.492	0.983
Car Driver	0.082	0.213	0.295	0.205	0.101	0.306	1.223	1.229	2.452

4.12.4 Taking into account the new trip rates in **Table 15** and applying them to the development quantum of 509 dwellings, the following trip generation is calculated, shown in **Table 16**.

Table 16. Trip Generation - 50% Active Travel

Mode	AM Peak (08:00 – 09:00)	PM Peak (17:00 – 18:00)	Daily

	Arrival	Departure	Two-Way	Arrival	Departure	Two-Way	Arrival	Departure	Two-Way
Pedestrian	44	113	157	113	54	167	664	669	1,333
Cycle	18	45	63	41	23	63	250	250	500
Car Driver	42	109	151	105	52	157	623	626	1,249

4.12.5 **Table 16** shows that following an increase of active travel methods to 50% of total trips with the subsequent reduction in car trips, it is forecast there will be 220 two-way active travel trips in the AM peak, 230 two-way active travel trips in the PM peak, and 1,833 two-way active travel trips across the entire day.

4.13 Comment 13

"The aims are woolly and do not sufficiently hold the development to account and should not be based on simply raising awareness of sustainable travel. Targets are only based on decreasing private car use and there is no obvious target for the care home."

4.13.1 **Table 17** identifies the resulting number of trips to the care home as a result of the 10% reduction. This will be superseded once travel surveys are undertaken to identify the actual base modal share.

Table 17. Initial Target Care Home Vehicle Trip Generation (20 Dwellings)

Time Period	AM Peak (08:00 - 09:00)			PM Peak (17:00 - 18:00)		
	Arrival	Departure	Two-way	Arrival	Departure	Two-way
Car Driver	1	0	1	0	1	1

4.13.2 Welcome packs will be distributed to the care home staff as well as periodic newsletters.

4.13.3 The potential hours of work for residents, staff, and students should be considered in the travel plan, as the operational hours have an influence on the transport mode they may choose to take. For example, late working hours will incline workers to use a car more, as public transport does not often run as frequently at night or after dark. Again, during the day, it is also more likely for people to choose public transport during rush hour periods to avoid being caught in traffic or walking or cycling off the roads to avoid vehicle fumes or emissions.

4.13.4 In addition to the awareness raising aims of the TP there is also significant infrastructure proposed as part of the development proposals as set out earlier within this note including the LTN1/20 infrastructure and shared footway/cycleway infrastructure along the spine road and conversion of Burroughs Road to a primary active travel route (car free).

4.14 Comment 14

"Cycle training and purchase scheme should be explored"

4.14.1 Agreed and acknowledged.

4.15 Comment 15

"Different targets and incentives will be likely required for the different uses on site."

4.15.1 To provide accurate and clear timescales for the implementation of the Framework Travel Plan, its associated measures and targets are linked to the construction and occupation of plots and parcels. These measures relate to the potential for reducing the need to travel and, where travel is necessary, promoting active and shared transport methods, such as carpooling, walking, cycling, and public transport, among all residents, staff, and visitors.

4.15.2 The primary school will attract a large number of trips so will require its own bespoke measures for staff, pupils and parents in line with LCC Education specific requirements. The primary school specific targets measures will be identified as part of the preparation of the primary school specific travel plan. These will be based off the measures from the list in the Framework Travel Plan and any additional school specific measures.

4.15.3 These measures will relate to promoting active travel and shared transport methods aim at students, staff and parents. A large proportion of students likely to walk or cycle to the school. Car drivers are likely to be limited to staff access only with restrictions controlled for parent and drop-off access within the school parking areas.

4.16 Comment 16

"The travel plan does not provide sufficient detail on the active travel and public transport infrastructure to be provided or improved (both on and off-site)"

4.16.1 Additional information is provided on further improvements earlier within this note and within the included drawings.

4.16.2 The Framework Travel Plan has outlined the active travel proposals/improvements. When made available to the residents/staff, welcome packs will include the details of appropriate routes to nearby amenities. The Framework Travel Plan is a 'living' document and so is updated accordingly as proposals come forward within the local area.

Report Ref.	**109003-Pef-Zz-Xx-Rp-Tr-000011_S2_P0 - Highways Response**
File Path	P:\Data\109003 - Ratby Phases 3 & 4 Outline\01 - WIP\Documents\Transport Planning\109003-PEF-ZZ-XX-RP-TR-000011_S2_P0 - Highways Response.docx

Rev	Suit	Description	Date	Originator	Checker	Approver
P1	S2	Initial Draft Response	12.02.25	J.Hope/J.Farrell	L.Thomas	L.Thomas

Ref. reference. Rev revision. Suit suitability.

Appendix A LCC Comments

Substantive response of the Local Highway Authority to a planning consultation received under The Development Management Order.

Leicestershire County Council

Response provided under the delegated authority of the Director of Environment & Transport.

APPLICATION DETAILS

Planning Application Number: 24/00914/OUT

Highway Reference Number: 2024/0914/04/H

Application Address: Burroughs Road Recreation Ground Burroughs Road Ratby Leicester Leicestershire LE6 0XZ

Application Type: Outline (with access)

Description of Application: Outline planning application (with all four matters reserved apart from access) for a phased mixed-use development comprising about 470 dwellings (Use Class C3) or, in the alternative, about 450 dwellings and care home/extra care facility (Use Class C2/C3). Provision of a community hub (Use Class F2); 1FE primary school (Use Class F1); and associated operations and infrastructure including but not limited to site re-profiling works, sustainable urban drainage system, public open space, landscaping, habitat creation, internal roads/routes, and upgrades to the public highway.

GENERAL DETAILS

Planning Case Officer: Alex Jelley

Applicant: Lagan Homes England

County Councillor: Cllr Ozzy O'Shea

Parish: Ratby

Road Classification: Class C

Substantive Response provided in accordance with article 22(5) of The Town and Country Planning (Development Management Procedure) (England) Order 2015:

The Local Highway Authority does not consider that the application as submitted fully assesses the highway impact of the proposed development and further information is required as set out in this response. Without this information the Local Highway Authority is unable to provide final highway advice on this application.

Advice to Local Planning Authority

Background

The Local Highway Authority (LHA) has been consulted by the Local Planning Authority (LPA), Hinckley & Bosworth Borough Council (HBBC), on a planning application for the following development on land at Burroughs Road Recreation Ground Burroughs Road Ratby:

'Outline planning application (with all four matters reserved apart from access) for a phased mixed-use development comprising about 470 dwellings (Use Class C3) or, in the alternative, about 450 dwellings and care home/extra care facility (Use Class C2/C3). Provision of a community hub (Use Class F2); 1FE primary school (Use Class F1); and associated operations and infrastructure including but not limited to site re-profiling works, sustainable urban drainage system, public open space, landscaping, habitat creation, internal roads/routes, and upgrades to the public highway'.

The development site is located to the west of the village of Ratby, Burroughs Road bisects the northern and southern parcels of the site and Desford Lane lies to the south, beyond its southern boundary. The applicant secured planning permission for Phase 1 of this development for up to 75 dwellings in September 2023 (LPA ref: 22/00648/OUT). The applicant has also provided details of another development for 90 dwelling units, which is adjacent to Phase 1 (LPA ref: 20/00462/FUL).

A location plan alongside other consented developments in the area is included in Figure 1 below:

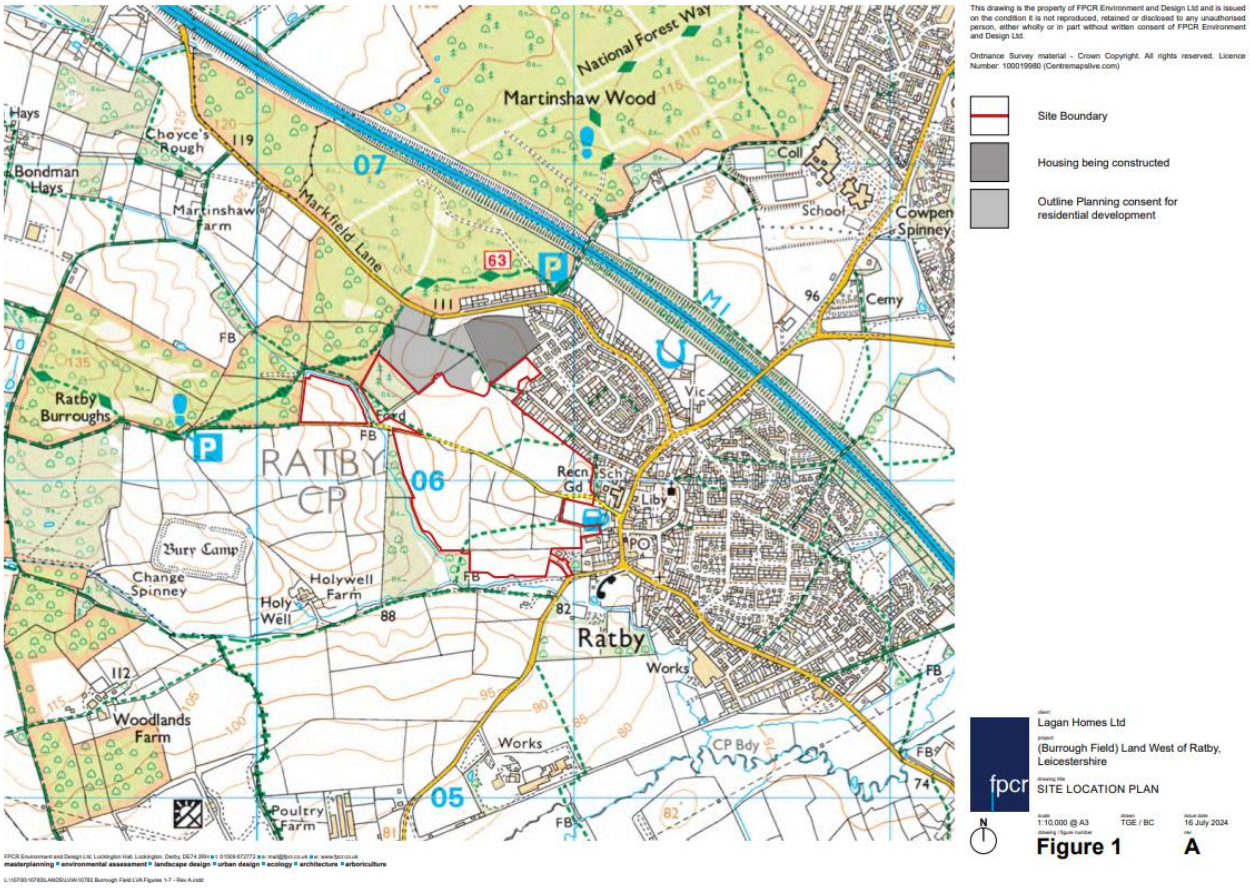


Figure 1: Site Location Plan reproduced from FPCR Environment and Design Ltd drawing number: TGE / BC, 'Burrough Field – Land West of Ratby - Site Location Plan', Revision A, dated 16 July 2024.

The applicant has submitted the following relevant documents / plans to support the planning application:

- Planning application form;
- Marrons Planning Statement, 'Land West of Ratby - on behalf of Lagan Homes Limited', dated 10 September 2024;
- FPCR Environment and Design Ltd drawing number: TGE / BC, 'Burrough Field – Land West of Ratby - Site Location Plan', Revision A, dated 16 July 2024;
- FPCR Environment and Design Ltd Design and Access Statement, 'Land at West of Ratby, Leicestershire', dated August 2024;
- FPCR Environment and Design Ltd drawing number: 10783-FPCR-XX-XX-DR-L-0007, 'Framework Plan - Burrough Field, Land West of Ratby', Revision P13, dated 10 July 2024;
- FPCR Environment and Design Ltd drawing number: 10783-FPCR-XX-XX-DR-L-13, 'Illustrative Masterplan - Burrough Field, Land West of Ratby', Revision P04, dated 10 July 2024;

- Pell Frischmann Transport Assessment (TA), 'Land West of Ratby', Report Ref: 106232-PEF-ZZ-XX-RP-TS-000002, Revision P3, dated 6 September 2024;
- Pell Frischmann Transport Assessment Addendum (TAA), 'Land West of Ratby', Report Ref: 109003-PEF-ZZ-XX-RP-TP-000006, Revision P1, dated 6 September 2024;
- Pell Frischmann drawing number: 109003-PEF-ZZ-XX-DR-TP-00001, 'Desford Lane Site Access Drawing', Revision P03, dated 28 May 2024;
- Pell Frischmann drawing number: 109003-PEF-ZZ-XX-DR-TP-00002, 'Burroughs Road Internal Access Design', Revision P01, dated 2 May 2024;
- Pell Frischmann drawing number: 109003-PEF-ZZ-XX-DR-TP-00008, 'Phase 1 - Site Access Drawing', Revision P01, dated 4 July 2024;
- Pell Frischmann drawing number: 109003-PEF-ZZ-XX-DR-TP-00009, 'Phase 2 - Site Access Drawing', Revision P01, dated 12 August 2024; and
- Pell Frischmann Framework Travel Plan (FTP), 'Land West of Ratby', Report Ref: 106232-PEF-ZZ-XX-RP-TP-000003, Revision P3, dated 6 September 2024.

The LHA has now had the opportunity to review some of the evidence submitted and is pleased to offer the following comments on the site access arrangements, highway safety, internal layout, sustainability of the site in transport terms, Public Rights of Way, and Framework Travel Plan for consideration or further action by the applicant. It should be noted that the LHA undertook a site visit on Thursday 7 November 2024.

Site Accesses

The LHA acknowledge the intention to provide three vehicular accesses to the proposed development and additional information regarding the constraints associated with the location of each site access. The proposed vehicular accesses to the site are summarised below:

- Simple priority junctions, off Markfield Road and Desford Lane; and
- Extension to new vehicular access provided for adjacent development to serve Parcel D.

Markfield Road

According to the applicant the access off Markfield Road would form an extension to the approved access from the adjacent consented development approval (22/00648/OUT – 75 dwellings) which forms a 5.5m wide access with 6m wide corner radii in line with Residential Access Road specification in the Leicestershire Highway Design Guide (LHDG - available at: https://resources.leicestershire.gov.uk/environment-and-planning/planning/leicestershire-highway-design-guide).

The LHA understands that a 2m wide footway will also be implemented as part of the adjacent consented development along the southern side of Markfield Road to link with existing infrastructure proposed as part of planning approval which is currently being built out. A footpath/cycle path is also proposed as part of the adjacent consented development routing west of the main access road linking with Public Right of Way R50.

The site access off Markfield Road also benefits from speed reducing measures linking in with existing features to the east into Ratby and has been subject to a Stage 1 Road Safety Audit (RSA1). The contents of the RSA1 are considered in more detail below.

The internal spine road which is 5.5m for Phase 1 which was determined as part of that application and then will widen within the Phase 2 site to provide a 6.75m link road to accommodate the proposed development.

Desford Lane

Access via Desford Lane will be through the existing Pear Tree Office Park. The site access will be 6.75m in line with the LHDG requirements for a residential access road providing access to a school. The applicant has confirmed that the 6.75m width will be maintained throughout the internal layout to a point within the site where it will link into Phase 1.

The applicant has provided a 3m wide footway / cycleway along the northern side of the existing access as there is little or no demand to the south.

Parcel D Access

The last vehicular access as part of the proposals will also be an extension to an existing access off Markfield Road. As referenced above a new vehicular access was provided as part of the proposals for 90 dwellings approved under LPA ref: LPA ref: 20/00462/FUL.

The LHA note that the masterplan indicates this would only serve a relatively limited number of dwellings and does not show a connection through to the rest of the site.

Stage 1 Road Safety Audit.

Following a RSA1 of the site access proposals, the RSA1 identified two issues with the Markfield Road access that are listed below:

1. Risk of pull-out collisions at the Markfield Road access due to obstructed left-hand visibility splay east of proposed access; and

2. Distances between speed control measures may increase risk of collisions due to inappropriate speeds.

The LHA has reviewed the contents of the RSA1 and Designers Response and they are accepted. However, the LHA would advise the applicant to update the RSA1 or commission a new RSA to include the proposed Toucan crossing (further details below). There does not appear to be any evidence that a Toucan crossing is required as part of the proposals. Therefore, the applicant should undertake a crossing assessment in line with the guidance in Traffic Signs Manual (TSM) Chapter 6.

Notwithstanding the above, the LHA has reviewed the site access drawings against the guidance in the LHDG and offers further comments for the applicant to consider / provide on the revised drawings:

109003-PEF-ZZ-XX-DR-TP-00001 Desford Lane Site Access Drawing rev P03

- The footway to the south of the scheme would require works to the existing ditch and the applicant should be mindful that the highway boundary is likely to be along the roadside edge of the ditch.

- If a Toucan crossing is required, TSM Chapter 6 paragraph 20.1.5 states that the minimum permitted width of a Toucan crossing is 3m, where as a width of 2.4m is shown on the drawing. This should be shown on an amended plan.

- Visibility to the proposed traffic signal heads should be shown on the drawing, and this should be in accordance with TSM Chapter 6 Table 15-1.

- The junction visibility splays are shown assuming that the relocation of 30mph speed limit will result in 85th percentile speed readings of 30mph or less. There is no guarantee that relocating the speed limit will achieve this and therefore 85th percentile speed readings should be provided for the site. Visibility splays should then be based on these readings.

- Dimensions should be added to the drawing showing that the junction corner radii and carriageway width are in accordance with the LHDG Tables DG1 and DG5.

- The LHDG requires swept path analysis is undertaken for an 11.2m length refuse vehicle, fire tender and pantechnicon / removal lorry, at a speed of 15kph. Ideally 0.5m clearance to kerbs should be provided. A note should be added to the drawing showing that vehicle speeds of 15kph have been used.

- There is a possibility that some highway trees are affected by the proposals. The applicant is therefore advised that these are highway assets which can hold significant Capital Asset Value for Amenity Trees (CAVAT) value and should confirm which highway trees will need to be removed as part of the proposals.

<u>109003-PEF-ZZ-XX-DR-TP-00009 Phase 2 Site Access Drawing (Future Phase) rev P01</u>

- LHDG Table DG1 states that no more than 400 dwellings should be served by a 5.5m wide access, with no more than 150 dwellings from a single access. The proposed site accesses using the existing 5.5m wide access roads off Markfield Rd would not meet these criteria as each already serve developments of 75 and 90 dwellings.

  However, given that the Phase 1 element of the site cannot be amended to provide a 6.75m carriageway and noting that the 5.5m carriageway width is for a relatively short length, and the remainder of the spine road being 6.75m, this is considered to be acceptable.

<u>109003-PEF-ZZ-XX-DR-TP-00008 Phase 1 Site Access Drawing (Future Phase) rev P01</u>

- 2m wide footways should be provided on both sides of the carriageway.

<u>Other Considerations</u>

Notwithstanding the comments on the site access arrangements the LHA would highlight several further issues that will need to be addressed at the Section 278 (S278) detailed design stage of the scheme subject to the applicant obtaining necessary permissions.

- All S278 works in Leicestershire require core samples of the existing road pavement during the Technical Approval process. This is to ensure that the full area of existing carriageway is suitable for the intensification of use, and that there are no underlying road pavement issues which are not evident on the surface, for example a perished binder layer. The cores also assist with ensuring that the pavement design matches the existing, for example you may propose a 40mm surface course, but the existing is 50mm. We would not want a 10mm layer of existing material left in situ. Any UKAS accredited lab is suitable, their website has a useful search function that can filter geographically for local providers. This can be undertaken at the detailed design stage of the scheme.

- Confirmation that statutory undertakers are not affected by the works should be provided. This should be either a websearch plan showing that they have no assets in the area of works, or if they do have assets in the area a formal NRSWA C3 response from the Statutory Undertaker stating that they are unaffected. If Statutory Undertakers are affected please provide the response letter, estimate of works and plan of the works. This can be undertaken at the detailed design stage of the scheme.

- In accordance with LHDG Tables DG1 and 2 the longitudinal gradient at junctions should not exceed 1:30 for the first 10m.

- The existing drainage system should be proven by a CCTV survey to ensure it is running free of blockages and suitable for the proposed changes. The survey should cover the existing highway drainage system to where it outfalls / joins the Severn Trent Water system. A drainage system will be required to ensure that surface water from the development does not flow into the highway.

- Existing vegetation will need to be cut back to allow for the construction of the access and ensure visibility splays are maintained. Mitigation methods such as replacement planting should be shown on a landscaping drawing. Any vegetation removal should be undertaken to avoid the bird nesting season. A tree survey, Arboricultural Impact Assessment (AIA) and Arboricultural Method Statement (AMS) will need to be undertaken and submitted to LCC.

Junction Operation

The applicant has tested the site access designs with the predicted flows in the 2031 Design Year with the proposed development in Section 5 of the TAA. The results indicate that both main site accesses would operate within capacity in both the AM and PM peak hours.

The existing access on to Markfield Road which will serve Parcel D and was delivered as part of the 2020 application will also operate within capacity. According to the TAA there will be a maximum delay of 25 seconds and only three passenger car units at this junction in the 2031 AM with development scenario.

Internal Spine Road

A key part of infrastructure associated with the proposals is an internal spine road which will join Phase 1 of the development off Markfield Lane and Desford Lane and it will also provide access to various elements of the proposed development.

The submitted TA states that the Pan Regional Transport Model (PRTM) has tested the scenario with 250 dwellings and no spine road to understand the level of development that could be accommodated on the local highway prior to this new road.

The LHA will review the results of the modelling work and provide comments about the proposals and requirements for the spine road as part of its future responses to the application.

Stopping up of Burroughs Road

As part of the proposals the applicant is seeking the permanent removal (“stopping up”) of highway rights on a section of Burroughs Road to enable the development to take place and provide additional pedestrian / cycle access to the site. The applicant has indicated on drawing number: 109003-PEF-ZZ-XX-DR-TP-00007 that a new turning head will be provided to facilitate access to Burroughs Road, for example to the playing fields and the Plough Inn but not allow through traffic.

The LHA would ask the applicant to submit a drawing which shows the full extent of the 'stopping up' proposals so the LHA can review and provide further comments on the implications of stopping up part of Burroughs Road. This is especially relevant given the presence of the car park for Burroughs Wood and neighbouring businesses and therefore the applicant is required to give consideration as to how appropriate access for such facilities would remain.

Highway Safety

The applicant has reviewed the Personal Injury Collision (PIC) data for the period 2017 to 30 April 2024. The applicant's study area consists of residential roads including Groby Road, Ratby, and Sacheverell Way as well as two roundabouts, one that connects the A50 and A46 to residential areas. The extent of the study area is shown in Figure 2 below:

Figure 2: Extent of Personal Injury Collision study area reproduced from Figure 1 of Pell Frischmann Transport Assessment Addendum (TAA), 'Land West of Ratby', Report Ref: 106232-PEF-ZZ-XX-RP-TS-000002, Revision P3, dated 6 September 2024.

The key findings of the applicant's review of the local highway network are detailed below:

- Total of 28 PICs –There were three serious collisions and 25 slight collisions in the period under consideration; and
- Four collisions in 2017, 2018, and 2019, five collisions in 2020, four collisions in 2021, three collisions in 2022 and 2023 and one collision up to 30 April 2024.

The applicant has concluded that based on the PIC record there is no spatial clustering or trends and there are no existing road safety issues that could be exacerbated by the proposed development.

However, the LHA would advise the applicant to consider the trip distribution / assignment based on the results from the PRTM modelling including the Botcheston Road / Desford Lane junction. The PIC data will need to be analysed by the applicant to see if there are any emerging patterns/trends that could be exacerbated by the proposed development.

If there are any areas of concern, then the applicant will need to submit a road safety scheme (along with Stage 1 RSA and Designer's Response) to the LHA for review.

Until full collision data has been collated and analysed the LHA cannot confirm that the proposed development will not have any road safety implications.

Internal Layout

The applicant is seeking outline planning permission with access the only matter being determined at this stage. Therefore, the LHA will provide further observations on any future Reserved Matters (RM) applications at the appropriate time should the LPA be minded to grant planning consent. The applicant should be advised that if the internal roads/footways within the development are to be offered for adoption by the LHA, then all details must comply with the current design standards of LCC.

Transport Sustainability

Section 3 of the TA considers the existing infrastructure for sustainable modes of travel and the Illustrative Masterplan of the proposed development is shown on drawing number: 10783-FPCR-XX-XX-DR-L-13, Revision P04. The LHA has considered this aspect of the proposed development and provides further comments below.

Walking and Cycling

Local facilities and amenities have been identified along with the suitable walking and cycling distances to each in Table 1 of the TA. Isochrone maps have been produced to represent the maximum, acceptable and desirable travelling distances using active travel methods.

The applicant is planning to provide pedestrian / cycle links from the proposed development to tie in with the existing infrastructure. There will also be a network of footways / cycleways through the site to encourage shorter trips by foot or bicycle.

Given the location of the proposed development residents will have access to a street lit footway on Markfield Road, adjacent to the site. This makes footways available on both sides of Markfield Road, which will then connect to footways on Main Street, providing a route to Ratby village, Ratby Primary School and Groby.

Cycle infrastructure is in place and means that cyclists can join the carriageway on Ratby Lane. However, this should not prevent the applicant delivering any walking / cycling improvements that are identified through the review of the application.

Public Transport

It is noted that the closest bus stops to the site are on Charnwood (served by the Arriva 27) and two on Main Street (served by Arriva 27 and 28), opposite and adjacent to Burrough Road. These stops are approximately 600m walking distance for residents who will live within the site - which is substantially above the recommended 400m walking distance.

It is also identified that it would not be feasible to divert existing bus services through the site along Burrough Road or the proposed internal spine road due to the width of these roads. Had the

proposed internal spine road been 6.75m for the entire length of the road, consideration could have been given for a bus to penetrate the site.

The LHA would recommend that the stop on Charnwood has a raised kerb installed and the stop on Main Street (opposite Burroughs Road) have a bus stop road marking implemented to encourage the use of public transport.

Notwithstanding the above, the LHA would ask the applicant to investigate and put forward suggestions to improve the bus services in the village.

Public Rights of Way

The LHA note that several Public Rights of Way (PROW) cross the site. After a review of the Illustrative Masterplan overlaid with the Definitive Map of PROW (attached as a separate document to this response) the LHA has the following comments.

The National Planning Policy Framework (NPPF) in paragraph 104 requires that:

'Planning policies and decisions should protect and enhance public rights of way and access, including taking opportunities to provide better facilities for users, for example by adding links to existing rights of way networks including National Trails.'

The requirements of NPPF paragraph 104 are applied in the local context by the LHDG annex on 'Development and Public Rights of Way' at: https://resources.leicestershire.gov.uk/sites/resource/files/field/pdf/faq/2018/6/5/Rights-of-way-guide.pdf

In summary, any submitted scheme should follow the following principles:

- Planning must be based on the routes on the Definitive PROW map that have legal authority. The applicant should be aware routes on the ground may not be the same as these;
- Development should be planned around the existing rights of way routes. Any changes will need separate legal orders for diversions in addition to the planning permission;
- Rights of way should be through public open space and separate from roads and footways, as far as possible, to preserve the identity of rights of way as through routes;
- Rights of way should be easy to follow and pleasant to use, including being well overlooked. Enclosed and narrow paths discourage users;
- The treatment of paths should help maximise non-motorised active travel by having path surfaces and drainage, gradients, and path widths that encourage use by all abilities.
- Rights of way outside the application site will need improvement where a development uses those routes to access schools, shops, community facilities, and employment areas. Improvements may be made as part of section 106 or section 278 agreements.
- Rights of way beyond the application site merit enhancements particularly where the new residents of the application site will use the routes for informal outdoor leisure

The Design and Access Statement (DAS) makes the positive commitment that:

'Existing Public Footpaths will be retained and are expected to be improved through new surfacing, signage and interpretation. These will be located within corridors of green space, supplemented with new trees and landscape features, and will connect with additional recreational routes to provide a wide network of routes around the site. Where these routes run through the built

environment they will be overlooked by new homes and buildings to create safe and attractive spaces.'

In drawing up a Rights of Way scheme and any future RM applications the applicant should pay attention to the following:

- As noted above, in law, the routes of public footpaths and bridleways are precisely fixed by the Definitive Map of public rights of way, the official record. Routes on the ground may be different but, in law, the route on the Definitive Map is the alignment that must be used by planning proposals. If not, a legal diversion of the right of way will be needed, which is a separate process from the planning permission;
- On the Illustrative Masterplan, south of Burroughs Road, the east-west section of Footpath R44 is 4.5 metres south of the legal alignment. The north-south sections are relatively more accurate;
- On the Illustrative Masterplan, northeast from Burroughs Road, most of Footpath R48 is 4.5 metres south of the legal alignment, including reaching Stamford Street through the middle of a house rather than along the western side of it;
- Northwest from Burroughs Road, most of Footpath R48 is up to 5 metres south of the legal alignment, including running on top of a stream rather than beside it; and
- A section of Footpath R48 coincides with the route of Burroughs Road. From Ratby village to the far western corner of the application site Burroughs Road also has the status of a public carriageway with public rights for motorised vehicle traffic. The only exception is the western extremity of Burroughs Road, which is Restricted Byway R45, where the only motorised vehicle rights are for private access to the Woodland Trust car park, the paintball site, and several residential properties at the western end.

Travel Plan

As part of the Framework Travel Plan (FTP) a parking guide has been provided, however there are no details for additional unallocated parking. Furthermore, the applicant is unable to specify at this time how many parking spaces will be available per home. The applicant has not considered the allocation of Electric Vehicle (EV) charging for dwellings or community spaces, such as the school or community centre and these will need considering if they are part of the final proposals. The applicant may wish to include this information (if available) in the revised document, or it will need to be considered as part of any future RM application(s).

Cycle parking could be provided with curtilage of dwellings in secure covered areas, but the applicant has not committed to this. Moreover, the applicant has not considered cycle parking for the school or the community centre. Cycle facilities have not been identified although the applicant states cycles will be accommodated.

SMART targets have been identified in the FTP, but the LHA would ask the applicant to start surveying occupants within six months of first occupation. The inclusion of a site-wide Travel Plan Co-ordinator (TPC), along with TPC's for each parcel of land, is welcomed. The initiatives and incentive include a good range of activities that the TPCs can use to encourage modal shift. The LHA note that to promote and encourage sustainable travel to/from site, two six-month bus passes will be offered per household and available for new residents. The surveys and timelines for surveys, i.e. initial survey, annual multi modal survey and qualitative surveys are acceptable. The applicant has agreed to use Modeshift STARS and has a good action plan in place.

Although the applicant has considered several issues to encourage sustainable modes of travel, the LHA would ask the applicant to submit a revised FTP with the following amendments:

- Detail what upgrades they will be making to Burroughs Road to make it suitable for pedestrians, cyclists and motorists;
- Implement a raised kerb at the stop on Charnwood;
- Bus stop road markings implemented on Main Street (opposite Burroughs Road);
- The applicant should state how many parking spaces each dwelling will have, how many unallocated parking spaces and the number of overall spaces on the site;
- The applicant should consider installation of EV charging points at dwellings, the community centre and the school, as well as accessible parking bays;
- The applicant should indicate how much cycle parking will be available within dwellings and include the number of cycle parking spaces the community centre, school and any green spaces will have; and
- The applicant should commit to surveying from within six months of first occupation.

Following a review of the FTP, the LHA cannot approve the document at this time and would welcome the submission of a revised document.

Closing

The LHA has identified some concerns with the proposed site access strategy and some other transport issues of the application.

Therefore, the applicant should provide further evidence/clarification on the issues raised in this response, including:

- Amendments to site access arrangements and confirmation that vehicle speeds of 15kph have been used swept path analysis;
- Revised RSA1 and Designer's Response to include the proposed Toucan Crossing;
- A drawing which shows the full extent of the 'stopping up' proposals for Burroughs Road;
- Up to date PIC data to include expanded study area;
- Investigate possibility of additional public transport infrastructure / service improvements; and
- Submission of an updated FTP.

Date Received	Case Officer	Reviewer	Date issued
04 October 2024	David Hunt	RD	12 November 2024

Appendix B NH Comments

National Highways Planning Response (NHPR 21-09)
Formal Recommendation to an Application for Planning Permission

From: Victoria Lazenby (Regional Director)
Operations Directorate
Midlands Region
National Highways
PlanningM@nationalhighways.co.uk

To: Hinckley & Bosworth Council
FAO: alex.jelley@hinckley-bosworth.gov.uk

CC: transportplanning@dft.gov.uk
spatialplanning@nationalhighways.co.uk

Council's Reference: 24/00914/OUT

Location: Burroughs Road Recreation Ground, Burroughs Road, Ratby, Leicestershire

Proposal: Outline planning application (with all four matters reserved apart from access) for a phased mixed-use development comprising about 470 dwellings (Use Class C3) or, in the alternative, about 450 dwellings and care home/extra care facility (Use Class C2/C3). Provision of a community hub (Use Class F2); 1FE primary school (Use Class F1); and associated operations and infrastructure including but not limited to site re-profiling works, sustainable urban drainage system, public open space, landscaping, habitat creation, internal roads/routes, and upgrades to the public highway.

National Highways Ref: TBC

Referring to the consultation on a planning application dated 14th November 2024 referenced above, in the vicinity of the M1 that forms part of the Strategic Road Network, notice is hereby given that National Highways' formal recommendation is that we:

~~a) Offers No Objection (see reason Annexe A)~~

~~b) Recommend that Conditions should be attached to any planning permission that may be granted (see Annexe A-National Highways recommended Planning Conditions Reasons)~~

c) Recommend that planning permission Not be Granted for a specific period (see reason Annexe A)

~~d) Recommend that the application is refused (see reasons Annexe A)~~

Highways Act 1980 Section 175B is not relevant to this application.[1]

This represents National Highways' formal recommendation and is copied to the Department for Transport as per the terms of our Licence.

Should the Local Planning Authority not propose to determine the application in accordance with this recommendation they are required to consult the Secretary of State for Transport, as set out in the Town and Country Planning (Development Affecting Trunk Roads) Direction 2018, via transportplanning@dft.gov.uk and may not determine the application until the consultation process is complete.

Signature: Adrian Chadha	**Date:** 3 December 2024
Name: Adrian Chadha	**Position:** Assistant Spatial Planner
National Highways The Cube, 199 Wharfside Street, Birmingham B1 1RN Adrian.Chadha@nationalhighways.co.uk	

[1] Where relevant, further information will be provided within Annex A.

Annex A National Highway's assessment of the proposed development

National Highways has been appointed by the Secretary of State for Transport as a strategic highway company under the provisions of the Infrastructure Act 2015 and is the highway authority, traffic authority and street authority for the Strategic Road Network (SRN). The SRN is a critical national asset and as such we work to ensure that it operates and is managed in the public interest, both in respect of current activities and needs as well as in providing effective stewardship of its long-term operation and integrity.

Recommended Non-Approval for a specified period

This response represents our formal recommendations with regard to planning application 24/00914/OUT and has been prepared by Adrian Chadha, Assistant Spatial Planning Manager for National Highways

Reasons

It is recommended that the application should not be approved until 3rd March 2025. The justification for this decision is set out below.

Trip Generation
The trip generation has been completed using trip rates from a nearby application (21/01295/OUT). Independent checks confirm the approach is appropriate for calculating residential development trip rates.
The primary school trip rates analysis requires the confirmation of the following key details:

- Total number of pupils
- How trip rates were derived
- Internalisation calculations

Additionally, the following actions are recommended for addressing our queries on modal split and trip generation details:

- NOMIS output: provide the full NOMIS output for our review
- Care home trip rates; include trip rate calculations
- Scenarios: calculate trip generation for both proposals, one for 470 dwellings and another for 450 dwellings and care home.

Trip Distribution

- Trip Distribution maps are presented in "Chapter 3 of TA Addendum 1.pdf" file. Although the distribution pattern looks reasonable, what methodology is adopted to determine the distribution is not stated in the TA reports. Further information is required.

- After the trip distribution methodology is confirmed and the PRTM clarifications have been addressed a review of the junction capacity assessment will be conducted. As such we welcome the models for our review at this stage.

LinSIG Modelling

- There is an inconsistency on page 23 of the TA addendum Part 1, where it states PICADY was used for the roundabout modelling instead of LINSIG. This should be corrected for clarity and consistency.
- A review of the LINSIG models will be undertaken once the PRTM (Pan Regional Transport Model) matters have been resolved.

PRTM Model

Suitability of the PRTM Model

To understand the suitability of the PRTM model in this proposal, the PRTM base model Local Model Validation Report (LMVR) was reviewed. The following observations are noted:

1. Zone Boundaries: Around the proposed development, the PRTM model zones and coverage are reasonable.
2. Zone Trip Ends: Most of the zones around the proposed scheme have maximum trip ends in the reasonable range of 300 to 500.
3. Network Density: Network density is in line with regional models and hence is deemed reasonable.
4. Base Model Calibration & Validation: Section 5 of the PRTM base report indicates, the base model developed using count data collected between 2010 and 2015. Additionally, some new count data was collected in 2019. This requires some high-level analysis comparing 2024/2023 with 2019 to confirm the suitability of using this base model.
5. Screenline & Cordon: Good coverage of screenlines and cordon around the scheme area. Requires a review on how the observed vs modelled flow is along in the study area.
6. Calibration & Validation Performance: Chapter 11 indicates in general decent model performance. However, a more detailed assessment needs to be prepared focussing on the model performance within the proposal's vicinity.

Queue Data Comparison

Queue data presented in "TA Addendum 1" is compared against the observed queue data in "TA Addendum 2" for the 2024 Base scenario. The queue in the models are found to be in similar ranges as the observed data. However, we reserve comments on the validity of the base models until they are provided by the model developer.

Junction Review

Traffic count and queue survey data was collected, and this is utilised in developing Junction 9 and LinSig models to determine the junction delays and Ratio to Flow Capacity (RFC). However, the report does not indicate if any base model calibration and validation exercise was carried out.

In summary, the below points need to be addressed/clarified:

- PRTM base model calibration and validation performance needs to be studied around the proposal's area.
- Trip generation and distribution methodology is to be clarified.

- Clarify and present whether any base model calibration and validation exercise has been carried out on the individual Junction models used in the TA.

In light of the above, National Highways recommends that planning permission not be granted for a further period of three months from the date of this notice, to allow the applicant time to submit the additional supporting information.

Standing advice to the local planning authority

The Climate Change Committee's 2022 Report to Parliament notes that for the UK to achieve net zero carbon status by 2050, action is needed to support a modal shift away from car travel. The NPPF supports this position, with paragraphs 73 and 105 prescribing that significant development should offer a genuine choice of transport modes, while paragraphs 104 and 110 advise that appropriate opportunities to promote walking, cycling and public transport should be taken up.

Moreover, the build clever and build efficiently criteria as set out in clause 6.1.4 of PAS2080 promote the use of low carbon materials and products, innovative design solutions and construction methods to minimise resource consumption.

These considerations should be weighed alongside any relevant Local Plan policies to ensure that planning decisions are in line with the necessary transition to net zero carbon.

Appendix C ATE Comments

Active Travel England
West Offices
Station Rise
York
YO1 6GA
Tel: 0300 330 3000

Your Ref: 24/00914/OUT
Our Ref: ATE/24/01346/OUT
Date: 03 December 2024

Active Travel England Planning Response
Detailed Response to an Application for Planning Permission

From: Planning & Development Division, Active Travel England

To: Hinckley and Bosworth Borough Council

Application Ref: 24/00914/OUT

Site Address: BURROUGHS ROAD RECREATION GROUND, BURROUGHS ROAD, RATBY, LE6 0XZ

Description of development: Outline planning application (with all four matters reserved apart from access) for a phased mixed-use development comprising about 470 dwellings (Use Class C3) or, in the alternative, about 450 dwellings and care home/extra care facility (Use Class C2/C3). Provision of a community hub (Use Class F2); 1FE primary school (Use Class F1); and associated operations and infrastructure including but not limited to site re-profiling works, sustainable urban drainage system, public open space, landscaping, habitat creation, internal roads/routes, and upgrades to the public highway.

Notice is hereby given that Active Travel England's formal recommendation is as follows:

a. ~~**No Objection:** ATE has undertaken a detailed assessment of this application and is content with the submission.~~

b. ~~**Conditional approval:** ATE recommends approval of the application, subject to the agreement and implementation of planning conditions and/or obligations as set out in this response.~~

c. **Deferral:** ATE is not currently in a position to support this application and requests further assessment, evidence, revisions and/or dialogue as set out in this response.

d. ~~**Refusal:** ATE recommends that the application be refused for the reasons set out in this response.~~

1.0 Background

The application is submitted in with all matters reserved except for access for a residential led mixed use proposal, with circa 470 C3 dwellings and circa 450 C2/C3 dwellings with care. The proposed development would make provision for a new community hub and 1 Form Entry (FE) primary school and it is presumed this will involve the relocation of the very close by existing primary school.

Active Travel England (ATE) welcomes the opportunity to comment on this planning application. Based on the site area and the number of dwellings proposed it has triggered statutory consultation with ATE. There has been no previous engagement with ATE on this site.

Approval for access is sought from Land South of Markfield Road I (i.e. Phase 1), Land South of Markfield Road II (i.e. Phase 2), Burroughs Road and Desford Lane. No explicit mention in the planning statement is made for approval of other accesses for pedestrians, wheelers or cyclists despite there being many on the illustrative masterplan. ATE are reminded that the definition of access as a reserved matter includes, 'the accessibility to and within the site, for vehicles, cycles and pedestrians in terms of the positioning and treatment of access and circulation routes and how these fit into the surrounding access network' as defined by article 2 of the Town and Country Planning (Development Management Procedure) (England) Order 2015.

2.0 Summary

ATE have carried out an assessment of the submitted details using our planning applications assessment toolkit, a copy of the summary report is appended separately.

In this we note concern regarding the limited information available on active travel accessibility and the quality of off site infrastructure. It is critical that there is good access to public transport, off site infrastructure and excellent travel planning including remedial measures should targets go unmet. There is little information provided to understand the potential for new active travel to the new primary school or the dwellings with care, both within and beyond this site, as both uses will attract external trips.

We have requested further information to help address the shortfalls identified. At this stage ATE recommend any decision on the application is deferred until more details are supplied to enable us to make a more informed response. At present however, the application fails to proiritise walking and cycling movements as required by paragraph 116 of the NPPF. It maybe that some of the issues raised can be resolved by suitably worded planning obligation or conditions, such as the travel plan and cycle parking.

A copy of the toolkit assessment report is appended to this letter and a supporting note including a full blank version along with accompanying notes are available from our website.

3.0 National Policy and Guidance

The National Planning Policy Framework (NPPF) 2023 states:

108. Transport issues should be considered from the earliest stages of… development proposals, so that:
c) opportunities to promote walking, cycling and public transport use are identified and pursued;
e) patterns of movement, streets, parking and other transport and other transport considerations are integral to the design of schemes, and contribute to making high quality places.

109. The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable.

114. In assessing… specific applications for development, it should be ensured that:
a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location; [and]
b) safe and suitable access to the site can be achieved for all users;

116. …applications for development should:
a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas…;
b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport; [and]
c) create places that… minimise the scope for conflicts between pedestrians, cyclists and vehicles…;

117. All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed.

Manual For Streets (MfS, 2007) in section 4 describes layout and connectivity and in particular that walkable neighbourhoods are characterised by having a range of facilities within 10 minutes' walking distance, typically a distance of 800m. MfS encourages a reduction in the need to travel by car through the creation of mixed-use neighbourhoods with interconnected street patterns, where daily needs are within walking distance of most residents. Section 3 requires that the movement of all users should be key to the design and layout of new development.

Local Transport Note 1/20 (LTN 1/20) provides guidance to local authorities on delivering high quality, cycle infrastructure, including chapter 14 which sets out how to plan for and integrate cycling infrastructure with new development.
Design for the Mind - PAS 6463 (2022) gives guidance on the design of the built environment for a neurodiverse society, making places more inclusive for everyone.

Inclusive Mobility: making transport accessible for passengers and pedestrians, provides guidance on designing and improving the accessibility and inclusivity of public transport and pedestrian infrastructure.
Active Design (Sport England, supported by Active Travel England and the Office for Health Improvement & Disparities) sets out how the design of our environments can help people to lead more physically active and healthy lives. This includes, among other things, providing walkable communities, connected active travel routes, multi-functional open spaces, and high quality streets and spaces.

Cycling Walking Investment Strategy (CWIS) DfT - this is a key strategy document first published in 2017 by Department for Transport to make cycling and walking the natural choice for shorter journeys or part of a longer journey. This approach strongly aligns with the long held policy direction in the NPPF that the planning system should actively manage growth to make the fullest use of public transport, walking and cycling by focusing on sustainable locations. The first CWIS in 2017 was updated in 2023 with an ambitious target that 50% of journeys within urban areas should be by active modes by 2030.

4.0 Recommended Planning Conditions and Obligations / Reasons for Refusal

Condition:	**Cycle parking**	**Condition**: No development shall commence until *[or other relevant timescale]* details of the cycle parking have been submitted to and approved in writing by the Local Planning Authority. The cycle parking provision shall accord with the guidance in LTN 1/20 on Cycle Infrastructure Design as a minimum unless local cycle parking standards are greater. The development or any phase of the development, whichever is the sooner, shall not be occupied until the cycle parking has been constructed and completed in accordance with the approved details and shall thereafter be kept free of obstruction and permanently available for the parking of cycles only. Reason: To comply with [*insert relevant policy or policies…]* of the *[insert development plan document reference xxxxxxx]* and/or the guidance in LTN 1/20 on Cycle Infrastructure Design as a minimum.
Condition:	**Internal design**	**Condition:** (in circumstances where major developments are submitted for outline planning permission) No reserved or full applications shall be submitted until a Design Code document (or series of documents) showing how the development will comply with the guidance in LTN 1/20 on Cycle Infrastructure Design, in Manual for Streets 3 and the National Model Design Code have been submitted to and approved in writing by the Local Planning Authority. This must include details of the phasing of the development including the phasing of infrastructure. Subsequent applications for reserved matters approval and/or full planning permission shall accord with the approved details. **Reason:** To ensure the development including the phasing of the development and infrastructure complies with the guidance in LTN 1/20 on Cycle

		Infrastructure Design, in Manual for Streets 3 and the National Model Design Code.
Condition:	**Travel Plan**	**Condition**: No development shall commence until [*or Prior to first occupation of the development*], a Travel Plan comprising immediate, continuing and long-term measures to promote and prioritise alternatives to private vehicular use, which shall include clear objectives and modal share targets, together with a time-bound programme of implementation, monitoring, regular review and interventions (in the event of a failure to meet modal share targets) shall be submitted to and approved in writing by the Local Planning Authority. The approved Travel Plan shall be implemented, monitored and reviewed in accordance with the agreed Travel Plan measures and targets to the satisfaction of the council. **Reason:** In order to deliver sustainable transport objectives including a reduction in private vehicular journeys and the increased use of public transport, walking, wheeling and cycling.

5.0 Next Steps

ATE relevant model conditions are included above to help secure the provision and design for active travel at subsequent applications. We would be happy to discuss alternate wording to secure the same aims or alternate mechanism.

ATE would be happy to review further information and attend a meeting to discuss the findings of our report with a view to making a specific recommendation.

Planning Application Assessment Report

Application details

Summary of proposal	Outline planning application (with all four matters reserved apart from access) for a phased mixed-use development comprising about 470 dwellings (Use Class C3) or, in the alternative, about 450 dwellings and care home/extra care facility (Use Class C2/C3). Provision of a community hub (Use Class F2); 1FE primary school (Use Class F1); and associated operations and infrastructure including but not limited to site re-profiling works, sustainable urban drainage system, public open space, landscaping, habitat creation, internal roads/routes, and upgrades to the public highway.
Application type	Outline planning permission
Site address	BURROUGHS ROAD RECREATION GROUND, BURROUGHS ROAD, RATBY, LE6 0XZ
Local planning authority	Hinckley and Bosworth
Local highway authority	Leicestershire
Local authority reference (if available)	24/00914/OUT
ATE reference (if available)	ATE/24/01346/OUT
Completed by (User and Organisation)	HL
Date	2024-11-29

Assessment report

Criterion	Rating	Appraiser Comments	Relevant Policy & Guidance
1. Trip generation and assignment	Concern	Trips are only considered in the peak times for vehicles and using 2011 census data an assumed modal split, again only for peak times. It is important to consider all day trips to ensure a more accurate picture of all likely trips and not just peak times. Only 11% likely with this base data to be by active modes and only 8% by public transport is not aspirational. It is disappointing that vehicle trips are forecast only for the primary school, when walking, wheeling and cycling to school should be the default option for those new residents living close to this amenity. No traffic impact is presented for active modes and access points proposed.	Leicestershire County Council - Cycling and Walking Strategy - Policies 2-5 inclusive Hinkley and Bosworth Core Strategy - Vision - The Environment - reduce the reliance on car travel

			Leicestershire Local Transport Plan 3
2. Active travel route audit	Concern	Local pedestrian and cycling routes are only identified in application documents by their location, with no assessment provided on whether these are safe, direct, convenient and accessible for people of all abilities (paragraph 82 of the National Design Guide) or coherent, direct, safe, comfortable and attractive (core design principles in LTN 1/20). New access points are not assessed to ascertain whether traffic volumes mean shared used infrastructure is appropriate, continuous, meets desire lines and meets the other principles of LTN 1/20, Whilst there would be a new primary school on site the application has not demonstrated how local secondary schools and colleges will be accessed by active travel modes. There is a secondary academy available in the region on 2km from the site, this may be a route that can be cycled by those studying and employed there. Qualitative analysis to inform any necessary improvements to the design and accessibility of key routes does not include maps, photographs and comments nor has regard to the following guidance, tools and plans in the assessment of key routes: Inclusive Mobility (Chapters 3, 4, 6, 7 and 15; and Sections 5.2, 5.7, 9.1, 9.3, 9.4 and 9.7 as appropriate) PAS 6463: Design for the Mind (Sections 5.2.1, 5.2.3, 6.4, 7.6.2, 7.6.3, 7.7 and 11.12) LTN 1/20: Cycle Infrastructure Design (including Appendix A: Cycling Level of Service Tool; and Appendix B: Junction Assessment Tool) the government's Walking Route Audit Tool, and any adopted or emerging Local Cycling and Walking Infrastructure Plans (LCWIPs)	Leicestershire County Council - Cycling and Walking Strategy - Policies 2-5 inclusive Hinkley and Bosworth Core Strategy - Vision - The Environment - reduce the reliance on car travel Leicestershire Local Transport Plan 3
3. Pedestrian access to local amenities	Concern	The proposal expands an established town with a range of facilities. The proposal will include a relocated primary school and community hub building, along with an improved play area. All other amenities will require trips off site. Whilst the distances for walking and cycling in the TA and Travel Plan are feasible, ATE consider the manual for streets threshold of 800m the better distance threshold where regular walking to all amenities is very likely. The table 1 in the Travel Plan lists amenities by approximate walking distances, over half are beyond this 800m distance. It is not known how these distances have been measured, whether this has been from the site edge, centre or furthest point away from the access point. ATE would always recommend the distance is measured from the furthest house, to ensure the distance works for everyone. Given there are few on site facilities, to support more walking trips, and given there are several adjoining developments adding to the scale of this one, is there not a case for more on site facilities such as a daily needs shop to prevent car trips into the narrow high street.	Leicestershire County Council - Cycling and Walking Strategy - Policies 2-5 inclusive Hinkley and Bosworth Core Strategy - Vision - The Environment - reduce the reliance on car travel Leicestershire Local Transport Plan 3
4. Cycling accessibility	Concern	Whilst LTN 1/20 and 2020's Gear Change are referred to within the opening policy section of the TA, there is no analysis within the assessment to understand if there is infrastructure outside the site can comply with the design and technical standards recommended. As stated access to all amenities and facilities locally including employment and education should be assessed. This will include routes to higher order settlements, including Leicester, the edge of which is close by at 4km to the south east.	Leicestershire County Council - Cycling and Walking Strategy - Policies 2-5 inclusive Hinkley and Bosworth Core Strategy - Vision

			- The Environment - reduce the reliance on car travel Leicestershire Local Transport Plan 3
5. Access to public transport	Concern	All existing nodes are beyond the 400m/5mins walking time threshold. No quality information is provided but from streetview all but one (The Bulls head PH) appear to have a flag but no shelter or timetable/real time information. Roads are in places narrow without wide footways and raised kerbs. Some natural surveillance is possible but none have benches. The illustrative plan includes a recreation route to the pub, which may also help access to this bus stop, streetview indicates a change in levels which if not planned effectively may exclude wheelers. It is not described whether footpaths/ways to public transport nodes do not conform to the National Design Guide standards of being safe, direct, convenient and accessible for people of all abilities, which includes but is not limited to routes that: - have a minimum width of 2m, with limited pinch points no less than 1.5m - are step-free - have a smooth, even surface - have seating at regular intervals are uncluttered - have good natural surveillance and clear lines of sight - have street lighting - have wayfinding, and - have crossing points suitable for the speed and traffic flow of the road(s). It may be possible to secure improved routing towards nodes within the red line boundary and a condition or design code should refer to the above standards. There is no plans at this stay to support bus access to the development. This is a key omission and requires further consideration to help make modal shift happen. The TA and travel plan only indicate very limited services which are insufficient to support use for typical working hours at a higher order settlement. A contribution to increasing services and local nodes should be pursued.	Leicestershire County Council - Cycling and Walking Strategy - Policies 2-5 inclusive Hinkley and Bosworth Core Strategy - Vision - The Environment - reduce the reliance on car travel Leicestershire Local Transport Plan 3
6. Off-site transport infrastructure	Concern	Please note that shared use routes for pedestrians and cyclists are proposed and these have not been shown to do meet the limited situations listed in paragraph 6.5.6 of LTN 1/20. Where shared use routes are acceptable, their widths are below 3m (<300 cyclists per hour) or below 4.5m elsewhere, contrary to LTN 1/20 Table 6-3. LTN 1/20 promotes segregated design to avoid conflicts between modes in the majority of circumstances. The Desford lane access includes shared infrastructure with cycle off shoot the east of the access point. No onward additional infrastructure is proposed to help routing to key amenities within Ratby or beyond. Routing into the site requires use of a proposed toucan crossing to the west of the access beyond the direct desire line. It also appears to require a further uncontrolled crossing of a further side road. It is likely active travellers will use on road or attempt to cross the Desford road further east closer to Main street, which is narrower with narrow footways. This will not support wheelers, the less able and children/pushchairs and buggies well. Routes are less direct than travelling by car, breaking one of the principles of LTN 1/20. Crossing points on the bell mouth of junctions put pedestrians and wheelers in the road for longer and should not be used. It appears this access will be shared with Pear	As quoted above

		Tree business park, a small employment site. There appears to be many parked cars on this access on Streetview images which could jeopardise the shared use infrastructure. A method of parking control maybe required to prevent pavement parking. Will national speed limit sign be moved beyond the site entrance? No designs are apparent in the TA to show any improvements to Burroughs lane, despite this being narrow and sloping with no footways and only limited lighting. Does the gradient meet the requirements of Inclusive Mobility (2022) to be able to support access by wheelers? There could be conflict between modes and users of the pub car park, how will this be managed or signage used to support active modes. It seems a shame the turning head has taken priority in the designs so far tabled. Similarly the spine road intersection with Burroughs road offers very little for active travellers and does nothing to help prioritise their movements either along Burroughs lane, several woodland areas and open space plus paintball centre lie beyond the site to the west along with part of the National Cycle Network. Crossing the site south/north on the spine road, where the wide radii junction proposed promotes vehicles rather than other modes given the size of the bell mouth. Other connections to the north into consented or under construction schemes have 2m wide footways which are welcome, and one instance of a change in surface material. But there is no provision off road for cyclists and no detailed plans are provided to demonstrate connection into shared use infrastructure approved to the north under 20/00462/FUL, as shown in figure 7 of the framework travel plan. As there is no detailed quality assessment of off site provision there is no insight to understand whether further off site quality improvements need to be made. Once this research has been carried ATE would welcome a discussion to understand whether further off site infrastructure is required. There are tools to accompany LTN 1/20 such as the Cycling Level of Service Tool and the JAT. Walking Route Audit tool and Inclusive Mobility are also important considerations.	
7. Site permeability	Condition / Obligation to make acceptable	Plans are illustrative only, however there is a network of established PRoWs and 'recreational paths', which could help form the basis for a heirachy of active travel corridiors and access points if designed and improved to support wheelers and pushchairs with appropriate surfaces, widths and lighting where they match desire lines. The development of such a network should form a planning condition either in its own right or as part of a design code condition. Please note; 1. the development must provide or safeguard pedestrian and cycling connections to neighbouring sites including future phases of development 2. routes for pedestrians and cyclists are at least as direct – and preferably more direct – than the equivalent by car 3. routes must be fully accessible or do not have adjacent accessible alternatives (e.g. ramps alongside steps or bound paths next to unbound paths) 4. appropriate or infrequent crossings must be proposed (see Inclusive Mobility Sections 4.10-4.11, PAS 6463 Section 7.6.2, LTN 1/20 Table 10-2, Manual for Streets Section 6.3 and Manual for Steets 2 Section 9.3) 5.pedestrians and cyclists are not prioritised at side road crossing points (see LTN 1/20 Figure 10.13) priority junctions have radii that interrupts the pedestrian desire line (see Manual for Streets Sections 6.3-6.4 and Manual for Streets 2 Section 9.4) 6. Avoid red/zero scores when applying the Junction Assessment Tool in LTN 1/20 7. signalised	As above

		junctions must have pedestrian aspects on some arms where cyclists would mix with motor vehicles, 8. lane widths are between 3.2m and 3.9m (paragraph 7.2.5 of LTN 1/20 identifies that such widths allow motor vehicles to drive alongside a cyclist without a safety margin for their comfort and protection) 9.there are unsafe transitions for cyclists when moving between cycleways on and off the carriageway, or cycleways within commercial sites are not continuous through to cycle parking areas 10. shared use routes for pedestrians and cyclists are proposed and these are only acceptable where the limited situations listed in paragraph 6.5.6 of LTN 1/20 can be met. Where shared use routes are acceptable, their widths are below 3m (<300 cyclists per hour) or below 4.5m elsewhere, contrary to LTN 1/20 Table 6-3.	
8. Placemaking	Condition / Obligation to make acceptable	The design and access statement has some images and themes within it which offer a positive response to this criterion, with regards to the Building for a Healthy Life framework. ATE would support making active frontages and a mixed materials approach to street design to help establish the road heirarchy. It is welcome that the interface with Burroughs lane is included in an image on page 53, however this is at odds with the motor vehicle dominated design shown on the transport assessment. This could be a central heart to the development, a meeting point by the public art or a village square, and is in need of place creation. ATE strongly feel street design should help make active modes the first choice with design cues to support this. Shade and benches and a network of play and open spaces and public art could help support those less able and small families to use active modes as their first choice. Spaces should feel safe and secure for all to make this an any time mode. Routes must avoid blind-spots', sharp turns or high-sided boundary treatments. The development must provide continuous and legible routes and be supported by an effective wayfinding strategy. The residential or local streets encourage traffic movements through the site and be designed for a 20mph speed limit (see Manual for Streets Section 7.4 for guidance on achieving appropriate traffic speeds). There are no new on site facilities proposed beyond a relocated school, community hub and additional play areas. Amenities beyond the site will fall outside the 800m threshold for many, which will encourages private car use. Consideration should be given as to whether additional on site facilities are required given the cumulative impact of this residential scheme alongside its consented neighbours. The aim should be for the development establish a strong sense of place, with well-designed streets, public spaces that feel safe and key amenities provided. As the plans are illustrative only, the development of such should form a planning condition either in its own right or as part of a design code condition. A conditioned overarching parameters plan may help consider the networks of places and heirachies in more detail, and we would encourage the development of such a plan.	As above
9. Cycle parking and trip-end facilities	Condition / Obligation to make acceptable	Plans are illustrative only, the implementation of the travel plan objectives to provide for cycling must form a planning condition either in its own right or as part of a design code condition. The standard of cycle parking must meet the locally adopted cycle parking standard or those within LTN 1/20 that proposes 1 space per bedroom for dwellings and short stay visitors at care homes of 0.05 space per bedroom and	As above

		matched for long stay. Education uses are recommended to have separate parking for students and teachers, and to be based on travel plan mode share targets, but with a minimum of 1 space per 20 staff and 1 per 10 students. For assembly halls, 1 space per 50 sqm. Parking must be well located have shelter for short stay and enclosure for long stay and have security, good natural surveillance or CCTV. It must have lighting and provide for all abilities. LTN 1/20 recommends 5% of spaces support cargo and adapted cycles and tricycles. Sheds in gardens are very vulnerable to theft, parking should be within garages or located within the built footprint, via an externally accessible store, such as under stairs cupboard. Space for the storage of tools and cycling equipment is also important. Showers and drying areas are vital to support the modal shift of employees on site within the care home. The details proposed within the travel plan must be reflected in further reiterations of the application.	
10. Travel planning	Condition / Obligation to make acceptable	A framework travel plan is included. It is high level and does not meet the full requirements of the para 117 of the NPPF (2024). It is disappointing that no clear direction at this stage is presented for mode shift and the Government's target that by 2030 50% of all journeys in towns and cities should be by active modes. The aims are woolly and do not sufficiently hold the development to account and should not be based on simply raising awareness of sustainable travel. Targets are only based on decreasing private car use and there is no obvious target for the care home. Green travel vouchers can be useful but as highlighted above local bus services are very limited and without further investment cannot support employment well. Cycle training and purchase scheme should be explored also. Different targets and interventions will be likely required for the different uses on site. The travel plan does not provide sufficient detail on the active travel and public transport infrastructure to be provided or improved (both on and off-site) or how its use will be embedded by initiatives and incentives to be secured through planning conditions and obligations, or there are no details of effective and influential actions to be taken if targets are not met, with the intention for these to be secured and monitored (if triggered) through planning conditions and obligations. It may be possible to use a planning obligation or condition to ensure the submission of a comprehensive travel plan before or at the time of reserved matters. ATE can recommend model condition wording. There must be a strong relationship between the reserved matters scheme(s) layout and design and the travel plan commitments as meeting modal shift targets begins at the front door.	As above.

Appendix D Drawings

Maximum Visibility Splay West Along Desford Lane
Scale 1:500

Ridge & Furrow Field

Maximum visibility splay 2.4m by 186m

Site Access

Proposed double yellow lines

Proposed 3m wide shared footway cycleway

Existing 6.75m wide access

Tangential Visibility Splay

2.4m by 33m Visibility Splay based on the 85%tile and Table DG4 of the Leicestershire Highway Design Guide

2.4m by 43m visibility splay

Trees to be removed to make way for proposed 3m shared facility subject to a RPA zone assessment

Planning red line boundary extended to incorporate earthworks required to facilitate wider shared use foot/cycleway

Tangential Visibility Splay

2.4m by 33m Visibility Splay based on the 85%tile and Table DG4 of the Leicestershire Highway Design Guide

Existing access, part of planning application 20/00786/FUL

Existing dropped kerb crossing as part of planning application 20/00786/FUL

2.4m by 43m visibility splay

Shared footway/cycleway to continue should improvements as part of application 21/01295/OUT come forward

Existing 30mph signage to be relocated as part of planning application 20/00786/FUL to the west

Proposed toucan signalised crossing

PROPOSED 3.0m WIDE SHARED FOOTPATH / CYCLEWAY

PROPOSED FOOTPATH / CYCLEWAY NARROWS TO 2.0m CYCLISTS TO DISMOUNT

DESFORD LANE

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Key:
Highway Boundary
Land Ownership
Planning Application 21/01295/OUT
Red Line Application Boundary

P04	UPDATED IN-LINE WITH LCC HIGHWAY COMMENTS	SP	JF	LT	21.01.25
P03	UPDATED SITE BOUNDARY	SP	LT	CH	28.05.24
P02	PLANNING REDLINE BOUNDARY ADDED	JN	LDH	LDH	15.04.24
P01	FIRST ISSUE	SP	LT	LT	08.03.24
REV	DESCRIPTION	DRN	CHK	APP	DATE

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Architect/Client/Contractor
LAGAN HOMES

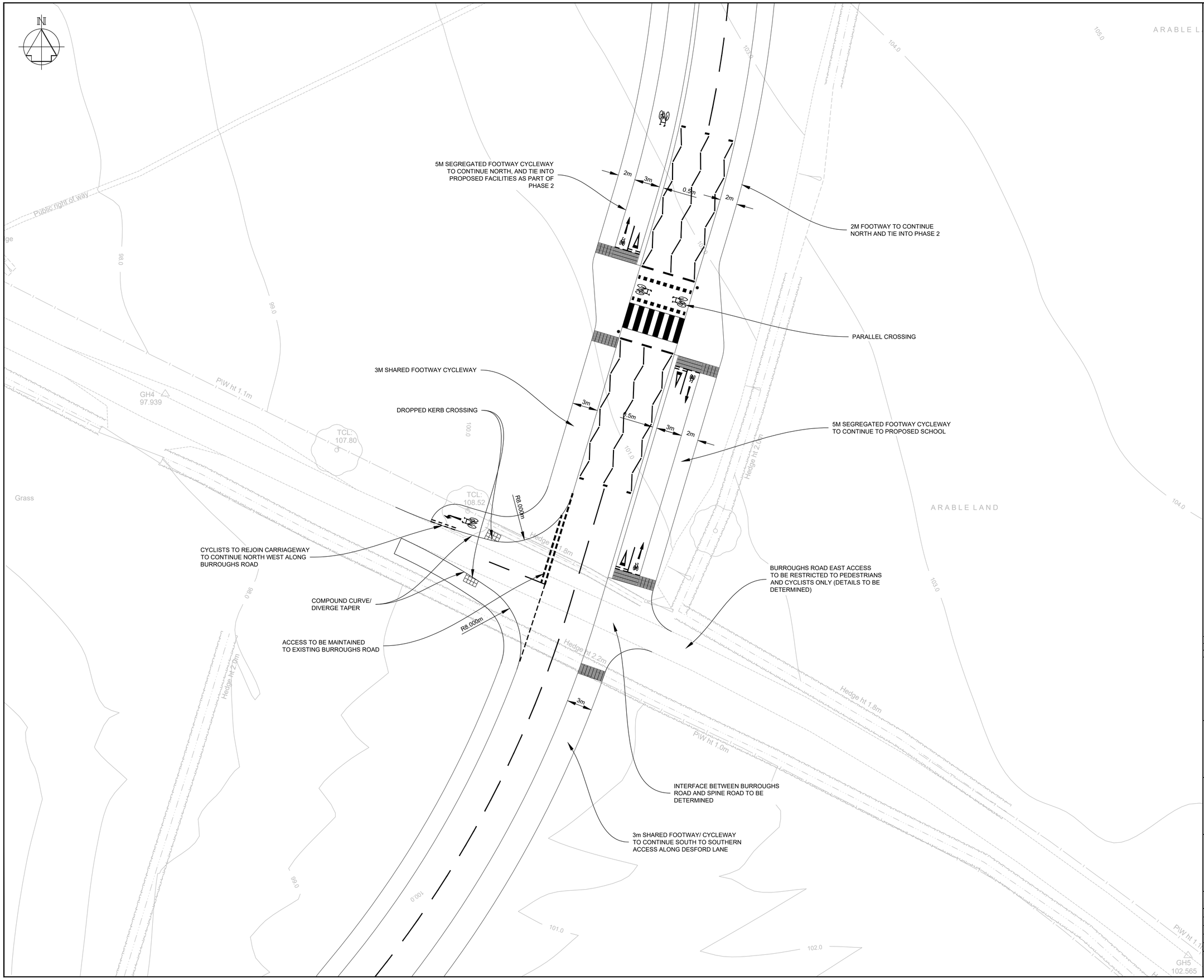
Project
RATBY PHASES
3 & 4 OUTLINE

Drawing Title
DESFORD LANE
SITE ACCESS DRAWING

Drawing Status
PRELIMINARY

	Name	Date	Status Code
Drawn	S.PAOLI	08.03.24	S2
Designed	S.PAOLI	08.03.24	Scale 1:250
Eng Chk	L.THOMAS	08.03.24	Revision P04
Approved	L.THOMAS	08.03.24	

Drawing No.
109003 - PEF - ZZ - XX - DR - TP - 00001



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P02	UPDATED IN-LINE WITH LCC HIGHWAY COMMENTS	SP	JF	LT	21.01.25
P01	FIRST ISSUE	SP	LT	CH	02.05.24

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Architect/Client/Contractor

LAGAN HOMES

Project

RATBY PHASE
3 & 4
OUTLINE

Drawing Title

BURROUGHS ROAD
INTERNAL ACCESS

Drawing Status

PRELIMINARY

	Name	Date	Status Code
Drawn	S. PAOLI	02.05.24	S2
Designed	S. PAOLI	02.05.24	Scale 1:200
Eng Chk	L. THOMAS	02.05.24	Revision P02
Approved	C. HOLLOWAY	02.05.24	

Drawing No.

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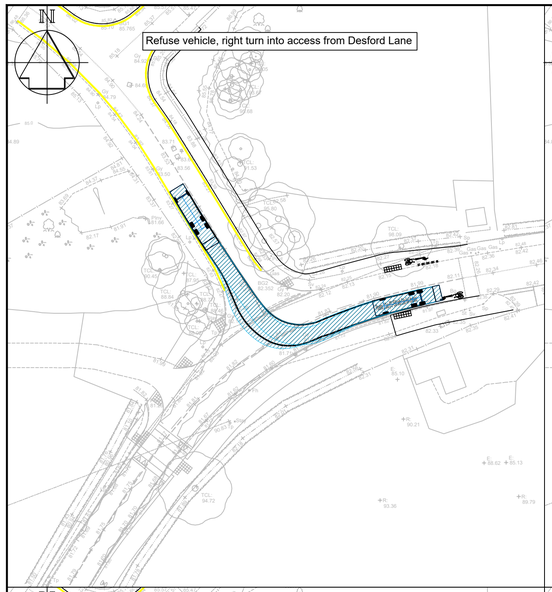

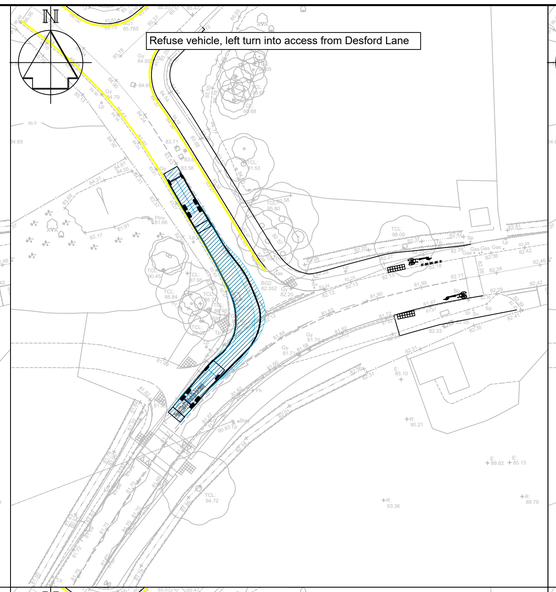

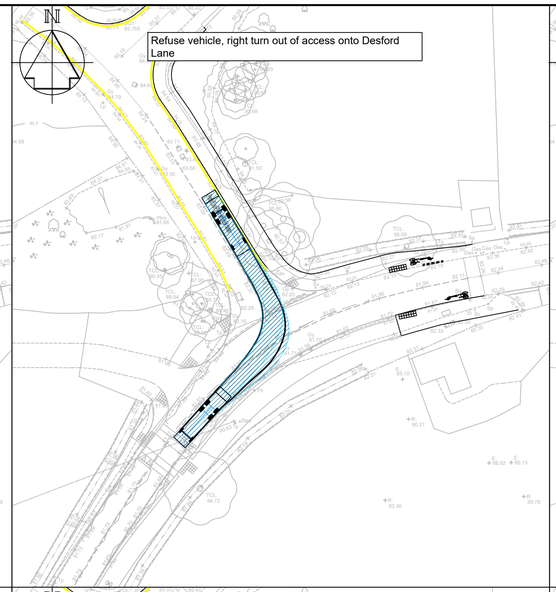

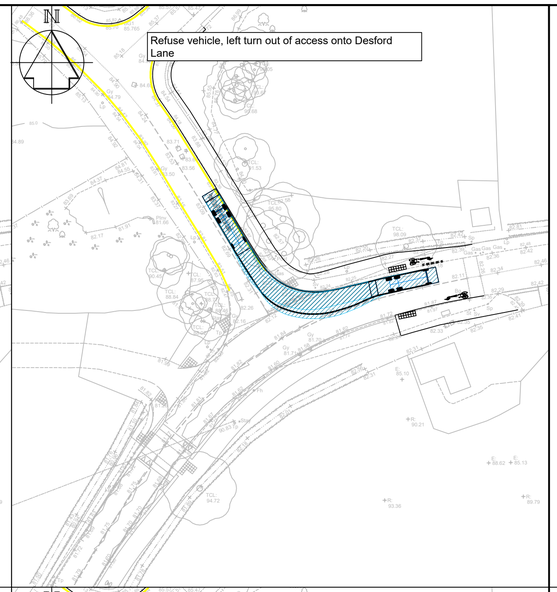

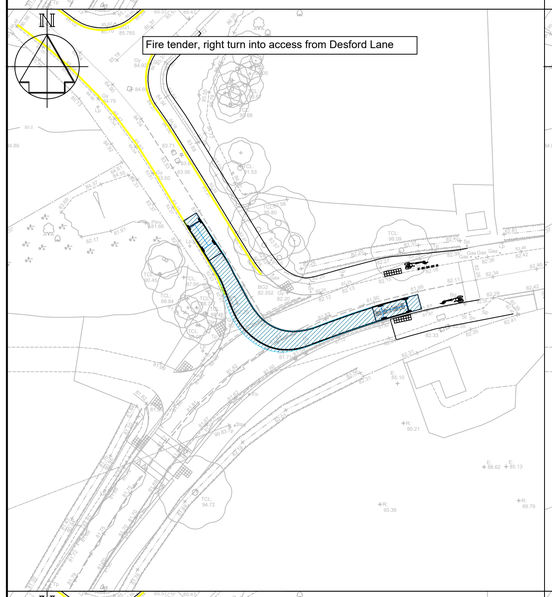

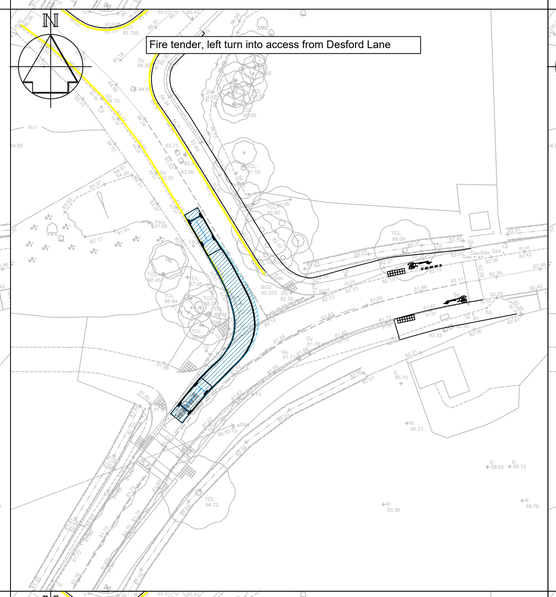

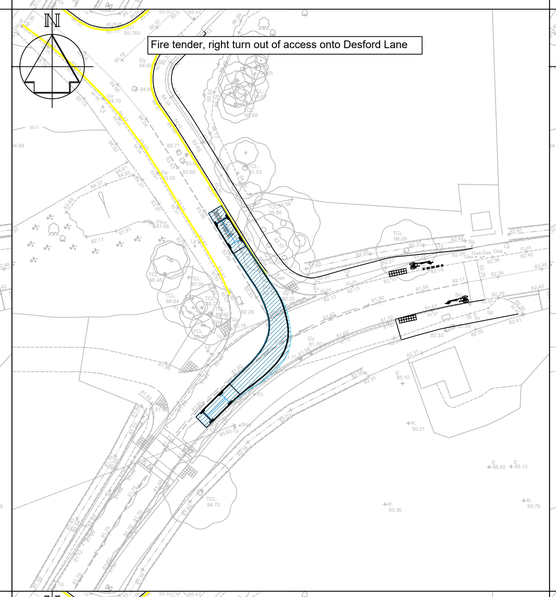

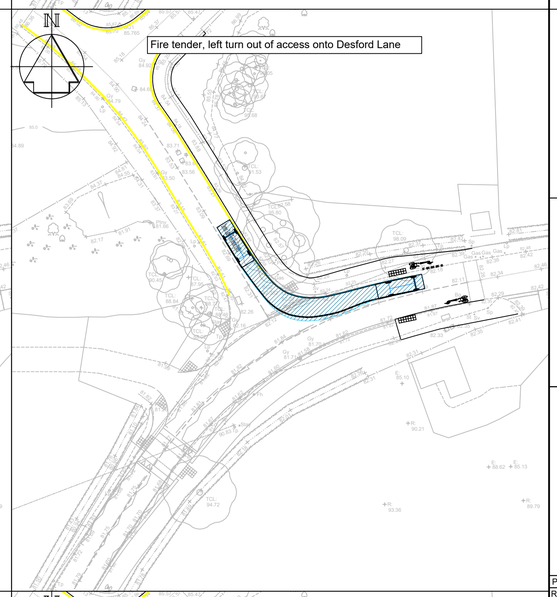

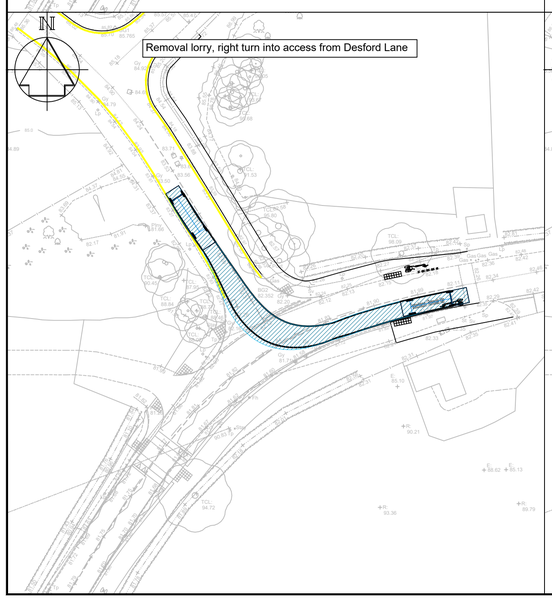

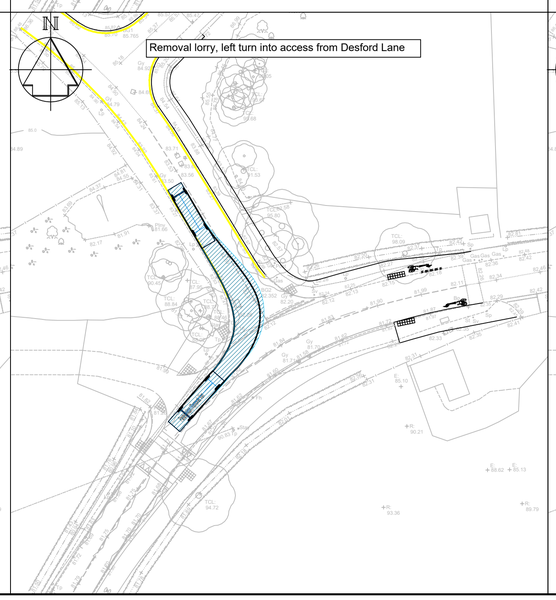

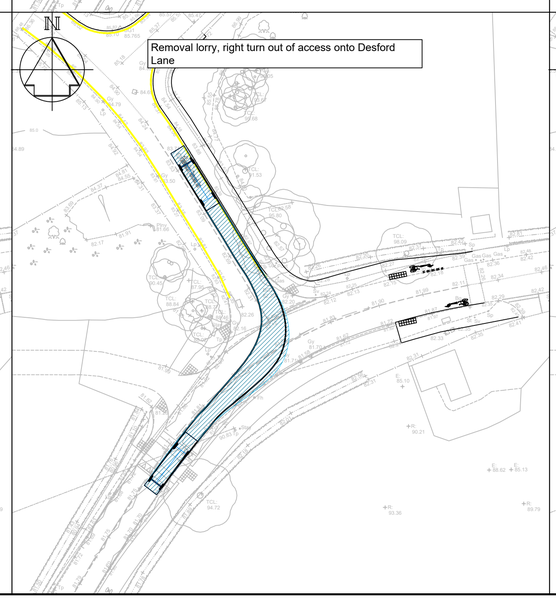

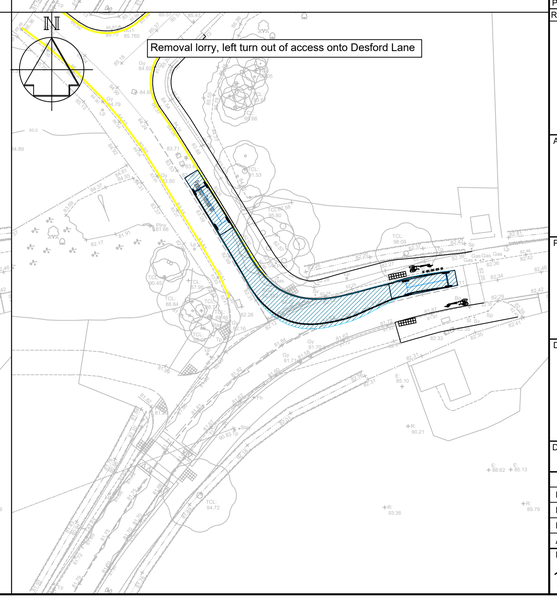

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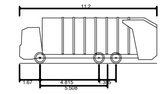
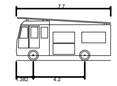


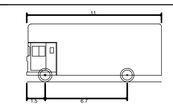
Phoenix 2 Duo (P2-15W with Elite 6x4 chassis)

Overall Length	11.200m
Overall Width	2.530m
Overall Body Height	3.751m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	9.500m



Dennis Sabre Fire Tender (LWB)

Overall Length	7.700m
Overall Width	2.430m
Overall Body Height	3.512m
Min Body Ground Clearance	0.397m
Track Width	2.380m
Lock to lock time	5.00s
Kerb to Kerb Turning Radius	7.400m



Pantechnicon / Removals Van

Overall Length	11.000m
Overall Width	2.500m
Overall Body Height	4.730m
Min Body Ground Clearance	0.541m
Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	12.200m

REV	DESCRIPTION	DRN	CHK	APP	DATE
P01	FIRST ISSUE	SP	JF	LT	20.01.25

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Architect/Client/Contractor

LAGAN HOMES

Project

RATBY PHASES
3 & 4 OUTLINE

Drawing Title

VEHICLE TRACKING OF DESFORD LANE

Drawing Status

FOR INFORMATION

	Name	Date	
Drawn	S. PAOLI	20.01.25	Status Code S2
Designed	S. PAOLI	20.01.25	Scale 1:500
Eng Chk	J.FARRELL	20.01.25	Revision P01
Approved	L. THOMAS	20.01.25	

Drawing No.

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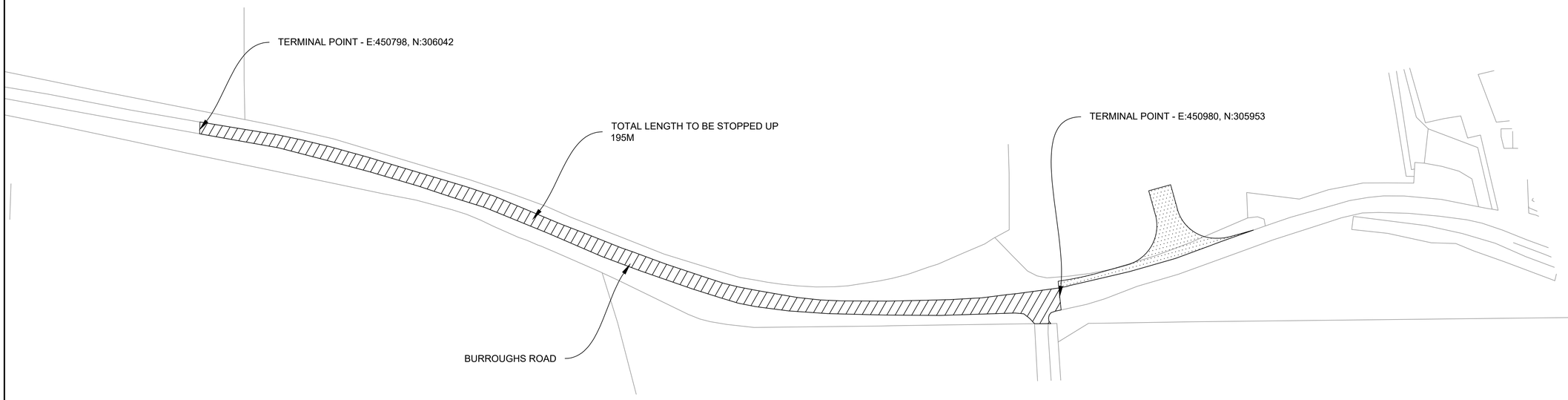

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KEY:

HIGHWAY TO BE STOPPED UP

IMPROVEMENTS

NEW FOOTWAY

NEW HIGHWAY

REV	DESCRIPTION	DRN	CHK	APP	DATE
P01	FIRST ISSUE	SP	JF	LT	21.01.25

Pell Frischmann
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Architect/Client/Contractor
LAGAN HOMES

Project
RATBY PHASES
3 & 4 OUTLINE

Drawing Title
STOPPING UP OF
BURROUGHS ROAD

Drawing Status
FOR INFORMATION

	Name	Date	Status Code
Drawn	S. PAOLI	21.01.25	S2
Designed	S. PAOLI	21.01.25	Scale 1:500
Eng Chk	J. FARRELL	21.01.25	Revision P01
Approved	L. THOMAS	21.01.25	

Drawing No.
109003 - PEF - ZZ - XX - DR - TP - 00015

Appendix E Stage 1 RSA

safer roads for everyone

Ratby Phase 3 & 4 Outline, Leicestershire

Section 278 Highway Works

Road Safety Audit Stage 1

on behalf of Leicestershire County Council

TMS Client – Pell Frischmann

TMS Reference No: 18995
Date: 6th February 2025
Revision: 1

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1. Project Details

Report Title:	Ratby Phase 3 & 4 Outline, Leicestershire Section 278 Highway Works Road Safety Audit Stage 1
Author	Neal Roderick
Document Ref No:	TMS Report Ref No: 18995
Revision	1
Prepared by:	TMS Consultancy
On behalf of:	Leicestershire County Council (Overseeing Organisation)
TMS Client	Pell Frischmann

Document Control Sheet

Issue No	Revision	Audit Team	Completion Date	TMS Issue Date
1	0	VS/NR	05/02/2025	05/02/2025
2	1	VS/NR	06/02/2025	06/02/2025

2. Introduction

2.1 This report describes a Stage 1 Road Safety Audit carried out on the Section 278 highway works associated with a residential development on land off Desford Lane, Ratby, Leicestershire.

2.2 The audit team members are as follows:

Audit Team Leader

Neal Roderick - BEng (Hons), PGCE, MCIHT, MSoRSA
National Highways Approved RSA Certificate of Competency
Engineer / Road Safety Auditor, TMS Consultancy

Audit Team Member

Vicky Seaton – BSc (Hons), MCIHT, MSoRSA
National Highways Approved RSA Certificate of Competency
Principal Engineer, TMS Consultancy

Observer

Amelia Hill – BA (Hons)
Graduate Engineer, TMS Consultancy

2.3 The audit comprised an examination of the documents listed in **Appendix A**. The Road Safety Audit was undertaken in accordance with the instruction from Santino Paoli of Pell Frischmann.

2.4 The site was visited by the Audit Team on Monday 3rd February 2025 between 2pm and 2.30pm. The weather was overcast, and the road surface was damp. Traffic flows were moderate. Pedestrian flows were low. No cyclists were observed.

2.5 The terms of reference of the Road Safety Audit are as described in GG 119 Revision 2. The team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the design to any other criteria.

2.6 All of the problems described in this report are considered by the audit team to require action in order to improve the safety of the scheme and minimise collision occurrence.

2.7 A scheme drawing is included in **Appendix B**, where the locations of specific problems are referenced. A location plan of the scheme is also included in this Appendix.

2.8 Scheme Description

The scheme consists of the Section 278 highway works associated with a phased, mixed use, development comprising about 470 dwellings or, in the alternative, up to about 450 dwellings and a care home.

Works include an extension to the existing access off Desford Lane adjacent to Pear Tree Office Park, widening to the existing footway on the north/ eastern side of the access to include a shared footway/ cycleway and crossing facilities, across Desford Lane primarily to enable westbound cyclists to access this infrastructure. These will then link in with infrastructure proposed as part of Planning Application 21/01295/OUT should that come forward as well as planning application 20/00786/FUL which has now been constructed.

Cycle transitions will be included onto/ off from the shared footway/ cycleways to/ from Desford Lane. Double Yellow Line parking restrictions are also proposed along the initial section of the existing access to maintain clear access.

Desford Lane is subject to a 30mph speed limit in the immediate vicinity of the proposed works. The speed limit changes to 60mph southwest of the access prior to the bridge with pedestrian crossing facility.

2.9 Road Safety Audit Response Report

Following the completion of the road safety audit, the design team should prepare a road safety audit response report in collaboration with the Overseeing Organisation.

The response report should incorporate the following:

- **Decision Log** spreadsheet, where each Problem and Recommendation in the Safety Audit report is reiterated.
- In the Decision Log, a response should be provided by the Design Team and Overseeing Organisation for each problem raised in the RSA report, together with an agreed action.

Further information is provided in **GG 119 Sections 4.11 to 4.19** and **Appendix F** (where a road safety audit response report template is available).

The response report should be produced and finalised within *one month* of the issue of the RSA report. A copy of the response report should be issued to the Audit Team for their information.

3. Items resulting from the Stage 1 Audit Road Safety Audit

No problems were identified as part of this Road Safety Audit.

3.1 OBSERVATION OUTSIDE THE SCOPE OF THE ROAD SAFETY AUDIT

At this stage it is unclear how the footway/ cycleway will tie in at the extents of the scheme, or how cyclists will re-join the carriageway. This should be clarified at the detailed design stage to be covered by a Stage 2 Road Safety Audit.

4. Audit Team Statement

We certify that the terms of reference of the road safety audit are as described in GG 119 Revision 2.

Audit Team Leader

Neal Roderick - BEng (Hons), PGCE, MCIHT, MSoRSA National Highways Approved RSA Certificate of Competency Engineer / Road Safety Auditor, TMS Consultancy

Signed	
Date	6th February 2025

Audit Team Member

Vicky Seaton – BSc (Hons), MCIHT, MSoRSA National Highways Approved RSA Certificate of Competency Principal Engineer, TMS Consultancy

Signed	
Date	6th February 2025

Observer

Amelia Hill – BA (Hons)
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Appendix A

Documents Examined:

109003-PEF-ZZ-XX-DR-TP-00001_S2-P04 - Desford Lane Site Access Drawing
109003-PEF-ZZ-XX-DR-TP-00014_S2-P01 - Vehicle Tracking of Desford Lane
109003-PEF-ZZ-XX-RP-TP-000002_S2_P3 Transport Assessment
Burroughs Road & Desford Lane ATCs.xlsx"
Gap Acceptance
Gap Acceptance.png
RSA1 - Checklist of Information Required - Ratby Desford Lane
Site Location

Collision Data\Map
Collision Data\Reports
Collision Data\Statistics

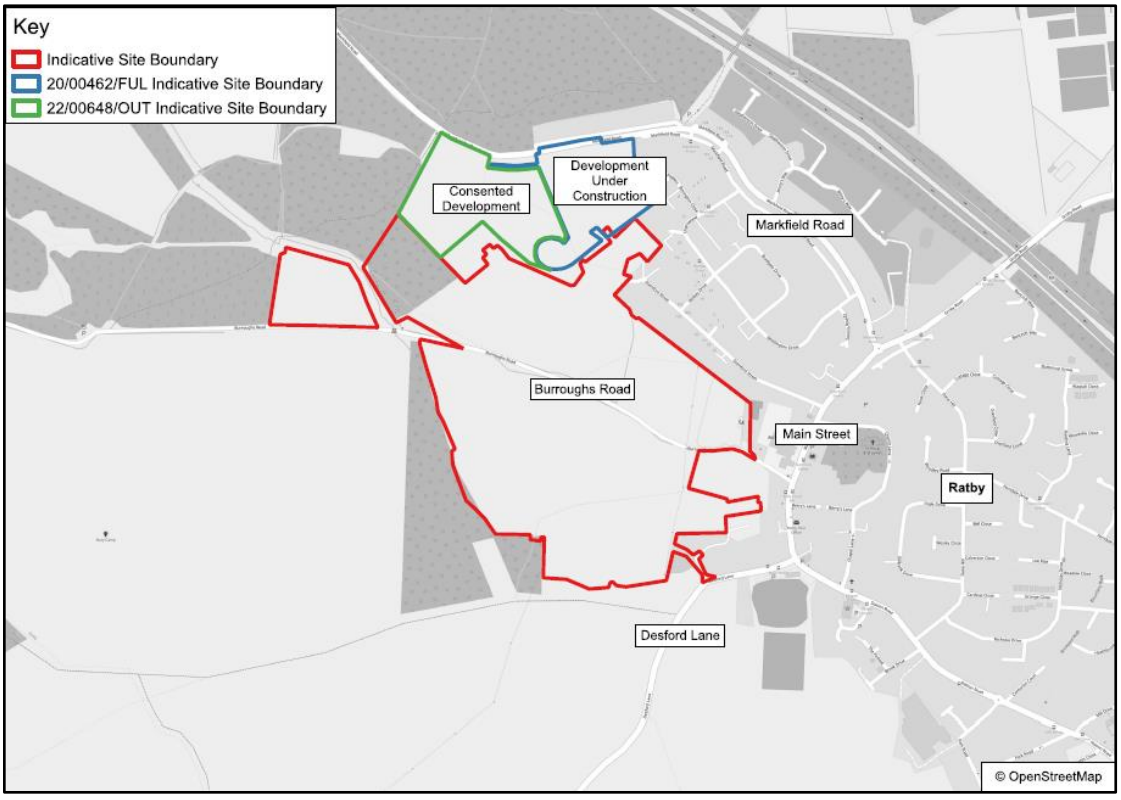
Traffic Flow & Speed Data\11647 Desford Lane_Pear Tree Business Park - Queue (Wednesday)
Traffic Flow & Speed Data\Burroughs Road & Desford Lane ATCs
Traffic Flow & Speed Data\Desford Lane, Pear Tree Bus. Park 08112023 AM
Traffic Flow & Speed Data\Desford Lane, Pear Tree Bus. Park 08112023 PM

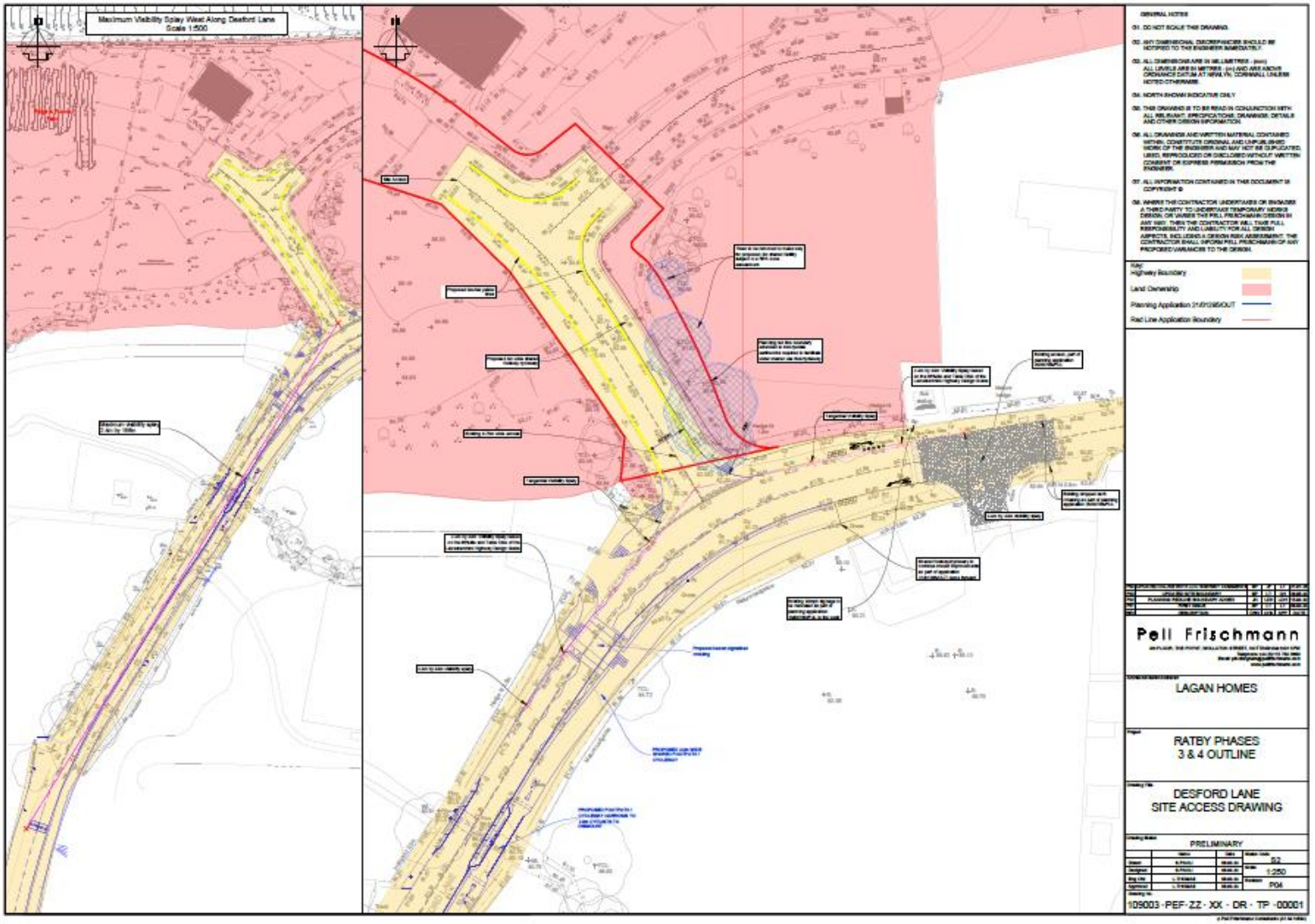
11647 Desford Lane Pear Tree Business Park – Queue (Wednesday)
Burroughs Road & Desford Lane ATC
Desford Lane, Pear Tree Bus. Park 08112023 AM
Desford Lane, Pear Tree Bus. Park 08112023 PM

Appendix B

Please refer to the following page for a plan illustrating the locations of the problems identified as part of this audit (location numbers refer to paragraph numbers in the report).

The location of the scheme is shown below:




Maximum Visibility Splay West Along Desford Lane
Scale 1:500
Pell Frischmann
LAGAN HOMES
RATBY PHASES
3 & 4 OUTLINE
DESFORD LANE
SITE ACCESS DRAWING
PRELIMINARY
1:250
P04
109003-PEF-ZZ-XX-DR-TP-00001

Appendix F NOMIS Output

WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level

Population : All usual residents aged 16 and over in employment the week before the census

Units : Persons

Date : 2011

usual residence : E02005379 : Hinckley and Bosworth 003 (2011 super output area - middle layer

place of work : 2011 super output area - middle l	All categor	Work main	Undergrou	Train	Bus, minib	Taxi	Motorcycle	Driving a c	Passenger	Bicycle	On foot	Other method of travel to work
E02000001 : City of London 001	1	0	0	0	0	0	0	1	0	0	0	0
E02000184 : Camden 019	1	0	0	1	0	0	0	0	0	0	0	0
E02000190 : Camden 025	1	0	0	0	0	0	0	1	0	0	0	0
E02000808 : Southwark 002	1	0	0	1	0	0	0	0	0	0	0	0
E02000878 : Tower Hamlets 015	1	0	0	0	0	0	0	0	0	0	1	0
E02000972 : Westminster 013	2	0	0	1	0	0	0	1	0	0	0	0
E02000977 : Westminster 018	2	0	0	1	1	0	0	0	0	0	0	0
E02001097 : Manchester 053	1	0	0	0	0	0	0	1	0	0	0	0
E02001185 : Salford 029	1	0	0	0	0	0	0	1	0	0	0	0
E02001200 : Stockport 014	2	0	0	0	1	0	0	1	0	0	0	0
E02001238 : Tameside 010	1	0	0	0	0	0	0	1	0	0	0	0
E02001309 : Wigan 023	1	0	0	0	0	0	0	1	0	0	0	0
E02001331 : Knowsley 005	1	0	0	0	0	0	0	1	0	0	0	0
E02001596 : Rotherham 019	1	0	0	0	0	0	0	1	0	0	0	0
E02001614 : Sheffield 004	1	0	0	0	0	0	0	1	0	0	0	0
E02001628 : Sheffield 018	1	0	0	0	0	0	0	1	0	0	0	0
E02001646 : Sheffield 036	1	0	0	0	0	0	0	1	0	0	0	0
E02001841 : Birmingham 015	1	0	0	0	0	0	0	1	0	0	0	0
E02001854 : Birmingham 028	1	0	0	0	0	0	0	1	0	0	0	0
E02001859 : Birmingham 033	1	0	0	0	0	0	0	1	0	0	0	0
E02001863 : Birmingham 037	1	0	0	0	0	0	0	1	0	0	0	0
E02001876 : Birmingham 050	2	0	0	0	0	0	0	2	0	0	0	0
E02001878 : Birmingham 052	1	0	0	0	0	0	0	1	0	0	0	0
E02001892 : Birmingham 066	1	0	0	1	0	0	0	0	0	0	0	0
E02001950 : Birmingham 124	1	0	0	0	0	0	0	1	0	0	0	0
E02001958 : Coventry 001	3	0	0	0	0	0	0	3	0	0	0	0
E02001965 : Coventry 008	4	0	0	0	0	0	0	4	0	0	0	0
E02001968 : Coventry 011	1	0	0	0	0	0	0	1	0	0	0	0
E02001970 : Coventry 013	1	0	0	0	0	0	0	1	0	0	0	0
E02001972 : Coventry 015	2	0	0	0	0	0	0	2	0	0	0	0
E02001976 : Coventry 019	4	0	0	0	1	0	0	3	0	0	0	0
E02001978 : Coventry 021	1	0	0	0	0	0	0	1	0	0	0	0
E02001979 : Coventry 022	1	0	0	0	0	0	0	1	0	0	0	0
E02001981 : Coventry 024	1	0	0	0	0	0	0	1	0	0	0	0
E02001985 : Coventry 028	1	0	0	0	0	0	0	1	0	0	0	0
E02001988 : Coventry 031	12	0	0	0	1	0	0	8	1	1	1	0
E02001990 : Coventry 033	1	0	0	0	0	0	0	0	1	0	0	0
E02001992 : Coventry 035	1	0	0	0	0	0	0	1	0	0	0	0
E02001993 : Coventry 036	1	0	0	0	0	0	0	1	0	0	0	0
E02001995 : Coventry 038	1	0	0	0	0	0	0	0	1	0	0	0
E02001999 : Coventry 042	1	0	0	0	0	0	0	1	0	0	0	0
E02002029 : Dudley 030	1	0	0	0	0	0	0	1	0	0	0	0
E02002062 : Sandwell 020	1	0	0	0	0	0	0	1	0	0	0	0
E02002088 : Solihull 008	1	0	0	0	0	0	0	1	0	0	0	0
E02002089 : Solihull 009	4	0	0	0	0	0	0	4	0	0	0	0
E02002096 : Solihull 016	1	0	0	0	0	0	0	1	0	0	0	0
E02002125 : Walsall 016	1	0	0	0	0	0	0	1	0	0	0	0
E02002127 : Walsall 018	1	0	0	0	0	0	0	1	0	0	0	0
E02002162 : Wolverhampton 014	1	0	0	0	0	0	0	1	0	0	0	0
E02002165 : Wolverhampton 017	1	0	0	0	0	0	0	1	0	0	0	0
E02002168 : Wolverhampton 020	1	0	0	0	0	0	0	1	0	0	0	0
E02002496 : Middlesbrough 001	1	0	0	0	0	0	0	1	0	0	0	0
E02002517 : Redcar and Cleveland 003	1	0	0	0	0	0	0	1	0	0	0	0
E02002559 : Darlington 001	1	0	0	0	0	0	0	0	1	0	0	0
E02002613 : Warrington 024	1	0	0	0	0	0	0	1	0	0	0	0
E02002803 : Derby 008	3	0	0	0	0	0	0	3	0	0	0	0
E02002813 : Derby 018	3	0	0	0	0	0	0	3	0	0	0	0
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E02002827 : Leicester 001	33	0	0	0	1	0	3	27	0	2	0	0
E02002828 : Leicester 002	25	0	0	0	2	0	0	22	0	1	0	0
E02002829 : Leicester 003	17	0	0	0	1	0	0	13	2	1	0	0
E02002830 : Leicester 004	123	0	0	0	18	0	2	86	13	2	1	1
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E02002862 : Leicester 036	1	0	0	0	0	0	0	0	1	0	0	0
E02002863 : Rutland 001	3	0	0	0	0	0	0	3	0	0	0	0
E02002872 : Nottingham 005	1	0	0	0	0	0	0	1	0	0	0	0
E02002874 : Nottingham 007	1	0	0	0	0	0	0	1	0	0	0	0
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E02002895 : Nottingham 028	2	0	0	0	0	0	0	1	1	0	0	0
E02002896 : Nottingham 029	1	0	0	0	0	0	0	1	0	0	0	0
E02002898 : Nottingham 031	2	0	0	0	0	0	0	2	0	0	0	0
E02002901 : Nottingham 034	1	0	0	0	0	0	0	1	0	0	0	0
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E02003475 : Milton Keynes 017	1	0	0	0	0	0	0	1	0	0	0	0
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E02003712 : Wycombe 017	1	0	0	0	0	0	0	1	0	0	0	0
E02003754 : Huntingdonshire 002	1	0	0	0	0	0	0	1	0	0	0	0
E02003780 : South Cambridgeshire 006	1	0	0	0	0	0	0	1	0	0	0	0
E02003792 : South Cambridgeshire 018	2	0	0	0	0	0	0	2	0	0	0	0
E02003807 : Cheshire West and Chester 043	1	0	0	0	0	0	0	0	0	0	1	0
E02003905 : Cornwall 032	1	0	0	0	1	0	0	0	0	0	0	0
E02004043 : Amber Valley 015	1	0	0	0	0	0	0	1	0	0	0	0
E02004045 : Bolsover 001	1	0	0	0	0	0	0	1	0	0	0	0
E02004080 : Erewash 003	1	0	0	0	0	0	0	1	0	0	0	0
E02004083 : Erewash 006	1	0	0	0	0	0	0	1	0	0	0	0
E02004087 : Erewash 010	1	0	0	0	0	0	0	1	0	0	0	0
E02004089 : Erewash 012	1	0	0	0	0	0	0	1	0	0	0	0
E02004110 : North East Derbyshire 006	1	0	0	0	0	0	0	1	0	0	0	0
E02004733 : Fareham 007	1	0	0	0	1	0	0	0	0	0	0	0
E02004907 : Hertsmere 012	1	0	0	0	0	0	0	1	0	0	0	0
E02004945 : Stevenage 002	1	0	0	0	0	0	0	1	0	0	0	0
E02004985 : Welwyn Hatfield 006	1	0	0	0	0	0	0	1	0	0	0	0
E02005334 : Blaby 002	14	0	0	0	2	0	0	12	0	0	0	0
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E02005341 : Blaby 009	18	0	0	0	0	0	0	15	1	2	0	0
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E02005344 : Blaby 012	10	0	0	0	1	0	0	8	1	0	0	0
E02005346 : Charnwood 002	24	0	0	0	0	0	1	22	1	0	0	0
E02005347 : Charnwood 003	7	0	0	0	0	0	0	7	0	0	0	0
E02005348 : Charnwood 004	6	0	0	0	0	0	0	5	1	0	0	0
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E02005350 : Charnwood 006	10	0	0	0	0	0	0	10	0	0	0	0
E02005351 : Charnwood 007	3	0	0	0	0	0	0	3	0	0	0	0
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E02005353 : Charnwood 009	8	0	0	0	0	0	0	8	0	0	0	0
E02005354 : Charnwood 010	9	0	0	0	0	0	0	8	0	0	1	0
E02005355 : Charnwood 011	11	0	0	1	0	0	0	7	3	0	0	0
E02005356 : Charnwood 012	9	0	0	0	0	0	0	8	1	0	0	0
E02005357 : Charnwood 013	5	0	0	0	0	0	0	5	0	0	0	0
E02005358 : Charnwood 014	17	0	0	0	0	0	0	16	1	0	0	0
E02005359 : Charnwood 015	3	0	0	0	0	0	0	3	0	0	0	0
E02005360 : Charnwood 016	9	0	0	0	0	0	0	8	1	0	0	0
E02005361 : Charnwood 017	16	0	0	0	0	0	0	16	0	0	0	0
E02005362 : Charnwood 018	5	0	0	0	1	0	0	4	0	0	0	0
E02005363 : Charnwood 019	2	0	0	0	0	0	0	2	0	0	0	0
E02005364 : Charnwood 020	9	0	0	0	2	0	0	6	1	0	0	0
E02005365 : Charnwood 021	33	0	0	0	0	0	0	31	2	0	0	0
E02005366 : Charnwood 022	18	0	0	0	0	0	0	14	3	0	1	0
E02005368 : Harborough 002	1	0	0	0	0	0	0	1	0	0	0	0
E02005369 : Harborough 003	8	0	0	0	1	0	0	4	0	0	3	0
E02005370 : Harborough 004	6	0	0	0	0	0	0	6	0	0	0	0
E02005371 : Harborough 005	3	0	0	0	0	0	0	3	0	0	0	0
E02005372 : Harborough 006	13	0	0	0	0	0	0	11	2	0	0	0
E02005373 : Harborough 007	3	0	0	0	0	0	0	3	0	0	0	0
E02005374 : Harborough 008	5	0	0	0	0	0	0	4	1	0	0	0
E02005375 : Harborough 009	2	0	0	0	0	0	0	2	0	0	0	0
E02005376 : Harborough 010	12	0	0	0	0	0	1	10	1	0	0	0

E02005377 : Hinckley and Bosworth 001	36	0	0	0	1	0	0	33	2	0	0	0
E02005378 : Hinckley and Bosworth 002	110	0	0	0	0	0	0	58	8	14	30	0
E02005379 : Hinckley and Bosworth 003	169	0	0	0	4	0	0	62	12	5	86	0
E02005380 : Hinckley and Bosworth 004	25	0	0	0	0	0	0	21	1	1	1	1
E02005381 : Hinckley and Bosworth 005	57	0	0	0	1	0	2	43	9	0	2	0
E02005382 : Hinckley and Bosworth 006	11	0	0	0	0	0	0	10	1	0	0	0
E02005383 : Hinckley and Bosworth 007	13	0	0	0	0	0	1	9	2	1	0	0
E02005384 : Hinckley and Bosworth 008	6	0	0	0	0	0	0	5	0	0	1	0
E02005385 : Hinckley and Bosworth 009	8	0	0	0	1	0	0	7	0	0	0	0
E02005386 : Hinckley and Bosworth 010	18	0	0	0	1	0	0	11	1	0	5	0
E02005387 : Hinckley and Bosworth 011	13	0	0	0	0	0	0	12	0	1	0	0
E02005388 : Hinckley and Bosworth 012	7	0	0	0	0	0	0	5	0	0	2	0
E02005389 : Hinckley and Bosworth 013	4	0	0	0	0	0	0	3	0	0	1	0
E02005390 : Hinckley and Bosworth 014	11	0	0	0	0	0	0	8	3	0	0	0
E02005392 : Melton 002	6	0	0	0	1	0	0	4	1	0	0	0
E02005393 : Melton 003	5	0	0	0	0	0	0	4	1	0	0	0
E02005394 : Melton 004	7	0	0	0	1	0	0	3	2	0	1	0
E02005395 : Melton 005	8	0	0	0	0	0	2	5	0	0	1	0
E02005396 : Melton 006	3	0	0	0	0	0	0	2	1	0	0	0
E02005397 : North West Leicestershire 001	10	0	0	0	0	0	0	10	0	0	0	0
E02005398 : North West Leicestershire 002	5	0	0	0	0	0	0	3	1	1	0	0
E02005399 : North West Leicestershire 003	3	0	0	0	0	0	0	3	0	0	0	0
E02005400 : North West Leicestershire 004	2	0	0	0	0	0	0	1	0	1	0	0
E02005401 : North West Leicestershire 005	4	0	0	0	0	0	0	3	1	0	0	0
E02005403 : North West Leicestershire 007	2	0	0	0	0	0	0	2	0	0	0	0
E02005405 : North West Leicestershire 009	4	0	0	0	1	0	0	3	0	0	0	0
E02005406 : North West Leicestershire 010	27	0	0	0	1	0	1	24	0	1	0	0
E02005407 : North West Leicestershire 011	15	0	0	0	0	0	0	12	3	0	0	0
E02005409 : North West Leicestershire 013	42	0	0	0	0	0	0	38	3	0	0	1
E02005412 : Oadby and Wigston 003	8	0	0	0	0	0	0	7	1	0	0	0
E02005414 : Oadby and Wigston 005	20	0	0	0	2	0	0	17	0	1	0	0
E02005415 : Oadby and Wigston 006	12	0	0	0	1	0	0	11	0	0	0	0
E02005416 : Oadby and Wigston 007	4	0	0	0	0	0	0	3	1	0	0	0
E02005460 : North Kesteven 008	1	0	0	0	0	0	0	1	0	0	0	0
E02005468 : South Holland 004	1	0	0	0	0	0	0	1	0	0	0	0
E02005481 : South Kesteven 006	1	0	0	0	0	0	0	1	0	0	0	0
E02005482 : South Kesteven 007	1	0	0	0	0	0	0	1	0	0	0	0
E02005612 : Corby 001	1	0	0	0	0	0	0	1	0	0	0	0
E02005614 : Corby 003	1	0	0	0	0	0	1	0	0	0	0	0
E02005619 : Daventry 001	1	0	0	0	0	0	0	1	0	0	0	0
E02005621 : Daventry 003	5	0	0	0	0	0	0	4	1	0	0	0
E02005641 : Kettering 003	1	0	0	0	0	0	0	1	0	0	0	0
E02005645 : Kettering 007	2	0	0	0	0	0	0	2	0	0	0	0
E02005647 : Kettering 009	1	0	0	0	0	0	0	1	0	0	0	0
E02005651 : Northampton 002	3	0	0	0	0	0	0	3	0	0	0	0
E02005657 : Northampton 008	2	0	0	0	0	0	0	2	0	0	0	0
E02005660 : Northampton 011	1	0	0	0	0	0	0	1	0	0	0	0
E02005673 : Northampton 024	2	0	0	0	0	0	0	2	0	0	0	0
E02005674 : Northampton 025	1	0	0	0	0	0	1	0	0	0	0	0
E02005677 : Northampton 028	3	0	0	0	0	0	0	3	0	0	0	0
E02005694 : Wellingborough 003	1	0	0	0	0	0	0	1	0	0	0	0
E02005700 : Wellingborough 009	1	0	0	0	0	0	0	1	0	0	0	0
E02005701 : Wellingborough 010	1	0	0	0	0	0	0	1	0	0	0	0
E02005763 : Harrogate 003	1	0	0	0	0	0	0	0	0	0	1	0
E02005773 : Harrogate 013	1	0	0	0	1	0	0	0	0	0	0	0
E02005823 : Ashfield 005	1	0	0	0	0	0	0	1	0	0	0	0
E02005828 : Ashfield 010	1	0	0	0	0	0	0	1	0	0	0	0
E02005859 : Broxtowe 010	1	0	0	0	0	0	0	1	0	0	0	0
E02005871 : Gedling 007	1	0	0	0	0	0	0	1	0	0	0	0
E02005879 : Gedling 015	1	0	0	0	0	0	0	1	0	0	0	0
E02005898 : Newark and Sherwood 006	1	0	0	0	0	0	0	1	0	0	0	0
E02005899 : Newark and Sherwood 007	3	0	0	0	0	0	0	3	0	0	0	0
E02005901 : Newark and Sherwood 009	3	0	0	0	0	0	0	2	1	0	0	0
E02005907 : Rushcliffe 002	1	0	0	0	0	0	0	1	0	0	0	0
E02005910 : Rushcliffe 005	1	0	0	0	0	0	0	1	0	0	0	0
E02005924 : Cherwell 004	2	0	0	0	0	0	0	2	0	0	0	0
E02006029 : Shropshire 015	5	0	0	0	0	0	0	5	0	0	0	0
E02006141 : East Staffordshire 011	2	0	0	0	0	0	0	2	0	0	0	0
E02006147 : Lichfield 002	3	0	0	0	0	0	0	3	0	0	0	0
E02006149 : Lichfield 004	1	0	0	0	0	0	0	1	0	0	0	0
E02006150 : Lichfield 005	3	0	0	0	0	0	0	3	0	0	0	0
E02006168 : Newcastle-under-Lyme 011	1	0	0	0	0	0	0	1	0	0	0	0
E02006177 : South Staffordshire 004	1	0	0	0	0	0	0	1	0	0	0	0
E02006218 : Tamworth 002	1	0	0	0	0	0	0	1	0	0	0	0
E02006468 : North Warwickshire 001	1	0	0	0	0	0	0	1	0	0	0	0
E02006469 : North Warwickshire 002	2	0	0	0	0	0	0	2	0	0	0	0
E02006470 : North Warwickshire 003	2	0	0	0	0	0	0	2	0	0	0	0
E02006471 : North Warwickshire 004	2	0	0	0	0	0	0	2	0	0	0	0
E02006473 : North Warwickshire 006	1	0	0	0	0	0	0	1	0	0	0	0
E02006477 : Nuneaton and Bedworth 003	2	0	0	0	0	0	0	2	0	0	0	0
E02006479 : Nuneaton and Bedworth 005	1	0	0	0	0	0	0	1	0	0	0	0
E02006482 : Nuneaton and Bedworth 008	3	0	0	0	0	0	0	3	0	0	0	0
E02006483 : Nuneaton and Bedworth 009	1	0	0	0	0	0	0	1	0	0	0	0
E02006485 : Nuneaton and Bedworth 011	3	0	0	0	0	0	0	3	0	0	0	0
E02006488 : Nuneaton and Bedworth 014	1	0	0	0	0	0	0	0	1	0	0	0
E02006489 : Nuneaton and Bedworth 015	1	0	0	0	0	0	0	1	0	0	0	0
E02006492 : Rugby 001	5	0	0	0	0	0	0	4	1	0	0	0
E02006493 : Rugby 002	2	0	0	0	0	0	0	2	0	0	0	0
E02006494 : Rugby 003	2	0	0	0	0	0	0	2	0	0	0	0

E02006495 : Rugby 004	1	0	0	0	0	0	0	1	0	0	0	0
E02006496 : Rugby 005	1	0	0	1	0	0	0	0	0	0	0	0
E02006497 : Rugby 006	1	0	0	0	0	0	0	1	0	0	0	0
E02006500 : Rugby 009	2	0	0	0	0	0	0	2	0	0	0	0
E02006514 : Stratford-on-Avon 011	1	0	0	0	0	0	0	1	0	0	0	0
E02006520 : Warwick 002	1	0	0	0	0	0	0	1	0	0	0	0
E02006529 : Warwick 011	1	0	0	0	0	0	0	1	0	0	0	0
E02006530 : Warwick 012	5	0	0	0	1	0	0	4	0	0	0	0
E02006579 : Crawley 005	1	0	0	0	0	0	0	1	0	0	0	0
E02006617 : Mid Sussex 014	1	0	0	0	0	0	0	0	1	0	0	0
E02006663 : Wiltshire 048	1	0	0	0	0	0	0	0	0	0	1	0
E02006704 : Bromsgrove 009	1	0	0	0	0	0	0	1	0	0	0	0
E02006711 : Malvern Hills 002	1	0	0	0	0	0	0	0	0	0	1	0
E02006740 : Worcester 007	1	0	0	0	0	0	0	1	0	0	0	0
E02006815 : Leicester 037	2	0	0	0	0	0	0	2	0	0	0	0
E02006816 : Harborough 011	1	0	0	0	0	0	0	1	0	0	0	0
E02006817 : Leicester 038	11	0	0	0	0	0	0	9	0	0	2	0
E02006818 : Oadby and Wigston 008	3	0	0	0	0	0	0	2	1	0	0	0
E02006819 : Leicester 039	39	0	0	0	0	0	0	35	1	2	1	0
E02006820 : Blaby 013	130	0	0	0	10	0	0	96	10	6	8	0
E02006828 : Erewash 016	2	0	0	0	0	0	0	2	0	0	0	0
E02006850 : Leicester 040	104	0	0	0	20	0	2	73	6	2	0	1
E02006851 : Leicester 041	174	0	0	0	55	0	0	97	16	3	2	1
E02006854 : Tower Hamlets 033	1	0	0	0	1	0	0	0	0	0	0	0
E02006862 : Corby 008	1	0	0	0	0	0	0	1	0	0	0	0
E02006877 : Peterborough 022	1	0	0	0	0	0	0	1	0	0	0	0
E02006887 : Bristol 054	1	0	0	0	0	0	0	1	0	0	0	0
E02006895 : Birmingham 134	1	0	0	0	0	0	0	1	0	0	0	0
E02006897 : Birmingham 136	2	0	0	0	0	0	0	2	0	0	0	0
E02006899 : Birmingham 138	3	0	0	1	0	0	0	2	0	0	0	0
E02006904 : Nottingham 039	6	0	0	0	1	0	0	5	0	0	0	0
E02006905 : Nottingham 040	4	0	0	0	0	0	0	4	0	0	0	0
E02006911 : Oadby and Wigston 009	7	0	0	0	1	0	0	6	0	0	0	0
W02000332 : Torfaen 010	1	0	0	1	0	0	0	0	0	0	0	0

In order to protect against disclosure of personal information, records have been swapped between different geographic areas. Some counts will be affected, particularly small counts at the lowest geographies

Speed Bins Report LEICESTERSHIRE_TEMP 880088022800 2023-11-14 to 2023-11-21

Site Name	880088022800
Site ID	880088022800
Grid	451024305709
Description	Desford Lane, Ratby

Setup	LEICS_TUBES
Lanes	Each Lane
Show	Average
Time Period	15 minutes
Class	Any
Averaged over	Weekdays only
Speed units	mph
Exclude data:	Events

All directions

	Average Flow	<5.0mph	5.0-10.0mph	10.0-15.0mph	15.0-20.0mph	20.0-25.0mph	25.0-30.0mph	30.0-35.0mph	35.0-40.0mph	40.0-45.0mph	45.0-50.0mph	>50.0mph	Invalid Reading	85th %ile	Mean Speed	Std Dev
00:00:00	2	0	0	0	1	1	0	0	0	0	0	0	0	23	18.9	4.4
00:15:00	2	0	0	0	1	0	0	0	0	0	0	0	0	27.7	22.2	5.2
00:30:00	1	0	0	0	0	0	0	0	0	0	0	0	0	26.6		
00:45:00	2	0	0	0	1	0	0	0	0	0	0	0	0	21.3		
01:00:00	1	0	0	0	0	1	0	0	0	0	0	0	0	23.4		
01:15:00	1	0	0	0	0	1	0	0	0	0	0	0	0	23.9		
01:30:00	1	0	0	0	1	0	0	0	0	0	0	0	0	25.6		
01:45:00	1	0	0	0	0	0	0	0	0	0	0	0	0	27.8		
02:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	28.5		
02:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	18.9		
02:30:00	1	0	0	0	0	1	0	0	0	0	0	0	0	24.6		
02:45:00	1	0	0	0	0	0	0	0	0	0	0	0	0	26.9		
03:00:00	1	0	0	0	0	0	0	0	0	0	0	0	0	32.1		
03:15:00	1	0	0	0	1	0	0	0	0	0	0	0	0	20		
03:30:00	2	0	0	0	1	0	0	0	0	0	0	0	0	19.2		
03:45:00	1	0	0	0	0	0	0	0	0	0	0	0	0	25.9		
04:00:00	1	0	0	0	1	0	0	0	0	0	0	0	0	24.2		
04:15:00	3	0	0	0	1	1	0	0	0	0	0	0	0	24	18.5	6.1
04:30:00	5	0	0	1	1	2	0	0	0	0	0	0	0	25.1	19.8	6.1
04:45:00	6	0	0	2	1	2	0	0	0	0	0	0	0	24	17.2	6
05:00:00	13	0	0	3	4	3	2	1	0	0	0	0	0	26.6	19.9	5.6
05:15:00	16	0	0	2	8	4	1	0	0	0	0	0	0	24.2	19.3	5
05:30:00	36	1	0	8	15	8	3	0	0	0	0	0	0	22.9	17.9	4.5
05:45:00	32	0	0	4	16	9	3	1	0	0	0	0	0	23.6	19.3	4.2
06:00:00	24	0	0	5	9	7	3	0	0	0	0	0	0	24.4	19.1	4.5
06:15:00	36	0	1	7	12	10	4	2	0	0	0	0	0	25.1	19.2	5.5
06:30:00	63	0	1	12	21	18	9	1	0	0	0	0	0	25.1	19.5	5.3
06:45:00	66	0	2	10	23	22	7	1	0	0	0	0	0	24.4	19.2	5.1
07:00:00	78	0	4	16	28	22	7	1	0	0	0	0	0	23.6	18.3	5.2
07:15:00	96	1	5	22	37	25	5	0	0	0	0	0	0	22.9	17.5	5
07:30:00	103	1	3	17	41	30	9	2	0	0	0	0	0	23.8	18.8	4.9
07:45:00	132	1	3	23	53	40	11	1	0	0	0	0	0	23.3	18.6	4.8
08:00:00	134	1	3	21	52	43	13	2	0	0	0	0	0	24.2	19	4.8
08:15:00	146	1	8	25	53	47	11	1	0	0	0	0	0	23.3	18.4	5.1
08:30:00	119	1	2	20	44	38	12	2	0	0	0	0	0	23.9	19.1	4.9
08:45:00	109	0	3	13	43	39	10	1	0	0	0	0	0	23.9	19.3	4.4
09:00:00	85	0	2	15	32	25	9	1	0	0	0	0	0	24.5	19.1	4.8
09:15:00	82	0	2	14	30	25	9	1	0	0	0	0	0	24.5	19.2	5
09:30:00	79	0	3	15	30	22	8	1	0	0	0	0	0	24.1	18.6	4.9
09:45:00	68	0	2	14	26	20	5	1	0	0	0	0	0	23.5	18.4	5
10:00:00	67	0	2	11	30	20	3	1	0	0	0	0	0	23.2	18.7	4.6
10:15:00	73	0	3	14	28	20	6	1	0	0	0	0	0	23.4	18.4	5.1
10:30:00	72	0	2	14	29	20	4	1	0	0	0	0	0	23.2	18.2	4.9
10:45:00	62	0	1	9	22	19	8	1	0	0	0	0	0	24.8	19.4	5.1
11:00:00	58	0	1	10	21	18	6	1	0	0	0	0	0	24.1	19	4.9
11:15:00	67	0	2	14	25	20	6	0	0	0	0	0	0	23.3	18.5	4.8
11:30:00	71	0	4	13	26	20	6	1	0	0	0	0	0	23.7	18.5	5.4
11:45:00	67	0	1	13	23	22	7	1	0	0	0	0	0	24.3	19.1	5.1
12:00:00	67	0	4	11	28	19	5	0	0	0	0	0	0	22.6	17.9	5
12:15:00	70	0	2	16	27	18	5	1	0	0	0	0	0	23.3	18.3	4.9
12:30:00	63	0	2	18	21	20	3	0	0	0	0	0	0	23.3	18.1	4.8
12:45:00	72	0	2	16	27	22	4	1	0	0	0	0	0	22.5	18.2	4.7
13:00:00	67	0	2	11	28	15	9	1	0	0	0	0	0	25	19	5.3
13:15:00	75	0	4	17	26	22	5	1	0	0	0	0	0	23.3	18.2	5.1
13:30:00	69	0	3	15	25	20	4	1	0	0	0	0	0	22.9	18	4.9
13:45:00	70	0	3	15	23	23	6	1	0	0	0	0	0	23.9	18.3	5.2
14:00:00	89	0	6	23	33	20	5	1	0	0	0	0	0	22.3	17.2	5.1
14:15:00	89	1	5	17	36	24	7	1	0	0	0	0	0	22.9	17.9	5
14:30:00	99	0	4	28	39	22	5	1	0	0	0	0	0	22.8	17.4	4.9
14:45:00	107	1	8	28	40	26	5	0	0	0	0	0	0	22.4	16.9	5
15:00:00	97	1	3	19	39	27	8	0	0	0	0	0	0	23.5	18.4	4.7
15:15:00	93	0	5	21	33	27	7	1	0	0	0	0	0	22.8	18.1	5.1
15:30:00	124	0	6	36	42	31	9	0	0	0	0	0	0	23.2	17.4	4.9
15:45:00	107	0	4	23	41	30	8	1	0	0	0	0	0	23.4	18.2	4.8
16:00:00	126	0	8	28	50	31	7	1	0	0	0	0	0	22.6	17.6	4.8
16:15:00	130	0	6	37	49	30	6	1	0	0	0	0	0	22.4	17.2	4.8
16:30:00	137	1	11	38	52	29	6	0	0	0	0	0	0	22.4	16.7	5
16:45:00	135	1	8	36	48	30	9	1	0	0	0	0	0	23	17.3	5.2
17:00:00	134	1	9	34	53	31	5	1	0	0	0	0	0	22.1	17.1	5
17:15:00	127	0	7	27	48	35	8	1	0	0	0	0	0	23.4	18	5
17:30:00	107	0	6	22	38	33	7	0	0	0	0	0	0	23.2	18.2	4.9
17:45:00	110	0	4	22	41	33	9	1	0	0	0	0	0	23.4	18.6	4.9
18:00:00	82	0	4	16	32	23	8	0	0	0	0	0	0	23.9	18.3	4.9
18:15:00	70	0	3	11	21	22	10	1	0	0	0	0	0	25.4	19.7	5.6
18:30:00	69	0	2	12	25	21	7	1	0	0	0	0	0	24.5	19	5.2
18:45:00	57	0	3	8	17	21	7	1	0	0	0	0	0	24.7	19.5	5.3
19:00:00	58	0	2	12	19	18	5	1	0	0	0	0	0	24	18.8	5.3
19:15:00	52	0	2	8	17	18	6	1	0	0	0	0	0	24.7	19.4	5.2
19:30:00	42	0	1	7	14	13	6	1	0	0	0	0	0	25.4	19.8	5.3
19:45:00	32	0	1	4	10	10	5	1	0	0	0	0	0	25.4	20.1	5.4
20:00:00	36	0	1	6	11	14	4	1	0	0	0	0	0	24.9	19.7	5.1
20:15:00	37	0	1	7	12	11	5	1	0	0	0	0	0	25.4	19.3	5.8

20:30:00	28	0	1	5	11	7	3	1	0	0	0	0	0	25	19.1	5.6
20:45:00	24	0	1	4	7	7	4	1	0	0	0	0	0	25.9	19.8	5.5
21:00:00	24	0	1	4	7	8	3	1	0	0	0	0	0	24.8	19.4	5.7
21:15:00	23	0	1	4	7	8	4	0	0	0	0	0	0	25.5	19.9	5.4
21:30:00	20	0	1	2	6	7	3	1	0	0	0	0	0	26.2	20.4	5.3
21:45:00	19	0	1	4	6	5	3	0	0	0	0	0	0	25.5	19	5.9
22:00:00	17	0	0	2	6	6	2	0	0	0	0	0	0	25	20	4.4
22:15:00	18	0	1	2	8	5	2	1	0	0	0	0	0	24.9	19.7	5
22:30:00	12	0	0	2	5	3	1	1	0	0	0	0	0	24.4	19.2	5.2
22:45:00	10	0	0	2	3	3	2	0	0	0	0	0	0	26.2	19.2	5.1
23:00:00	11	0	0	2	3	3	2	0	0	0	0	0	0	26.1	20.3	5.6
23:15:00	7	0	0	2	1	3	1	0	0	0	0	0	0	24.2	19.2	5.3
23:30:00	6	0	0	1	2	2	1	1	0	0	0	0	0	28	20.8	6.2
23:45:00	5	0	0	1	1	2	1	0	0	0	0	0	0	27.6	20.7	6
07-19	4406	18	190	916	1655	1242	339	42	2	0	0	0	0	23.4	18.2	5
06-22	4991	20	209	1016	1847	1426	416	54	3	0	0	0	0	23.6	18.4	5.1
06-24	5077	20	211	1029	1878	1452	428	56	3	0	0	0	0	23.6	18.4	5.1
00-24	5208	21	214	1052	1931	1487	440	59	3	0	0	0	0	23.6	18.4	5.1
00-06	130	1	0	20	53	33	9	2	0	0	0	0	0			
am Peak	07:45:00	07:30:00	07:30:00	07:45:00	07:45:00	07:45:00	07:45:00	07:30:00	10:45:00					02:15:00	00:15:00	
Peak Volume	530	3	17	88	202	168	46	6	1					27.2	21.3	5.2
pm Peak	16:15:00	16:15:00	16:30:00	16:15:00	16:15:00	17:00:00	17:45:00	16:45:00	18:15:00	13:45:00				23:00:00	23:00:00	
Peak Volume	536	3	36	145	202	133	35	4	1	0				26.3	20.2	5.7

Eastbound

	Average Flow	<5.0mph	5.0-10.0mph	10.0-15.0mph	15.0-20.0mph	20.0-25.0mph	25.0-30.0mph	30.0-35.0mph	35.0-40.0mph	40.0-45.0mph	45.0-50.0mph	>50.0mph	Invalid Reading	85th %ile	Mean Speed	Std Dev
00:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	23		
00:15:00	1	0	0	0	1	0	0	0	0	0	0	0	0	32		
00:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	26.6		
00:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	35.1		
01:00:00	1	0	0	0	0	1	0	0	0	0	0	0	0	23.4		
01:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	21.1		
01:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	25.6		
01:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	27.8		
02:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	28.5		
02:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0			
02:30:00	1	0	0	0	0	0	0	0	0	0	0	0	0	21.9		
02:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	23.7		
03:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	32.1		
03:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	18.2		
03:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	19.2		
03:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0			
04:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	22.5		
04:15:00	1	0	0	0	0	0	0	0	0	0	0	0	0	18.4		
04:30:00	3	0	0	1	0	1	0	0	0	0	0	0	0	25.1	19.4	6.8
04:45:00	1	0	0	0	1	0	0	0	0	0	0	0	0	24.6		
05:00:00	3	0	0	1	0	1	2	0	0	0	0	0	0	28.6	23	6.7
05:15:00	2	0	0	0	1	0	0	0	0	0	0	0	0	20.7	17.3	4.4
05:30:00	8	0	0	3	2	2	1	0	0	0	0	0	0	22.9	17.2	4.5
05:45:00	7	0	0	0	3	2	1	1	0	0	0	0	0	26	20.6	5.4
06:00:00	11	0	0	3	4	3	1	0	0	0	0	0	0	24	18.5	4.8
06:15:00	13	0	0	4	4	3	1	1	0	0	0	0	0	25.1	19.1	5.7
06:30:00	25	0	1	5	5	7	6	1	0	0	0	0	0	27.9	20.8	6.5
06:45:00	27	0	1	6	6	8	5	1	0	0	0	0	0	25.9	19.1	6.1
07:00:00	36	0	3	10	12	7	3	1	0	0	0	0	0	24.2	17.5	5.7
07:15:00	37	0	5	13	9	8	2	0	0	0	0	0	0	22.9	15.9	5.8
07:30:00	44	0	2	9	17	10	5	1	0	0	0	0	0	24.9	18.4	5.6
07:45:00	60	0	2	16	21	16	5	1	0	0	0	0	0	23.3	18	5.1
08:00:00	62	1	2	12	18	20	7	2	0	0	0	0	0	25	19.4	5.6
08:15:00	66	0	5	15	19	19	7	1	0	0	0	0	0	24	18.1	5.8
08:30:00	56	0	1	10	19	18	7	1	0	0	0	0	0	24.3	19.1	5.1
08:45:00	43	0	2	7	16	14	5	0	0	0	0	0	0	24.3	19	4.7
09:00:00	47	0	1	9	18	13	6	1	0	0	0	0	0	24.7	19	5.1
09:15:00	40	0	1	9	13	10	6	1	0	0	0	0	0	25.4	19.1	5.5
09:30:00	40	0	3	8	11	12	6	0	0	0	0	0	0	24.9	18.6	5.6
09:45:00	40	0	2	9	14	11	3	1	0	0	0	0	0	23.5	18.2	5.3
10:00:00	33	0	1	6	14	9	3	1	0	0	0	0	0	23.8	18.6	5
10:15:00	35	0	2	8	11	9	4	1	0	0	0	0	0	24.5	18.3	5.7
10:30:00	30	0	2	6	11	8	3	0	0	0	0	0	0	23.3	17.8	5.4
10:45:00	32	0	1	6	11	10	4	0	0	0	0	0	0	24.7	19.3	5.5
11:00:00	30	0	1	6	9	9	4	0	0	0	0	0	0	25.1	19.1	5.5
11:15:00	35	0	1	8	12	11	3	0	0	0	0	0	0	23.5	18.4	5
11:30:00	32	0	3	7	12	8	2	0	0	0	0	0	0	23.7	17.8	5.9
11:45:00	36	0	1	8	12	10	4	0	0	0	0	0	0	24.4	18.9	5.4
12:00:00	37	0	2	7	16	8	3	0	0	0	0	0	0	22.4	17.6	5.1
12:15:00	36	0	1	10	13	8	3	1	0	0	0	0	0	23.7	18	5.4
12:30:00	32	0	1	10	10	9	1	0	0	0	0	0	0	23.4	17.6	5.2
12:45:00	32	0	1	9	11	9	3	0	0	0	0	0	0	23.3	18	4.9
13:00:00	35	0	1	7	14	7	5	1	0	0	0	0	0	25.3	18.7	5.7
13:15:00	38	0	3	10	12	9	3	1	0	0	0	0	0	22.8	17.5	5.5
13:30:00	34	0	3	8	11	10	3	0	0	0	0	0	0	23	18	5.3
13:45:00	39	0	3	9	12	12	3	0	0	0	0	0	0	24	18	5.6
14:00:00	56	0	5	16	19	12	2	1	0	0	0	0	0	22.2	16.4	5.2
14:15:00	40	0	3	10	12	12	3	0	0	0	0	0	0	23.3	17.5	5.6
14:30:00	51	0	4	17	16	11	3	1	0	0	0	0	0	23.1	17	5.4
14:45:00	56	1	7	18	17	10	2	0	0	0	0	0	0	22	15.6	5.4
15:00:00	65	0	3	13	27	17	5	0	0	0	0	0	0	23.2	18	4.8
15:15:00	52	0	4	15	17	12	4	0	0	0	0	0	0	21.9	17.1	5.3
15:30:00	72	0	5	26	21	14	5	0	0	0	0	0	0	22.4	16.5	5.1
15:45:00	57	0	2	14	21	15	4	0	0	0	0	0	0	22.9	17.8	4.8
16:00:00	70	0	6	21	25	14	3	0	0	0	0	0	0	21.9	16.6	5
16:15:00	76	0	5	29	24	14	3	1	0	0	0	0	0	21.6	16.2	4.9
16:30:00	78	1	8	28	27	12	3	0	0	0	0	0	0	21.1	15.6	4.9
16:45:00	80	1	7	26	26	13	6	1	0	0	0	0	0	22.5	16.4	5.4
17:00:00	79	1	7	27	25	15	3	1	0	0	0	0	0	21.9	16.2	5.3
17:15:00	71	0	6	20	24	16	3	1	0	0	0	0	0	23.1	17	5.4
17:30:00	56	0	4	15	16	15	5	0	0	0	0	0	0	23.6	17.8	5.6

17:45:00	55	0	3	15	18	13	5	1	0	0	0	0	0	23.6	17.8	5.5
18:00:00	43	0	4	10	16	9	4	0	0	0	0	0	0	24.2	17.7	5.4
18:15:00	39	0	2	8	11	11	6	1	0	0	0	0	0	25.9	19.3	6
18:30:00	37	0	2	8	11	11	4	1	0	0	0	0	0	24.8	18.7	5.6
18:45:00	30	0	2	5	7	10	5	1	0	0	0	0	0	26.2	19.4	6
19:00:00	29	0	1	7	8	9	3	0	0	0	0	0	0	24.1	18.8	5.7
19:15:00	26	0	2	4	8	8	4	0	0	0	0	0	0	25.2	19.4	5.7
19:30:00	18	0	1	4	5	6	3	0	0	0	0	0	0	25.5	19.7	5.6
19:45:00	15	0	1	2	6	4	2	1	0	0	0	0	0	24.6	19.4	5.4
20:00:00	16	0	1	3	4	5	1	1	0	0	0	0	0	24.8	19.1	5.9
20:15:00	19	0	1	5	5	3	3	0	0	0	0	0	0	26.5	18.1	6.4
20:30:00	15	0	1	3	5	3	2	1	0	0	0	0	0	26.3	19.6	6.3
20:45:00	13	0	1	2	3	4	3	0	0	0	0	0	0	26.5	20.1	5.9
21:00:00	12	0	1	3	3	4	2	1	0	0	0	0	0	25.1	19.6	6.5
21:15:00	12	0	0	2	3	4	2	0	0	0	0	0	0	25.5	19.6	5.7
21:30:00	9	0	0	1	3	3	1	0	0	0	0	0	0	27.1	20.2	5.8
21:45:00	11	0	1	3	2	3	3	0	0	0	0	0	0	27	19.4	6.5
22:00:00	7	0	0	1	1	3	2	0	0	0	0	0	0	27.1	21.3	5.1
22:15:00	8	0	0	1	3	3	1	0	0	0	0	0	0	24.5	19.8	5.2
22:30:00	6	0	0	1	3	0	1	1	0	0	0	0	0	27.8	20.2	6.3
22:45:00	7	0	0	1	2	2	1	0	0	0	0	0	0	27.1	18.8	5.7
23:00:00	8	0	0	1	2	2	2	0	0	0	0	0	0	27	20.7	5.9
23:15:00	4	0	0	1	1	2	0	0	0	0	0	0	0	23.6	18.5	5.3
23:30:00	4	0	0	1	1	1	1	1	0	0	0	0	0	31.4	22	6.8
23:45:00	2	0	0	1	0	0	1	0	0	0	0	0	0	29.2	20.1	8.7
07-19	2283	11	148	589	757	561	190	26	1	0	0	0	0	23.5	17.6	5.4
06-22	2555	12	160	645	830	638	233	34	2	0	0	0	0	23.8	17.8	5.5
06-24	2601	12	161	653	844	650	241	37	2	0	0	0	0	23.8	17.9	5.5
00-24	2632	12	163	660	853	658	245	38	2	0	0	0	0	23.9	17.9	5.6
00-06	28	0	0	5	8	7	4	1	0	0	0	0	0			
am Peak	07:45:00	07:45:00	07:00:00	07:45:00	07:45:00	07:45:00	07:45:00	07:30:00	10:45:00					00:00:00	00:45:00	
Peak Volume	244	2	11	52	77	73	26	4	1					30.3	20.1	9.3
pm Peak	16:15:00	16:30:00	16:30:00	16:15:00	16:15:00	17:00:00	17:30:00	17:00:00	18:15:00	13:45:00				23:00:00	23:00:00	
Peak Volume	313	3	29	110	102	60	21	3	1	0				27.4	20.4	6.3

Westbound

	Average Flow	<5.0mph	5.0-10.0mph	10.0-15.0mph	15.0-20.0mph	20.0-25.0mph	25.0-30.0mph	30.0-35.0mph	35.0-40.0mph	40.0-45.0mph	45.0-50.0mph	>50.0mph	Invalid Reading	85th %ile	Mean Speed	Std Dev
00:00:00	2	0	0	0	1	1	0	0	0	0	0	0	0	22.8	18.9	4.5
00:15:00	1	0	0	0	0	0	0	0	0	0	0	0	0	27.7		
00:30:00	1	0	0	0	0	0	0	0	0	0	0	0	0	25.6		
00:45:00	1	0	0	0	1	0	0	0	0	0	0	0	0	21.3		
01:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	14.5		
01:15:00	1	0	0	0	0	1	0	0	0	0	0	0	0	23.9		
01:30:00	1	0	0	0	1	0	0	0	0	0	0	0	0	17.8		
01:45:00	1	0	0	0	0	0	0	0	0	0	0	0	0	25.6		
02:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0			
02:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	18.9		
02:30:00	1	0	0	0	0	0	0	0	0	0	0	0	0	24.6		
02:45:00	1	0	0	0	0	0	0	0	0	0	0	0	0	26.9		
03:00:00	1	0	0	0	0	0	0	0	0	0	0	0	0	20.9		
03:15:00	1	0	0	0	1	0	0	0	0	0	0	0	0	20.5		
03:30:00	1	0	0	0	1	0	0	0	0	0	0	0	0	19.2		
03:45:00	1	0	0	0	0	0	0	0	0	0	0	0	0	25.9		
04:00:00	1	0	0	0	0	0	0	0	0	0	0	0	0	24.2		
04:15:00	2	0	0	0	1	1	0	0	0	0	0	0	0	24		
04:30:00	2	0	0	1	1	1	0	0	0	0	0	0	0	25.6	20.3	5.5
04:45:00	5	0	0	2	1	2	0	0	0	0	0	0	0	24	17	6.2
05:00:00	10	0	0	2	4	3	1	0	0	0	0	0	0	23.5	18.8	4.9
05:15:00	14	0	0	2	6	4	1	0	0	0	0	0	0	24.2	19.7	5.1
05:30:00	28	1	0	5	13	6	3	0	0	0	0	0	0	22.9	18.1	4.5
05:45:00	25	0	0	3	14	6	2	0	0	0	0	0	0	23.3	18.9	3.7
06:00:00	13	0	0	2	6	4	2	0	0	0	0	0	0	25.1	19.5	4.2
06:15:00	23	0	1	4	8	7	3	1	0	0	0	0	0	25	19.2	5.4
06:30:00	38	0	0	7	17	11	2	0	0	0	0	0	0	22.6	18.6	4.2
06:45:00	39	0	1	4	17	15	2	0	0	0	0	0	0	23.2	19.2	4.2
07:00:00	42	0	1	6	17	15	3	0	0	0	0	0	0	23.4	19	4.5
07:15:00	59	1	0	10	28	18	2	0	0	0	0	0	0	22.6	18.5	4.2
07:30:00	59	0	1	9	24	20	4	1	0	0	0	0	0	23	19	4.4
07:45:00	71	1	2	7	32	24	6	1	0	0	0	0	0	23.3	19	4.4
08:00:00	72	0	1	9	34	22	5	0	0	0	0	0	0	22.8	18.8	4.1
08:15:00	80	1	2	10	34	29	4	0	0	0	0	0	0	22.9	18.7	4.4
08:30:00	62	0	1	10	25	20	5	1	0	0	0	0	0	23.6	19.2	4.7
08:45:00	66	0	1	6	27	25	6	1	0	0	0	0	0	23.7	19.6	4.2
09:00:00	38	0	0	7	15	12	4	0	0	0	0	0	0	24.2	19.2	4.4
09:15:00	42	0	1	5	16	15	3	1	0	0	0	0	0	23.8	19.2	4.5
09:30:00	39	0	0	7	19	11	2	0	0	0	0	0	0	23.3	18.6	4.1
09:45:00	27	0	0	4	12	9	2	0	0	0	0	0	0	23.5	18.9	4.6
10:00:00	34	0	1	5	16	11	1	0	0	0	0	0	0	22.9	18.8	4.1
10:15:00	38	0	1	6	16	11	3	0	0	0	0	0	0	22.6	18.5	4.5
10:30:00	42	0	0	8	19	12	2	1	0	0	0	0	0	23	18.5	4.4
10:45:00	30	0	1	3	12	9	4	0	0	0	0	0	0	24.6	19.5	4.8
11:00:00	28	0	0	5	12	9	2	0	0	0	0	0	0	23.1	18.8	4.2
11:15:00	32	0	1	6	13	9	3	0	0	0	0	0	0	22.9	18.6	4.5
11:30:00	39	0	1	6	14	12	4	0	0	0	0	0	0	23.5	19	4.9
11:45:00	30	0	0	5	11	11	3	0	0	0	0	0	0	23.9	19.4	4.7
12:00:00	30	0	1	4	12	10	2	0	0	0	0	0	0	23	18.4	4.8
12:15:00	33	0	0	6	14	10	2	0	0	0	0	0	0	23.3	18.7	4.4
12:30:00	31	0	0	8	11	10	2	0	0	0	0	0	0	23.1	18.5	4.4
12:45:00	40	0	1	7	16	14	1	0	0	0	0	0	0	22.5	18.4	4.5
13:00:00	31	0	1	4	14	8	4	0	0	0	0	0	0	25	19.3	4.8
13:15:00	37	0	1	7	14	13	2	0	0	0	0	0	0	23.6	18.9	4.4
13:30:00	35	0	1	7	14	10	2	0	0	0	0	0	0	22.7	18.1	4.5
13:45:00	32	0	1	6	12	11	2	0	0	0	0	0	0	23.8	18.8	4.6
14:00:00	33	0	1	7	14	8	3	0	0	0	0	0	0	22.6	18.4	4.6
14:15:00	49	0	2	7	24	12	4	0	0	0	0	0	0	22.4	18.2	4.4
14:30:00	48	0	1	11	22	12	2	0	0	0	0	0	0	22.5	17.8	4.2
14:45:00	50	0	1	9	23	15	2	0	0	0	0	0	0	22.5	18.4	4

15:00:00	31	0	0	6	12	10	3	0	0	0	0	0	0	24.3	19.1	4.5
15:15:00	41	0	0	6	16	15	4	0	0	0	0	0	0	23.6	19.3	4.6
15:30:00	52	0	1	9	21	17	4	0	0	0	0	0	0	23.6	18.7	4.5
15:45:00	50	0	1	9	20	15	5	0	0	0	0	0	0	23.8	18.6	4.7
16:00:00	56	0	2	7	26	17	4	0	0	0	0	0	0	23	18.8	4.3
16:15:00	54	0	1	8	25	16	3	0	0	0	0	0	0	23.1	18.7	4
16:30:00	58	0	3	10	25	17	3	0	0	0	0	0	0	23	18.3	4.8
16:45:00	55	0	1	10	22	17	3	1	0	0	0	0	0	23.1	18.7	4.7
17:00:00	55	0	2	7	27	16	2	0	0	0	0	0	0	22	18.3	4.4
17:15:00	56	0	1	7	24	19	5	0	0	0	0	0	0	23.7	19.2	4.2
17:30:00	50	0	2	7	22	18	2	0	0	0	0	0	0	22.5	18.6	4
17:45:00	55	0	1	7	23	20	4	0	0	0	0	0	0	23.4	19.3	4.1
18:00:00	39	0	0	6	16	13	3	0	0	0	0	0	0	23.4	19	4.2
18:15:00	31	0	0	4	10	12	4	0	0	0	0	0	0	25	20.3	5.1
18:30:00	32	0	0	4	14	10	3	0	0	0	0	0	0	24.3	19.4	4.5
18:45:00	27	0	0	3	10	11	2	1	0	0	0	0	0	23.6	19.6	4.5
19:00:00	29	0	1	6	11	9	2	0	0	0	0	0	0	24	18.9	4.9
19:15:00	27	0	0	4	9	10	2	1	0	0	0	0	0	24	19.3	4.7
19:30:00	23	0	0	3	9	7	3	0	0	0	0	0	0	24.7	19.8	5
19:45:00	17	0	0	2	5	6	4	0	0	0	0	0	0	26.2	20.7	5.3
20:00:00	20	0	0	2	7	8	3	0	0	0	0	0	0	24.7	20.2	4.2
20:15:00	18	0	0	1	6	8	2	0	0	0	0	0	0	24.9	20.6	4.8
20:30:00	13	0	0	2	6	4	1	0	0	0	0	0	0	23.5	18.6	4.5
20:45:00	11	0	0	1	4	3	2	0	0	0	0	0	0	25.2	19.4	5
21:00:00	12	0	1	2	4	5	1	0	0	0	0	0	0	23.9	19.3	4.9
21:15:00	11	0	0	1	3	4	2	0	0	0	0	0	0	25	20.2	5
21:30:00	10	0	0	1	4	4	2	0	0	0	0	0	0	26	20.6	4.8
21:45:00	8	0	0	1	3	3	0	0	0	0	0	0	0	22.5	18.4	4.8
22:00:00	9	0	0	1	5	3	1	0	0	0	0	0	0	22.2	19	3.6
22:15:00	10	0	0	1	5	2	1	0	0	0	0	0	0	24.9	19.6	4.9
22:30:00	7	0	0	1	3	2	0	0	0	0	0	0	0	22.8	18.4	4
22:45:00	3	0	0	0	1	1	0	0	0	0	0	0	0	22	19.9	3.6
23:00:00	4	0	0	1	1	1	1	0	0	0	0	0	0	25	19.6	5
23:15:00	2	0	0	1	0	1	1	0	0	0	0	0	0	25.7	20.3	5.3
23:30:00	2	0	0	0	1	1	0	0	0	0	0	0	0	23.8	19	4.7
23:45:00	3	0	0	0	1	1	0	0	0	0	0	0	0	24.3	21.2	3.4
07-19	2123	8	42	327	899	681	149	15	1	0	0	0	0	23.2	18.8	4.4
06-22	2436	8	49	370	1017	788	182	19	1	0	0	0	0	23.4	18.9	4.5
06-24	2476	8	50	375	1034	802	186	20	1	0	0	0	0	23.4	18.9	4.5
00-24	2577	9	51	393	1078	829	195	21	1	0	0	0	0	23.4	18.9	4.5
00-06	101	1	0	15	45	25	7	0	0	0	0	0	0			
am Peak	07:45:00	07:00:00	07:30:00	07:45:00	07:45:00	08:00:00	08:00:00	08:30:00	07:45:00					03:45:00	03:45:00	
Peak Volume	285	2	6	36	125	97	20	2	0					25	20.4	4.9
pm Peak	16:30:00	14:15:00	15:45:00	16:15:00	16:15:00	17:00:00	15:15:00	18:30:00	16:15:00	17:30:00				19:30:00	19:30:00	
Peak Volume	225	1	7	35	100	73	16	2	0	0				25.1	20.3	4.8

Event key: QC Failure | QC Outlier | QC Atypical | Events | Special | Holiday | Offline | Weekends and defined holidays

Notes on data:

Averages are calculated as the simple average of values across the period.

Holidays & Events:

None

Speed Bins Report LEICESTERSHIRE_TEMP 880088022800 2023-11-14 to 2023-11-21

Site Name 880088022800
Site ID 880088022800
Grid 451024305709
Description Desford Lane, Ratby

Setup LEICS_TUBES
Lanes Each Lane
Show Average
Time Period 15 minutes
Class Any

Averaged over All days
Speed units mph
Exclude data: Events

All directions

	Average Flow	<5.0mph	5.0-10.0mph	10.0-15.0mph	15.0-20.0mph	20.0-25.0mph	25.0-30.0mph	30.0-35.0mph	35.0-40.0mph	40.0-45.0mph	45.0-50.0mph	>50.0mph	Invalid Reading	85th %ile	Mean Speed	Std Dev
00:00:00	4	0	0	0	1	1	0	0	0	0	0	0	0	24.8	20.3	5.5
00:15:00	3	0	0	0	1	1	1	0	0	0	0	0	0	26.5	21.3	5.4
00:30:00	2	0	0	0	1	1	1	0	0	0	0	0	0	26.6	21.1	5
00:45:00	2	0	0	0	1	1	0	0	0	0	0	0	0	25.5	20.6	5.6
01:00:00	1	0	0	0	0	1	0	0	0	0	0	0	0	23.4		
01:15:00	2	0	0	0	0	1	0	0	0	0	0	0	0	26	21.4	4.7
01:30:00	1	0	0	0	1	0	0	0	0	0	0	0	0	25.6	19.4	4.4
01:45:00	1	0	0	0	0	0	0	0	0	0	0	0	0	25.6		
02:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	28.5		
02:15:00	1	0	0	0	0	0	0	0	0	0	0	0	0	26.3		
02:30:00	2	0	0	0	0	1	0	0	0	0	0	0	0	24.6	19	6.2
02:45:00	1	0	0	0	0	0	0	0	0	0	0	0	0	23.9		
03:00:00	1	0	0	0	0	0	0	0	0	0	0	0	0	24		
03:15:00	1	0	0	0	1	0	0	0	0	0	0	0	0	20		
03:30:00	2	0	0	0	1	0	0	0	0	0	0	0	0	21.3	17.7	2.8
03:45:00	1	0	0	0	0	0	0	0	0	0	0	0	0	25.9		
04:00:00	1	0	0	0	0	0	0	0	0	0	0	0	0	22.5		
04:15:00	2	0	0	0	1	0	0	0	0	0	0	0	0	24	18.5	6
04:30:00	4	0	0	1	1	1	1	0	0	0	0	0	0	25.6	20	6.1
04:45:00	5	0	0	2	1	2	0	0	0	0	0	0	0	24	17.3	5.8
05:00:00	11	0	0	3	3	3	2	0	0	0	0	0	0	26.6	19.9	5.5
05:15:00	13	0	0	2	6	3	1	0	0	0	0	0	0	24.3	19.6	5.2
05:30:00	29	0	0	6	12	7	2	0	0	0	0	0	0	23.1	18.2	4.5
05:45:00	24	0	0	3	12	7	2	0	0	0	0	0	0	24	19.5	4.3
06:00:00	19	0	0	4	7	5	3	0	0	0	0	0	0	24.4	18.9	4.5
06:15:00	27	0	1	5	9	7	3	1	0	0	0	0	0	25.1	19.3	5.5
06:30:00	47	0	1	9	16	14	6	1	0	0	0	0	0	25.1	19.4	5.3
06:45:00	50	0	2	7	18	17	5	1	0	0	0	0	0	24.4	19.1	5.1
07:00:00	59	0	3	12	21	17	6	1	0	0	0	0	0	24.1	18.5	5.3
07:15:00	74	1	4	17	28	20	4	0	0	0	0	0	0	23	17.7	5
07:30:00	79	0	3	13	31	23	7	1	0	0	0	0	0	23.8	18.8	5
07:45:00	101	1	3	17	41	30	8	1	0	0	0	0	0	23.3	18.6	4.8
08:00:00	105	0	2	17	41	33	10	2	0	0	0	0	0	24.2	19.1	4.9
08:15:00	116	1	6	21	42	37	9	1	0	0	0	0	0	23.3	18.4	5.1
08:30:00	97	1	2	16	36	30	11	1	0	0	0	0	0	24.1	19.3	5
08:45:00	94	0	2	12	38	32	9	1	0	0	0	0	0	23.9	19.3	4.4
09:00:00	77	0	2	14	29	23	8	1	0	0	0	0	0	24.6	19	4.9
09:15:00	76	0	2	13	29	23	8	1	0	0	0	0	0	24.2	19	4.9
09:30:00	79	0	3	16	30	22	7	1	0	0	0	0	0	23.9	18.6	4.8
09:45:00	73	0	3	15	30	20	4	1	0	0	0	0	0	23.2	18.1	4.8
10:00:00	70	0	3	11	30	21	4	1	0	0	0	0	0	23.2	18.5	4.8
10:15:00	77	0	3	15	31	21	6	1	0	0	0	0	0	23.2	18.3	4.8
10:30:00	73	0	2	13	32	19	6	1	0	0	0	0	0	23.6	18.5	4.8
10:45:00	64	0	2	10	24	20	8	1	0	0	0	0	0	24.5	19.2	5
11:00:00	65	0	2	12	25	20	6	0	0	0	0	0	0	23.5	18.6	4.7
11:15:00	73	0	2	15	25	23	7	1	0	0	0	0	0	23.9	18.8	5
11:30:00	79	0	4	17	32	20	5	1	0	0	0	0	0	23.1	18	5
11:45:00	79	0	2	14	32	24	5	1	0	0	0	0	0	23.1	18.5	4.8
12:00:00	77	0	4	14	32	22	5	0	0	0	0	0	0	22.6	17.9	5
12:15:00	77	0	2	18	28	21	6	1	0	0	0	0	0	23.4	18.3	4.9
12:30:00	74	0	3	19	27	21	4	1	0	0	0	0	0	23	17.9	4.8
12:45:00	75	0	2	16	31	22	4	0	0	0	0	0	0	22.5	18.2	4.5
13:00:00	74	0	3	15	30	17	8	1	0	0	0	0	0	24.5	18.5	5.2
13:15:00	74	0	3	17	26	21	5	1	0	0	0	0	0	23.2	18.2	5
13:30:00	75	0	4	19	27	20	5	1	0	0	0	0	0	22.7	17.6	5
13:45:00	76	0	4	16	26	24	6	1	0	0	0	0	0	23.3	18.3	5
14:00:00	87	0	6	22	34	19	6	1	0	0	0	0	0	22.4	17.2	5.1
14:15:00	84	1	4	17	33	23	7	0	0	0	0	0	0	23.2	18	4.9
14:30:00	91	0	5	24	35	20	5	1	0	0	0	0	0	22.8	17.4	4.9
14:45:00	93	1	6	23	35	22	5	0	0	0	0	0	0	22.7	17.2	5.1
15:00:00	83	0	3	15	34	24	7	0	0	0	0	0	0	23.7	18.4	4.7
15:15:00	86	0	4	20	32	22	7	1	0	0	0	0	0	22.8	18	5
15:30:00	108	0	6	30	37	27	7	0	0	0	0	0	0	23.3	17.4	4.9
15:45:00	93	0	4	22	37	24	7	1	0	0	0	0	0	23.1	17.9	4.8
16:00:00	108	0	7	25	44	25	6	0	0	0	0	0	0	22.5	17.5	4.8
16:15:00	111	0	5	31	42	26	6	1	0	0	0	0	0	22.7	17.4	4.8
16:30:00	117	1	9	29	45	26	7	1	0	0	0	0	0	22.9	17.2	5.1
16:45:00	112	1	6	28	40	26	10	1	0	0	0	0	0	23.4	17.8	5.4
17:00:00	109	1	7	27	42	27	4	1	0	0	0	0	0	22.5	17.4	5.1
17:15:00	106	0	5	21	40	32	7	1	0	0	0	0	0	23.5	18.3	5
17:30:00	89	0	4	19	31	27	7	0	0	0	0	0	0	23.5	18.3	5
17:45:00	93	0	3	18	34	28	9	1	0	0	0	0	0	23.7	18.8	5
18:00:00	74	0	3	13	28	21	8	1	0	0	0	0	0	24.2	18.7	5
18:15:00	65	0	3	12	20	19	9	1	0	0	0	0	0	25.4	19.4	5.7
18:30:00	64	0	3	11	22	20	7	1	0	0	0	0	0	24.6	19.2	5.2
18:45:00	52	0	2	7	16	20	6	1	0	0	0	0	0	24.7	19.6	5.2
19:00:00	54	0	1	10	17	18	6	2	0	0	0	0	0	25.2	19.6	5.5
19:15:00	45	0	2	6	15	15	6	1	0	0	0	0	0	25	19.6	5.2
19:30:00	40	0	1	6	14	12	7	1	0	0	0	0	0	25.5	19.9	5.2
19:45:00	31	0	1	4	11	10	4	2	0	0	0	0	0	25.6	20.3	5.6
20:00:00	34	0	1	5	11	13	4	1	0	0	0	0	0	24.7	19.7	4.9

20:15:00	32	0	1	5	9	11	5	1	0	0	0	0	0	25.5	19.6	5.7
20:30:00	24	0	1	3	10	6	3	1	0	0	0	0	0	25.7	19.4	5.5
20:45:00	23	0	1	4	7	7	4	1	0	0	0	0	0	25.5	19.6	5.5
21:00:00	22	0	1	3	7	7	3	1	0	0	0	0	0	25.1	19.8	5.7
21:15:00	22	0	1	3	7	7	3	0	0	0	0	0	0	25.4	20.1	5.5
21:30:00	18	0	0	2	6	6	3	1	0	0	0	0	0	26.5	20.7	5.4
21:45:00	17	0	1	3	5	5	3	0	0	0	0	0	0	25.6	19.5	6
22:00:00	15	0	0	2	6	5	2	0	0	0	0	0	0	25.1	20	4.5
22:15:00	17	0	0	2	7	4	2	1	0	0	0	0	0	25.5	20.1	5.3
22:30:00	13	0	0	2	5	4	2	1	0	0	0	0	0	25.9	19.8	5.3
22:45:00	10	0	0	2	3	3	1	0	0	0	0	0	0	24.8	19.2	4.8
23:00:00	11	0	0	2	3	4	2	0	0	0	0	0	0	26.1	20.3	5.5
23:15:00	7	0	0	2	1	2	1	0	0	0	0	0	0	25.1	19.2	5.5
23:30:00	7	0	0	1	2	2	1	1	0	0	0	0	0	26.3	20.2	5.9
23:45:00	5	0	0	1	1	1	1	0	0	0	0	0	0	26.5	20.4	5.7
07-19	4037	15	169	838	1533	1124	315	40	2	0	0	0	0	23.4	18.2	5
06-22	4542	16	184	919	1701	1283	383	53	3	0	0	0	0	23.6	18.4	5.1
06-24	4625	16	186	931	1730	1308	395	56	3	0	0	0	0	23.7	18.4	5.1
00-24	4740	17	188	951	1774	1341	408	58	4	0	0	0	0	23.7	18.4	5.1
00-06	114	0	0	17	43	30	10	0	0	0	0	0	0			
am Peak	07:45:00	07:45:00	07:30:00	07:45:00	07:45:00	08:00:00	08:00:00	07:45:00	10:45:00					01:30:00	01:15:00	
Peak Volume	419	2	14	70	160	132	38	5	0					26.1	21.2	4.3
pm Peak	16:15:00	16:15:00	16:15:00	16:15:00	16:00:00	17:00:00	17:45:00	18:15:00	16:30:00	13:45:00				23:00:00	21:30:00	
Peak Volume	449	2	27	114	170	114	33	5	1	0				26	20.1	5.4

Eastbound

	Average Flow	<5.0mph	5.0-10.0mph	10.0-15.0mph	15.0-20.0mph	20.0-25.0mph	25.0-30.0mph	30.0-35.0mph	35.0-40.0mph	40.0-45.0mph	45.0-50.0mph	>50.0mph	Invalid Reading	85th %ile	Mean Speed	Std Dev
00:00:00	2	0	0	0	1	1	0	0	0	0	0	0	0	25.6	21.5	5.8
00:15:00	2	0	0	0	1	0	0	0	0	0	0	0	0	26.5	20.9	6.4
00:30:00	1	0	0	0	0	0	0	0	0	0	0	0	0	26.8		
00:45:00	1	0	0	0	0	0	0	0	0	0	0	0	0	35.1		
01:00:00	1	0	0	0	0	0	0	0	0	0	0	0	0	27.5		
01:15:00	1	0	0	0	0	0	0	0	0	0	0	0	0	28.5		
01:30:00	1	0	0	0	0	0	0	0	0	0	0	0	0	25.6		
01:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	27.8		
02:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	28.5		
02:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	26.3		
02:30:00	1	0	0	0	0	1	0	0	0	0	0	0	0	25.6		
02:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	23.7		
03:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	32.1		
03:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	19.1		
03:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	19.2		
03:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	10.4		
04:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	22.5		
04:15:00	1	0	0	0	0	0	0	0	0	0	0	0	0	18.4		
04:30:00	2	0	0	1	0	1	0	0	0	0	0	0	0	25.1	19.6	6.7
04:45:00	1	0	0	0	0	0	0	0	0	0	0	0	0	24.6		
05:00:00	3	0	0	1	0	0	1	0	0	0	0	0	0	28.6	22.3	7.1
05:15:00	2	0	0	0	1	0	0	0	0	0	0	0	0	20.7	17.8	4.4
05:30:00	7	0	0	3	2	1	1	0	0	0	0	0	0	23.2	17.6	4.5
05:45:00	6	0	0	0	2	2	1	0	0	0	0	0	0	28.2	21	5.4
06:00:00	9	0	0	3	3	2	1	0	0	0	0	0	0	24	18.3	4.7
06:15:00	10	0	0	3	3	3	1	1	0	0	0	0	0	25.1	19.4	5.7
06:30:00	19	0	1	3	3	5	5	1	0	0	0	0	0	27.8	20.7	6.5
06:45:00	21	0	1	4	5	6	4	0	0	0	0	0	0	25.9	19.1	6.1
07:00:00	28	0	2	7	8	6	3	1	0	0	0	0	0	24.4	17.8	5.9
07:15:00	28	0	3	9	7	6	2	0	0	0	0	0	0	23.2	16.2	5.8
07:30:00	33	0	2	7	13	7	4	1	0	0	0	0	0	24.9	18.3	5.5
07:45:00	47	0	2	11	16	13	4	1	0	0	0	0	0	23.7	18.2	5.2
08:00:00	48	0	1	9	14	16	6	1	0	0	0	0	0	25	19.5	5.7
08:15:00	53	0	4	13	15	15	5	0	0	0	0	0	0	23.9	17.9	5.7
08:30:00	45	0	1	8	14	14	7	1	0	0	0	0	0	25.1	19.3	5.3
08:45:00	36	0	2	6	13	12	4	0	0	0	0	0	0	24.6	19.1	4.8
09:00:00	42	0	2	8	16	11	5	1	0	0	0	0	0	24.7	18.8	5.2
09:15:00	36	0	1	8	11	9	5	0	0	0	0	0	0	25.3	19	5.5
09:30:00	36	0	2	7	11	11	5	0	0	0	0	0	0	24.8	18.7	5.5
09:45:00	38	0	2	10	13	10	3	0	0	0	0	0	0	23.5	18	5.1
10:00:00	30	0	1	5	12	8	3	1	0	0	0	0	0	24	18.6	5.3
10:15:00	35	0	2	9	12	9	3	1	0	0	0	0	0	23.6	18.1	5.4
10:30:00	32	0	2	5	12	9	3	0	0	0	0	0	0	24.6	18.5	5.4
10:45:00	33	0	1	6	12	10	4	0	0	0	0	0	0	24.7	19.2	5.2
11:00:00	33	0	1	7	12	9	4	0	0	0	0	0	0	24.3	18.6	5.1
11:15:00	38	0	2	9	12	11	4	1	0	0	0	0	0	23.9	18.6	5.2
11:30:00	40	0	3	10	15	9	2	0	0	0	0	0	0	23.1	17.4	5.3
11:45:00	44	0	2	9	17	12	4	0	0	0	0	0	0	23.1	18.3	5
12:00:00	40	0	2	9	15	9	3	0	0	0	0	0	0	22.4	17.6	5.2
12:15:00	41	0	2	11	14	11	3	1	0	0	0	0	0	23.5	18.1	5.1
12:30:00	40	0	2	12	13	10	1	0	0	0	0	0	0	22.9	17.2	5.1
12:45:00	35	0	1	9	14	9	3	0	0	0	0	0	0	22.4	18	4.5
13:00:00	41	0	2	10	15	9	4	1	0	0	0	0	0	24.2	18.2	5.4
13:15:00	39	0	3	10	13	9	2	1	0	0	0	0	0	22.6	17.5	5.3
13:30:00	40	0	3	10	13	10	3	1	0	0	0	0	0	22.9	17.4	5.5
13:45:00	43	0	2	10	13	13	4	0	0	0	0	0	0	23.2	17.9	5.3
14:00:00	52	0	5	15	18	11	3	1	0	0	0	0	0	22.5	16.7	5.4
14:15:00	37	0	2	10	11	11	3	0	0	0	0	0	0	23.3	17.7	5.4
14:30:00	46	0	4	15	15	9	2	0	0	0	0	0	0	22.4	16.8	5.3
14:45:00	48	1	6	15	15	9	3	0	0	0	0	0	0	23.1	16.1	5.6
15:00:00	54	0	3	10	23	14	4	0	0	0	0	0	0	23.2	18.1	4.7
15:15:00	47	0	4	14	15	9	4	0	0	0	0	0	0	22.1	17	5.3
15:30:00	62	0	5	21	19	12	4	0	0	0	0	0	0	22.6	16.6	5.1
15:45:00	50	0	3	14	19	12	3	0	0	0	0	0	0	22.4	17.3	4.8
16:00:00	60	0	5	19	22	11	3	0	0	0	0	0	0	21.9	16.5	5
16:15:00	62	0	4	23	20	12	3	1	0	0	0	0	0	22.2	16.3	5
16:30:00	66	0	7	21	23	11	3	0	0	0	0	0	0	21.7	16.1	5.1
16:45:00	65	1	5	20	21	11	6	1	0	0	0	0	0	23	17	5.7
17:00:00	64	1	5	20	21	14	3	1	0	0	0	0	0	22.6	16.6	5.4
17:15:00	58	0	4	15	20	14	3	1	0	0	0	0	0	23.4	17.4	5.5

17:30:00	46	0	3	13	13	12	5	0	0	0	0	0	0	24.1	18	5.7
17:45:00	48	0	3	12	15	12	5	1	0	0	0	0	0	23.9	18.2	5.5
18:00:00	39	0	3	7	14	9	5	1	0	0	0	0	0	24.9	18.5	5.6
18:15:00	36	0	2	7	10	9	6	1	0	0	0	0	0	26	19.2	6.1
18:30:00	34	0	2	7	10	11	4	1	0	0	0	0	0	24.8	18.9	5.7
18:45:00	26	0	2	4	7	9	4	1	0	0	0	0	0	26.2	19.6	5.9
19:00:00	27	0	1	5	7	9	4	1	0	0	0	0	0	26	20.1	6
19:15:00	22	0	1	3	7	6	4	1	0	0	0	0	0	26.2	19.8	5.8
19:30:00	18	0	1	3	5	5	4	0	0	0	0	0	0	26.3	20	5.6
19:45:00	15	0	1	2	5	4	2	1	0	0	0	0	0	25.6	20	5.9
20:00:00	15	0	1	3	4	5	1	1	0	0	0	0	0	24.7	19.1	5.6
20:15:00	17	0	1	4	5	4	2	0	0	0	0	0	0	26.4	18.8	6.2
20:30:00	13	0	1	2	4	3	2	1	0	0	0	0	0	27	19.9	6.3
20:45:00	12	0	1	2	3	3	2	0	0	0	0	0	0	26.6	20.2	6.1
21:00:00	10	0	0	2	3	3	2	1	0	0	0	0	0	25.8	20	6.5
21:15:00	11	0	0	2	3	3	2	0	0	0	0	0	0	26.3	20.3	6.1
21:30:00	10	0	0	1	3	3	1	1	0	0	0	0	0	27.2	20.6	5.9
21:45:00	10	0	1	2	2	2	3	0	0	0	0	0	0	27.1	20	6.7
22:00:00	7	0	0	1	1	3	2	0	0	0	0	0	0	27.1	21.5	5
22:15:00	8	0	0	1	3	2	1	1	0	0	0	0	0	25.7	20.5	5.8
22:30:00	6	0	0	1	2	1	1	1	0	0	0	0	0	28.3	21.3	6.2
22:45:00	6	0	0	1	2	1	1	0	0	0	0	0	0	26	18.6	5.6
23:00:00	6	0	0	1	2	2	1	0	0	0	0	0	0	26.1	20.5	5.9
23:15:00	4	0	0	1	1	1	0	0	0	0	0	0	0	23.6	18.2	5.2
23:30:00	4	0	0	0	1	1	1	1	0	0	0	0	0	31.2	21.6	6.5
23:45:00	2	0	0	0	0	0	1	0	0	0	0	0	0	29.2	20.7	8.5
07-19	2071	8	128	526	697	509	176	25	1	0	0	0	0	23.5	17.8	5.4
06-22	2310	10	138	571	761	577	216	35	2	0	0	0	0	23.9	18	5.5
06-24	2352	10	139	578	774	589	224	37	2	0	0	0	0	24	18	5.5
00-24	2384	10	140	583	783	597	229	38	2	0	0	0	0	24	18	5.5
00-06	32	0	0	5	7	6	3	0	0	0	0	0	0			
am Peak	07:45:00	07:45:00	07:30:00	07:45:00	07:45:00	07:45:00	08:00:00	07:45:00	10:45:00					00:30:00	01:15:00	
Peak Volume	192	1	9	41	59	57	22	3	0					29.3	23.4	3.4
pm Peak	16:15:00	16:30:00	16:15:00	16:15:00	16:00:00	17:00:00	17:30:00	18:15:00	16:30:00	13:45:00				21:45:00	21:45:00	
Peak Volume	258	2	21	85	86	52	20	4	0	0				27	20.7	6

Westbound

	Average Flow	<5.0mph	5.0-10.0mph	10.0-15.0mph	15.0-20.0mph	20.0-25.0mph	25.0-30.0mph	30.0-35.0mph	35.0-40.0mph	40.0-45.0mph	45.0-50.0mph	>50.0mph	Invalid Reading	85th %ile	Mean Speed	Std Dev
00:00:00	2	0	0	0	1	1	0	0	0	0	0	0	0	24.5	19.3	5.3
00:15:00	1	0	0	0	0	1	0	0	0	0	0	0	0	26.8		
00:30:00	1	0	0	0	0	1	0	0	0	0	0	0	0	25.6		
00:45:00	1	0	0	0	1	0	0	0	0	0	0	0	0	21.3		
01:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	22.5		
01:15:00	1	0	0	0	0	1	0	0	0	0	0	0	0	23.9		
01:30:00	1	0	0	0	0	0	0	0	0	0	0	0	0	27.4		
01:45:00	1	0	0	0	0	0	0	0	0	0	0	0	0	25.6		
02:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	18.5		
02:15:00	1	0	0	0	0	0	0	0	0	0	0	0	0	20.1		
02:30:00	1	0	0	0	0	0	0	0	0	0	0	0	0	20.2		
02:45:00	1	0	0	0	0	0	0	0	0	0	0	0	0	26.9		
03:00:00	1	0	0	0	0	0	0	0	0	0	0	0	0	24		
03:15:00	1	0	0	0	1	0	0	0	0	0	0	0	0	20		
03:30:00	1	0	0	0	1	0	0	0	0	0	0	0	0	21.3		
03:45:00	1	0	0	0	0	0	0	0	0	0	0	0	0	25.9		
04:00:00	1	0	0	0	0	0	0	0	0	0	0	0	0	24.2		
04:15:00	1	0	0	0	1	0	0	0	0	0	0	0	0	24	20.9	4.4
04:30:00	2	0	0	1	1	1	0	0	0	0	0	0	0	25.6	20.3	5.5
04:45:00	4	0	0	1	1	1	0	0	0	0	0	0	0	23.1	17.2	6
05:00:00	8	0	0	2	3	2	1	0	0	0	0	0	0	23.5	19.1	4.7
05:15:00	11	0	0	1	5	3	1	0	0	0	0	0	0	24.3	20	5.4
05:30:00	22	0	0	4	10	6	2	0	0	0	0	0	0	23.1	18.4	4.5
05:45:00	18	0	0	2	10	5	2	0	0	0	0	0	0	23.5	19	3.8
06:00:00	10	0	0	1	4	3	1	0	0	0	0	0	0	24.4	19.4	4.2
06:15:00	17	0	1	3	6	5	2	1	0	0	0	0	0	25	19.2	5.4
06:30:00	28	0	0	5	12	8	2	0	0	0	0	0	0	23.1	18.6	4.2
06:45:00	29	0	1	3	13	11	2	0	0	0	0	0	0	23	19.1	4.2
07:00:00	32	0	1	4	12	11	3	0	0	0	0	0	0	23.5	19.1	4.6
07:15:00	46	0	0	7	21	14	2	0	0	0	0	0	0	23	18.6	4.3
07:30:00	46	0	1	7	18	16	3	1	0	0	0	0	0	23.3	19.2	4.4
07:45:00	54	0	1	6	25	17	4	0	0	0	0	0	0	23.2	19	4.4
08:00:00	57	0	1	8	27	17	4	0	0	0	0	0	0	22.8	18.7	4.1
08:15:00	64	0	2	8	27	23	4	0	0	0	0	0	0	23	18.7	4.5
08:30:00	52	0	1	7	22	17	4	1	0	0	0	0	0	23.6	19.2	4.6
08:45:00	58	0	1	7	25	20	5	1	0	0	0	0	0	23.5	19.4	4.2
09:00:00	36	0	0	6	13	12	3	0	0	0	0	0	0	24.3	19.3	4.5
09:15:00	41	0	1	5	18	14	2	1	0	0	0	0	0	23.3	19	4.4
09:30:00	42	0	0	9	19	11	3	0	0	0	0	0	0	22.8	18.5	4.2
09:45:00	35	0	1	6	16	10	2	0	0	0	0	0	0	22.9	18.3	4.4
10:00:00	39	0	1	6	18	12	1	0	0	0	0	0	0	22.7	18.5	4.3
10:15:00	42	0	1	7	19	12	2	0	0	0	0	0	0	22.5	18.5	4.3
10:30:00	40	0	0	8	20	10	2	1	0	0	0	0	0	22.9	18.5	4.3
10:45:00	31	0	1	4	12	10	4	0	0	0	0	0	0	24	19.2	4.7
11:00:00	32	0	1	5	13	11	2	0	0	0	0	0	0	23.1	18.7	4.2
11:15:00	36	0	1	6	13	12	4	0	0	0	0	0	0	23.9	19.1	4.7
11:30:00	39	0	1	7	16	11	3	0	0	0	0	0	0	22.9	18.6	4.6
11:45:00	35	0	0	6	15	12	2	0	0	0	0	0	0	23.1	18.7	4.5
12:00:00	38	0	2	5	16	13	2	0	0	0	0	0	0	22.7	18.3	4.6
12:15:00	36	0	1	8	14	10	2	0	0	0	0	0	0	23.3	18.5	4.7
12:30:00	34	0	0	7	14	11	2	0	0	0	0	0	0	23.2	18.7	4.3
12:45:00	40	0	1	7	17	13	1	0	0	0	0	0	0	22.8	18.4	4.4
13:00:00	33	0	1	5	15	8	4	0	0	0	0	0	0	24.4	18.8	4.8
13:15:00	35	0	0	7	13	12	3	0	0	0	0	0	0	23.6	19	4.6
13:30:00	35	0	1	8	14	10	2	0	0	0	0	0	0	22.6	17.8	4.5
13:45:00	34	0	1	6	13	11	2	0	0	0	0	0	0	23.6	18.7	4.6
14:00:00	35	0	1	7	16	8	3	0	0	0	0	0	0	22.2	18.1	4.5
14:15:00	47	0	2	7	22	12	4	0	0	0	0	0	0	23	18.2	4.5
14:30:00	45	0	1	10	20	11	3	0	0	0	0	0	0	22.8	17.9	4.4

14:45:00	45	0	1	8	21	13	2	0	0	0	0	0	0	22.5	18.3	4
15:00:00	29	0	0	5	11	9	3	0	0	0	0	0	0	24.3	19.1	4.6
15:15:00	39	0	0	6	16	13	3	0	0	0	0	0	0	23.2	19.1	4.4
15:30:00	46	0	1	9	18	15	3	0	0	0	0	0	0	23.6	18.4	4.5
15:45:00	44	0	1	8	18	12	4	0	0	0	0	0	0	23.4	18.5	4.7
16:00:00	47	0	1	6	23	14	3	0	0	0	0	0	0	23	18.8	4.3
16:15:00	48	0	1	8	22	15	3	0	0	0	0	0	0	23.2	18.8	4.1
16:30:00	51	0	2	8	21	15	4	0	0	0	0	0	0	23.6	18.7	4.8
16:45:00	47	0	1	8	19	15	3	1	0	0	0	0	0	23.6	18.9	4.7
17:00:00	45	0	1	6	21	14	2	0	0	0	0	0	0	22.5	18.4	4.4
17:15:00	48	0	1	6	20	18	4	0	0	0	0	0	0	23.7	19.4	4.1
17:30:00	43	0	1	6	18	15	2	0	0	0	0	0	0	22.7	18.7	4
17:45:00	46	0	0	6	19	16	4	0	0	0	0	0	0	23.4	19.4	4.3
18:00:00	35	0	0	6	14	12	3	0	0	0	0	0	0	23.4	19	4.3
18:15:00	29	0	0	5	10	10	4	0	0	0	0	0	0	24.7	19.7	5
18:30:00	30	0	0	4	12	10	3	1	0	0	0	0	0	24.4	19.5	4.6
18:45:00	26	0	1	3	9	11	2	1	0	0	0	0	0	23.5	19.6	4.5
19:00:00	27	0	1	5	10	8	2	0	0	0	0	0	0	24	19	4.8
19:15:00	23	0	0	3	8	9	2	1	0	0	0	0	0	23.8	19.4	4.5
19:30:00	22	0	0	3	9	7	3	0	0	0	0	0	0	25.1	19.8	4.9
19:45:00	16	0	0	2	6	5	3	1	0	0	0	0	0	25.8	20.5	5.3
20:00:00	19	0	0	2	6	8	2	0	0	0	0	0	0	24.7	20.3	4.1
20:15:00	15	0	0	1	5	6	2	0	0	0	0	0	0	25	20.6	4.9
20:30:00	11	0	0	1	5	3	1	0	0	0	0	0	0	23.8	18.9	4.4
20:45:00	11	0	0	2	4	4	1	0	0	0	0	0	0	23.3	19	4.8
21:00:00	11	0	0	1	4	4	1	0	0	0	0	0	0	24.7	19.6	4.8
21:15:00	11	0	0	1	4	4	2	0	0	0	0	0	0	24.7	19.8	4.8
21:30:00	8	0	0	1	3	3	2	0	0	0	0	0	0	26	20.7	4.9
21:45:00	7	0	0	1	3	2	0	0	0	0	0	0	0	23.5	18.7	4.7
22:00:00	8	0	0	1	5	2	1	0	0	0	0	0	0	22.1	18.7	3.5
22:15:00	9	0	0	1	4	2	1	0	0	0	0	0	0	24.9	19.8	4.9
22:30:00	8	0	0	1	3	3	0	0	0	0	0	0	0	22.8	18.6	4.2
22:45:00	4	0	0	0	1	2	0	0	0	0	0	0	0	22	20.2	3.2
23:00:00	5	0	0	1	1	2	1	0	0	0	0	0	0	27.1	20.1	5
23:15:00	2	0	0	1	0	1	1	0	0	0	0	0	0	25.8	21.2	5.5
23:30:00	3	0	0	0	1	1	0	0	0	0	0	0	0	23.5	18.6	4.9
23:45:00	3	0	0	0	1	1	0	0	0	0	0	0	0	24.3	20.2	3.9
07-19	1966	6	41	312	837	615	139	14	1	0	0	0	0	23.2	18.8	4.4
06-22	2232	6	46	348	939	705	167	18	1	0	0	0	0	23.3	18.9	4.5
06-24	2273	6	47	353	956	720	172	18	1	0	0	0	0	23.4	18.9	4.5
00-24	2356	7	48	367	991	743	179	19	1	0	0	0	0	23.4	18.9	4.5
00-06	82	0	0	11	35	22	6	0	0	0	0	0	0			
am Peak	08:00:00	07:00:00	07:30:00	08:00:00	07:45:00	08:00:00	08:00:00	08:30:00	07:45:00					03:45:00	00:15:00	
Peak Volume	230	1	5	30	100	76	17	2	0					25	20.9	3.7
pm Peak	16:00:00	14:15:00	15:45:00	14:00:00	16:00:00	17:00:00	15:45:00	18:30:00	16:15:00	17:30:00				23:00:00	19:30:00	
Peak Volume	194	1	6	32	85	62	15	2	0	0				25.4	20.2	4.8

Event key: QC Failure | QC Outlier | QC Atypical | Events | Special | Holiday | Offline | Weekends and defined holidays

Notes on data:

Averages are calculated as the simple average of values across the period.

Holidays & Events:

None

Appendix G TRICS

Pell Frischmann 5 Manchester Square London Licence No: 610805

Calculation Reference: AUDIT-610805-250116-0115

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : P - ASSISTED LIVING
TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	WS	WEST SUSSEX	1 days
04	EAST ANGLIA		
	NF	NORFOLK	3 days
	PB	PETERBOROUGH	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YORKSHIRE	1 days
08	NORTH WEST		
	GM	GREATER MANCHESTER	1 days
09	NORTH		
	TW	TYNE & WEAR	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: No of Dwellings
Actual Range: 24 to 79 (units:)
Range Selected by User: 11 to 79 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/16 to 21/09/23

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	1 days
Tuesday	1 days
Wednesday	1 days
Thursday	2 days
Friday	3 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	8 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	6
Edge of Town	2

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	8

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	4 days - Selected
Servicing vehicles Excluded	4 days - Selected

Secondary Filtering selection:

Use Class:

n/a	1 days
C3	7 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:
All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

10,001 to 15,000	4 days
20,001 to 25,000	1 days
25,001 to 50,000	3 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days
125,001 to 250,000	4 days
250,001 to 500,000	1 days
500,001 or More	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	5 days
1.1 to 1.5	3 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	8 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	8 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 GM-03-P-01 ASSISTED LIVING GREATER MANCHESTER
AMBLECOTE DRIVE WEST
SALFORD
LITTLE HULTON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 66
Survey date: THURSDAY *21/09/23* *Survey Type: MANUAL*

2 NF-03-P-01 ASSISTED LIVING NORFOLK
MOUNTBATTEN DRIVE
NORWICH

Edge of Town
Residential Zone
Total No of Dwellings: 40
Survey date: FRIDAY *08/11/19* *Survey Type: MANUAL*

3 NF-03-P-02 ASSISTED LIVING NORFOLK
LAKENFIELDS
NORWICH
LAKENHAM
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 40
Survey date: FRIDAY *22/11/19* *Survey Type: MANUAL*

4 NF-03-P-03 ASSISTED LIVING NORFOLK
YARMOUTH ROAD
NORTH WALSHAM

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 24
Survey date: FRIDAY *16/06/23* *Survey Type: MANUAL*

5 NY-03-P-01 ASSISTED LIVING NORTH YORKSHIRE
FENNELL GROVE
RIPON

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 40
Survey date: TUESDAY *24/05/22* *Survey Type: MANUAL*

6 PB-03-P-01 ASSISTED LIVING PETERBOROUGH
THISTLE DRIVE
PETERBOROUGH
STANGROUND
Edge of Town
Residential Zone
Total No of Dwellings: 79
Survey date: MONDAY *26/09/22* *Survey Type: MANUAL*

7 TW-03-P-01 ASSISTED LIVING TYNE & WEAR
KENTON ROAD
NEWCASTLE UPON TYNE

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 42
Survey date: THURSDAY *07/10/21* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

8 WS-03-P-01 ASSISTED LIVING WEST SUSSEX
DURRINGTON LANE
WORTHING

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 54
Survey date: WEDNESDAY *18/05/22* *Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/P - ASSISTED LIVING
TOTAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	48	0.065	8	48	0.034	8	48	0.099
08:00 - 09:00	8	48	0.088	8	48	0.044	8	48	0.132
09:00 - 10:00	8	48	0.153	8	48	0.117	8	48	0.270
10:00 - 11:00	8	48	0.145	8	48	0.130	8	48	0.275
11:00 - 12:00	8	48	0.125	8	48	0.122	8	48	0.247
12:00 - 13:00	8	48	0.112	8	48	0.140	8	48	0.252
13:00 - 14:00	8	48	0.138	8	48	0.140	8	48	0.278
14:00 - 15:00	8	48	0.101	8	48	0.145	8	48	0.246
15:00 - 16:00	8	48	0.096	8	48	0.083	8	48	0.179
16:00 - 17:00	8	48	0.065	8	48	0.106	8	48	0.171
17:00 - 18:00	8	48	0.052	8	48	0.078	8	48	0.130
18:00 - 19:00	8	48	0.031	8	48	0.029	8	48	0.060
19:00 - 20:00	1	24	0.042	1	24	0.000	1	24	0.042
20:00 - 21:00	1	24	0.000	1	24	0.042	1	24	0.042
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.213			1.210			2.423

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter summary

Trip rate parameter range selected:	24 - 79 (units:)
Survey date date range:	01/01/16 - 21/09/23
Number of weekdays (Monday-Friday):	8
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 03 - RESIDENTIAL/P - ASSISTED LIVING
TAXIS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	48	0.000	8	48	0.000	8	48	0.000
08:00 - 09:00	8	48	0.008	8	48	0.005	8	48	0.013
09:00 - 10:00	8	48	0.010	8	48	0.013	8	48	0.023
10:00 - 11:00	8	48	0.016	8	48	0.016	8	48	0.032
11:00 - 12:00	8	48	0.008	8	48	0.008	8	48	0.016
12:00 - 13:00	8	48	0.008	8	48	0.008	8	48	0.016
13:00 - 14:00	8	48	0.003	8	48	0.003	8	48	0.006
14:00 - 15:00	8	48	0.010	8	48	0.010	8	48	0.020
15:00 - 16:00	8	48	0.003	8	48	0.003	8	48	0.006
16:00 - 17:00	8	48	0.005	8	48	0.005	8	48	0.010
17:00 - 18:00	8	48	0.008	8	48	0.008	8	48	0.016
18:00 - 19:00	8	48	0.000	8	48	0.000	8	48	0.000
19:00 - 20:00	1	24	0.000	1	24	0.000	1	24	0.000
20:00 - 21:00	1	24	0.000	1	24	0.000	1	24	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.079			0.079			0.158

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/P - ASSISTED LIVING
OGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	48	0.000	8	48	0.000	8	48	0.000
08:00 - 09:00	8	48	0.003	8	48	0.003	8	48	0.006
09:00 - 10:00	8	48	0.005	8	48	0.003	8	48	0.008
10:00 - 11:00	8	48	0.000	8	48	0.003	8	48	0.003
11:00 - 12:00	8	48	0.000	8	48	0.000	8	48	0.000
12:00 - 13:00	8	48	0.000	8	48	0.000	8	48	0.000
13:00 - 14:00	8	48	0.000	8	48	0.000	8	48	0.000
14:00 - 15:00	8	48	0.000	8	48	0.000	8	48	0.000
15:00 - 16:00	8	48	0.000	8	48	0.000	8	48	0.000
16:00 - 17:00	8	48	0.000	8	48	0.000	8	48	0.000
17:00 - 18:00	8	48	0.000	8	48	0.000	8	48	0.000
18:00 - 19:00	8	48	0.000	8	48	0.000	8	48	0.000
19:00 - 20:00	1	24	0.000	1	24	0.000	1	24	0.000
20:00 - 21:00	1	24	0.000	1	24	0.000	1	24	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.008			0.009			0.017

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/P - ASSISTED LIVING
PSVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	48	0.000	8	48	0.000	8	48	0.000
08:00 - 09:00	8	48	0.000	8	48	0.000	8	48	0.000
09:00 - 10:00	8	48	0.000	8	48	0.000	8	48	0.000
10:00 - 11:00	8	48	0.003	8	48	0.003	8	48	0.006
11:00 - 12:00	8	48	0.000	8	48	0.000	8	48	0.000
12:00 - 13:00	8	48	0.000	8	48	0.000	8	48	0.000
13:00 - 14:00	8	48	0.000	8	48	0.000	8	48	0.000
14:00 - 15:00	8	48	0.003	8	48	0.003	8	48	0.006
15:00 - 16:00	8	48	0.000	8	48	0.000	8	48	0.000
16:00 - 17:00	8	48	0.000	8	48	0.000	8	48	0.000
17:00 - 18:00	8	48	0.000	8	48	0.000	8	48	0.000
18:00 - 19:00	8	48	0.000	8	48	0.000	8	48	0.000
19:00 - 20:00	1	24	0.000	1	24	0.000	1	24	0.000
20:00 - 21:00	1	24	0.000	1	24	0.000	1	24	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.006			0.006			0.012

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/P - ASSISTED LIVING
CYCLISTS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	48	0.013	8	48	0.008	8	48	0.021
08:00 - 09:00	8	48	0.013	8	48	0.003	8	48	0.016
09:00 - 10:00	8	48	0.005	8	48	0.000	8	48	0.005
10:00 - 11:00	8	48	0.000	8	48	0.005	8	48	0.005
11:00 - 12:00	8	48	0.005	8	48	0.005	8	48	0.010
12:00 - 13:00	8	48	0.000	8	48	0.003	8	48	0.003
13:00 - 14:00	8	48	0.000	8	48	0.005	8	48	0.005
14:00 - 15:00	8	48	0.000	8	48	0.003	8	48	0.003
15:00 - 16:00	8	48	0.000	8	48	0.000	8	48	0.000
16:00 - 17:00	8	48	0.000	8	48	0.000	8	48	0.000
17:00 - 18:00	8	48	0.000	8	48	0.003	8	48	0.003
18:00 - 19:00	8	48	0.000	8	48	0.000	8	48	0.000
19:00 - 20:00	1	24	0.000	1	24	0.000	1	24	0.000
20:00 - 21:00	1	24	0.000	1	24	0.000	1	24	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.036			0.035			0.071

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/P - ASSISTED LIVING
CARS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	48	0.057	8	48	0.029	8	48	0.086
08:00 - 09:00	8	48	0.073	8	48	0.034	8	48	0.107
09:00 - 10:00	8	48	0.114	8	48	0.081	8	48	0.195
10:00 - 11:00	8	48	0.112	8	48	0.099	8	48	0.211
11:00 - 12:00	8	48	0.088	8	48	0.083	8	48	0.171
12:00 - 13:00	8	48	0.088	8	48	0.109	8	48	0.197
13:00 - 14:00	8	48	0.109	8	48	0.130	8	48	0.239
14:00 - 15:00	8	48	0.073	8	48	0.104	8	48	0.177
15:00 - 16:00	8	48	0.088	8	48	0.073	8	48	0.161
16:00 - 17:00	8	48	0.057	8	48	0.094	8	48	0.151
17:00 - 18:00	8	48	0.036	8	48	0.065	8	48	0.101
18:00 - 19:00	8	48	0.029	8	48	0.026	8	48	0.055
19:00 - 20:00	1	24	0.042	1	24	0.000	1	24	0.042
20:00 - 21:00	1	24	0.000	1	24	0.042	1	24	0.042
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.966			0.969			1.935

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/P - ASSISTED LIVING
LGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	48	0.005	8	48	0.003	8	48	0.008
08:00 - 09:00	8	48	0.005	8	48	0.003	8	48	0.008
09:00 - 10:00	8	48	0.023	8	48	0.021	8	48	0.044
10:00 - 11:00	8	48	0.013	8	48	0.010	8	48	0.023
11:00 - 12:00	8	48	0.026	8	48	0.031	8	48	0.057
12:00 - 13:00	8	48	0.016	8	48	0.018	8	48	0.034
13:00 - 14:00	8	48	0.023	8	48	0.008	8	48	0.031
14:00 - 15:00	8	48	0.016	8	48	0.029	8	48	0.045
15:00 - 16:00	8	48	0.003	8	48	0.005	8	48	0.008
16:00 - 17:00	8	48	0.003	8	48	0.005	8	48	0.008
17:00 - 18:00	8	48	0.008	8	48	0.005	8	48	0.013
18:00 - 19:00	8	48	0.003	8	48	0.003	8	48	0.006
19:00 - 20:00	1	24	0.000	1	24	0.000	1	24	0.000
20:00 - 21:00	1	24	0.000	1	24	0.000	1	24	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.144			0.141			0.285

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/P - ASSISTED LIVING
MOTOR CYCLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	48	0.003	8	48	0.003	8	48	0.006
08:00 - 09:00	8	48	0.000	8	48	0.000	8	48	0.000
09:00 - 10:00	8	48	0.000	8	48	0.000	8	48	0.000
10:00 - 11:00	8	48	0.003	8	48	0.000	8	48	0.003
11:00 - 12:00	8	48	0.003	8	48	0.000	8	48	0.003
12:00 - 13:00	8	48	0.000	8	48	0.005	8	48	0.005
13:00 - 14:00	8	48	0.003	8	48	0.000	8	48	0.003
14:00 - 15:00	8	48	0.000	8	48	0.000	8	48	0.000
15:00 - 16:00	8	48	0.003	8	48	0.003	8	48	0.006
16:00 - 17:00	8	48	0.000	8	48	0.003	8	48	0.003
17:00 - 18:00	8	48	0.000	8	48	0.000	8	48	0.000
18:00 - 19:00	8	48	0.000	8	48	0.000	8	48	0.000
19:00 - 20:00	1	24	0.000	1	24	0.000	1	24	0.000
20:00 - 21:00	1	24	0.000	1	24	0.000	1	24	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.015			0.014			0.029

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Appendix H PRTM Summary

Leicestershire County Council

Environment and Transport Commissioning Framework

Land West of Ratby

Forecasting Report

Date: June 2024
Project Code: 3851.197

Document Sign-off

Control Details

Document Location:	\\Lccfp3\htwdata\Transportation\Transport Policy and Programs\Traffic Modelling\TMODELLING\05. 3851 (External)\MF3851.197 Markfield Road, Ratby\12. Deliverables\01. Reports\3851.197_Land West of Ratby_Forecasting Report_v1.0.docx
Production Software:	Microsoft Word 2010
Author:	JR
Owner:	Alex Gray, Network Data and Intelligence Team

Document history and status

Ver	Date	Description	Author	Review	Approved	Released
0.1	May 2024	Draft for internal review	JR	PB		
1.0	June 2024	Release version for client	JR	PB	PB	LG

Model Version

Model:	PRTM2019 v1.2
Networks:	Highway: v1.4; Public Transport: v1.1
Constrained / NTEM minimum:	NTEM-Minimum
Planning Data:	HH154Emp1541
SATURN Version:	11.5.05N

Leicestershire County Council

Contents

Table of Figures

Table of Tables

1. Introduction

1.1. Background

1.1.1. Leicestershire County Council's (LCC's) Network Data & Intelligence (NDI) consultants have been commissioned by Pell Frischmann to undertake strategic transport modelling to assess the potential traffic impacts of the proposed Land West of Ratby development. This assessment has been undertaken using the Pan Regional Transport Model (PRTM) for the AM and PM peak hours.

1.1.2. The proposed development is a residential development of 509 dwellings and a primary school. The site is located to the south of Markfield Road and to the north of Desford Lane in Ratby, Leicestershire and is expected to be fully built by 2031. Figure 1.1 shows the indicative location of the proposed development.

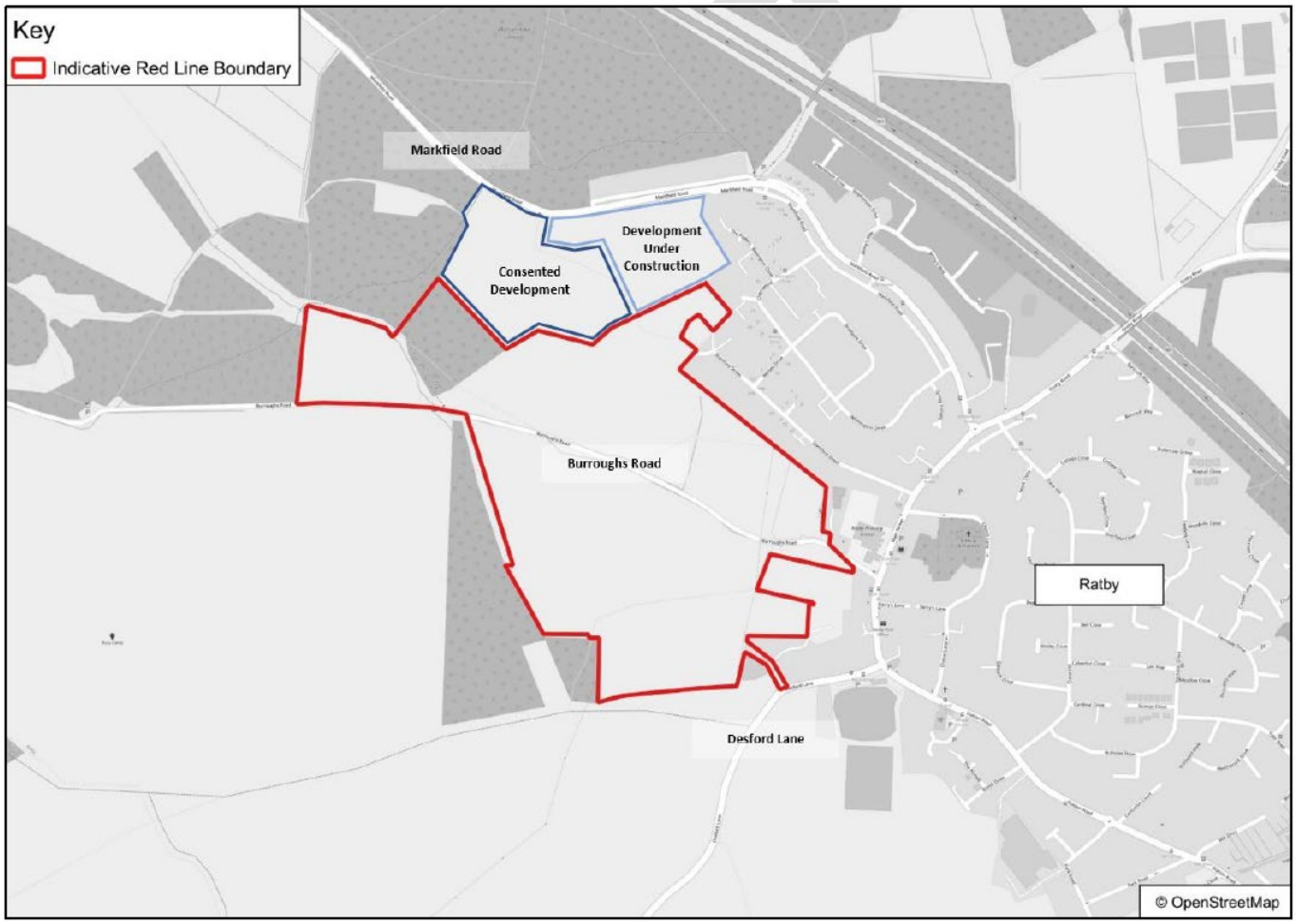

Figure 1.1 Indicative Location of the Proposed Development

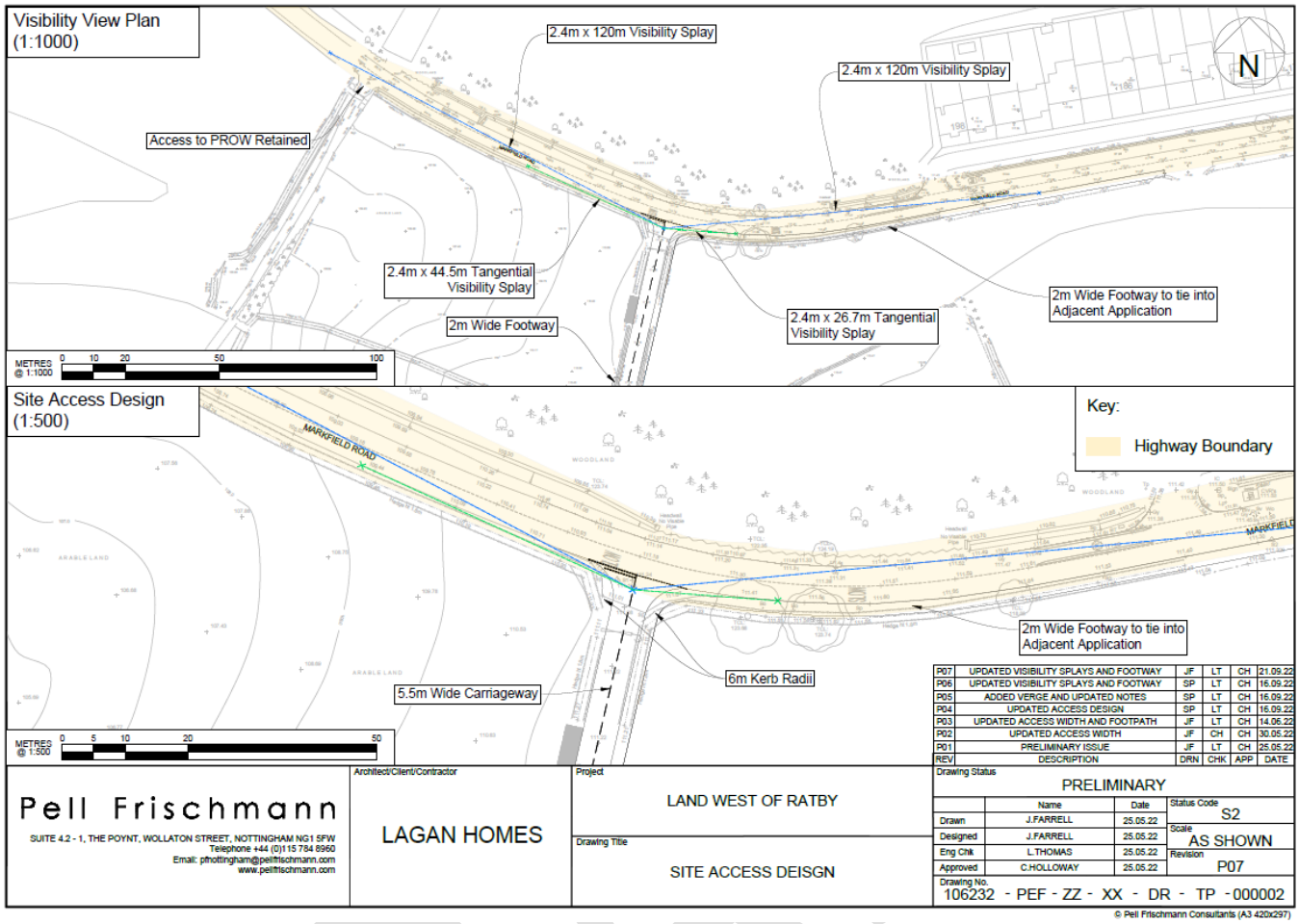

Figure 1.2 Proposed Site Access

1.1.3. A new primary school is proposed within the development in addition to the existing Ratby Primary School.

1.1.4. The proposed development will have two simple priority junction accesses onto the highway network, one off Markfield Road (see Figure 1.2) and one off Desford Lane:

- Markfield Road – an extension to the approved access from the adjacent consented development approval (22/00648/OUT)
- Desford Lane – an extension to the existing access which also serves Pear Tree Office Park

1.1.5. This report is the Forecasting Report containing the forecast model results of the strategic modelling assessment of the proposed development. This report follows the Land West of Ratby Base Year Model Review Report[1], which details the 2019 base year model network review and performance in the vicinity of the proposed site.

[1] 3851.197 Land West of Ratby – Base Year Model Review - v1.0 (08/03/2024)

1.2. Report Structure

1.2.1. Section 2 details the model suitability, including the agreements around the Uncertainty log and development trip generation.

1.2.2. Section 3 outlines the forecast model results for all scenarios.

1.2.3. Section 4 summarises the results of the PRTM Assessment of the proposed development.

Leicestershire County Council

2. Forecast Approach and Assumptions

2.1. Introduction

2.1.1. For this strategic modelling assessment, the following forecast model scenarios have been produced:

- 2024 'Without Development'
- 2028 'Without Development'
- 2028 'With 50% Development'
- 2031 'Without Development'
- 2031 'With 100% Development' + development spine road + Primary School

2.1.2. The 'Without Development' forecasts have been run through the wider PRTM modelling suite which includes, among others: a highway model, a public transport model, and a variable demand model. Therefore, the forecasts include the response of travel demand to forecast changes in the costs of travel (including congestion, fuel prices and public transport fares) and change in assumed highway and public transport infrastructure over time.

2.1.3. To produce the 2028 and 2031 'With Development' forecasts; the highway trips, specified by the client in the trip generation numbers for the proposed development, have been added to the 2028 and 2031 'Without Development' highway demand matrices using the agreed parent-zone distribution and assigned in the PRTM highway model.

2.2. 'Without Development' Assumptions

2.2.1. The forecast planning data and infrastructure schemes used to produce the forecast 'Without Development' scenarios were reviewed by the client in the format of an uncertainty log.

2.2.2. Appendix A contains the land use assumptions (residential and employment) within 5km of the development. Due to the development being located close to the boundaries of four Local Planning Authorities (LPAs) it was decided to extract planning data within 5km of the development to avoid a large dataset for stakeholders to review.

2.2.3. Appendix B presents the forecast assumptions for highway networks for this application.

2.2.4. The trip forecasting process contained within the PRTM uses forecasts of population, households, and jobs to generate estimates of future travel demand. Planning forecasts (containing measures of housing and development) were unconstrained (NTEM minimum[2]) for this application.

2.3. Proposed Development Access Assumptions

2.3.1. To create the 2028 and 2031 'With Development' network the proposed development accesses on Markfield Road and Desford Lane, as shown in Figure 1.2, were added to the 'Without Development' network.

2.3.2. 3 new development zones have been used for this application; these are:

[2] If the planning data result in forecasts below NTEM / TEMPro growth, the model reverts to NTEM / TEMPro as minimum.

- To represent the 2 approved planning applications (75 dwelling, 22/00648/OUT and 90 dwellings 20/00462/FUL) to the South of Markfield Road and the North of the proposed development shown in Figure 1.1.
- To represent the residential element of the proposed Land West of Ratby development.
- To represent part of the residential element of the proposed development in 2028 'With Development' forecast scenario then representing the educational element of the proposed Land West of Ratby development in the 2031 'With Development' forecast scenario.

2.3.3. The development zone containing the two approved planning applications access the network via Markfield Road with the residential development zone using the same access, with a second access onto Desford Lane because of the spine road through the development linking Markfield Road and Desford Lane.

2.3.4. In the 2028 'With Development' forecast scenario the spine road is not yet in place, so 200 dwellings load onto the network via the Desford Lane access and 50 dwellings load onto the network via the Markfield Road site access, as detailed below in Table 2.1.

2.3.5. The development spine road has been coded in the model with a 20mph speed limit to reflect speed calming measures likely to be in place and / or potentially parked cars on the road.

2.3.6. The development zone which contains the educational element of the proposed development loads only onto Desford Lane.

2.4. Proposed Development Trip Generation Assumptions

2.4.1. Assumptions regarding trip rates generated by the proposed development in 2028 and 2031 were provided by the client. The trip generation figures provided are shown in Table 2.1 and Table 2.2 respectively. These trips have been added to the 'Without Development' highway demand matrices and assigned in the PRTM highway model.

2.4.2. As Table 2.1 shows there are no education trips included in the 2028 'With Development' scenario as it is envisaged, by the client, that the requirement for a school will not have been met as a trigger policy for the development.

2.4.3. The school catchment area for development trips to and from the school is a 2-mile radius from the school capturing Kirby Muxloe, Groby and parts of Glenfield.

Time Period	Car Trips (Vehicles)					
	Desford Lane Access (200 Dwellings)			Markfield Road Access (50 Dwellings)		
	Arrival (In)	Departure (Out)	Total	Arrival (In)	Departure (Out)	Total
AM Peak (08:00 - 09:00)	35	91	**126**	9	23	**32**
PM Peak (17:00 - 18:00)	88	44	**132**	22	11	**33**

Table 2.1 Development Trip Generation (2028)

Time Period	Car Trips (Vehicles)					
	Residential Trips (509 Dwellings)			Educational Trips (210 Off-Site Students)		
	Arrival (In)	Departure (Out)	Total	Arrival (In)	Departure (Out)	Total
AM Peak (08:00 - 09:00)	89	232	**321**	79	67	**146**
PM Peak (17:00 - 18:00)	224	111	**335**	3	5	**8**

Table 2.2 Development Trip Generation (2031)

2.5. Proposed Development Trip Distribution Assumptions

2.5.1. It was agreed[3] that existing 'parent zone' 6108 taken from the 2031 'Without Development' scenario is used for the trip distribution of the new development zone representing the proposed development (residential trips). Zone 6108 represents the West of Ratby village which largely contains residential land-use.

2.5.2. Figure 2.1 to Figure 2.4 show the forecast residential development trip distribution on the highway network for the 2028 'With Development' scenarios in the AM and PM Peak hours. Figure 2.5 to Figure 2.8 show the forecast residential development trip distribution on the highway network for the 2031 'With Development' scenarios in the AM and PM Peak hours.

2.5.3. These figures show that traffic routeing to and from the development via Groby Road and Sacheverell Way, to the north and east, is doing so to access the A46 and the routes into Leicester City Centre. Trips travelling to and from the West are travelling via Markfield Road to access the M1 J22 and beyond. Trips travelling to and from the south use Desford Lane and then Station Road to access M1 J21A and the A47 into the city centre.

2.5.4. Figure 2.9 and Figure 2.10 show the forecast educational development trip distribution on the highway network for the 2031 'With Development' scenarios in the AM Peak hour only.

2.5.5. Educational trips only load onto the network via the Desford Lane Access to the South of the development. Trips route through Ratby village, Main Street, then Groby Road and Sacheverell Way to Groby. Southbound trips travel via Desford Lane to and from Kirby Muxloe and Station Road then Ratby Lane towards Glenfield.

2.5.6. The PM peak hour plots for the 2031 educational trips have not been included in the main body of the report as the number of trips is so low, therefore the plots do not show anything meaningful. However, they are included in Appendix A.

[3] Inception Meeting, 12th March 2024.

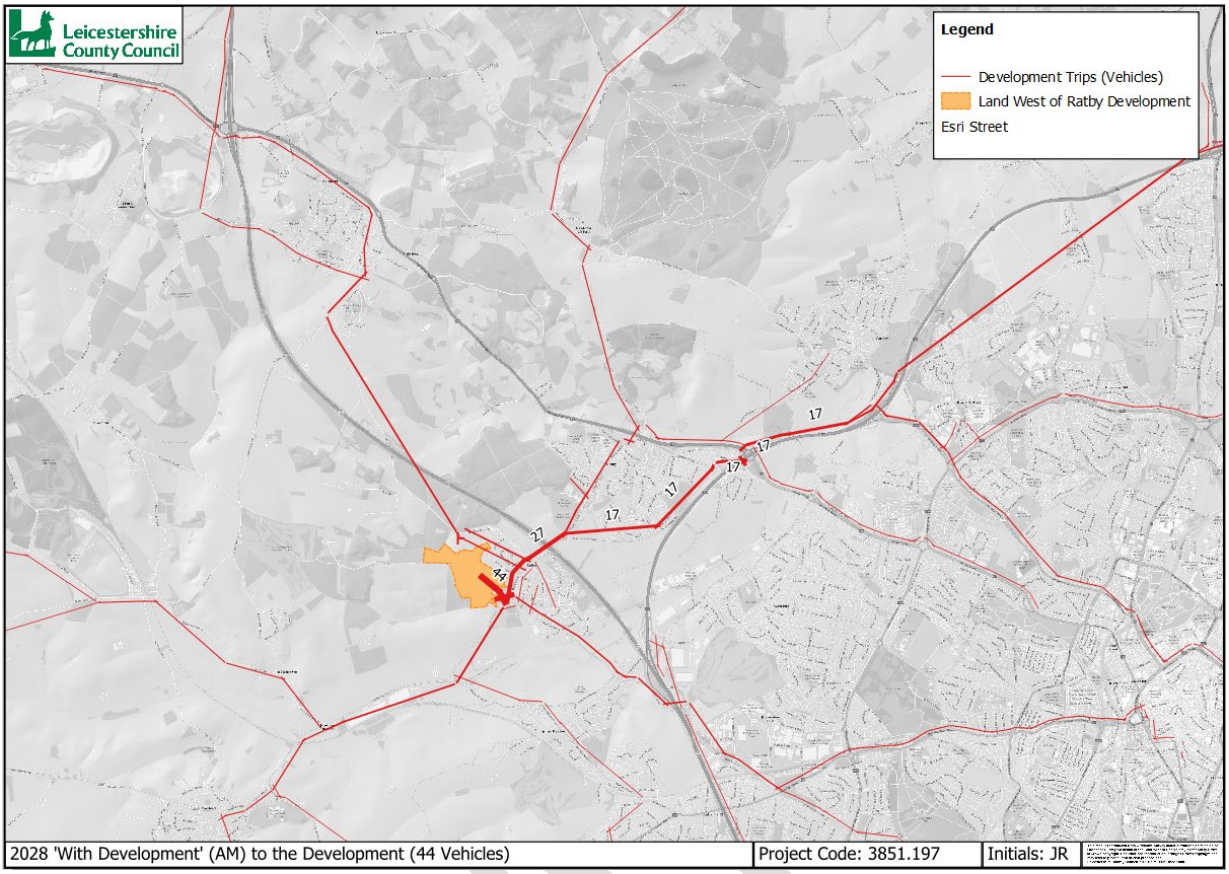

Figure 2.1 Vehicle Trip Distribution to the Proposed Development - 2028 AM (Residential)

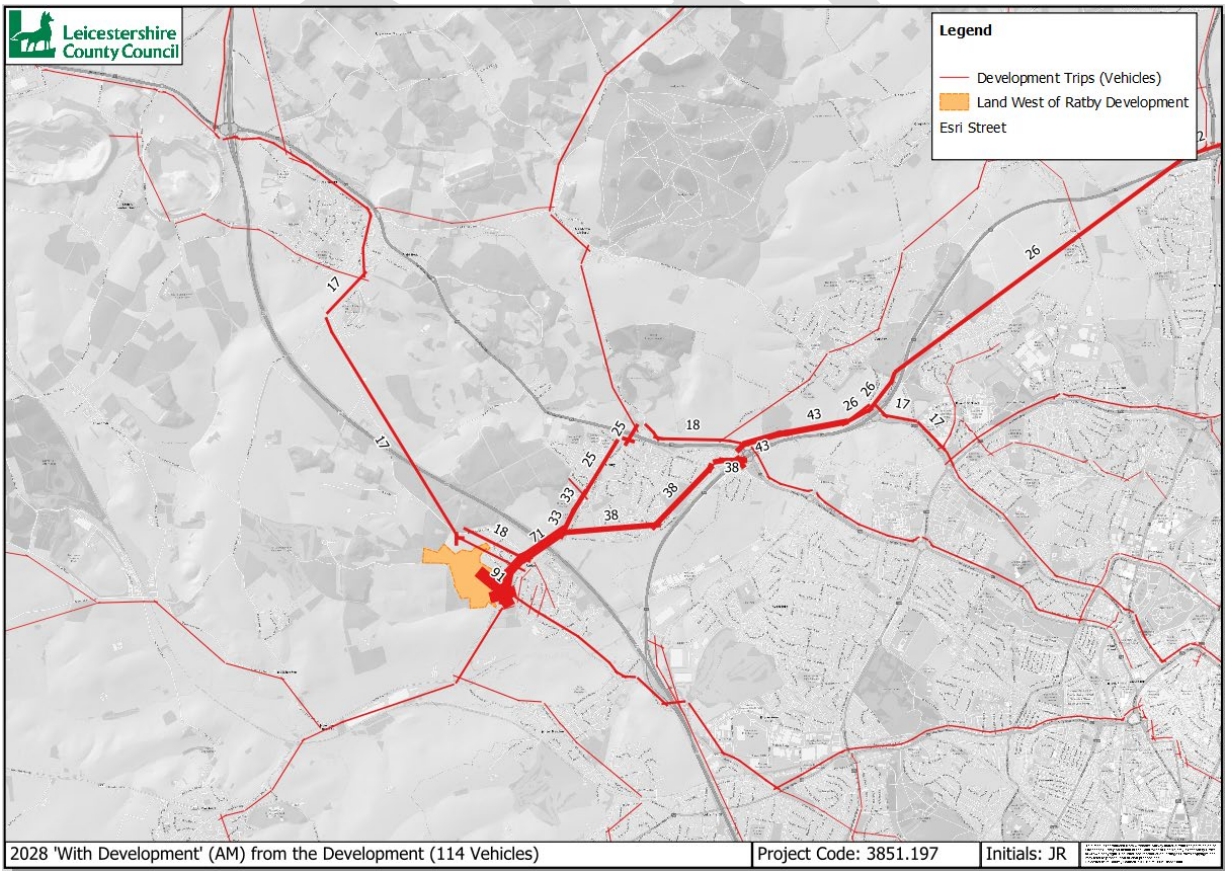

Figure 2.2 Vehicle Trip Distribution from the Proposed Development - 2028 AM (Residential)

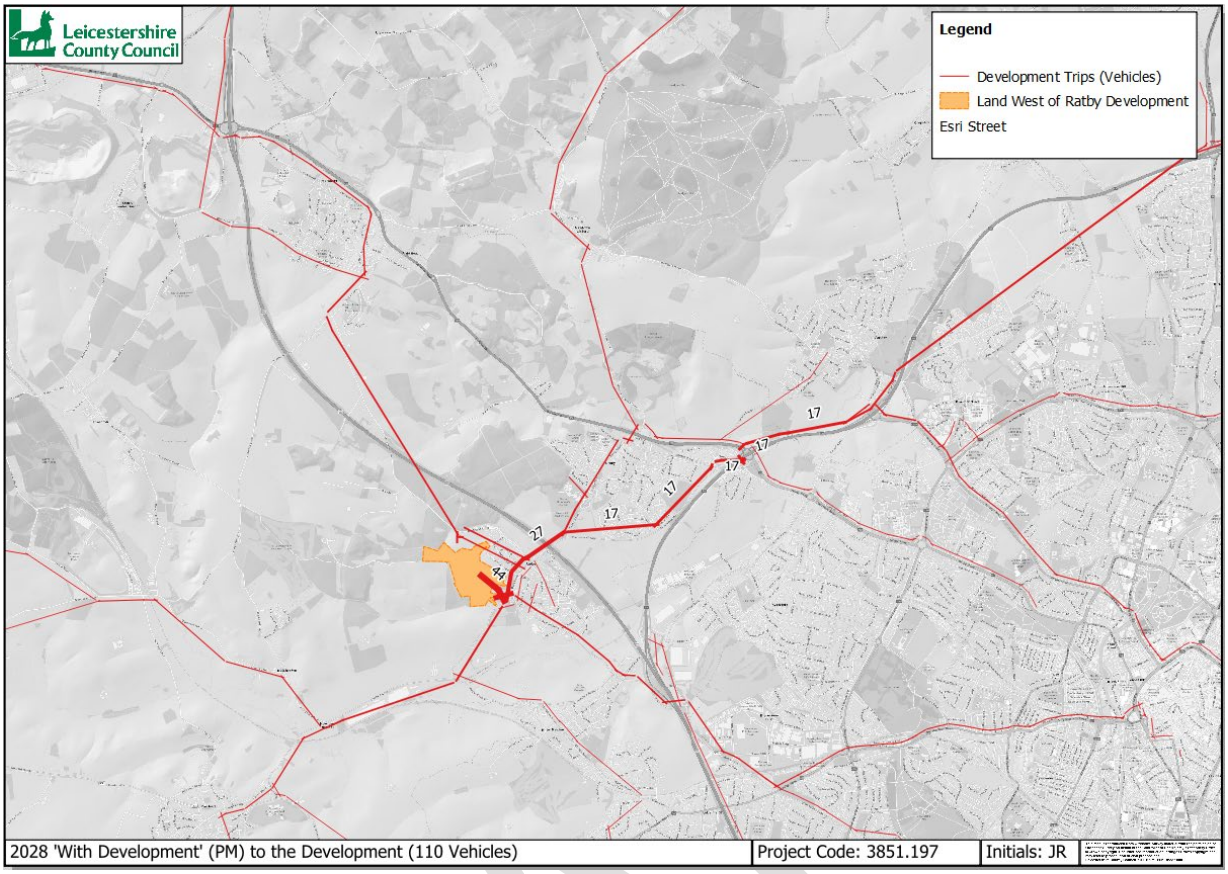

Figure 2.3 Vehicle Trip Distribution to the Proposed Development 2028 PM (Residential)

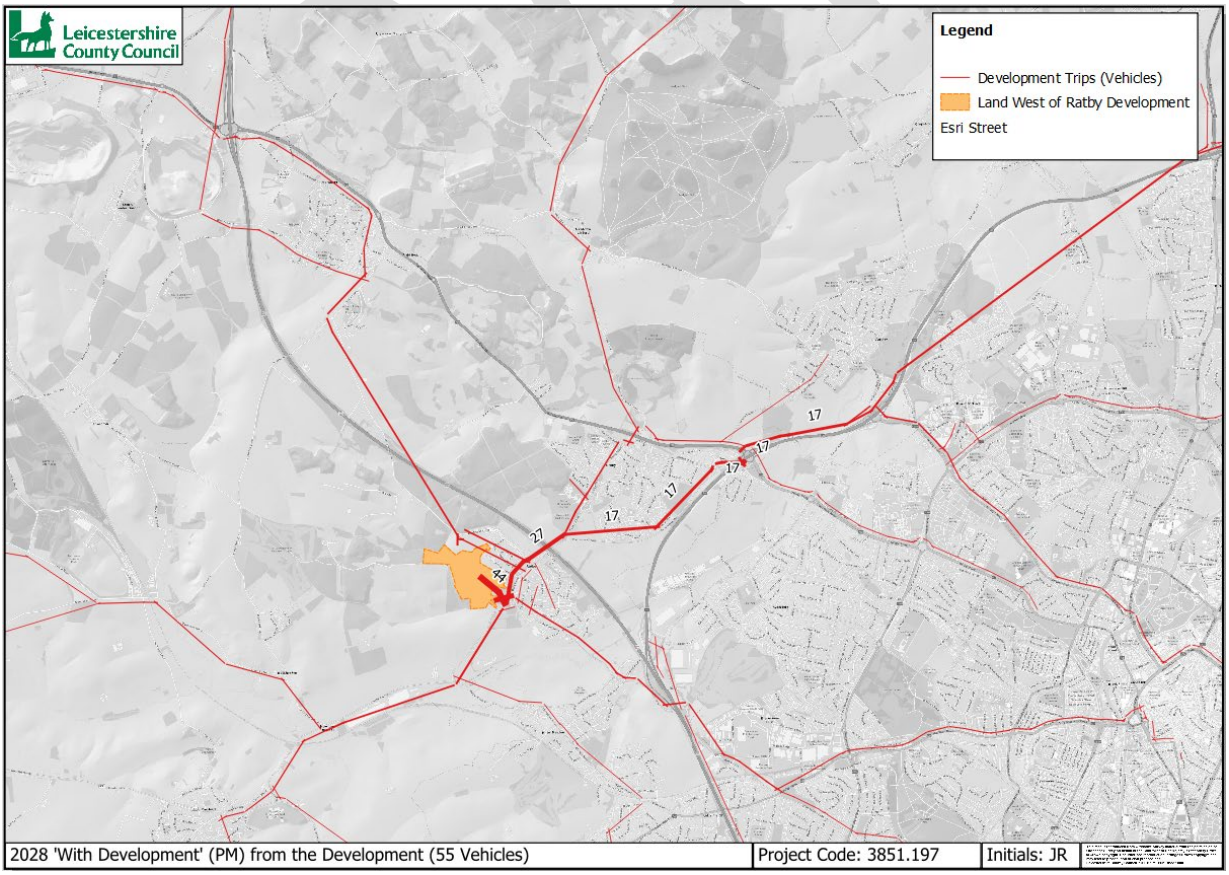

Figure 2.4 Vehicle Trip Distribution from the Proposed Development 2028 PM (Residential)

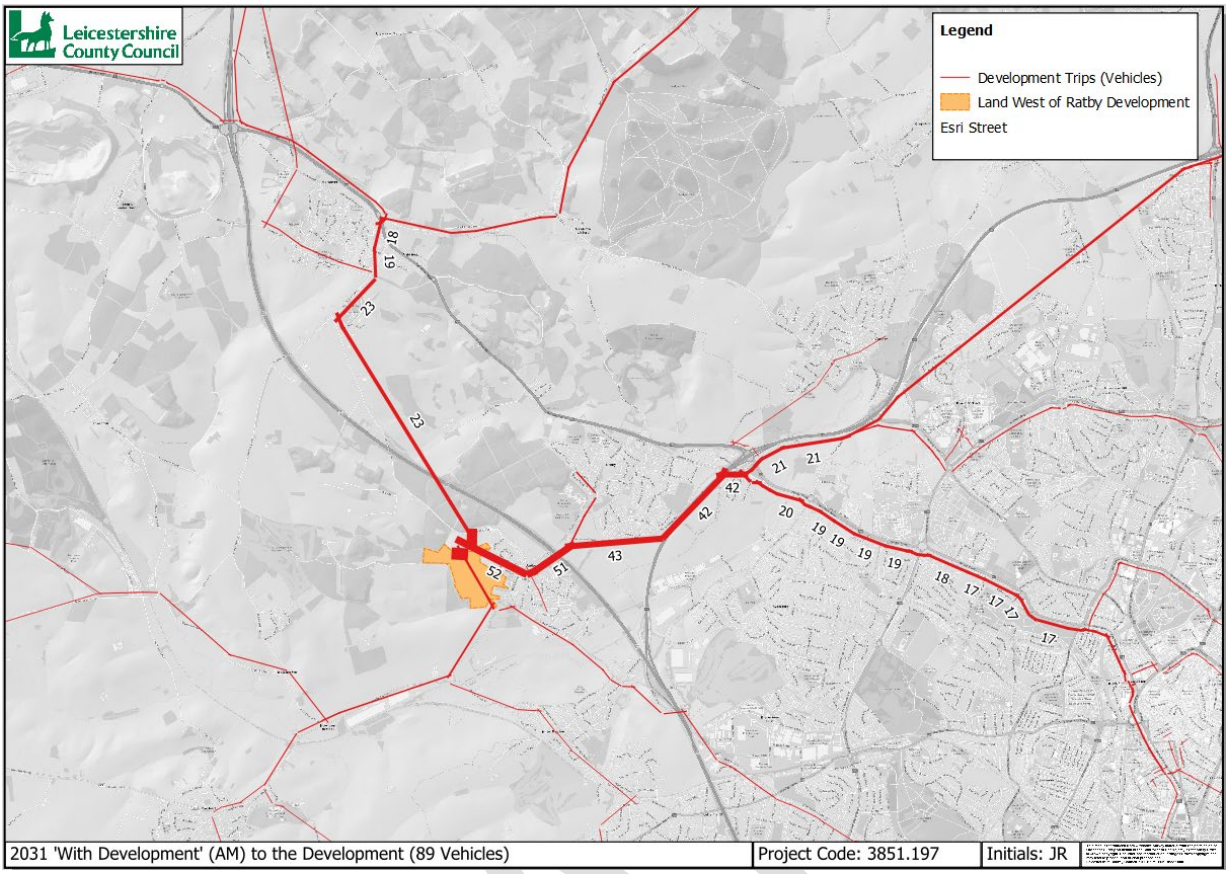

Figure 2.5 Vehicle Trip Distribution to the Proposed Development 2031 AM (Residential)

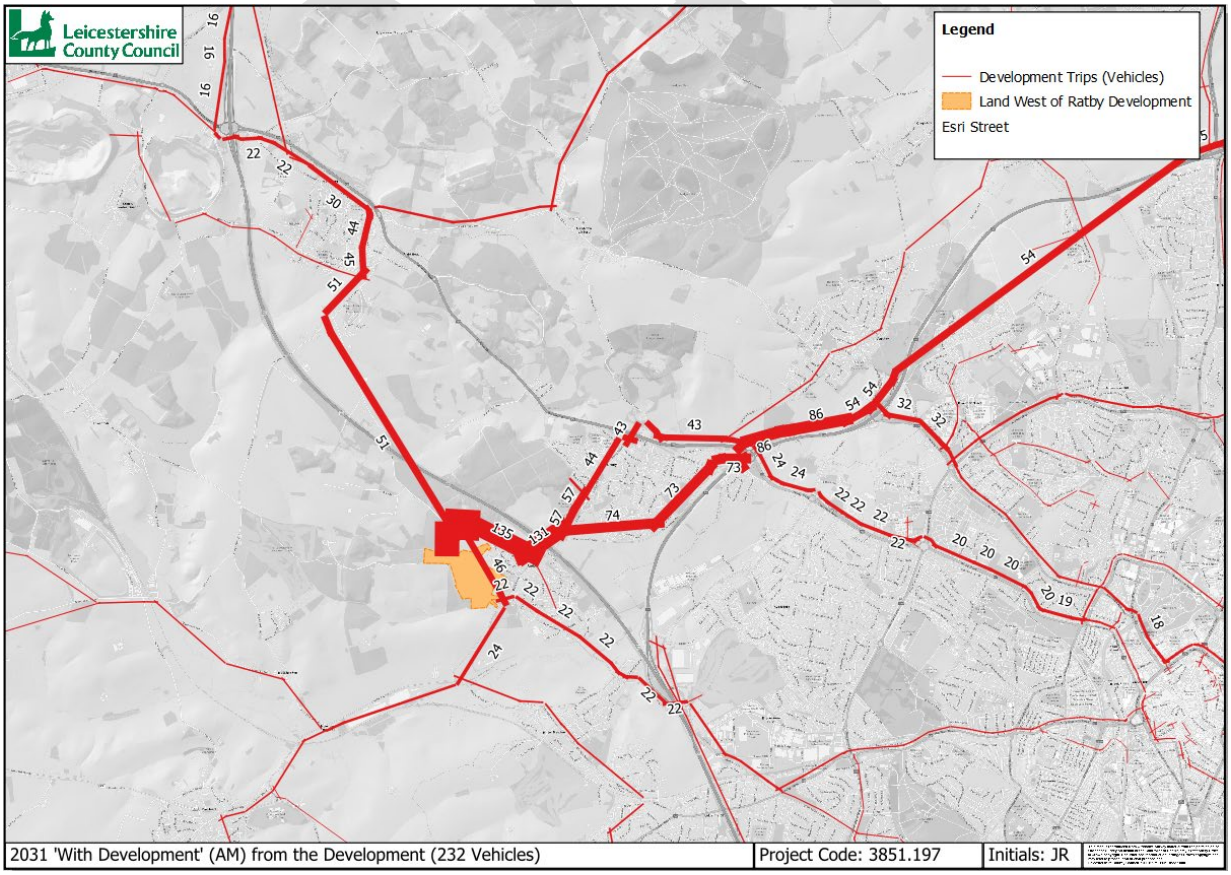

Figure 2.6 Vehicle Trip Distribution from the Proposed Development 2031 AM (Residential)

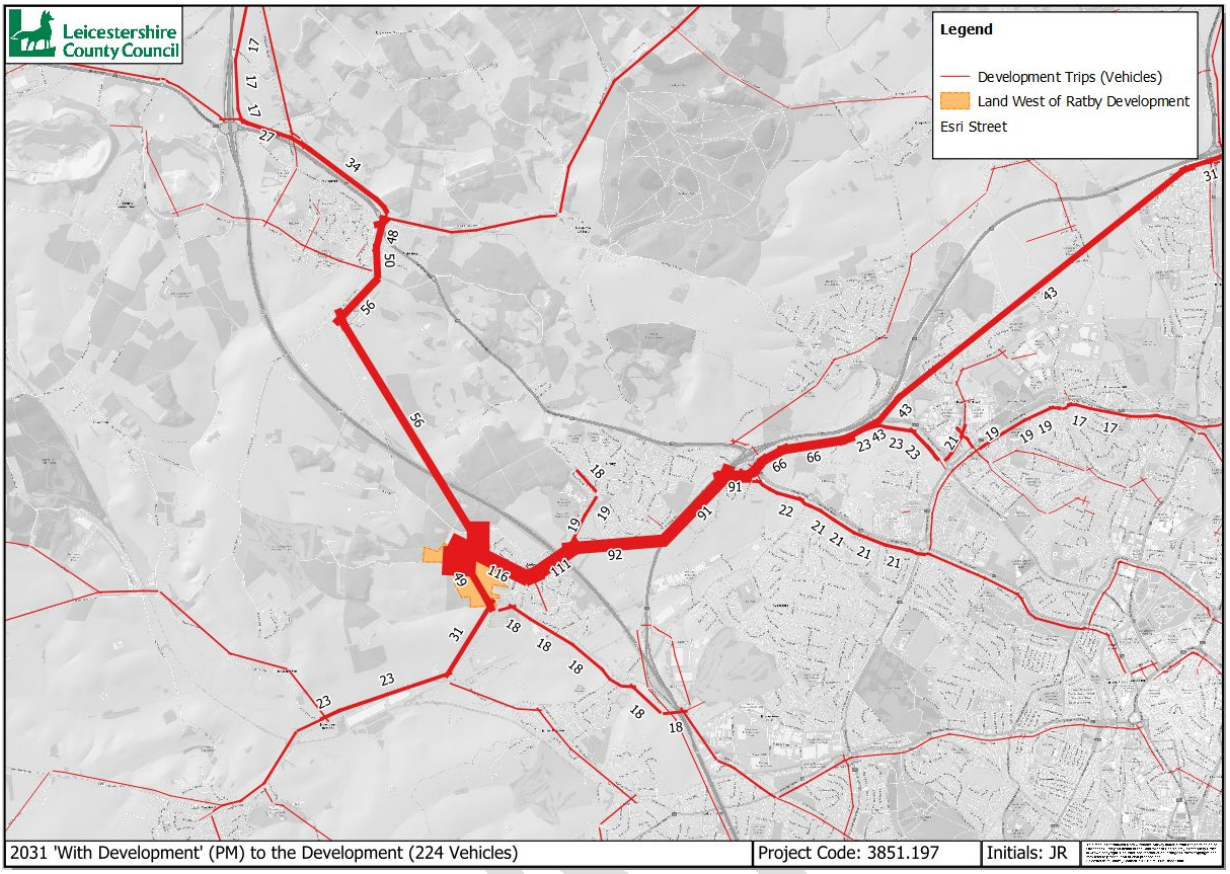

Figure 2.7 Vehicle Trip Distribution to the Proposed Development 2031 PM (Residential)

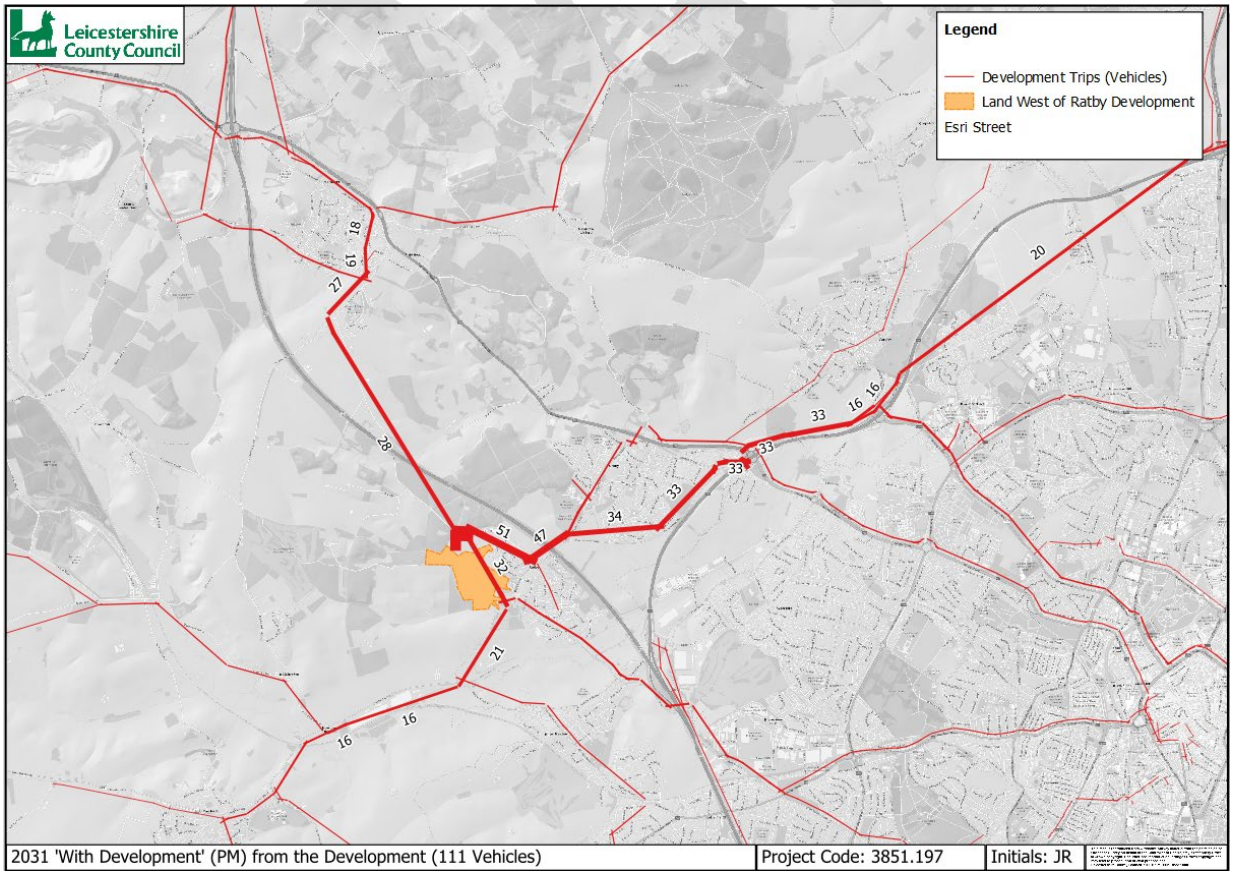

Figure 2.8 Vehicle Trip Distribution from the Proposed Development 2031 PM (Residential)

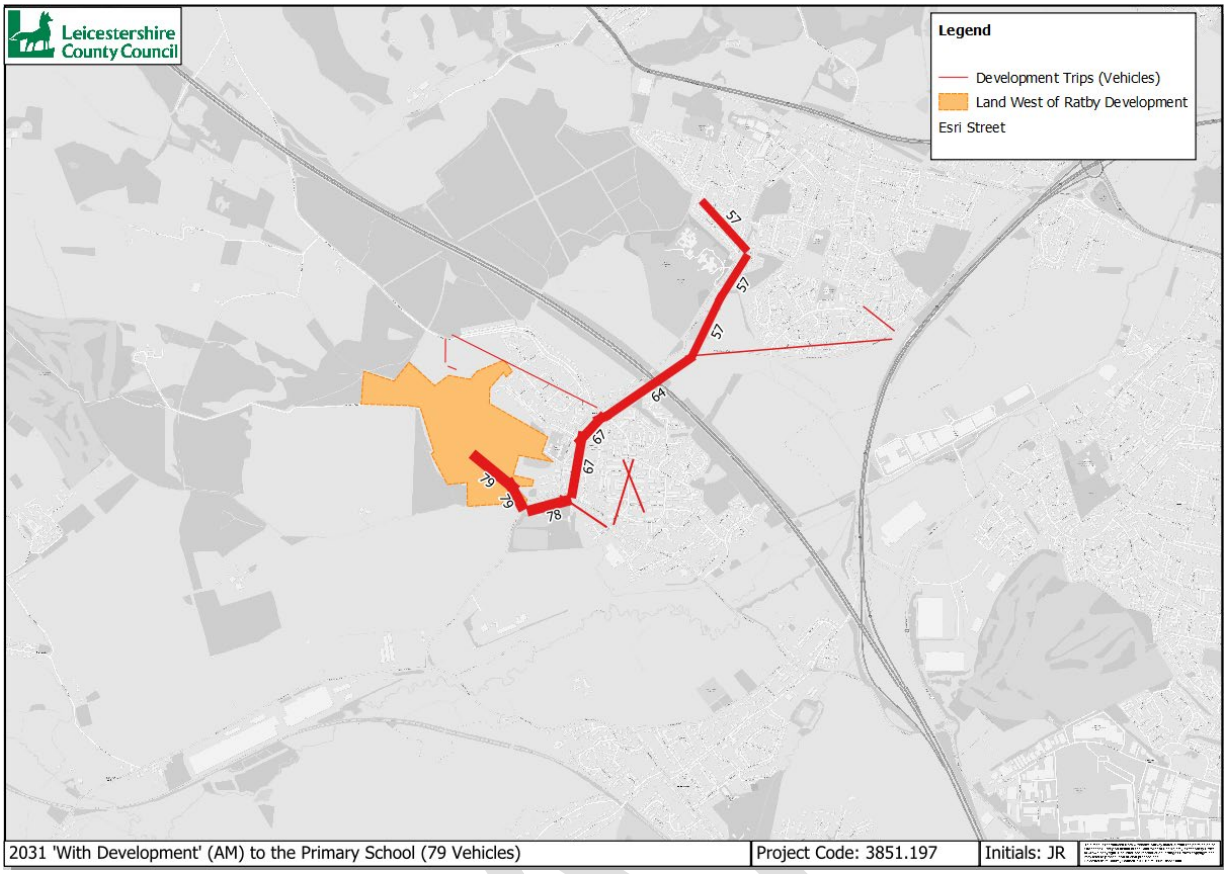

Figure 2.9 Vehicle Trip Distribution to the Proposed Development 2031 AM (Educational)

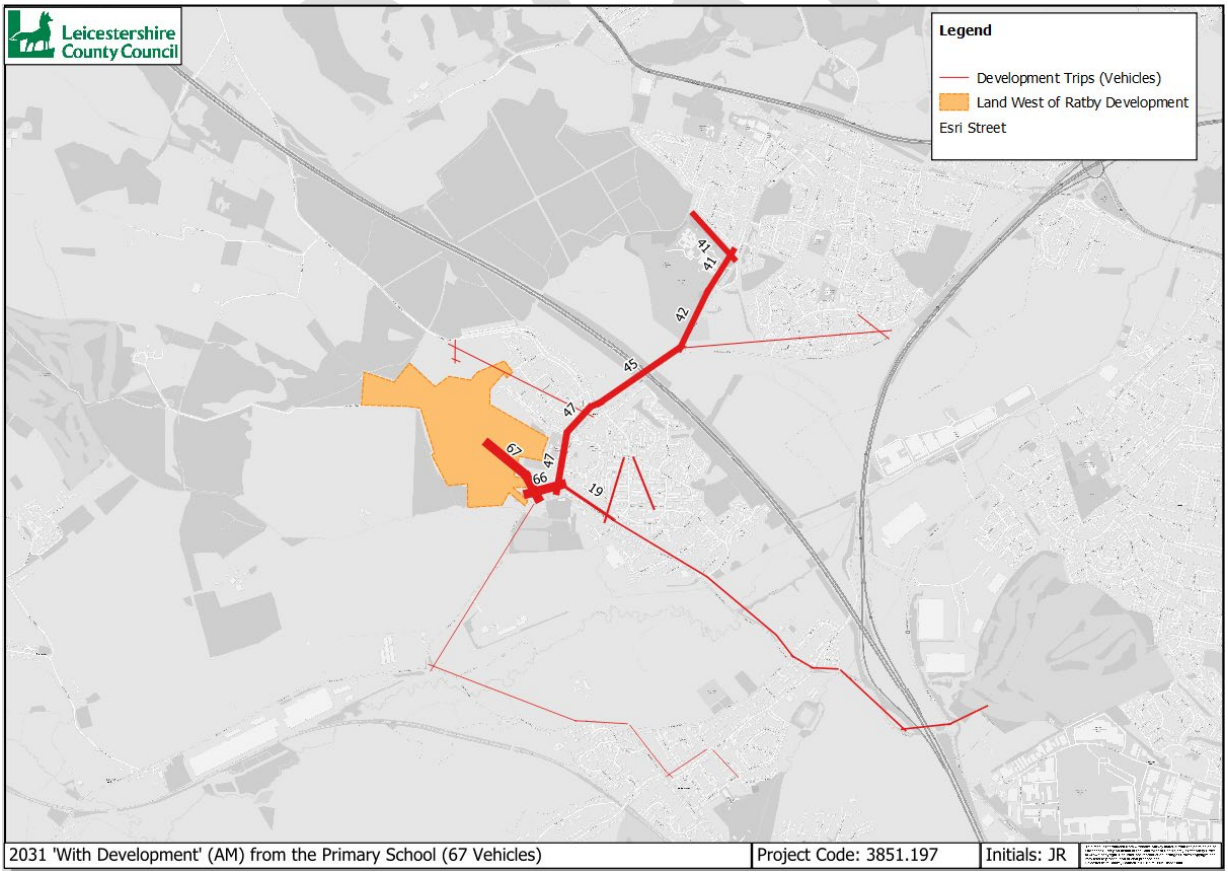

Figure 2.10 Vehicle Trip Distribution from the Proposed Development 2031 AM (Educational)

3. Forecast Model Results

3.1. Introduction

3.1.1. This section details the forecast model results for the proposed development Land West of Ratby for the AM Peak (8am to 9am) and PM Peak (5pm to 6pm) hours.

3.2. Forecast Development Traffic

3.2.1. Figure 2.1 to Figure 2.8 in Section 2.5 show the assigned forecast residential trip distribution to and from the proposed development in 2028 and 2031 for both AM and PM Peak hours. The figures show that traffic generated by the proposed development is forecast to:

- route northwest via Markfield Road and Ratby Lane towards Markfield and the M1 J22;
- route northeast via Groby Road, Ratby Lane and Sacheverell Way towards the A46 and A50;
- route southeast via Station Road and Ratby Lane towards the M1 J21 and A47;
- route southwest via Desford Lane towards Desford.

3.2.2. Figure 2.9 and Figure 2.10 in Section 2.5 show the assigned forecast educational trip distribution to and from the proposed Primary School in 2028 and 2031 for the AM Peak hour. The figures show that traffic generated by the proposed development is forecast to:

- route through Ratby Village via Main Street, Groby Road and Sacheverell Way towards Groby;
- route via Desford Lane towards Kirby Muxloe;
- route via Station Road, Ratby Lane towards Glenfield.

3.3. Forecast Flow Change

3.3.1. Figure 3.1 and Figure 3.2 show the background traffic growth between the 2024 'Without Development' and 2028 'Without Development' forecast scenarios for the AM and PM Peak hours respectively. Note, only flows greater than 100 PCUs are labelled.

3.3.2. Figure 3.3 and Figure 3.4 show the background traffic growth between the 2028 'Without Development' and 2031 'Without Development' forecast scenarios for the AM and PM Peak hours respectively. Note, only flows greater than 100 PCUs are labelled.

3.3.3. Figure 3.5 and Figure 3.6 show the forecast flow changes in 2028 between the 'With Development' and 'Without Development' scenarios for the AM and PM Peak hours respectively. Figure 3.7 and Figure 3.8 show the forecast flow changes in 2031 between the 'With Development' and 'Without Development' scenarios for the AM and PM Peak hours respectively. Red bandwidths represent a flow increase and blue represent flow decrease. The labels are only displayed when the change in flow is 15 passenger car units (PCUs) or more.

3.3.4. In 2028 the largest increases in flow are forecast along the section of Desford Lane between the site access and Main Street. In the 2028 'With Development' scenario, Desford Lane has a forecast increase in two-way traffic of approximately 100 passenger car units (PCUs) in the AM Peak hour and 50 PCUs in the PM Peak hour. Main Street through Ratby village has a forecast increase in two-way traffic of approximately 80 PCUs in the AM Peak hour and 50 PCUs in the PM Peak hour.

3.3.5. In the 2028 PM forecast there is also a decrease in flow southbound on Desford Lane of 30 PCUs, which is because of trips on the A46 rerouting as a result of the development traffic and existing congestion at some junctions on the A46.

3.3.6. In 2031 Figure 3.7 and Figure 3.8 show the largest increases in flow are forecast in close proximity to the proposed development, as would be expected. As a result of the introduction of the development spine road there is a reduction in trips travelling on Main Street through Ratby village, on Dane Hill and on the section of Markfield Road between the proposed development access and the Markfield Road / Groby Road / Main Street roundabout – westbound in the AM Peak hour and Eastbound in the PM Peak hour.

3.3.7. The introduction of the development spine road linking Markfield Road and Desford Lane, in the 2031 'With Development' forecast scenarios provides an element of relief to Ratby Village Centre by providing an alternative route to through traffic.

3.3.8. A portion of the existing trips displaced as a result of the introduction of the development spine road in 2031 are of a greater quantum than the trips generated by the development. Therefore, whilst the trips travelling to and from the development are using the routes relieved of existing traffic, as a result of the introduction of the spine road, there is an overall reduction in trips travelling South to North through Ratby village as shown in Figure 3.7. This is the same case in the PM in the reverse direction – an overall decrease in the number of trips travelling on the links North to South through Ratby village, shown in Figure 3.8.

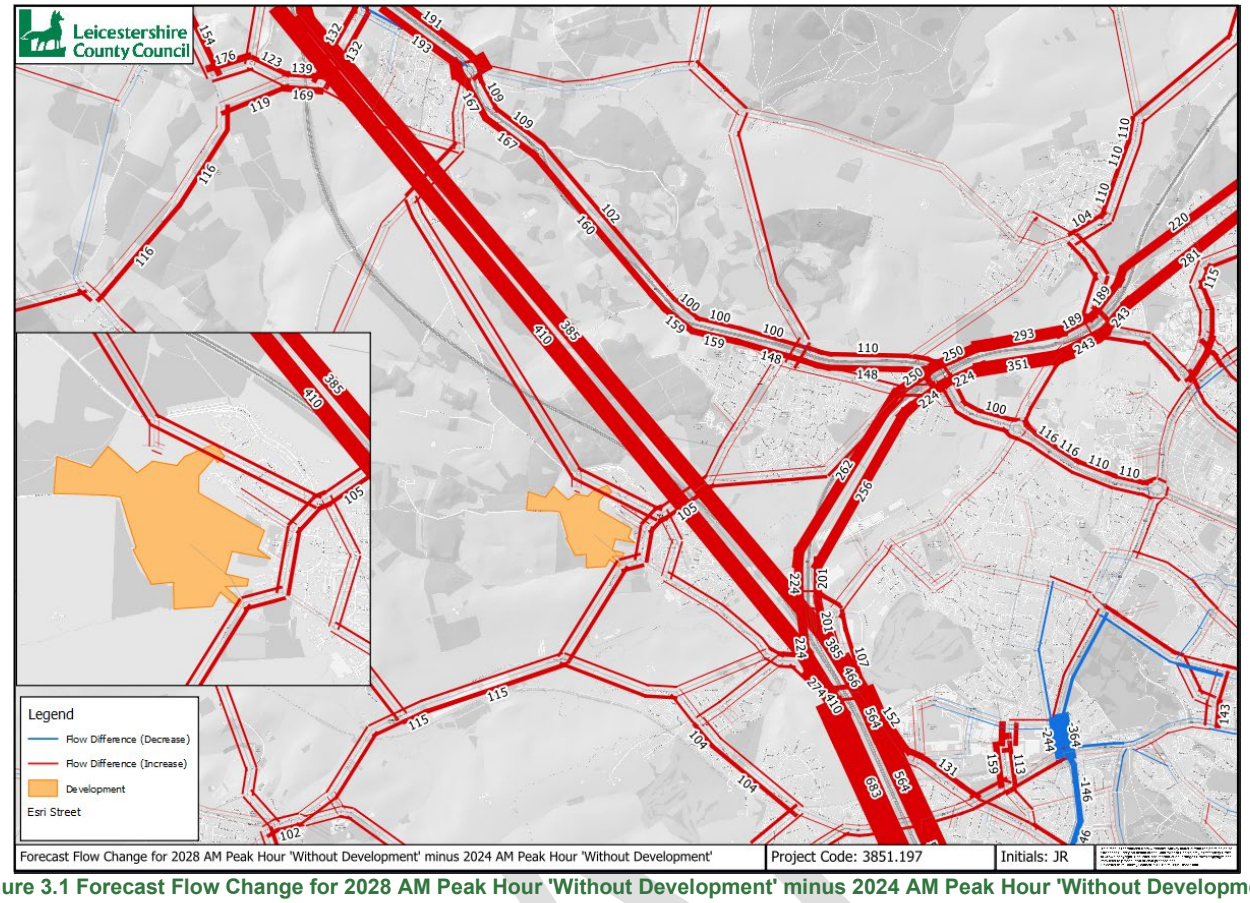

Figure 3.1 Forecast Flow Change for 2028 AM Peak Hour 'Without Development' minus 2024 AM Peak Hour 'Without Development'

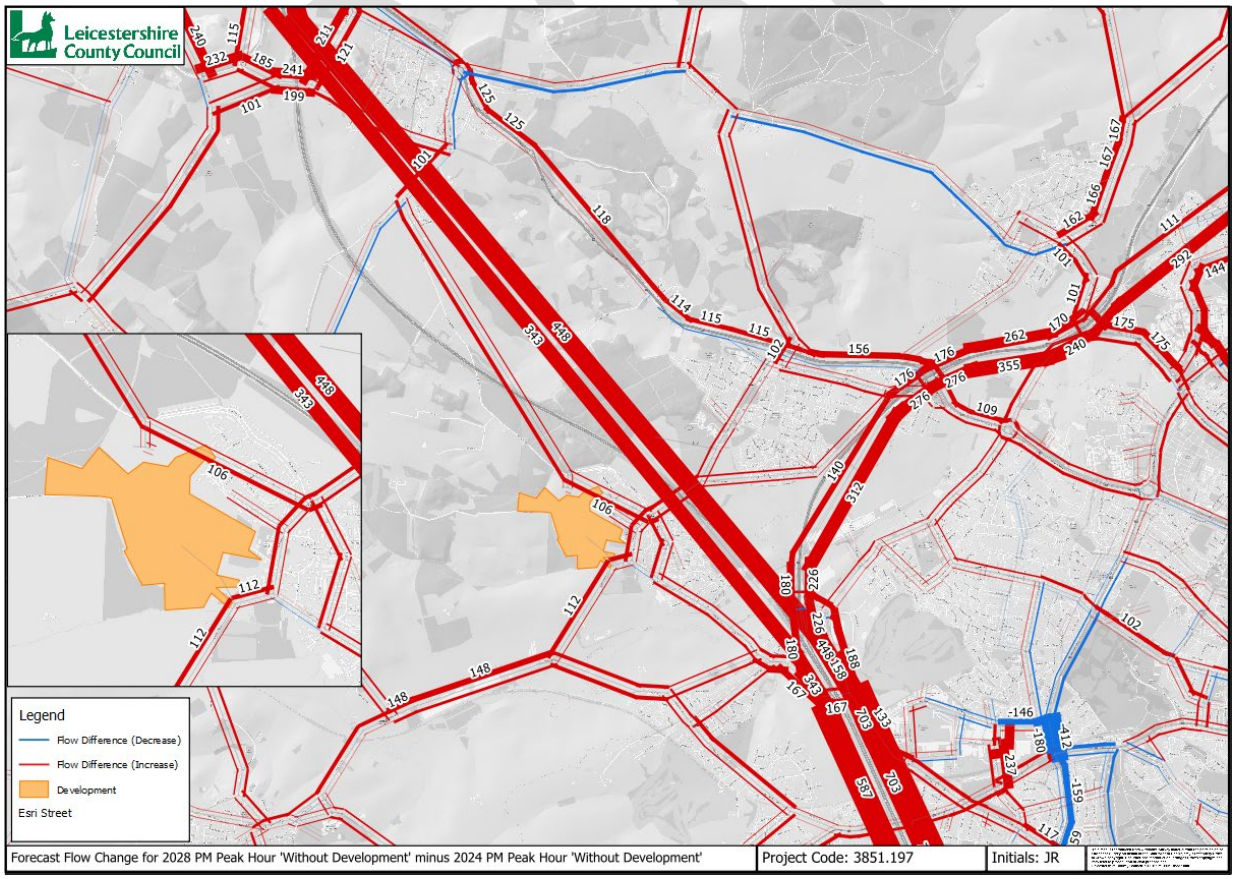

Figure 3.2 Forecast Flow Change for 2028 PM Peak Hour 'Without Development' minus 2024 PM Peak Hour 'Without Development'

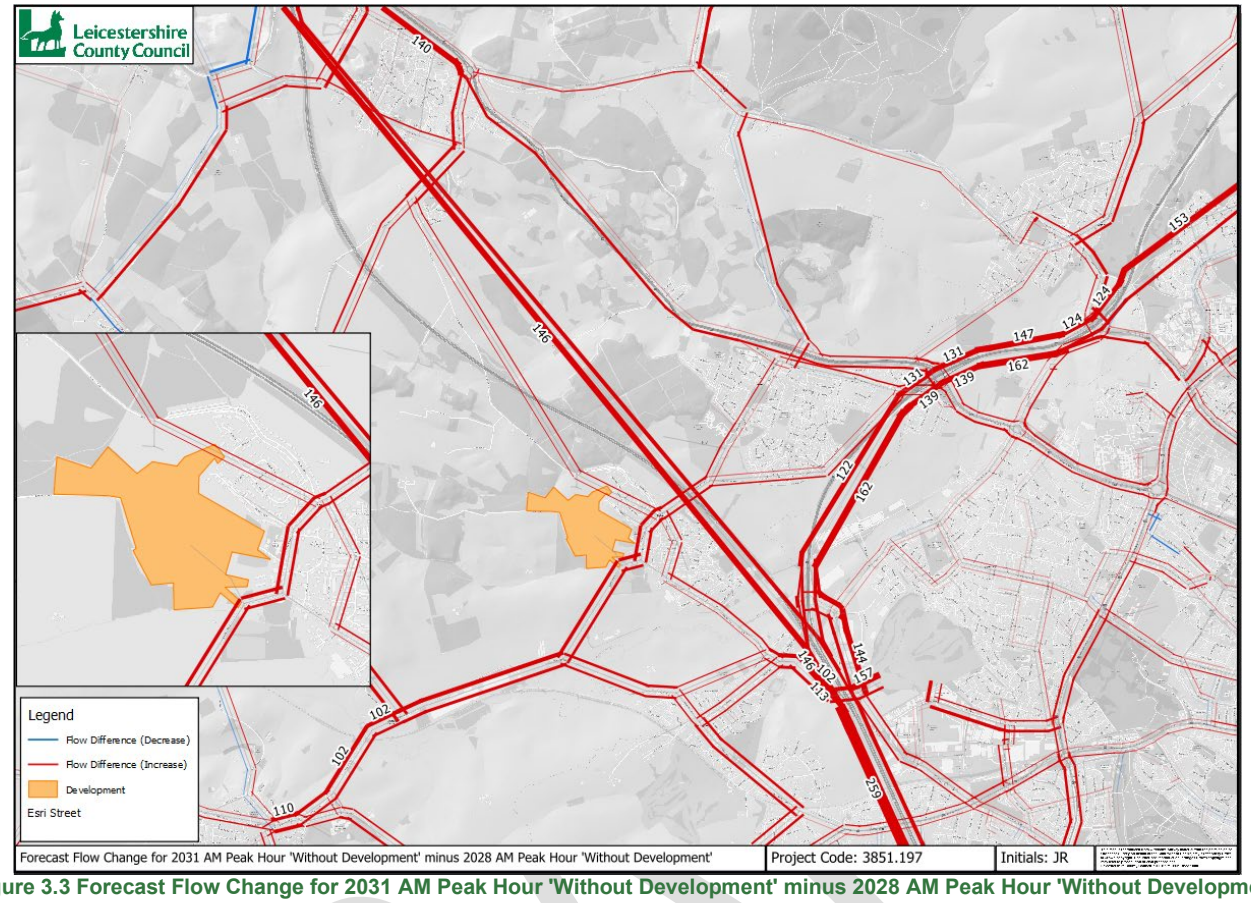

Figure 3.3 Forecast Flow Change for 2031 AM Peak Hour 'Without Development' minus 2028 AM Peak Hour 'Without Development'

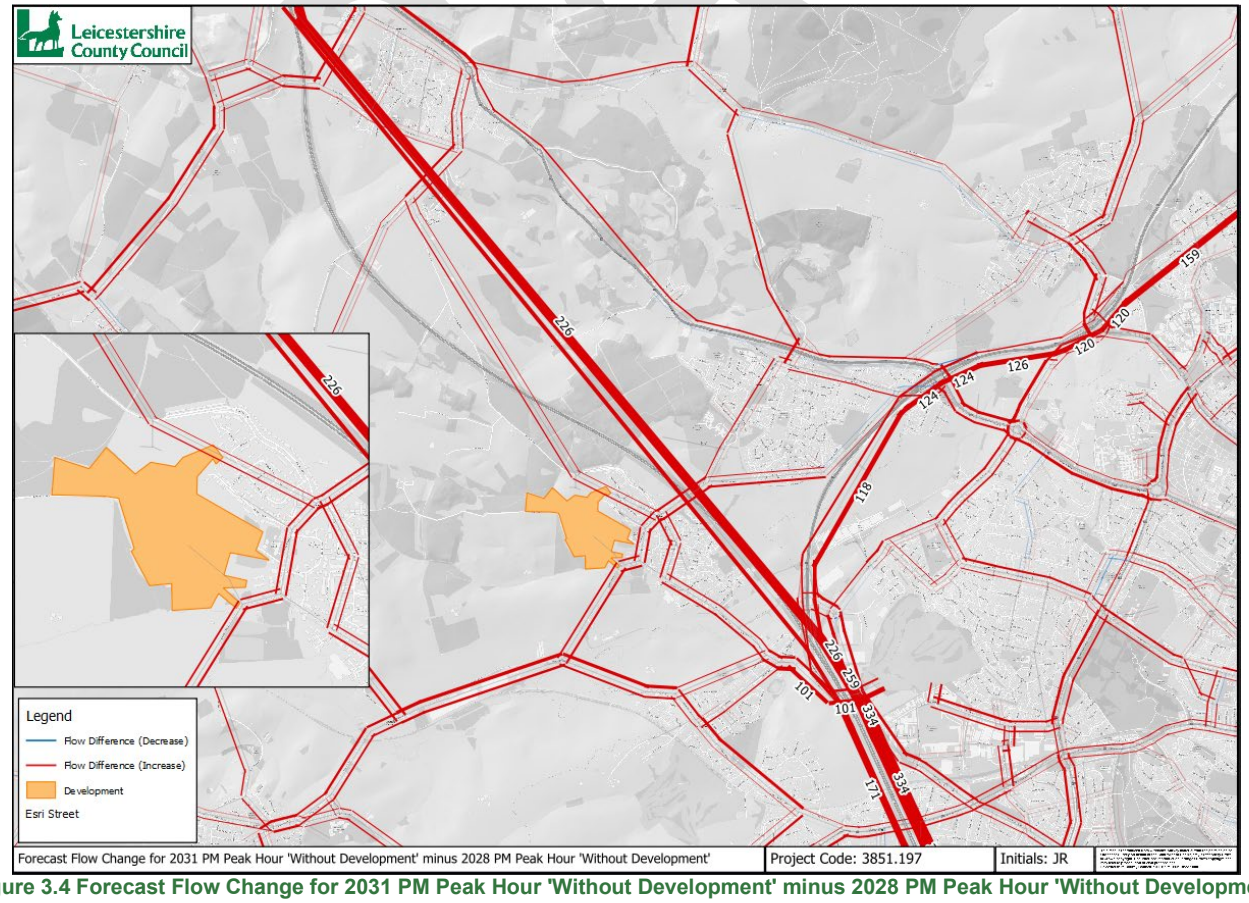

Figure 3.4 Forecast Flow Change for 2031 PM Peak Hour 'Without Development' minus 2028 PM Peak Hour 'Without Development'

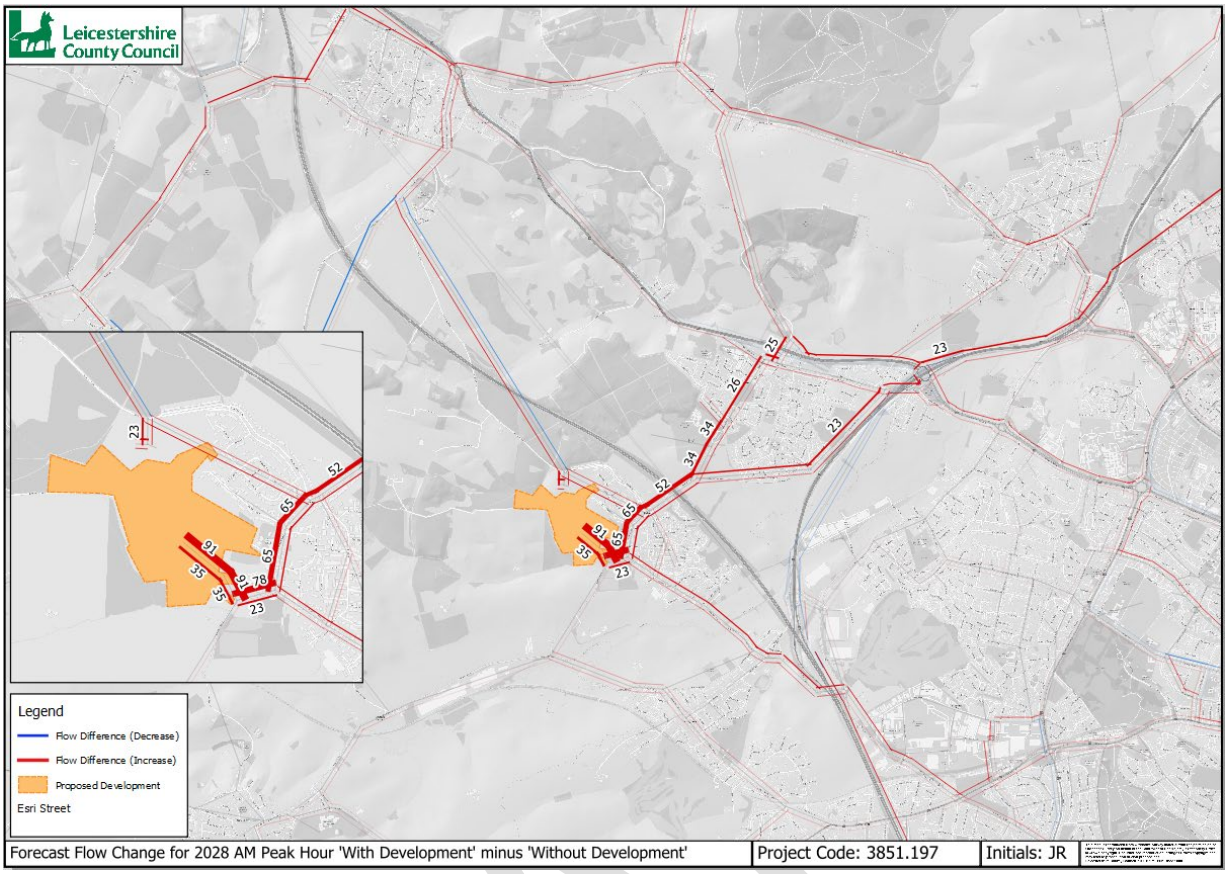

Figure 3.5 Forecast Flow Change for 2028 AM 'With Development' minus 'Without Development'

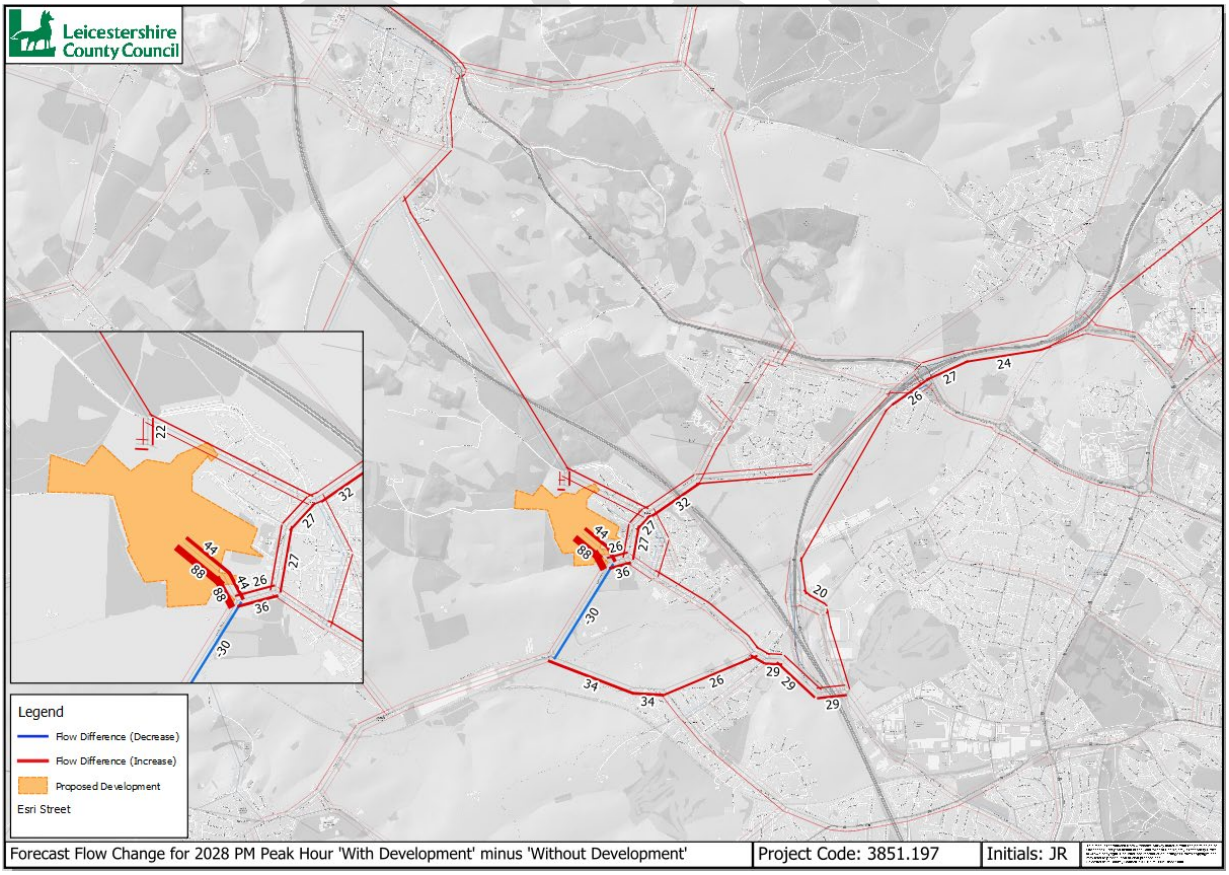

Figure 3.6 Forecast Flow Change for 2028 PM 'With Development' minus 'Without Development'

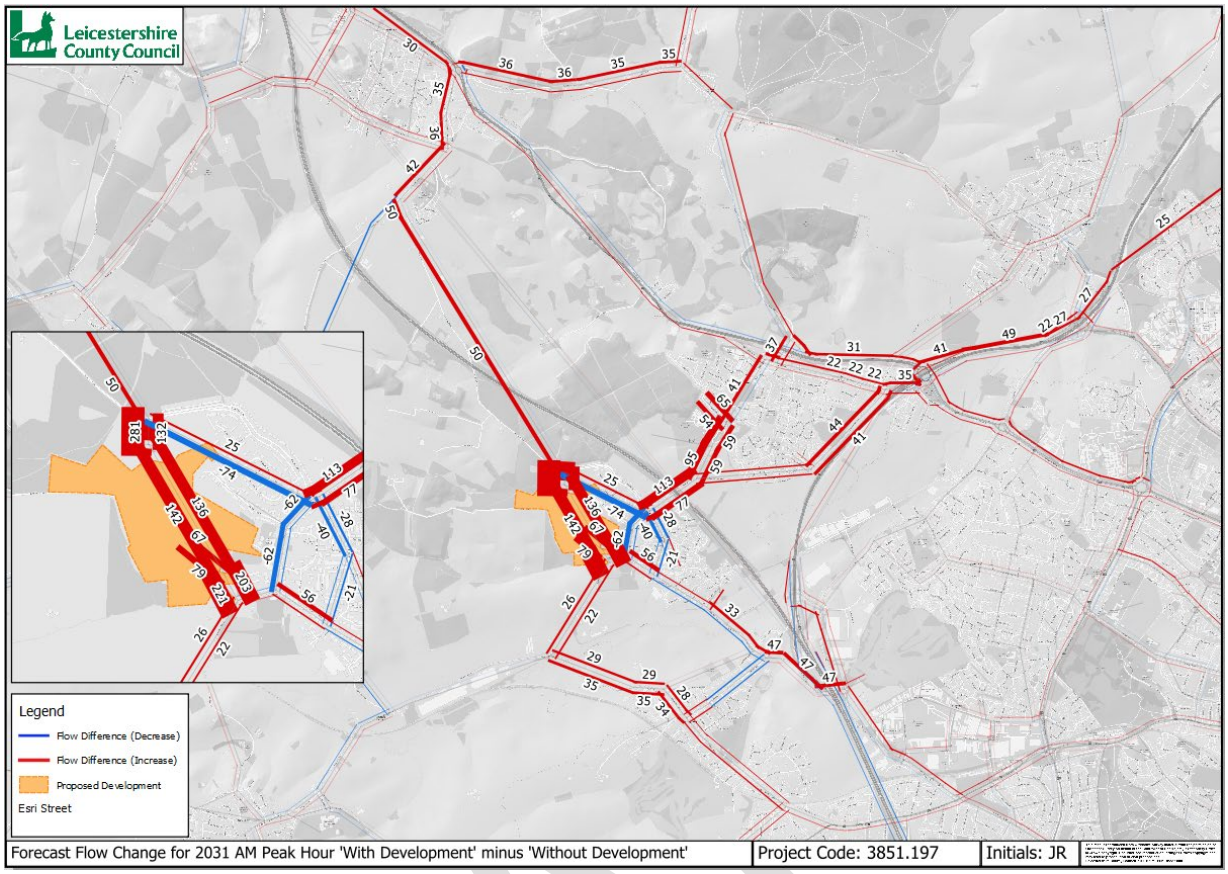

Figure 3.7 Forecast Flow Change for 2031 AM 'With Development' minus 'Without Development'

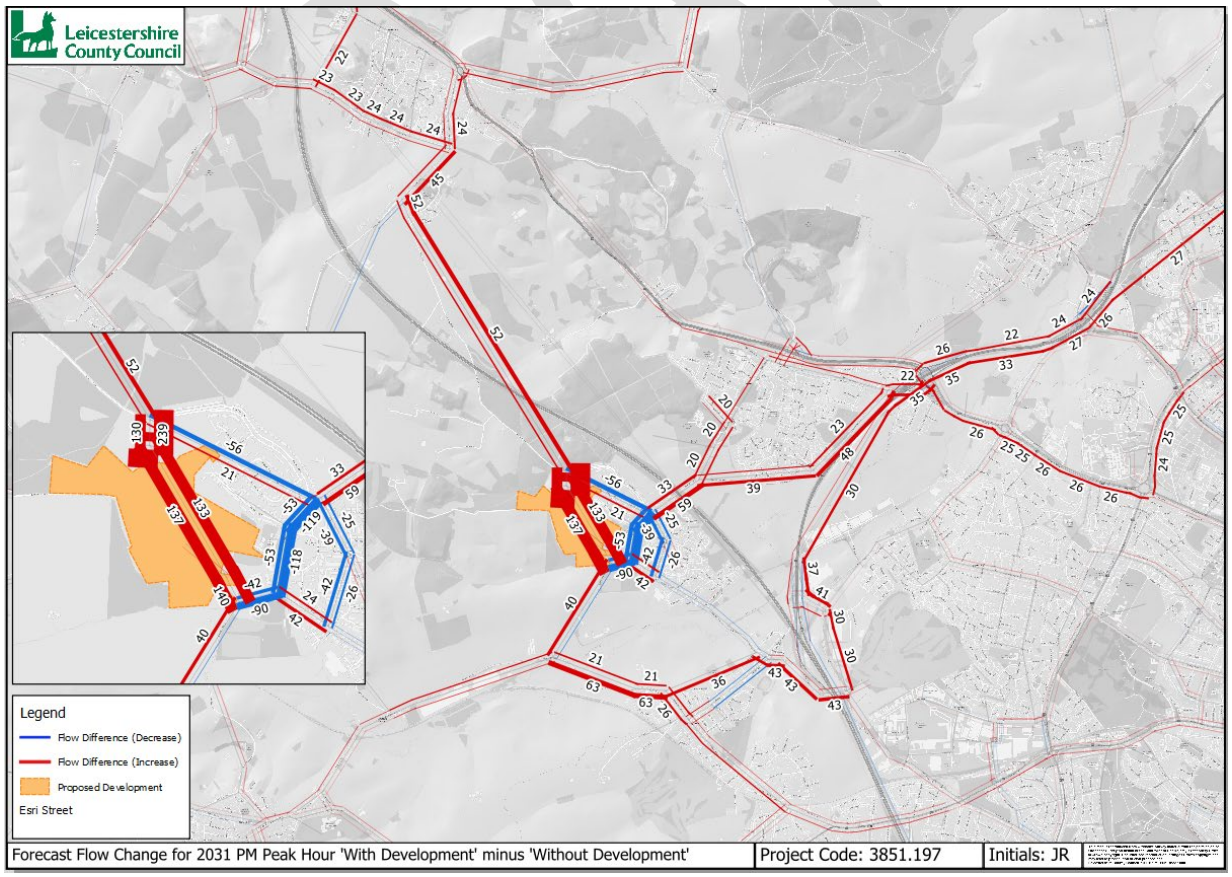

Figure 3.8 Forecast Flow Change for 2031 PM 'With Development' minus 'Without Development'

3.4. Area of Influence (AoI)

3.4.1. The Area of Influence for 2028 and 2031, shown in Figure 3.9 and Figure 3.10 respectively, have been defined using the forecast flow changes between the 'With Development' and 'Without Development' scenarios.

3.4.2. The AOI has been defined by links with a forecast flow change of at least ±5% and ±30 passenger car units (PCUs) between the scenarios mentioned above, in either the AM Peak or the PM peak hour.

3.4.3. The forecast Area of Influence for the 2028 'With Development' scenario shown in Figure 3.9 includes the following roads:

- Groby Road
- Main Street
- Desford Lane

3.4.4. The forecast Area of Influence for the 2031 'With Development' scenario shown in Figure 3.10 includes the following roads:

- all links noted for the 2028 'With Development' scenario;
- Desford Road;
- Ratby Lane;
- Station Road;
- Dane Hill;
- Ratby Road;
- Sacheverell Way;
- Markfield Road;
- Launde Road, Markfield;
- Markfield Lane.

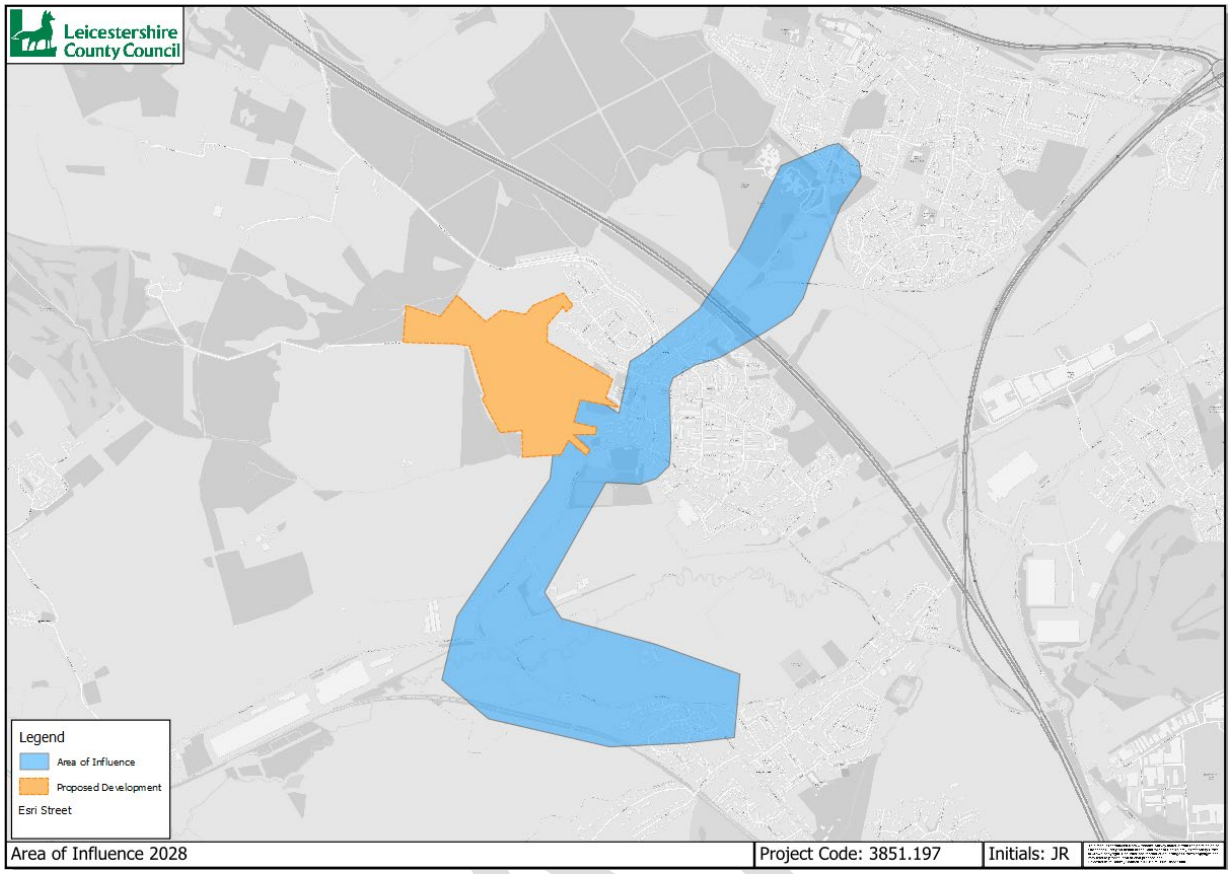

Figure 3.9 Area of Influence for 2028 'With Development'

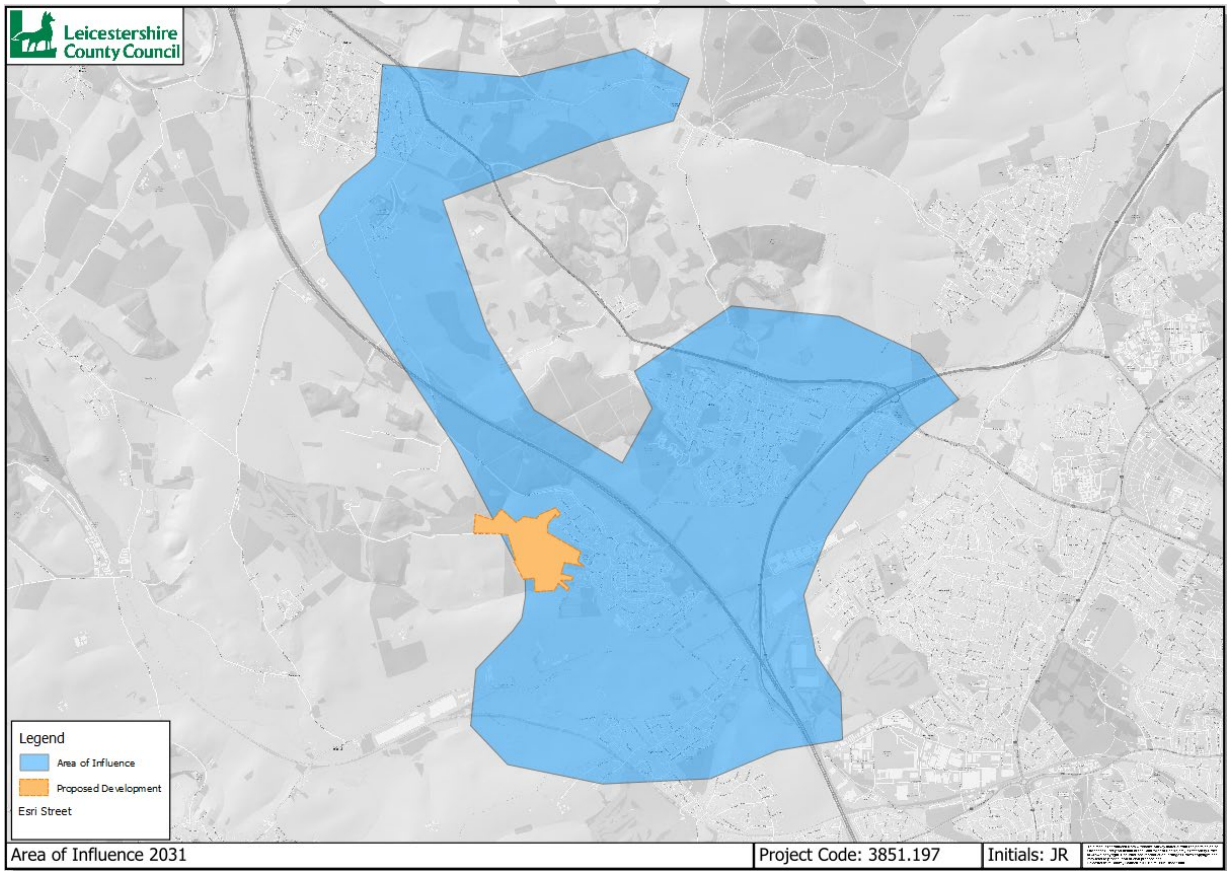

Figure 3.10 Area of Influence for 2031 'With Development'

3.5. Forecast Delay Change

3.5.1. Figure 3.11 and Figure 3.12 show the forecast delay changes in 2028 between the 'With Development' and 'Without Development' scenarios for the AM and PM Peak hours respectively. Red bandwidths represent a delay increase and blue represent delay decrease. The labels are only displayed when the delay is 5 seconds or more. There are no delays in either the 2028 AM or PM peak hours that exceed 5 seconds.

3.5.2. Figure 3.13 and Figure 3.14 show the forecast delay changes in 2031 between the 'With Development' and 'Without Development' scenarios for the AM and PM peak hours respectively. There is one link showing a delay change of more than 5 seconds in the 2031 AM 'With Development' scenario on the slip road onto the M1 southbound at J21a, an increase of 11 seconds. However, when looking at Figure 3.19 this junction has a volume-capacity ratio of 100% or above in both the 'Without Development' and 'With Development'. Therefore, the minor increase in flow on that link is forecast to result in a material increase in delay, due to the exponential nature of delay. This is a result of the PRTM being a strategic model and may not be directly attributed to the proposed development.

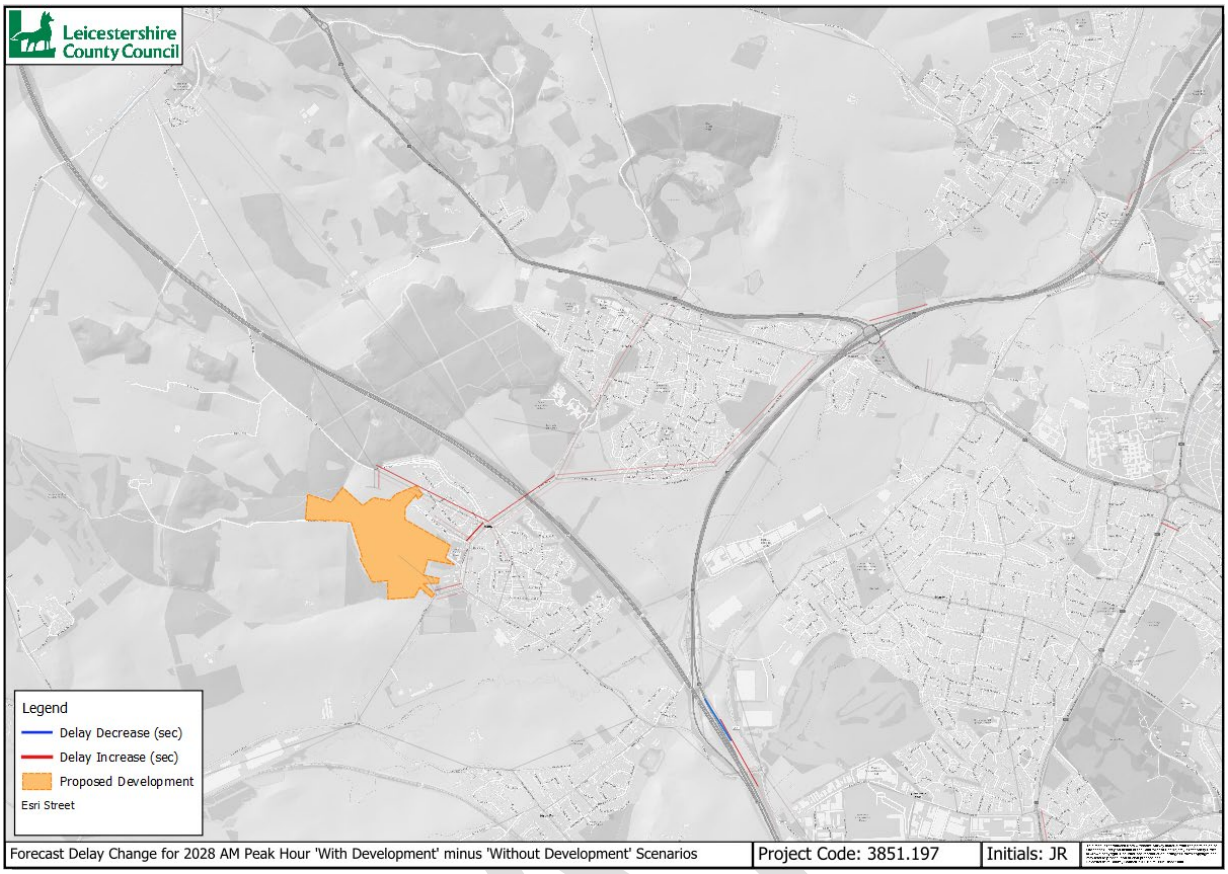

Figure 3.11 Forecast Delay Change for 2028 AM 'With Development' minus 'Without Development'

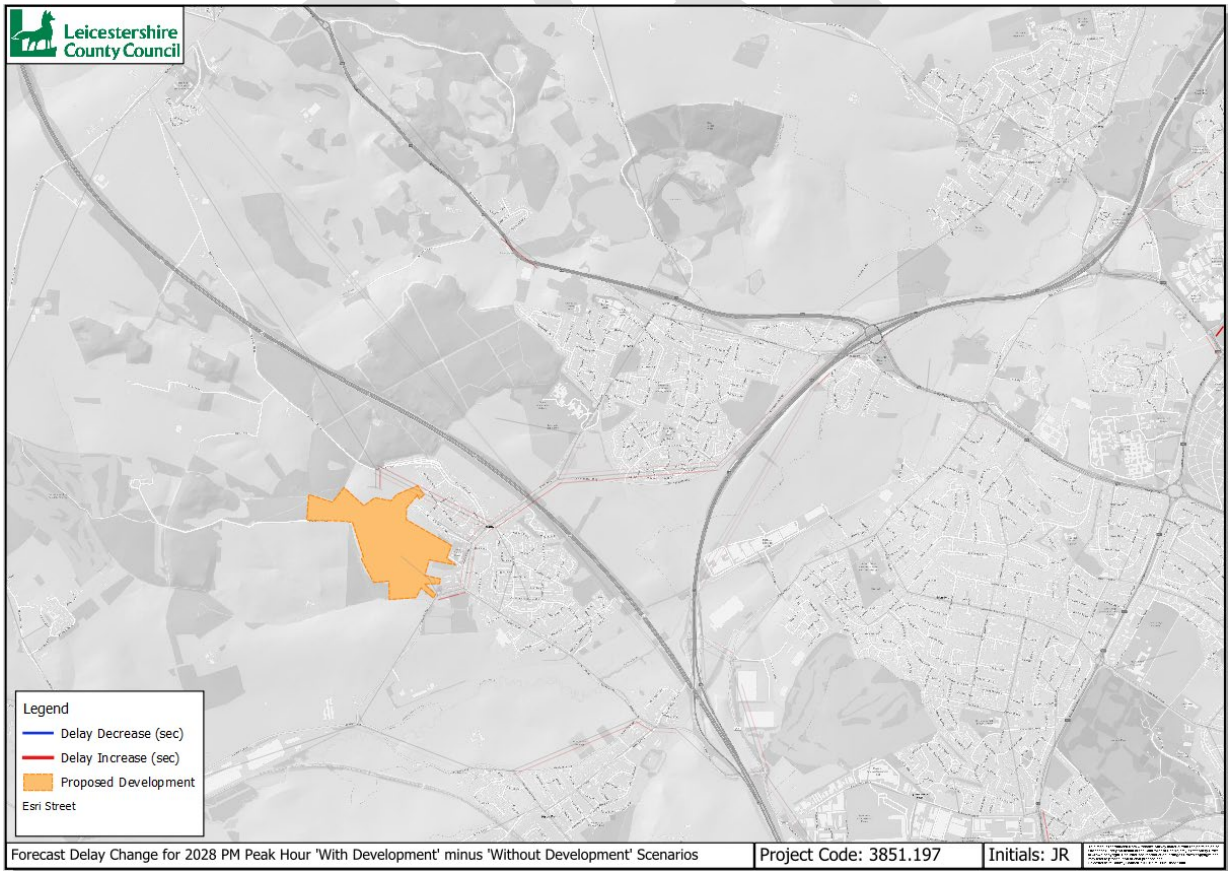

Figure 3.12 Forecast Delay Change for 2028 PM 'With Development' minus 'Without Development'

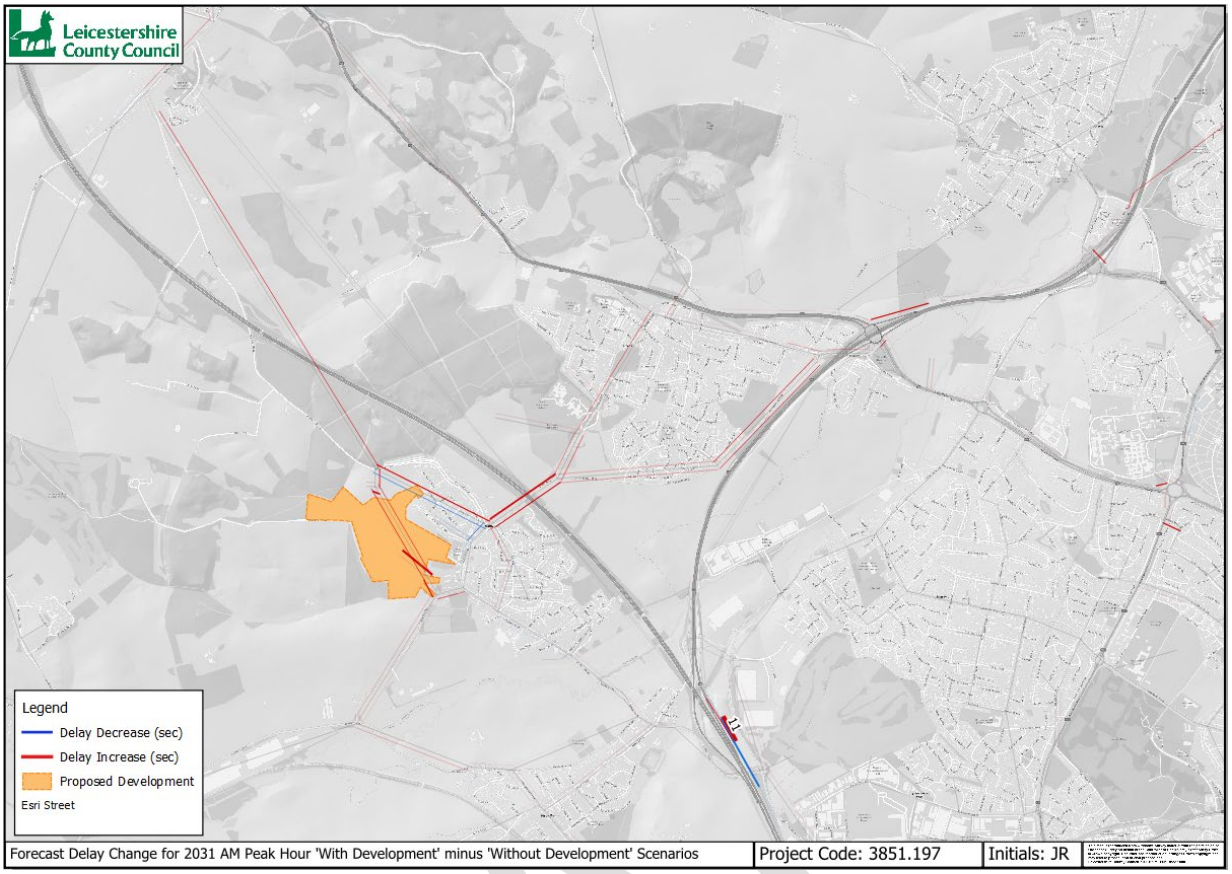

Figure 3.13 Forecast Delay Change for 2031 AM 'With Development' minus 'Without Development'

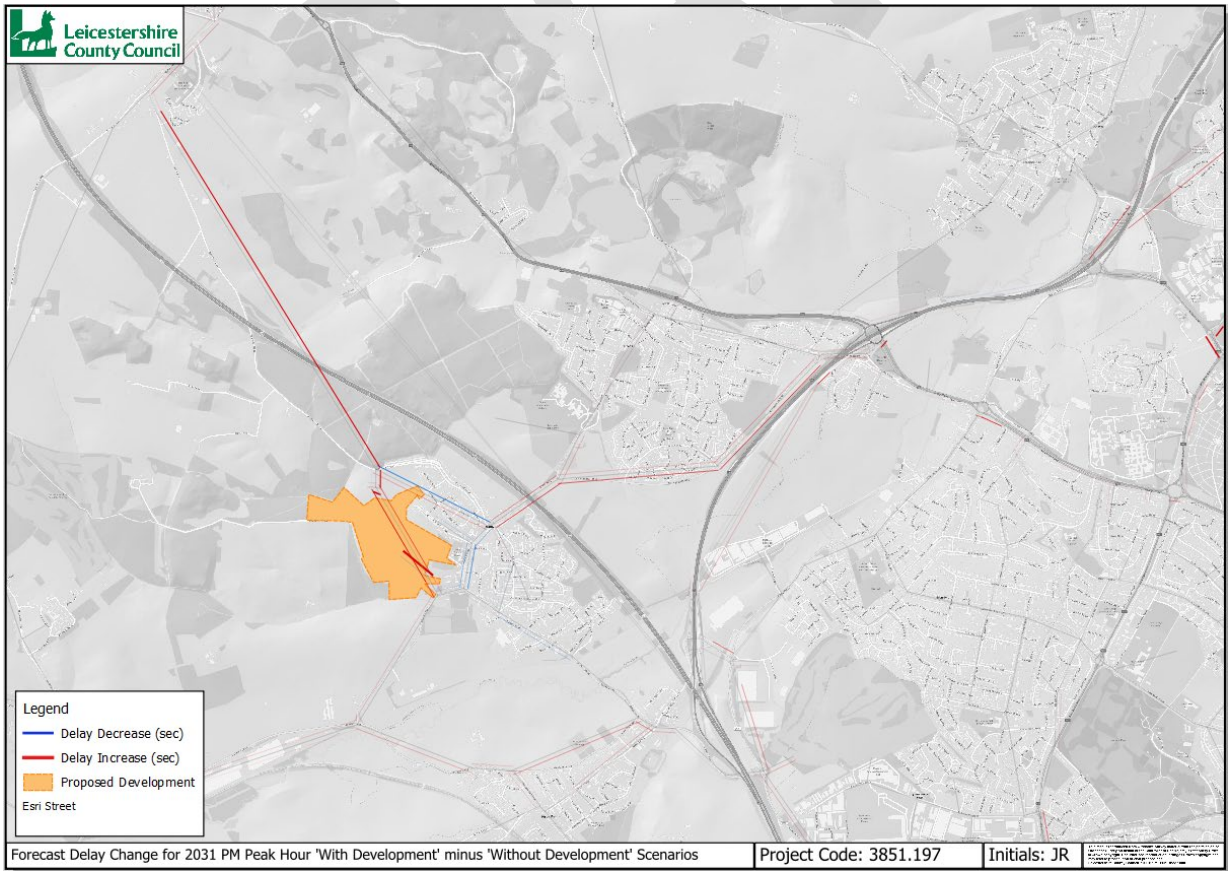

Figure 3.14 Forecast Delay Change for 2031 PM 'With Development' minus 'Without Development'

3.6. 2031 Maximum Volume/Capacity Ratios

3.6.1. Junction capacities are estimated for individual turning movements at the junction, reporting on these maximum values. Node volume-capacity ratios are used to identify locations where the forecast flows are approaching or exceeding the forecast capacity.

3.6.2. Ratios exceeding 85% indicate that the highway network is under stress and there is likely to be increased delays. When junctions have a high volume-capacity ratio a large increase in delay can be created by a small increase in flow.

3.6.3. Figure 3.15 and Figure 3.16 show the forecast maximum volume-capacity ratios for the 2024, 2028 and 2031 'Without Development' scenarios on the same plot for the AM and PM Peak hours. The only junction in close proximity to the development flagged as having a forecast volume-capacity ratio of over 85% is the Markfield Road/Groby Road/Main Street junction in the 2031 AM Peak hour. This is discussed in more detail in paragraph 3.6.10.

3.6.4. Figure 3.17 and Figure 3.18 show the maximum volume-capacity ratios for the 2028 'Without Development' and 'With Development' AM and PM Peak hour scenarios on the same plot.

3.6.5. Figure 3.19 and Figure 3.20 show the maximum volume-capacity ratios for the 2031 'Without Development' and 'With Development' AM and PM Peak hour scenarios on the same plot.

3.6.6. It should be noted that only junctions where the volume/capacity ratio exceeds 85% are displayed on the plots.

3.6.7. By 2028, Figure 3.17 shows that in the vicinity of the proposed development, the Markfield Road/Groby Road/Main Street junction is forecast to have a volume-capacity ratio between 85% to 100% in the AM Peak hour in the 'With Development' scenario.

3.6.8. Figure 3.19 and Figure 3.20 show that in 2031 the volume-capacity ratio limits do not increase between the 'Without Development' and 'With Development' scenario in either peak hour. However, the Markfield Road/Groby Road/Main Street junction volume-capacity improves in the AM peak hour from 85%-100% in the 'Without Development' scenario to less than 85% in the 'With Development' scenario. It should be noted that the change between the two scenarios is a minimal change of -3.7%.

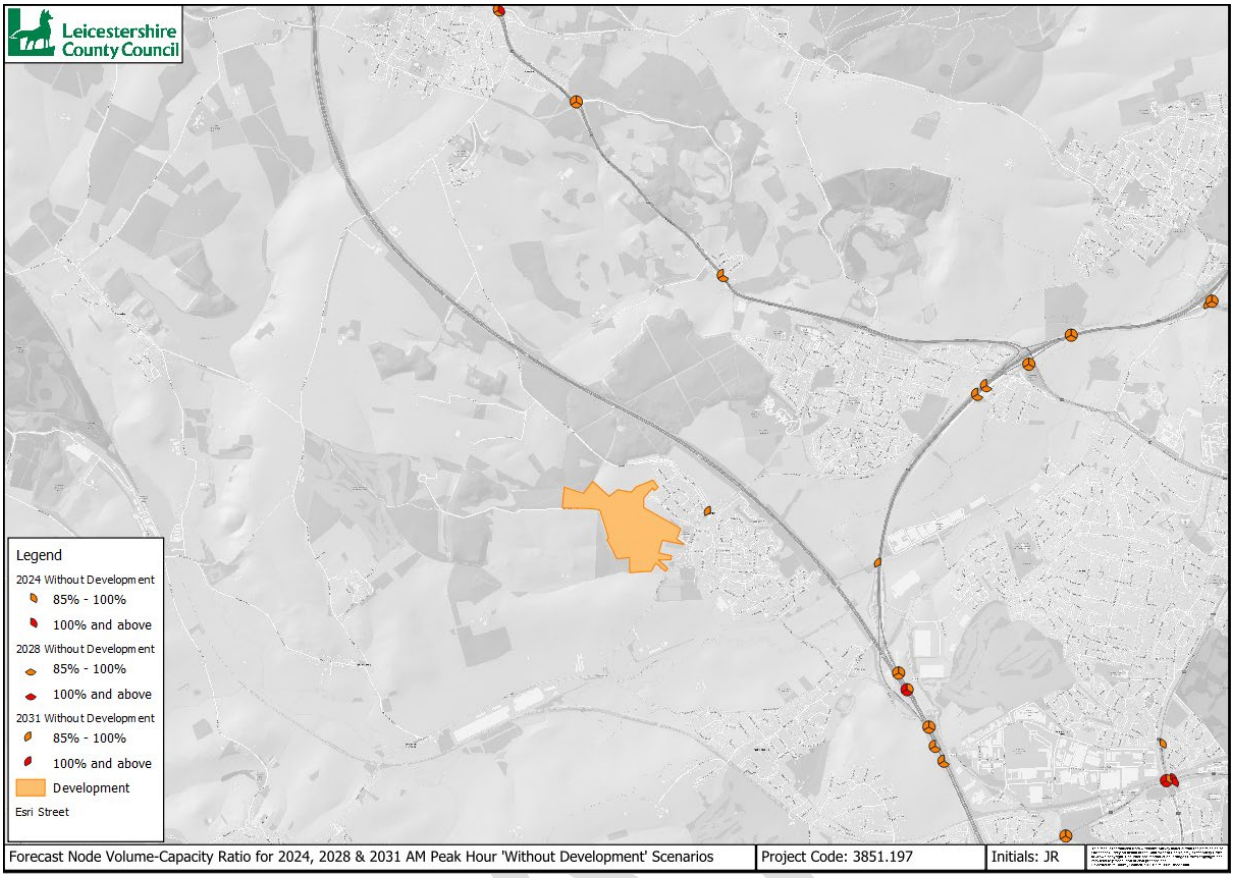

Figure 3.15 Forecast Node Volume-Capacity Ratio for 2024, 2028 and 2031 AM Peak Hour 'Without Development' Scenarios

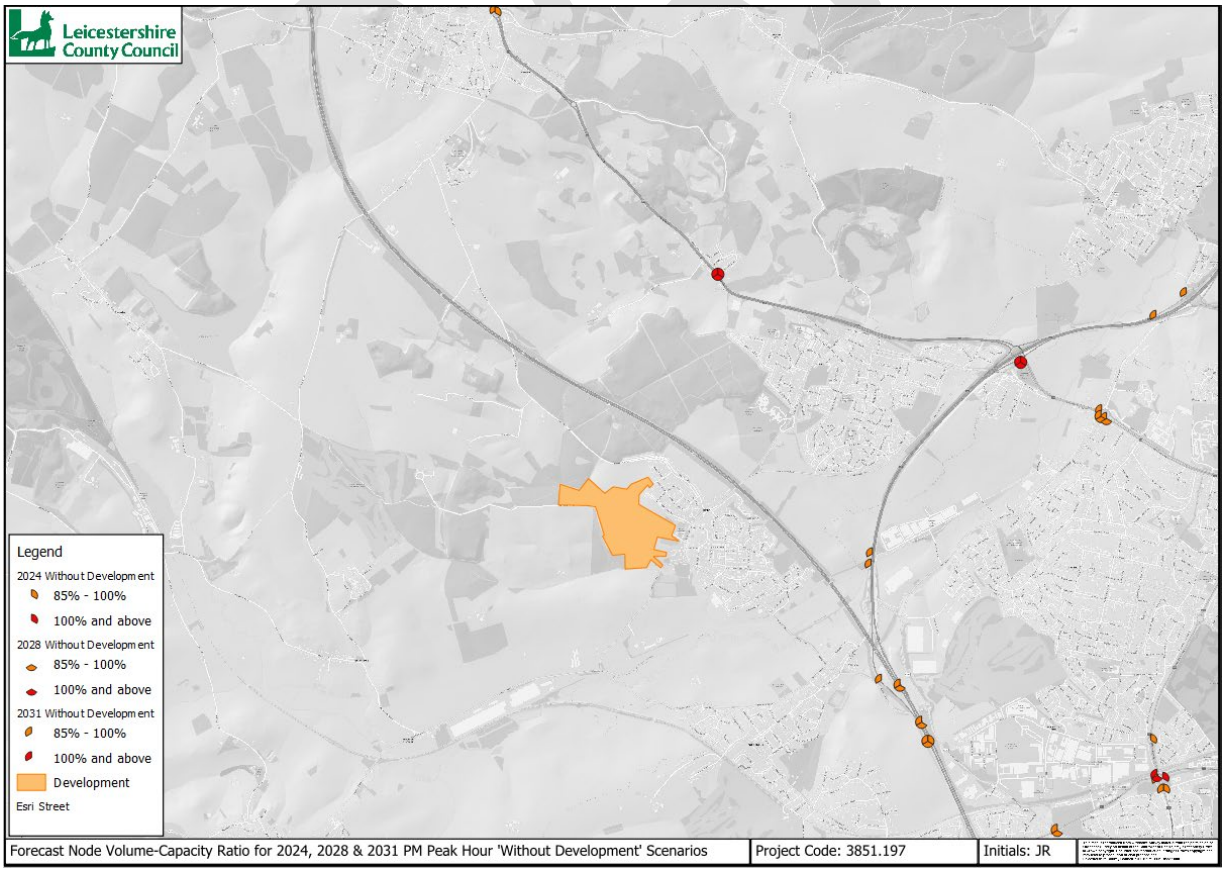

Figure 3.16 Forecast Node Volume-Capacity Ratio for 2024, 2028 and 2031 PM Peak Hour 'Without Development' Scenarios

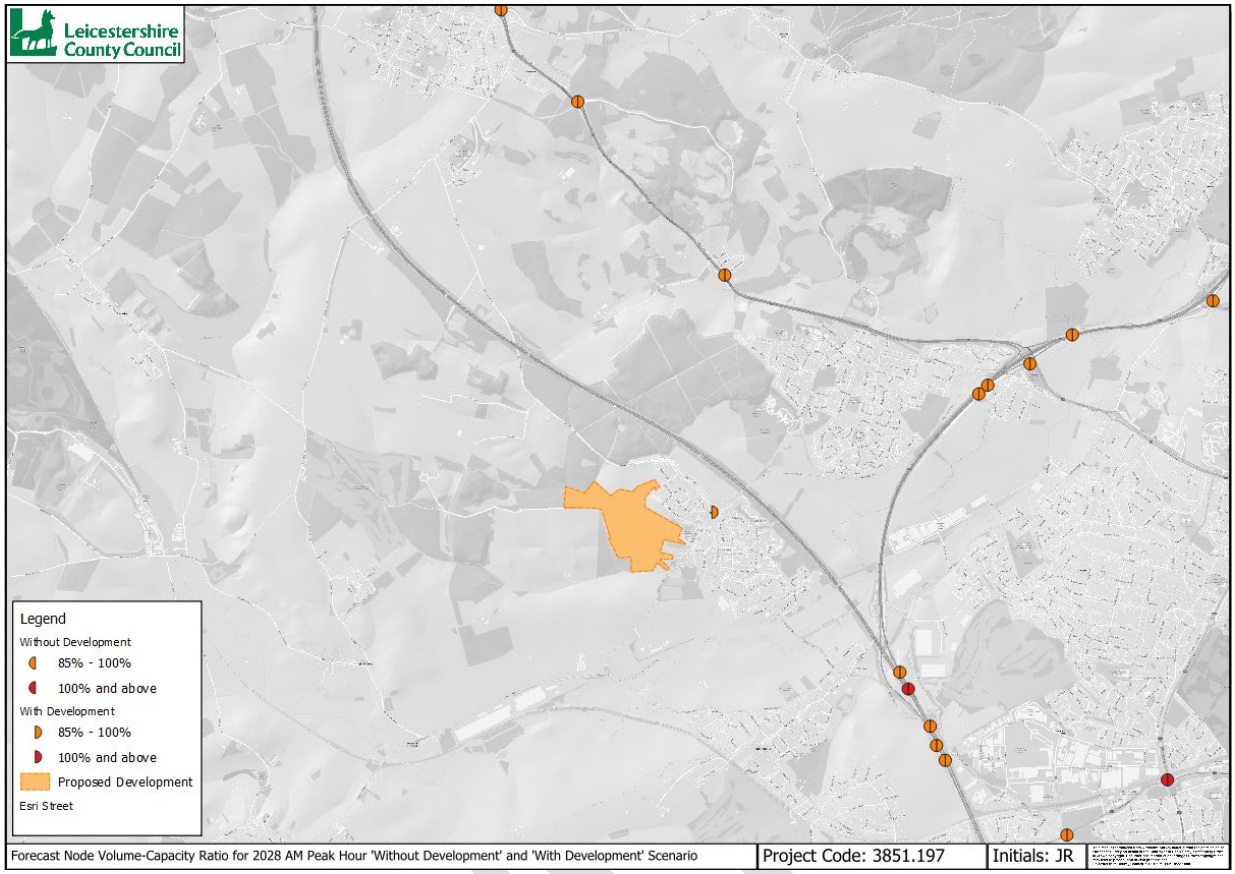

Figure 3.17 Forecast Node Volume-Capacity Ratio for 2028 AM 'Without Development' and 'With Development' Scenarios

Figure 3.18 Forecast Node Volume-Capacity Ratio for 2028 PM 'Without Development' and 'With Development' Scenarios

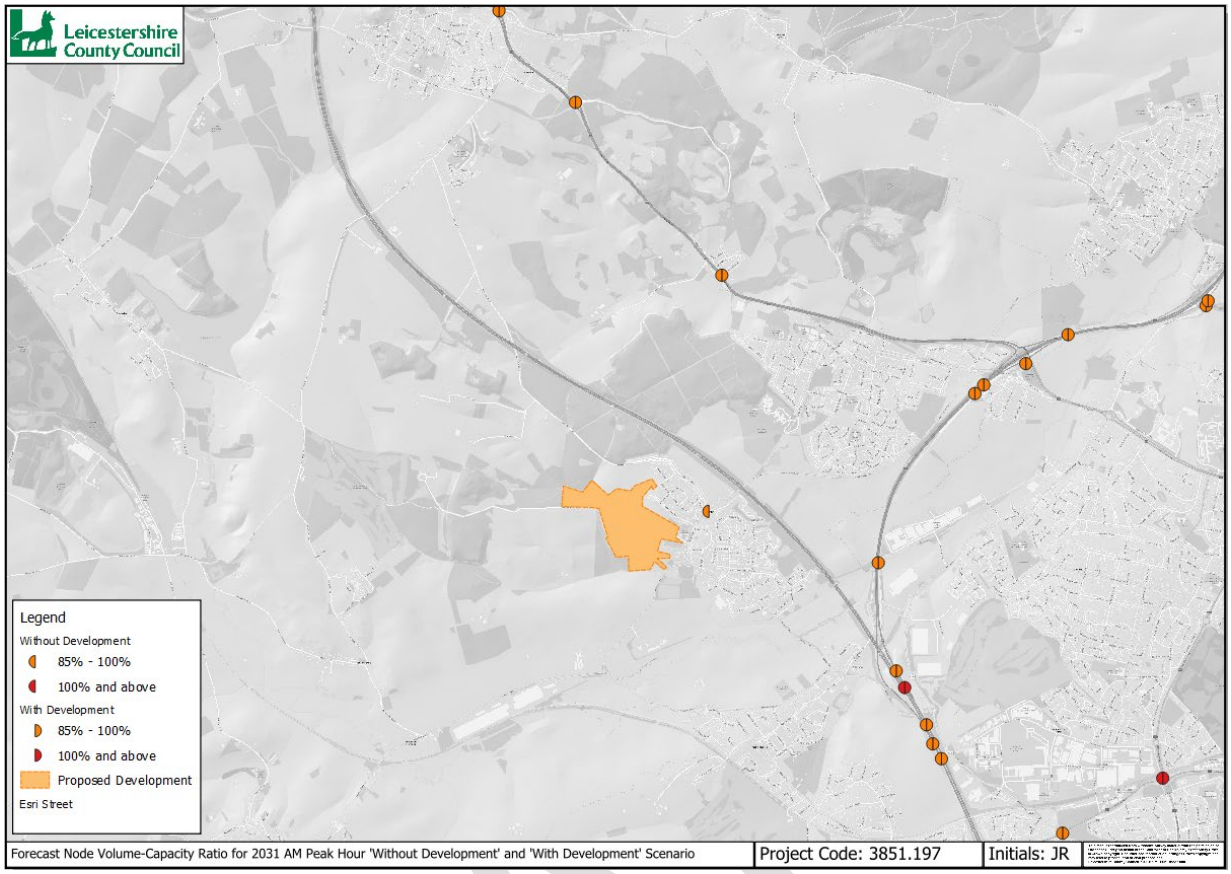

Figure 3.19 Forecast Node Volume-Capacity Ratio for 2031 AM 'Without Development' and 'With Development' Scenarios

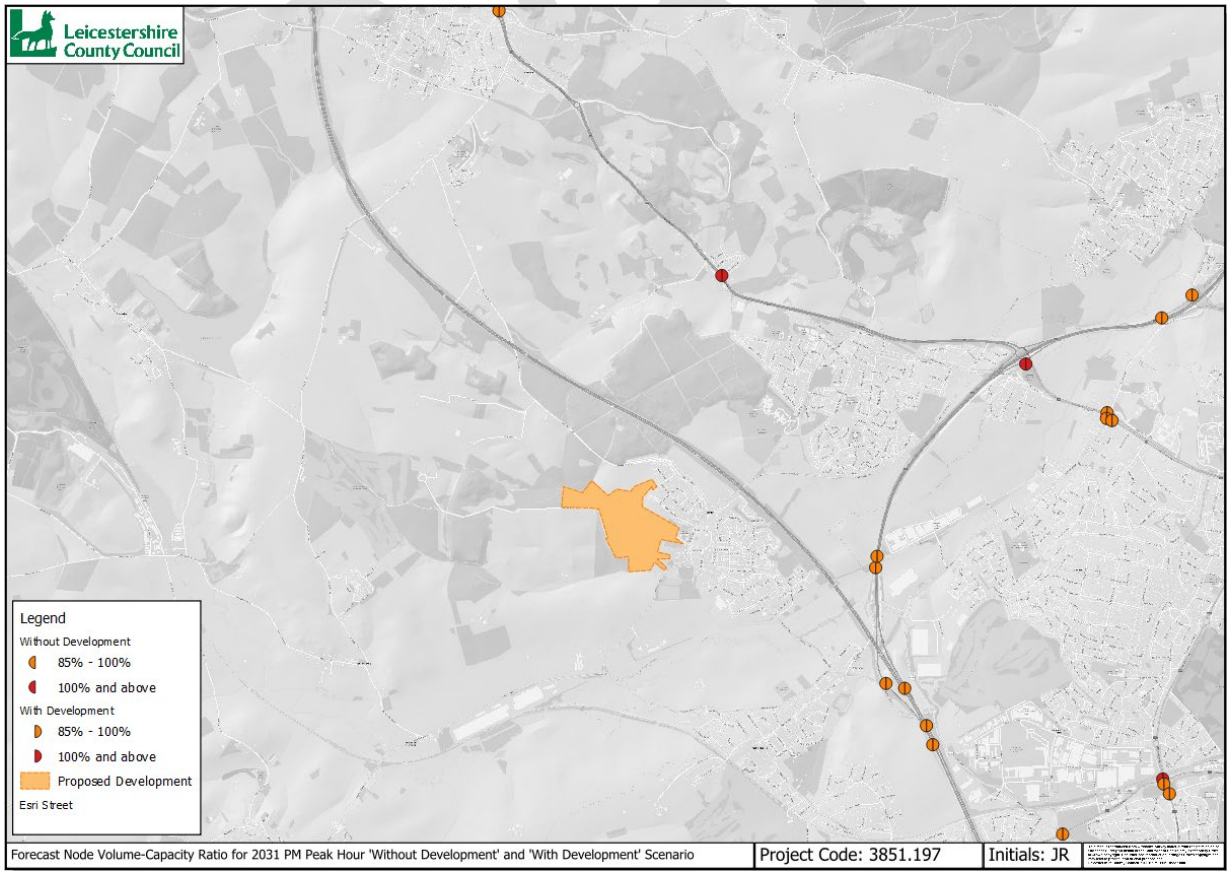

Figure 3.20 Forecast Node Volume-Capacity Ratio for 2031 PM 'Without Development' and 'With Development' Scenarios

3.7. Individual Junction Turning Flows

3.7.1. The forecast turning flows have been extracted for the following eight junctions (shown in Figure 3.21):

1. Markfield Road Site Access
2. Main Street / Groby Road / Markfield Road Roundabout
3. Groby Road / Sacheverell Way
4. Sacheverell Way / Leicester Road Roundabout
5. Desford Lane Site Access
6. Desford Lane / Main Street
7. Ratby Lane / Main Street / Glenfield Lane Roundabout
8. Ratby Lane / Kirby Lane Roundabout

3.7.2. Appendix D contains the turning flows and turn volume-capacity ratios (where available) for the AM and PM Peak hours. Data is provided for all 'Without Development' and 'With Development' forecast scenarios.

3.7.3. As PRTM2019 is a strategic highway model it has not been calibrated or validated for individual turning movements, so care should be taken when using forecast of flows and volume/capacity ratios at this level.

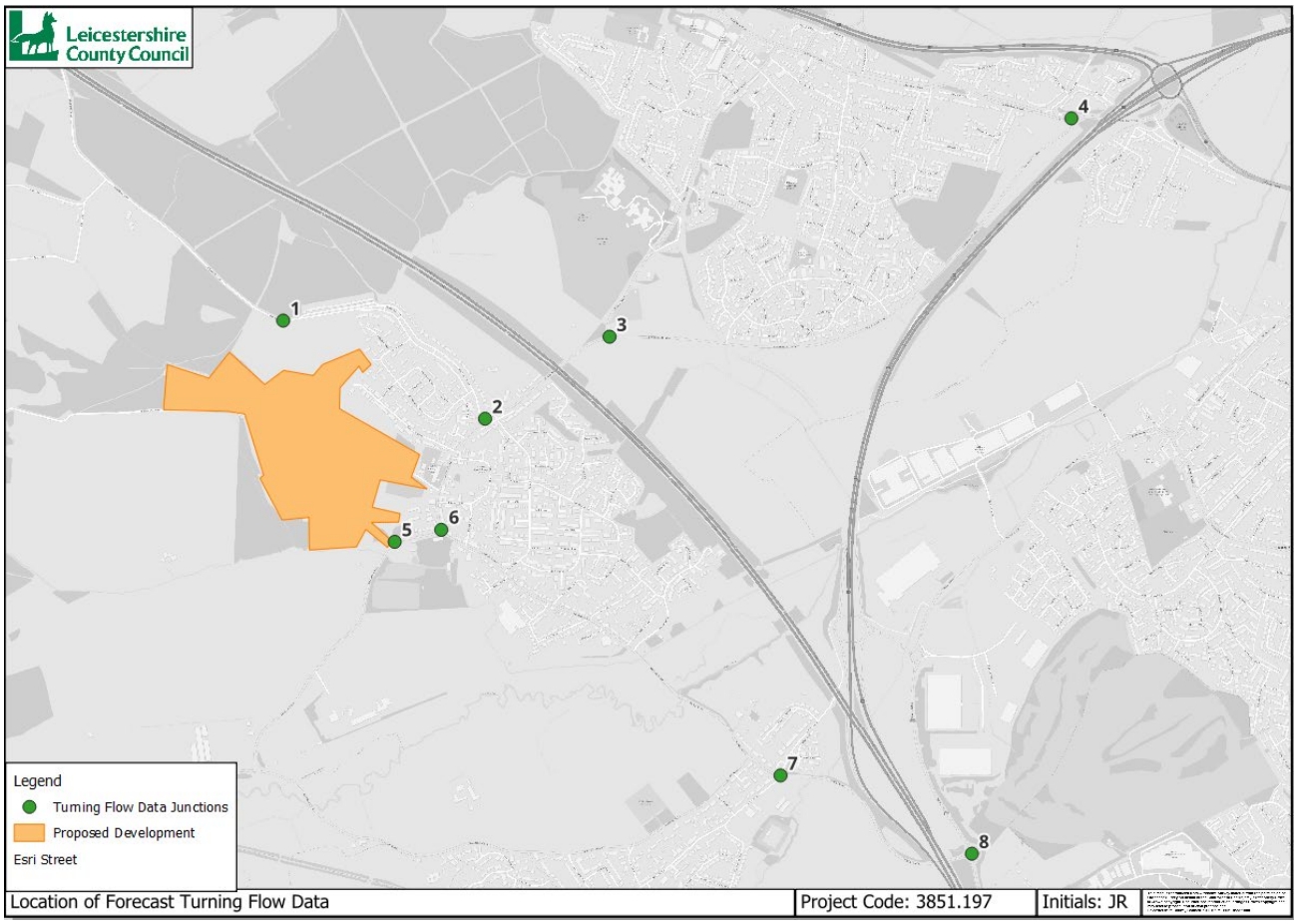

Figure 3.21 Location of Forecast Turning Flow Data

4. Summary

4.1. Summary of Assessment

4.1.1. Using the PRTM, forecasts have been undertaken to produce the 2024, 2028 and 2031 'Without Development' and the 2028 and 2031 'With Development' scenarios for the AM and PM Peak hours for the strategic assessment of the proposed development Land West of Ratby.

4.1.2. The points below provide a summary of the key findings for the assessment of the proposed development.

4.1.3. Development residential trips are forecast to route via the following roads:

- route northwest via Markfield Road and Ratby Lane towards Markfield and the M1 J22;
- route northeast via Groby Road, Ratby Lane and Sacheverell Way towards the A46 and A50;
- route southeast via Station Road and Ratby Lane towards the M1 J21 and A47;
- route southwest via Desford Lane towards Desford.

4.1.4. Development educational trips are forecast to route via the following roads:

- route through Ratby Village via Main Street, Groby Road and Sacheverell Way towards Groby;
- route via Desford Lane towards Kirby Muxloe;
- route via Station Road, Ratby Lane towards Glenfield.

4.1.5. In 2028 the forecast flow changes show that the largest increases in flow are forecast along roads in the immediate vicinity of the proposed development. Mainly Main Street through Ratby village centre and Desford Lane between the site access and Main Street.

4.1.6. In 2031 Figure 3.7 and Figure 3.8 show the largest increases in flow are forecast in close proximity to the proposed development, as would be expected. As a result of the introduction of the development spine road there is a reduction in trips travelling on Main Street through Ratby village, on Dane Hill and on the section of Markfield Road between the proposed development access and the Markfield Road / Groby Road / Main Street roundabout – westbound in the AM Peak hour and Eastbound in the PM Peak hour.

4.1.7. The introduction of the development spine road linking Markfield Road and Desford Lane, in the 2031 'With Development' forecast scenarios provides an element of relief to Ratby Village Centre by providing an alternative route to through traffic.

4.1.8. The Area of Influence has been identified by identifying links forecast to change by more than ±5% flow and ±30 PCUs between the 'With Development and 'Without Development' scenarios in either the AM or PM Peak hour. The forecast Area of Influence includes:

- Groby Road
- Main Street
- Desford Lane
- Desford Road;
- Ratby Lane;
- Station Road;
- Dane Hill;
- Ratby Road;

- Sacheverell Way;
- Markfield Road;
- Launde Road, Markfield;
- Markfield Lane.

4.1.9. There is no delay increase or decrease between the 'With Development' and 'Without Development' scenarios in either the 2028 AM or PM peak hours that exceed 5 seconds.

4.1.10. There is one link showing a delay change of more than 5 seconds in the 2031 AM 'With Development' scenario on the slip road onto the M1 southbound at J21a, an increase of 11 seconds. However, when looking at Figure 3.19 it can be seen that the junction in question has a volume-capacity ratio of 100% or above in both the 'Without Development' and 'With Development'. Therefore, a minor increase in flow on that link could result in a significant increase in delay, as is the case with the M1 J21a southbound on slip. This is a result of the PRTM being a strategic model and may not be directly attributed to the proposed development.

4.1.11. The forecast maximum node volume/capacity rations show that junctions in the vicinity of the proposed developments are operating below 85% in both the 2024 AM and PM Peak hours. The Markfield Road / Main Street / Groby Road junction is forecast to have an increase in volume-capacity in the 2028 forecast scenario in the AM Peak hour. The change is from less than 85% ratio to 85% - 100%.

4.1.12. In the 2031 AM Peak hour scenarios the Markfield Road / Main Street / Groby Road junction is forecast to have a decrease in volume-capacity, the change is from 85%-100% ratio to less than 85%, as a result of the introduction of the development spine road. The reduction is minimal at -3.7%.

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5. Contact Details

5.1.1. We trust that our report meets your expectations and look forward to working with you again soon.

5.1.2. If you have any questions, please do not hesitate to contact:

Network Data & Intelligence Team
Environment & Transport Department
Leicestershire County Council

Email: etcf@leics.gov.uk

Leicestershire County Council

6. Appendix A – Planning Data Assumptions

Residential Development Assumptions (within 5km of the proposed development)

District	Location	Quantum	Timescales	Include
Charnwood	Land at Gynsill Lane & Anstey Lane, Glenfield	260	2029-2035	Y
Charnwood	Park View Nursery Site off Gynsill Lane, Glenfield	40	2026-2027	Y
Charnwood	Fairhaven Farm, Anstey	47	2026-2027	Y
Charnwood	West of Anstey	714	2025-2034	Y
Leicester City	Land North of Billesdon Close	240	2028-2032	Y
Leicester City	Allexton Gardens Open Space	25	2029	Y
Leicester City	Fulford Road Open Space	58	2030-2031	Y
Leicester City	Hockley Farm Road open space	8	2029	Y
Leicester City	Western Golf Course	412	2032-2036	Y
Leicester City	Forest Lodge Education Centre, Charnor Road	26	2033	Y
Charnwood	Gynsill Court MewsGynsill Lane	43	2021-2022	Y
Charnwood	Land adj to Gynsill Court	24	2021	Y
Charnwood	Fairhaven Farm, Land off Cropston Road	6	2021	Y
Charnwood	Between 1 & 3 Latimer Street and 10a and 16 Bradgate Road	12	2027	Y
Blaby	Land off Nursery Rise	29	2020-2022	Y
Blaby	Land off Barry Close	69	2021-2024	Y
Blaby	Land north of A47 Hinckley Road	750	2022-2033	Y
Blaby	Land at Ratby Lane / Desford Road	52	2024-2025	Y
Blaby	Land at Grange Farm	55	2026-2027	Y
Blaby	Lubbesthorpe SUE	1989	2020-2033	Y
Blaby	Lubbesthorpe SUE	1990	2020-2033	Y
Hinckley & Bosworth	Land Adjacent Stanton-Under-Bardon Primary School, Main Street	18	2020	Y
Hinckley & Bosworth	Former highway Land, Leicester Road	30	2020-2021	Y
Hinckley & Bosworth	Land Opposite Bosworth College, Leicester Road	80	2021-2023	Y
Hinckley & Bosworth	Land East of Peckleton Lane	80	2022-2024	Y
Hinckley & Bosworth	Springfield Riding School, Groby Road	168	2023-2026	Y
Hinckley & Bosworth	Land South Of Markfield Road	75	2026-2028	Y
Hinckley & Bosworth	Land South Of 295 Main Street	50	2026-2027	Y
Hinckley & Bosworth	Behind Station Road	50	2041	Y
Hinckley & Bosworth	Land off Murphy Drive and Chestnut Drive	70	2041	Y
Hinckley & Bosworth	East of Barnes Way	56	2041	Y
Hinckley & Bosworth	Land rear of Sharps Close	53	2041	Y
Hinckley & Bosworth	Land South Of Markfield Road	90	2022-2024	Y
Hinckley & Bosworth	Land off Desford Lane, Ratby	225	2028	Y

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Employment Development Assumptions (within 5km of the proposed development)

District	Location	Quantum	Timescale	Include
Leicester City	Western Park Golf Course	69,999 sqm	2030-2033	Y
Leicester City	Sunningdale Road, Sunningdale Centre	20,200 sqm	2020-2021	Y
Blaby	Land at junction of Ratby Lane and Oak Spinney Park	2,766 sqm	2020	Y
Blaby	Glenfield Park Land at Kirby Road / Ratby Lane Glenfield	3,582 sqm	2023-2025	Y
Blaby	Unit B, Plot 40B, Devana Avenue, Optimus Point	2,418 sqm	2024	Y
Blaby	Plot 10, Optimus Point	5,947 sqm	2022	Y
Blaby	New Lubbesthorpe	138 jobs	2022-2033	Y
Blaby	New Lubbesthorpe	11,000 sqm	2024-2033	Y
Blaby	Land north of A47 Hinckley Road	5 jobs	2028	Y
Blaby	Unit B, Plot 40B, Devana Avenue, Optimus Point	1,629 sqm	2024	Y
Blaby	Sandown Court, Station Road	1,246 sqm	2022	Y
Blaby	Holmfield Avenue West	10 jobs	2022	Y
Hinckley and Bosworth	Beyond Storage, Henwood Farm, Merrylees Road	2,807 sqm	2020	Y
Hinckley and Bosworth	Land North Of Neovia Logistics Services (UK) Ltd Peckleton Lane, Desford	84,509 sqm	2025-2027	Y
Hinckley and Bosworth	Lorry Park, Stokes Industrial Park	1,261 sqm	2023-2031	Y

7. Appendix B – Network Assumptions

Highway Network Scheme Assumptions

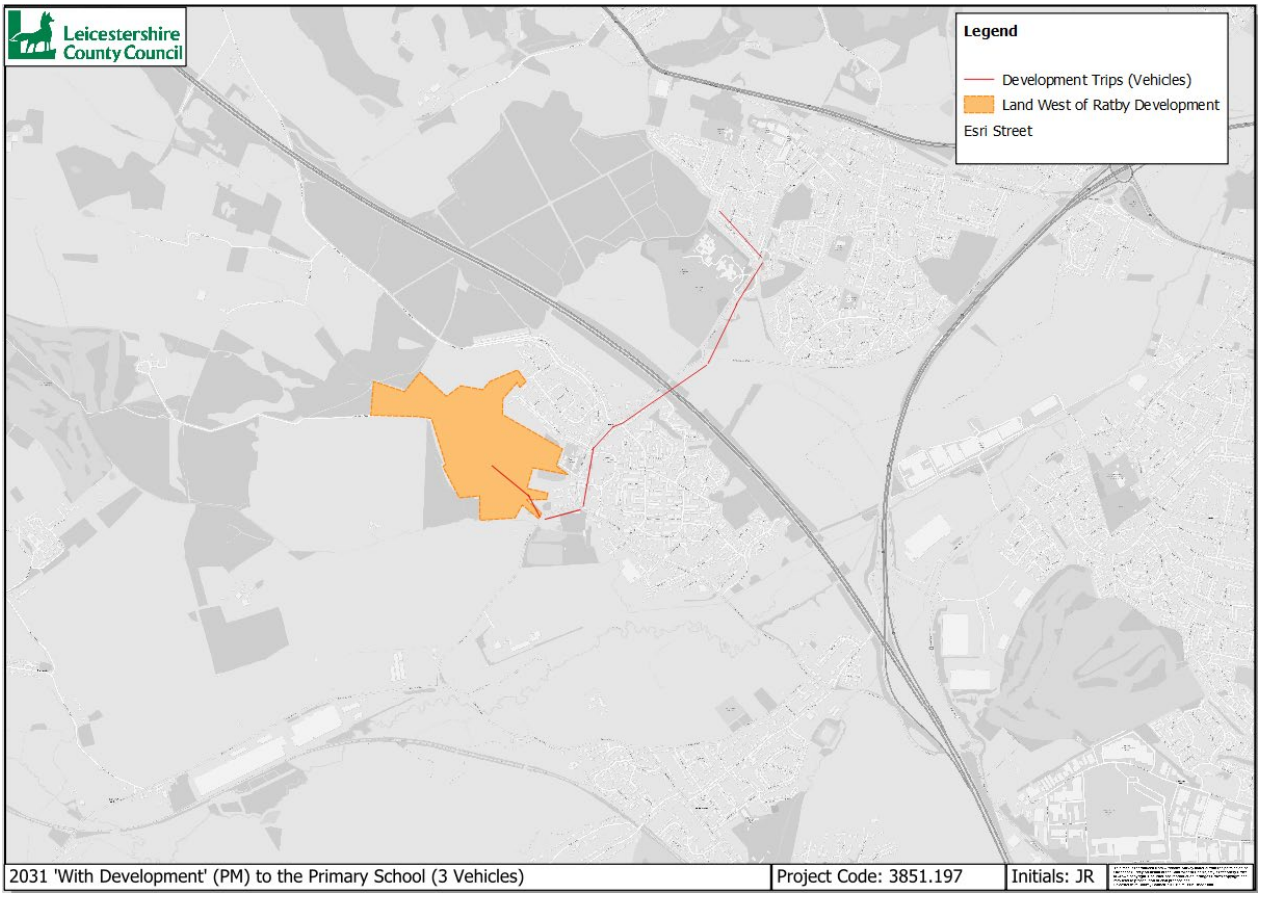
Location	Scheme Name	First Forecast Year	Include
Hinckley & Bosworth	A5 Dodwells and Longshoot junctions	2021	Y
Leicestershire	M1 Junctions 19-23A		N
Leicestershire	A5 widening to dual carriageway near Hinckley		N
Earl Shilton	Access arrangements for SUE / Highway improvements for SUE	2026	Y
Barwell	Access arrangements for SUE / Highway improvements for SUE	2026	Y
Lubbesthorpe	Access arrangements for SUE including strategic traffic link to the A563 Lubbesthorpe Way	2021	Y
Loughborough	A512 widening B591 to M1 J23, improvements to J23 and completion of dualling thereafter to either Snell's Nook Lane or Epinal Way junction	2021	Y
Coalville	4. Bardon Road Link: Southern section only	2026	Y
Castle Donington	Western Link Road from Back Lane to Tops Hill, NWLDC package of measures to help mitigate growth planned	2021	Y
Lubbesthorpe	Link across M69 to join North and South of the Lubbesthorpe development.	2031	Y
Earl Shilton & Barwell	Highway improvements for SUE	2026	Y
Lubbesthorpe	Highway improvements for SUE	2026	Y
Loughborough	West of Loughborough SUE (access from the north via the A6 roundabout)	2022	Y
Blaby	Desford Crossroads	2026	N
Blaby	Ratby Lane / Desford Road Signalisation	2022	Y
Harborough	Harborough Strategic Development Area	2021	Y
Charnwood	North of Birstall SUE	2026	Y
Charnwood	Mountsorrel Lane, Rothley Link Road	2021	Y
Charnwood	A512 junction improvements	2021	Y
North of East Leicester	North of East Leicester Development Network - Thorpebury (previously Thurmaston) SUE.	2026	Y
Leicester City	Traffic Calming Schemes (Phase 2)	2021	Y
Leicester City	Welford Road	2021	Y
Leicester City	Waterside Development	2026	Y
Leicester City	Belgrave Gate South	2020	Y
Leicester City	Lancaster Road	2020	Y
Leicester City	Mansfield Street & Church Gate	2021	Y
Leicester City	SMBS Access to Burleys Way	2021	Y
Leicester City	Vaughan Way	2020	Y
Leicester City	Ashton Green	2021	Y
Leicester City	LNW2 Ravensbridge Drive / Blackbird Road	2020	Y
Melton	MMDR Northern Section	2026	Y
Melton	MMDR Eastern Section	2026	Y
Melton	MMDR Southern Section	2026	Y
Melton	Gladman's Site (Leicester Rd and Kirby Lane Access)	2021	Y
Leicester City	Beaumont Leys Anstey Lane Improvements	2021	Y
Hinckley	Hinckley Rugby Road Corridor Improvements - Phase 4	2023	Y

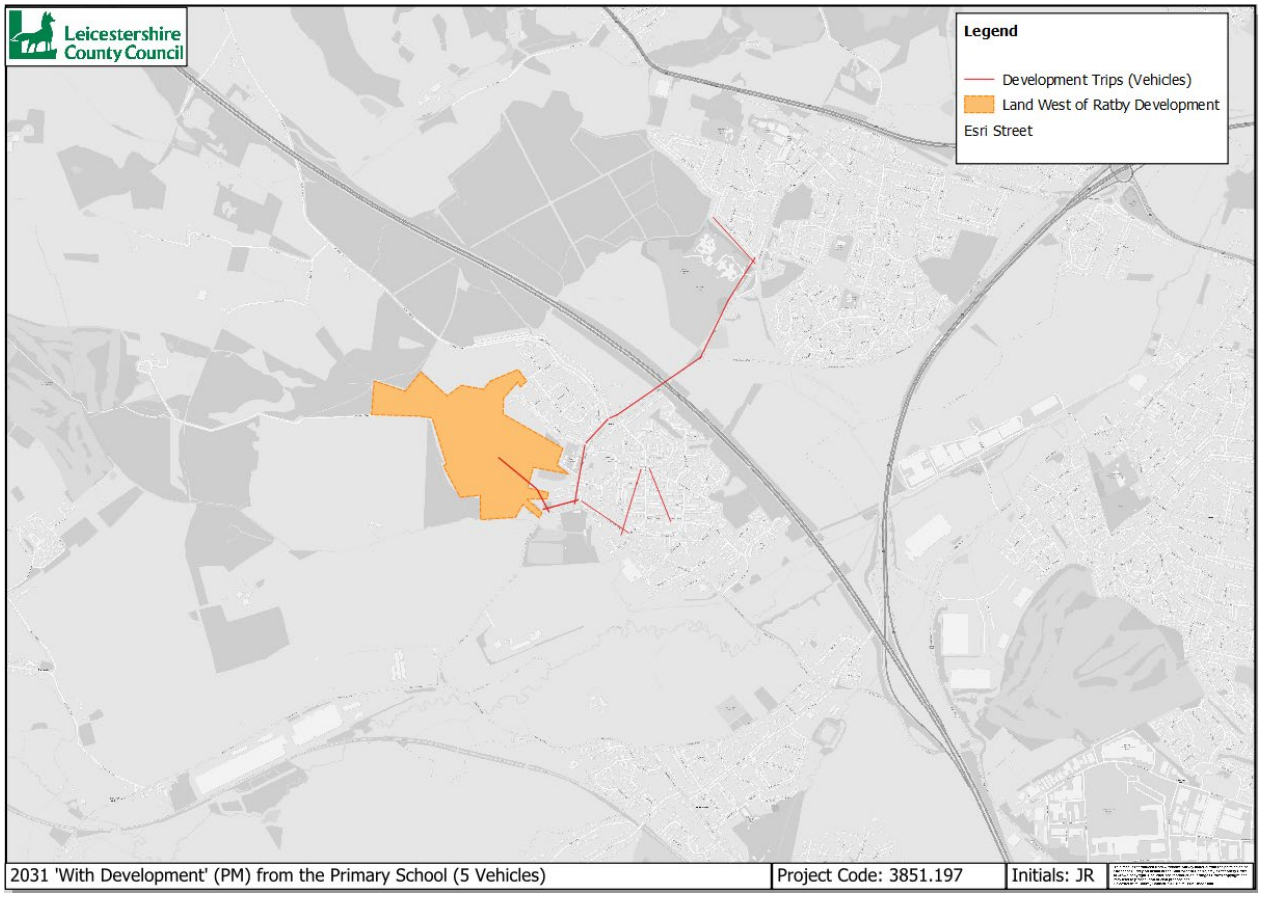
Leicester City	Putney Road West Improvement	2022	Y
Lutterworth	Frank Whittle Roundabout approaches	2021	Y
Lutterworth	Lutterworth East Development (Development Access (A4304, Gilmorton Road and A426))	2026	Y
Lutterworth	Lutterworth East Development associated mitigations	2031	Y
Lutterworth	Lutterworth East Development (Link Road between A4304 and A426)	2031	Y
Lutterworth	Lutterworth East Development (Gilmorton Road bridge bus restriction)	2026	Y
Bardon Hill	Bardon Hill Link Road North Section	2026	Y
Coalville	Hoo Ash Roundabout	2025	Y
Coalville	Thornborough Road Roundabout	2025	Y
Coalville	Dual Carriageway from Thornborough Rd to Whitwick Road	2025	Y
Coalville	Whitwick Road Roundabout	2025	Y
Coalville	Broom Leys Road Junction	2025	Y
Coalville	Bardon Link Road Junction	2025	Y
Coalville	Birch Tree Roundabout	2025	Y
Coalville	Charnwood Arms Roundabout		N
Coalville	Flying Horse Roundabout	2025	Y
Coalville	Fieldhead Roundabout	2025	Y
Hinckley	DPD A5 Access	2021	Y
Isley Walton	Isley Walton Development Access		N
Padge Hall	Padge Hall Development Access	2024	Y
Leicester City	Abbey Park Road Cycle Provision	2021	Y
Leicester City	Leicester TCF2 schemes		N
Blaby	A47/Kirby Lane Tesco Express	2021	Y
Leicester City	Abbey Street	2021	Y
Leicester City	A50 Groby Road Bus Lane	2022	Y
Harborough	Magna Park Extension Access - Mere Lane, Lutterworth	2021	Y
Harborough	Magna Park Extension Access - A5, Lutterworth	2026	Y
Blaby	Highway improvements for Lubbesthorpe SUE	2021	Y
Blaby	Foxhunter Roundabout Eastbound Approach	2021	Y
Loughborough	West of Loughborough SUE (connection to the northern arm of the A512 roundabout)	2036	Y
Harborough	B4114/B581 Signalisation Improvement, Broughton Astley	2026	Y
Blaby	Blaby DPD Site Access	2026	Y
Blaby	West of St Johns (Blaby DPD) Site Access	2026	Y
Harborough	Wigston Direction for Growth Site Access	2026	Y
Blaby	Everard Way Closure, Fosse Park	2020	Y
Loughborough	Access connection for the Science Park via the A512 roundabout	2031	Y
Hinckley & Bosworth	Hinckley NRFI		N
NWL	Money Hill Site Access A511	2026	Y
Derbyshire	Wragley Way (South Derbyshire) SUE Access A50	2031	Y
Derbyshire	Clifton (Rushcliffe) SUE Access	2022	Y
Derbyshire	EMIP A50 (Freeport)	2030	Y
Derbyshire	Toton Innovation Hub (HS2)	2026	Y
Nottinghamshire	Ratcliffe Power Station A453 (Freeport)	2030	Y
Rugby	Rugby Radio Station - A5 Access	2022	Y
Leicester City	Buckminster Rd/Brading Rd Safer Streets	2022	Y

North West Leicestershire	Mercia Park	2020	Y
Leicester City	Western Park Golf Course	2029	Y
Harborough	Kettering Road Signalisation	2021	Y
Charnwood	Shuttle signals on Tickow Lane (over bridge)	2022	Y
Charnwood	Buttercup Lane in Shepshed	2022	Y
Blaby	Dans Lane (A47)	2023	Y
Hinckley	B582 / B585 signalisation	2023	Y
Hinckley	A47 roundabout between Wykin Rd and Outlands Dr	2021	Y
M6 J10-13	M54-Stafford ALR	2021	Y
M54-M6 Toll	New Link Road min 2 lane motorway	2024	Y
M6 J13-J16	Stafford South to Stoke ALR	2022	Y
M1 J13-16	MK South - J16 ALR	2022	Y
M40 M42	M40 J16-M42 J3 ALR	2026	Y
A46 Coventry	Remove Binley and Walsgrove roundabouts M40-M6 as 'expressway standard'(i.e. all grade separated junctions)	2026	Y
M6 J10	Walsall M6 Junction 10 issues	2014	Y
A46 Toll Bar End	Grade separated junction at TBE & Stonebridge Hwy to 3 lanes	2021	Y
Newark N	Dualling Newark N bypass first stages now in RIS 2	2031	Y
Newark S	A1-A46 link S of Newark; part constructed. Not in MRTM list	2031	Y
Lincoln E	A15-A158; under construction	2021	Y
Lincoln S	A158-A46; envisaged as dual carriageway… Assumed costing will be similar to Lincoln E bypass and will be 60mph single	2031	Y
Grantham S	A1-A52 link bypassing Grantham; under construction	2023	Y
Warwickshire	M6 J2 - J4 SMART motorway	2021	Y
Nuneaton and Bedworth Borough	Coton Arches	2021	Y
Nuneaton and Bedworth Borough	A4254b Eastboro Way P1	2024	Y
Nuneaton and Bedworth Borough	College Street / A444	2023	Y
Nuneaton and Bedworth Borough	Transforming Nuneaton	2026	Y
Nuneaton and Bedworth Borough	Croft Road/Greenmoor Road Priority	2031	Y
Nuneaton and Bedworth Borough	A47 Old Hinckley Road	2024	Y
Nuneaton and Bedworth Borough	Coventry Road / Gipsy Lane	2026	Y
Nuneaton and Bedworth Borough	A4254 / B4114 / Eastboro Way	2026	Y
Nuneaton and Bedworth Borough	Nuneaton Northern Sites Link Road	2026	Y
North Warwickshire	B5000 Market Street/Bridge St Signals	2026	Y

North Warwickshire	A5 Dualling between Grendon and Dordon Junction	2033	Y
Rugby Borough	A426/A4071 Avon Mill Roundabout/Newbold Road/Hunters Lane Priority Junction	2026	Y
Rugby Borough	Ashlawn Road/Hillmorton Road	2021	Y
Rugby Borough	A5 Northern Access to DIRFT III	2021	Y
Rugby Borough	A5/A428 Halfway House Roundabout	2026	Y
Rugby Borough	M1 Junction 18	2031	Y
Rugby Borough	M6 to Coton House	2021	Y
Rugby Borough	A5 Southern Access to DIRFT III	2021	Y
Nuneaton and Bedworth Borough	A444 Bedworth Bypass Junction Improvements		N
North Warwickshire	A5 dualling Grendon to Atherstone	2031	Y
Rugby Borough	M6 J2 Signalisation	2024	Y
Nuneaton and Bedworth Borough	Callendar Farm Phase 2	2031	Y
Nuneaton and Bedworth Borough	Bermuda Triangle Project	2026	Y
Rugby Borough	Ansty Park Access (Combe Fields Road)	2020	Y
Castle Donington	Land South of A50 J1 Development Access	2024	Y
Hinckley	B4114 Coventry Rd / Broughton Rd widening	2021	Y
Shepshed	A512 Ashby Rd Quarry access/signalised jnc	2021	Y
Bardon	Tungsten Park, Bardon A511	2021	Y
NWL	EMAGIC Segro EMG Phase 2 Development Access	2025	Y

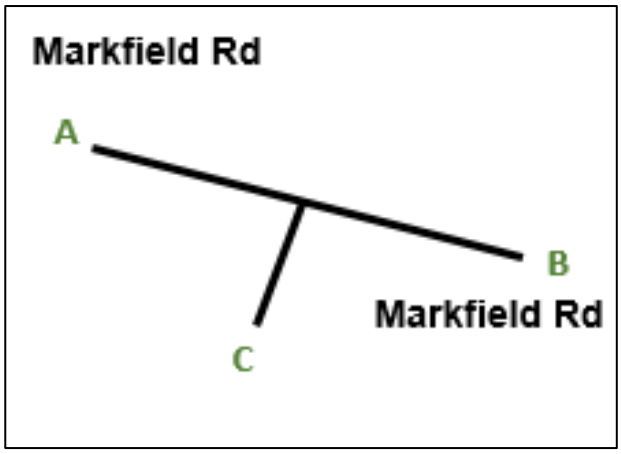
8. Appendix C – 2031 PM 'With Development' Educational Trips





9. Appendix D – Individual Junction Turning Flows

Turning Flows – Markfield Road Site Access



2024 'Without Development'				
Turning Movement	2024			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	163	10%	177	11%
A-C	4	0%	8	1%
B-A	168	10%	186	11%
B-C	10	1%	24	2%
C-A	10	1%	4	0%
C-B	26	2%	12	1%

2028 'Without Development'				
Turning Movement	2028			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	213	13%	199	12%
A-C	7	1%	15	1%
B-A	236	14%	273	17%
B-C	19	1%	43	3%
C-A	18	1%	7	1%
C-B	47	4%	22	2%

2028 'With Development'				
Turning Movement	2028			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	203	12%	208	13%
A-C	6	1%	21	2%
B-A	240	14%	269	16%
B-C	26	2%	59	4%
C-A	23	2%	10	1%
C-B	65	6%	31	3%

2031 'Without Development'				
Turning Movement	2031			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	240	15%	219	13%
A-C	7	1%	15	1%
B-A	257	15%	304	18%
B-C	19	1%	43	3%
C-A	18	1%	7	1%
C-B	47	4%	22	2%

2031 'With Development'				
Turning Movement	2031			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	153	10%	124	8%
A-C	93	7%	162	14%
B-A	137	8%	232	15%
B-C	65	4%	136	10%
C-A	188	15%	97	7%
C-B	158	15%	61	6%

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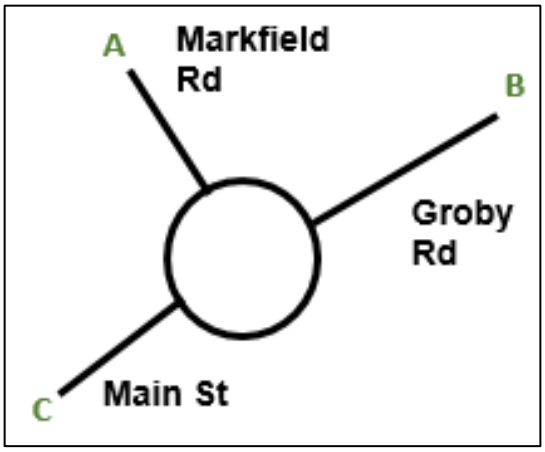
Turning Flows – Main Street / Groby Road / Markfield Road Roundabout



2024 'Without Development'				
Turning Movement	2024			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	150	27%	132	19%
A-C	43	9%	61	10%
B-A	126	21%	149	24%
B-C	476	51%	435	48%
C-A	56	16%	65	12%
C-B	643	68%	451	49%

2028 'Without Development'				
Turning Movement	2028			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	210	40%	141	24%
A-C	54	15%	84	15%
B-A	159	32%	252	43%
B-C	561	62%	453	58%
C-A	100	34%	68	19%
C-B	686	78%	546	65%

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2028 With Development (in vehicles)				
Turning Movement	2028			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	212	45%	147	25%
A-C	59	18%	96	18%
B-A	159	33%	256	46%
B-C	574	64%	468	61%
C-A	112	47%	76	22%
C-B	739	85%	556	67%

2031 'Without Development'				
Turning Movement	2031			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	228	49%	152	27%
A-C	63	21%	93	18%
B-A	161	37%	274	51%
B-C	617	69%	493	65%
C-A	119	52%	76	25%
C-B	747	87%	580	71%

2031 'With Development'				
Turning Movement	2031			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	301	62%	164	26%
A-C	14	7%	26	5%
B-A	183	42%	364	54%
B-C	654	72%	442	60%
C-A	22	13%	26	10%
C-B	782	83%	577	71%

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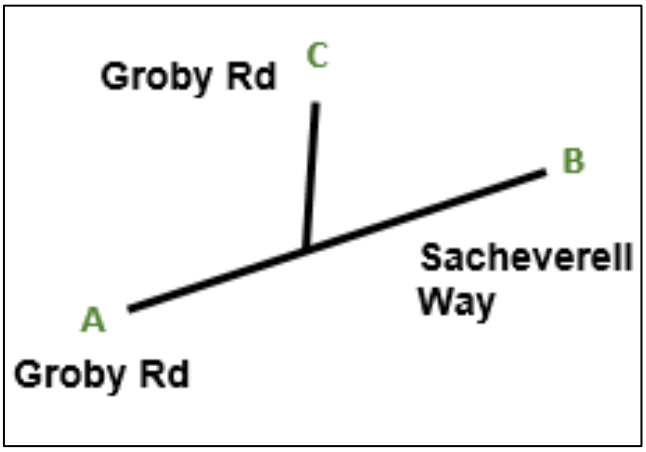
Turning Flows – Groby Road / Sacheverell Way



2024 'Without Development'				
Turning Movement	2024			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	518	37%	430	28%
A-C	275	26%	145	13%
B-A	527	32%	445	26%
B-C	14	2%	9	1%
C-A	126	16%	127	14%
C-B	21	2%	6	1%

2028 'Without Development'				
Turning Movement	2028			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	541	40%	473	32%
A-C	321	30%	192	17%
B-A	613	37%	483	29%
B-C	11	2%	9	1%
C-A	145	21%	158	19%
C-B	20	2%	6	1%

2028 'With Development'				
Turning Movement	2028			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	559	43%	483	33%
A-C	355	34%	195	18%
B-A	618	37%	503	30%
B-C	11	2%	9	1%
C-A	152	22%	171	21%
C-B	20	2%	6	1%

2031 'Without Development'				
Turning Movement	2031			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	556	43%	497	34%
A-C	358	34%	218	20%
B-A	650	39%	535	34%
B-C	11	2%	9	1%
C-A	161	24%	161	20%
C-B	20	2%	6	1%

2031 'With Development'				
Turning Movement	2031			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	573	48%	510	35%
A-C	453	44%	238	22%
B-A	668	40%	574	34%
B-C	11	2%	9	1%
C-A	220	34%	181	24%
C-B	20	3%	6	1%

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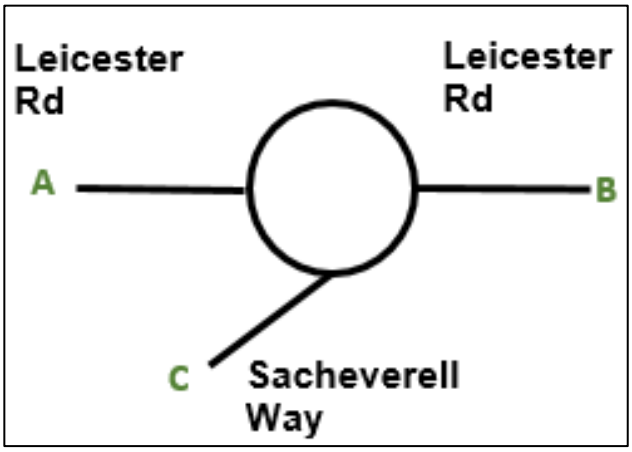
Turning Flows – Sacheverell Way / Leicester Road Roundabout



2024 'Without Development'				
Turning Movement	2024			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	38	4%	34	3%
A-C	10	1%	27	3%
B-A	209	18%	411	39%
B-C	501	35%	583	48%
C-A	66	10%	53	9%
C-B	819	59%	662	54%

2028 'Without Development'				
Turning Movement	2028			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	90	10%	36	4%
A-C	12	1%	43	4%
B-A	213	20%	467	46%
B-C	572	40%	587	51%
C-A	84	13%	56	10%
C-B	811	59%	688	59%

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2028 'With Development'				
Turning Movement	2028			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	89	10%	36	4%
A-C	12	1%	46	5%
B-A	212	20%	467	46%
B-C	582	41%	596	52%
C-A	90	14%	56	11%
C-B	828	61%	691	59%

2031 'Without Development'				
Turning Movement	2031			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	124	14%	36	4%
A-C	14	2%	45	4%
B-A	200	19%	491	49%
B-C	610	42%	604	54%
C-A	96	15%	61	12%
C-B	815	59%	675	59%

2031 'With Development'				
Turning Movement	2031			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	123	15%	35	4%
A-C	36	5%	56	6%
B-A	197	20%	490	51%
B-C	628	44%	640	58%
C-A	104	17%	61	12%
C-B	850	62%	697	61%

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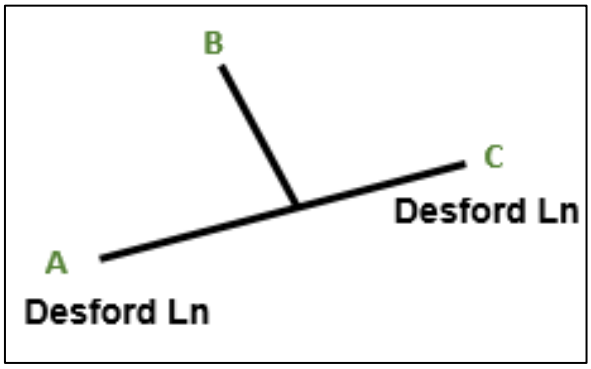
Turning Flows – Desford Lane Site Access



2024 'Without Development'				
Turning Movement	2024			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	0	0%	0	0%
A-C	639	39%	471	29%
B-A	0	0%	0	0%
B-C	0	0%	0	0%
C-A	463	27%	442	26%
C-B	0	0%	0	0%

2028 'Without Development'				
Turning Movement	2028			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	0	0%	0	0%
A-C	708	43%	583	36%
B-A	0	0%	0	0%
B-C	0	0%	0	0%
C-A	557	33%	466	27%
C-B	0	0%	0	0%

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2028 'With Development'				
Turning Movement	2028			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	4	0%	13	1%
A-C	704	43%	574	35%
B-A	9	2%	9	1%
B-C	82	9%	35	3%
C-A	549	33%	427	27%
C-B	31	5%	75	10%

2031 'Without Development'				
Turning Movement	2031			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	0	0%	0	0%
A-C	791	48%	626	38%
B-A	0	0%	0	0%
B-C	0	0%	0	0%
C-A	622	37%	518	30%
C-B	0	0%	0	0%

2031 'With Development'				
Turning Movement	2031			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	135	15%	105	10%
A-C	682	45%	562	36%
B-A	100	18%	116	15%
B-C	103	13%	22	2%
C-A	544	35%	394	24%
C-B	86	14%	35	5%

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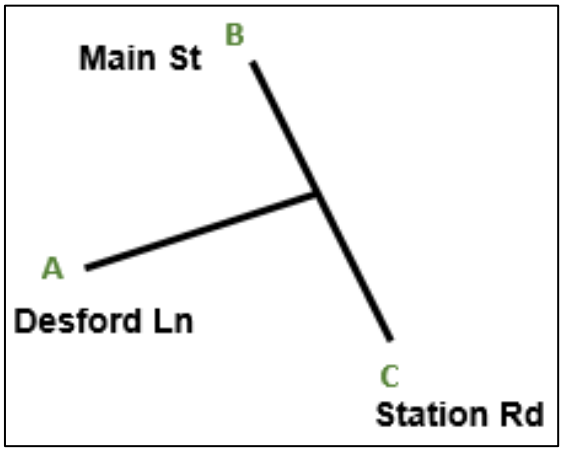
Turning Flows – Desford Lane / Main Street



2024 'Without Development'				
Turning Movement	2024			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	630	49%	457	36%
A-C	10	2%	14	2%
B-A	456	36%	429	34%
B-C	6	1%	7	1%
C-A	7	1%	13	1%
C-B	8	1%	29	2%

2028 'Without Development'				
Turning Movement	2028			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	698	55%	567	45%
A-C	10	2%	16	3%
B-A	550	43%	453	36%
B-C	11	1%	10	1%
C-A	7	1%	13	1%
C-B	9	1%	14	1%

2028 'With Development'				
Turning Movement	2028			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	763	61%	585	47%
A-C	23	6%	24	4%
B-A	567	44%	480	38%
B-C	11	1%	10	1%
C-A	13	1%	22	2%
C-B	9	1%	15	1%

2031 'Without Development'				
Turning Movement	2031			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	781	61%	611	48%
A-C	11	3%	16	3%
B-A	615	48%	504	40%
B-C	12	2%	10	1%
C-A	7	1%	14	1%
C-B	9	1%	15	1%

2031 'With Development'				
Turning Movement	2031			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	719	60%	549	44%
A-C	66	17%	35	6%
B-A	606	48%	381	31%
B-C	12	2%	15	1%
C-A	26	2%	47	4%
C-B	9	1%	24	2%

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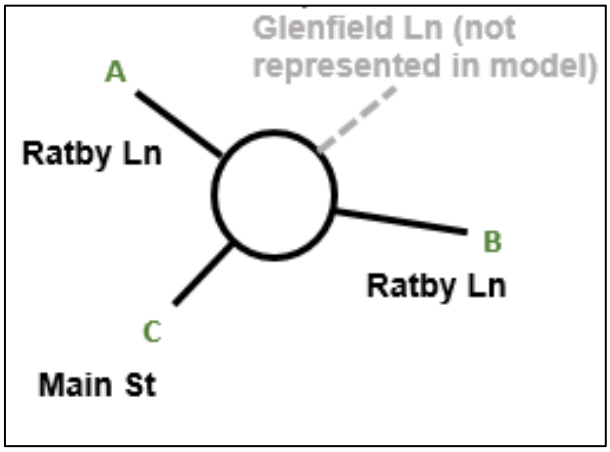
Turning Flows – Ratby Lane / Main Street / Glenfield Lane Roundabout



2024 'Without Development'				
Turning Movement	2024			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	211	13%	127	8%
A-C	23	2%	22	1%
B-A	124	8%	306	20%
B-C	46	3%	86	7%
C-A	20	1%	24	2%
C-B	47	3%	34	3%

2028 'Without Development'				
Turning Movement	2028			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	293	19%	203	13%
A-C	24	2%	22	2%
B-A	174	11%	423	28%
B-C	68	5%	137	11%
C-A	25	2%	23	2%
C-B	88	6%	37	3%

2028 'With Development'				
Turning Movement	2028			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	308	20%	219	14%
A-C	24	2%	25	2%
B-A	179	12%	453	30%
B-C	69	5%	137	12%
C-A	25	2%	23	2%
C-B	87	6%	37	3%

2031 'Without Development'				
Turning Movement	2031			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	363	24%	265	17%
A-C	24	2%	19	1%
B-A	210	14%	490	34%
B-C	103	7%	171	15%
C-A	26	2%	24	2%
C-B	120	8%	37	3%

2031 'With Development'				
Turning Movement	2031			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	411	27%	272	17%
A-C	10	1%	8	1%
B-A	215	14%	535	36%
B-C	102	7%	169	15%
C-A	10	1%	15	1%
C-B	119	8%	37	3%

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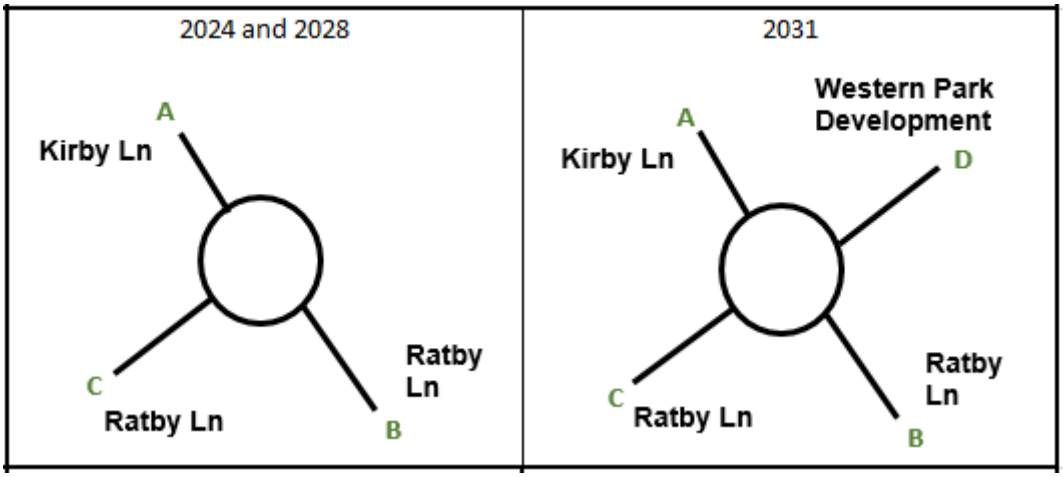
Turning Flows – Ratby Lane / Kirby Lane Roundabout



2024 'Without Development'				
Turning Movement	2024			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	497	35%	512	39%
A-C	53	5%	210	20%
B-A	604	41%	569	45%
B-C	118	12%	183	21%
C-A	76	8%	42	4%
C-B	181	18%	119	11%

2028 'Without Development'				
Turning Movement	2028			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	567	43%	578	50%
A-C	91	11%	332	37%
B-A	600	42%	603	54%
B-C	151	16%	228	31%
C-A	118	14%	54	6%
C-B	264	27%	186	18%

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2028 'With Development'				
Turning Movement	2028			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	566	43%	565	51%
A-C	93	11%	361	40%
B-A	598	42%	604	55%
B-C	155	16%	229	32%
C-A	120	14%	55	6%
C-B	275	28%	201	0%

2031 'Without Development'				
Turning Movement	2031			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	575	52%	583	57%
A-C	131	20%	363	45%
A-D	95	15%	31	7%
B-A	614	47%	610	63%
B-C	170	20%	256	42%
B-D	10	1%	5	1%
C-A	147	21%	59	7%
C-B	285	34%	231	24%
C-D	52	8%	12	2%
D-A	36	5%	61	12%
D-B	13	2%	18	4%
D-C	13	2%	42	9%

2031 'With Development'				
Turning Movement	2031			
	AM		PM	
	Total	V/C (%)	Total	V/C (%)
A-B	578	53%	578	58%
A-C	131	21%	399	49%
A-D	96	16%	31	7%
B-A	609	47%	609	66%
B-C	171	20%	262	46%
B-D	10	1%	5	2%
C-A	171	25%	61	8%
C-B	298	36%	235	25%
C-D	61	10%	13	2%
D-A	35	5%	61	13%
D-B	13	2%	20	5%
D-C	14	2%	44	10%

Appendix I PRTM Base Year Model Review

Leicestershire County Council

Environment and Transport Commissioning Framework

Land West of Ratby

Base Year Model Review

8th March 2024
3851.197

Project Reference: 3851.197

Document Sign-off

Control Details

Document Location:	\\lccfp3\htwdata\Transportation\Transport Policy and Programs\Traffic Modelling\TMODELLING\05. 3851 (External)\MF3851.197 Markfield Road, Ratby\12. Deliverables\01. Reports\3851.197 Land West of Ratby BYMR - v1.0.docx
Production Software:	Microsoft Word 2010
Author:	JR
Owner:	Alex Gray, Network Data and Intelligence Team

Document history and status

Ver	Date	Description	Author	Review	Approved	Released
0.1	07/03/24	Draft for internal review	JR	PB		
1.0	08/03/24	Final version for release to the client	JR	PB	RJB	LG

Model Version

Model:	PRTM2019 v1.2
Constrained / Unconstrained:	NTEM Minimum
SATURN Version:	11.5.05N

Leicestershire County Council

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1. Overview

1.1. Introduction

1.1.1. The proposed development is a residential development of 509 dwellings and a primary school. The site is located to the south of Markfield Road and to the north of Desford Lane in Ratby, Leicestershire and is expected to be fully built by 2031. Figure 1.1 shows the indicative location of the proposed development.

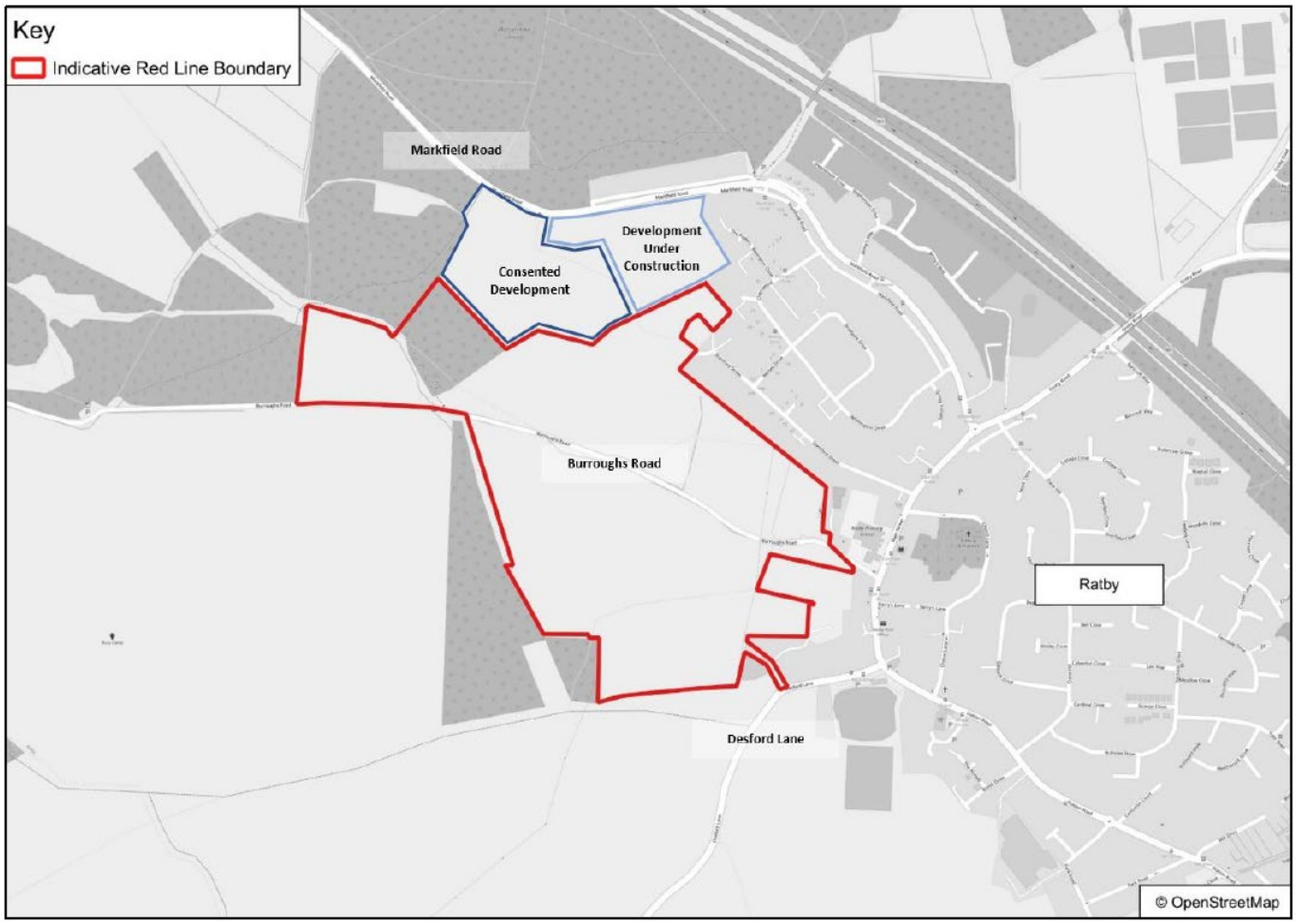

Figure 1.1 : Indicative Location of the Proposed Development

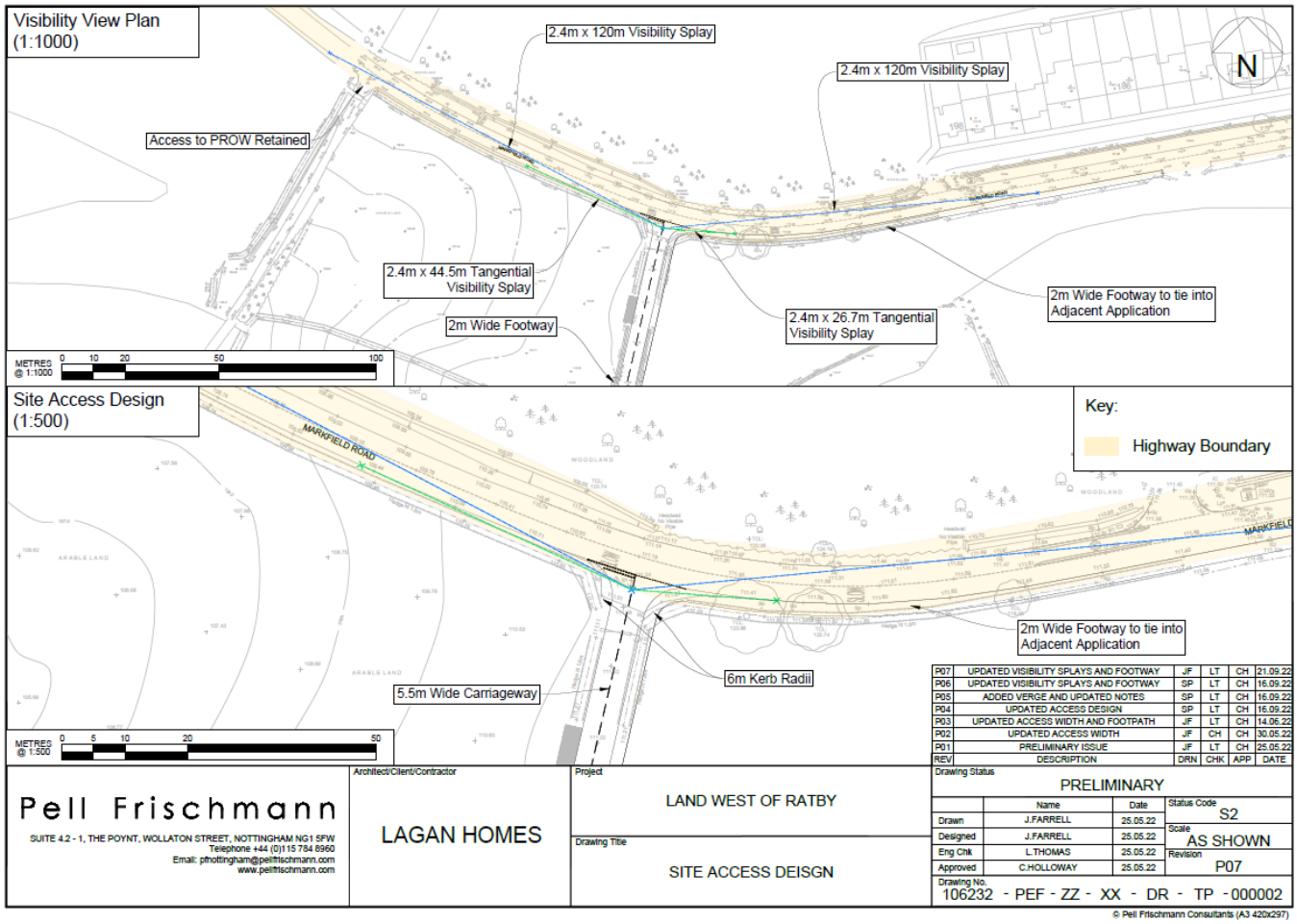

Figure 1.2: Proposed Development Access Design

1.1.2. A new primary school is proposed within the development, which could result in the relocation and expansion of the existing Ratby Primary School.

1.1.3. The proposed development will have two simple priority junction accesses onto the highway network, one off Markfield Road (see Figure 1.2) and one off Desford Lane:

- Markfield Road – an extension to the approved access from the adjacent consented development approval (22/00648/OUT)

- Desford Lane – an extension to the existing access which also serves Pear Tree Office Park

1.1.4. Leicestershire County Council (Network and Data Intelligence Team) have been commissioned to undertake a strategic assessment of the development using the latest version of the Pan Regional Transport Model (PRTM2019 v1.2).

1.1.5. PRTM2019 is a strategic model which validates well to Government Transport Analysis Guidance (TAG) over the wider area. Despite this, and as TAG makes clear, it is necessary to review model validation in the context of the specific project being undertaken to ensure its suitability.

1.1.6. This document is the Base Year Model Review of the PRTM2019 base year of 2019. It presents the results of the base year calibration and validation performance in the vicinity of the proposed development.

2. PRTM Base Year Model Structure

2.1. Zone System

2.1.1. The PRTM2019 v1.2 zoning system is based on existing land-use and 2011 Census Geography

2.1.2. Figure 2.1 shows the PRTM2019 zoning system and the location of the proposed Land West of Ratby development site.

2.1.3. Ratby is represented by two zones: 6105 and 6108. The proposed development is located in zone 6108, which is the zone proposed to be used for the trip distribution of the new development zone used to represent the Land West of Ratby proposed development. Zone 6108 loads on to the highway network via Main Street. Figure 2.2 shows that the Ratby zones are larger than those in the more urban areas (e.g. Leicester City) due to its rural nature, with them decreasing in size moving closer to urban conurbations.

2.1.4. The existing zone network in the vicinity of the proposed development is deemed suitable for this application of the PRTM2019. However, it is suggested that the proposed development and nearby approved developments (22/00648/OUT and 20/00462/FUL) are contained in their own new development zones to allow for detailed analysis and reporting of development trips.

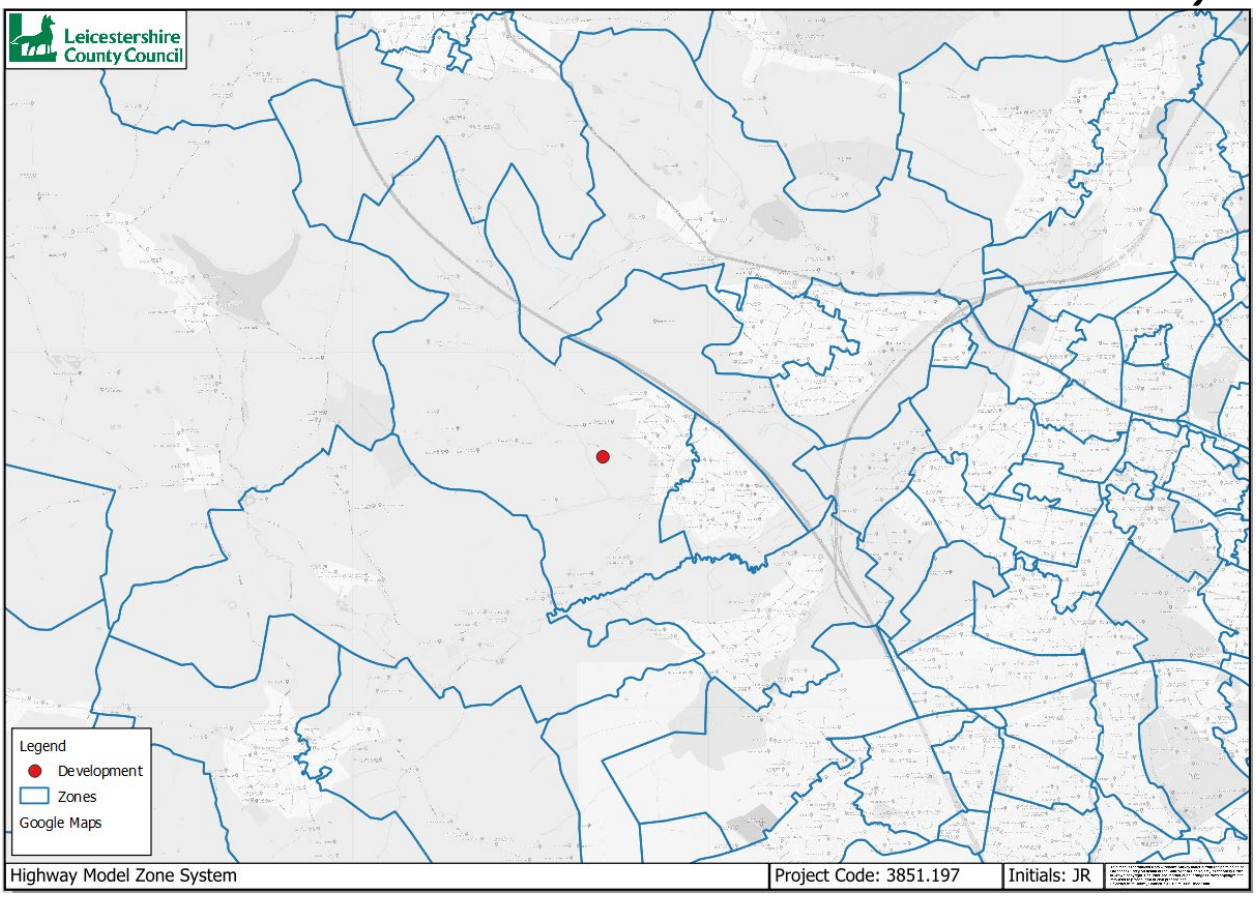

Figure 2.1: Highway Model Zone System

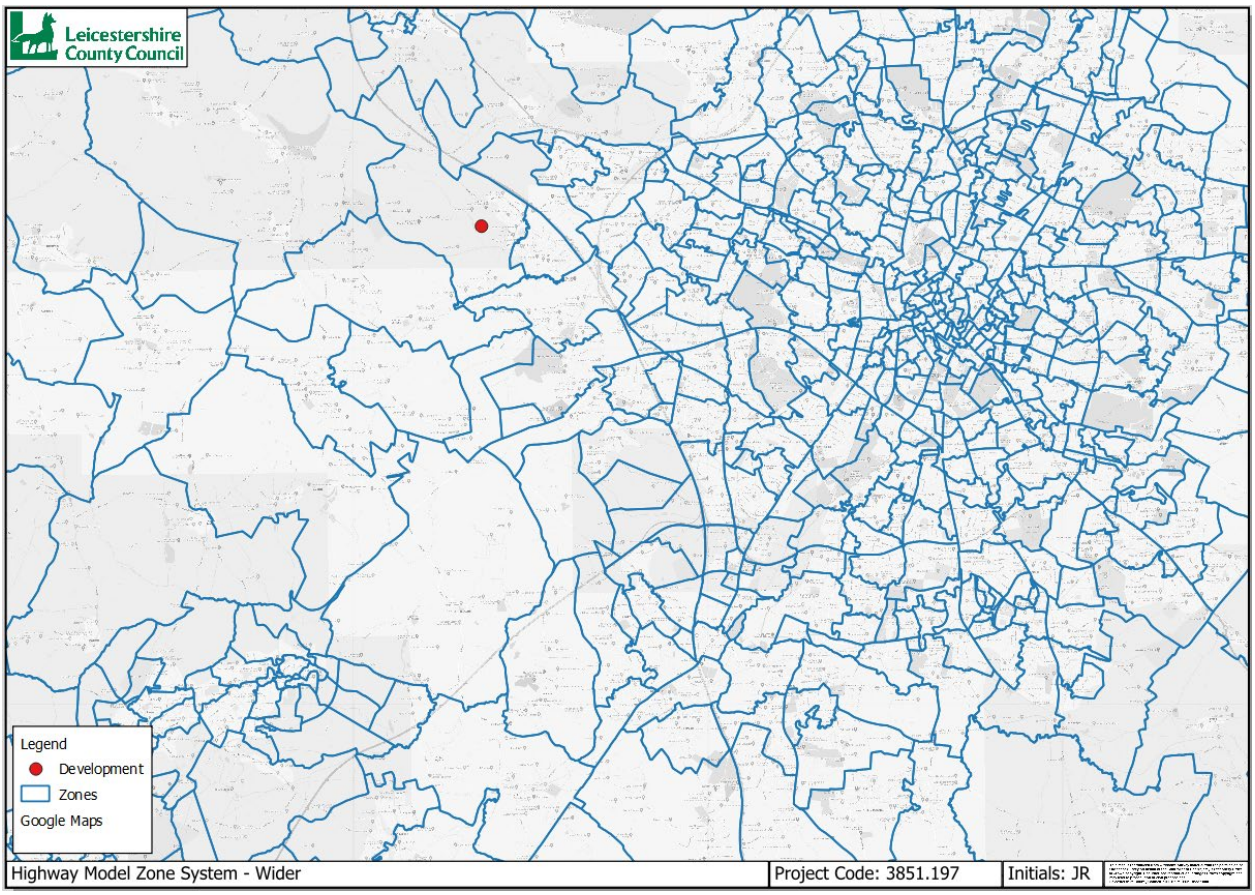

Figure 2.2: Highway Model Zone System - Wider

2.2. Network Structure

2.2.1. The highway network has been reviewed within the vicinity of the Land West of Ratby proposed development.

2.2.2. Figure 2.3 shows the extent of the highway network close to the proposed development. As the PRTM is a strategic transport model not all links are included, with the more minor residential and rural links omitted. As such, it should be noted that, Burroughs Road is not included in the model as it is a very minor link.

2.2.3. It is considered that the highway network in the base year model is a good representation with all important and significant links included.

2.2.4. Key roads and junctions close to the development have been reviewed in detail and compared to the PRTM Highway Coding Manual[1]. The link review included the coded distances, saturation flows and speed-flow curves (SFC, determining the speed on a link for a given traffic volume). The junction review included the number of lanes, turning movements, flare length (where used) and saturation flows for the key junctions in the vicinity of the proposed development.

2.2.5. Table 2.1 shows the results of this review, it was found that Main Street had different speed and associated SFC between the AM and PM Peak hours. In the AM it is coded with a speed limit of 20mph, representing the 20mph School Safety Zone along that link, whereas in the PM Peak it is coded with a 30mph speed limit. Whilst this is the speed limit of the road in the PM (as the 20mph School Safety Zone Limit doesn't apply), further interrogation revealed that there is consistent parking on one side of the road due to the shops, pharmacy, post office and terraced housing along Main Street. Therefore, a sensitivity test was performed using the AM speed limit along Main Street in the PM. The results of this sensitivity test found that this made a non-material difference (a difference of less than 40 passenger car units, PCUs), therefore it was considered appropriate to retain the 30mph SPC on this link for consistency of results for Highways Development Management (HDM) colleagues.

2.2.6. Table 2.2 shows the outcome of the key junction review, it was found that the Groby Road / Sacheverell Way junction was not modelled with a separate right turn filter lane for vehicles turning from Sacheverell Way to Groby Road. Again, a sensitivity test was performed including the right turn lane on Sacheverell Way and it was found that its inclusion made no material difference (a difference of less than 10 PCUs).

2.2.7. Overall, the coding of the network was found to be satisfactory and in line with the PRTM Highway Coding Manual.

[1] PRTM 2019 Coding Manual (December 2020)

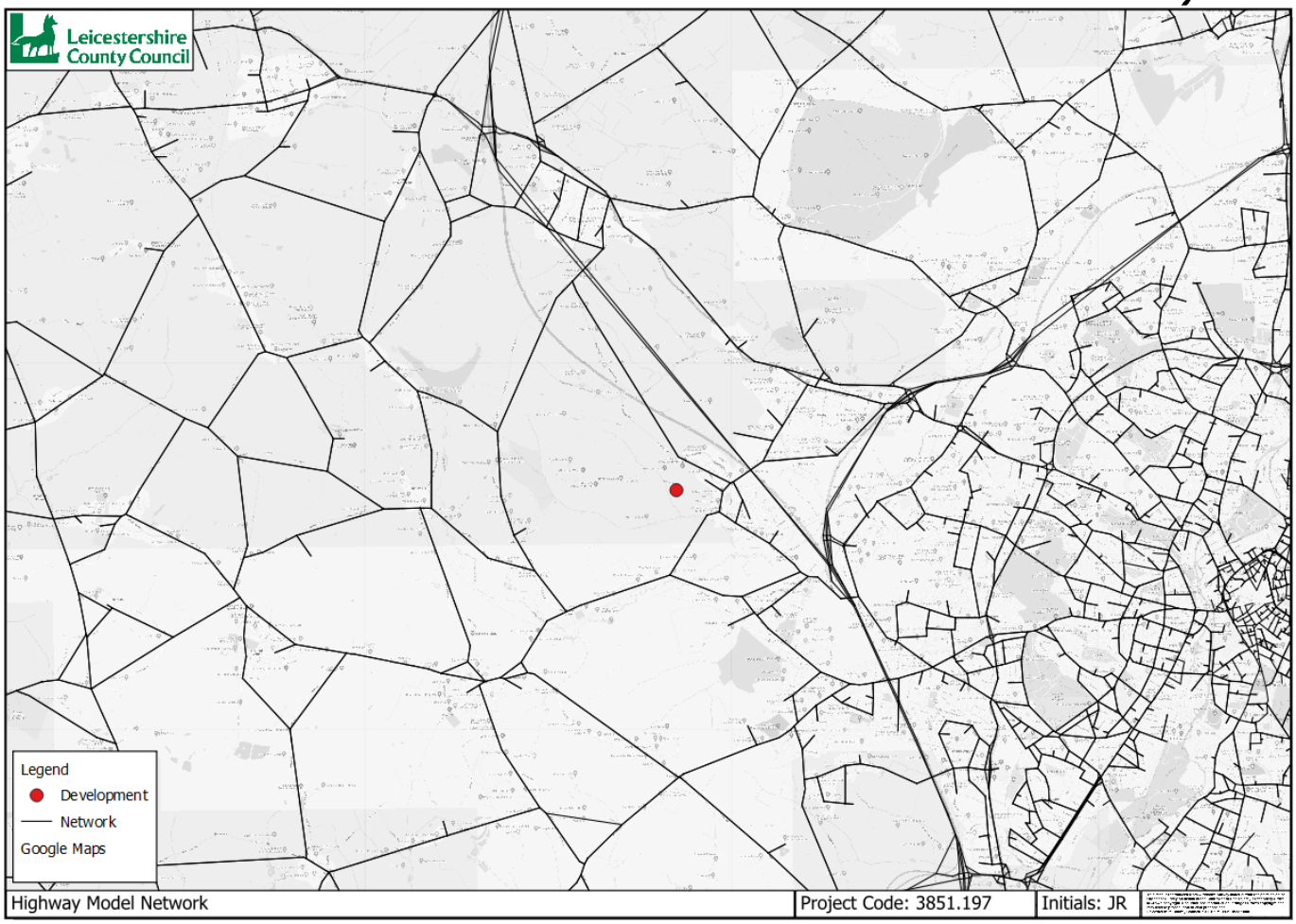

Figure 2.3: Highway Model Network

Links	Distance	Speed Flow Curves	Capacity
Markfield Road	✓	✓	✓
Main Street	✓	✗	✓
Desford Lane	✓	✓	✓
Groby Road	✓	✓	✓
Dane Hill	✓	✓	✓
Station Road	✓	✓	✓
Sacheverell Way	✓	✓	✓

Table 2.1: Highway Network Link Coding Review

Junctions	Lanes	Turning Movements	Flare Length	Saturation Flows
Main Street / Groby Road / Markfield Road Roundabout	✓	✓		✓
Groby Road / Sacheverell Way	✗	✓	✗	✓
Sacheverell Way / Leicester Road Roundabout	✓	✓	✓	✓
Desford Lane / Main Street	✓	✓		✓
Ratby Lane / Main Street / Glenfield Lane Roundabout	✓	✓	✓	✓
Ratby Lane / Kirby Lane Roundabout	✓	✓	✓	✓

Table 2.2: Junction Coding Review

3. Journey Time and Link Flow Validation

3.1. Link Flow Validation

3.1.1. TAG compliance for traffic flows is governed by meeting the following acceptability rules in at least 85% of cases:

- Individual flows with within 100 veh/hour of counts for flows less than 700 veh/hour
- Individual flows within 15% of counts for flows from 700 to 2,700 veh/hour
- Individual flows within 400 veh/hour of counts for flows more than 2,700 veh/hour
- GEH value of <5 for individual flows

3.1.2. A local area review of the 2019 base year highway model for the AM and PM Peak hours is shown in Figure 3.1 and Figure 3.2. Green represents those links where the modelled flow passes TAG acceptability guidelines, blue represents links where the model is under assigning and red represents links where the model is over assigning.

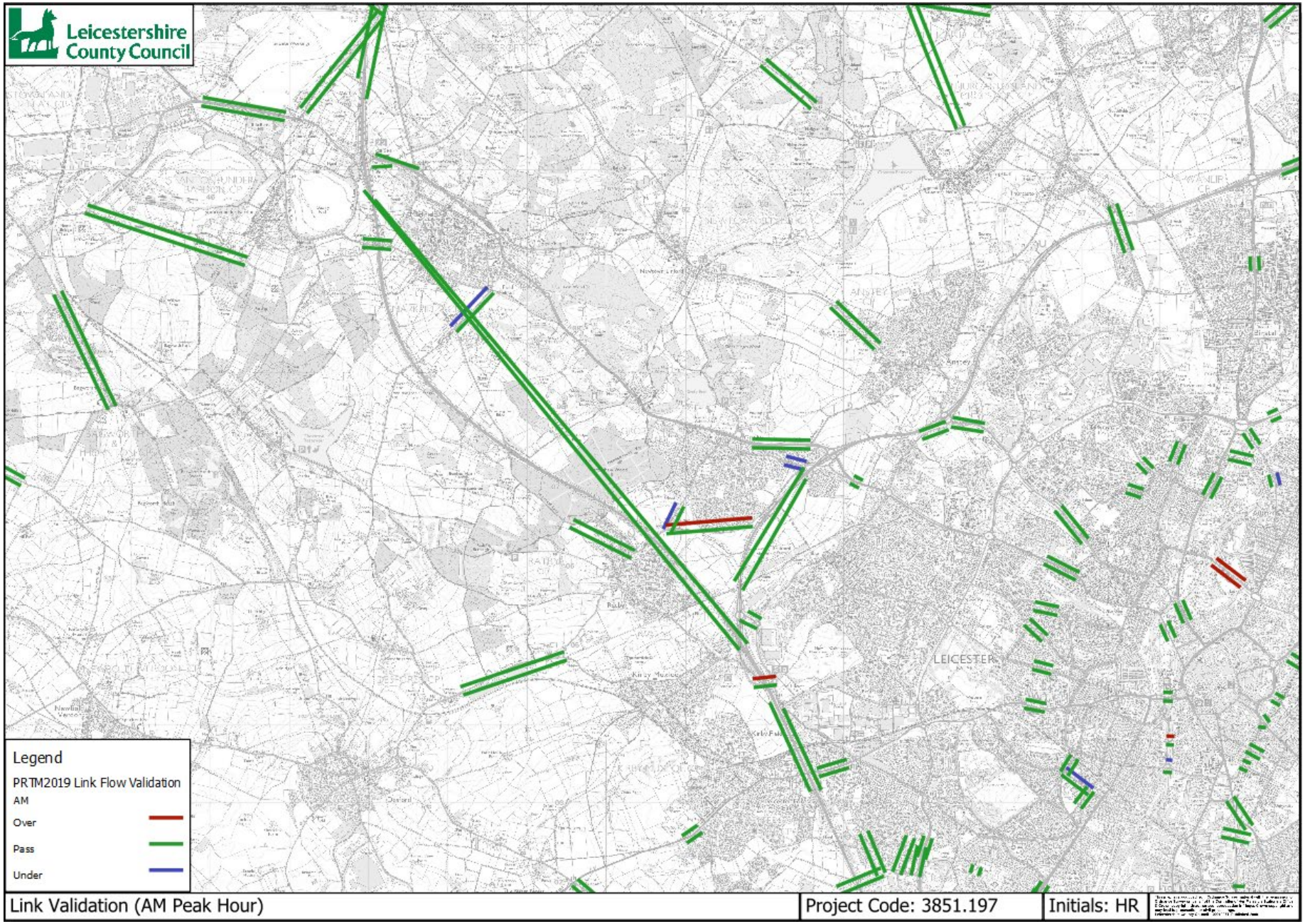

Figure 3.1: Link Validation - AM Peak Hour

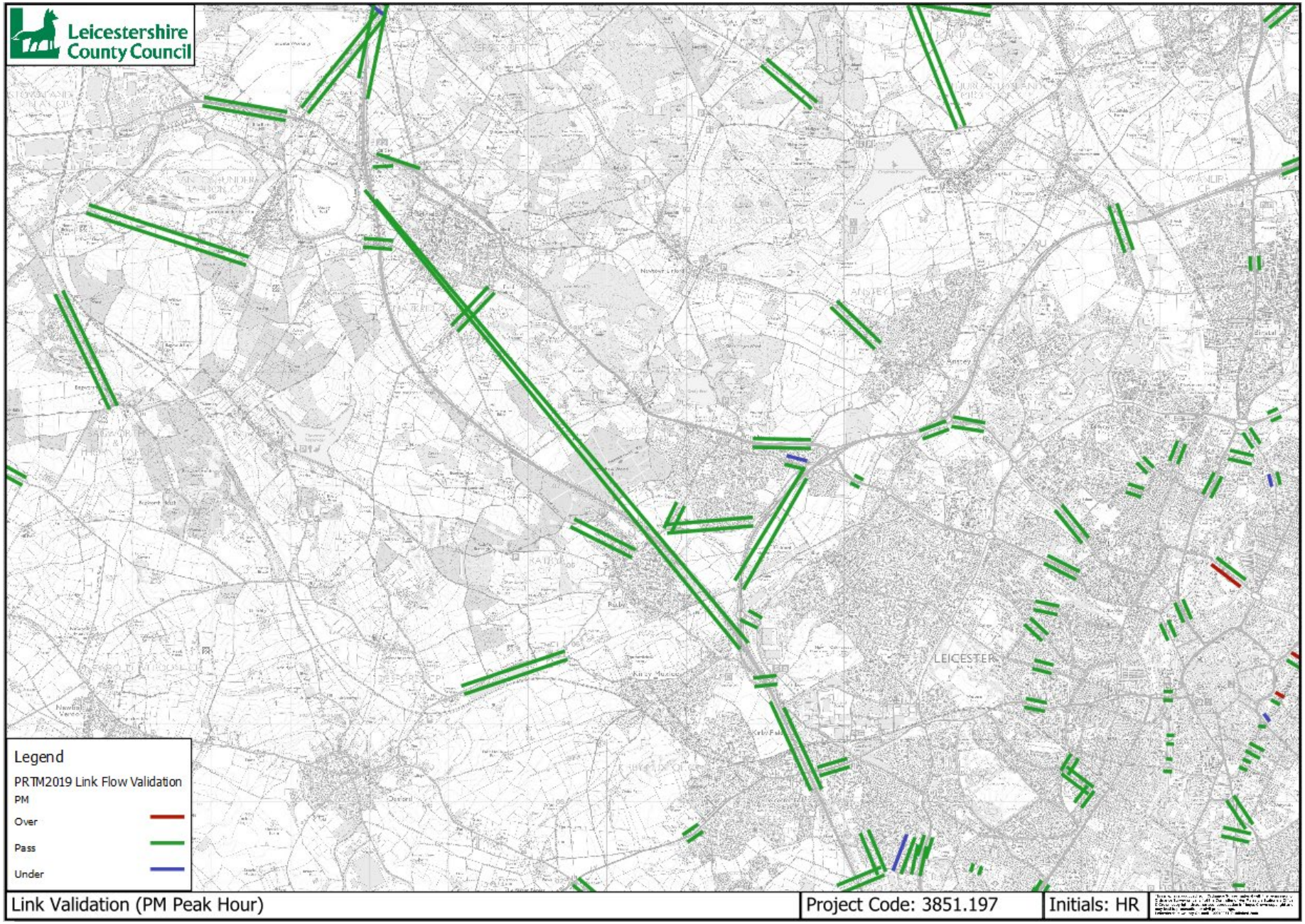

Figure 3.2: Link Validation - PM Peak Hour

3.1.3. Table 3.1 shows how PRTM2019 performs with respect to TAG on modelled versus observed link flows in the vicinity of the proposed development.

3.1.4. In the AM Peak hour 91% of links pass and 96% pass in the PM Peak hour.

		AM	PM
Number of Links	Pass	124	130
	Over Assigned	5	2
	Under Assigned	7	4
Percentage	Pass	91%	96%
	Over Assigned	4%	1%
	Under Assigned	5%	3%

Table 3.1 : Link Validation

3.1.5. Overall, the link flow performance exceeds, in both the AM and PM Peak, the 85% threshold of counts required to pass against TAG guidance. Therefore, the link flow performance in the vicinity of the proposed development is satisfactory.

3.2. Journey Time Validation

3.2.1. TAG compliance for modelled journey times is governed by meeting the following acceptability rules in at least 85% of cases:

- Modelled times along routes should be within 15% of surveyed times (or 1 minute, if higher than 15%)

3.2.2. Figure 3.3 and Figure 3.4 show the journey time routes in the vicinity of the proposed development and whether they pass (green), are faster (blue) or slower (red) in the model than observed.

3.2.3. Table 3.2 shows the journey time performance in the 2019 base year model for the journey time routes in the vicinity of the proposed development. Three routes fail marginally in the PM Peak: A563 ORR2 Clockwise (-15.2%), A50 (A46 to M1) Northbound (18.6%) and A511 (M1 to Bardon Road) Eastbound (-15.5%). The A50 Groby Inbound route fails in the AM Peak (-21.2%) due to an underestimation of delay at the Fourways Junction (A50 / Blackbird Road / Fosse Road North); this is deduced from analysing the journey time graphs shown in 'Appendix A – Journey Time Route Performance'.

3.2.4. Table 3.3 shows the number of routes that pass the TAG criteria in the AM and PM Peak hours. In the AM Peak hour 94% (17 out of 18) of journey time routes meet the TAG criteria, with 83% (15 out of 18) passing in the PM Peak hour.

3.2.5. Graphs comparing observed and modelled journey times for all routes shown below are included in Appendix A.

3.2.6. Although there is a marginal failure on the Leicester Outer Ring Road, which is unlikely to be influenced by the development, the model is deemed 'fit for purpose' based on journey times.

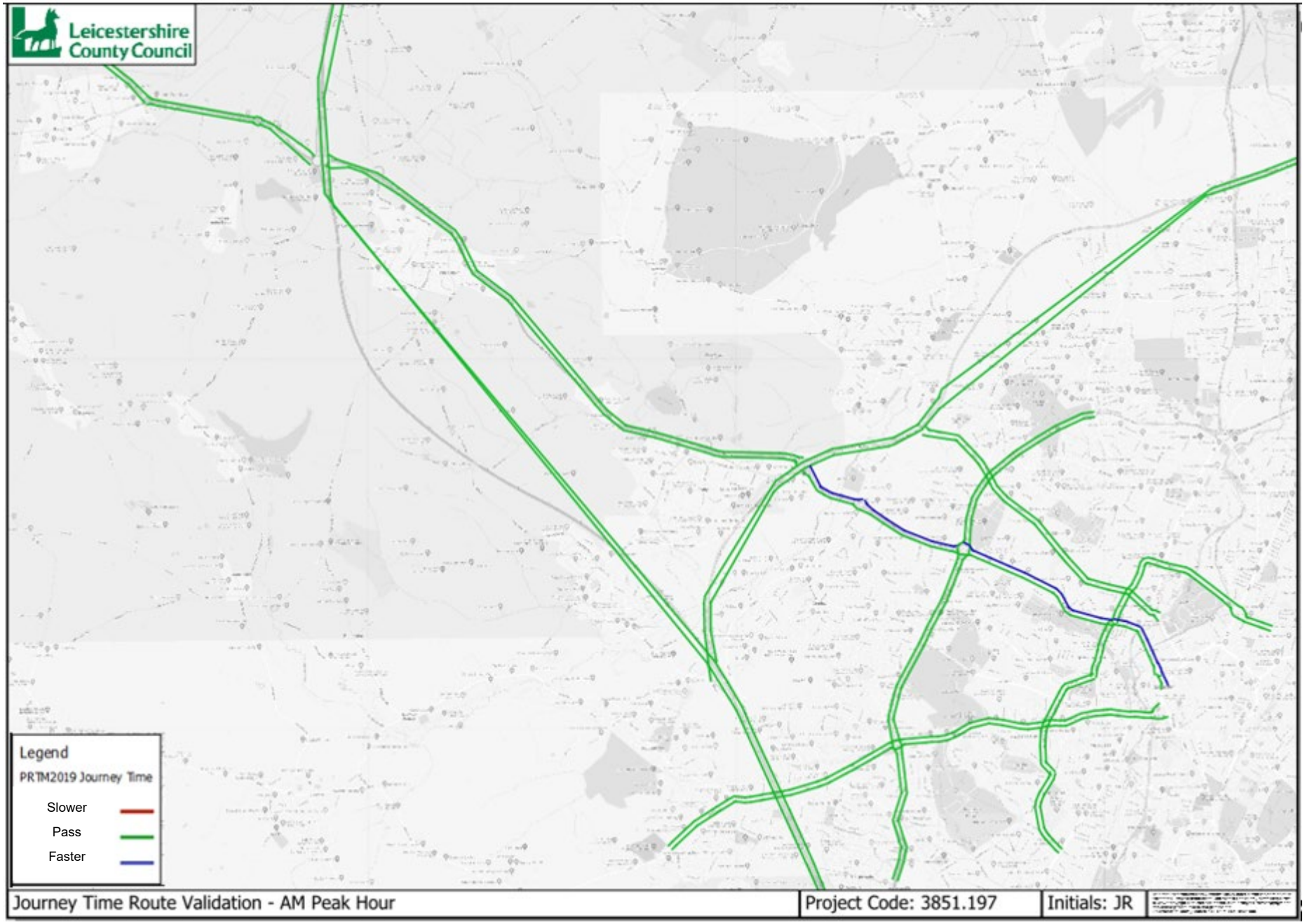

Figure 3.3: Journey Time Route Validation - AM Peak Hour

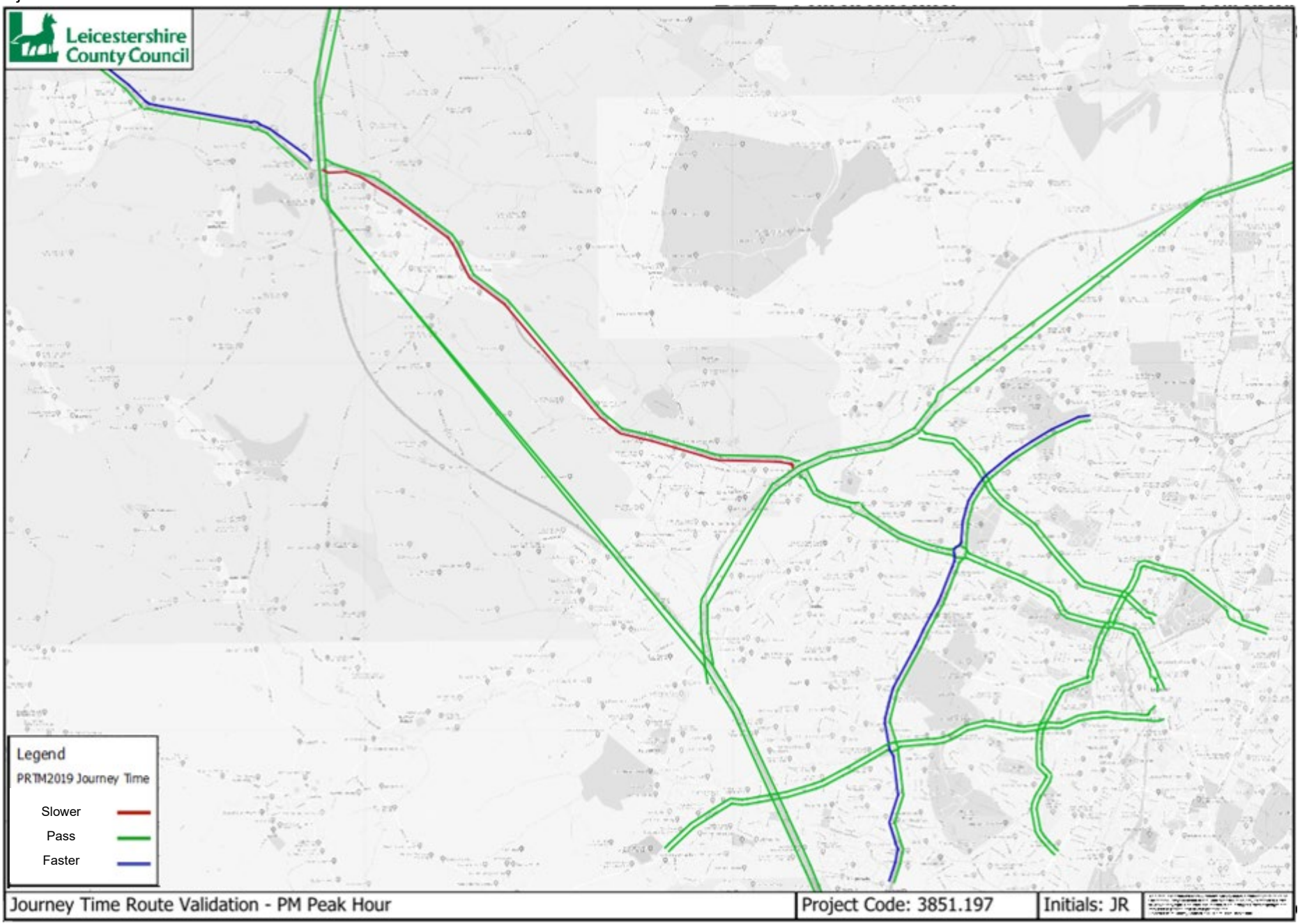

Figure 3.4: Journey Time Route Validation - PM Peak Hour

	Distance (km)		AM Peak Hour					PM Peak Hour				
	Obs.	*Mod.*	*Obs.*	*Mod.*	*Diff*	*%Diff*	*TAG*	*Obs.*	*Mod.*	*Diff*	*%Diff*	*TAG*
B5327 Anstey Inbound	3.88	0.00	11:28	10:15	-01:13	-10.6%	✓	07:45	07:45	00:00	0.1%	✓
B5327 Anstey Outbound	3.92	0.00	08:27	07:16	-01:11	-13.9%	✓	09:16	09:16	00:00	0.0%	✓
A50 Groby Inbound	5.53	0.00	15:29	12:12	-03:17	-21.2%	×	12:05	11:11	-00:54	-7.5%	✓
A50 Groby Outbound	5.54	0.00	09:34	10:09	00:35	6.1%	✓	10:53	11:22	00:29	4.4%	✓
A47 Leicester Forest East Inbound	6.58	0.00	19:03	17:26	-01:37	-8.4%	✓	16:03	14:10	-01:53	-11.7%	✓
A47 Leicester Forest East Outbound	6.59	0.00	13:12	14:09	00:56	7.1%	✓	16:25	14:42	-01:43	-10.4%	✓
A563 ORR2 Anti-Clockwise	8.45	0.00	15:26	14:21	-01:05	-7.0%	✓	13:24	15:01	01:37	12.1%	✓
A563 ORR2 Clockwise	8.47	0.00	15:17	13:57	-01:20	-8.7%	✓	16:29	13:58	-02:31	-15.2%	×
Fullhurst Anti-Clockwise	6.53	0.00	20:36	18:07	-02:29	-12.1%	✓	18:49	18:37	-00:12	-1.1%	✓
Fullhurst Clockwise	6.53	0.00	19:09	17:40	-01:29	-7.8%	✓	18:01	17:41	-00:20	-1.8%	✓
A50 (A46 to M1) Northbound	7.31	0.00	06:42	06:50	00:09	2.2%	✓	06:56	08:14	01:17	18.6%	×
A50 (A46 to M1) Southbound	7.36	0.00	08:30	08:09	-00:21	-4.1%	✓	06:26	07:18	00:53	13.7%	✓
A511 (M1 to Bardon Road) Eastbound	5.07	0.00	06:17	05:52	-00:24	-6.5%	✓	07:15	06:08	-01:07	-15.5%	×
A511 (M1 to Bardon Road) Westbound	5.22	0.00	06:27	05:52	-00:35	-9.0%	✓	06:31	05:59	-00:31	-8.0%	✓
M1 (Jn16 to 26) Northbound	93.33	0.00	51:46	54:41	02:55	5.6%	✓	53:15	56:17	03:02	5.7%	✓
M1 (Jn16 to 26) Southbound	93.71	0.00	01:32	56:06	-05:26	-8.8%	✓	53:06	55:06	02:00	3.8%	✓
A46 (M1 to A52) Northbound	42.42	0.00	25:29	27:01	01:32	6.0%	✓	26:35	30:23	03:48	14.3%	✓
A46 (M1 to A52) Southbound	43.47	0.00	29:05	28:40	-00:25	-1.4%	✓	24:33	26:49	02:16	9.2%	✓

Table 3.2: Journey Time Route Validation in the vicinity of Land West of Ratby Proposed Development

	AM		PM	
Pass	17	94%	15	83%
Fail	1	6%	3	17%

Table 3.3: Journey Time Route Validation

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4. Summary

4.1.1. This base year highway model review is focused on assessing the suitability of the PRTM for the assessment of the proposed development Land West of Ratby in the AM and PM Peak hours.

4.1.2. The review has considered many elements of the model, including: modelled link flow and journey time against data collected as part of the model development; zone system; network structure; and, coding in the vicinity of the proposed development.

4.1.3. The model zone system is considered to contain sufficient detail for a strategic assessment of the proposed development. It is suggested that the proposed development and nearby approved developments (22/00648/OUT and 20/00462/FUL) are contained in their own new development zone, with trip generation constrained to their transport assessments, to allow for detailed analysis and reporting of development trips. The Land West of Ratby development being assessed will also be included in a separate development zone.

4.1.4. The highway network close to the proposed development, including key junctions, has been reviewed and is considered suitable for the assessment. However, it was found that the Groby Road / Sacheverell Way junction did not have a separate right turn lane on Sacheverell Way. A sensitivity test was performed in the AM and PM Peak hour model. Including the right turn lane on Sacheverell Way and it was found that its inclusion made no material difference (a difference of less than 10 PCU).

4.1.5. It was also found that Main Street had different speed and associated SFC between the AM and PM Peak hours. In the AM it is coded with a speed limit of 20mph, representing the 20mph School Safety Zone along that link, whereas in the PM Peak it is coded with a 30mph speed limit. Whilst this is the speed limit of the road in the PM (as the 20mph School Safety Zone Limit doesn't apply), further interrogation revealed that there are parked consistently on one side of the road due to the shops, pharmacy, post office and terraced housing along Main Street. Therefore, a sensitivity test was performed using the AM speed limit along Main Street in the PM. The results of this sensitivity test found that this made a non-material difference (a difference of less than 40 passenger car units, PCUs), therefore it was considered appropriate to retain the 30mph SPC on this link for consistency of results for Highways Development Management (HDM) colleagues.

4.1.6. In the link flow performance, 136 links were considered in the vicinity of the proposed development. In the AM Peak hour 91% of links pass and 96% pass in the PM Peak hour, suggesting that both time periods are robust in relation to the 85% TAG criterion.

4.1.7. In respect of journey time routes, 94% (17 out of 18) and 83% (15 out of 18) routes meet TAG criterion in the AM and PM Peak hours respectively. The 3 routes that fail in the PM Peak do so only marginally, whilst the route failing in the AM Peak is more significant (-21.2%). Nevertheless, it is considered that the route is far enough away from the proposed development to not have an impact on the assessment of the proposed development.

4.1.8. Based on this base year model review the PRTM is considered suitable for the strategic assessment of the proposed development at Land West of Ratby.

6. Contact Details

We trust that our report meets your expectations and look forward to working with you again soon.

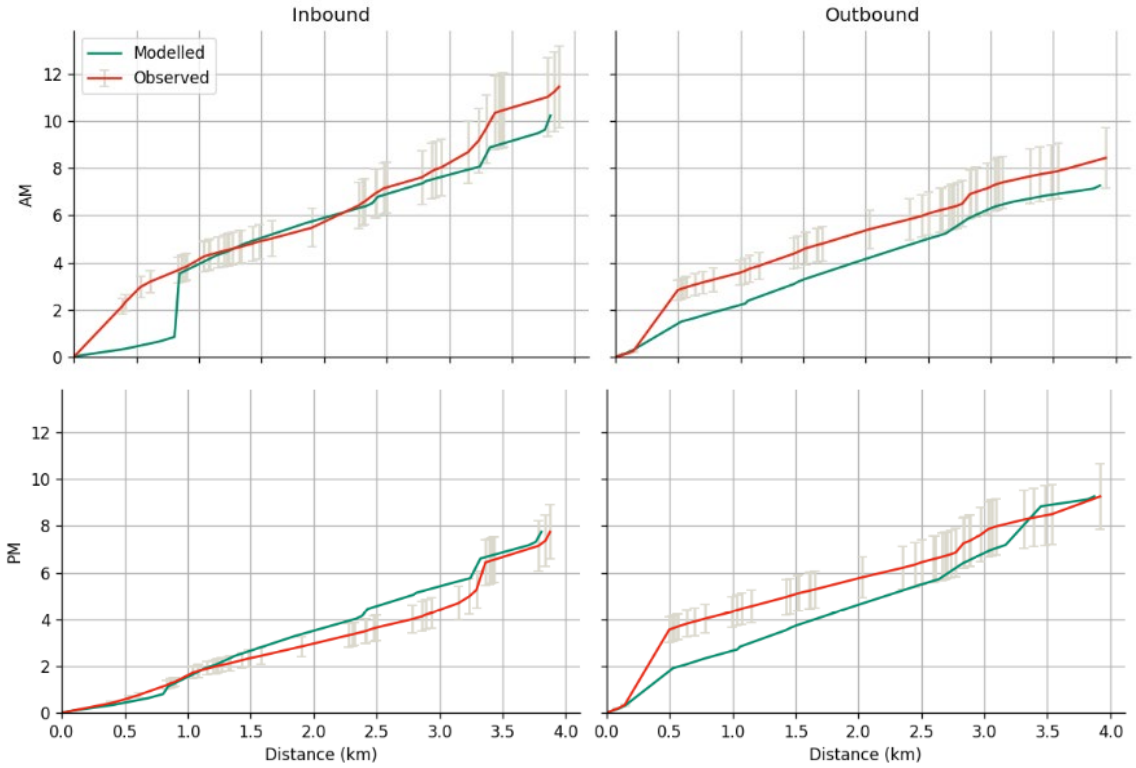
If you have any questions, please do not hesitate to contact:

Environment & Transport Department Commissioning Framework
Network Data & Intelligence
Environment & Transport Department
Leicestershire County Council

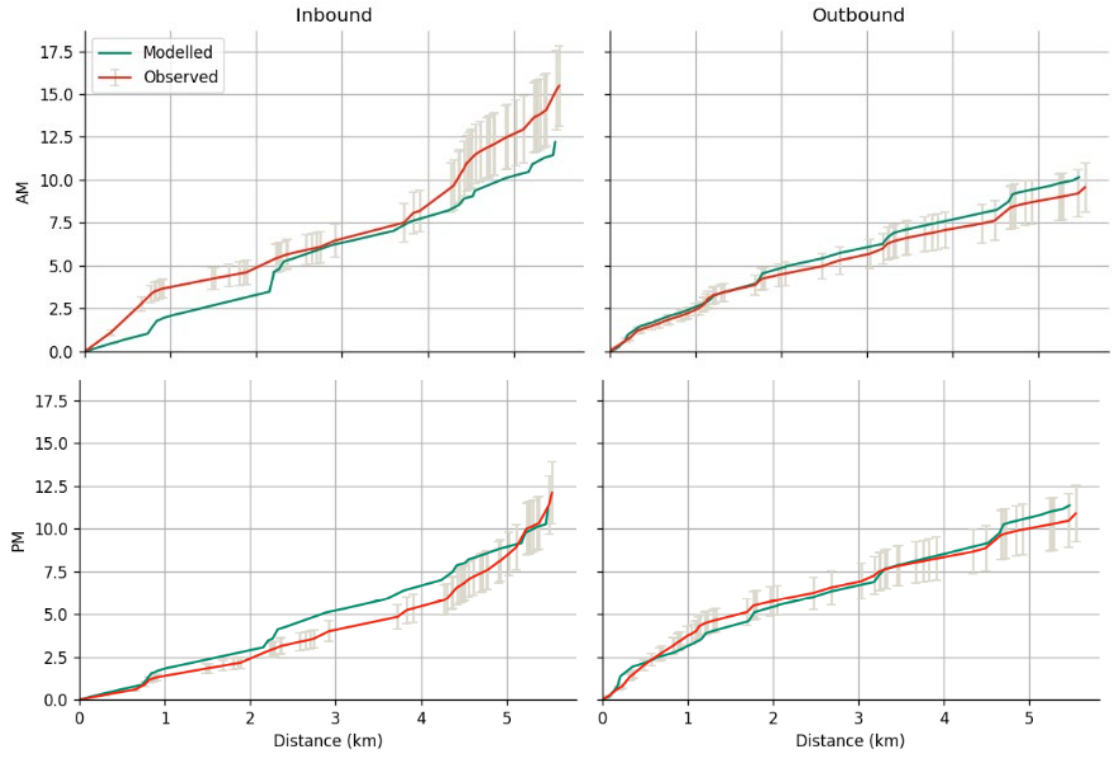
Email: etcf@leics.gov.uk

7. Appendix A – Journey Time Route Performance

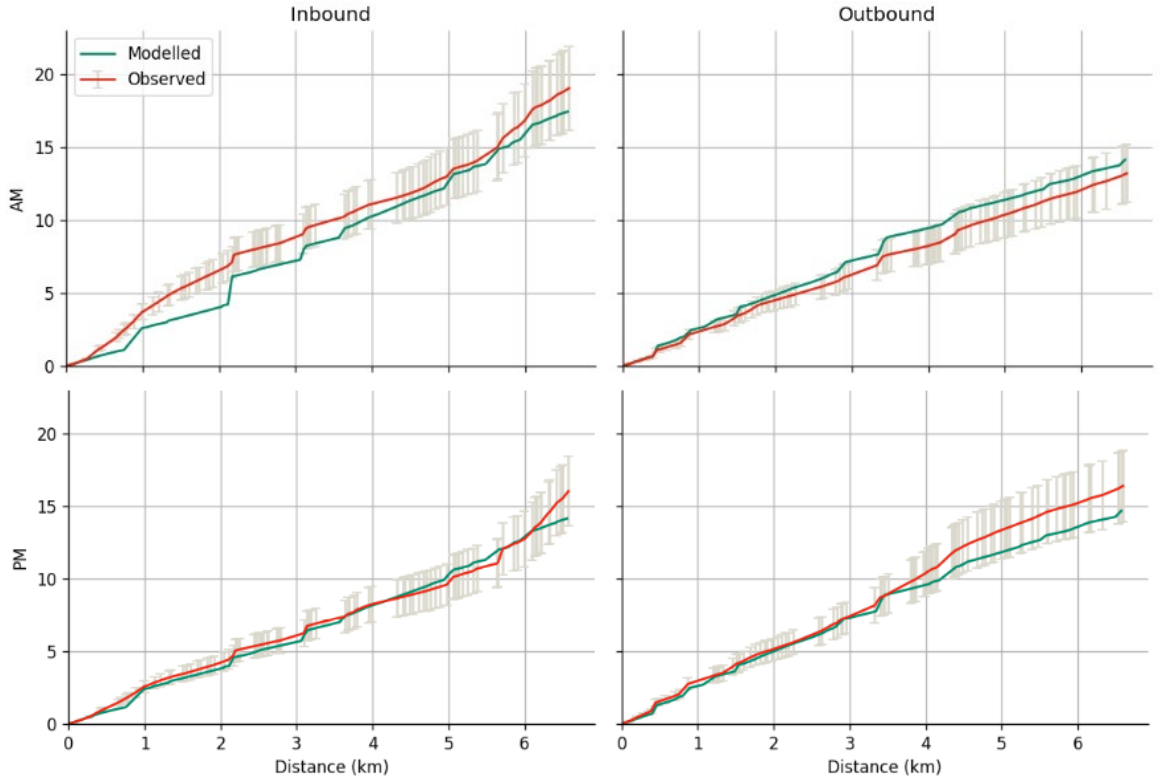
B5327 Anstey



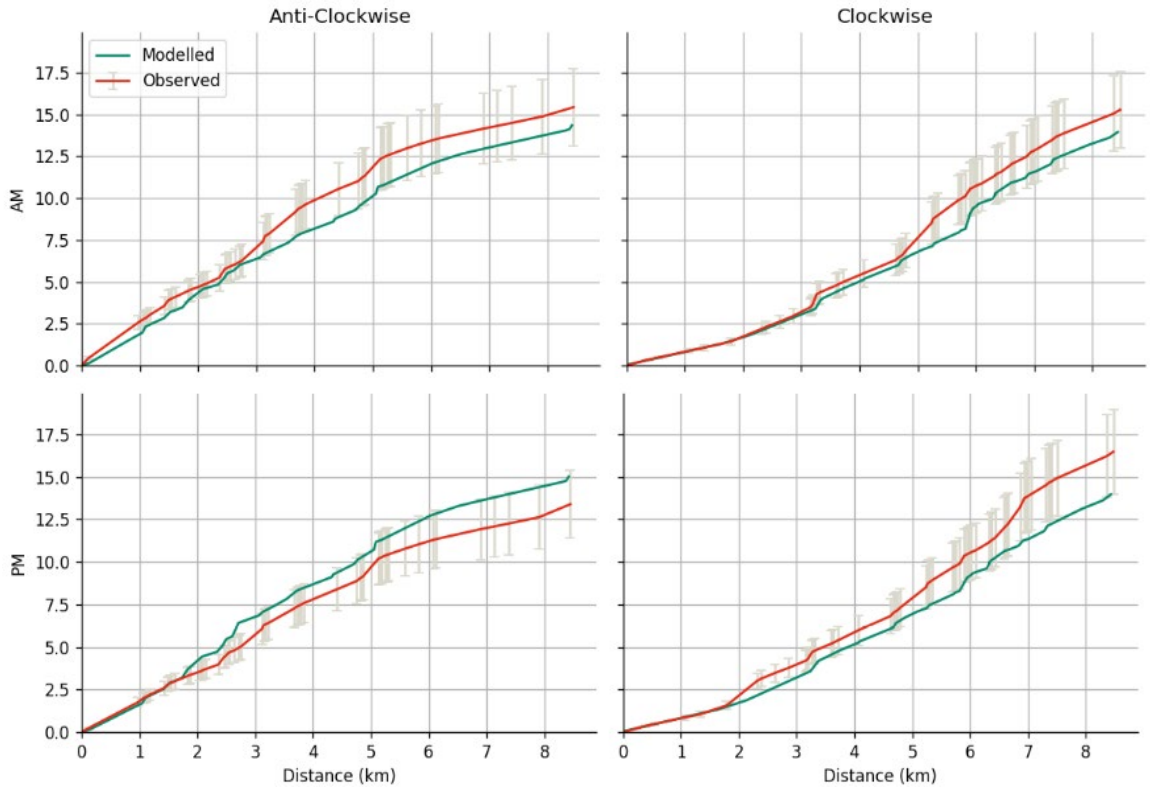
A50 Groby



A47 Leicester Forest East



A563 ORR2



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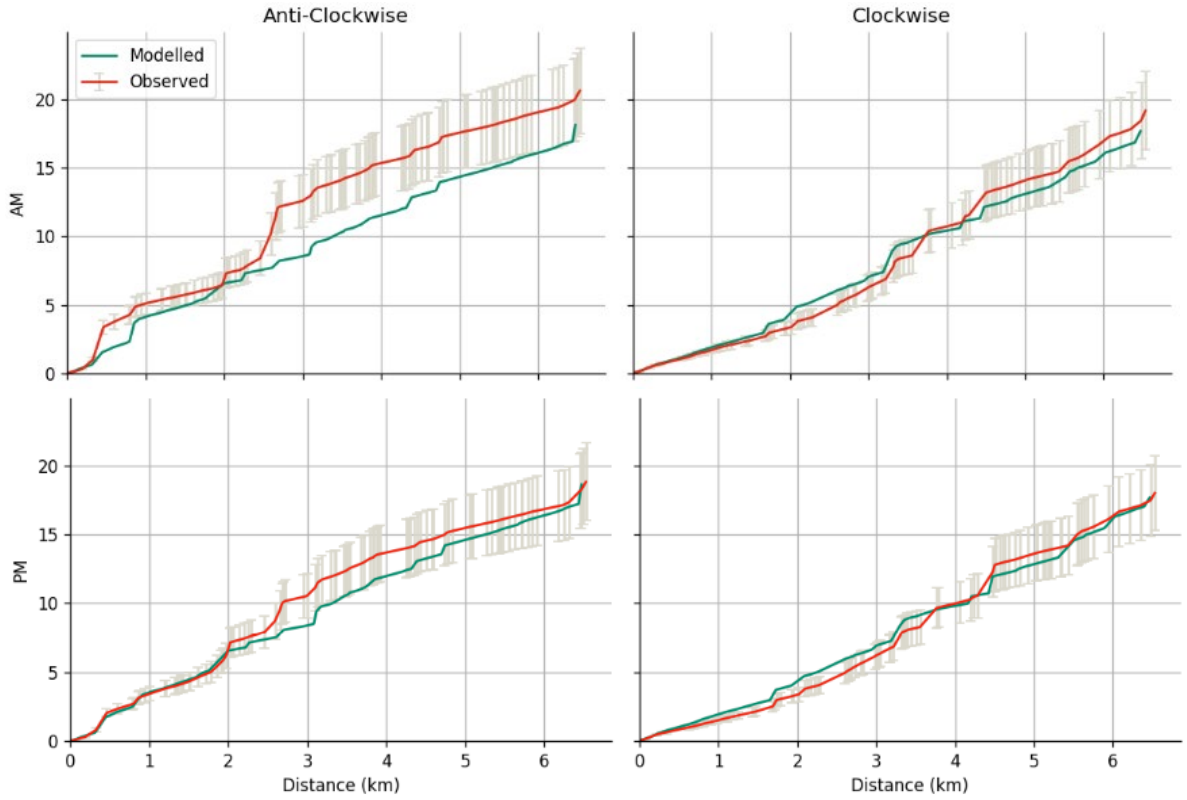
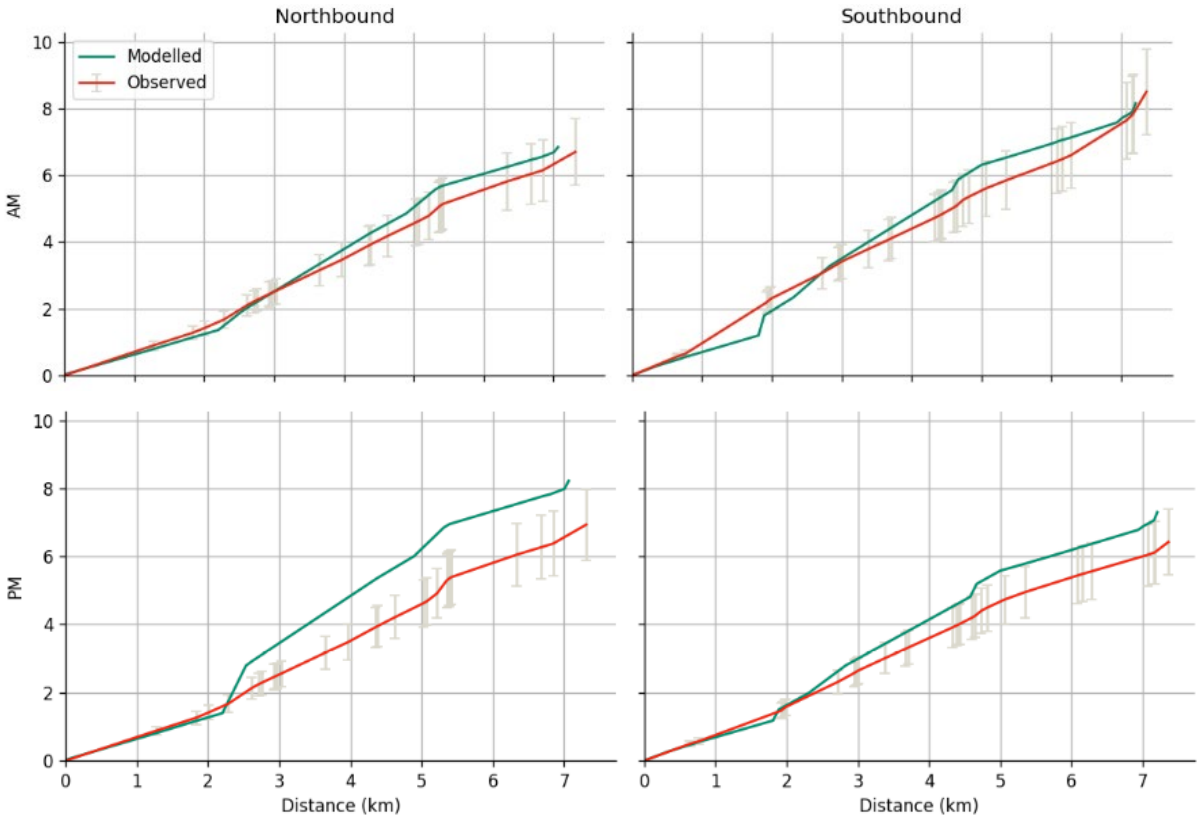
Fullhurst



A50 (A46 to M1)



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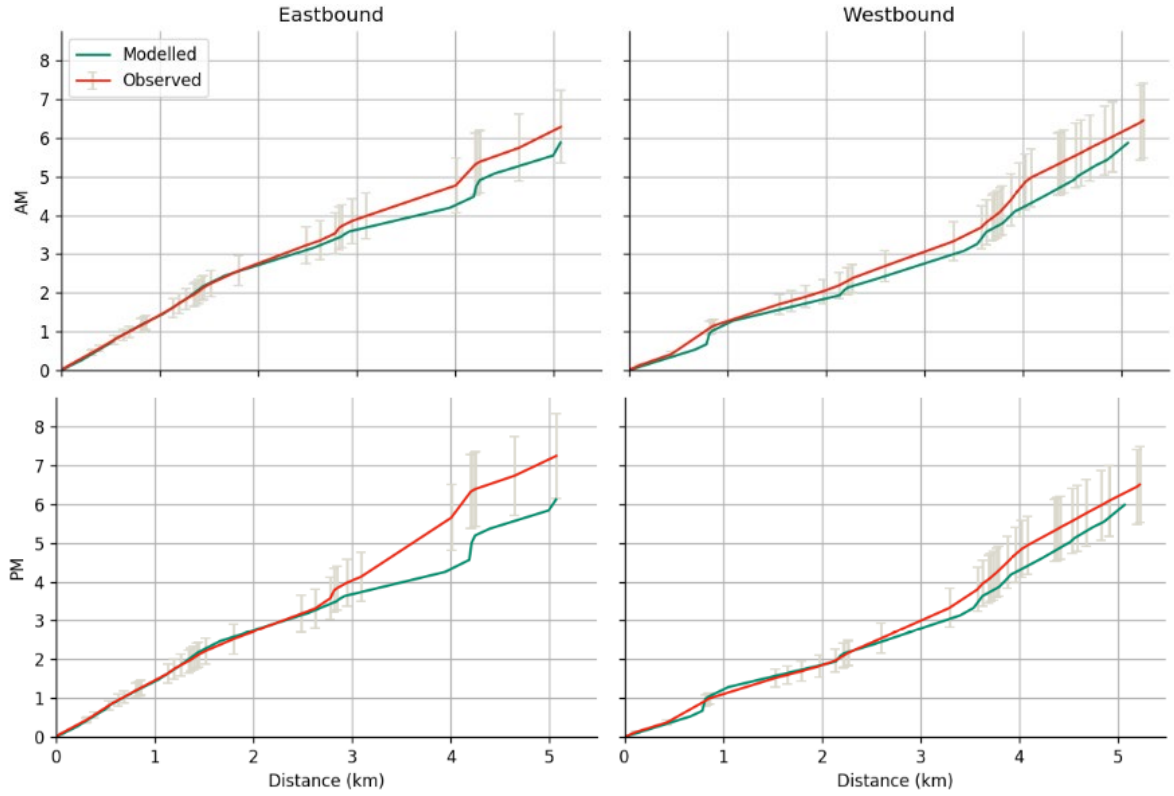
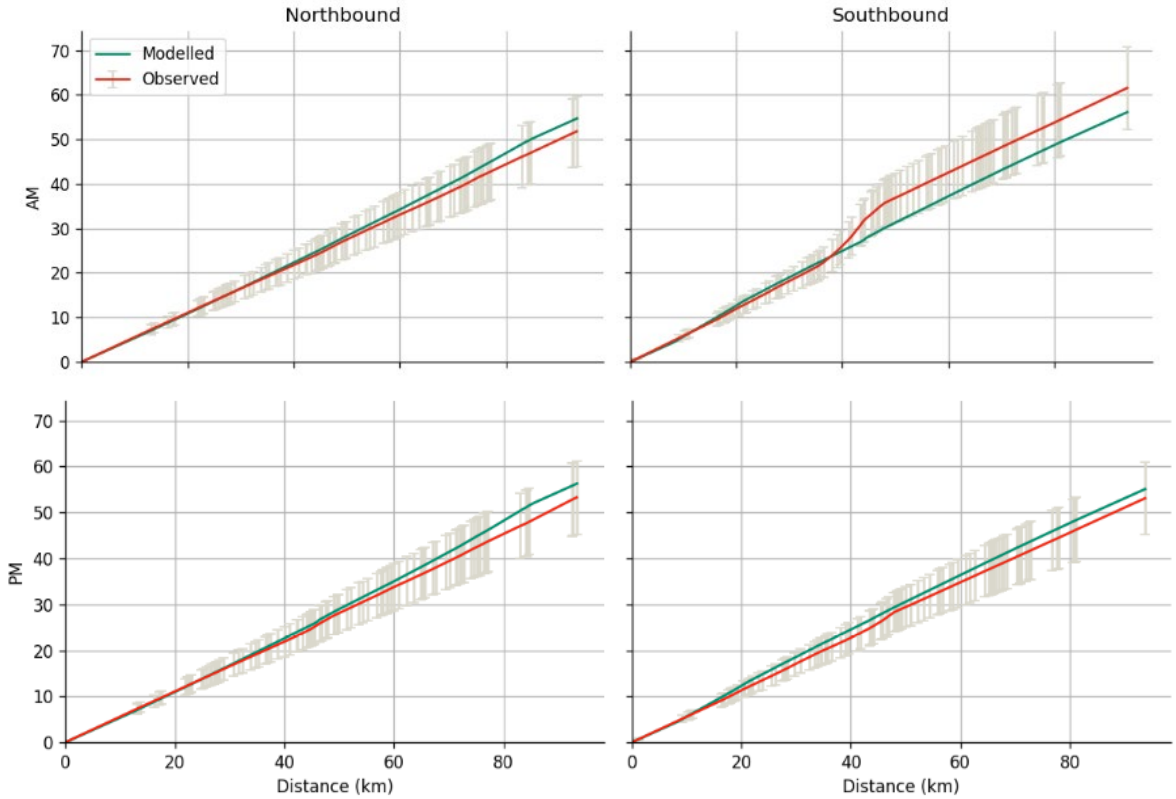
A511 (M1 to Bardon Road)



M1 (Jn16 to 26)



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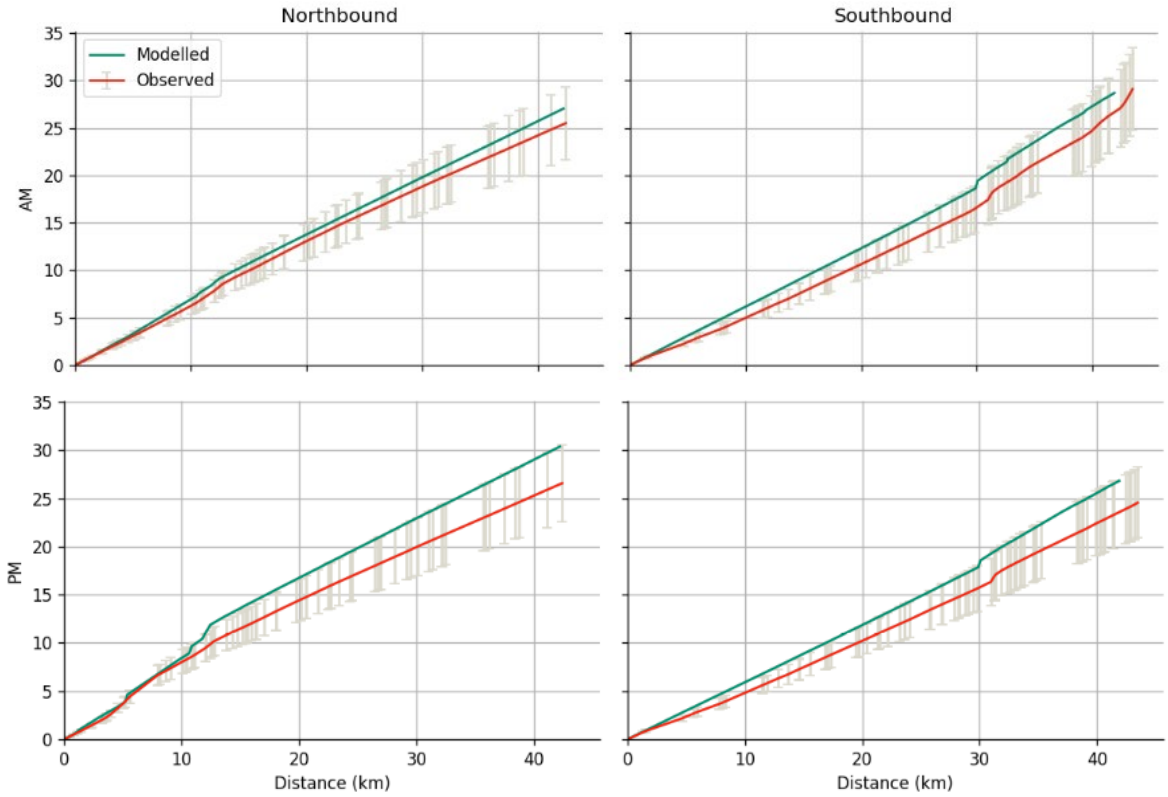
A46 (M1 to A52)



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