Retford Transport Assessment

Bassetlaw District Council

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Prepared on Behalf of Tetra Tech Limited. Registered in England number: 01959704

tetratecheurope.com

Tetra Tech Leicester, Executive Park, Avalon Way, Anstey, Leicester, United Kingdom, LE7 7GR
Registered Office: 3 Sovereign Square, Sovereign Street, Leeds, United Kingdom, LS1 4ER

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Primary Author	Rob Holland	Initialled:	RJH

Contributor	-	Initialled:	-

Review By	Alistair Gregory	Initialled:	ASG

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Tetra Tech Leicester, Executive Park, Avalon Way, Anstey, Leicester, United Kingdom, LE7 7GR
Registered Office: 3 Sovereign Square, Sovereign Street, Leeds, United Kingdom, LS1 4ER

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Registered Office: 3 Sovereign Square, Sovereign Street, Leeds, United Kingdom, LS1 4ER

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Tetra Tech Leicester, Executive Park, Avalon Way, Anstey, Leicester, United Kingdom, LE7 7GR
Registered Office: 3 Sovereign Square, Sovereign Street, Leeds, United Kingdom, LS1 4ER

1 INTRODUCTION

1.1 BACKGROUND

1.1.1 Tetra Tech has been appointed by Bassetlaw District Council (BDC) to prepare a Transport Assessment document (TA) to assess the impact of housing growth identified in the latest version of the Draft Local Plan for Bassetlaw was published for consultation in November 2020. The following sites are considered in this report as shown in **Figure 1**:

- HS7 Trinity Farm, Retford – 244 dwellings
- HS8 Milnercroft, Retford – 5 dwellings
- HS9 Former Elizabethan School, Retford – 46 dwellings
- HS10 St. Michael's View, Hallcroft Road, Retford – 20 dwellings
- HS11 Fairy Grove, Grove Road, Retford – 61 dwellings
- HS12 Station Road, Retford – 5 dwellings
- HS13 Ordsall, Retford – 800 dwellings (note that 1,250 dwellings are assessed in this report)

1.1.2 As indicated in the above list, Site HS13 is the largest of the seven sites and therefore, forms the focus of this report. It should be noted that the draft allocation is for a minimum of 800 dwellings. Nevertheless, this report assesses a development of 1,250 dwellings to understand the potential for the site to accommodate more growth than the minimum.

1.1.3 **Figure 2** shows the location of Site HS13 and the site boundary is included in **Appendix A**. Nevertheless, trip generation from all the above sites has been considered in this report. It should be noted that possible development at the 'Garden Village' site does not form part of this TA.

1.1.4 The findings of this report will be used to inform BDC on transport and highway matters relating to Local Plan growth.

1.1.5 The highway network near the site is maintained by Nottinghamshire County Council (NCC) in their capacity as the local highway authority. The A1(T) is maintained by National Highways. BDC is the local planning authority.

1.2 SCOPE OF TRANSPORT ASSESSMENT

1.2.1 This TA has been prepared in accordance with the Ministry of Housing, Communities and Local Government (MHCLG) Planning Practice Guidance 'Travel Plans, Transport Assessments and Statements' (2014), which presents the Government's most up-to-date guidance on the preparation of highways and transportation documents to support development proposals. It has also been prepared in accordance with the National Planning Policy Framework (NPPF).

1.2.2 Preliminary discussions were held with NCC highways in relation to the scope of this report and correspondence is included in **Appendix B**. NCC specifically advised in relation to committed developments and the TA study area. NCC also indicated that Main Road between Ollerton Road and the A638 through the village of Eaton is not well suited to a material increase in traffic. This is because of its existing characteristics.

1.3 TA STUDY AREA

1.3.1 The TA study area has been informed by discussions with NCC and comprises of the following off-site junctions as shown in **Figures 3** and **4**:

- A1/A620 Retford Road/B6079 Retford Road
- A1/B6420 Mansfield Road/A614 Blyth Road/A57
- A1/Elkesley Bridge Road/Jockey Lane/Eskil Way
- A1/B6387 Dover Bottom
- A1 Markham Moor Junction
- A620 Babworth Road/B6420 Mansfield Road/A620 Straight Mile/Sutton Lane
- A620 Babworth Road/Ordsall Road
- A620 Amcott Way/Bridlegate/A620 Hospital Road/A638 North Road/Hallcroft Road
- A620 Amcott Way/A620 Moorgate/A638 Arlington Way
- A638 Arlington Way/Spital Hill/Chapelgate
- A638 Arlington Way/Grove Street
- A638 Arlington Way/A638 London Road/Carolgate
- Ollerton Road/West Hill Road
- A638 London Road/Whitehouses Road
- A638 London Road / Whinney Moor Lane / Bracken Lane
- All Hollows Street / High Street / Goosemoor Lane
- Ollerton Road / Main Road
- A638 / Main Road (Eaton)
- A638 / B6387 Rectory Lane

1.4 REPORT LAYOUT

1.4.1 This TA investigates the highways and transportation issues associated with development of the site. The structure of the report is as follows:

- Chapter 2 summarises relevant planning policy documents.
- Chapter 3 describes existing conditions.
- Chapter 4 outlines development assumptions.
- Chapter 5 explores the opportunities for encouraging sustainable travel.
- Chapter 6 outlines the future assessment year, background traffic growth and committed development traffic.

- Chapter 7 calculates development trip generation.
- Chapter 8 distributes development trips.
- Chapter 9 presents highway impacts.
- Chapter 10 presents the results of capacity assessments.
- Chapter 11 considers the need for mitigation.
- Chapter 12 summarises the report.

2 PLANNING POLICY AND GUIDANCE

2.1 INTRODUCTION

2.1.1 The following planning policy and guidance documents have been considered in the preparation of this TA:

- National Planning Policy Framework (Ministry of Housing Communities and Local Government (MHCLG), July 2021)
- Draft Bassetlaw Local Plan (BDC, November 2020)
- Bassetlaw District Local Development Framework – Core Strategy and Development Management Policies DPD (BDC, 2011)
- Nottinghamshire Local Transport Plan (LTP) 2011 - 2026 (NCC, 2011)
- Nottinghamshire Highway Design Guide (NCC, 2021)
- Travel Plans, Transport Assessments and Statements (MHCLG, 2014)

2.2 NATIONAL PLANNING POLICY FRAMEWORK

The NPPF sets out the Government's planning policies for England and how these should be applied. An updated version of the NPPF was published in July 2021. At the heart of the NPPF is a presumption in favour of sustainable development. In terms of transport, Paragraph 110 states that:

"In assessing sites that may be allocated for development in plans, or 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.

b) safe and suitable access to the site can be achieved for all users;

c) the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; and

d) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree."

2.2.1 Paragraph 111 goes on to state that "Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe."

2.2.2 In order to address this, applications for development should give priority to pedestrian, cycle and public transport movements; address the needs of people with disabilities and reduced mobility; create places that are safe, secure and attractive; allow for the efficient delivery of goods, service and emergency vehicles; and be designed to enable charging of plug-in vehicles.

2.2.3 Considering the above, this TA considers whether the development proposals will provide suitable access for all travel modes, as well as whether any associated increase in traffic will result in a severe cumulative impact.

2.3 DRAFT BASSETLAW LOCAL PLAN

2.3.1 The latest version of the Draft Local Plan for Bassetlaw was published for consultation in November 2020. Policy ST29, Site HS13 covers the land at Ordsall South, which is the subject of this study. For completeness, trip generation from the six other Local Plan sites in Retford is also considered in this report, namely:

- HS7 Trinity Farm, Retford – 244 dwellings
- HS8 Milnercroft, Retford – 5 dwellings
- HS9 Former Elizabethan School, Retford – 46 dwellings
- HS10 St. Michael's View, Hallcroft Road, Retford – 20 dwellings
- HS11 Fairy Grove, Grove Road, Retford – 61 dwellings
- HS12 Station Road, Retford – 5 dwellings

2.3.2 Land at Ordsall South is identified for development for residential, community and open space uses to deliver a safe, sustainable, quality living environment. Development should deliver at least 800 dwellings during the Plan period to 2037 and should incorporate a mix of housing types, sizes and tenures to meet local needs. With regards to transport and movement Policy ST29 states the following for site HS13:

"Be supported by a Transport Assessment and Travel Plan, informed by Local Highways Authority advice, detailing:

a) Safe access to the site for vehicles, cyclists and pedestrians from Ollerton Road.

b) The impact on surrounding highways and relevant mitigation measures including:

- *A financial contribution to improve the North Road/Babworth Road roundabout.*
- *A financial contribution to improve Goosemoor London Road mini roundabout.*
- *A financial contribution to improve Ordsall/Babworth mini roundabout.*
- *A traffic management scheme in Ordsall Old Village.*

c) New and improved pedestrian and cycle links from the site to neighbouring areas including:

- *A marked cycle lane along Brecks Road*
- *Improvements to the existing public rights of way that cross the site and run along its boundaries.*
- *A marked cycle lane along Ollerton Road/West Hill Road and Ordsall Park Road to Ordsall Primary School, Retford Leisure Centre and Retford Oaks School via West Carr Road.*
- *improvements to public realm in Ordsall Old Village and to Goosemoor Play Area and Sports Ground, including bike storage facility*

d) *A subsidised high frequency bus service from the site to Retford town centre and the wider area supported by appropriate public transport infrastructure.*

e) *Appropriate off road parking provision for vehicles and cycles, and an appropriate servicing strategy for non-residential development."*

2.4 BASSETLAW DISTRICT LOCAL DEVELOPMENT FRAMEWORK – CORE STRATEGY & DEVELOPMENT MANAGEMENT POLICIES DPD 2011-2028

2.4.1 Adopted by Bassetlaw District Council on 22 December 2011, the Core Strategy identifies the overarching framework for new development over an 18-year period and sets out a vision for change in Bassetlaw up to 2028.

2.4.2 Within the Vision for Bassetlaw, the Core Strategy states that future development proposals in Retford for the period up to 2028:

> "*will continue to provide an attractive range of homes and a good concentration of services and facilities, allowing it to maintain its role in supporting surrounding rural communities without compromising its market town character. Development in Retford will, therefore, protect the town's retail and service role, delivering growth of a scale that respects the town's heritage assets and, where appropriate, supporting the increased value of the Chesterfield Canal*".

2.4.3 A set of 10 Strategic Objectives are, as such set out as part of the Core Strategy. Of these 10 Objectives, the following are most applicable to future development within the Retford area:

- **SO1** – To provide a range of high-quality market and affordable houses in Worksop, Retford, Harworth Bircotes, Carlton-in-Lindrick/Langold, Tuxford, Misterton and sustainable rural settlements (as identified in the Settlement Hierarchy) to meet the diverse needs of Bassetlaw's growing population.
- **SO4** – To enhance and protect the vitality and viability of the centres of Worksop, Retford, Harworth Bircotes and Tuxford, through environmental improvements and provision of increased town centre retail, employment and leisure development.
- **SO6** – To ensure that all new development addresses the causes and effects of climate change by, as appropriate, reducing or mitigating flood risk; realising opportunities to utilise renewable and low carbon energy sources and/or infrastructure, alongside sustainable design and construction; taking opportunities to achieve sustainable transport solutions; and making use of Sustainable Drainage Systems.
- **SO7** – To ensure that all new development enhances the attractiveness and local distinctiveness of the area and, where appropriate, achieves its full potential against national and local design standards.
- **SO10** – To ensure the provision of the essential physical, social and green infrastructure required to support the District's growth.

2.4.4 This TA explores whether development of the site will positively contribute towards the vision and applicable Strategic Objectives set by BDC.

2.5 NOTTINGHAMSHIRE LOCAL TRANSPORT PLAN (LTP3) 2011-2026

2.5.1 The Nottinghamshire Local Transport Plan (LTP3) 2011-2026 was published in 2011. Replacing the second Local Transport Plan for Greater Nottingham, the LTP3 details the transport strategy for the whole of the county of Nottinghamshire for the period between April 2011 and March 2026.

2.5.2 Underpinned by 12 local transport objectives which identify how transport in Nottinghamshire will help support economic growth; protect the environment; improve health and safety; improve accessibility, and maintain and improve existing infrastructure, three transport goals are set out within the LTP3. These Transport Goals are to:

- Provide a reliable, resilient transport system which supports a thriving economy and growth whilst encouraging sustainable and healthy travel.
- Improve access to key services, particularly enabling employment and training opportunities.
- Minimise the impacts of transport on people's lives, maximise opportunities to improve the environment and help tackle carbon emissions.

2.5.3 This TA considers how development of the site accords with the aims and policies of the Nottinghamshire Local Transport Plan as it is in an area easily accessible by sustainable modes of transport.

2.6 NOTTINGHAMSHIRE HIGHWAY DESIGN GUIDE

2.6.1 The Nottinghamshire Highway Design Guide provides clear and common guidance to developers across Nottinghamshire with reasonably practicable and agreeable guidance to assist in the delivery of housing growth, encourage sustainable development and minimise the impact of development on the highway.

2.6.2 This TA has considered the Nottinghamshire Highway Design Guide in the production of this report.

2.7 TRAVEL PLANS, TRANSPORT ASSESSMENTS AND STATEMENTS

2.7.1 The Planning Practice Guidance provides information relating to the preparation of a TA, including when they are required, the scope of the report and what information to include. This TA has been prepared in accordance with the Planning Practice Guidance and NCC Travel Plan Guidance https://www.nottinghamshire.gov.uk/media/124515/travelplanguidance.pdf

2.8 SUMMARY

2.8.1 Future development of the site should be in accordance with the policy objectives set out in the national and local planning policy summarised in this chapter.

3 EXISTING CONDITIONS

3.1 EXISTING SITE

3.1.1 The location of the Ordsall South site is illustrated on **Figures 1** and **2**. The site currently comprises agricultural land and is bound to the north by residential development and Retford Golf Club, and to the east, west and south by agricultural land.

3.1.2 For this TA, the site is assumed to be accessed via Ollerton Road, which bisects the site and divides the site into an eastern and western parcel. The western parcel of the site is larger than the eastern parcel.

3.2 NEARBY LOCAL FACILITIES AND AMENITIES

3.2.1 Retford town centre is approximately 4.0km from the site and provides a range of employment, retail, leisure, and other needs. **Table 1** below shows the approximate distance between the site and other key local facilities/amenities nearer to the site. The distances should be treated as approximate distances as they will vary depending on where within the site the measurement is taken from.

Table 1 - Summary of Distances to Nearby Local Amenities

Nearby Local Amenities	Approximate Distance (Kilometers)
Convenience Store	1.0
Post Office	1.0
Pre-School	1.0
Pharmacy	1.1
Primary School	1.6
Retford Train Station	1.8
Secondary School	2.6
Retford Hospital	3.5
Doctor's Surgery	3.7
Dentist	3.8

3.3 WIDER CONTEXT

3.3.1 In the wider area, **Table 2** below summarises approximate distances to the nearest large towns and cities.

Table 2 - Distance to Nearby Towns and Cities

Nearby Local Amenities	Approximate Distance (In Miles)
Doncaster	19.5
Lincoln	21.9
Nottingham	29.8
Sheffield	30.0

3.4 PEDESTRIAN ACCESSIBILITY

Pedestrian Infrastructure

3.4.1 There are no footways on Ollerton Road adjacent to the site frontage. To the north of the site, footways are provided on both sides of Ollerton Road and form part of a network of pedestrian routes within Retford. To the south of the site there are no footways adjacent to Ollerton Road.

3.4.2 A public footpath is aligned in an east-west direction through the western parcel of the site. The footpath connects Brecks Road in the east with a bridleway beyond the western boundary of the site. Several public footpaths are aligned through the eastern parcel of the site, along Water Lane and connecting to High Street. These footpaths form part of a network of Public Rights of Way in the local area, increasing connectivity with Ordsall and the wider countryside.

Pedestrian Catchment Area

3.4.3 In terms of what constitutes a reasonable walking distance it is necessary to consider what is realistic for a walking trip. The Chartered Institution of Highways and Transportation (CIHT) document 'Guidelines for Providing for Journeys on Foot' (2000) states that "walking accounts for over a quarter of all journeys and four fifths of journeys less than one mile". The document also provides guidance on acceptable walking distances and suggests that a preferred maximum walking distance of 2km is applicable for commuting or school trips.

3.4.4 It can therefore be concluded that distances up to 2km can be considered reasonable to be undertaken on foot, and that walking is a realistic mode to consider for trips within this distance. Whilst this does not preclude pedestrians from undertaking longer journeys, it is considered that 2km is reasonable. Based on an average walking speed of 1.4 m/s it can be concluded that a 2km walk would take approximately 24 minutes.

3.4.5 A 2km catchment from the site is presented at **Figure 5.** The catchment demonstrates that all Ordsall and surrounding areas of Retford are within 2km of the site. As a result, many residential areas and amenities such as the nearest convenience store, pharmacy, post office, pre-school and primary school are located within a reasonable walking distance to the site. **Table 1** summarises these distances.

3.4.6 Improvements will be required to existing pedestrian infrastructure to maximise accessibility of the site for pedestrians. Any new infrastructure should tie in with existing nearby infrastructure. Subject to infrastructure improvements, the location of the site near to local facilities/amenities may help to encourage a proportion of shorter trips from the area to be made on foot. It is considered that travel on foot should be the key mode of travel for trips originating from the site and the surrounding area. Walking should be encouraged as the most appropriate mode of travel for local trips.

3.5 CYCLIST ACCESSIBILITY

Cycle Infrastructure

3.5.1 Retford has the key attributes to be an attractive town to cycle around. The urban area is less than 4km from north to south and less than 3km from east to west, which coupled with the generally flat topography ensures that all major trip generators are within easy reach.

3.5.2 The corridors formed by the river and canal provide good opportunities to travel across the town without coming into conflict with general traffic, giving Retford significant potential to make cycling the mode of choice for all trips to access employment, education, healthcare and leisure facilities provided locally.

3.5.3 However, at present, the coverage and quality of infrastructure to support and encourage cyclists falls below modern standards, both in terms of on-road and off-road routes in place, including those along the canal and river. Where attractive links are provided, they are often undermined by a lack of continuity and the absence of safety features at major junctions.

3.5.4 In the immediate vicinity of the site, there are no formal cycle facilities along Ollerton Road meaning that cyclists must travel within the carriageway.

Cycle Catchment Area

3.5.5 In much the same way as pedestrian trip lengths are defined, the length of cycling trips will be governed by routes that are available and trip length, although several other factors often mitigate for or against making these trips.

3.5.6 Local Transport Note 1/20 'Cycle Infrastructure Design' (DfT, 2020) states that *"two out of every three personal trips are less than five miles in length – an achievable distance to cycle for most people*". Accounting for the fact that some people will not want to cycle five miles, three miles has been assumed in this report to inform a catchment area for cycle trips. Three miles is equivalent to approximately 5km.

3.5.7 **Figure 5** shows a 5km catchment centred on the site. A 5km distance includes all of Retford, Ordsall, Newtown and Balk Field. Cycling should also therefore be encouraged as an appropriate mode of travel for local trips.

3.6 BUS ACCESSIBILITY

3.6.1 The CIHT document 'Buses in Urban Developments' (2018) recommends a maximum walking distance to bus stops of 400m. Therefore, 400m is generally regarded as being the maximum walking distance to a public transport access point.

3.6.2 In the first instance, it should be noted that the size of the site is such that, the distance to a bus stop will vary depending on where the measurement is taken from. The far extremities of the site are more than 1km from Ollerton Road. Future development of the site should therefore facilitate bus access into the development itself. Nevertheless, for the purpose of this Chapter, existing bus provision is considered.

3.6.3 The nearest bus stops to the site are shown in **Figure 1**. A southbound bus stop is located on the eastern side of Ollerton Road, approximately 100m north of the site boundary, opposite Glen Eagles Way. The bus stop comprises of a flag and pole and timetable information.

3.6.4 Approximately 350m north of the site boundary, bus stops are located on both sides of West Hill Road (Brecks Road stops). Both stops consist of a flag, timetable information and a shelter.

3.6.5 Additional bus stops are located approximately 650m from the northern site boundary on Welbeck Road and High Street. A summary of regular bus services stopping at the nearest bus stops to the site is provided in **Table 3**.

Table 3 - Summary of Bus Services Stopping near the Site

Service / Route	Bus Stop	Mon - Fri Frequency			Sat Frequency
		7am – 9am	9am – 5pm	4pm - 6pm	9am – 6pm
335: Retford - Ollerton	Glen Eagles Way	N/A	N/A	1 Bus	1 Bus
335: Newark – Retford	Brecks Road	1 Bus	N/A	N/A	1 Bus
Doncaster Shopper: Trafford Way at Doncaster Interchange – Tuxford	Glen Eagles Way	N/A	1 Bus	N/A	N/A
Doncaster Shopper: Tuxford – Trafford Way at Doncaster Interchange	Brecks Road	N/A	1 Bus	N/A	N/A
Sherwood Arrow: Retford - Nottingham	Glen Eagles Way	2 Buses	4 Buses	1 Bus	4 Buses
Sherwood Arrow: Nottingham – Retford	Brecks Road	N/A	4 Buses	1 Bus	4 Buses
47 Retford – Ordsall	Brecks Road	N/A	1 Bus Every Hour Between 09:15 and 14:15	1 Bus	1 Bus Every Hour Between 09:15 and 15:15, Then A Further 2 Buses
47 Ordsall – Retford	Brecks Road	N/A	1 Bus Every Hour Between 09:25 and 14:25	1 Bus	1 Bus Every Hour Between 09:25 and 15:25, Then A Further 2 Buses
Lincoln Shopper: Lincoln – Retford	Welbeck Road	N/A	1 Bus	N/A	N/A
Lincoln Shopper: Retford – Lincoln	Welbeck Road	N/A	1 Bus	N/A	N/A

3.6.6 As shown in **Table 4** there are four bus services that operate to the nearest bus stops to the site (Glen Eagles Way and Brecks Road). But only one of these (the Sherwood Arrow) offers frequent services, providing a connection between Ordsall and Retford.

3.6.7 However, whilst the other bus services are infrequent, they all stop directly outside Retford Bus Station, located approximately 2 miles from the site boundary. The bus station is approximately an 11 minute cycle journey or a 7 minute car journey from the site.

3.6.8 Retford Bus Station offers an additional 15 services to several key employment centres including Doncaster, Gainsborough, Newark, and Nottingham. **Table 4** summarises the location and frequency of additional services departing from Retford Bus Station.

Table 4 - Summary of Bus Services Departing from Retford Bus Station

Service / Route	Monday – Friday Frequency		Saturday Frequency	
	Number of Buses Per Day	Approximate Frequency	Number of Buses Per Day	Approximate Frequency
136 Retford - Walesby	4	Approx. every two hours between 10:30 and 16:40	3	Approx. every two hours between 10:30 and 14:30
190 Retford – Tuxford	3	Approx. every 70 mins between 16:05 and 18:25	3	Approx. every 70 mins between 16:05 and 18:25
195 Retford - Gainsborough	2	06:50 and 17:10	2	06:50 and 17:10
197 Retford - Beckingham	1	12:30	1	12:30
335; Retford – Ollerton	1	17:30	1	17:30
27 Retford - Everton	6	Approx. every 2 hours between 08:45 and 15:25/15:35, then 18:15	6	Approx. every 2 hours between 08:45 and 15:35, Then 18:15
29 Retford - Doncaster	5	Approx. every 2 – 3 hours between 08:54 and 17:35	5	Approx. every 2 – 3 hours between 08:54 and 17:35
37 Retford - Newark	11	Approx. every hour between 08:00 and 18:20	11	Approx. every hour between 08:00 and 18:20
43 Retford – Worksop / Wensleydale	14	Approx. every hour between 05:45 and 19:05	14	Approx. every hour between 05:45 and 19:05
95 Retford - Gainsborough	6	Approx. every 2 hours between 08:40 and 14:30, then 16:00 and 17:50	6	Approx. every 2 hours between 08:40 and 14:30, then 16:00 and 17:50
97 Retford - Gainsborough	4	Approx. every hour between 09:30 and 15:55	4	Approx. every 2 hours between 09:30 and 15:55
99 Retford - Doncaster	10	Approx. every hour between 07:40 and 17:45	10	Approx. every hour between 07:40 and 17:45
123 Retford Town Circular Route	3	11:00, 12:00 and 13:30	3	11:00, 12:00 and 13:30

3.6.9 The information above highlights that there are regular bus services during peak travel times to key nearby towns which offer employment, retail, leisure and other opportunities to future residents.

3.7 RAIL SERVICES

3.7.1 The nearest train station is Retford Station, which is located approximately 1.1 miles north-east of the site boundary when walking or cycling. This equates to a walk of approximately 20 minutes or a cycle ride of approximately 7 minutes. When travelling by road, the train station is located approximately 2.4 miles from the site boundary. This is a drive of approximately 7 minutes. In the context of the site, the train station is therefore more suited to pedestrian and cycle trips than car trips. However, it is worth noting that the condition of the underpass beneath the railway line between Station Road and Tunnel Road may discourage people from using this route, particularly cyclists who may struggle to negotiate the steps.

3.7.2 Many trains operate throughout the day to destinations such as London, Doncaster, York, Sheffield and Lincoln catering for peak commuter travel and as well as other journey types. **Table 5** summarises the times of the first and last weekday trains at Retford Station.

Table 5 - Time of the first and last Weekday trains at Retford Train Station

Train	Arrivals from London Kings Cross	Departures to London Kings Cross	Arrivals from Doncaster	Departures to Doncaster	Arrivals from York	Departures to York
First Train	07:33	05:51	05:50	07:34	08:32	07:56
Last Train	23:16	23:02	23:01	23:17	23:01	16:48

Train	Arrivals from Sheffield	Departures to Sheffield	Arrivals from Lincoln	Departures to Lincoln
First Train	06:23	06:13	07:19	06:24
Last Train	22:28	22:51	23:17	21:33

3.7.3 Retford Train Station is located on the East Coast Main Line between Edinburgh and London Kings Cross, calling at Newcastle, York, Doncaster, and Peterborough on the way. The Station is also located on the Sheffield to Lincoln line.

3.7.4 Trains to London Kings Cross operate every day of the week, with approximately one train every one to two hours. Trains to London have an approximate journey time of between 90 and 105 minutes. During peak journey times, there are four trains between 6am and 9am and six trains between 4pm and 7pm.

3.7.5 One train departs from Retford to Edinburgh during the week at 0756 hrs, taking approximately 3 hours and 25 minutes, calling at Doncaster, York, Northallerton, Darlington, Durham and Newcastle before 1000 hrs.

3.7.6 Two trains per hour depart from Retford to Lincoln between Monday and Friday and have an approximate duration of around 35 minutes. Trains departing from Retford to Lincoln on Saturday and Sunday typically operate at a frequency of around one train per hour.

3.7.7 Trains are frequently available to Doncaster, with three trains departing from Retford at peak times between 0700 and 0900 hrs, Monday to Friday. Outside of peak times, one train is available every one to two hours. On average, trains to Doncaster typically take around 15 minutes.

3.7.8 In addition to these regular train services, two direct trains are available to Hull during the week, and three direct trains are available to Hull during the weekends, taking approximately 1 hour and 10 minutes. One direct train is available to Beverley, taking approximately 1 hour and 40 minutes, Monday to Saturday and one direct train to Bradford, taking approximately 1 hour and 25 minutes.

3.7.9 Travel by train provides a genuine alternative to the private car and should therefore assist in encouraging modal shift away from the private car. The journey time to the station is similar when cycling or driving or driving by car due to the longer distance when travelling by car. Walking time to the train station is approximately 20 minutes, which should encourage walking and cycling between the site and the station. Furthermore, there are 38 sheltered bicycle parking spaces at Retford Train Station, providing the opportunity for staff and visitors to cycle to and from the station.

3.7.10 Additionally, bus stops located directly adjacent to the station on Victoria Road are served by the Sherwood Arrow service, which also stops at the nearest bus stops to the site boundary.

3.7.11 Using sustainable means of transport in this way is therefore an attractive and viable option between the site and the Train Station.

3.8 HIGHWAY NETWORK

To/from Retford Town Centre

3.8.1 The two most likely routes for vehicles to travel between the site and Retford town centre are via Ordsall Road/Babworth Road or Goosemoor Lane/Whitehouses Lane/London Road.

3.8.2 Ordsall Road, which is a continuation of Ollerton Road is a single carriageway subject to a 30mph speed limit. It is a typical distributor road with footways adjacent to both sides of the carriageway and is street lit. Babworth Road is aligned in an east to west direction and provides a route to

the A1 in the west and the town centre in the east. It joins Ordsall Road at a mini-roundabout. Babworth Road is a single carriageway subject to a 40mph speed limit in the vicinity of Ordsall Road. To the east, the speed limit changes to 30mph and to the west, the speed limit changes to 50mph. Babworth Road has a footway adjacent to one side of the carriageway and is street lit. Bus routes operate along Ordsall Road and Babworth Road.

3.8.3 Goosemoor Lane/Whitehouses Road is aligned in an east to west direction and provides a link between Ollerton Road and London Road. It is a single carriageway subject to a 30mph speed limit. Street lighting is provided. Footways are typically provided adjacent to both sides of the carriageway, although a section of Goosemoor Lane has a footway adjacent to one side only. London Road is aligned in a north to south direction and provides a route between the A1 in the south (Markham Moor) and Retford town centre in the north. Near Whitehouses Road, London Road is subject to a 40mph speed limit. To the south, the speed limit changes to 50mph and to the north, the speed limit changes to 30mph.

3.8.4 The highway network around the town centre includes several signal-controlled junctions which are known to experience congestion during peak periods.

To/from the Markham Moor Junction

3.8.5 The Markham Moor junction on the A1 is likely to be used by vehicles travelling to/from the A1 (south) and for trips to/from Lincoln via the A57. It will also facilitate local trips to villages south of Markham Moor. The Markham Moor junction is a recently improved dumbbell layout.

3.8.6 Trips from the site would use London Road to access the Markham Moor junction. Some vehicles may use Goosemoor Lane/Whitehouses Road to travel to/from London Road. However, it is also likely that vehicles will use Main Road through the centre of Eaton village. Main Road is a single carriageway with limited footway provision and limited street lighting. Main Road is also narrow in places with reduced visibility. Furthermore, the existing bridge over the River Idle is only wide enough for one-way vehicular traffic.

To/from the A1 (north)

3.8.7 Vehicles are likely to access the A1 at its junction with the A620 Retford Road via Ordsall Road and Babworth Road. The junction with the A1 includes slip roads which facilitate all movements.

To/from Worksop

3.8.8 The most likely route for vehicles travelling to/from Worksop is via Brick Yard Lane, the A1(T) and the A57.

3.9 BACKGROUND TRAFFIC FLOWS

3.9.1 Full classified turning counts were undertaken on Wednesday 7th July 2021 between 07:30-09:30 and 16:30-18:30 at the following junctions:

- A1/A620 Retford Road/B6079 Retford Road
- A1/B6420 Mansfield Road/A614 Blyth Road/A57
- A1/Elkesley Bridge Road/Jockey Lane/Eskil Way
- A1/B6387 Dover Bottom
- A1 Markham Moor Junction
- A620 Babworth Road/B6420 Mansfield Road/A620 Straight Mile/Sutton Lane
- A620 Amcott Way/Bridlegate/A620 Hospital Road/A638 North Road/Hallcroft Road
- Ollerton Road/West Hill Road
- Ollerton Road / Main Road
- A638 / Main Road (Eaton)
- A638 / B6387 Rectory Lane

3.9.2 As agreed with NCC, existing peak period classified turning counts have been obtained for study area junctions where new counts have not been obtained. The following existing counts have been obtained and used in this TA:

- A620 Babworth Road/Ordsall Road – Tuesday 7th May 2016
- A620 Amcott Way/A620 Moorgate/A638 Arlington Way – Mon 12th March 2018
- A638 Arlington Way/Spital Hill/Chapelgate – Mon 12th March 2018
- A638 Arlington Way/Grove Street – Mon 12th March 2018
- A638 Arlington Way/A638 London Road/Carolgate – Mon 12th March 2018
- A638 London Road/Whitehouses Road – Thursday 12th May 2016
- A638 London Road / Whinney Moor Lane / Bracken Lane – Tuesday 10th October 2017
- High Street / Goosemoor Lane – Tue 4th December 2018

3.10 COLLISION ANALYSIS

3.10.1 Personal Injury Collision (PIC) data has been obtained from NCC for the most recently available five-year period between 1st January 2015 and 30th September 2020. The Study Area comprises of Ollerton Road/Ordsall Road between its junctions with the A620 Babworth Road to the north

of the site and Main Road (west of Eaton) to the south of the site. The study area also includes High Street and Goosemoor Lane.

3.10.2 Collision data is presented in **Appendix C** and **Table 6** below summarises the recorded PICs. A plot of collision locations and severity is included as **Figure 6**.

Table 6 – Personal Injury Collision Data January 2015 to September 2020

Year	Severity			Total
	Slight	Serious	Fatal	
2015	3	1	0	4
2016	1	0	0	1
2017	3	2	0	5
2018	4	1	0	5
2019	0	2	0	2
2020	1	0	1	2
Totals	12	6	1	19

3.10.3 In total, there were nineteen collisions that occurred within the study area and of these collisions, 12 were classified as slight in severity, six were classified as serious in severity and one was classified as fatal in severity. No recorded collisions involved cyclists. However, a total of four collisions involved pedestrians.

3.10.4 A total of four collisions occurred at the Babworth Road/Ordsall Road mini-roundabout junction, with three of these classified as slight in severity and one classified as serious in severity. All of these collisions involved vehicles only and involved vehicles performing conflicting movements at the mini roundabout junction.

3.10.5 A total of four collisions involving pedestrians occurred within the study area, three of which occurred along Ordsall Road and West Hill Road. Only one of these incidents involving pedestrians was classified as serious in severity and involved a car colliding with a child outside Ordsall Primary School. The remaining two collisions were classified as slight in severity, one of which involved a car colliding with a young pedestrian after daylight hours, whilst the other involved a goods vehicle colliding with a pedestrian.

3.10.6 Five further collisions involving vehicles only occurred along Ordsall Road and West Hill Road. Four of these incidents were classified as slight in severity, three of which involved cars performing conflicting movements at junctions, whilst the remaining collision involved a standing passenger on a bus falling. The remaining one incident at was classified as serious in severity and involved two cars travelling in opposite directions colliding during hours of darkness.

3.10.7 Two incidents occurred at the Ollerton Road/West Hill Road junction. These incidents involved vehicles only, one of which was classified as slight in severity and involved a car turning right

onto Ollerton Road (south) and colliding with a motorcycle travelling south on Ollerton Road in wet conditions. The remaining collision was classified as serious in severity and involved one vehicle turning left onto Ollerton Road (south) and colliding with a car travelling north on Ollerton Road.

3.10.8 One incident occurred along the National Speed Limit section of Ollerton Road at the Ollerton Road/Main Road junction and involved vehicles only. The incident was classified as slight in severity.

3.10.9 A total of four collisions occurred along Goosemoor Lane and Whitehouses Road, two of which occurred at the London Road/Whitehouses Road mini roundabout junction. Both incidents at the mini roundabout were classified as slight in severity and involved cars performing conflicting movements at the junction. The one fatality in the study area occurred on Goosemoor Lane/Whitehouses Road and involved a car turning right into Goosemoor Produce Farm Shop and colliding with a motorcycle. The final incident that occurred on Goosemoor Lane involved a car colliding with a pedestrian during the early hours of the morning and was classified as slight in severity.

3.10.10 The collisions that occurred throughout the study area do not suggest any spatial clustering or clear causational trends. No collisions occurred at or near to the Ollerton Road site frontage. It is therefore concluded that there are no existing road safety issues which are likely to be exacerbated by future development at the site.

4 DEVELOPMENT ASSUMPTIONS

4.1 INTRODUCTION

4.1.1 For this TA, a development consisting of 1,250 dwellings at the Ordsall South site has been assumed.

4.2 SITE ACCESS STRATEGY

4.2.1 Ollerton Road bisects the site and is the only existing adopted highway from which vehicular access could be provided. For the purposes of this study, it has been assumed that the site would be accessed from two new roundabouts onto Ollerton Road with land to the east and west of Ollerton Road accessed from separate arms onto the roundabouts. Land to the west would be accessed from both roundabouts and land to the east would be accessed from one roundabout. A concept layout depicting a possible site access strategy is provided in **Appendix D**. Each roundabout has the following characteristics:

- 40m inscribed circle diameter (ICD)
- One lane entry on each approach arm
- 7.3m width carriageway on both site access arms

4.2.2 3m wide shared footway/cycleway to the north of the site on Ollerton Road, adjacent to each site access arm and between both roundaboutsThe concept layout does not impact on any existing public rights of way (PROW).

4.3 INTERNAL SITE LAYOUT

4.3.1 The internal layout of the site will need to be designed to provide a road network in which pedestrian and cyclist movements are prioritised. The road network should allow for future bus access into the site as set out in **Chapter 5**. The internal layout of the site should have a 20mph design speed throughout.

4.3.2 The opportunity should be taken to maximise connectivity for pedestrians and cyclists with adjoining areas. Wherever possible, it is recommended that the alignment of any existing PROW remains as per existing.

4.4 SERVICE AND EMERGENCY VEHICLES

4.4.1 Service and emergency vehicles will gain access to the development via the same route as other vehicular traffic.

4.5 PEOPLE WITH DISABILITIES AND OTHER MOBILITY IMPAIRMENTS

4.5.1 The detailed design of the development and its internal transport infrastructure will be undertaken in accordance with the requirements of the 2010 Equality Act and in accordance with current good practice as embodied within the DfT's 'Inclusive Mobility' document.

4.5.2 This approach will ensure that the completed development is fully inclusive and meets the needs of all users, including those with disabilities or temporary mobility impairments.

4.5.3 The requirement to design for disabled people will permeate all aspects of the design process and will include access to and movement within the site, but also the interface between the development and the surrounding highway network and in particular, the pedestrian routes and public transport facilities.

5 OPPORTUNITIES TO IMPROVE SUSTAINABLE TRANSPORT INFRASTRUCTURE

5.1 WALKING AND CYCLING

5.1.1 As outlined in **Chapter 3**, southern parts of Retford are within reasonable walking distance of the site and all of Retford is within reasonable cycling distance.

5.1.2 The 'Grey to Green Retford Walking and Cycling Audit' prepared by Tetra Tech in 2021 identified a series of recommendations and priorities for improving walking and cycling in Retford. There would be the opportunity for development of the Ordsall site to contribute towards delivery of some of these recommendations and priorities.

5.1.3 As a minimum, development at the site should provide connections with existing infrastructure adjoining and near to the site.

5.1.4 Pedestrian infrastructure is already of a reasonable standard but there may be locations for example, where improved crossing facilities could be provided, or a footway could be widened. As any development proposals are worked up, consideration should be given to likely pedestrian desire lines, and this should inform improvements to pedestrian infrastructure. This should focus on routes to key trip attractors such as schools, shops, and the train station.

5.1.5 Improvements to cycle infrastructure should focus on routes to Retford town centre and Retford Train Station. There could be an opportunity for some of the priority links identified in the 'Grey to Green Retford Walking and Cycling Audit' to be improved as part of development at the site, particularly the Babworth Road and London Road corridors. Any improvements should be LTN 1/20 compliant wherever possible.

5.1.6 The opportunity to contribute to or safeguard a new strategic walking or cycling route should also be taken, for example any proposals for a walking/cycling corridor between Retford and Worksop; and/or improved links to Retford Train Station.

5.2 BUS SERVICES

5.2.1 Whilst existing bus stops are located within the recommended 400m of the site boundary, large parts of the site are further than 400m from an existing bus stop. In addition, existing bus services stopping at the nearest bus stops to the site are not high frequency services.

5.2.2 The site layout should be designed in a manner that allows bus access into the site. As a minimum, bus services should access the western parcel of the site. Subject to discussions with NCC and local bus operators, if bus stops are provided on Ollerton Road near the site access, the need for buses to access the eastern parcel of the site could be removed.

5.2.3 To future proof the site, the western and eastern parcels should both be designed to allow future bus access, including bus access to land to the south. The western parcel of the site should include a loop road arrangement to allow bus penetration into the site. A development of 800 dwellings should be of a suitable scale to enable developer funding of a new or extended bus service. To encourage modal shift from single occupancy car to bus, it is likely that a 30-minute frequency service would be required. It is typically the case that developers would fund a bus service for five years. After five years the idea is that the service would be sustainable without the need for financial support. This would need to be explored in further detail. The risk is that if the service is not sustainable and additional support is not available, the bus service would cease to operate or would operate a reduced timetable.

5.2.4 As a guide, the cost to operate one single deck bus for one year is circa £175k excluding any revenue generated from ticket sales.

5.3 TRAIN SERVICES

5.3.1 The site benefits from its proximity to Retford Train Station and as set out in this chapter, efforts should be made to maximise connectivity with the train station. Travel by train provides a genuine opportunity for future residents to undertake longer journeys by train rather than single occupancy car. As noted earlier in this report, the condition of the underpass beneath the railway line between Station Road and Tunnel Road may discourage people from using this route. Development of the site may provide an opportunity to improve the condition of the underpass.

6 FUTURE TRAFFIC FLOWS

6.1 FORECAST GROWTH

6.1.1 Traffic growth factors for a 2021 and 2031 future design year have been derived using TEMPro software, for the 'Bassetlaw 010' Middle Super Output Area (MSOA). The TEMPro outputs are presented in **Appendix E** and the resulting growth factors are shown below.

- 2016 to 2021 AM = 1.080
- 2016 to 2021 PM = 1.076
- 2017 to 2021 AM = 1.064
- 2017 to 2021 PM = 1.060
- 2018 to 2021 AM = 1.048
- 2018 to 2021 PM = 1.045
- 2021 to 2031 AM = 1.111
- 2021 to 2031 PM = 1.111

6.1.2 It should be noted that there is considerable uncertainty regarding future traffic flows in the years ahead and whether traffic will return to pre-Covid levels. It is widely accepted that there will be an increase in home working and therefore less commuter travel in typical rush hour periods. There is also likely to be a decrease in public transport use for a period with people perhaps favouring the car. The Department for Transport has not issued revised growth forecasts, but the increases indicated in TEMPro for the period to 2031 are perhaps higher than may ultimately prove to be the case. Nevertheless, this TA uses TEMPro growth forecasts and therefore presents a robust assessment of future background traffic levels.

6.2 COMMITTED DEVELOPMENTS

6.2.1 Committed schemes are defined as developments or transport schemes which have current planning consent, but which are unimplemented or incomplete, and could in the future have a significant impact on transport conditions or the layout of the local highway network. NCC has confirmed that the following committed development should be included in this TA:

- Application 14/00503/OUT - Outline Application for the Erection of up to 175 Dwellings Including Public Open Space, Attenuation Drainage Basin and Associated Works. The site is located off Tiln Lane.
- Application 15/00493/OUT - Outline Planning Application for a Mixed Use Development of up to 196 dwellings and 11.11ha of Employment Land with All Matters Reserved Except Access. The site is located off North Road.

- Application 16/00015/FUL - Hybrid Planning Application, comprising: A) Full Application for New Manufacturing Building (Class B2) and Two Storey Offices (B1), with Associated Parking and Refurbishment and Change of Use to Class A1/A3/B1 or D1 Use for Former Northern Rubber Tower Building. B) Outline Application for the Erection of A Convenience Supermarket (A1), Freestanding Hot Food Restaurant or Take Away (A3/A5) and A Single Storey Building for Non Food Retail and Leisure Use (A1/D2) With Associated Access, Car Park, and Service Infrastructure. The site is located off London Road/South Street/Thrumpton Lane.

- Application 16/01777/FUL – Demolition of Nursery Buildings and Erection of 113 Dwellings together with Access to London Road and Creation of Public Open Space. The site is located at Kenilworth Nurseries, London Road.

- Application 18/00695/FUL – Erect 109 Dwellings and Construct New Access Including Provision of Public Open Space and Surface Water Balancing Pond. The site is located at Kenilworth Nurseries, London Road.

6.2.2 The TAs for the above developments have been reviewed and the development traffic flows have been obtained. Committed development trips have been added to the background traffic flows in this TA. Committed development flows are presented in **Appendix F**.

6.3 OTHER POSSIBLE DEVELOPMENT SITES

6.3.1 As requested by BDC, development trips from the other six housing allocation sites in the Draft Local Plan (i.e. in addition to Ordsall South) have also been taken into consideration in this TA. The following housing allocations have been considered:

- HS7 Trinity Farm, Retford – 244 dwellings
- HS8 Milnercroft, Retford – 5 dwellings
- HS9 Former Elizabethan School, Retford – 46 dwellings
- HS10 St. Michael's View, Hallcroft Road, Retford – 20 dwellings
- HS11 Fairy Grove, Grove Road, Retford – 61 dwellings
- HS12 Station Road, Retford – 5 dwellings

6.3.2 Development trip generation has been calculated and trips have been distributed onto the existing highway network. The approach taken for trip generation and distribution is the same as the approach taken for the Ordsall site. This is explained in **Chapters 7** and **8**. Traffic flows from these sites are presented in **Appendix G**.

6.3.3 .

6.3.4 This TA includes assessments ‘with’ and ‘without’ trips associated with the other possible development sites taken into consideration. No additional sites other than those identified in this Chapter have been taken into consideration.

7 TRIP GENERATION

7.1 TRIP GENERATION

7.1.1 Development trip generation has been calculated using the TRICS database. The category 'Residential – Houses Privately Owned' was searched for sites in England, Scotland, and Wales, excluding Greater London. The data was obtained for the highway peak periods of 0800-0900 hrs and 1700-1800hrs. As requested by NCC, sites listed as 'mixed housing' or 'flats' were removed from the selection.

7.1.2 The full TRICS output is presented in **Appendix H** and the resultant trip rates are summarised in **Table 7** as follows. The same trip rates have been used to calculate trip generation of all Local Plan allocation sites identified in **Section 6.3**. It should be noted that to achieve these trip rates, the full package of mitigation identified in this TA is likely to be required.

Table 7 - Residential Trip Rates by Mode (Houses Privately Owned)

Mode	AM (08:00-09:00)			PM (17:00-18:00)		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Vehicles	0.125	0.366	0.491	0.286	0.146	0.432
Taxis	0.004	0.004	0.008	0.002	0.002	0.004
OGVs	0.002	0.002	0.004	0.000	0.000	0.000
PSVs	0.001	0.001	0.002	0.000	0.000	0.000
Cyclists	0.005	0.013	0.018	0.010	0.006	0.016
Vehicle Occupants	0.150	0.576	0.726	0.419	0.200	0.619
Pedestrians	0.049	0.122	0.171	0.062	0.034	0.096
Public Transport Users	0.001	0.026	0.027	0.012	0.005	0.017
Total People	0.206	0.737	0.943	0.503	0.245	0.748

7.1.3 Using the trip rates presented in **Table 7** the resultant development trip generation of all allocation sites is shown in the following tables.

Table 8 - Residential Trip Generation by Mode (allocation HS13 – 1,250 Dwellings)

Mode	AM (08:00-09:00)			PM (17:00-18:00)		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Vehicles	156	458	614	358	183	540
Taxis	5	5	10	3	3	5
OGVs	3	3	5	0	0	0
PSVs	1	1	3	0	0	0
Cyclists	6	16	23	13	8	20
Vehicle Occupants	188	720	908	524	250	774
Pedestrians	61	153	214	78	43	120
Public Transport Users	1	33	34	15	6	21
Total People	258	921	1,179	629	306	935

Table 9 - Residential Trip Generation by Mode (Allocation HS7 - 244 Dwellings)

Mode	AM (08:00-09:00)			PM (17:00-18:00)		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Vehicles	31	89	120	70	36	105
Taxis	1	1	2	0	0	1
OGVs	0	0	1	0	0	0
PSVs	0	0	0	0	0	0
Cyclists	1	3	4	2	1	4
Vehicle Occupants	37	141	177	102	49	151
Pedestrians	12	30	42	15	8	23
Public Transport Users	0	6	7	3	1	4
Total People	50	180	230	123	60	183
PCUs	31	90	121	70	36	105

Table 10 - Residential Trip Generation by Mode (Allocation HS8 - 5 Dwellings)

Mode	AM (08:00-09:00)			PM (17:00-18:00)		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Vehicles	1	2	2	1	1	2
Taxis	0	0	0	0	0	0
OGVs	0	0	0	0	0	0
PSVs	0	0	0	0	0	0
Cyclists	0	0	0	0	0	0
Vehicle Occupants	1	3	4	2	1	3
Pedestrians	0	1	1	0	0	0
Public Transport Users	0	0	0	0	0	0
Total People	1	4	5	3	1	4
PCUs	1	2	2	1	1	2

Table 11 - Residential Trip Generation by Mode (Allocation HS9 - 46 Dwellings)

Mode	AM (08:00-09:00)			PM (17:00-18:00)		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Vehicles	6	17	23	13	7	20
Taxis	0	0	0	0	0	0
OGVs	0	0	0	0	0	0
PSVs	0	0	0	0	0	0
Cyclists	0	1	1	0	0	1
Vehicle Occupants	7	26	33	19	9	28
Pedestrians	2	6	8	3	2	4
Public Transport Users	0	1	1	1	0	1
Total People	9	34	43	23	11	34
PCUs	6	17	23	13	7	20

Table 12 - Residential Trip Generation by Mode (Allocation HS10 - 20 Dwellings)

Mode	AM (08:00-09:00)			PM (17:00-18:00)		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Vehicles	3	7	10	6	3	9
Taxis	0	0	0	0	0	0
OGVs	0	0	0	0	0	0
PSVs	0	0	0	0	0	0
Cyclists	0	0	0	0	0	0
Vehicle Occupants	3	12	15	8	4	12
Pedestrians	1	2	3	1	1	2
Public Transport Users	0	1	1	0	0	0
Total People	4	15	19	10	5	15
PCUs	3	7	10	6	3	9

Table 13 - Residential Trip Generation by Mode (Allocation HS11 - 61 Dwellings)

Mode	AM (08:00-09:00)			PM (17:00-18:00)		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Vehicles	8	22	30	17	9	26
Taxis	0	0	0	0	0	0
OGVs	0	0	0	0	0	0
PSVs	0	0	0	0	0	0
Cyclists	0	1	1	1	0	1
Vehicle Occupants	9	35	44	26	12	38
Pedestrians	3	7	10	4	2	6
Public Transport Users	0	2	2	1	0	1
Total People	13	45	58	31	15	46
PCUs	8	22	30	17	9	26

Table 14 - Residential Trip Generation by Mode (Allocation HS12 - 5 Dwellings)

Mode	AM (08:00-09:00)			PM (17:00-18:00)		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Vehicles	1	2	2	1	1	2
Taxis	0	0	0	0	0	0
OGVs	0	0	0	0	0	0
PSVs	0	0	0	0	0	0
Cyclists	0	0	0	0	0	0
Vehicle Occupants	1	3	4	2	1	3
Pedestrians	0	1	1	0	0	0
Public Transport Users	0	0	0	0	0	0
Total People	1	4	5	3	1	4
PCUs	1	2	2	1	1	2

8 TRIP DISTRIBUTION

8.1 TRIP DISTRIBUTION

8.1.1 The external vehicle trip generation summarised in **Table 8** has been distributed onto the local highway network based upon 2011 Journey to Work (JTW) data for Bassetlaw 010 middle super output area (MSOA). Using GIS and HERE road data, the trips identified within the JTW data were routed to their corresponding origin/destination MSOAs using the Ollerton Road site frontage as the origin point for Bassetlaw 010 MSOA.

8.1.2 Trips that remain within the Bassetlaw 010 MSOA within the 2011 census data are assumed to travel to/from a point on Ollerton Road north of the Ollerton Road/West Hill Road but south of Babworth Road.

8.1.3 The road network used in this assessment covers the Bassetlaw district. Within the network area there are zones that match the MSOA boundaries, the connection of these zones to the network (model connectors), where trips enter and leave the network for the purposes of assignment, is taken to be a point in the largest urban centre within the MSOA. Trips that do not originate or terminate at an MSOA within the network area are allocated an 'exit' zone of the network on the link that they would exit the network along. The distribution percentage for all MSOAs that would use each exit zone is aggregated together to provide a distribution percentage for that zone.

8.1.4 Development trips have been distributed as follows:

- A1 (north) – 11%
- Retford Road (to/from Worksop) – 7%
- A57 (to/from Worksop) – 5%
- A614 Blyth Road – 8%
- Dover Bottom – 2%
- A57 (to/from Lincoln) – 2%
- A1 (south) and Great North Road – 21%
- Carolgate (to/from Retford town centre) – 11%
- Chapel Gate (to/from Retford town centre) – 4%
- Moorgate (east of Retford) – 5%
- Hallcroft Road – 9%
- Sutton Lane - 11%
- Whiney Moor Lane - 4%

8.2 TRIP ASSIGNMENT

8.2.1 VISUM software was used to assign the generated development trips onto the network. The development trips were compiled into a matrix based upon the distribution percentages to each

zone from the JTW MSOA analysis. The trips were assigned to the network using an 'all or nothing' assignment, with trips taking the shortest route based upon journey time. There is no trip reassignment or congestion included within the model.

8.2.2 The link speeds within VISUM were based upon the mandatory speed limits which were adjusted where required to reflect observed driver behaviour. The routing generated within the model was compared to suggested routings from Google's mapping engine that considers historic average traveling speeds on links based on congestion and the quality of the link. This indicated that in some cases rural national speed limit (60mph) links were being selected by VISUM, when in practice the actual speed of travel would be lower and an alternative route may provide a quicker journey as it would be possible to travel faster albeit with a lower mandatory speed limit. Therefore, link speeds were adjusted on some links to force routing to match the routes observed in Google Maps.

8.2.3 In addition, specific consideration has been given to the route between the site and the Markham Moor junction. The VISUM model initially distributed all trips between the site and the Markham Moor junction (except A1 (north) trips) via Main Road through Eaton village. Whilst Main Road is subject to the National Speed Limit, some sections are narrow, and visibility is reduced in places. As such, the journey time along Main Road can be slower than for other routes which could make it less attractive than some alternative route options **Table 15** indicates the distance and journey time between the site and the Markham Moor junction using different route options.

Table 15 - Distance and Journey Time to Markham Moor Junction

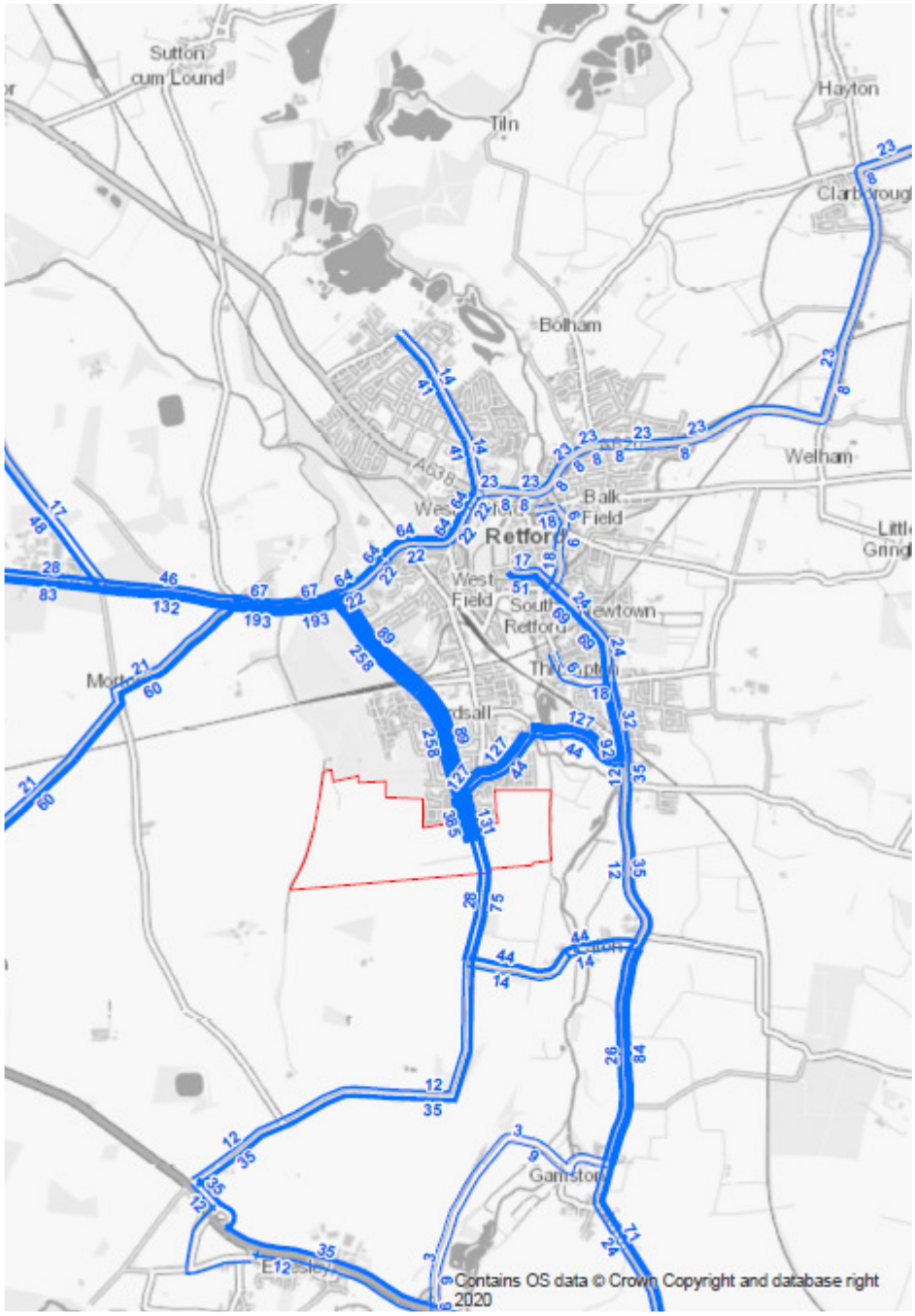
Route	Distance	Journey Time
Via Main Road (Eaton)	6.9km	7 minutes
Via High Street and Goosemoor Lane	8.2km	8 minutes
Via Brick Yard Lane	8.9km	8 minutes

8.2.4 Driver choice will vary between individual but on balance, for the purpose of this TA, trips to/from the Markham Moor junction have been split equally between the three route options in **Table 15**.

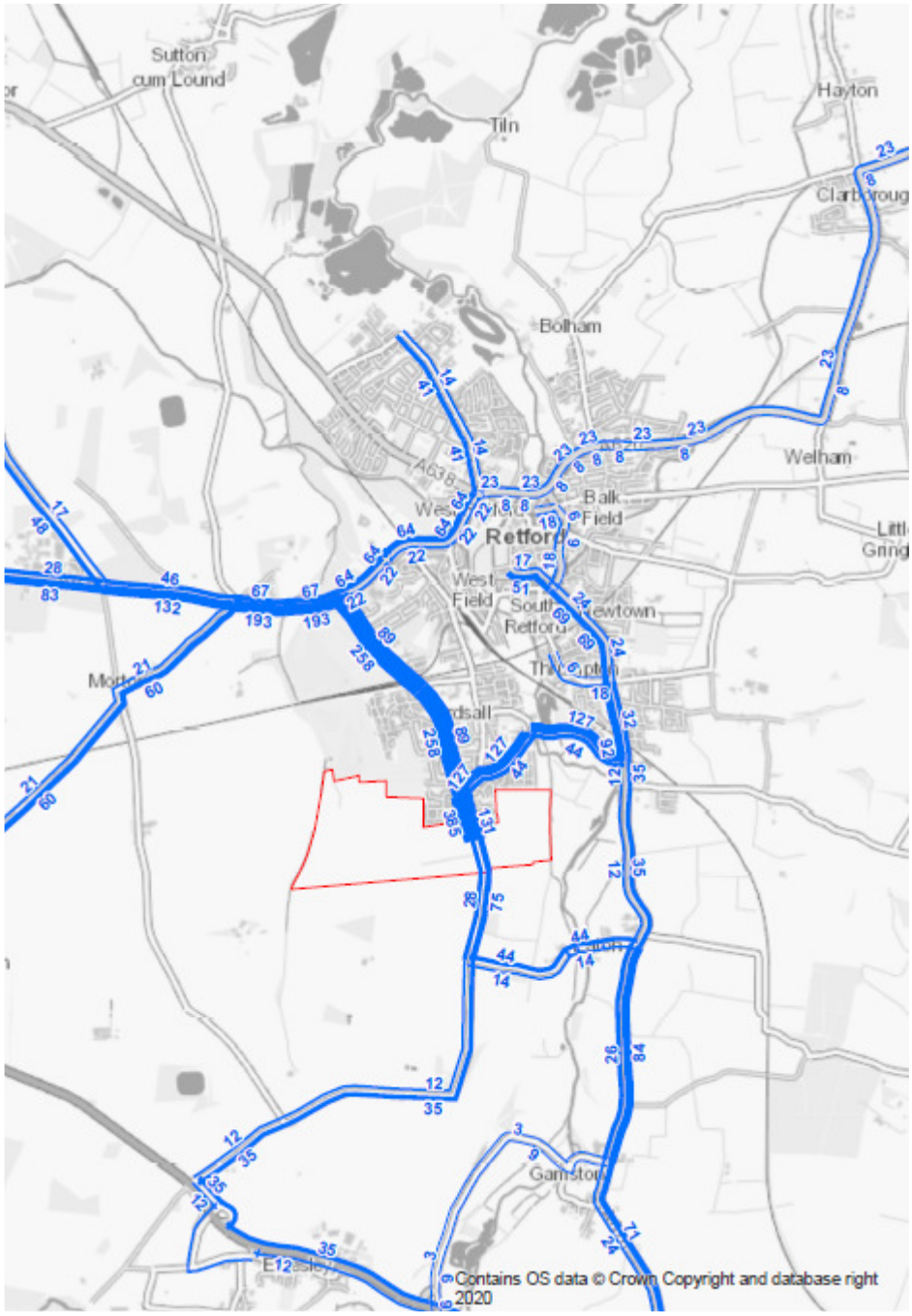
8.2.5 For this TA, it is assumed that 75% of development trips would be to/from the western parcel of the site and 25% would be to/from the eastern parcel of the site.

8.2.6 The resultant AM/PM peak period development trip distribution on the highway network near the site is shown in **Appendix I**. Distribution plots from the VISUM model are also in **Appendix I** and extracts for Retford are shown in the following images.

VISUM Trip Distribution in Retford – AM Peak



VISUM Trip Distribution in Retford – PM Peak



9 HIGHWAY IMPACTS

9.1 IMPACTS

9.1.1 Estimated two-way development traffic impacts on key local links are shown in **Table 16** below.

Table 16 - Two-Way Development Traffic Impacts on Links

Road Link	Development Flows	
	AM Peak	PM Peak
Babworth Road (west of Ordsall Road)	260	227
Babworth Road (east of Ordsall Road)	87	76
A1 (north)	68	59
A1 (south)	72	49
A620 Amcott Way	31	27
A620 Moorgate	31	27
A638 Arlington Way	25	21
A638 London Road	124	108
A638 (south of Main Road)	106	90
Main Road	58	49
Goosemoor Lane	171	149
Brick Yard Lane	47	41
A57 (east)	12	11
A57 (west)	31	27
Great North Road	22	50

9.1.2 **Table 17** on the next page shows the increase in vehicle trips at each study area junction. Full calculations are presented in **Appendix I**.

Table 17 - Two-Way Development Traffic Impacts at Junctions

Ref	Junction	Development Flows		Test
		AM Peak	PM Peak	
1A	A1 / B6079 Retford Road	94	58	*
1B	A1 / A620 Retford Road	111	97	*
2A	Apleyhead Interchange (A57 /Blyth Road / A1)	80	70	*
2B	A1 / B6420 Mansfield Road / A614 Blyth Road / A57	80	70	*
3	Elkesley Bridge Road / A1 Worksop Road	47	41	*
3B	Jockey Lane / Eskil Way	47	41	*
4A	A1 / B6387 Dover Bottom (North)	12	11	
4B	A1 / B6387 Dover Bottom (South)	12	11	
5A	Markham Moor Interchange (A638 / A57 Cliff gate / A57 / A1)	95	82	*
5B	A1 Markham Moor (A1 / Great N Road / Main Street / A57)	33	75	*
6	A620 Babworth Road / B6420 Mansfield Road / A620 Straight Mile / Sutton Lane	260	227	*
7	A620 Babworth Road / Ordsall Road	347	302	*
8	A620 Amcott Way / Bridlegate / A620 Hospital Road / A638 North Road / Hallcroft Road	87	76	*
9	A620 Amcott Way / A620 Moorgate / A638 Arlington Way	31	27	*
10	A638 Arlington Way / Spital Hill / Chapelgate	25	22	*
11	A638 Arlington Way / Grove Street	18	7	*
12	A638 Arlington Way / A638 London Road / Carolgate	93	81	*
13	Ollerton Road / W Hill Road	518	412	*
14	London Road / Whitehouses Road	203	149	*
15	London Road / Whinney Moor Lane / Bracken Lane	118	103	*
16	All Hallows Street / High Street / Goosemoor Lane	171	149	*
17	Site Access / Ollerton Road	619	517	*
18	Ollerton Road / Brick Yard Road	101	88	*
19	A638 / Main Road	106	90	*
20	A638 / B6387 Rectory Lane	112	95	*

Note: Junctions with red asterisks are discussed further in Chapter 11.

9.1.3 NCC has indicated that capacity assessments should be undertaken at locations where an increase of 30 or more trips is forecast in the AM or PM peak hour. Based on the highway impacts in **Table 17**, capacity assessments would be required at all off-site junctions in the study area except Junction 4. Junctions where capacity assessments have been undertaken are indicated with red asterisks.

9.1.4 The number of junctions where an increase of 30 or more trips is forecast in the AM or PM peak hour is significant. For any junctions shown to operate above capacity following the addition of development traffic, NCC may require mitigation. Any mitigation will need to be directly related to the proposed development and must be proportionate to the scale of impact.

9.1.5 At locations where highway capacity is exceeded, it is usually the case that junction capacity is the issue rather than link capacity. Nevertheless, the capacity of Main Road through Eaton village is worth specific consideration in this instance as it was identified by NCC as a potential constraint during preliminary discussions. Trip distribution calculations show an increase of 58 and 49 PCUs during the AM and PM peak hours respectively. Main Road is therefore likely to require further consideration as part of any planning application. This is discussed further in **Chapter 11**.

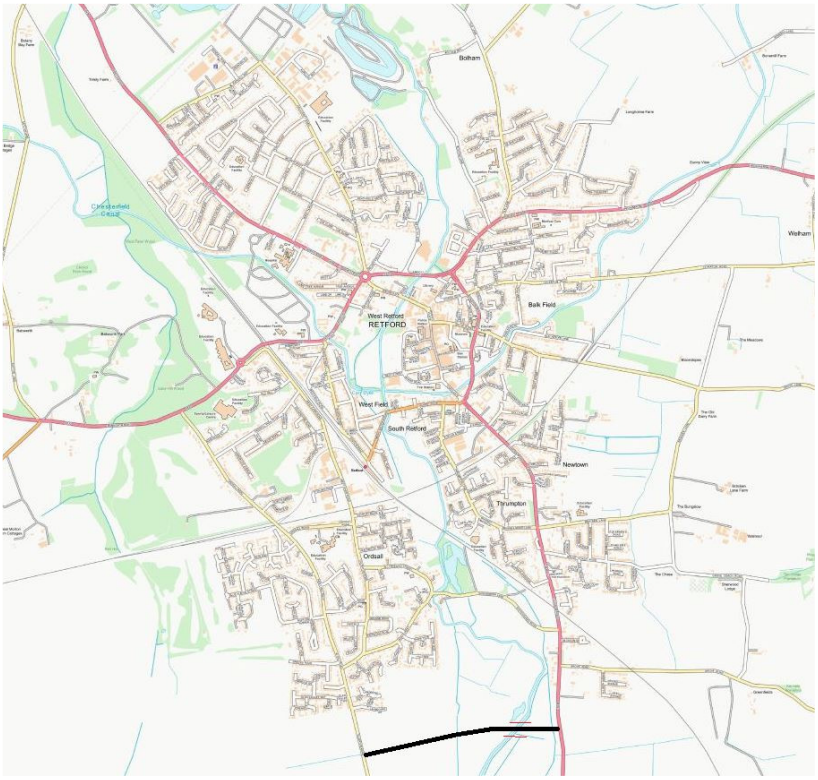
9.1.6 It should be noted that just because a junction is forecast to have an increase in trips greater than 30 PCUs in the AM or PM peak hour does not necessarily mean that physical mitigation in the form of highway improvements will be required. There may be 'spare' traffic capacity available at some junctions that can accommodate development trips without improvement. Alternatively, providing enhanced walking, cycling and public transport connections will also help to reduce development traffic impacts at off-site junctions.

9.2 LINK ROAD FEASIBILITY

9.2.1 A previous suggestion from residents in the Ordsall area is for the provision of a new link road between Ollerton Road and the A638. The logic behind this suggestion is that a new link road would help to relieve existing pressure on Goosemoor Lane and its junctions onto High Street at its western end and London Road at its eastern end. A new link road would also allow development traffic to easily access the A638 London Road without having to use Main Road through Eaton Village, which is unsuitable for any significant increase in use due to its alignment, width, and character through the village.

9.2.2 An indicative location and alignment for the suggested new link road is shown in the image on the following page.

Indicative Link Road between Ollerton Road and the A638



9.2.3 A very high-level appraisal has been undertaken which has identified that delivering a new link road at this location would not be straight forward because the road would be crossing flood plain and a new bridge would be required over the River Idle. To avoid potential flooding issues the road would probably need to be constructed as an elevated carriageway, which would have implications for cost, flood risk and environmental impacts. Further detailed appraisal would therefore be required to investigate its feasibility.

9.2.4 Based on a very high-level appraisal the anticipated cost to provide a new link road at this location could be in the order of £10m considering the length of the link road (circa 1.15km) and the constraints mentioned above. This order of cost would be difficult for a developer to fund entirely and would probably require a combination of a significantly larger scale of development (potentially a few thousand dwellings) together with external funding assistance.

9.2.5 Providing a new link road is therefore likely to prove technically very challenging and prohibitively expensive. Based on the scale of development assessed in this TA, provision of a link road would not satisfy the requirements of item 122(2) of The Community Infrastructure Levy Regulations 2010 which requires planning obligations to be necessary to make the development acceptable in planning terms; directly related to the development; and fairly and reasonably related in scale and kind to the development.

9.2.6 A link road would also only help to address traffic impacts associated with development traffic wishing to access destinations to the south and east and would provide no relief for development trips to/from the north that would be passing through or around Retford. At some of these locations (e.g. in Retford town centre) it will be very difficult to deliver any meaningful mitigation in the form of increased junction capacity due to the physical space constraints that exist within the urban environment.

10 CAPACITY ASSESSMENTS

10.1 INTRODUCTION

10.1.1 Capacity assessment have been undertaken at all junctions identified in **Table 17** with a red asterisk. Capacity assessments have been undertaken at off-site junctions for the following scenarios:

- 2021 base
- 2021 base + committed developments
- 2031 base + committed developments
- 2031 base + committed developments + Ordsall development
- 2031 base + committed developments + Ordsall development + optional developments

10.1.2 Capacity assessments have been undertaken at the Ordsall South site access roundabouts for the following scenarios:

- 2031 base + committed developments + Ordsall development
- 2031 base + committed developments + Ordsall development + optional developments

10.1.3 Capacity assessments undertaken at the Ordsall South site access roundabouts have been assessed on the basis that all development trips associated with 1,250 dwellings access the site from either roundabout (i.e. development trips have not been split across the roundabouts). This provides a very robust assessment of the site access roundabouts.

10.1.4 Assessments of priority junctions and roundabouts have been undertaken using the Junctions 9 computer programme, which is the 'industry standard' traffic modelling computer software package used for assessing the capacity of priority junctions and roundabouts. Assessments of signal controlled junctions have been undertaken using the LinSIG computer programme, which is the 'industry standard' traffic modelling software package used for assessing the capacity of signal controlled junctions.

10.1.5 A Ratio of Flow to Capacity (RFC) value below 0.85 indicates that a junction operates 'within' capacity. An RFC value between 0.85 and 1.00 indicates that there may be occasions during the period modelled when queues will develop, and delays occur. An RFC value greater than 1.00 indicates that a junction operates 'above' capacity.

10.1.6 At signal-controlled junctions a Reserve Capacity (RC) or degree of overload is used to indicate whether a junction operates 'within' its theoretical capacity. The RC is the percentage of all round traffic growth, which a junction can accommodate within its capacity. When there is no RC, a degree of overload is the percentage by which the traffic flows exceed the capacity of the junction. Experience with RC calculations at existing junctions indicates that queuing does not become particularly noticeable until the degree of overload reaches 10% (i.e. -11% RC). For the

purposes of comparison with priority junctions and roundabouts, it can be assumed that a RC of 0% (and a Degree of Saturation of 90%) roughly equates to an RFC of 0.85.

10.1.7 Geometry plans and capacity assessment outputs are presented in **Appendix J**.

10.2 CAPACITY ASSESSMENT RESULTS

10.2.1 A summary of the capacity assessment results is presented in **Table 18** on the next page and full outputs are presented in **Appendix J**.

Table 18 - Capacity Assessment Results

Junction	Arm	2021 Base				2021 Base + Committed Developments				2031 Base + Committed Developments				2031 Base + Committed Developments + Ordsall Development				2031 Base + Committed Developments + Ordsall Development + Optional Developments			
		AM		PM		AM		PM		AM		PM		AM		PM		AM		PM	
		RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ
1A - A1 / B6079 Retford Road	B - A1 slip road	0.11	0.1	0.11	0.1	0.11	0.1	0.11	0.1	0.13	0.1	0.12	0.1	0.13	0.1	0.13	0.1	0.13	0.1	0.13	0.1
	C - B6079 Retford Road	0.17	0.3	0.2	0.4	0.17	0.3	0.2	0.4	0.2	0.4	0.23	0.5	0.33	0.8	0.28	0.6	0.34	0.8	0.28	0.6
1B - A1 / A620 Retford Road	B - A1 slip road	0.27	0.4	0.17	0.2	0.27	0.4	0.17	0.2	0.32	0.5	0.2	0.2	0.38	0.6	0.32	0.5	0.39	0.6	0.32	0.5
	C - B6079 Retford Road	0	0	0.02	0	0	0	0.02	0	0	0	0.02	0	0	0	0.02	0	0	0	0.02	0
2A - Apleyhead Interchange (A57 /Blyth Road / A1)	A - A57	0.39	0.6	0.38	0.6	0.39	0.6	0.38	0.6	0.44	0.8	0.43	0.8	0.44	0.8	0.45	0.8	0.44	0.8	0.45	0.8
	C - Road Access A1 (East)	0.42	0.7	0.38	0.6	0.42	0.7	0.38	0.6	0.47	0.9	0.42	0.7	0.51	1	0.44	0.8	0.52	1.1	0.44	0.8
	D - Slip Rd - Entry Only	0.25	0.3	0.28	0.4	0.25	0.3	0.28	0.4	0.28	0.4	0.32	0.5	0.29	0.4	0.32	0.5	0.29	0.4	0.32	0.5
	E - BlythRoad	0.3	0.4	0.27	0.4	0.3	0.4	0.27	0.4	0.34	0.5	0.3	0.4	0.35	0.5	0.32	0.5	0.36	0.5	0.33	0.5
2BA - A1 / B6420 Mansfield Road / A614 Blyth Road / A57		0.76	2.9	0.69	2.1	0.76	2.9	0.69	2.1	0.86	5.4	0.78	3.4	0.87	5.6	0.8	3.6	0.87	5.7	0.8	3.7
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2BB - A1 / B6420 Mansfield Road / A614 Blyth Road / A57		44	0.8	0.39	0.6	0.44	0.8	0.39	0.6	0.51	1	0.45	0.8	0.63	1.7	0.49	1	0.66	1.9	0.51	1
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 - A1 / Elkesley Bridge Road	A - Poulter Rise	0.04	0	0.07	0.1	0.04	0	0.07	0.1	0.04	0	0.08	0.1	0.07	0.1	0.09	0.1	0.07	0.1	0.09	0.1
	B - Unamed Road	0.03	0	0.02	0	0.03	0	0.02	0	0.03	0	0.02	0	0.03	0	0.02	0	0.03	0	0.02	0
	C - Elkesley Bridge Rd	0.05	0.1	0.06	0.1	0.05	0.1	0.06	0.1	0.06	0.1	0.06	0.1	0.07	0.1	0.09	0.1	0.07	0.1	0.09	0.1
3B - Jockey Lane / Eskil Way	A- Poulter Rise SE	0	0	0	0	0	0	0	0	0	0	0	0	0.01	0	0.02	0	0.01	0	0.02	0
	B - Jockey Lane	0	0	0	0	0	0	0	0	0	0	0	0	0.03	0	0.01	0	0.03	0	0.01	0
5A - Markham Moor Interchange (A638 / A57 Cliff gate / A57 / A1)	A - A57	0.17	0.2	0.2	0.2	0.17	0.2	0.2	0.2	0.19	0.2	0.22	0.3	0.2	0.2	0.25	0.3	0.21	0.3	0.27	0.4
	B - Entry Only	0.29	0.4	0.33	0.5	0.29	0.4	0.33	0.5	0.33	0.5	0.37	0.6	0.33	0.5	0.38	0.6	0.34	0.5	0.38	0.6
	C - A638	0.25	0.3	0.22	0.3	0.25	0.3	0.22	0.3	0.29	0.4	0.25	0.3	0.34	0.5	0.27	0.4	0.38	0.6	0.28	0.4
	D - Cliffe Gate	0.33	0.5	0.31	0.4	0.33	0.5	0.31	0.4	0.37	0.6	0.35	0.5	0.38	0.6	0.35	0.5	0.39	0.6	0.36	0.5
5B - A1 Markham Moor (A1 / Great N Road / Main Street / A57)	B - Entry from A1	0.11	0.1	0.15	0.2	0.11	0.1	0.15	0.2	0.12	0.1	0.17	0.2	0.13	0.2	0.18	0.2	0.13	0.2	0.18	0.2
	C - Great North Rd	0.17	0.2	0.16	0.2	0.17	0.2	0.16	0.2	0.2	0.2	0.18	0.2	0.21	0.3	0.22	0.3	0.22	0.3	0.25	0.3

Junction	Arm	2021 Base				2021 Base + Committed Developments				2031 Base + Committed Developments				2031 Base + Committed Developments + Ordsall Development				2031 Base + Committed Developments + Ordsall Development + Optional Developments			
		AM		PM		AM		PM		AM		PM		AM		PM		AM		PM	
		RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ
	D - A638	0.16	0.2	0.15	0.2	0.16	0.2	0.15	0.2	0.18	0.2	0.17	0.2	0.19	0.2	0.18	0.2	0.19	0.2	0.18	0.2
	A - Cliffe Gate	0.31	0.4	0.3	0.4	0.31	0.4	0.3	0.4	0.34	0.5	0.34	0.5	0.34	0.5	0.34	0.5	0.34	0.5	0.34	0.5
6 - A620 Babworth Road / B6420 Mansfield Road / A620 Straight Mile / Sutton Lane	B - Mansfield Road	0.07	0.1	0..05	0	0.07	0.1	0.05	0	0.1	0.1	0.1	0.1	0.47	0.8	1.2	2.6	0.96	2.3	1.29	2.9
	B - Mansfield Road	0.54	1.1	0.66	1.8	0.54	1.1	0.66	1.8	0.66	1.8	0.82	3.8	0.9	5.7	1.17	25.6	0.93	7.2	1.26	34.1
	A - Babworth Road	0.05	0.1	0.06	0.1	0.05	0.1	0.06	0.1	0.06	0.1	0.07	0.1	0.06	0.1	0.07	0.1	0.06	0.1	0.07	0.1
	D - Sutton Lane	0.04	0	0.05	0.1	0.04	0	0.05	0.1	0.04	0	0.06	0.1	0.04	0	0.07	0.1	0.04	0	0.07	0.1
	D - Sutton Lane	0.01	0	0.02	0	0.01	0	0.02	0	0.02	0	0.02	0	0.02	0	0.03	0	0.02	0	0.03	0
	C - Straight Mile	0.03	0	0.04	0	0.03	0	0.04	0	0.04	0	0.04	0	0.04	0	0.05	0	0.04	0	0.05	0
7 - A620 Babworth Road / Ordsall Road	A- A620 Babworth Rd (E)	0.98	14.6	0.82	4.2	0.98	14.6	0.82	4.2	1.09	42.5	0.92	8.9	1.15	65.1	1.08	40.1	1.22	91	1.12	51.6
	B - Ordsall Road	0.94	8.5	0.6	1.5	0.94	8.5	0.6	1.5	1.07	23.6	0.71	2.3	1.69	247	0.91	7.1	1.69	260.3	0.96	10.9
	C - A620 Babworth Rd (W)	1.03	28.8	0.79	3.5	1.03	28.8	0.79	3.5	1.15	74.6	0.88	6.4	1.22	111	1.09	48.5	1.24	119.5	1.13	64.8
8 - A620 Amcott Way / Bridlegate / A620 Hospital Road / A638 North Road / Hallcroft Road	B - A620 Amcott Way	0.49	0.9	0.56	1.3	0.56	1.3	0.62	1.6	0.63	1.7	0.7	2.3	0.64	1.8	0.73	2.6	0.66	1.9	0.76	3.1
	C - Bridgegate	0.39	0.6	0.47	0.9	0.49	0.9	0.55	1.2	0.61	1.5	0.68	2.1	0.63	1.6	0.72	2.4	0.68	2	0.76	2.9
	D - A620 Hospital Road	0.62	1.6	0.65	1.9	0.77	3.3	0.74	2.8	0.92	8.8	0.86	5.5	1	19.6	0.89	6.7	1.03	28.7	0.95	12.3
	E - North Road	0.55	1.2	0.67	2	0.7	2.3	0.81	4	0.78	3.4	0.92	9.2	0.8	3.9	0.93	10.3	0.86	5.7	0.97	14.9
	A - Hallcroft Road	0.48	0.9	0.46	0.8	0.58	1.3	0.55	1.2	0.69	2.1	0.67	2	0.72	2.5	0.74	2.7	0.79	3.5	0.77	3.1
9 - A620 Amcott Way / A620 Moorgate / A638 Arlington Way	Moorgate (ahead/left)	91.4	20.4	79.3	13.4	97.2	28.1	83.8	15.1	107.2	67.6	92.7	21.7	108.3	73.4	94.1	23.1	109.9	80.6	95.8	25.3
	Amcott Way (ahead/right)	92	20	79.8	11	97.2	26.1	83.7	12	107.9	78.2	92.7	16.5	107.9	79.5	92.7	16.4	110.3	96.8	94	17.5
	Arlington Way (right/left)	91.6	10.8	79	9.2	93.7	12.2	83.8	10.6	103.8	27.6	92.1	14.2	103.8	27.7	94.3	15.9	110.7	45.3	94.9	16.7
	Practical Reserve Capacity	-2.2		12.8		-8		7.4		-19.9		-3		-20.3		-4.8		-23		-6.5	
10 - A638 Arlington Way / Spital Hill / Chapelgate	Arlington Way (left/ahead/right)	67.3	13.6	72.1	15.6	68.1	14	74.2	16.6	75.5	16.9	80.6	19.5	75.5	16.9	80.6	19.5	78.6	18.6	80	19.2
	Spital Hill (right/left/ahead)	66.8	7.1	71.5	7.5	67.3	7.2	73	7.7	74.6	8.4	85.2	9.8	74.6	8.4	85.2	9.8	78.5	8.7	85.2	9.8
	Arlington Way (ahead/righ/left)	62.2	11.8	73.3	16.2	63.3	12.1	77	17.7	75.2	14.5	83.8	21.9	75.2	15.4	84.6	22.2	75.2	15.7	88.3	25.2
	Chapelgate (left/ahead/right)	26.3	2.4	47.7	4.8	27	2.3	49.2	4.6	32.5	2.6	62.7	5.5	38.7	2.9	76	6.7	41.8	3	76	6.7
	Practical Reserve Capacity	33.8		22.7		32.1		16.9		19.1		5.7		19.1		5.7		14.6		1.9	
11 - A638 Arlington Way / Grove Street	Arlington Way (left/ahead/right)	73.9	12.8	79.3	14.7	76.2	13.7	84.8	17.8	84.5	18.1	93.5	25.2	84.5	18.1	93.5	25.2	89.1	21.7	94.4	26.6

Junction	Arm	2021 Base				2021 Base + Committed Developments				2031 Base + Committed Developments				2031 Base + Committed Developments + Ordsall Development				2031 Base + Committed Developments + Ordsall Development + Optional Developments			
		AM		PM		AM		PM		AM		PM		AM		PM		AM		PM	
		RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ
	Grove Street (right/left/ahead)	58	3.2	59.2	3.3	57.5	3.1	58.3	3.2	63.6	3.6	64.9	3.7	63.6	3.6	64.9	3.7	63.6	3.6	64.9	3.7
	Arlington Way (ahead/right/left)	98.3	32.7	105.8	56.2	100.1	36.9	111.3	77.9	111	79.5	122.9	129.6	113.2	89.4	123.8	133.8	115.3	99.2	126.2	147.4
	Grove Street (left/ahead/right)	85.3	6.2	106.8	24.6	85.3	6.2	106.8	24.6	94.7	9.3	118.8	46.7	94.7	9.3	118.8	46.7	94.7	9.3	125.8	57.1
	Practical Reserve Capacity	-9.2		-18.7		-11.2		-23.6		-23.3		-36.6		-25.8		-37.6		-28.2		-40.2	
12 - A638 Arlington Way / A638 London Road / Carolgate	Carolgate (left/ahead/right)	56.1	3.3	91.1	13.2	52.9	2.9	95.7	15.4	59.1	3.3	109.5	46.2	67.9	4.1	112.7	54.1	67.9	4.2	117.7	70.2
	London Road (ahead/right/left)	77.8	13	92	16.2	86.6	17.6	97.6	23.9	97.5	28.7	108.8	58.5	101.4	43	114.8	83.2	103.7	54.1	117.4	93.3
	Arlington Way (right/left/ahead)	37.7	5.5	56	9.2	40.8	6.1	62.6	11.9	45	7	67.8	11.7	45.5	7.1	71.4	15.2	48.8	8	71.9	13.3
	Albert Road (left/ahead/right)	76.8	6.9	90.4	9	86.1	8.6	93.3	10.3	94.8	12.4	104.7	18.9	99.1	15.7	111.5	28.2	102.1	19.1	114.1	29.8
	Practical Reserve Capacity	15.7		-2.2		3.9		-8.4		-8.4		-21.7		-12.7		-27.6		-15.3		-30.7	
13 - Ollerton Road / W Hill Road	B - Ollerton Road	0.06	0.1	0.09	0.1	0.06	0.1	0.09	0.1	0.07	0.1	0.1	0.1	0.14	0.2	0.29	0.4	0.14	0.2	0.29	0.4
	B - Ollerton Road	0.12	0.1	0.17	0.2	0.12	0.1	0.17	0.2	0.13	0.1	0.2	0.2	0.18	0.2	0.26	0.4	0.18	0.2	0.26	0.4
	C - West Hill Road	0.08	0.1	0.08	0.1	0.08	0.1	0.08	0.1	0.09	0.1	0.09	0.1	0.42	1.1	0.23	0.4	0.42	1.1	0.23	0.4
14 - London Road / Whitehouses Road	A - A638 London Road (South)	0.67	2	1.04	34.3	0.69	2.2	1.09	51	0.77	3.3	1.23	113.9	0.8	3.9	1.33	167.6	0.83	4.6	1.38	203.7
	B - Whitehouses Road	0.95	10	0.83	4.2	0.96	11	0.89	5.9	1.13	38.6	0.96	10.9	1.43	122.6	1.03	19.9	1.47	133.6	1.06	24.6
	C A638 London Road	0.52	1.1	0.55	1.2	0.56	1.3	0.57	1.3	0.62	1.6	0.63	1.7	0.64	1.7	0.69	2.2	0.67	2	0.71	2.4
15 - London Road / Whinney Moor Lane / Bracken Lane	B - Bracken Lane																				
	B - Bracken Lane																				
	A - London Road (north)																				
	D - Whinney Moor Lane																				
	D - Whinney Moor Lane																				
	C - London Road (south)																				
16 - All Hallows Street / High Street / Goosemoor Lane	B - Goosemoor Lane	0.17	0.2	0.27	0.4	0.17	0.2	0.27	0.4	0.2	0.2	0.32	0.5	0.32	0.5	0.56	1.2	0.33	0.5	0.56	1.3
	B - Goosemoor Lane	0.45	0.8	0.45	0.8	0.45	0.8	0.45	0.7	0.51	1	0.51	1	0.59	1.4	0.6	1.4	0.62	1.5	0.61	1.5
	C - High Street	0.29	0.4	0.15	0.2	0.28	0.4	0.16	0.2	0.32	0.5	0.18	0.2	0.57	1.3	0.28	0.4	0.57	1.3	0.28	0.4
	A - Ollerton Road (north)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.11	0.1	0.05	0.1	0.11	0.1	0.05	0.1

Junction	Arm	2021 Base				2021 Base + Committed Developments				2031 Base + Committed Developments				2031 Base + Committed Developments + Ordsall Development				2031 Base + Committed Developments + Ordsall Development + Optional Developments			
		AM		PM		AM		PM		AM		PM		AM		PM		AM		PM	
		RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ	RFC	MMQ
17 - Ollerton Road/Site Access (northern)	B - Site Access (east)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.18	0.2	0.22	0.3	0.18	0.2	0.22	0.3
	C - Ollerton Road (south)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.36	0.6	0.14	0.2	0.36	0.6	0.14	0.2
	D - Site Access (west)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.23	0.3	0.42	0.7	0.23	0.3	0.42	0.7
17 - Ollerton Road/Site Access (southern)	A - Ollerton Road (north)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.17	0.2	0.20	0.2				
	C - Ollerton Road (south)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.32	0.5	0.13	0.1				
	D - Site Access (west)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.22	0.3	0.39	0.6				
18 - Ollerton Road / Brick Yard Road	B - Main Road	0.01	0	0.02	0	0.01	0	0.02	0	0.02	0	0.02	0	0.02	0	0.02	0	0.02	0	0.02	0
	B - Main Road	0.05	0.1	0.11	0.1	0.05	0.1	0.11	0.1	0.06	0.1	0.12	0.1	0.09	0.1	0.19	0.2	0.09	0.1	0.19	0.2
	C - Brick Yard Lane	0.03	0	0.01	0	0.03	0	0.01	0	0.03	0	0.01	0	0.03	0	0.01	0	0.03	0	0.01	0
19 - A638 / Main Road	B - Main Road	0.05	0.1	0.04	0	0.05	0.1	0.04	0	0.06	0.1	0.04	0	0.06	0.1	0.04	0	0.06	0.1	0.04	0
	B - Main Road	0.11	0.1	0.09	0.1	0.11	0.1	0.1	0.1	0.14	0.2	0.11	0.1	0.29	0.4	0.19	0.2	0.3	0.4	0.2	0.2
	C - A638 (north)	0.04	0	0.05	0.1	0.04	0	0.05	0.1	0.04	0.1	0.06	0.1	0.04	0.1	0.07	0.1	0.04	0.1	0.07	0.1
20 - A638 / B6387 Rectory Lane	B - B6387 Rectory Lane	0.21	0.3	0.3	0.4	0.21	0.3	0.3	0.4	0.24	0.3	0.34	0.5	0.25	0.3	0.37	0.6	0.26	0.3	0.38	0.6
	C - A638 (south)	0.22	0.3	0.2	0.2	0.22	0.3	0.2	0.2	0.25	0.3	0.22	0.3	0.28	0.4	0.24	0.3	0.28	0.4	0.25	0.3

10.2.2 As demonstrated by the capacity assessment results in **Table 18** the following junctions are shown to experience capacity issues in one or more scenario:

- Junction 6 - A620 Babworth Rd/B6420 Mansfield Rd/A620 Straight Mile/Sutton Lane
- Junction 7 - A620 Babworth Road/Ordsall Road
- Junction 8 - A620 Amcott Way/Bridlegate/A620 Hospital Rd/A638 North Road/Hallcroft Rd
- Junction 9 - A620 Amcott Way/A620 Moorgate/A638 Arlington Way
- Junction 11 - A638 Arlington Way/Grove Street
- Junction 12 - A638 Arlington Way/A638 London Road/Carolgate
- Junction 14 - A638 London Road/Whitehouses Road
- Junction 15 - London Road / Whinney Moor Lane / Bracken Lane

10.2.3 The A620 Babworth Road/A6420 Mansfield Road/A620 Straight Mile/Sutton Lane junction (Junction 6) is shown to operate within capacity in the 2021 scenarios. In 2031 the junction is shown to operate within capacity in the 'base plus committed development' scenario. However, the addition of development trips from the Ordsall South development is such that the Mansfield Road arm of the junction is shown to operate above capacity. The addition of development trips from other Local Plan allocation sites results in a further worsening of junction performance on the Mansfield Road arm. Other arms of the junction are shown to operate within capacity in all scenarios.

10.2.4 The A620 Babworth Road/Ordsall Road junction (Junction 7) is shown to exceed capacity on all arms of the junction in the AM and PM peak hours in the 2021 'base' scenario. Junction performance significantly worsens in 2031. In the '2031 base plus committed development plus Ordsall South plus other Local Plan sites', the longest queue is shown to be circa 1.5km on the Ordsall Road arm in the AM peak hour, with large queues shown on all approaches in both peak periods.

10.2.5 The A620 Amcott Way/Bridlegate/A620 Hospital Road/A638 North Road/Hallcroft Road junction (Junction 8) is shown to operate within capacity in the 2021 scenarios. At 2031 the Hospital Road and North Road arms of the junction are shown to exceed capacity in the AM and PM peak hours respectively. The addition of Ordsall South development trips and trips from other allocation sites worsens junction performance. Nevertheless, the A620 Amcott Way, Bridlegate and Hallcroft Road arms of the junction are shown to operate within capacity in all scenarios.

10.2.9 The A638 London Road/Whitehouses Road junction (Junction 14) is shown to operate above capacity on the A638 London Road (south) and Whitehouses Road arms of the junction in all scenarios. The London Road (north) arm of the junction is shown to operate within capacity in all scenarios.

10.2.10 The London Road/Whinney Moor Lane/Bracken Lane junction (Junction 15) is shown to operate above capacity on the Whinney Moor Lane arm of the junction in the '2031 base + committed developments + Ordsall development + optional developments' scenario only. The junction is shown to operate within capacity in all other scenarios.

11 MITIGATION

11.1 INTRODUCTION

11.1.1 This Chapter outlines a preliminary strategy for mitigating the impact of a development of 1,250 dwellings at the Ordsall South site.

11.2 SUSTAINABLE TRAVEL INFRASTRUCTURE/MEASURES

11.2.1 Current best practice recommends that the transport implications of developments should be assessed having regard to:

- **Measures to encourage environmental sustainability** – i.e. reducing the need to travel, especially by car, providing sustainable transport information and choices and measures to assist in influencing travel behaviour.
- **Managing the existing network** – i.e. making best use of existing transport infrastructure, low cost improvements such as signal control systems and intelligent transport systems.
- **Mitigating residual impacts** – through demand management; improvements to public transport networks, walking and cycling infrastructure; and through minor physical improvements to existing roads.

11.2.2 In accordance with the NPPF all developments which generate significant amounts of movement will be required to provide a Travel Plan. As part of the travel planning process developers will be required to nominate a Travel Plan Coordinator and make financial contributions for the annual monitoring of travel plan performance against agreed targets for an agreed time period following occupation of the development. In addition, bond payments will also be sought to cover the provision of supplementary sustainable travel infrastructure/measures if agreed targets are not met.

11.2.3 The detailed content of the Travel Plan will be site specific and will need to be agreed with the highway and planning authorities at the planning application stage but in general terms will set out the process for monitoring future travel behavior, and the site-specific strategy and measures that will be introduced to influence modal choice with a view to reducing dependency upon the private car. The broad aims of Travel Plan reports being to:

- Encourage the use of alternative modes of transport to the private car and to better manage private car usage to reduce environmental impacts for all journeys associated with the proposed development.

- Include ‘smarter choices’ (for example car sharing, car clubs, teleworking, teleconferencing, home shopping, electric vehicle infrastructure etc.) to help change the way people travel.
- Deliver long-term commitments to changing travel habits by minimising the percentage of single occupancy car journeys associated with the proposal and maximising the proportion of trips made by public transport, by car share, on foot and by cycle.
- Identify and achieve the support of stakeholders for the Travel Plan and encourage a sustainable transport culture, which will develop and grow with time.
- To educate residents and employees regarding the health benefits of walking and cycling.
- To seek to reduce traffic generated by development to a lower level of car trips than would occur without the implementation of a Travel Plan.
- Promote healthy lifestyles and vibrant communities.

11.2.4 The site developer will be required to fund (via S106 Agreements) measures and/or infrastructure improvements required to mitigate the direct transport impacts of the development. This will include funding for items such as Smarter Choices measures and initiatives, Travel Plan, on and off-site cycling and walking infrastructure, bus network/infrastructure enhancements and new/enhanced bus services, where these can be demonstrated to be financially self-supporting in the long term.

11.3 BUS TRANSPORT

11.3.1 As discussed earlier in this report the existing bus services stopping close to the site are not high frequency services. Enhancements to these services, or the provision of new complimentary services should therefore be provided by the developer to ensure that residents on the completed development have sustainable travel choices available. The layout of the site should also be configured to allow bus penetration into the western parcel of land, as a minimum.

11.3.2 Consultation with existing bus service providers is recommended to test the commerciality of (and therefore reduce the subsidy required for) any potential service improvements.

11.3.3 Regarding timing, it is essential to implement new and improved bus services and infrastructure very early in the life of a development, ideally before any units on the site are occupied, so that facilities are available and operational for new residents to use immediately. This is an important aspect of establishing good, sustainable travel behaviour and should be a conditional requirement of planning permissions for new development.

11.3.4 Detailed investigations should be undertaken at the planning application stage in order to identify the appropriate level of new/improved bus services and complementary infrastructure improvements required in order to support the trip rates used in this TA, cater for forecast

demands and achieve modal split targets. Delivery of an appropriate package of improvements should be a conditional requirement of planning permission and should be implemented prior to development occupation and expanded intothe site as development progresses in order to encourage good, sustainable travel behaviour.

11.3.5 Improvements to bus networks/infrastructure should therefore be timed to coincide with development to meet forecast demand.

11.3.6 The cost of providing additional bus resources will depend on the service specifics identified at the planning application stage and will be dependent upon the details of the bus contract specifications, numbers of vehicles required, routes, service frequencies and any new/improved infrastructure required.

11.3.7 However, as a general 'rule of thumb' a new bus service with a single vehicle costs in the order of £475 to £500 per day to operate, or approximately £175,000 per vehicle per annum for a 7-day service.

11.3.8 Improvements are funded to a specified level for specific time periods and are not therefore "open-ended" (usually secured via a Section 106 Agreement). It is typically the case that developers would fund a bus service for a minimum of five years, subject to build-out / occupation rate. After five years the idea is that the service would be sustainable without the need for financial support. This would need to be explored in further detail. The risk is that if the service is not sustainable and additional support is not available, the bus service would cease to operate or would operate a reduced timetable.

11.3.9 Based on the assumption that a new service comprising two buses is required this would equate to a total cost of circa £1.75m for the service to be fully funded for a five year period, assuming no revenue generation from fares.

11.4 CYCLING AND WALKING INFRASTRUCTURE

11.4.1 The site developer will be required to deliver new and improved walking and cycling infrastructure to connect the development to neighbouring areas and facilitate safe travel by these modes. A detailed access strategy will need to be identified at the planning application stage. However, as a minimum this should provide for 3.0m wide shared cycle/footways along Ollerton Road to connect the site to Ordsall plus the new and improved pedestrian and cycle links as detailed in Policy ST29 (for Site HS13) of the November 2020 Draft Local Plan, which requires provision of the following:

- A marked cycle lane along Brecks Road. It should be noted that part of Brecks Road is a public footpath, meaning cycling is prohibited. Permissive cycling rights would be required from the landowner to allow cycling.

- Improvements to the existing public rights of way that cross the site and run along its boundaries.
- A marked cycle lane along Ollerton Road/West Hill Road and Ordsall Park Road to Ordsall Primary School, Retford Leisure Centre and Retford Oaks School via West Carr Road.
- Improvements to public realm in Ordsall Old Village and to Goosemoor Play Area and Sports Ground, including bike storage facility.

11.4.2 Cycle infrastructure improvements should be carried out in accordance with Department for Transport (DfT) Local Transport Note 1/20 'Cycle Infrastructure Design'.

11.4.3 Regarding timing, it is important to implement this new/improved walking and cycling infrastructure very early in the life of the development, ideally before any units on the site are occupied, so that the facilities are available and operational for new residents to use immediately. This is an important aspect of establishing good, sustainable travel behaviour and should be a conditional requirement of planning permissions for new development.

11.4.4 Indicative construction costs for developing new cycling and walking facilities are in the region of:

- New footway/ cycleway – £150,000 to £300,000 per km particularly dependent upon the number and complexity of side road junctions
- New on carriageway cycle lane – £25,000 to £50,000 per km depending upon number of junctions/ signalised junctions, existing highway layout, on street parking constraints etc.
- Rural/ off carriageway route – £50,000 to £100,000 per km primarily dependent upon surfacing material required
- Controlled crossing (toucan) in urban area – £60,000 per site (likely to be higher if on higher speed road or requires Pegasus arrangement to cater for equestrian use also)
- New pair of dropped (uncontrolled) crossings – £2,500 per site.

11.5 MITIGATION OF RESIDUAL HIGHWAY IMPACTS

11.5.1 The site developer will also be required to deliver off-site highway infrastructure improvements to mitigate residual traffic impacts. Details of which will need to be determined at the planning application stage through the submission of a Transport Assessment produced in accordance with the NPPF. The developer will be required to assess the transport implication of the site and the cumulative implications of any other committed land-use development and transport schemes in the local area. Appropriate transport mitigation will need to be identified and agreed with the highway authority to address residual traffic impacts. Delivery of mitigation will be secured through the planning approval process.

11.6 MITIGATION OVERVIEW

11.6.1 If junction modelling shows a junction to operate above capacity following the addition of development trips, NCC highways is likely to seek mitigation. If a junction is shown to operate above capacity prior to the introduction of development trips, the developer will be required to mitigate the impact of the development but will not be required to fix existing problems i.e. mitigation should be determined on a 'nil-detriment' basis.

11.6.2 At the eight junctions shown to be over-capacity, a preliminary approach to mitigation has been identified.

11.7 A620 BABWORTH ROAD / B6420 MANSFIELD ROAD / A620 STRAIGHT MILE / SUTTON LANE

11.7.1 The layout of the existing junction is shown in the image below.

(Map data © Ordnance Survey)

11.7.2 The junction currently operates as a staggered priority crossroad arrangement with right turn ghost islands provided on the A620. The junction also incorporates a private access to the north.

11.7.3 To mitigate the impact of the development, a signal-controlled junction has been assessed. A preliminary layout drawing is presented in **Appendix K** together with LinSIG model outputs. **Table 19** summarises the results of the '2031 Base + Committed Developments + Ordsall Development + Optional Developments' scenario and demonstrates that the junction will operate within capacity.

Table 19 – Capacity Assessment Results for a Signal Controlled Mitigation Scheme

Arm	2031 Base + Committed Developments + Ordsall Development + Optional Developments			
	AM		PM	
	DoS	MMQ	DoS	MMQ
A620 Babworth Road	78.0%	13.7	75.9%	11.8
B6420 Mansfield Road	76.7%	6.5	81.1%	8.4
A620 Straight Mile	65.0%	13.3	81.4%	19.2
Sutton Lane	15.9%	0.7	23.4%	1.0
Practical Reserve Capacity	15.3%		10.5%	

11.8 A620 BABWORTH ROAD / ORDSALL ROAD

11.8.1 The layout of the existing junction is shown in the image below.

(Map data © 2021 TomTom)

11.8.2 This is one of the off-site junctions where the greatest increase in trips is forecast. The existing junction is a three-arm mini-roundabout.

11.8.3 To mitigate the impact of the development, a preliminary signal-controlled junction improvement has been assessed. A preliminary layout drawing is presented in **Appendix K** along with LinSIG model outputs. **Table 20** summarises the results of the '2031 Base + Committed Developments + Ordsall Development + Optional Developments' scenario and demonstrates that the junction will operate within capacity.

Table 20 – Capacity Assessment Results for a Signal Controlled Mitigation Scheme

Arm	2031 Base + Committed Developments + Ordsall Development + Optional Developments			
	AM		PM	
	DoS	MMQ	DoS	MMQ
A620 Babworth Road (east)	89.1%	26.2	63.3%	13.4
Ordsall Road	93.2%	22.2	62.9%	7.4
Babworth Road (west)	92.6%	17.5	61.0%	9.4
Practical Reserve Capacity	-3.5%		42.1%	

11.9 A620 AMCOTT WAY / BRIDLEGATE / A620 HOSPITAL ROAD / A638 NORTH ROAD / HALLCROFT ROAD

11.9.1 The layout of the existing junction is shown in the image below.

(Map data © Ordnance Survey)

11.9.2 The existing junction is a 5-arm priority roundabout with existing residential development on all sides which constrains options for improvement. Demand management measures to influence development modal splits (i.e. increasing use of sustainable transport in order to reduce car trips) should therefore be fully explored to help reduce development traffic impacts at this junction. This should include consideration of contributions twards new/improved public transport infrastructure and services.

11.9.3 In the event that modal shift alone cannot address forecast impacts at this junction then the most likely form of improvement that could be delivered would be either the introduction of signal control on the roundabout or replacing the junction with a signal-controlled crossroads. However, both of these options would be very difficult to deliver in practice due to the constrained nature of the junction, so modal shift should be the initial priority. The site developers will be expected to deliver/fund any improvements required to achieve 'nil detriment'.

11.10 A620 AMCOTT WAY / A620 MOORGATE / A638 ARLINGTON WAY

11.10.1 The layout of the existing junction is shown in the image below.

(Map data © 2021 Ordnance Survey)

11.10.2 The existing junction is a 3-arm signal controlled junction with existing commercial/residential development on all sides which constrains options for improvement.

11.10.3 Demand management measures to influence development modal splits (i.e. increasing use of sustainable transport in order to reduce car trips) should therefore be fully explored to help reduce development traffic impacts at this junction. This should include consideration of contributions towards new/improved public transport infrastructure and services.

11.10.4 The site developers will be expected to deliver/fund any improvements or demand management measures required to achieve 'nil detriment'.

11.11 A638 ARLINGTON WAY / GROVE STREET

11.11.1 The layout of the existing junction is shown in the image below.

(Map data © Ordnance Survey)

11.11.2 The existing junction is a 4-arm signal controlled junction with existing commercial/residential development on all sides which constrains options for improvement.

11.11.3 Demand management measures to influence development modal splits (i.e. increasing use of sustainable transport in order to reduce car trips) should therefore be fully explored to help reduce development traffic impacts at this junction. This should include consideration of contributions towards new/improved public transport infrastructure and services.

11.11.4 The site developers will be expected to deliver/fund any improvements or demand management measures required to achieve 'nil detriment'.

11.12 A638 ARLINGTON WAY / A638 LONDON ROAD / CAROLGATE

11.12.1 The layout of the existing junction is shown in the image below.

(Map data © 2021 Google)

11.12.2 The existing junction is a 4-arm signal controlled junction with existing commercial/residential development on all sides which constrains options for improvement.

11.12.3 Demand management measures to influence development modal splits (i.e. increasing use of sustainable transport in order to reduce car trips) should therefore be fully explored to help reduce development traffic impacts at this junction. This should include consideration of contributions twards new/improved public transport infrastructure and services.

11.12.4 The site developers will be expected to deliver/fund any improvements or demand management measures required to achieve ‘nil detriment’.

11.13 LONDON ROAD / WHITEHOUSES ROAD

11.13.1 The layout of the existing junction is shown in the image below.

(Map data © 2021 Google)

11.13.2 The existing junction is a three-arm mini-roundabout.

11.13.3 To mitigate the impact of the development, a preliminary signal-controlled junction improvement has been assessed. A preliminary layout drawing is presented in **Appendix K** along with LinSIG model outputs. **Table 21** summarises the results of the '2031 Base + Committed Developments + Ordsall Development + Optional Developments' scenario and demonstrates that the junction would operate within capacity.

Table 21 – Capacity Assessment Results for a Signal Controlled Mitigation Scheme

Arm	2031 Base + Committed Developments + Ordsall Development + Optional Developments			
	AM		PM	
	DoS	MMQ	DoS	MMQ
A638 London Road (south)	74.1%	17.0	99.1%	44.5
Whitehouses Road	73.8%	11.7	94.2%	13.9
A638 London Road (north)	74.6%	18.7	95.9%	19.9
Practical Reserve Capacity	20.6%		-10.1%	

11.14 LONDON ROAD / WHINNEY MOOR LANE / BRACKEN LANE

11.14.1 The layout of the existing junction is shown in the image below.

(Map data © Ordnance Survey)

11.14.2 The existing junction is a four-arm priority crossroad arrangement.

11.14.3 To mitigate the impact of development, a preliminary junction scheme has been designed with widening on the Whinney Moor Lane approach. A preliminary layout drawing is presented in **Appendix K** along with the Junctions 9 model outputs. **Table 23** summarises the results of the '2031 Base + Committed Developments + Ordsall Development + Optional Developments' scenario and demonstrates that the junction would operate within capacity.

11.14.4 Nevertheless, it is worth noting the maximum RFC with the mitigation scheme is still required but mitigation is only required in the most onerous scenario assessed (2031 Base + Committed Developments + Ordsall Development + Optional Developments). The preliminary mitigation scheme in **Appendix K** is likely to result in the loss of some trees. Any loss of trees would need to be mitigated for.

Table 22 – Capacity Assessment Results for a Carriageway Widening Mitigation Scheme

Arm	2031 Base + Committed Developments + Ordsall Development + Optional Developments			
	AM		PM	
	RFC	MMQ	RFC	MMQ
B - Bracken Lane	0.09	0.1	0.07	0.1
B - Bracken Lane	0.21	0.3	0.18	0.2
A - London Road (north)	0.13	0.2	0.18	0.2
D - Whinney Moor Lane	0.34	0.5	0.51	0.9
D - Whinney Moor Lane	0.61	1.5	0.84	3.7
C - London Road (south)	0.06	0.1	0.06	0.1

11.15 MAIN ROAD

11.15.1 As indicated previously in this report, NCC has expressed concern relating to any increase in traffic using Main Road. This is due to the character of Main Road which is a historic village layout with a winding road alignment, buildings directly abutting the carriageway, with poor forward and side-road visibility in places. Immediately to the west of the village, Main Road crosses the River Idle via a narrow bridge with no footways and a carriageway that is only wide enough for one-way traffic.

11.15.2 Whilst it may be possible to deliver improvements to the A638/Main Road junction and possibly introduce one-way traffic signal controlled working at the bridge it is unlikely to be appropriate to do so in practice because such improvements would only encourage more traffic to pass through the village.

11.15.3 The most likely form of mitigation is therefore the introduction of measures to discourage development-related traffic to drive between Ollerton Road and the A638 through the village. This could comprise a package of signing/lining measures and, if appropriate, traffic calming measures. Drawings showing an indicative traffic calming scheme for Main Road are presented in **Appendix K**.

11.16 MITIGATION SUMMARY

11.16.1 A summary of the possible walking/cycling and public transport mitigation discussed in this chapter is presented in **Table 23** below. All costs are very preliminary 'ball park' estimates intended to provide an approximate indication of the likely scale of costs involved.

Table 23 – Summary of Sustainable Modes Mitigation

Description	Likely Improvement	Indicative Costs
Public Transport Improvements	New bus service funded for 5 years	£1.4m
Walking & Cycling	New and improved walking and cycling connections to the site	£0.75m

11.16.2 A summary of off-site highway infrastructure improvements to mitigate residual traffic impacts is presented in **Appendix K**. As indicated in the table, a suggested proportional split for infrastructure costs is identified. This is based on the number of development trips from each Local Plan allocation site passing through each junction in the highway peak hours as a proportion of the total Local Plan allocation trips from all sites. All costs are very preliminary 'ball park' estimates intended to provide an approximate indication of the likely scale of costs involved.

11.16.3 The mitigation requirements for each Local Plan allocation site will need to be determined at the planning application stage through the submission of a Transport Assessment produced in accordance with the NPPF. The developer will be required to assess the transport implication of the development and the cumulative implications of any other committed land-use development and transport schemes in the local area. Appropriate transport mitigation will need to be identified and agreed with the highway authority to address any residual traffic impacts.

12 SUMMARY

12.1 INTRODUCTION

12.1.1 This study assesses the impact of a potential development of 1,250 dwellings at the Ordsall South site on Ollerton Road, Retford. The site is allocated in the Draft Bassetlaw Local Plan dated November 2020 under reference HS13 for a minimum of 800 dwellings.

12.1.2 The site currently comprises of agricultural land and is bound to the north by residential development and Retford Golf Club, and to the east, west and south by agricultural land.

12.1.3 For the purposes of this study it has been assumed that the site would be accessed from two new roundabouts onto Ollerton Road with land to the east and west of Ollerton Road accessed from separate arms onto the roundabouts. Land to the west would be accessed from both roundabouts and land to the east would be accessed from one roundabout.

12.1.4 Existing bus services stopping close to the site are not high frequency services. Enhancements to these services, or the provision of new complimentary services should therefore be provided by the developer to ensure that residents on the completed development have sustainable travel choices available. The layout of the site should also be configured to allow bus penetration into the western parcel of land, as a minimum.

12.1.5 The site developer will be required to deliver new and improved walking and cycling infrastructure to connect the development to neighbouring areas and facilitate safe travel by these modes. A detailed access strategy will need to be identified at the planning application stage. However, as a minimum this should provide for 3.0m wide shared cycle/footways along Ollerton Road to connect the site to Ordsall plus the new and improved pedestrian and cycle links as detailed in Policy ST29 (for Site HS13) of the November 2020 Draft Local Plan.

12.1.6 Based on the forecast highway impacts, capacity assessments would be required at all but one of the junctions considered in this TA.

12.1.7 A larger number of dwellings would increase off-site highway impacts. A significant increase could potentially enable more comprehensive mitigation measures to be provided. One previous suggestion from residents in the Ordsall area is for the provision of a new link road between Ollerton Road and the A638. Providing a new link road is likely to prove technically very challenging and prohibitively expensive. It would also only help to address traffic impacts associated with development traffic wishing to access destinations to the south and east and would provide no relief for development trips to/from the north that would be passing through or around Retford. At some of these locations (e.g. in Retford town centre) it will be very difficult to deliver any meaningful mitigation in the form of increased junction capacity due to the physical

space constraints that exist within the urban environment and because at many locations opportunities to achieve additional traffic capacity appear to have already been taken.

12.1.8 The site developer will also be required to deliver off-site highway infrastructure improvements to mitigate residual traffic impacts. Details of which will need to be determined at the planning application stage through the submission of a Transport Assessment produced in accordance with the NPPF. The developer will be required to assess the transport implication of the site and the cumulative implications of any other committed land-use development and transport schemes in the local area. Appropriate transport mitigation will need to be identified and agreed with the highway authority to address residual traffic impacts. This TA has identified that eight off-site junctions will require mitigation. A preliminary approach to mitigation has been identified with walking/cycling improvements, bus service improvements and off-site junction improvements identified.

12.1.9 Delivery of mitigation will be secured through the planning approval process. Mitigation could take the form of a S106 contribution towards a scheme(s) or delivery of a scheme(s) in full. NCC may opt for a comprehensive scheme at a specific junction rather than several smaller piecemeal improvements at several junctions. In this scenario, a comprehensive scheme would also address existing capacity problems as well as the impact of the development.

Figures

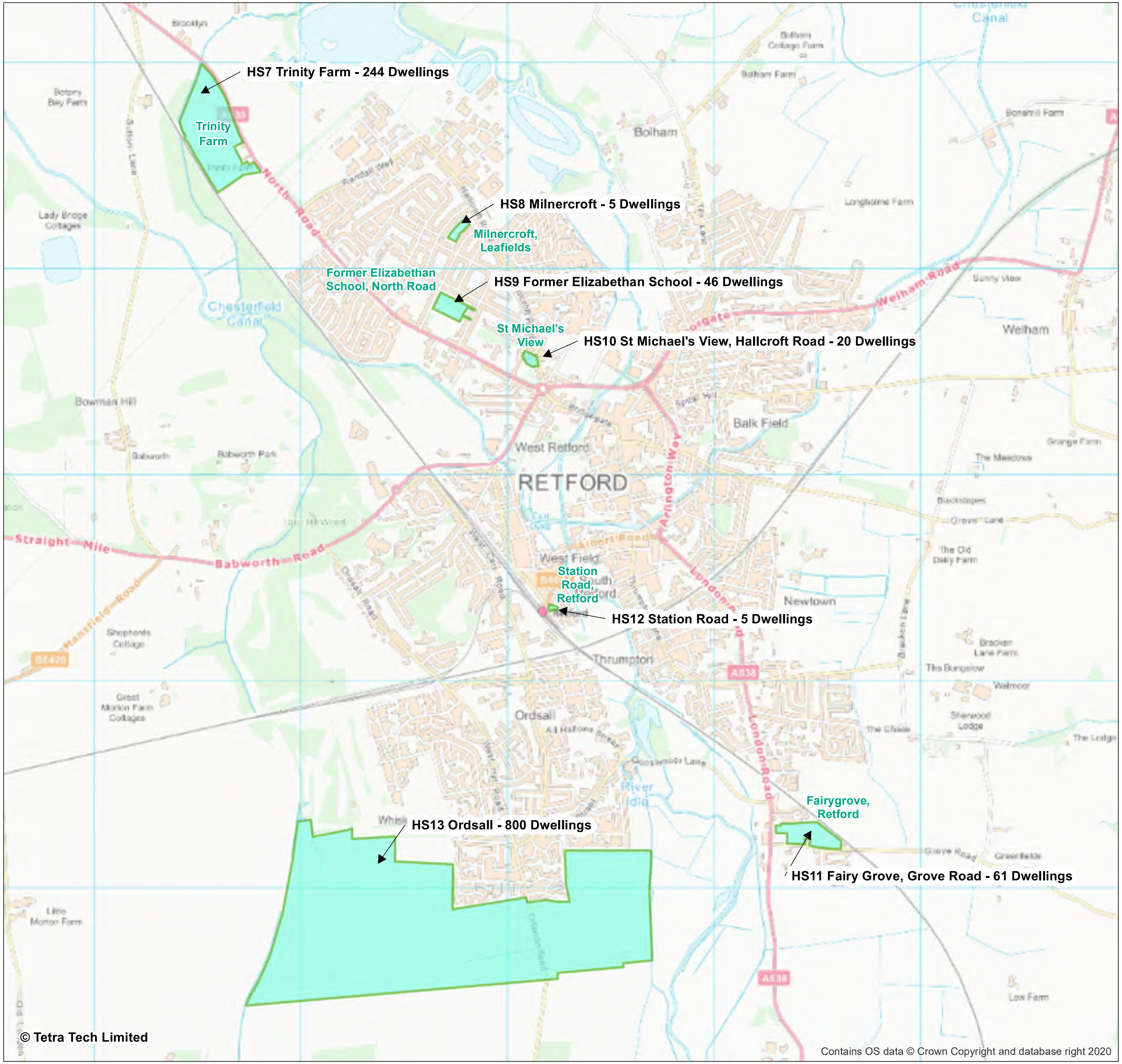
Figure 1 Retford Development Sites

Ordsall, Retford

Bassetlaw District Council

Legend

Allocation Sites



Notes:

Drawn by: JC

Checked by: RJH

Approved by: ASG

Drawing No. 006

Revision No. -

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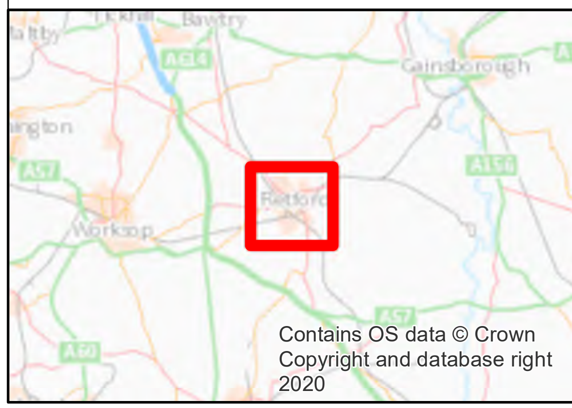
04 June 2021

NGR: 470,255 E / 380,729 N



TETRA TECH

Executive Park
Avalon Way
Anstey
Leicester
Leicestershire
LE7 7GR

TEL: 0116 234 8000
Email: europe@tetratech.com

Figure 2 Ordsall South Site Location

Ordsall, Retford

Bassetlaw District Council

Legend

- Local Amenities
- Bus Stops
- PROWs
- Site Boundary

Primary School

Education Facility

Education Facility

Pre-School

Pharmacy

Convenience Store & Post Office

Convenience Store

Ordsall

Ash Holt

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Notes:

Drawn by: LW

Checked by: RJH

Office: Nottingham

Drawing No. 001

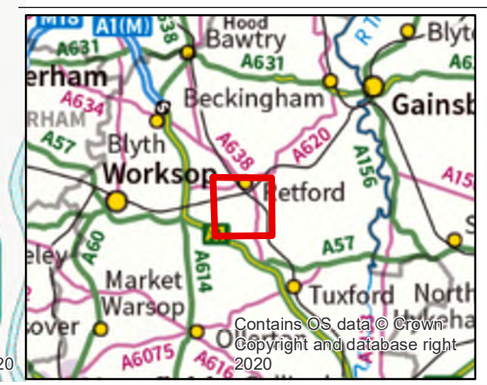
Revision No. -

0 0.1 0.2 0.3 Km

Scale: 1:560,462 @A3

07 June 2021

NGR: 470,949 E / 379,835 N



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Geneva Building
Lake View Drive
Sherwood Business Park
Nottingham
NG15 0ED

TEL: +44 (0)1623 684550
Email: nottingham@tetratech.com

Figure 5 - 2km and 5km Catchment Plan

Ordsall, Retford

Bassetlaw District Council

Legend

- Site Boundary
- 2km Walking Catchment
- 5km Cycling Catchment

Notes:

Drawn by: LW

Checked by: RJH

Office: Nottingham

Drawing No. 002

Revision No. -

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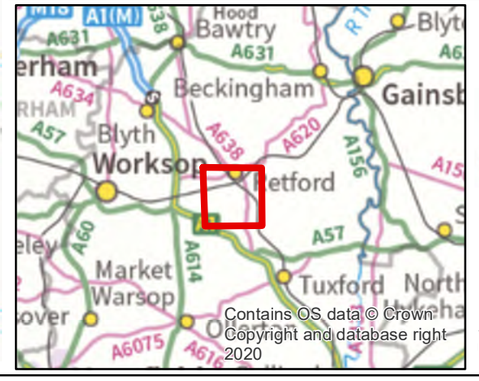
Scale: 1:560,462 @A3

07 June 2021

NGR: 470,949 E / 379,835 N



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Geneva Building
Lake View Drive
Sherwood Business Park
Nottingham
NG15 0ED

TEL: +44 (0)1623 684550
Email: nottingham@tetratech.com

Figure 6 - Personal Injury Collision Data

Ordsall, Retford

Bassetlaw District Council

Legend

- Site Boundary
- Collision Data Study Area

Severity/Road User Involved

- Slight Collision Pedestrian Involved
- Slight Collision Vehicle Only
- Serious Collision Pedestrian Involved
- Serious Collision Vehicle Only
- Fatal Collision Vehicle Only

Notes:

Drawn by: ES
Checked by: RJH
Office: Nottingham

Drawing No. 003
Revision No. -

0 0.15 0.3 0.45 Km

Scale: 1:10,000 @A3

07 June 2021

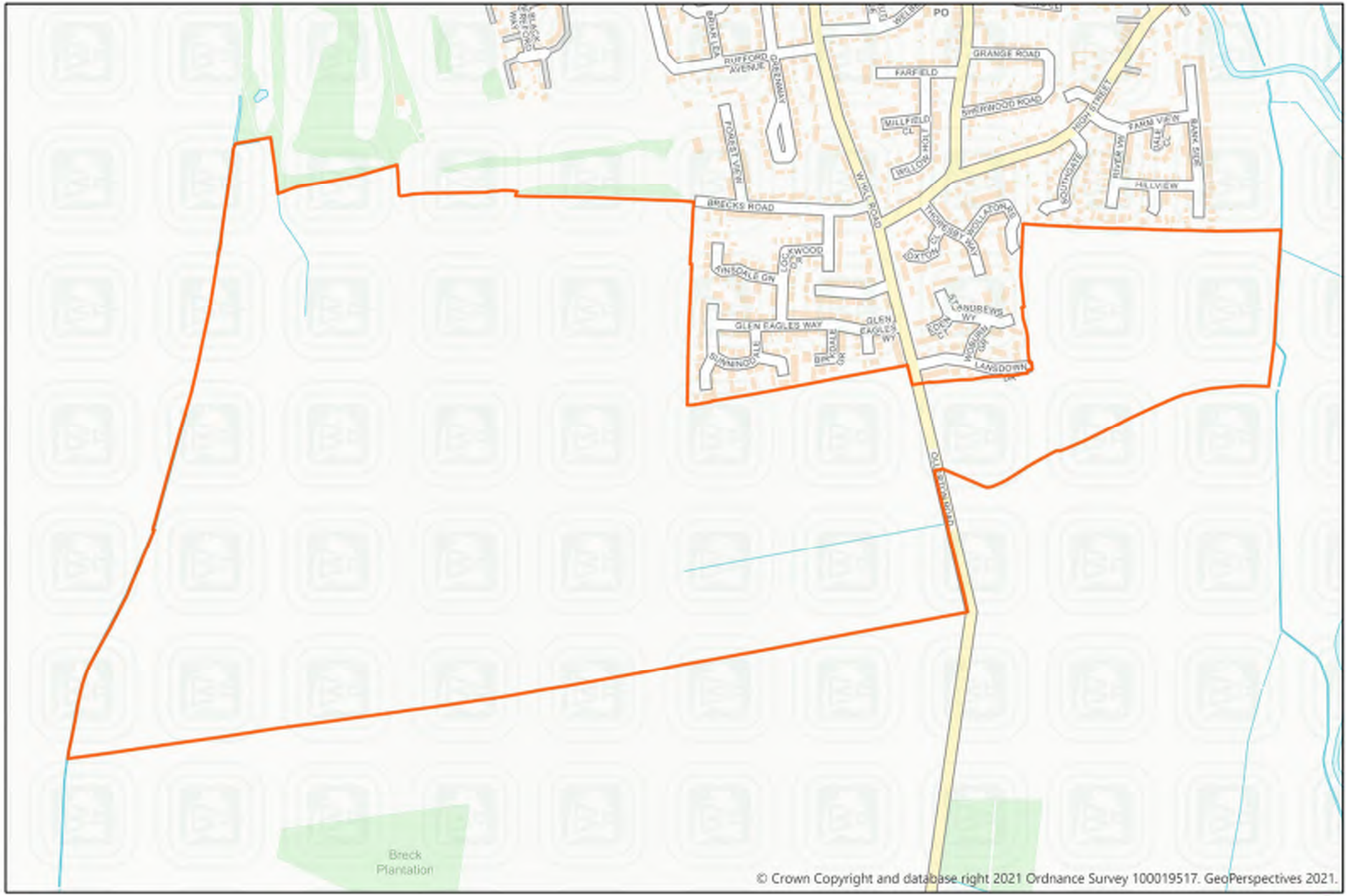
NGR: 470,035 E / 379,631 N

TETRA TECH

Geneva Building
Lake View Drive
Sherwood Business Park
Nottingham
NG15 0ED

TEL: +44 (0)1623 684550
Email: nottingham@tetratech.com

Appendix A - Site Boundary



Bassetlaw
DISTRICT COUNCIL
North Nottinghamshire

Appendix B – TA Scoping Correspondence

Holland, Robert

From: Martin Green <martin.green@nottscc.gov.uk>
Sent: 04 December 2020 08:01
To: Holland, Robert
Subject: RE: Land at Ollerton Road, Ordsall

Hi Robert

The committed developments I mentioned earlier would be applicable here; residential development at Tiln Lane (14/00503/OUT), mixed use development at North Road, Retford (15/00493/OUT), retail park London Road/South Street including a Lidl (16/00015/FUL). I probably should have also mentioned, with respect the Garden Village; the residential development at the former Kenilworth Nurseries on London Road (16/01777/FUL & 18/00695/FUL), and the residential development at Bracken Lane, Retford (19/00765/OUT) which will also need consideration.

The scope of the assessment will need to include Main Street Eaton which links Ollerton Road to London Road. There's a narrow bridge, poor alignment, accesses with limited visibility splays, no footways etc. This could be a show stopper if it would be likely to experience a material increase in traffic. Unfortunately it's a more convenient route to the south than Goosemoor Lane. I'd also be grateful if you could include the Goosemoor Lane/High Street and Whinney Moor Lane/London Road junctions. More generally I will be seeking all main junctions that will experience greater the 30 two-way peak hour movements to be included within the scope of the assessment. The A638/B6387 is a popular route towards Ollerton, but I'm not sure whether it would exceed the threshold.

I do not have a copy of the completed S106 but I believe application reference 18/00695/FUL mentioned above includes a financial contribution of £250,000 towards either a scheme to provide improvements to mitigate the impact of the scheme on the London Road/Whinney Moor Lane junction, or to provide measures to reduce traffic and congestion on the London Road transport corridor.

Kind regards

Martin Green
Principal Officer
Nottinghamshire County Council
Telephone 0115 9773963
www.nottinghamshire.gov.uk

From: Holland, Robert <Robert.Holland@tetratech.com>
Sent: 03 December 2020 18:02
To: Martin Green <martin.green@nottscc.gov.uk>
Subject: Land at Ollerton Road, Ordsall

Hi Martin

We've been appointed by Bassetlaw District Council (BDC) to undertake a transport study of a potential residential development to the south of Ordsall to help inform Local Plan work. It will essentially be a Transport Assessment but the document won't form part of a planning application, not for now anyway. I've attached a plan showing the site boundary. We've been asked to consider 800 dwellings at the site with vehicular access from Ollerton Road.

We'd be grateful for your thoughts on the site in general and the approach we're taking as we're keen to ensure anything we do now isn't abortive if a planning application is prepared further down the line. We will be taking the following general approach:

- A description of proposed uses for the site.
- Summary of relevant planning policy documents.

- Analysis of existing conditions.
- Review of local sustainable transport facilities (walking, cycling, bus and rail), including walking and cycling catchments (2.0km for walking and 5.0km for cycling). Explore the opportunities and constraints. Identify improvements where necessary.
- Analysis of the most recently available 5 year period of collision data for the area shown on the attached plan.
- Study area for trip distribution to consist of the site access(es) on Ollerton Road and off-site junctions as advised by NCC. As a starting point, we propose the following as shown on the attached plan:
    1. A1/A620 Retford Road/B6079 Retford Road
    2. A1/B6420 Mansfield Road/A614 Blyth Road/A57
    3. A1/Elkesley Bridge Road/Jockey Lane/Eskil Way
    4. A1/B6387 Dover Bottom
    5. A1 Markham Moor Junction
    6. A620 Babworth Road/B6420 Mansfield Road/A620 Straight Mile/Sutton Lane
    7. A620 Babworth Road/Ordsall Road
    8. A620 Amcott Way/Bridlegate/A620 Hospital Road/A638 North Road/Hallcroft Road
    9. A620 Amcott Way/A620 Moorgate/A638 Arlington Way
    10. A638 Arlington Way/Spital Hill/Chapelgate
    11. A638 Arlington Way/Grove Street
    12. A638 Arlington Way/A638 London Road/Carolgate
    13. Ollerton Road/West Hill Road
    14. A638 London Road/Whitehouses Road
- Trip generation calculated using trip rates from the TRICS database.
- Trip distribution using Travel to Work data from the 2011 Census with route choices obtained from the VISSIM model that we've used to distribute trips when looking at the Cottam Power Station and Morton Garden Village sites for BDC. We will use the 'Bassetlaw 010' Middle Super Output Area.
- TA assessment year of 2031 i.e. 10 years from 2021. Assessments to consider the weekday AM and PM peak hours.
- Traffic growth using TEMPRO adjusted NTM growth factors for the local area.
- Capacity assessments at the site access junction(s) and off-site junctions where we have a severe impact. At this stage we will include any junction with a peak hour impact greater than 30 vehicles.

Please could you advise of any committed developments/schemes we should take into account. BDC has indicated that NCC may have an improvement scheme in the pipeline for a nearby junction – London Road/Whitehouses Road? Please advise of any implications for our site.

Any further comments you can add at this stage would be appreciated e.g. anything on likely S106 contributions.

Please let me know if you have any queries.

Many thanks

Rob Holland
Associate Director

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WYG
Geneva Building, Lake View Drive, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
Tel: +44 116 234 8176
Mob: +44 7824 431 929

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Appendix C – Collision Data

Accident Details Report

Ordsall Rd - Ollerton Rd - Goosemoor Rd - Ordsall Period 1-1-15 to 30-9-20 by nthing DR4644

Total number of reports = **19**

Total number of pages (including this page) = **20**

No. 1	District Bassetlaw		VRUs	Grid Reference 470093 / 377887
SEVERITY **SLIGHT**	Ref.No 2B167619	**Accident Details**		Police Officer Attend: Yes

Date	21/09/2019	Day Saturday	ROAD U
Time	10:11		LOCATION OLLERTON ROAD, at its Junction with U/C UNAMED ROAD,1060M SW LANSDOWN DRIVE RETFORD
Weather	Fine		
Road Surface	Dry		
Street Lighting	Daylight		

SITE DETAILS	
Speed Limit	60 MPH
Carriageway	Single c'way
Lane markings	Centre/hazard line
Junction Detail	Crossroads
Junction Control	Give way sign or uncontrolled
2nd Road Number	U
Pedestrian Facilities	No Human control within 50m
and	No crossing facility within 50m

SPECIAL SITE CONDITIONS

None

CARRIAGEWAY HAZARDS

None

VEHICLES INVOLVED 2

Veh.No. 1 Vehicle type Van/Goods < 3.5t
Manoeuvre Going ahead other
Direction from South west to North east Towing? No
Skidded Yes
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Approaching or parked on approach to junction
Veh left carriageway? Did not leave c'way
Hit object in c'way? None
Hit object off c'way? None
First point of impact Front
Drivers age 39 yrs Sex Male Other veh.hit (ref.) 2 Hit and run No
Foreign vehicle Not foreign Breath test Negative
Journey purpose

Veh.No. 2 Vehicle type Car
Manoeuvre Turning right
Direction from South west to South east Towing? No
Skidded No
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Leaving main road
Veh left carriageway? Did not leave c'way
Hit object in c'way? None
Hit object off c'way? None
First point of impact Back
Drivers age 52 yrs Sex Male Other veh.hit (ref.) 1 Hit and run No
Foreign vehicle Not foreign Breath test Negative
Journey purpose

CASUALTIES INVOLVED 2

Cas No 1 Cas Class Driver or Rider Veh ref No 2
Severity **SLIGHT** Age 52 yrs Sex Male
Car Passenger? No PSV Passenger? No
Ped Movement Not a pedestrian
Ped location Not a pedestrian
Ped Direction to Not a pedestrian
School Pupil Other
Roadworker injured No

Cas No 2 Cas Class Passenger Veh ref No 2
Severity **SLIGHT** Age 56 yrs Sex Female
Car Passenger? Front PSV Passenger? No
Ped Movement Not a pedestrian
Ped location Not a pedestrian
Ped Direction to Not a pedestrian
School Pupil Other
Roadworker injured No

No. 2	District Bassetlaw	Accident Details	VRUs	Grid Reference 470036 / 379196
SEVERITY **SERIOUS**	Ref.No 2B163717			Police Officer Attend: Yes

Date	26/07/2017	Day Wednesday	ROAD U
Time	18:47		LOCATION U/C WEST HILL ROAD, at its Junction with U/C OLLERTON ROAD, RETFORD
Weather	Fine		
Road Surface	Dry		
Street Lighting	Daylight		

SITE DETAILS	
Speed Limit	30 MPH
Carriageway	Single c'way
Lane markings	Centre/hazard line
Junction Detail	T or Staggered junction
Junction Control	Give way sign or uncontrolled
2nd Road Number	U
Pedestrian Facilities	No Human control within 50m
and	No crossing facility within 50m

SPECIAL SITE CONDITIONS

None

CARRIAGEWAY HAZARDS

None

VEHICLES INVOLVED 2

Veh.No. 1 Vehicle type Car
Manoeuvre Turning left
Direction from North east to South Towing? No
Skidded Yes
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Entering main road
Veh left carriageway? Did not leave c'way
Hit object in c'way? None
Hit object off c'way? None
First point of impact Front
Drivers age U/K yrs Sex Male Other veh.hit (ref.) 2 Hit and run No
Foreign vehicle Not foreign Breath test Not contacted
Journey purpose Other/Not known

Veh.No. 2 Vehicle type Car
Manoeuvre Going ahead other
Direction from South to North Towing? No
Skidded No
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Mid junction
Veh left carriageway? Did not leave c'way
Hit object in c'way? None
Hit object off c'way? None
First point of impact Front
Drivers age 75 yrs Sex Female Other veh.hit (ref.) 1 Hit and run No
Foreign vehicle Not foreign Breath test Negative
Journey purpose Other/Not known

CASUALTIES INVOLVED 1

Cas No 1 Cas Class Driver or Rider Veh ref No 2
Severity **SERIOUS** Age 75 yrs Sex Female
Car Passenger? No PSV Passenger? No
Ped Movement Not a pedestrian
Ped location Not a pedestrian
Ped Direction to Not a pedestrian
School Pupil Other
Roadworker injured No

No. 3	District Bassetlaw	Accident Details	VRUs Motorcycle	Grid Reference 470023 / 379226
SEVERITY SLIGHT	Ref.No 2B260318			Police Officer Attend: Yes

Date	12/12/2018 Day Wednesday	ROAD	U
Time	22:16	LOCATION	U/C WEST HILL ROAD, at its Junction with U/C BRECKS ROAD, RETFORD
Weather	Fine		
Road Surface	Wet		
Street Lighting	Dark/lights lit		

SITE DETAILS	
Speed Limit	30 MPH
Carriageway	Single c'way
Lane markings	Centre/hazard line
Junction Detail	T or Staggered junction
Junction Control	Give way sign or uncontrolled
2nd Road Number	U
Pedestrian Facilities	No Human control within 50m
and	No crossing facility within 50m

SPECIAL SITE CONDITIONS

None

CARRIAGEWAY HAZARDS

None

VEHICLES INVOLVED 2

Veh.No. 1 Vehicle type M/cycle 50 - 125cc
Manoeuvre Going ahead other
Direction from North west to South east Towing? No
Skidded Yes
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Mid junction
Veh left carriageway? Did not leave c'way
Hit object in c'way? None
Hit object off c'way? None
First point of impact Front
Drivers age 18 yrs Sex Male Other veh.hit (ref.) 2 Hit and run No
Foreign vehicle Not foreign Breath test Negative
Journey purpose Other/Not known

Veh.No. 2 Vehicle type Car
Manoeuvre Turning right
Direction from South west to South east Towing? No
Skidded No
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Entering main road
Veh left carriageway? Did not leave c'way
Hit object in c'way? None
Hit object off c'way? None
First point of impact Nearside
Drivers age 28 yrs Sex Male Other veh.hit (ref.) 1 Hit and run No
Foreign vehicle Not foreign Breath test Negative
Journey purpose

CASUALTIES INVOLVED 1

Cas No 1 Cas Class Driver or Rider Veh ref No 1
Severity SLIGHT Age 18 yrs Sex Male
Car Passenger? No PSV Passenger? No
Ped Movement Not a pedestrian
Ped location Not a pedestrian
Ped Direction to Not a pedestrian
School Pupil Other
Roadworker injured No

No. 4	District Bassetlaw		VRUs	Grid Reference 471274 / 379409
SEVERITY **SLIGHT**	Ref.No 2B161418	**Accident Details**		Police Officer Attend: Yes

Date	23/08/2018 Day Thursday	ROAD	A638
Time	13:17	LOCATION	A638 LONDON ROAD M-RBT, at its Junction with U/C WHITEHOUSES ROAD, RETFORD
Weather	Fine		
Road Surface	Dry		
Street Lighting	Daylight		

SITE DETAILS		SPECIAL SITE CONDITIONS
Speed Limit	40 MPH	None
Carriageway	Roundabout	
Lane markings	Centre/hazard line	CARRIAGEWAY HAZARDS
Junction Detail	Mini Roundabout	None
Junction Control	Give way sign or uncontrolled	
2nd Road Number	U	
Pedestrian Facilities	No Human control within 50m	
and	Central Refuge only	

VEHICLES INVOLVED 2

Veh.No. 1 Vehicle type Car
Manoeuvre Going ahead other
Direction from South to North Towing? No
Skidded No
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Entering roundabout
Veh left carriageway? Did not leave c'way
Hit object in c'way? None
Hit object off c'way? None
First point of impact Offside
Drivers age 70 yrs Sex Female Other veh.hit (ref.) 2 Hit and run No
Foreign vehicle Not foreign Breath test Negative
Journey purpose Other/Not known

Veh.No. 2 Vehicle type Car
Manoeuvre Turning right
Direction from North to West Towing? No
Skidded No
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Mid junction
Veh left carriageway? Did not leave c'way
Hit object in c'way? None
Hit object off c'way? None
First point of impact Front
Drivers age 21 yrs Sex Female Other veh.hit (ref.) 1 Hit and run No
Foreign vehicle Not foreign Breath test Negative
Journey purpose Other/Not known

CASUALTIES INVOLVED 1

Cas No 1 Cas Class Driver or Rider Veh ref No 1
Severity **SLIGHT** Age 70 yrs Sex Female
Car Passenger? No PSV Passenger? No
Ped Movement Not a pedestrian
Ped location Not a pedestrian
Ped Direction to Not a pedestrian
School Pupil Other
Roadworker injured No

No. 5	District Bassetlaw		VRUs	Grid Reference 471268 / 379417
SEVERITY **SLIGHT**	Ref.No 2B136515	**Accident Details**		Police Officer Attend: No - reported over the counter

Date	13/07/2015	Day Monday	ROAD A638
Time	11:30		LOCATION A638 LONDON ROAD, at its M-RBT Junction with Unclassified Road WHITEHOUSE ROAD (AKA GOOSEMOOR LN), EAST RETFORD
Weather	Fine		
Road Surface	Dry		
Street Lighting	Daylight		

SITE DETAILS	
Speed Limit	40 MPH
Carriageway	Roundabout
Lane markings	Centre/hazard line
Junction Detail	Mini Roundabout
Junction Control	Give way sign or uncontrolled
2nd Road Number	U
Pedestrian Facilities	No Human control within 50m
and	No crossing facility within 50m

SPECIAL SITE CONDITIONS

None

CARRIAGEWAY HAZARDS

None

VEHICLES INVOLVED 2

Veh.No. 1 Vehicle type Car
Manoeuvre Turning right
Direction from West to South Towing? No
Skidded No
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Entering roundabout
Veh left carriageway? Did not leave c'way
Hit object in c'way? None
Hit object off c'way? None
First point of impact Offside
Drivers age 18 yrs Sex Female Other veh.hit (ref.) 2 Hit and run No
Foreign vehicle Not foreign Breath test Not requested
Journey purpose Other/Not known

Veh.No. 2 Vehicle type Car
Manoeuvre Going ahead other
Direction from South to North Towing? No
Skidded No
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Mid junction
Veh left carriageway? Did not leave c'way
Hit object in c'way? None
Hit object off c'way? None
First point of impact Front
Drivers age 34 yrs Sex Male Other veh.hit (ref.) 1 Hit and run No
Foreign vehicle Not foreign Breath test Not requested
Journey purpose

CASUALTIES INVOLVED 1

Cas No 1 Cas Class Driver or Rider Veh ref No 1
Severity **SLIGHT** Age 18 yrs Sex Female
Car Passenger? No PSV Passenger? No
Ped Movement Not a pedestrian
Ped location Not a pedestrian
Ped Direction to Not a pedestrian
School Pupil Other
Roadworker injured No

No. 6	District Bassetlaw	Accident Details	VRUs Motorcycle	Grid Reference 471054 / 379510
SEVERITY FATAL	Ref.No 4B078220			Police Officer Attend: Yes

Date	19/07/2020	Day Sunday	ROAD U
Time	13:29		LOCATION U/C GOOSEMOOR LAN/WHITEHOUSES ROAD, at its Junction with U/C PTE ENT/EXT TO GOOSEMOOR PRODUCE FARM SHOP, RETFORD
Weather	Fine		
Road Surface	Dry		
Street Lighting	Daylight		

SITE DETAILS	
Speed Limit	40 MPH
Carriageway	Single c'way
Lane markings	Centre/hazard line
Junction Detail	Using private drive or entrance
Junction Control	Give way sign or uncontrolled
2nd Road Number	U
Pedestrian Facilities	No Human control within 50m
and	No crossing facility within 50m

SPECIAL SITE CONDITIONS

None

CARRIAGEWAY HAZARDS

None

VEHICLES INVOLVED 2

Veh.No. 1 Vehicle type M/cycle > 500cc
Manoeuvre Going ahead other
Direction from South east to North west Towing? No
Skidded No
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Mid junction
Veh left carriageway? Did not leave c'way
Hit object in c'way? None
Hit object off c'way? None
First point of impact Front
Drivers age 26 yrs Sex Male Other veh.hit (ref.) 2 Hit and run No
Foreign vehicle Not foreign Breath test Not provided
Journey purpose

Veh.No. 2 Vehicle type Car
Manoeuvre Turning right
Direction from North west to West Towing? No
Skidded No
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Leaving main road
Veh left carriageway? Did not leave c'way
Hit object in c'way? None
Hit object off c'way? None
First point of impact Nearside
Drivers age 53 yrs Sex Female Other veh.hit (ref.) 1 Hit and run No
Foreign vehicle Not foreign Breath test Negative
Journey purpose Other/Not known

CASUALTIES INVOLVED 1

Cas No 1 Cas Class Driver or Rider Veh ref No 1
Severity FATAL Age 26 yrs Sex Male
Car Passenger? No PSV Passenger? No
Ped Movement Not a pedestrian
Ped location Not a pedestrian
Ped Direction to Not a pedestrian
School Pupil Other
Roadworker injured No

No. 7	District Bassetlaw	Accident Details	VRUs	Grid Reference 469938 / 379515
SEVERITY SLIGHT	Ref.No 2B057318			Police Officer Attend: Yes

Date 26/03/2018 Day Monday
Time 13:04
Weather Fine
Road Surface Dry
Street Lighting Daylight

ROAD U

LOCATION U/C WEST HILL ROAD, at its Junction with U/C WELBECK ROAD, RETFORD

SITE DETAILS

Speed Limit 30 MPH
Carriageway Single c'way
Lane markings Centre/hazard line
Junction Detail T or Staggered junction
Junction Control Give way sign or uncontrolled
2nd Road Number U
Pedestrian Facilities No Human control within 50m
and No crossing facility within 50m

SPECIAL SITE CONDITIONS

None

CARRIAGEWAY HAZARDS

None

VEHICLES INVOLVED 2

Veh.No. 1 Vehicle type Car
Manoeuvre Turning right
Direction from South to East Towing? No
Skidded No
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Leaving main road
Veh left carriageway? Did not leave c'way
Hit object in c'way? None
Hit object off c'way? None
First point of impact Front
Drivers age 19 yrs Sex Male Other veh.hit (ref.) 2 Hit and run No
Foreign vehicle Not foreign Breath test Not requested
Journey purpose Other/Not known

Veh.No. 2 Vehicle type Car
Manoeuvre Going ahead other
Direction from North to South Towing? No
Skidded No
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Mid junction
Veh left carriageway? Did not leave c'way
Hit object in c'way? None
Hit object off c'way? None
First point of impact Front
Drivers age 28 yrs Sex Male Other veh.hit (ref.) 1 Hit and run No
Foreign vehicle Not foreign Breath test Not requested
Journey purpose Commuting to/from work

CASUALTIES INVOLVED 2

Cas No 1 Cas Class Driver or Rider Veh ref No 1
Severity SLIGHT Age 19 yrs Sex Male
Car Passenger? No PSV Passenger? No
Ped Movement Not a pedestrian
Ped location Not a pedestrian
Ped Direction to Not a pedestrian
School Pupil Other
Roadworker injured No

Cas No 2 Cas Class Driver or Rider Veh ref No 2
Severity SLIGHT Age 28 yrs Sex Male
Car Passenger? No PSV Passenger? No
Ped Movement Not a pedestrian
Ped location Not a pedestrian
Ped Direction to Not a pedestrian
School Pupil Other
Roadworker injured No

No. 8	District Bassetlaw	Accident Details	VRUs	Grid Reference 469936 / 379549
SEVERITY SLIGHT	Ref.No 2B139817			Police Officer Attend: No - reported over the counter

Date 08/08/2017 Day Tuesday
Time 12:31
Weather Rain
Road Surface Wet
Street Lighting Daylight

ROAD U

LOCATION U/C WEST HILL ROAD (BUS STOP), (APPROX) 24 metres north of WELBECK ROAD, RETFORD

Speed Limit 30 MPH
Carriageway Single c'way
Lane markings Centre/hazard line
Junction Detail Not at or within 20m of junction
Junction Control
2nd Road Number
Pedestrian Facilities No Human control within 50m
and No crossing facility within 50m

SITE DETAILS

SPECIAL SITE CONDITIONS

None

CARRIAGEWAY HAZARDS

None

VEHICLES INVOLVED 1

Veh.No. 1 Vehicle type Bus or Coach
Manoeuvre Stopping
Direction from South to North Towing? No
Skidded No
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Not at junction
Veh left carriageway? Did not leave c'way
Hit object in c'way? None
Hit object off c'way? None
First point of impact Did not impact
Drivers age U/K yrs Sex Male Other veh.hit (ref.) 0 Hit and run No
Foreign vehicle Not foreign Breath test Not contacted
Journey purpose Journey as part of work

CASUALTIES INVOLVED 1

Cas No 1 Cas Class Passenger Veh ref No 1
Severity SLIGHT Age U/K yrs Sex Female
Car Passenger? No PSV Passenger? Standing
Ped Movement Not a pedestrian
Ped location Not a pedestrian
Ped Direction to Not a pedestrian
School Pupil Other
Roadworker injured No

No. 9	District Bassetlaw	Accident Details	VRUs	Grid Reference 470784 / 379621
SEVERITY SLIGHT	Ref.No 2B158417		Pedestrian	Police Officer Attend: Yes

Date 27/08/2017 Day Sunday
Time 03:00
Weather Fine
Road Surface Dry
Street Lighting Dark/lights lit

ROAD U

LOCATION U/C GOOSEMOOR LANE, RETFORD

Speed Limit 40 MPH
Carriageway Single c'way
Lane markings Centre/hazard line
Junction Detail Not at or within 20m of junction
Junction Control
2nd Road Number
Pedestrian Facilities and No Human control within 50m No crossing facility within 50m

SITE DETAILS

SPECIAL SITE CONDITIONS

None

CARRIAGEWAY HAZARDS

None

VEHICLES INVOLVED 1

Veh.No. 1 Vehicle type Car
Manoeuvre Going ahead other
Direction from East to West Towing? No
Skidded No
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Not at junction
Veh left carriageway? Did not leave c'way
Hit object in c'way? None
Hit object off c'way? None
First point of impact Front
Drivers age U/K yrs Sex Not traced Other veh.hit (ref.) 0 Hit and run Yes
Foreign vehicle Not foreign Breath test Not contacted
Journey purpose

CASUALTIES INVOLVED 1

Cas No 1 Cas Class Pedestrian Veh ref No 1
Severity SLIGHT Age 31 yrs Sex Male
Car Passenger? No PSV Passenger? No
Ped Movement Crossing from drivers nearside
Ped location In c'way crossing elsewhere
Ped Direction to North
School Pupil Other
Roadworker injured No

No. 10	District Bassetlaw	Accident Details	VRUs	Grid Reference 469796 / 379877
SEVERITY **SERIOUS**	Ref.No 2B224615		**Pedestrian**	Police Officer Attend: Yes

Date	19/10/2015	Day Monday	ROAD C45
Time	15:30		LOCATION C45 WEST HILL ROAD, 30 metres southeast of /NEWLANDS (OUTSIDE ORDSALL PRIMARY SCHOOL), RETFORD
Weather	Fine		
Road Surface	Dry		
Street Lighting	Daylight		

Speed Limit	30 MPH	SITE DETAILS	SPECIAL SITE CONDITIONS
Carriageway	Single c'way		None
Lane markings	Centre/hazard line		
Junction Detail	Not at or within 20m of junction		CARRIAGEWAY HAZARDS
Junction Control			None
2nd Road Number			
Pedestrian Facilities	No Human control within 50m		
and	No crossing facility within 50m		

VEHICLES INVOLVED 1

Veh.No.	1	Vehicle type	Car		
Manoeuvre	Going ahead other				
Direction from	North west to South east	Towing?	No		
Skidded	No				
Veh location at impact (restricted lane)	On main carriageway				
Junct. location of veh. at 1st impact	Not at junction				
Veh left carriageway?	Did not leave c'way				
Hit object in c'way?	None				
Hit object off c'way?	None				
First point of impact	Nearside				
Drivers age	53 yrs	Sex	Female	Other veh.hit (ref.) 0	Hit and run No
Foreign vehicle	Not foreign				Breath test Negative
Journey purpose	Other/Not known				

CASUALTIES INVOLVED 1

Cas No	1	Cas Class	Pedestrian	Veh ref No	1
Severity	**SERIOUS**	Age	6 yrs	Sex	Female
Car Passenger?	No	PSV Passenger?	No		
Ped Movement	Crossing from drivers nearside				
Ped location	In c'way crossing elsewhere				
Ped Direction to	South west				
School Pupil	Other				
Roadworker injured	No				

No. 11	District Bassetlaw	Accident Details	VRUs	Grid Reference 469733 / 379949
SEVERITY SLIGHT	Ref.No 2B142116			Police Officer Attend: Yes

Date	18/02/2016 Day Thursday	ROAD	U
Time	11:45	LOCATION	Unclassified Road WEST HILL ROAD/ORDSALL ROAD (NW), at its Junction with Unclassified Road ORDSALL ROAD (E), RETFORD
Weather	Fine		
Road Surface	Dry		
Street Lighting	Daylight		

SITE DETAILS	
Speed Limit	30 MPH
Carriageway	Single c'way
Lane markings	Centre/hazard line
Junction Detail	T or Staggered junction
Junction Control	Give way sign or uncontrolled
2nd Road Number	U
Pedestrian Facilities	No Human control within 50m
and	No crossing facility within 50m

SPECIAL SITE CONDITIONS

None

CARRIAGEWAY HAZARDS

None

VEHICLES INVOLVED 2

Veh.No. 1 Vehicle type Car
Manoeuvre Turning right
Direction from East to North west Towing? No
Skidded No
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Entering main road
Veh left carriageway? Did not leave c'way
Hit object in c'way? None
Hit object off c'way? None
First point of impact Front
Drivers age 67 yrs Sex Male Other veh.hit (ref.) 2 Hit and run No
Foreign vehicle Not foreign Breath test Negative
Journey purpose Commuting to/from work

Veh.No. 2 Vehicle type Car
Manoeuvre Going ahead other
Direction from North west to South east Towing? No
Skidded No
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Mid junction
Veh left carriageway? Did not leave c'way
Hit object in c'way? None
Hit object off c'way? None
First point of impact Nearside
Drivers age 69 yrs Sex Male Other veh.hit (ref.) 1 Hit and run No
Foreign vehicle Not foreign Breath test Negative
Journey purpose

CASUALTIES INVOLVED 2

Cas No 1 Cas Class Driver or Rider Veh ref No 2
Severity SLIGHT Age 69 yrs Sex Male
Car Passenger? No PSV Passenger? No
Ped Movement Not a pedestrian
Ped location Not a pedestrian
Ped Direction to Not a pedestrian
School Pupil Other
Roadworker injured No

Cas No 2 Cas Class Passenger Veh ref No 2
Severity SLIGHT Age U/K yrs Sex Male
Car Passenger? Front PSV Passenger? No
Ped Movement Not a pedestrian
Ped location Not a pedestrian
Ped Direction to Not a pedestrian
School Pupil Other
Roadworker injured No

No. 12	District Bassetlaw	**Accident Details**	VRUs	Grid Reference 469638 / 380035
SEVERITY **SLIGHT**	Ref.No 2B084617		**Pedestrian**	Police Officer Attend: Yes

Date	05/05/2017	Day Friday	
Time	16:28		
Weather	Fine		
Road Surface	Dry		
Street Lighting	Daylight		

ROAD U

LOCATION Unclassified Road ORDSALL ROAD at House Number 97, RETFORD

SITE DETAILS	
Speed Limit	30 MPH
Carriageway	Single c'way
Lane markings	Centre/hazard line
Junction Detail	Not at or within 20m of junction
Junction Control	
2nd Road Number	
Pedestrian Facilities	No Human control within 50m
and	No crossing facility within 50m

SPECIAL SITE CONDITIONS

None

CARRIAGEWAY HAZARDS

None

VEHICLES INVOLVED 1

Veh.No.	1	Vehicle type	Car		
Manoeuvre	Going ahead other				
Direction from	North west to South east	Towing?	No		
Skidded	No				
Veh location at impact (restricted lane)	On main carriageway				
Junct. location of veh. at 1st impact	Not at junction				
Veh left carriageway?	Did not leave c'way				
Hit object in c'way?	None				
Hit object off c'way?	None				
First point of impact	Front				
Drivers age	53 yrs	Sex	Male	Other veh.hit (ref.) 0	Hit and run No
Foreign vehicle	Not foreign				Breath test Not requested
Journey purpose	Other/Not known				

CASUALTIES INVOLVED 1

Cas No	1	Cas Class	Pedestrian	Veh ref No	1
Severity	**SLIGHT**	Age	12 yrs	Sex	Male
Car Passenger?	No	PSV Passenger?	No		
Ped Movement	Crossing from drivers nearside				
Ped location	In c'way crossing elsewhere				
Ped Direction to	South west				
School Pupil	Yes on way to or from school				
Roadworker injured	No				

No. 13	District Bassetlaw	Accident Details	VRUs	Grid Reference 469603 / 380060
SEVERITY SLIGHT	Ref.No 2B053920		Pedestrian	Police Officer Attend: No - reported over the counter

Date 20/04/2020 Day Monday
Time 18:55
Weather Fine
Road Surface Dry
Street Lighting Daylight

ROAD U

LOCATION U/C ORDSALL ROAD at House Number OPP 89, 21 metres southeast of NORTHUMBRIA DRIVE, RETFORD

Speed Limit 30 MPH
Carriageway Single c'way
Lane markings Centre/hazard line
Junction Detail Not at or within 20m of junction
Junction Control
2nd Road Number
Pedestrian Facilities and No Human control within 50m No crossing facility within 50m

SITE DETAILS

SPECIAL SITE CONDITIONS

None

CARRIAGEWAY HAZARDS

None

VEHICLES INVOLVED 1

Veh.No. 1 Vehicle type Car
Manoeuvre Going ahead other
Direction from South east to North west Towing? No
Skidded No
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Not at junction
Veh left carriageway? Did not leave c'way
Hit object in c'way? None
Hit object off c'way? None
First point of impact Nearside
Drivers age 37 yrs Sex Male Other veh.hit (ref.) 0 Hit and run No
Foreign vehicle Not foreign Breath test Not contacted
Journey purpose

CASUALTIES INVOLVED 1

Cas No 1 Cas Class Pedestrian Veh ref No 1
Severity SLIGHT Age 35 yrs Sex Male
Car Passenger? No PSV Passenger? No
Ped Movement Crossing from drivers offside
Ped location In c'way crossing elsewhere
Ped Direction to South west
School Pupil Other
Roadworker injured No

No. 14	District Bassetlaw	Accident Details	VRUs	Grid Reference 469447 / 380206
SEVERITY **SERIOUS**	Ref.No 2B068318			Police Officer Attend: Yes

Date 26/03/2018 Day Monday
Time 19:56
Weather Fine
Road Surface Dry
Street Lighting Dark/lights lit

ROAD U

LOCATION U/C ORDSALL ROAD, 236 metres southeast of U/C ORDSALL PARK ROAD, RETFORD

SITE DETAILS

Speed Limit 30 MPH
Carriageway Single c'way
Lane markings Centre/hazard line
Junction Detail Not at or within 20m of junction
Junction Control
2nd Road Number
Pedestrian Facilities No Human control within 50m
and No crossing facility within 50m

SPECIAL SITE CONDITIONS

None

CARRIAGEWAY HAZARDS

None

VEHICLES INVOLVED 2

Veh.No. 1 Vehicle type Car
Manoeuvre Going ahead other
Direction from North west to South east Towing? No
Skidded No
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Not at junction
Veh left carriageway? Did not leave c'way
Hit object in c'way? None
Hit object off c'way? None
First point of impact Front
Drivers age 59 yrs Sex Male Other veh.hit (ref.) 2 Hit and run No
Foreign vehicle Not foreign Breath test Not requested
Journey purpose Commuting to/from work

Veh.No. 2 Vehicle type Car
Manoeuvre Going ahead other
Direction from South east to North west Towing? No
Skidded No
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Not at junction
Veh left carriageway? Did not leave c'way
Hit object in c'way? None
Hit object off c'way? None
First point of impact Front
Drivers age 39 yrs Sex Male Other veh.hit (ref.) 1 Hit and run No
Foreign vehicle Not foreign Breath test Not requested
Journey purpose Commuting to/from work

CASUALTIES INVOLVED 2

Cas No 1 Cas Class Driver or Rider Veh ref No 1
Severity **SERIOUS** Age 59 yrs Sex Male
Car Passenger? No PSV Passenger? No
Ped Movement Not a pedestrian
Ped location Not a pedestrian
Ped Direction to Not a pedestrian
School Pupil Other
Roadworker injured No

Cas No 2 Cas Class Driver or Rider Veh ref No 2
Severity **SLIGHT** Age 39 yrs Sex Male
Car Passenger? No PSV Passenger? No
Ped Movement Not a pedestrian
Ped location Not a pedestrian
Ped Direction to Not a pedestrian
School Pupil Other
Roadworker injured No

No. 15	District Bassetlaw	# Accident Details	VRUs	Grid Reference 469318 / 380377
SEVERITY **SLIGHT**	Ref.No 2B137815		**Pedestrian**	Police Officer Attend: No - reported over the counter

Date	08/06/2015	Day Monday	ROAD U
Time	08:15		LOCATION Unclassified Road ORDSALL ROAD, 21 metres southeast of Unclassified Road ORDSALL PARK ROAD, RETFORD
Weather	Other		
Road Surface	Dry		
Street Lighting	Daylight		

SITE DETAILS	
Speed Limit	30 MPH
Carriageway	Single c'way
Lane markings	Centre/hazard line
Junction Detail	Not at or within 20m of junction
Junction Control	
2nd Road Number	
Pedestrian Facilities	No Human control within 50m
and	No crossing facility within 50m

SPECIAL SITE CONDITIONS

None

CARRIAGEWAY HAZARDS

None

VEHICLES INVOLVED 1

Veh.No.	1	Vehicle type	Goods 3.5 - 7.5t		
Manoeuvre	Going ahead other				
Direction from	South east to North west	Towing?	No		
Skidded	No				
Veh location at impact (restricted lane)	On main carriageway				
Junct. location of veh. at 1st impact	Not at junction				
Veh left carriageway?	Did not leave c'way				
Hit object in c'way?	None				
Hit object off c'way?	None				
First point of impact	Nearside				
Drivers age	48 yrs	Sex	Male	Other veh.hit (ref.) 0	Hit and run No
Foreign vehicle	Not foreign				Breath test Not contacted
Journey purpose	Journey as part of work				

CASUALTIES INVOLVED 1

Cas No	1	Cas Class	Pedestrian	Veh ref No	1
Severity	**SLIGHT**	Age	16 yrs	Sex	Male
Car Passenger?	No	PSV Passenger?	No		
Ped Movement	Unknown or other				
Ped location	On footway or verge				
Ped Direction to	South west				
School Pupil	Yes on way to or from school				
Roadworker injured	No				

No. 16	District Bassetlaw		VRUs Motorcycle	Grid Reference 469125 / 380649
SEVERITY SERIOUS	Ref.No 2B072117	**Accident Details**		Police Officer Attend: Yes

Date 04/02/2017 Day Saturday	ROAD A620
Time 11:42	
Weather Fine	LOCATION A620 BABWORTH ROAD RBT, at its Junction with Unclassified Road ORDSALL ROAD, RETFORD
Road Surface Dry	
Street Lighting Daylight	

SITE DETAILS	
Speed Limit	40 MPH
Carriageway	Roundabout
Lane markings	Centre/hazard line
Junction Detail	Mini Roundabout
Junction Control	Give way sign or uncontrolled
2nd Road Number	U
Pedestrian Facilities	No Human control within 50m
and	No crossing facility within 50m

SPECIAL SITE CONDITIONS

None

CARRIAGEWAY HAZARDS

None

VEHICLES INVOLVED 2

Veh.No. 1 Vehicle type M/cycle 50 - 125cc
Manoeuvre Going ahead other
Direction from North east to South west Towing? No
Skidded No
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Mid junction
Veh left carriageway? Did not leave c'way
Hit object in c'way? None
Hit object off c'way? None
First point of impact Front
Drivers age 19 yrs Sex Male Other veh.hit (ref.) 2 Hit and run No
Foreign vehicle Not foreign Breath test Not requested
Journey purpose

Veh.No. 2 Vehicle type Car
Manoeuvre Turning right
Direction from South east to North east Towing? No
Skidded No
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Entering roundabout
Veh left carriageway? Did not leave c'way
Hit object in c'way? None
Hit object off c'way? None
First point of impact Offside
Drivers age 73 yrs Sex Male Other veh.hit (ref.) 1 Hit and run No
Foreign vehicle Not foreign Breath test Not requested
Journey purpose

CASUALTIES INVOLVED 1

Cas No 1 Cas Class Driver or Rider Veh ref No 1
Severity SERIOUS Age 19 yrs Sex Male
Car Passenger? No PSV Passenger? No
Ped Movement Not a pedestrian
Ped location Not a pedestrian
Ped Direction to Not a pedestrian
School Pupil Other
Roadworker injured No

No. 17	District Bassetlaw		VRUs	Grid Reference 469129 / 380651
SEVERITY SLIGHT	Ref.No 2B183215	**Accident Details**		Police Officer Attend: Yes

Date	30/07/2015	Day Thursday	ROAD A620
Time	20:29		LOCATION A620 BABWORTH ROAD, at its M-RBT Junction with Unclassified Road ORDSALL ROAD, RETFORD
Weather	Fine		
Road Surface	Dry		
Street Lighting	Daylight		

SITE DETAILS	
Speed Limit	30 MPH
Carriageway	Roundabout
Lane markings	Centre/hazard line
Junction Detail	Mini Roundabout
Junction Control	Give way sign or uncontrolled
2nd Road Number	U
Pedestrian Facilities	No Human control within 50m
and	No crossing facility within 50m

SPECIAL SITE CONDITIONS

None

CARRIAGEWAY HAZARDS

None

VEHICLES INVOLVED 2

Veh.No. 1 Vehicle type Car
Manoeuvre Turning right
Direction from South east to North east Towing? No
Skidded No
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Entering roundabout
Veh left carriageway? Did not leave c'way
Hit object in c'way? None
Hit object off c'way? None
First point of impact Front
Drivers age 19 yrs Sex Female Other veh.hit (ref.) 2 Hit and run No
Foreign vehicle Not foreign Breath test Negative
Journey purpose Journey as part of work

Veh.No. 2 Vehicle type Car
Manoeuvre Going ahead other
Direction from North east to South west Towing? No
Skidded No
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Mid junction
Veh left carriageway? Did not leave c'way
Hit object in c'way? Bollard/refuge
Hit object off c'way? None
First point of impact Nearside
Drivers age 29 yrs Sex Male Other veh.hit (ref.) 1 Hit and run No
Foreign vehicle Not foreign Breath test Negative
Journey purpose Journey as part of work

CASUALTIES INVOLVED 2

Cas No 1 Cas Class Driver or Rider Veh ref No 1
Severity SLIGHT Age 19 yrs Sex Female
Car Passenger? No PSV Passenger? No
Ped Movement Not a pedestrian
Ped location Not a pedestrian
Ped Direction to Not a pedestrian
School Pupil Other
Roadworker injured No

Cas No 2 Cas Class Driver or Rider Veh ref No 2
Severity SLIGHT Age 29 yrs Sex Male
Car Passenger? No PSV Passenger? No
Ped Movement Not a pedestrian
Ped location Not a pedestrian
Ped Direction to Not a pedestrian
School Pupil Other
Roadworker injured No

No. 18	District Bassetlaw		VRUs	Grid Reference 469125 / 380653
SEVERITY **SLIGHT**	Ref.No 2B082719	**Accident Details**		Police Officer Attend: Yes

Date	24/05/2019	Day Friday	ROAD A620
Time	12:40		LOCATION A620 BABWORTH ROAD M-RBT, at its Junction with U/C ORDSALL ROAD, RETFORD
Weather	Fine		
Road Surface	Dry		
Street Lighting	Daylight		

SITE DETAILS	
Speed Limit	40 MPH
Carriageway	Roundabout
Lane markings	Centre/hazard line
Junction Detail	Mini Roundabout
Junction Control	Give way sign or uncontrolled
2nd Road Number	U
Pedestrian Facilities	No Human control within 50m
and	Central Refuge only

SPECIAL SITE CONDITIONS

None

CARRIAGEWAY HAZARDS

None

VEHICLES INVOLVED 2

Veh.No. 1 Vehicle type Car
Manoeuvre Turning right
Direction from South west to South east Towing? No
Skidded No
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Mid junction
Veh left carriageway? Did not leave c'way
Hit object in c'way? None
Hit object off c'way? None
First point of impact Front
Drivers age 22 yrs Sex Male Other veh.hit (ref.) 2 Hit and run No
Foreign vehicle Not foreign Breath test Negative
Journey purpose Commuting to/from work

Veh.No. 2 Vehicle type Car
Manoeuvre Going ahead other
Direction from North east to South west Towing? No
Skidded No
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Entering roundabout
Veh left carriageway? Did not leave c'way
Hit object in c'way? None
Hit object off c'way? None
First point of impact Front
Drivers age 20 yrs Sex Female Other veh.hit (ref.) 1 Hit and run No
Foreign vehicle Not foreign Breath test Negative
Journey purpose Commuting to/from work

CASUALTIES INVOLVED 1

Cas No 1 Cas Class Driver or Rider Veh ref No 2
Severity **SLIGHT** Age 20 yrs Sex Female
Car Passenger? No PSV Passenger? No
Ped Movement Not a pedestrian
Ped location Not a pedestrian
Ped Direction to Not a pedestrian
School Pupil Other
Roadworker injured No

No. 19	District Bassetlaw	Accident Details	VRUs Motorcycle	Grid Reference 469124 / 380655
SEVERITY SLIGHT	Ref.No 2B204718			Police Officer Attend: No - reported over the counter

Date	13/10/2018	Day Saturday	ROAD A620
Time	08:00		LOCATION A620 BABWORTH ROAD M-RBT, at its Junction with U/C ORDSALL ROAD, RETFORD
Weather	Fine		
Road Surface	Dry		
Street Lighting	Daylight		

SITE DETAILS	
Speed Limit	40 MPH
Carriageway	Roundabout
Lane markings	Centre/hazard line
Junction Detail	Mini Roundabout
Junction Control	Give way sign or uncontrolled
2nd Road Number	U
Pedestrian Facilities	No Human control within 50m
and	No crossing facility within 50m

SPECIAL SITE CONDITIONS

Oil or diesel

CARRIAGEWAY HAZARDS

None

VEHICLES INVOLVED 1

Veh.No. 1 Vehicle type M/cycle <= 50cc
Manoeuvre Turning right
Direction from South east to North east Towing? No
Skidded Yes
Veh location at impact (restricted lane) On main carriageway
Junct. location of veh. at 1st impact Entering roundabout
Veh left carriageway? Left c'way near-side
Hit object in c'way? None
Hit object off c'way? None
First point of impact Offside
Drivers age 17 yrs Sex Female Other veh.hit (ref.) 0 Hit and run No
Foreign vehicle Not foreign Breath test Not requested
Journey purpose

CASUALTIES INVOLVED 1

Cas No 1 Cas Class Driver or Rider Veh ref No 1
Severity SLIGHT Age 17 yrs Sex Female
Car Passenger? No PSV Passenger? No
Ped Movement Not a pedestrian
Ped location Not a pedestrian
Ped Direction to Not a pedestrian
School Pupil Other
Roadworker injured No

Appendix D – Concept Access Layout

Key:

- New Carriageway
- New Footway
- New Refuges
- Landscaping
- Site Boundary
- Pedestrian/Cycle Permeability

PRELIMINARY ISSUE

P01	PRELIMINARY FIRST ISSUE	08.06.2021	NJ	RJH	RJH

Tetra Tech Leicester
Executive Park, Avalon Way, Anstey,
Leicester, United Kingdom, LE7 7GR
Tel: +44 (0)11 6234 8000
www.tetratecheurope.com

TETRA TECH

Bassetlaw District Council

Ordsall Transport Assessment

Potential Site Access Roundabouts

B023665	NJ 06 June 21	RJH 08 June 21	RJH 08 June 21	1:2000	S2
B023665	TTE	00	XX	SK	O	0011	P01

Appendix E – Tempro Outputs

Level Area

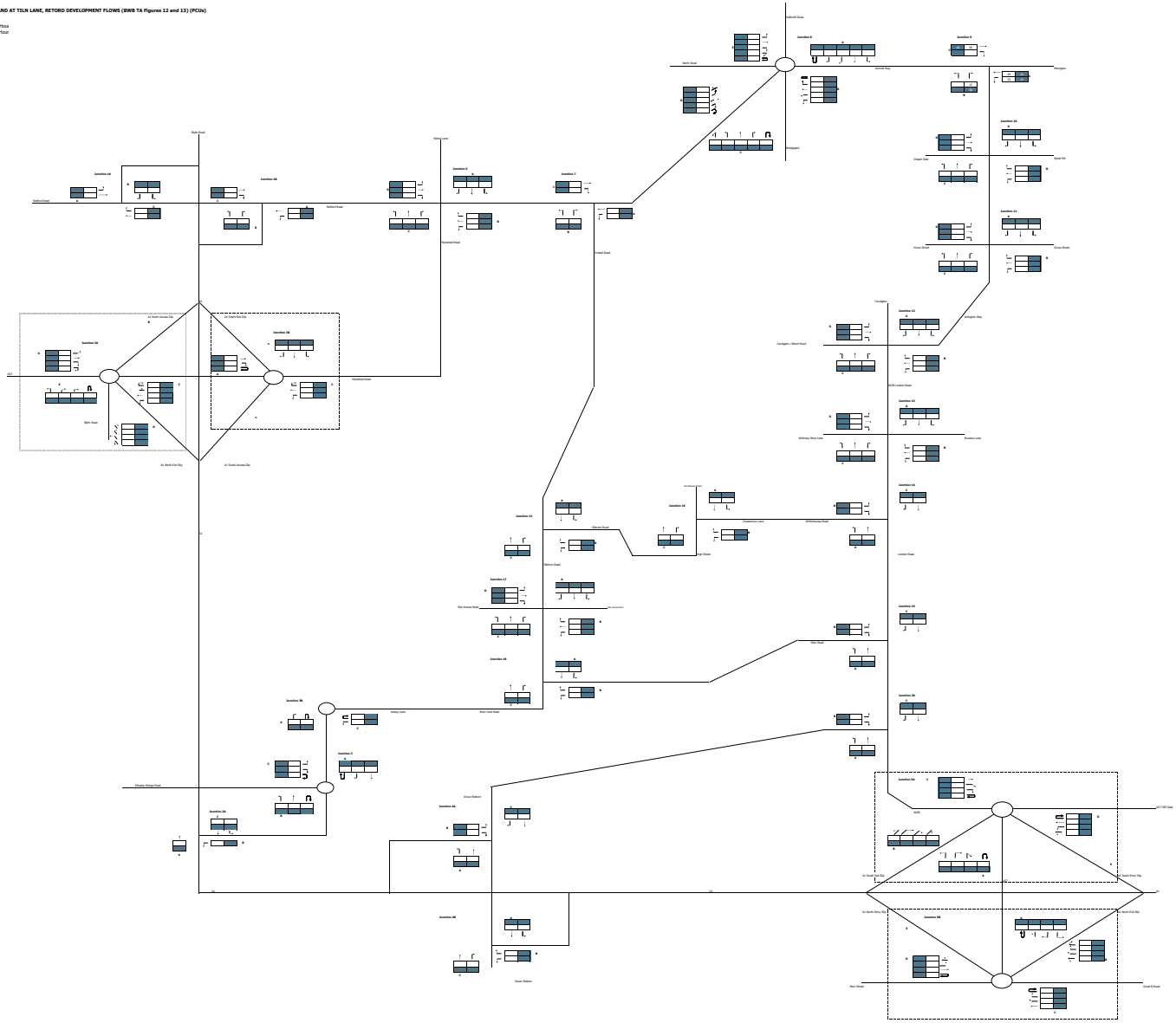
E02005844 Bassetlaw 010

From	To	Period	Local Growth Figure
2011	2021	AM	1.136427167
2011	2021	PM	1.132265056
2016	2021	AM	1.08047128
2016	2021	PM	1.075594117
2017	2021	AM	1.064079856
2017	2021	PM	1.060248188
2018	2021	AM	1.048154416
2018	2021	PM	1.045408693
2019	2021	AM	1.032731155
2019	2021	PM	1.030959746
2021	2031	AM	1.111559297
2021	2031	PM	1.110880498

Appendix F – Committed Development Flows

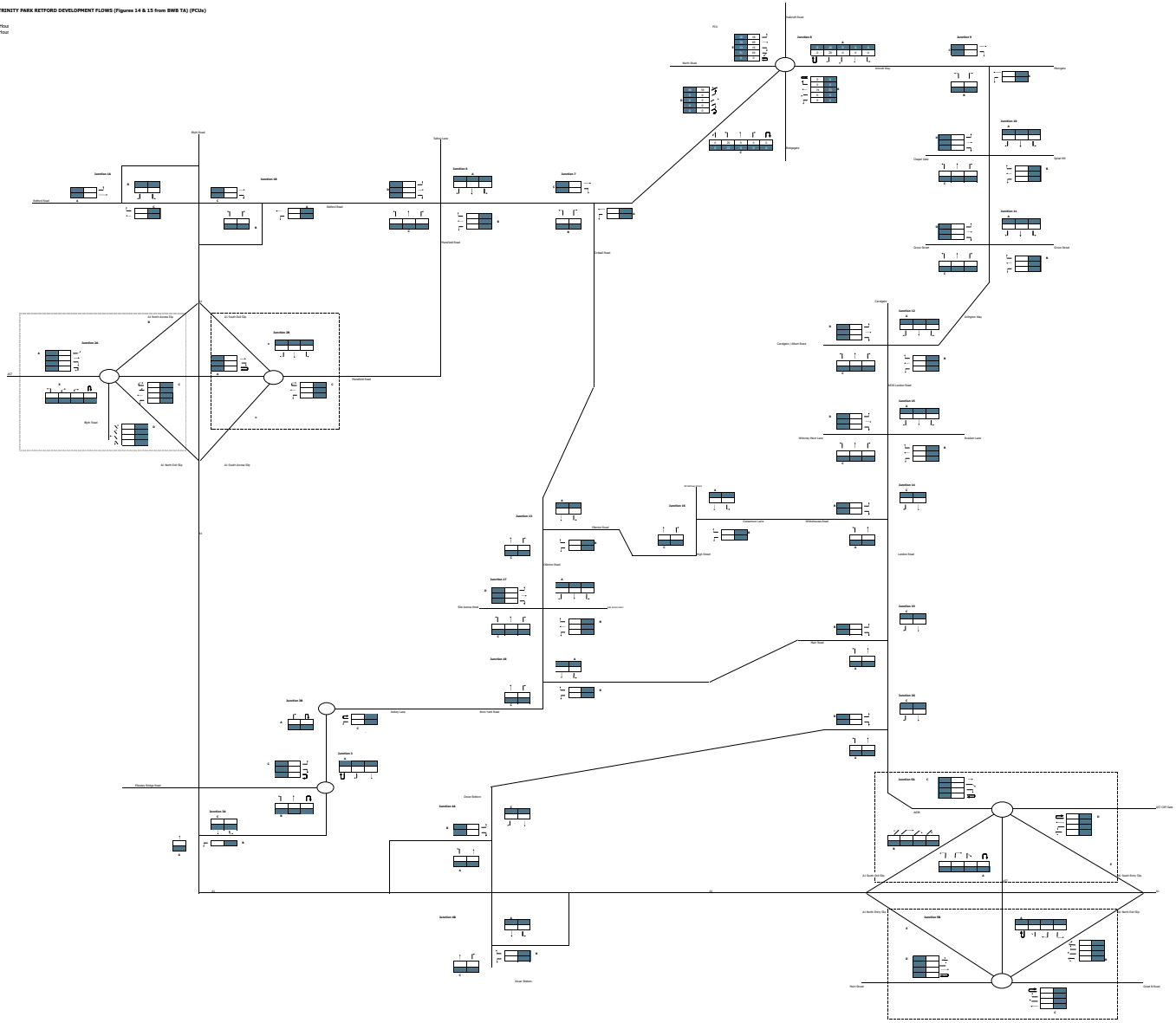
14/00503/OUT LAND AT TILN LANE, RETORD DEVELOPMENT FLOWS (BWB TA Figures 12 and 13) (PCUs)

KEY
AM Morning Peak Hour
PM Evening Peak Hour



15/00493/OUT - TRINITY PARK RETFORD DEVELOPMENT FLOWS (Figures 14 & 15 from BWB TA) (PCUs)

KEY
AM Morning Peak Hour
PM Evening Peak Hour

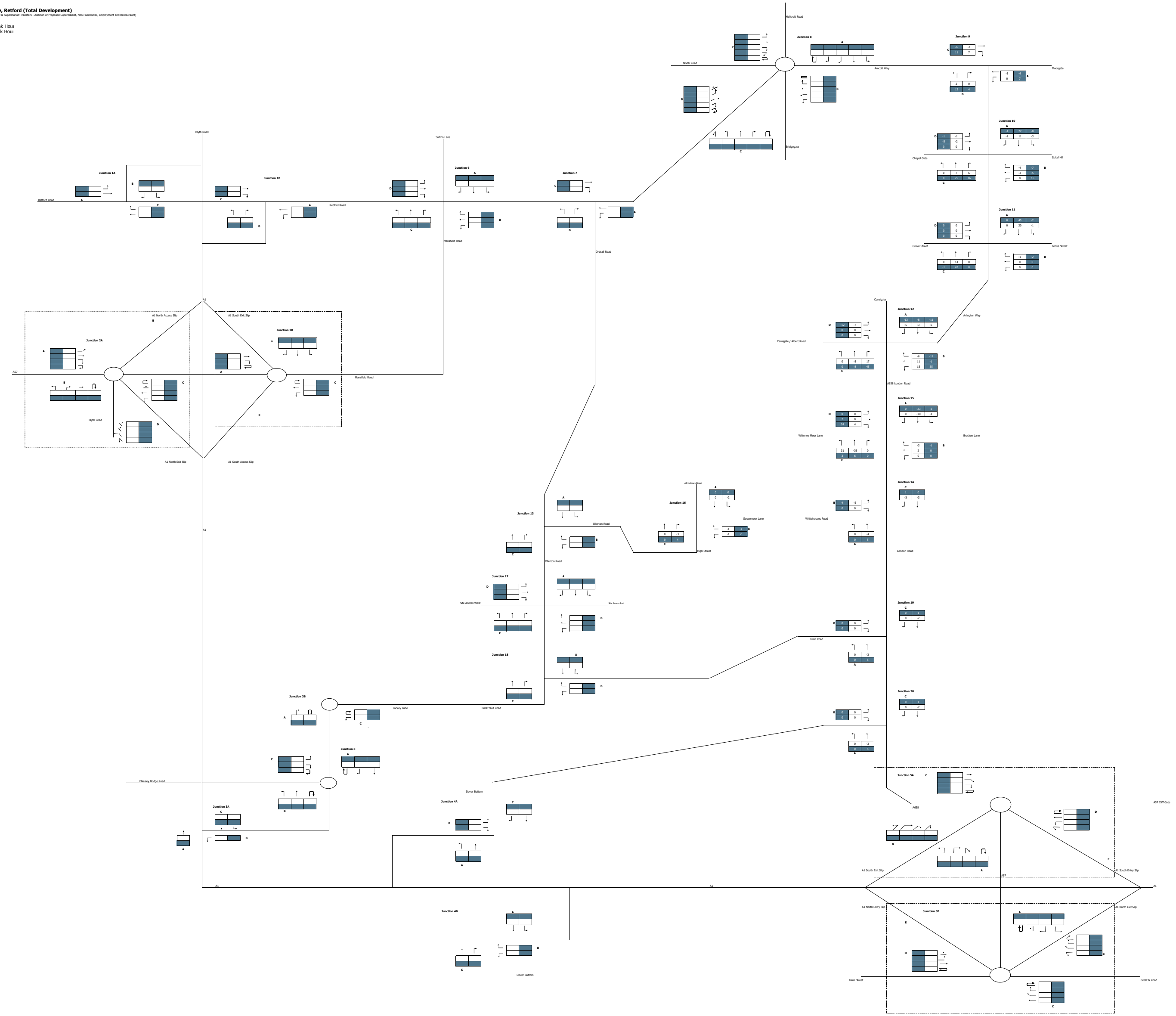


Thrumpton Lane, Retford (Total Development)

(Removed Current Employment & Supermarket Transfers - Addition of Proposed Supermarket, Non-Food Retail, Employment and Restauraunt)

KEY

x	Morning Peak Hour
x	Evening Peak Hour



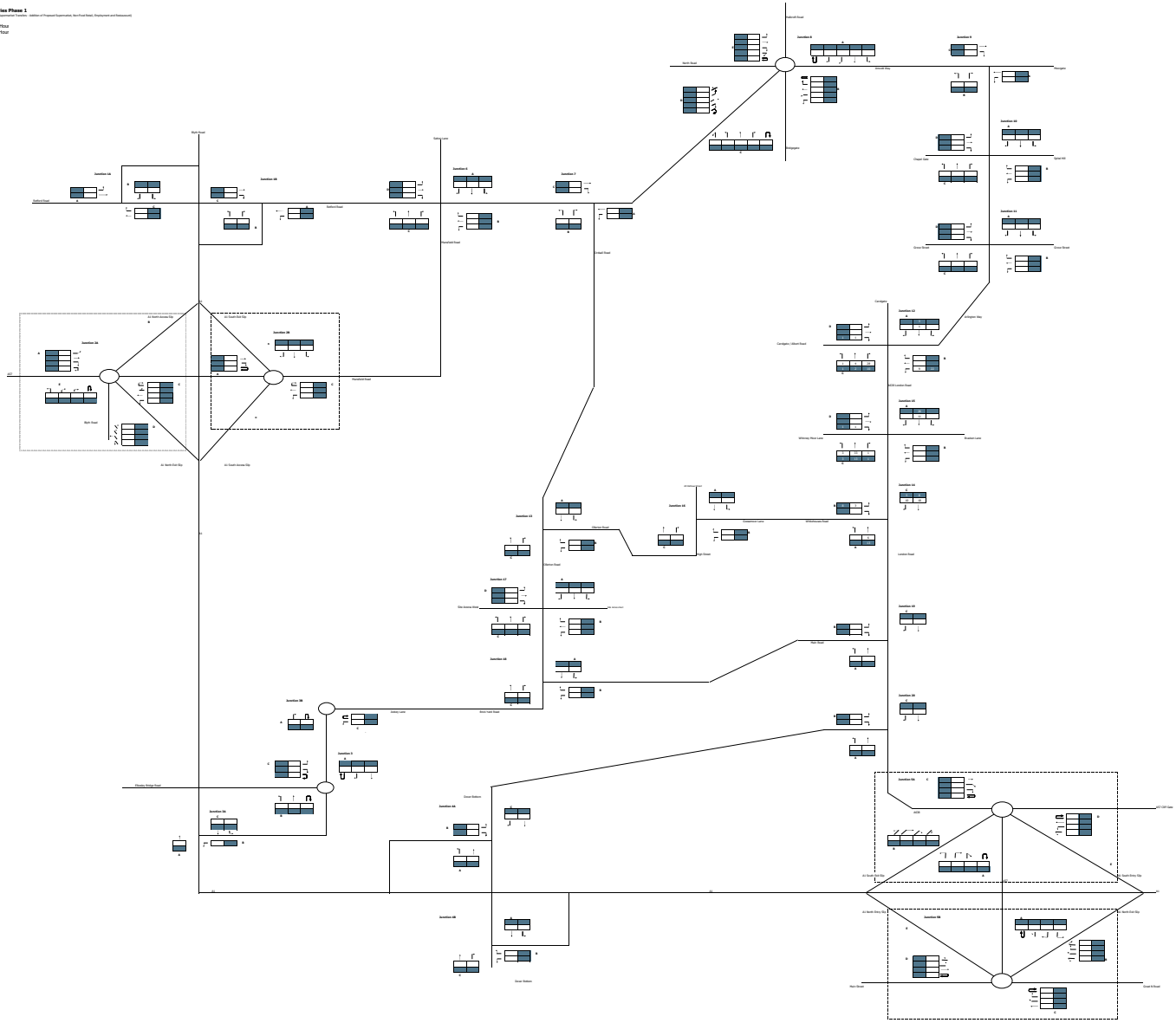
Kenilworth Nurseries Phase 1

(Retained Current Employment & Supermarket Transfers - Addition of Proposed Supermarket, Non-Food Retail, Employment and Restaurant)

KEY

Morning Peak Hour

Evening Peak Hour

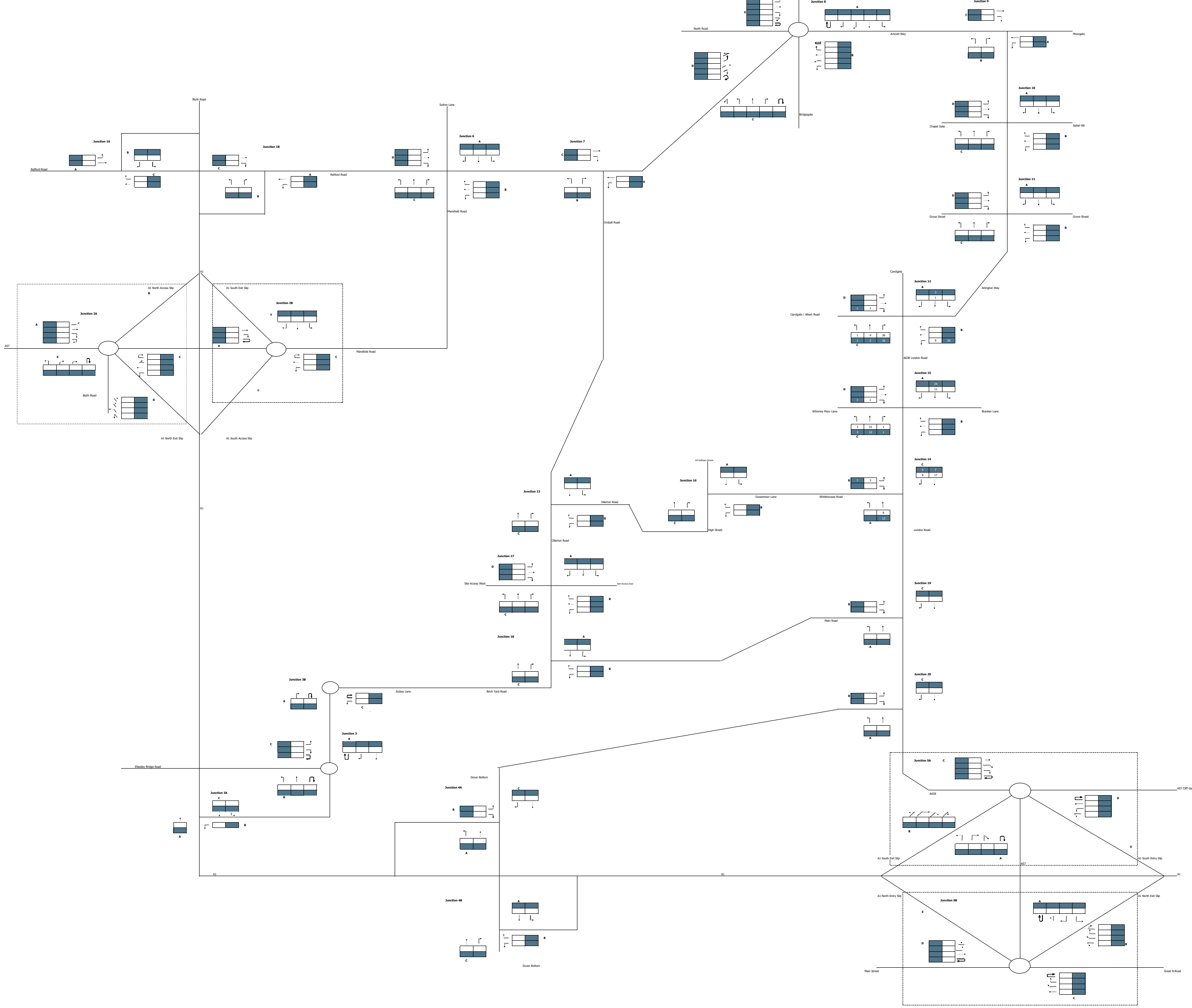


Kenilworth Nurseries Phase 2

(Removed Current Employment & Supermarket Transfers - Addition of Proposed Supermarket, Non-Food Retail, Employment and Restauraunt)

KEY

x	Morning Peak Houı
x	Evening Peak Houı



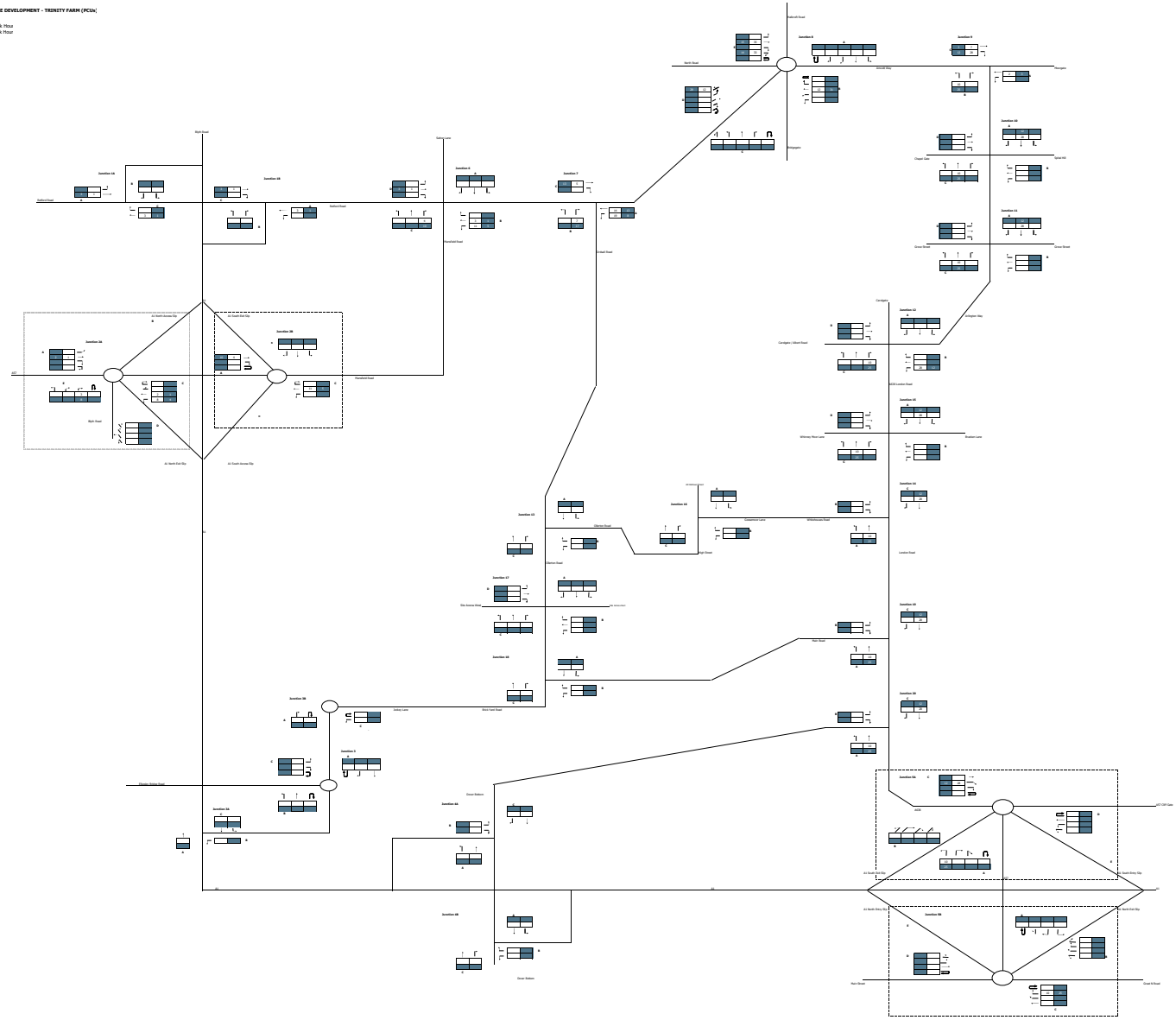
Appendix G – Development Flows for Other Allocations

OTHER POSSIBLE DEVELOPMENT - TRINITY FARM (PCUs)

KEY

AM Morning Peak Hour

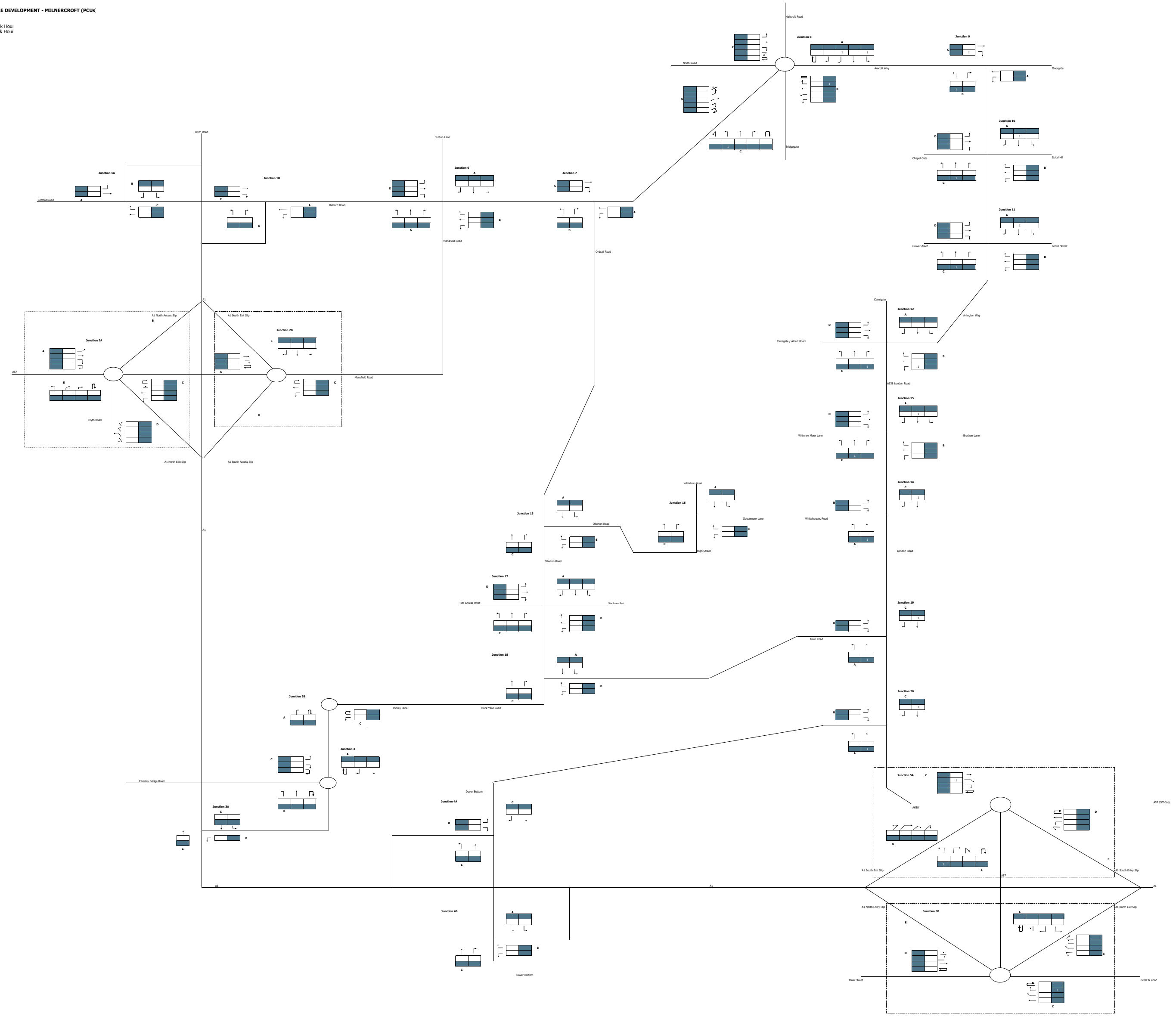
PM Evening Peak Hour



OTHER POSSIBLE DEVELOPMENT - MILNERCROFT (PCUs)

KEY

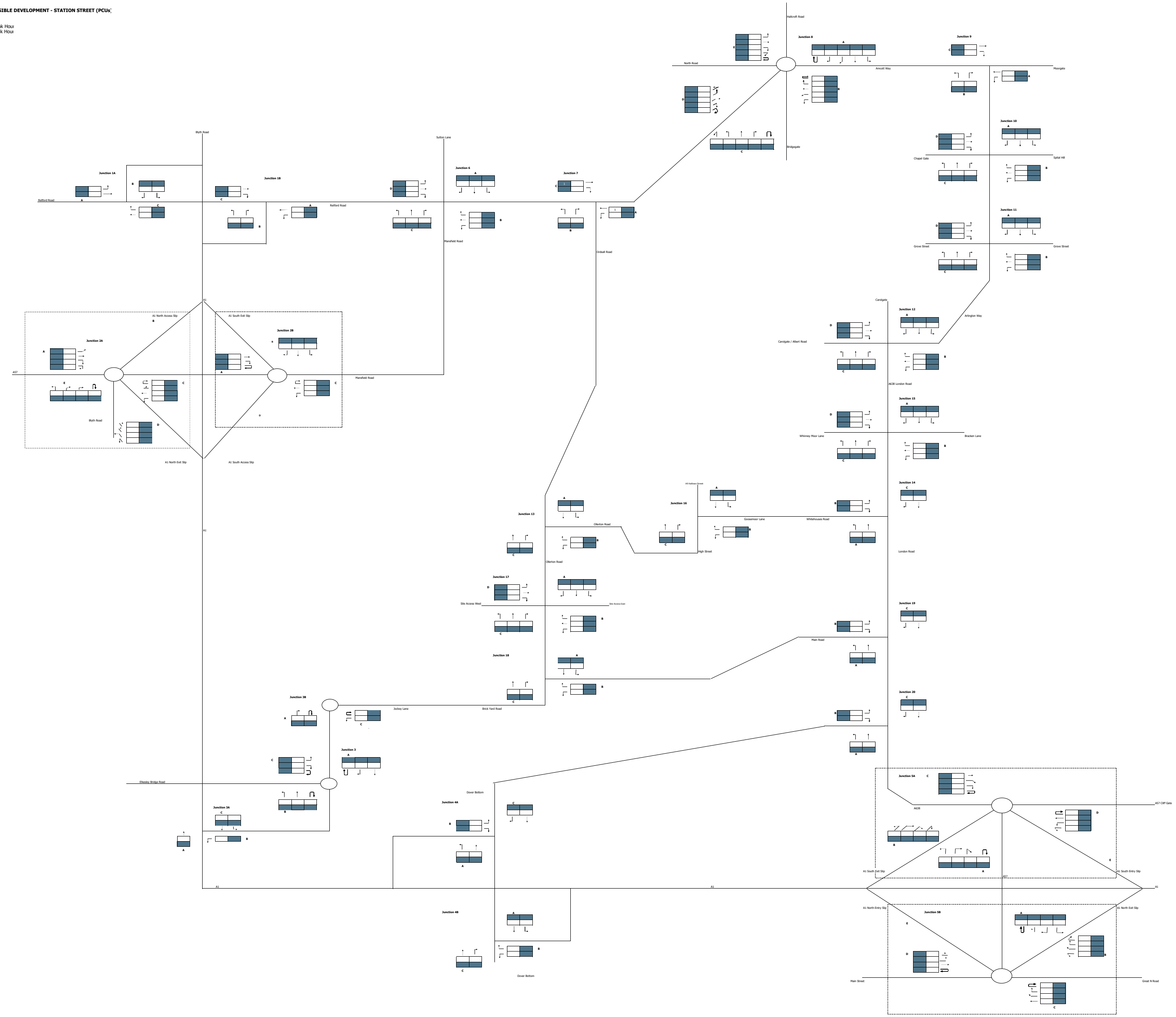
x	Morning Peak Hour
x	Evening Peak Hour



OPTIONAL POSSIBLE DEVELOPMENT - STATION STREET (PCUs)

KEY

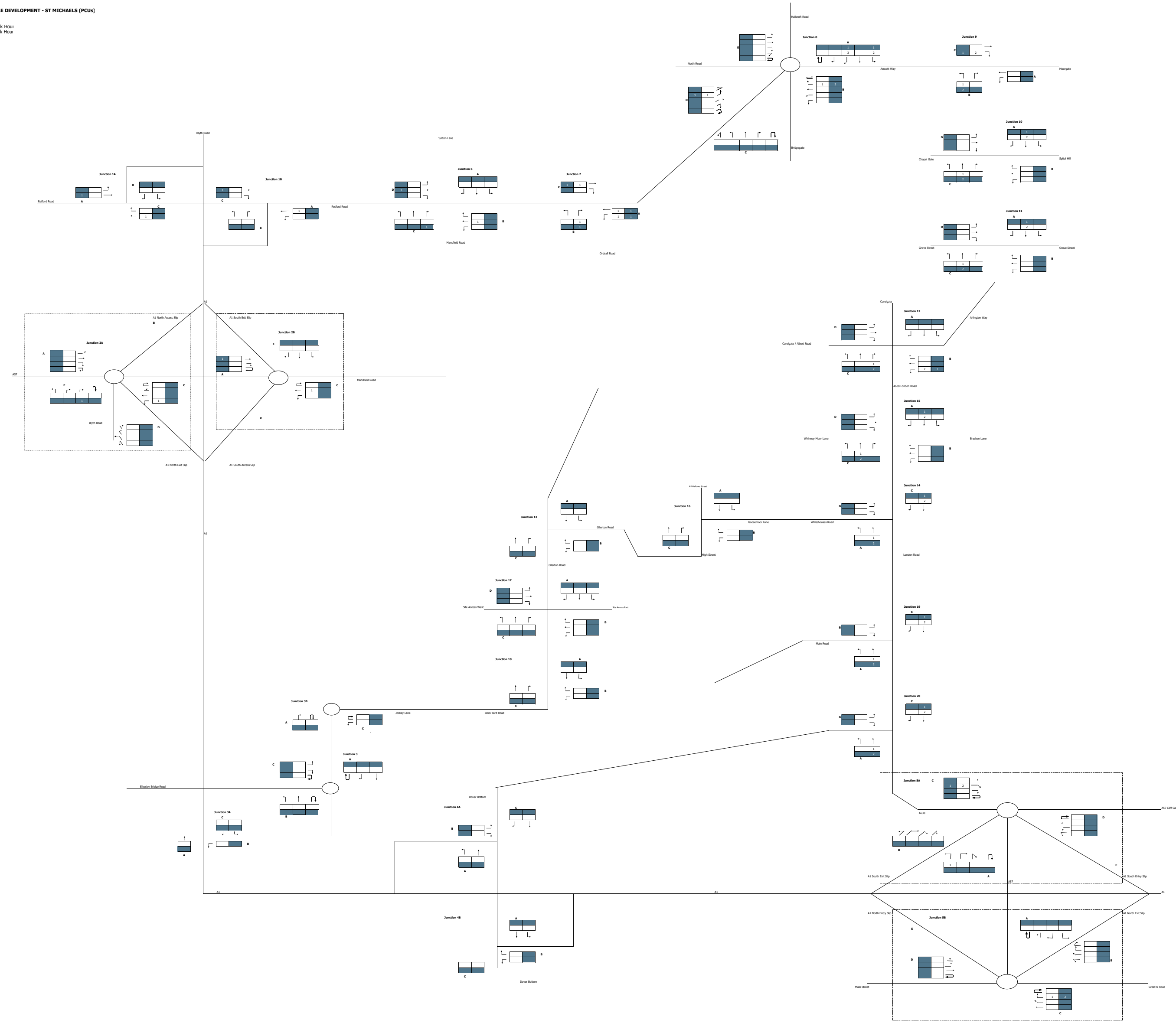
X	Morning Peak Hour
X	Evening Peak Hour



OTHER POSSIBLE DEVELOPMENT - ST MICHAELS (PCUs)

KEY

X	Morning Peak Hour
X	Evening Peak Hour

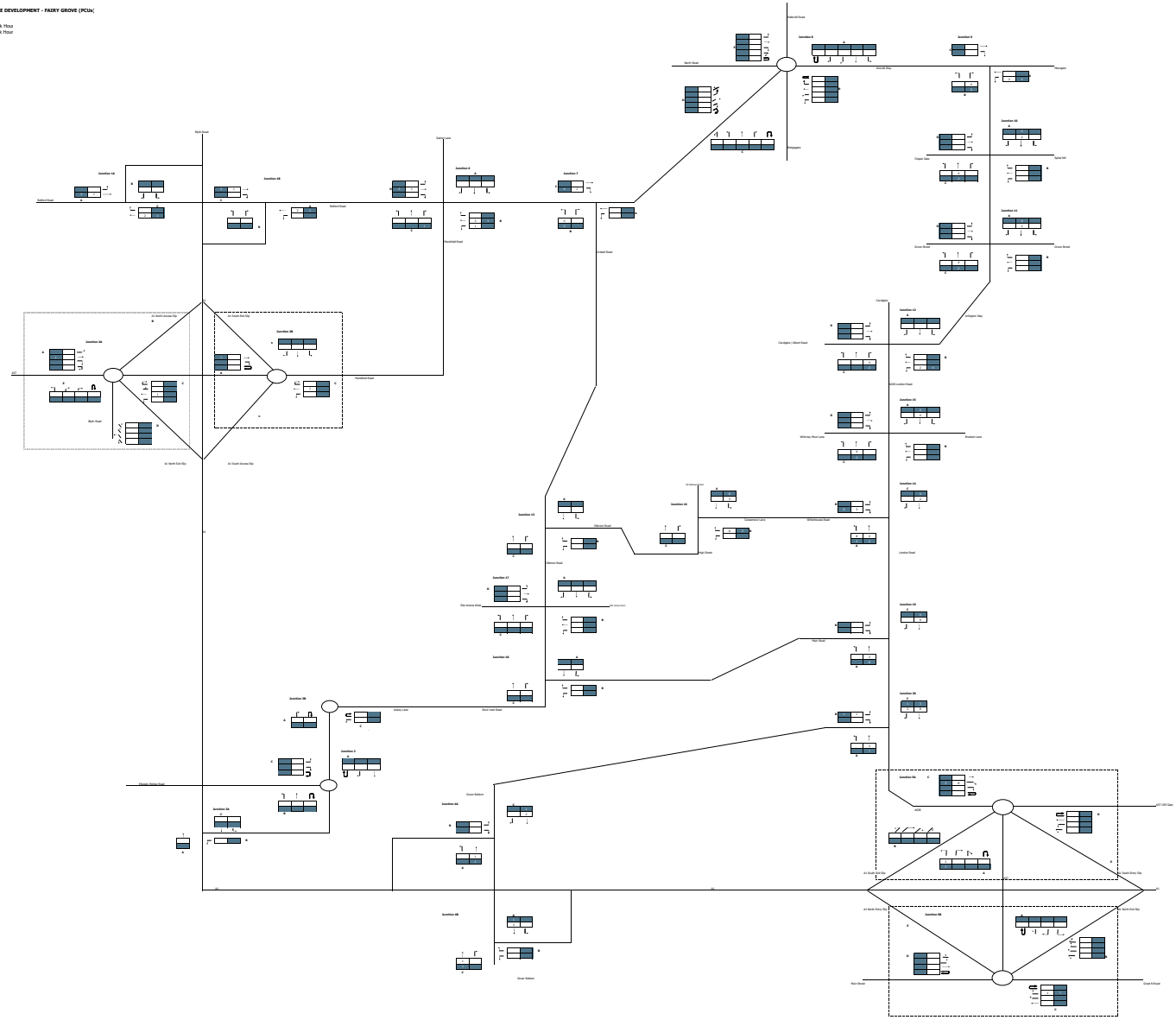


OTHER POSSIBLE DEVELOPMENT - FAIRY GROVE (PCUs)

KEY

A Morning Peak Hour

B Evening Peak Hour

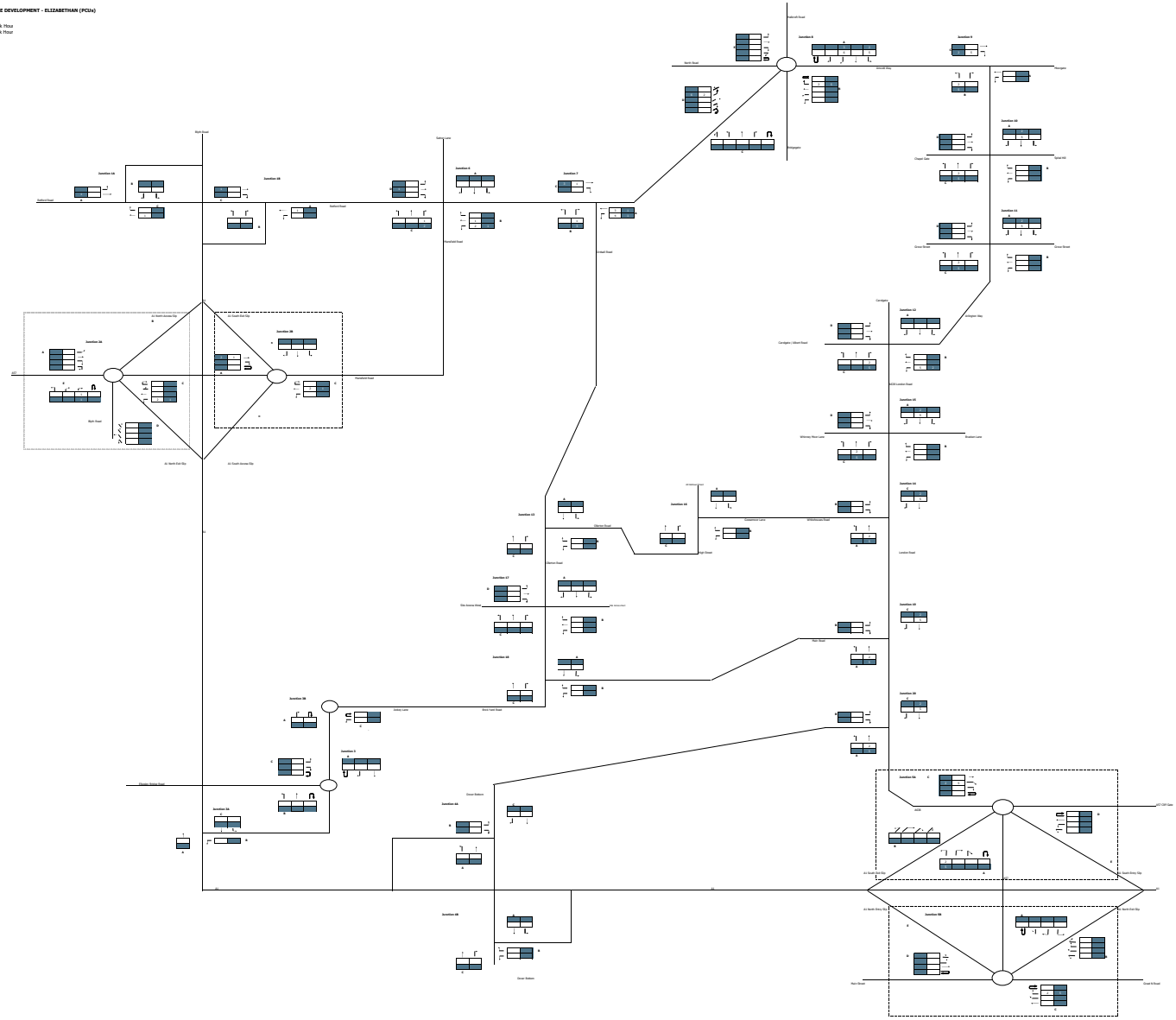


OTHER POSSIBLE DEVELOPMENT - ELIZABETHAN (PCI1a)

KEY

AM Morning Peak Hour

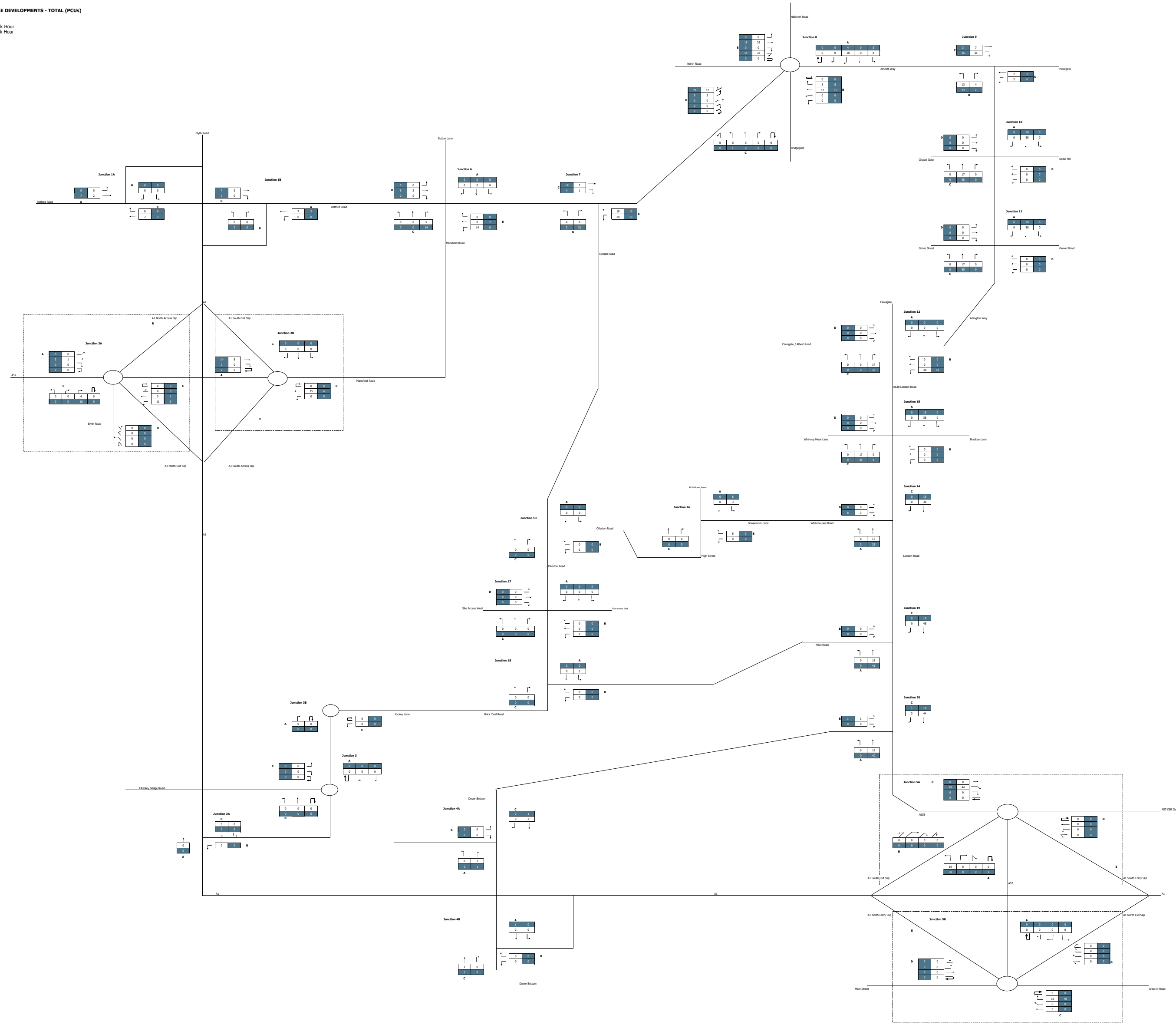
PM Evening Peak Hour



OTHER POSSIBLE DEVELOPMENTS - TOTAL (PCUs)

KEY

X	Morning Peak Hour
X	Evening Peak Hour



Appendix H – Trip Generation & Distribution

Calculation Reference: AUDIT-705102-210429-0456

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

02	**SOUTH EAST**		
	HC	HAMPSHIRE	1 days
	KC	KENT	2 days
	SC	SURREY	1 days
	WS	WEST SUSSEX	1 days
03	**SOUTH WEST**		
	DC	DORSET	1 days
	DV	DEVON	3 days
	SM	SOMERSET	1 days
	WL	WILTSHIRE	1 days
04	**EAST ANGLIA**		
	CA	CAMBRIDGESHIRE	1 days
	NF	NORFOLK	1 days
	SF	SUFFOLK	2 days
05	**EAST MIDLANDS**		
	LE	LEICESTERSHIRE	1 days
06	**WEST MIDLANDS**		
	SH	SHROPSHIRE	2 days
	ST	STAFFORDSHIRE	1 days
	WK	WARWICKSHIRE	2 days
	WM	WEST MIDLANDS	1 days
07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	NE	NORTH EAST LINCOLNSHIRE	1 days
	NY	NORTH YORKSHIRE	3 days
	SY	SOUTH YORKSHIRE	1 days
08	**NORTH WEST**		
	CH	CHESHIRE	3 days
	MS	MERSEYSIDE	1 days
09	**NORTH**		
	DH	DURHAM	2 days
	TW	TYNE & WEAR	1 days
10	**WALES**		
	PS	POWYS	1 days
	VG	VALE OF GLAMORGAN	1 days
11	**SCOTLAND**		
	FA	FALKIRK	1 days
	HI	HIGHLAND	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: 8 to 432 (units:)
Range Selected by User: 6 to 1817 (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: 01/01/13 to 08/10/20

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	10 days
Tuesday	3 days
Wednesday	8 days
Thursday	10 days
Friday	7 days

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

Selected survey types:

Manual count	38 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)	15
Edge of Town	18
Neighbourhood Centre (PPS6 Local Centre)	5

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	33
Village	4
No Sub Category	1

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.

Secondary Filtering selection:

Use Class:

C3	38 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 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:

1,000 or Less	1 days
1,001 to 5,000	3 days
5,001 to 10,000	11 days
10,001 to 15,000	10 days
15,001 to 20,000	6 days
20,001 to 25,000	2 days
25,001 to 50,000	5 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	4 days
25,001 to 50,000	4 days
50,001 to 75,000	8 days
75,001 to 100,000	5 days
100,001 to 125,000	1 days
125,001 to 250,000	9 days
250,001 to 500,000	7 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	12 days
1.1 to 1.5	24 days
1.6 to 2.0	2 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:

Yes	3 days
No	35 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	38 days

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

LIST OF SITES relevant to selection parameters

1 **CA-03-A-05** **DETACHED HOUSES** **CAMBRIDGESHIRE**
EASTFIELD ROAD
PETERBOROUGH

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 28
Survey date: MONDAY *17/10/16* *Survey Type: MANUAL*

2 **CH-03-A-09** **TERRACED HOUSES** **CHESHIRE**
GREYSTOKE ROAD
MACCLESFIELD
HURDSFIELD
Edge of Town
Residential Zone
Total No of Dwellings: 24
Survey date: MONDAY *24/11/14* *Survey Type: MANUAL*

3 **CH-03-A-10** **SEMI-DETACHED & TERRACED** **CHESHIRE**
MEADOW DRIVE
NORTHWICH
BARNTON
Edge of Town
Residential Zone
Total No of Dwellings: 40
Survey date: TUESDAY *04/06/19* *Survey Type: MANUAL*

4 **CH-03-A-11** **TOWN HOUSES** **CHESHIRE**
LONDON ROAD
NORTHWICH
LEFTWICH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 24
Survey date: THURSDAY *06/06/19* *Survey Type: MANUAL*

5 **DC-03-A-08** **BUNGALOWS** **DORSET**
HURSTDENE ROAD
BOURNEMOUTH
CASTLE LANE WEST
Edge of Town
Residential Zone
Total No of Dwellings: 28
Survey date: MONDAY *24/03/14* *Survey Type: MANUAL*

6 **DH-03-A-01** **SEMI DETACHED** **DURHAM**
GREENFIELDS ROAD
BISHOP AUCKLAND

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 50
Survey date: TUESDAY *28/03/17* *Survey Type: MANUAL*

7 **DH-03-A-03** **SEMI-DETACHED & TERRACED** **DURHAM**
PILGRIMS WAY
DURHAM

Edge of Town
Residential Zone
Total No of Dwellings: 57
Survey date: FRIDAY *19/10/18* *Survey Type: MANUAL*

8 **DV-03-A-01** **TERRACED HOUSES** **DEVON**
BRONSHILL ROAD
TORQUAY

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 37
Survey date: WEDNESDAY *30/09/15* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

9 **DV-03-A-02** **HOUSES & BUNGALOWS** **DEVON**
MILLHEAD ROAD
HONITON

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 116
Survey date: FRIDAY *25/09/15* *Survey Type: MANUAL*

10 **DV-03-A-03** **TERRACED & SEMI DETACHED** **DEVON**
LOWER BRAND LANE
HONITON

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 70
Survey date: MONDAY *28/09/15* *Survey Type: MANUAL*

11 **FA-03-A-01** **SEMI-DETACHED/TERRACED** **FALKIRK**
MANDELA AVENUE
FALKIRK

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 37
Survey date: THURSDAY *30/05/13* *Survey Type: MANUAL*

12 **HC-03-A-21** **TERRACED & SEMI-DETACHED** **HAMPSHIRE**
PRIESTLEY ROAD
BASINGSTOKE
HOUNDMILLS
Edge of Town
Residential Zone
Total No of Dwellings: 39
Survey date: TUESDAY *13/11/18* *Survey Type: MANUAL*

13 **HI-03-A-14** **SEMI-DETACHED & TERRACED** **HIGHLAND**
KING BRUDE ROAD
INVERNESS
SCORGUIE
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 40
Survey date: WEDNESDAY *23/03/16* *Survey Type: MANUAL*

14 **KC-03-A-04** **SEMI-DETACHED & TERRACED** **KENT**
KILN BARN ROAD
AYLESFORD
DITTON
Edge of Town
Residential Zone
Total No of Dwellings: 110
Survey date: FRIDAY *22/09/17* *Survey Type: MANUAL*

15 **KC-03-A-05** **DETACHED & SEMI-DETACHED** **KENT**
ROCHESTER ROAD
NEAR CHATHAM
BURHAM
Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 8
Survey date: FRIDAY *22/09/17* *Survey Type: MANUAL*

16 **LE-03-A-02** **DETACHED & OTHERS** **LEICESTERSHIRE**
MELBOURNE ROAD
IBSTOCK

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 85
Survey date: THURSDAY *28/06/18* *Survey Type: MANUAL*

17 **MS-03-A-03** **DETACHED** **MERSEYSIDE**
BEMPTON ROAD
LIVERPOOL
OTTERSPOOL
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 15
Survey date: FRIDAY *21/06/13* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

18 **NE-03-A-02** **SEMI DETACHED & DETACHED** **NORTH EAST LINCOLNSHIRE**
HANOVER WALK
SCUNTHORPE

Edge of Town
No Sub Category
Total No of Dwellings: 432
Survey date: MONDAY *12/05/14* *Survey Type: MANUAL*

19 **NF-03-A-03** **DETACHED HOUSES** **NORFOLK**
HALING WAY
THETFORD

Edge of Town
Residential Zone
Total No of Dwellings: 10
Survey date: WEDNESDAY *16/09/15* *Survey Type: MANUAL*

20 **NY-03-A-08** **TERRACED HOUSES** **NORTH YORKSHIRE**
NICHOLAS STREET
YORK

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 21
Survey date: MONDAY *16/09/13* *Survey Type: MANUAL*

21 **NY-03-A-11** **PRIVATE HOUSING** **NORTH YORKSHIRE**
HORSEFAIR
BOROUGHBRIDGE

Edge of Town
Residential Zone
Total No of Dwellings: 23
Survey date: WEDNESDAY *18/09/13* *Survey Type: MANUAL*

22 **NY-03-A-13** **TERRACED HOUSES** **NORTH YORKSHIRE**
CATTERICK ROAD
CATTERICK GARRISON
OLD HOSPITAL COMPOUND
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 10
Survey date: WEDNESDAY *10/05/17* *Survey Type: MANUAL*

23 **PS-03-A-02** **DETACHED/SEMI-DETACHED** **POWYS**
GUNROG ROAD
WELSHPOOL

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 28
Survey date: MONDAY *11/05/15* *Survey Type: MANUAL*

24 **SC-03-A-04** **DETACHED & TERRACED** **SURREY**
HIGH ROAD
BYFLEET

Edge of Town
Residential Zone
Total No of Dwellings: 71
Survey date: THURSDAY *23/01/14* *Survey Type: MANUAL*

25 **SF-03-A-05** **DETACHED HOUSES** **SUFFOLK**
VALE LANE
BURY ST EDMUNDS

Edge of Town
Residential Zone
Total No of Dwellings: 18
Survey date: WEDNESDAY *09/09/15* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

26 **SF-03-A-06** **DETACHED & SEMI-DETACHED** **SUFFOLK**
BURY ROAD
KENTFORD

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 38
Survey date: FRIDAY *22/09/17* *Survey Type: MANUAL*

27 **SH-03-A-05** **SEMI-DETACHED/TERRACED** **SHROPSHIRE**
SANDCROFT
TELFORD
SUTTON HILL
Edge of Town
Residential Zone
Total No of Dwellings: 54
Survey date: THURSDAY *24/10/13* *Survey Type: MANUAL*

28 **SH-03-A-06** **BUNGALOWS** **SHROPSHIRE**
ELLESMERE ROAD
SHREWSBURY

Edge of Town
Residential Zone
Total No of Dwellings: 16
Survey date: THURSDAY *22/05/14* *Survey Type: MANUAL*

29 **SM-03-A-01** **DETACHED & SEMI** **SOMERSET**
WEMBDON ROAD
BRIDGWATER
NORTHFIELD
Edge of Town
Residential Zone
Total No of Dwellings: 33
Survey date: THURSDAY *24/09/15* *Survey Type: MANUAL*

30 **ST-03-A-07** **DETACHED & SEMI-DETACHED** **STAFFORDSHIRE**
BEACONSIDE
STAFFORD
MARSTON GATE
Edge of Town
Residential Zone
Total No of Dwellings: 248
Survey date: WEDNESDAY *22/11/17* *Survey Type: MANUAL*

31 **SY-03-A-01** **SEMI DETACHED HOUSES** **SOUTH YORKSHIRE**
A19 BENTLEY ROAD
DONCASTER
BENTLEY RISE
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 54
Survey date: WEDNESDAY *18/09/13* *Survey Type: MANUAL*

32 **TW-03-A-02** **SEMI-DETACHED** **TYNE & WEAR**
WEST PARK ROAD
GATESHEAD

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 16
Survey date: MONDAY *07/10/13* *Survey Type: MANUAL*

33 **VG-03-A-01** **SEMI-DETACHED & TERRACED** **VALE OF GLAMORGAN**
ARTHUR STREET
BARRY

Edge of Town
Residential Zone
Total No of Dwellings: 12
Survey date: MONDAY *08/05/17* *Survey Type: MANUAL*

34 **WK-03-A-02** **BUNGALOWS** **WARWICKSHIRE**
NARBERTH WAY
COVENTRY
POTTERS GREEN
Edge of Town
Residential Zone
Total No of Dwellings: 17
Survey date: THURSDAY *17/10/13* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

35 **WK-03-A-04** **DETACHED HOUSES** **WARWICKSHIRE**
DALEHOUSE LANE
KENILWORTH

Edge of Town
Residential Zone
Total No of Dwellings: 49
Survey date: FRIDAY *27/09/19* *Survey Type: MANUAL*

36 **WL-03-A-02** **SEMI DETACHED** **WILTSHIRE**
HEADLANDS GROVE
SWINDON

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 27
Survey date: THURSDAY *22/09/16* *Survey Type: MANUAL*

37 **WM-03-A-04** **TERRACED HOUSES** **WEST MIDLANDS**
OSBORNE ROAD
COVENTRY
EARLSDON
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total No of Dwellings: 39
Survey date: MONDAY *21/11/16* *Survey Type: MANUAL*

38 **WS-03-A-07** **BUNGALOWS** **WEST SUSSEX**
EMMS LANE
NEAR HORSHAM
BROOKS GREEN
Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 57
Survey date: THURSDAY *19/10/17* *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.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
DH-03-A-02	as requested by NCC
DS-03-A-02	as requested by NCC
ES-03-A-03	as requested by NCC
ES-03-A-04	as requested by NCC
ES-03-A-05	as requested by NCC
FA-03-A-02	as requested by NCC
HC-03-A-22	as requested by NCC
HC-03-A-23	as requested by NCC
HF-03-A-03	as requested by NCC
KC-03-A-03	as requested by NCC
KC-03-A-06	as requested by NCC
KC-03-A-07	as requested by NCC
KC-03-A-08	as requested by NCC
NF-03-A-04	as requested by NCC
NF-03-A-05	as requested by NCC
NF-03-A-06	as requested by NCC
NY-03-A-09	as requested by NCC
NY-03-A-10	as requested by NCC
SC-03-A-05	as requested by NCC
SC-03-A-06	as requested by NCC
SF-03-A-07	as requested by NCC
SM-03-A-02	as requested by NCC
SM-03-A-03	as requested by NCC
WS-03-A-08	as requested by NCC
WS-03-A-09	as requested by NCC
WS-03-A-10	as requested by NCC
WS-03-A-11	as requested by NCC

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	38	55	0.078	38	55	0.255	38	55	0.333
08:00 - 09:00	38	55	0.125	**38**	**55**	**0.366**	**38**	**55**	**0.491**
09:00 - 10:00	38	55	0.137	38	55	0.156	38	55	0.293
10:00 - 11:00	38	55	0.125	38	55	0.154	38	55	0.279
11:00 - 12:00	38	55	0.128	38	55	0.143	38	55	0.271
12:00 - 13:00	38	55	0.162	38	55	0.163	38	55	0.325
13:00 - 14:00	38	55	0.154	38	55	0.155	38	55	0.309
14:00 - 15:00	38	55	0.164	38	55	0.174	38	55	0.338
15:00 - 16:00	38	55	0.255	38	55	0.180	38	55	0.435
16:00 - 17:00	38	55	0.264	38	55	0.173	38	55	0.437
17:00 - 18:00	**38**	**55**	**0.286**	38	55	0.146	38	55	0.432
18:00 - 19:00	38	55	0.235	38	55	0.149	38	55	0.384
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.113			2.214			4.327

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:	8 - 432 (units:)
Survey date date range:	01/01/13 - 08/10/20
Number of weekdays (Monday-Friday):	38
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	8
Surveys manually removed from selection:	27

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/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TAXIS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	38	55	0.004	38	55	0.003	38	55	0.007
08:00 - 09:00	38	55	0.004	38	55	0.004	38	55	0.008
09:00 - 10:00	**38**	**55**	**0.004**	38	55	0.004	38	55	0.008
10:00 - 11:00	38	55	0.003	38	55	0.003	38	55	0.006
11:00 - 12:00	38	55	0.001	38	55	0.001	38	55	0.002
12:00 - 13:00	38	55	0.002	38	55	0.001	38	55	0.003
13:00 - 14:00	38	55	0.003	38	55	0.004	38	55	0.007
14:00 - 15:00	38	55	0.003	38	55	0.002	38	55	0.005
15:00 - 16:00	38	55	0.003	38	55	0.004	38	55	0.007
16:00 - 17:00	38	55	0.003	38	55	0.003	38	55	0.006
17:00 - 18:00	38	55	0.002	38	55	0.002	38	55	0.004
18:00 - 19:00	38	55	0.004	**38**	**55**	**0.005**	**38**	**55**	**0.009**
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.036			0.036			0.072

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/A - HOUSES PRIVATELY OWNED
MULTI-MODAL 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	38	55	0.000	38	55	0.000	38	55	0.000
08:00 - 09:00	38	55	0.002	38	55	0.002	38	55	0.004
09:00 - 10:00	38	55	0.002	38	55	0.001	38	55	0.003
10:00 - 11:00	38	55	0.003	38	55	0.002	38	55	0.005
11:00 - 12:00	38	55	0.002	38	55	0.000	38	55	0.002
12:00 - 13:00	38	55	0.003	**38**	**55**	**0.004**	**38**	**55**	**0.007**
13:00 - 14:00	**38**	**55**	**0.003**	38	55	0.002	38	55	0.005
14:00 - 15:00	38	55	0.000	38	55	0.002	38	55	0.002
15:00 - 16:00	38	55	0.001	38	55	0.002	38	55	0.003
16:00 - 17:00	38	55	0.002	38	55	0.001	38	55	0.003
17:00 - 18:00	38	55	0.000	38	55	0.000	38	55	0.000
18:00 - 19:00	38	55	0.000	38	55	0.000	38	55	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.018			0.016			0.034

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/A - HOUSES PRIVATELY OWNED
MULTI-MODAL 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	38	55	0.000	38	55	0.000	38	55	0.000
08:00 - 09:00	**38**	**55**	**0.001**	**38**	**55**	**0.001**	**38**	**55**	**0.002**
09:00 - 10:00	38	55	0.000	38	55	0.000	38	55	0.000
10:00 - 11:00	38	55	0.000	38	55	0.000	38	55	0.000
11:00 - 12:00	38	55	0.001	38	55	0.001	38	55	0.002
12:00 - 13:00	38	55	0.000	38	55	0.000	38	55	0.000
13:00 - 14:00	38	55	0.000	38	55	0.000	38	55	0.000
14:00 - 15:00	38	55	0.000	38	55	0.000	38	55	0.000
15:00 - 16:00	38	55	0.001	38	55	0.001	38	55	0.002
16:00 - 17:00	38	55	0.000	38	55	0.000	38	55	0.000
17:00 - 18:00	38	55	0.000	38	55	0.000	38	55	0.000
18:00 - 19:00	38	55	0.000	38	55	0.000	38	55	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.003			0.003			0.006

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/A - HOUSES PRIVATELY OWNED

MULTI-MODAL CYCLISTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	38	55	0.007	**38**	**55**	**0.014**	**38**	**55**	**0.021**
08:00 - 09:00	38	55	0.005	38	55	0.013	38	55	0.018
09:00 - 10:00	38	55	0.001	38	55	0.005	38	55	0.006
10:00 - 11:00	38	55	0.002	38	55	0.005	38	55	0.007
11:00 - 12:00	38	55	0.002	38	55	0.004	38	55	0.006
12:00 - 13:00	38	55	0.005	38	55	0.005	38	55	0.010
13:00 - 14:00	38	55	0.004	38	55	0.002	38	55	0.006
14:00 - 15:00	38	55	0.004	38	55	0.002	38	55	0.006
15:00 - 16:00	**38**	**55**	**0.010**	38	55	0.004	38	55	0.014
16:00 - 17:00	38	55	0.007	38	55	0.003	38	55	0.010
17:00 - 18:00	38	55	0.010	38	55	0.006	38	55	0.016
18:00 - 19:00	38	55	0.009	38	55	0.004	38	55	0.013
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.066			0.067			0.133

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/A - HOUSES PRIVATELY OWNED
MULTI-MODAL VEHICLE OCCUPANTS
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	38	55	0.097	38	55	0.361	38	55	0.458
08:00 - 09:00	38	55	0.150	**38**	**55**	**0.576**	**38**	**55**	**0.726**
09:00 - 10:00	38	55	0.165	38	55	0.216	38	55	0.381
10:00 - 11:00	38	55	0.152	38	55	0.209	38	55	0.361
11:00 - 12:00	38	55	0.166	38	55	0.185	38	55	0.351
12:00 - 13:00	38	55	0.211	38	55	0.212	38	55	0.423
13:00 - 14:00	38	55	0.202	38	55	0.207	38	55	0.409
14:00 - 15:00	38	55	0.223	38	55	0.229	38	55	0.452
15:00 - 16:00	38	55	0.404	38	55	0.249	38	55	0.653
16:00 - 17:00	38	55	0.407	38	55	0.249	38	55	0.656
17:00 - 18:00	**38**	**55**	**0.419**	38	55	0.200	38	55	0.619
18:00 - 19:00	38	55	0.335	38	55	0.211	38	55	0.546
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.931			3.104			6.035

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/A - HOUSES PRIVATELY OWNED

MULTI-MODAL PEDESTRIANS

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	38	55	0.017	38	55	0.041	38	55	0.058
08:00 - 09:00	38	55	0.049	**38**	**55**	**0.122**	38	55	0.171
09:00 - 10:00	38	55	0.044	38	55	0.046	38	55	0.090
10:00 - 11:00	38	55	0.033	38	55	0.044	38	55	0.077
11:00 - 12:00	38	55	0.030	38	55	0.032	38	55	0.062
12:00 - 13:00	38	55	0.035	38	55	0.028	38	55	0.063
13:00 - 14:00	38	55	0.028	38	55	0.034	38	55	0.062
14:00 - 15:00	38	55	0.039	38	55	0.045	38	55	0.084
15:00 - 16:00	**38**	**55**	**0.122**	38	55	0.073	**38**	**55**	**0.195**
16:00 - 17:00	38	55	0.070	38	55	0.037	38	55	0.107
17:00 - 18:00	38	55	0.062	38	55	0.034	38	55	0.096
18:00 - 19:00	38	55	0.041	38	55	0.029	38	55	0.070
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.570			0.565			1.135

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/A - HOUSES PRIVATELY OWNED

MULTI-MODAL BUS/TRAM PASSENGERS

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	38	55	0.002	38	55	0.010	38	55	0.012
08:00 - 09:00	38	55	0.001	**38**	**55**	**0.021**	38	55	0.022
09:00 - 10:00	38	55	0.002	38	55	0.009	38	55	0.011
10:00 - 11:00	38	55	0.007	38	55	0.004	38	55	0.011
11:00 - 12:00	38	55	0.003	38	55	0.005	38	55	0.008
12:00 - 13:00	38	55	0.009	38	55	0.006	38	55	0.015
13:00 - 14:00	38	55	0.003	38	55	0.002	38	55	0.005
14:00 - 15:00	38	55	0.005	38	55	0.005	38	55	0.010
15:00 - 16:00	38	55	0.016	38	55	0.007	**38**	**55**	**0.023**
16:00 - 17:00	38	55	0.012	38	55	0.005	38	55	0.017
17:00 - 18:00	38	55	0.011	38	55	0.005	38	55	0.016
18:00 - 19:00	**38**	**55**	**0.016**	38	55	0.001	38	55	0.017
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.087			0.080			0.167

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/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL RAIL PASSENGERS

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	38	55	0.000	**38**	**55**	**0.005**	**38**	**55**	**0.005**
08:00 - 09:00	38	55	0.000	38	55	0.004	38	55	0.004
09:00 - 10:00	38	55	0.000	38	55	0.001	38	55	0.001
10:00 - 11:00	38	55	0.000	38	55	0.001	38	55	0.001
11:00 - 12:00	38	55	0.001	38	55	0.001	38	55	0.002
12:00 - 13:00	38	55	0.000	38	55	0.001	38	55	0.001
13:00 - 14:00	38	55	0.000	38	55	0.000	38	55	0.000
14:00 - 15:00	38	55	0.002	38	55	0.000	38	55	0.002
15:00 - 16:00	**38**	**55**	**0.003**	38	55	0.000	38	55	0.003
16:00 - 17:00	38	55	0.003	38	55	0.000	38	55	0.003
17:00 - 18:00	38	55	0.001	38	55	0.000	38	55	0.001
18:00 - 19:00	38	55	0.002	38	55	0.000	38	55	0.002
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.012			0.013			0.025

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/A - HOUSES PRIVATELY OWNED
MULTI-MODAL COACH PASSENGERS
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	38	55	0.000	38	55	0.000	38	55	0.000
08:00 - 09:00	38	55	0.000	**38**	**55**	**0.001**	**38**	**55**	**0.001**
09:00 - 10:00	38	55	0.000	38	55	0.000	38	55	0.000
10:00 - 11:00	38	55	0.000	38	55	0.000	38	55	0.000
11:00 - 12:00	38	55	0.000	38	55	0.000	38	55	0.000
12:00 - 13:00	38	55	0.000	38	55	0.000	38	55	0.000
13:00 - 14:00	38	55	0.000	38	55	0.000	38	55	0.000
14:00 - 15:00	38	55	0.000	38	55	0.000	38	55	0.000
15:00 - 16:00	**38**	**55**	**0.001**	38	55	0.000	38	55	0.001
16:00 - 17:00	38	55	0.000	38	55	0.000	38	55	0.000
17:00 - 18:00	38	55	0.000	38	55	0.000	38	55	0.000
18:00 - 19:00	38	55	0.000	38	55	0.000	38	55	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.001			0.001			0.002

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/A - HOUSES PRIVATELY OWNED
MULTI-MODAL PUBLIC TRANSPORT USERS
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	38	55	0.002	38	55	0.015	38	55	0.017
08:00 - 09:00	38	55	0.001	**38**	**55**	**0.026**	**38**	**55**	**0.027**
09:00 - 10:00	38	55	0.002	38	55	0.010	38	55	0.012
10:00 - 11:00	38	55	0.007	38	55	0.006	38	55	0.013
11:00 - 12:00	38	55	0.004	38	55	0.006	38	55	0.010
12:00 - 13:00	38	55	0.009	38	55	0.007	38	55	0.016
13:00 - 14:00	38	55	0.003	38	55	0.002	38	55	0.005
14:00 - 15:00	38	55	0.007	38	55	0.005	38	55	0.012
15:00 - 16:00	**38**	**55**	**0.020**	38	55	0.007	38	55	0.027
16:00 - 17:00	38	55	0.015	38	55	0.005	38	55	0.020
17:00 - 18:00	38	55	0.012	38	55	0.005	38	55	0.017
18:00 - 19:00	38	55	0.018	38	55	0.001	38	55	0.019
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.100			0.095			0.195

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/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL PEOPLE

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	38	55	0.123	38	55	0.431	38	55	0.554
08:00 - 09:00	38	55	0.206	**38**	**55**	**0.737**	**38**	**55**	**0.943**
09:00 - 10:00	38	55	0.213	38	55	0.277	38	55	0.490
10:00 - 11:00	38	55	0.194	38	55	0.264	38	55	0.458
11:00 - 12:00	38	55	0.203	38	55	0.227	38	55	0.430
12:00 - 13:00	38	55	0.259	38	55	0.252	38	55	0.511
13:00 - 14:00	38	55	0.237	38	55	0.246	38	55	0.483
14:00 - 15:00	38	55	0.273	38	55	0.282	38	55	0.555
15:00 - 16:00	**38**	**55**	**0.556**	38	55	0.333	38	55	0.889
16:00 - 17:00	38	55	0.500	38	55	0.295	38	55	0.795
17:00 - 18:00	38	55	0.503	38	55	0.245	38	55	0.748
18:00 - 19:00	38	55	0.403	38	55	0.245	38	55	0.648
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.670			3.834			7.504

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/A - HOUSES PRIVATELY OWNED

MULTI-MODAL CARS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	38	55	0.043	38	55	0.156	38	55	0.199
08:00 - 09:00	38	55	0.073	**38**	**55**	**0.215**	**38**	**55**	**0.288**
09:00 - 10:00	38	55	0.070	38	55	0.090	38	55	0.160
10:00 - 11:00	38	55	0.066	38	55	0.092	38	55	0.158
11:00 - 12:00	38	55	0.069	38	55	0.077	38	55	0.146
12:00 - 13:00	38	55	0.087	38	55	0.093	38	55	0.180
13:00 - 14:00	38	55	0.088	38	55	0.085	38	55	0.173
14:00 - 15:00	38	55	0.091	38	55	0.094	38	55	0.185
15:00 - 16:00	38	55	0.148	38	55	0.090	38	55	0.238
16:00 - 17:00	38	55	0.156	38	55	0.100	38	55	0.256
17:00 - 18:00	**38**	**55**	**0.172**	38	55	0.089	38	55	0.261
18:00 - 19:00	38	55	0.131	38	55	0.078	38	55	0.209
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.194			1.259			2.453

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/A - HOUSES PRIVATELY OWNED
MULTI-MODAL 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	38	55	0.017	**38**	**55**	**0.032**	**38**	**55**	**0.049**
08:00 - 09:00	38	55	0.019	38	55	0.025	38	55	0.044
09:00 - 10:00	38	55	0.021	38	55	0.019	38	55	0.040
10:00 - 11:00	38	55	0.020	38	55	0.020	38	55	0.040
11:00 - 12:00	38	55	0.015	38	55	0.019	38	55	0.034
12:00 - 13:00	38	55	0.021	38	55	0.021	38	55	0.042
13:00 - 14:00	38	55	0.022	38	55	0.021	38	55	0.043
14:00 - 15:00	38	55	0.017	38	55	0.018	38	55	0.035
15:00 - 16:00	38	55	0.024	38	55	0.023	38	55	0.047
16:00 - 17:00	38	55	0.018	38	55	0.022	38	55	0.040
17:00 - 18:00	**38**	**55**	**0.034**	38	55	0.010	38	55	0.044
18:00 - 19:00	38	55	0.021	38	55	0.011	38	55	0.032
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.249			0.241			0.490

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/A - HOUSES PRIVATELY OWNED

MULTI-MODAL MOTOR CYCLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	38	55	0.000	38	55	0.000	38	55	0.000
08:00 - 09:00	38	55	0.000	**38**	**55**	**0.002**	38	55	0.002
09:00 - 10:00	38	55	0.000	38	55	0.001	38	55	0.001
10:00 - 11:00	38	55	0.001	38	55	0.000	38	55	0.001
11:00 - 12:00	38	55	0.001	38	55	0.000	38	55	0.001
12:00 - 13:00	38	55	0.000	38	55	0.002	38	55	0.002
13:00 - 14:00	38	55	0.000	38	55	0.000	38	55	0.000
14:00 - 15:00	38	55	0.002	38	55	0.002	**38**	**55**	**0.004**
15:00 - 16:00	38	55	0.001	38	55	0.000	38	55	0.001
16:00 - 17:00	38	55	0.002	38	55	0.000	38	55	0.002
17:00 - 18:00	**38**	**55**	**0.003**	38	55	0.001	38	55	0.004
18:00 - 19:00	38	55	0.000	38	55	0.000	38	55	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.010			0.008			0.018

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 I – Traffic Data

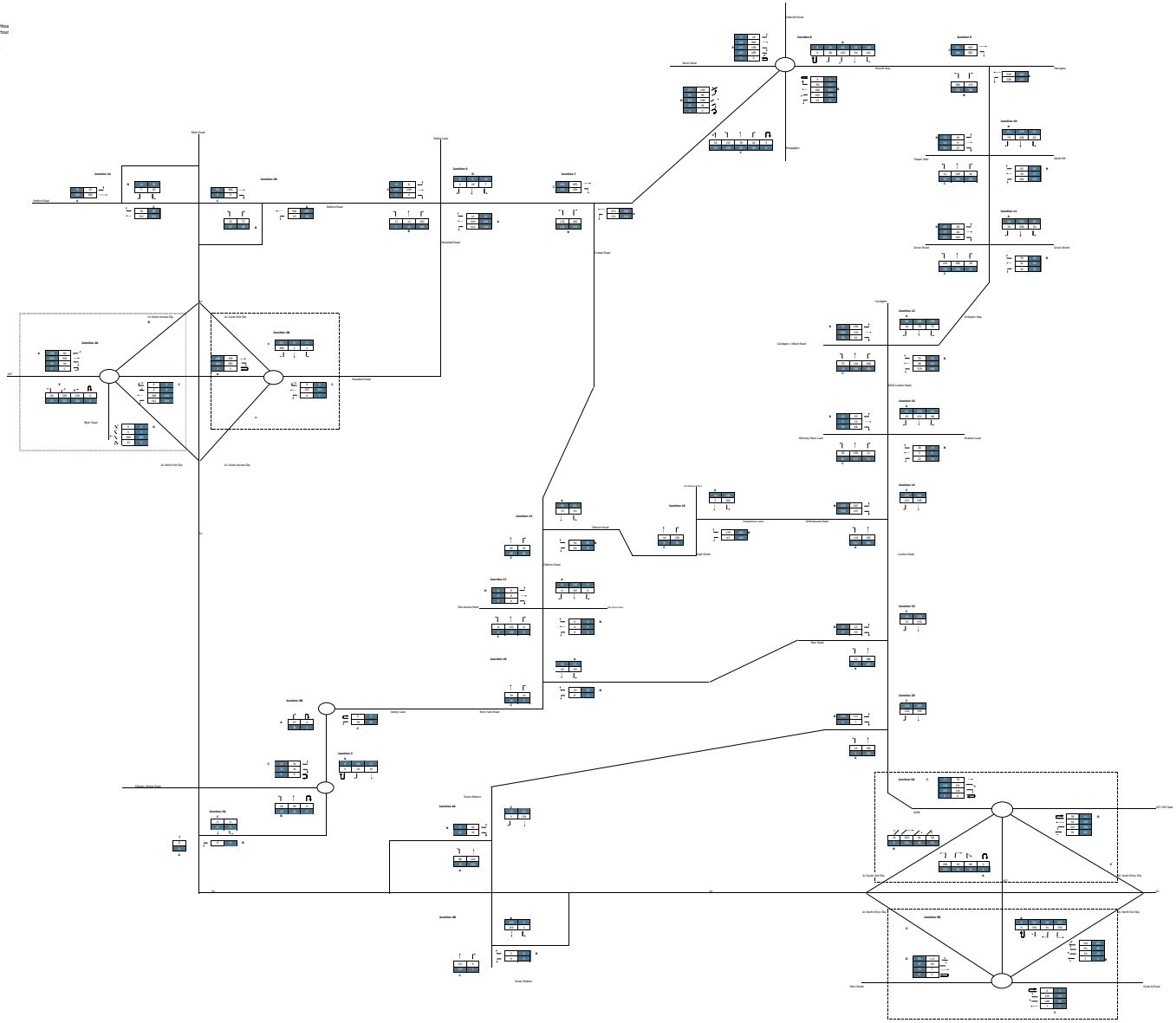
BASE COUNTS

KEY

AM Morning Peak Hour

PM Evening Peak Hour

Junction	Year of Survey
1	2015
2	2015
3	2015
4	2015
5	2015
6	2015
7	2015
8	2018
9	2018
10	2018
11	2018
12	2018
13	2015
14	2015
15	2018
16	2018
17	No survey
18	2015
19	2015
20	2015



B023665 - Proposed Residential Development Ordsall, Retford
Trip Generation

Proposed number of dwellings 1,250

Trip generation has been estimated using trip rates from the Residential (Privately Owned) category in the TRICS database. Trip rates are shown in **Table 1**.

Table 1 - TRICS 'Residential (Houses Privately Owned)' Trip Rates

Mode	AM (08:00-09:00)			PM (17:00-18:00)		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Vehicles	0.125	0.366	0.491	0.286	0.146	0.432
Taxis	0.004	0.004	0.008	0.002	0.002	0.004
OGVs	0.002	0.002	0.004	0.000	0.000	0.000
PSVs	0.001	0.001	0.002	0.000	0.000	0.000
Cyclists	0.005	0.013	0.018	0.010	0.006	0.016
Vehicle Occupants	0.150	0.576	0.726	0.419	0.200	0.619
Pedestrians	0.049	0.122	0.171	0.062	0.034	0.096
Public Transport Users	0.001	0.026	0.027	0.012	0.005	0.017
Total People	0.206	0.737	0.943	0.503	0.245	0.748

Using the trip rates in **Table 1**, trip generation for a residential development with 800 dwellings is shown in **Table 2**.

Table 2 - Trip Generation

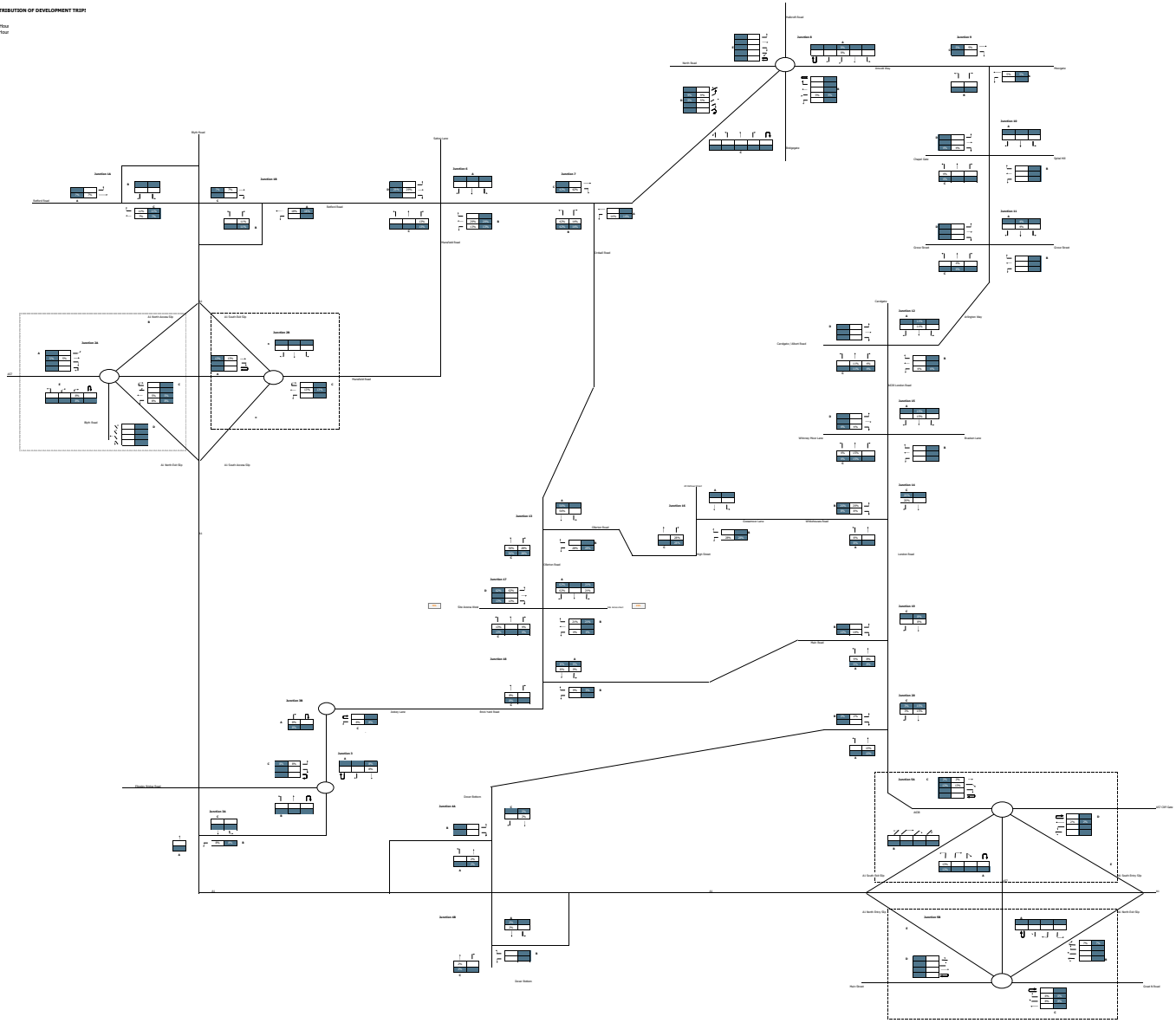
Mode	AM (08:00-09:00)			PM (17:00-18:00)		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Vehicles	156	458	614	358	183	540
Taxis	5	5	10	3	3	5
OGVs	3	3	5	0	0	0
PSVs	1	1	3	0	0	0
Cyclists	6	16	23	13	8	20
Vehicle Occupants	188	720	908	524	250	774
Pedestrians	61	153	214	78	43	120
Public Transport Users	1	33	34	15	6	21
Total People	258	921	1179	629	306	935
PCUs	159	460	619	358	183	540

PERCENTAGE DISTRIBUTION OF DEVELOPMENT TRIP!

KEY

AM Morning Peak Hour

PM Evening Peak Hour



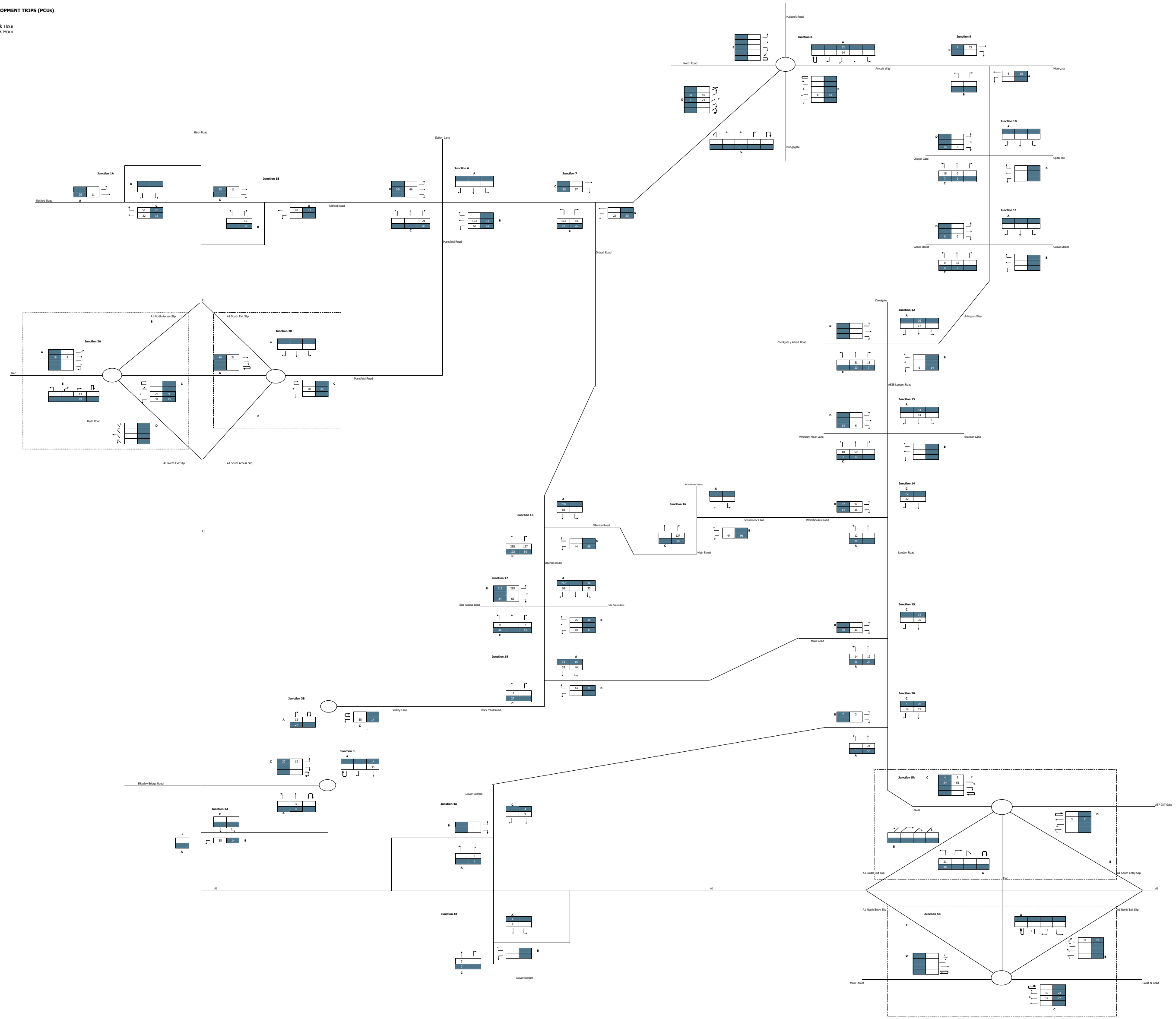
ORDSALL DEVELOPMENT TRIPS (PCUs)

KEY

x	Morning Peak Hour
x	Evening Peak Hour

Trip Generation

	Out	In
AM	460	159
PM	183	358

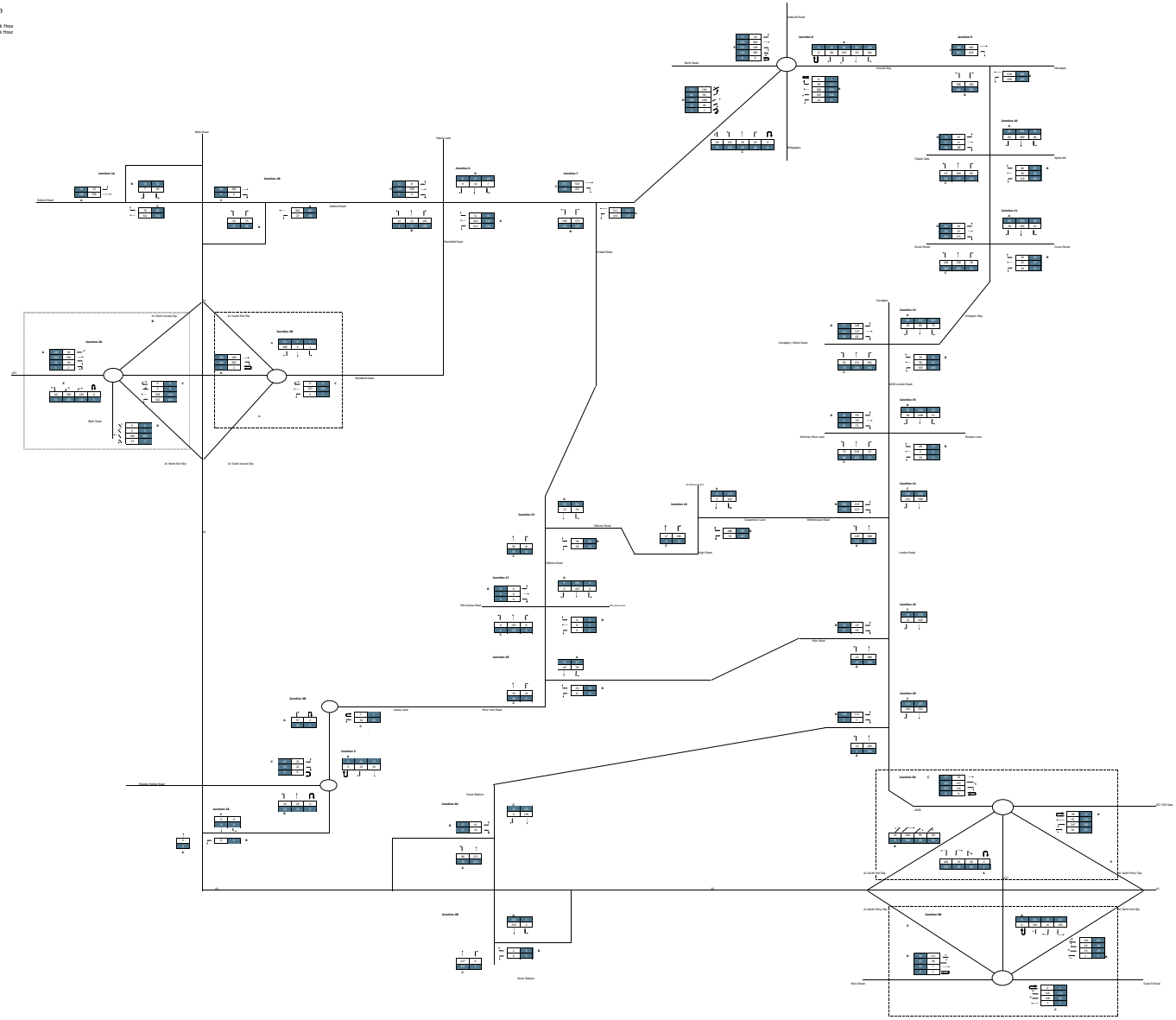


2031 BASE (PCU)

KEY

AM Morning Peak Hour

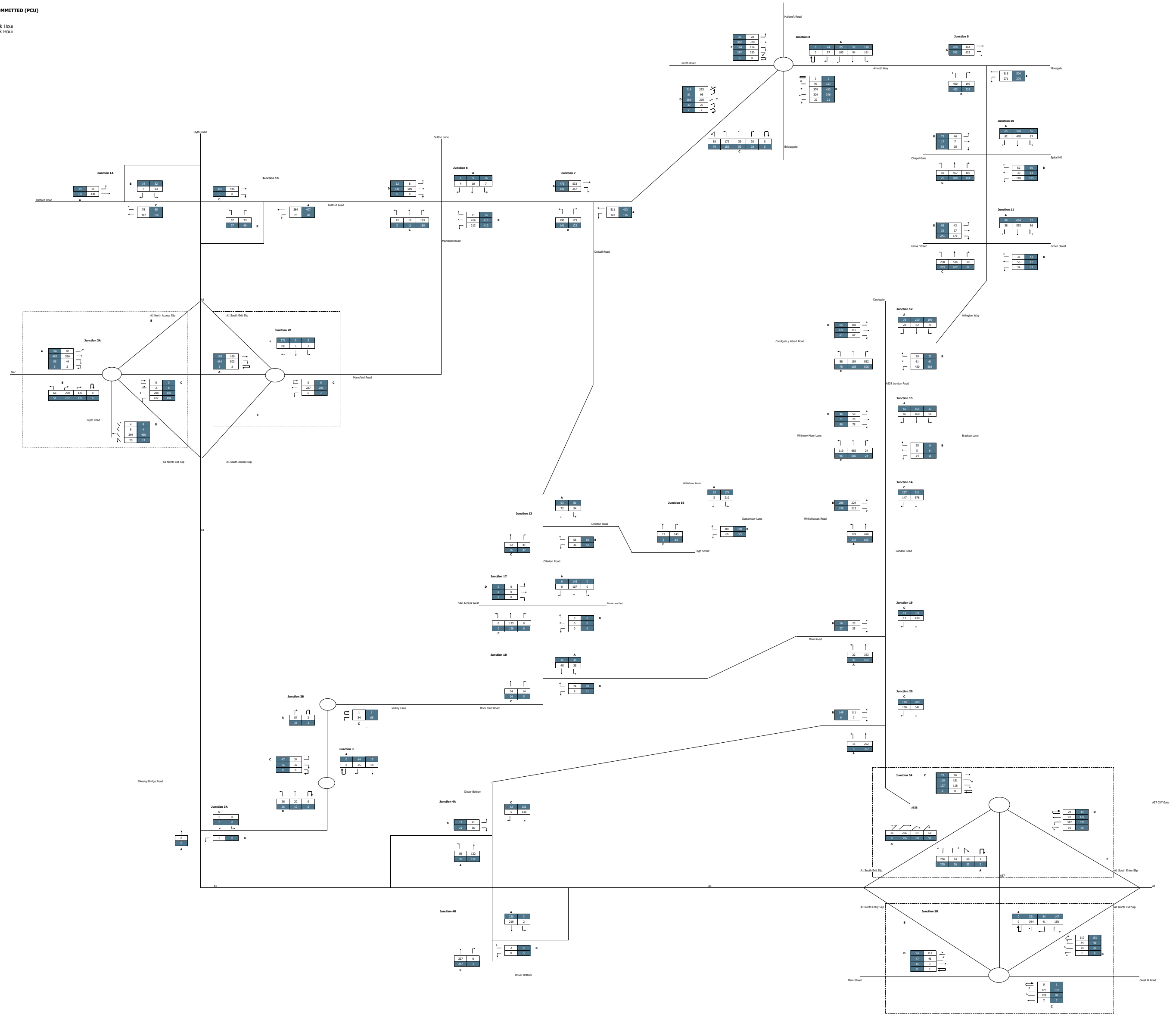
PM Evening Peak Hour



2021 BASE + COMMITTED (PCU)

KEY

x	Morning Peak Hour
x	Evening Peak Hour

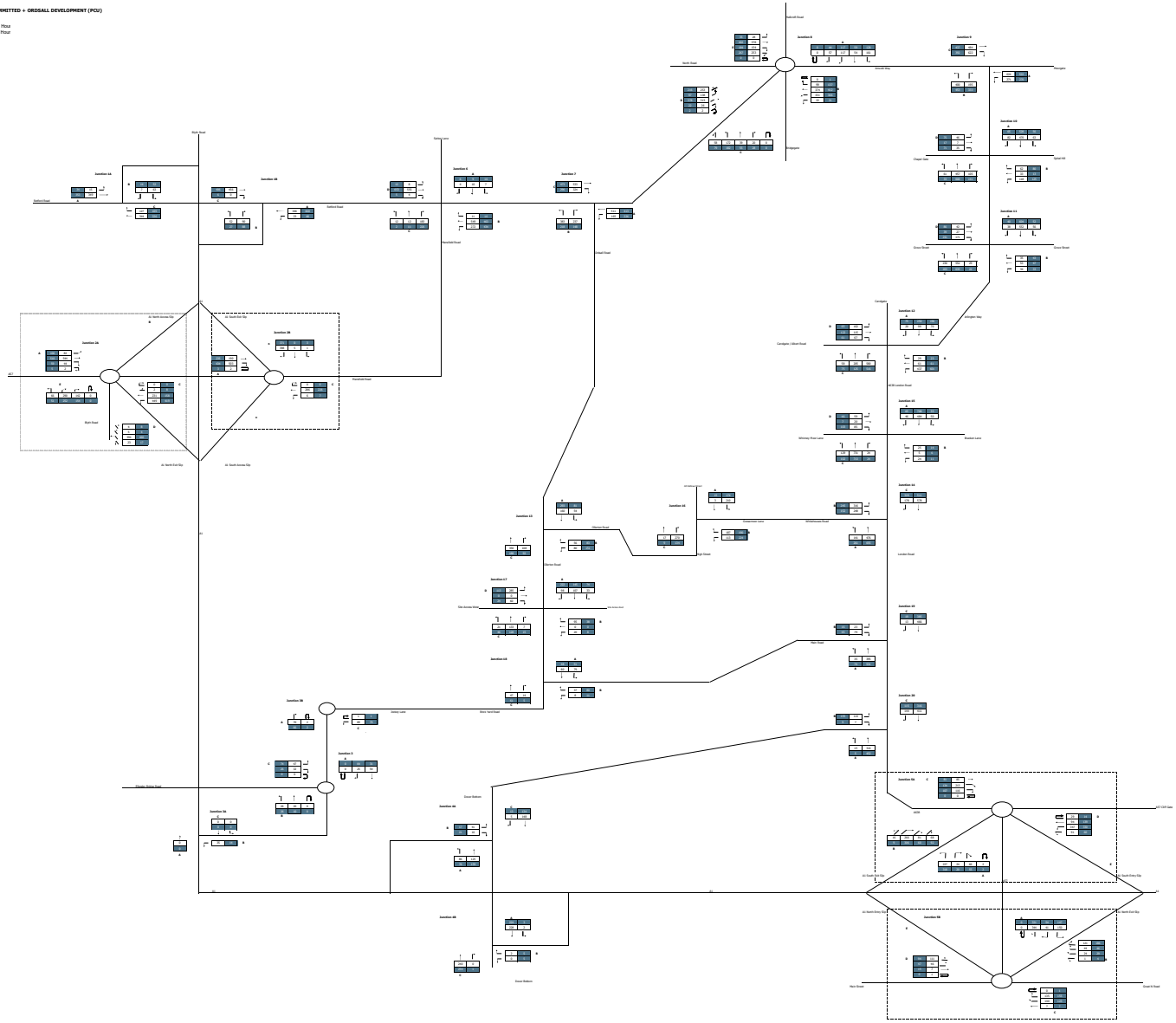


2031 BASE + COMMITTED + ORDSALL DEVELOPMENT (PCU)

KEY

AM Morning Peak Hour

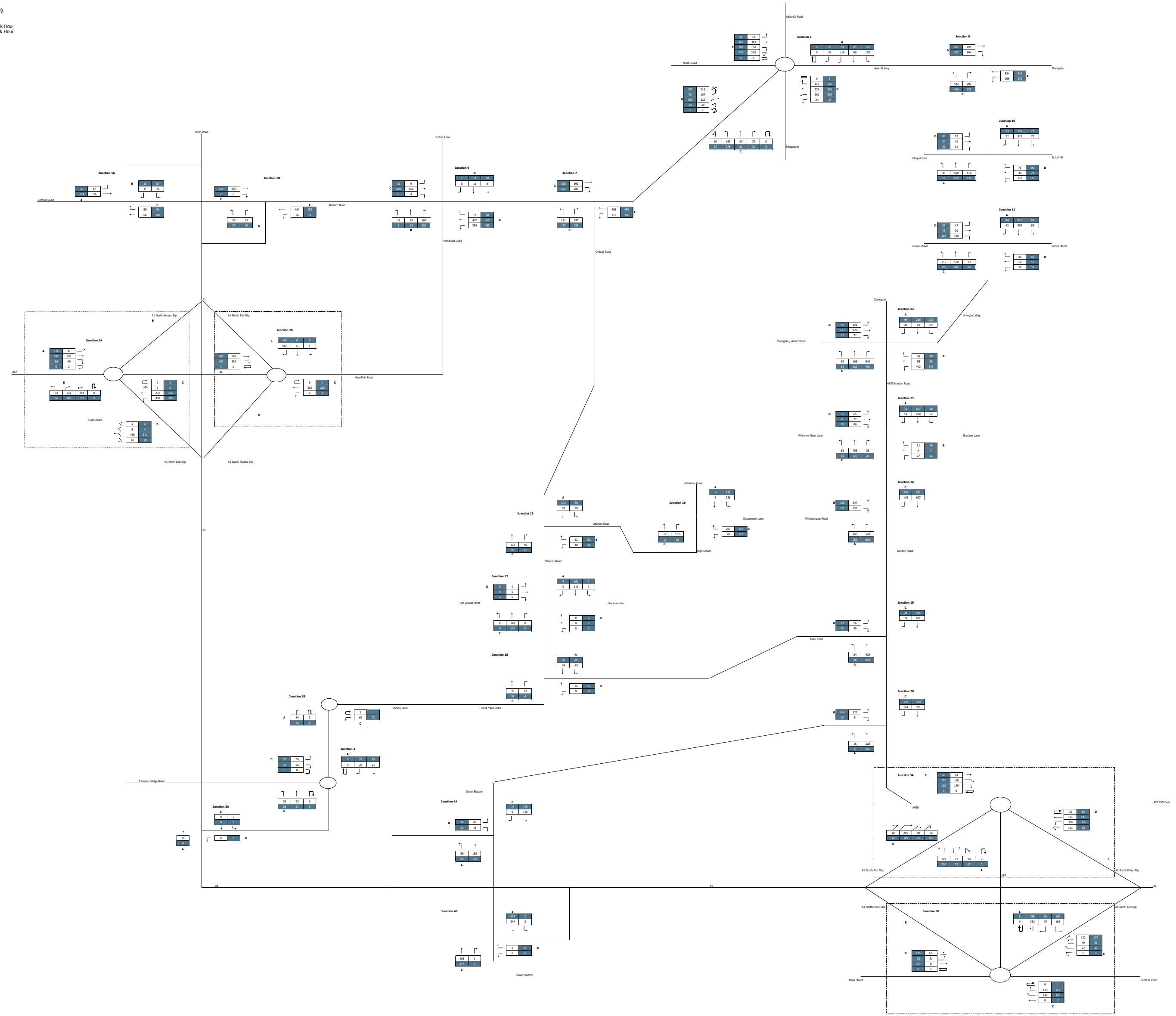
PM Evening Peak Hour



2031 BASE (PCU)

KEY

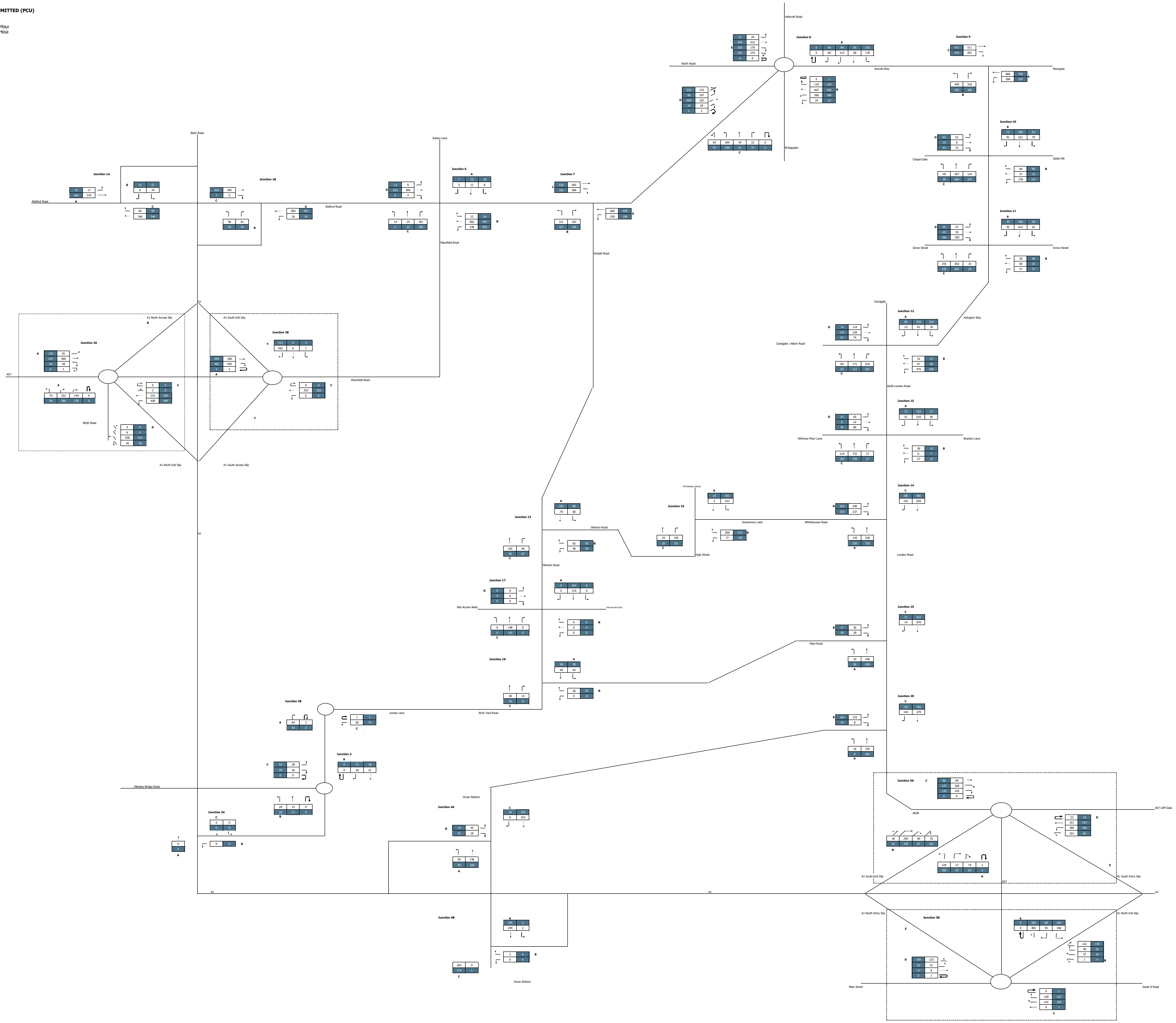
x	Morning Peak Hour
x	Evening Peak Hour



2031 BASE + COMMITTED (PCU)

KEY

X	Morning Peak Hour
X	Evening Peak Hour

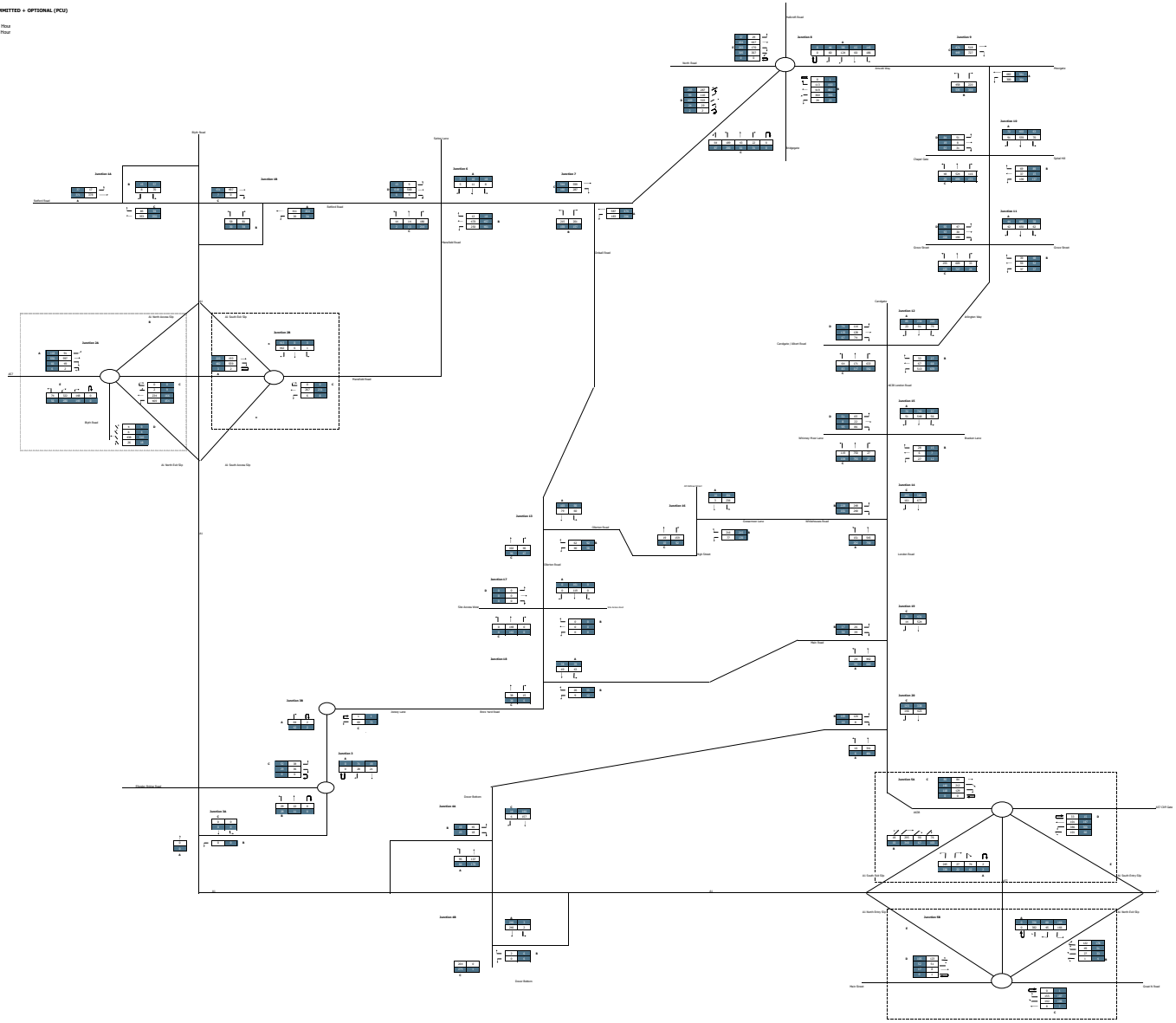


2031 BASE + COMMITTED + OPTIONAL (PCU)

KEY

AM Morning Peak Hour

PM Evening Peak Hour

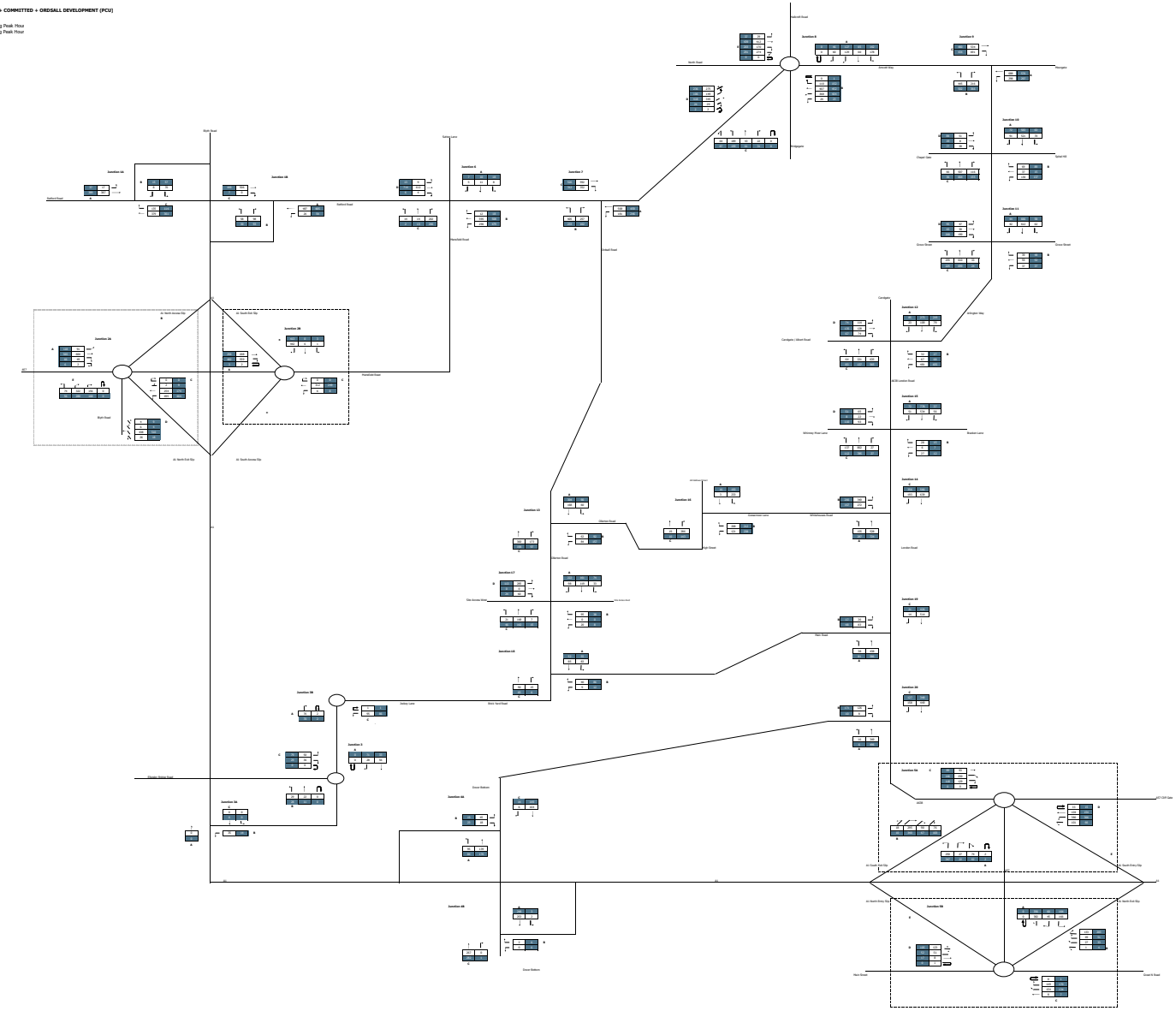


2031 Base + COMMITTED + ORDSALL DEVELOPMENT (PCU)

KEY

AM Morning Peak Hour

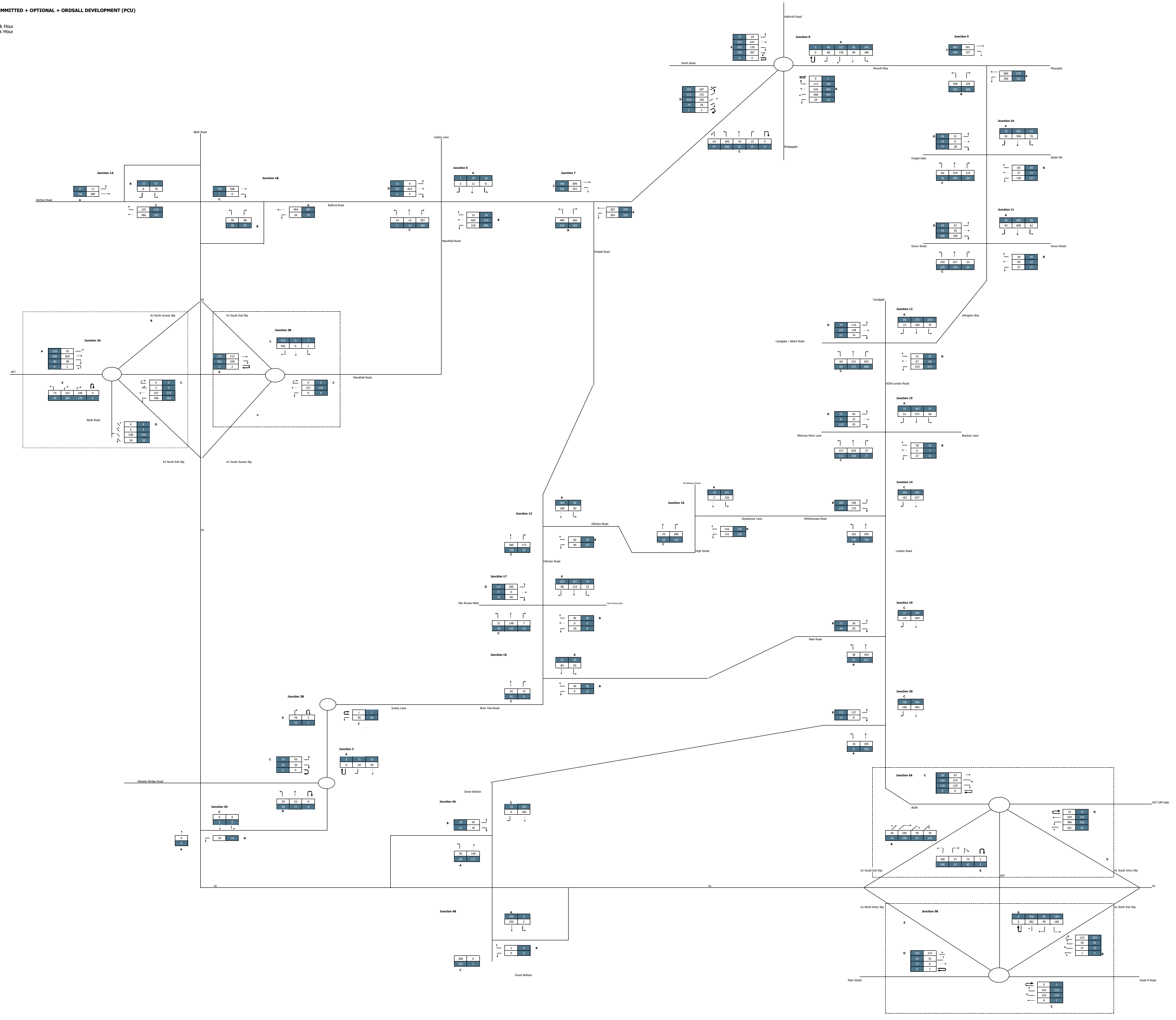
PM Evening Peak Hour



2031 BASE + COMMITTED + OPTIONAL + ORDSALL DEVELOPMENT (PCU)

KEY

X	Morning Peak Hour
X	Evening Peak Hour

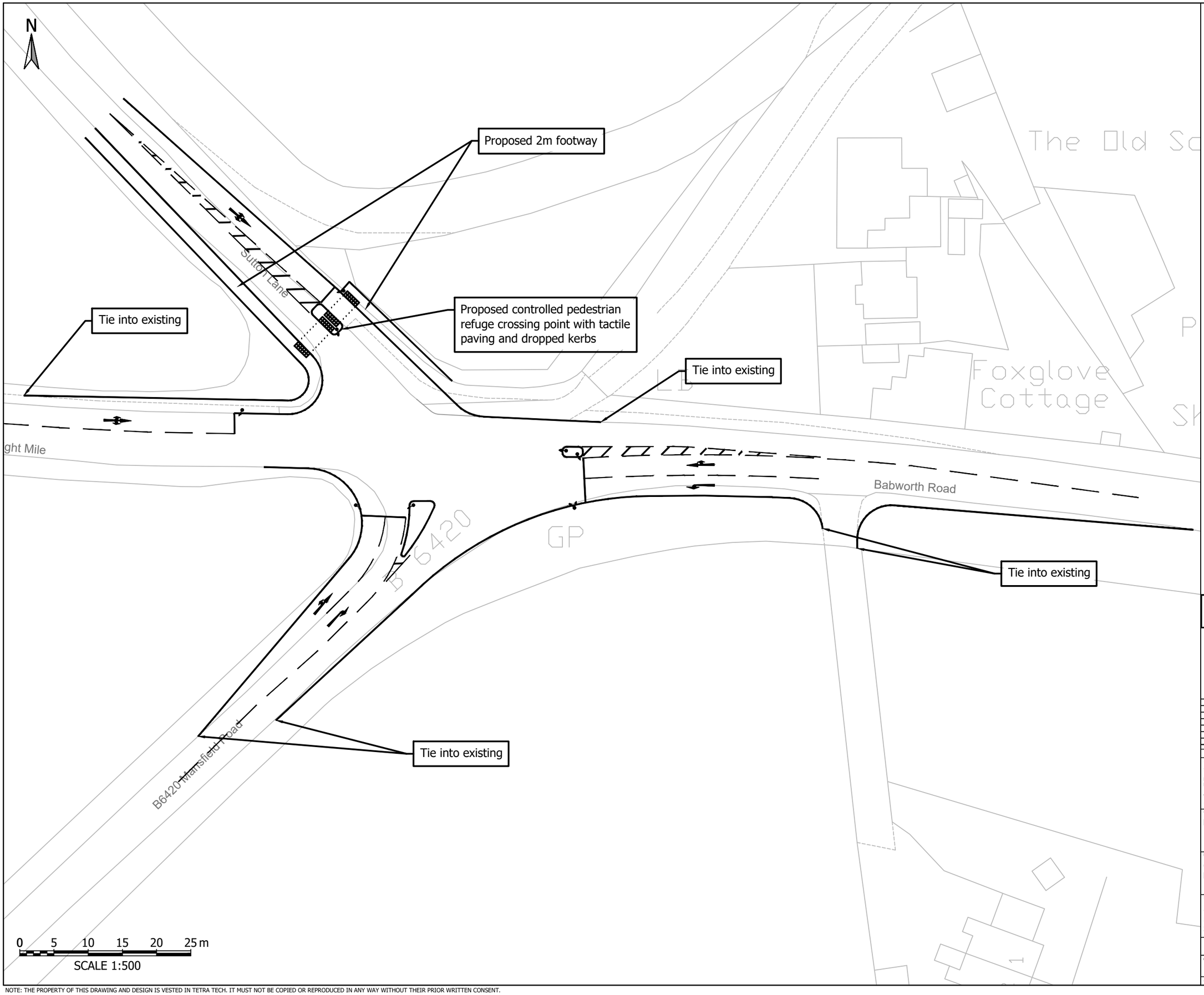


Appendix J – Capacity Assessments

(available on request)

Appendix K – Mitigation

(capacity assessments available on request)



Notes:

General

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2. All dimensions are in metres, unless stated otherwise.
3. This drawing is to be read & printed in colour.
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PRELIMINARY ISSUE

Rev	Description	Date	Drn / Chk / App
P01	PRELIMINARY FIRST ISSUE	18.08.2021	SJR / BM / RH

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Issuing Office
Tetra Tech Leicester
Executive Park, Avalon Way, Anstey, Leicester, United Kingdom, LE7 7GR
Tel: +44 (0)11 6234 8000
www.tetratecheurope.com

TETRA TECH

Client
Bassetlaw District Council

Project Name
Ordsall, Retford Proposed Residential Development

Sheet Title
JUNCTION 6
A620 Babworth Road / B6420/Straight Mile / Sutton Lane

TTE Project Number	Drawn By	Date	Checked By	Date	Approved By	Date	Scale @ A3	Suitability
B023665	SJR	AUG 21	BM	AUG 21	RH	AUG 21	1:500	S3

Client Project Number	Originator	Volume/System	Level/Location	Type/Code	Role	Number	Revision
B023665	TTE	00	XX	SK	O	0001	P01

TTE_MT_v1

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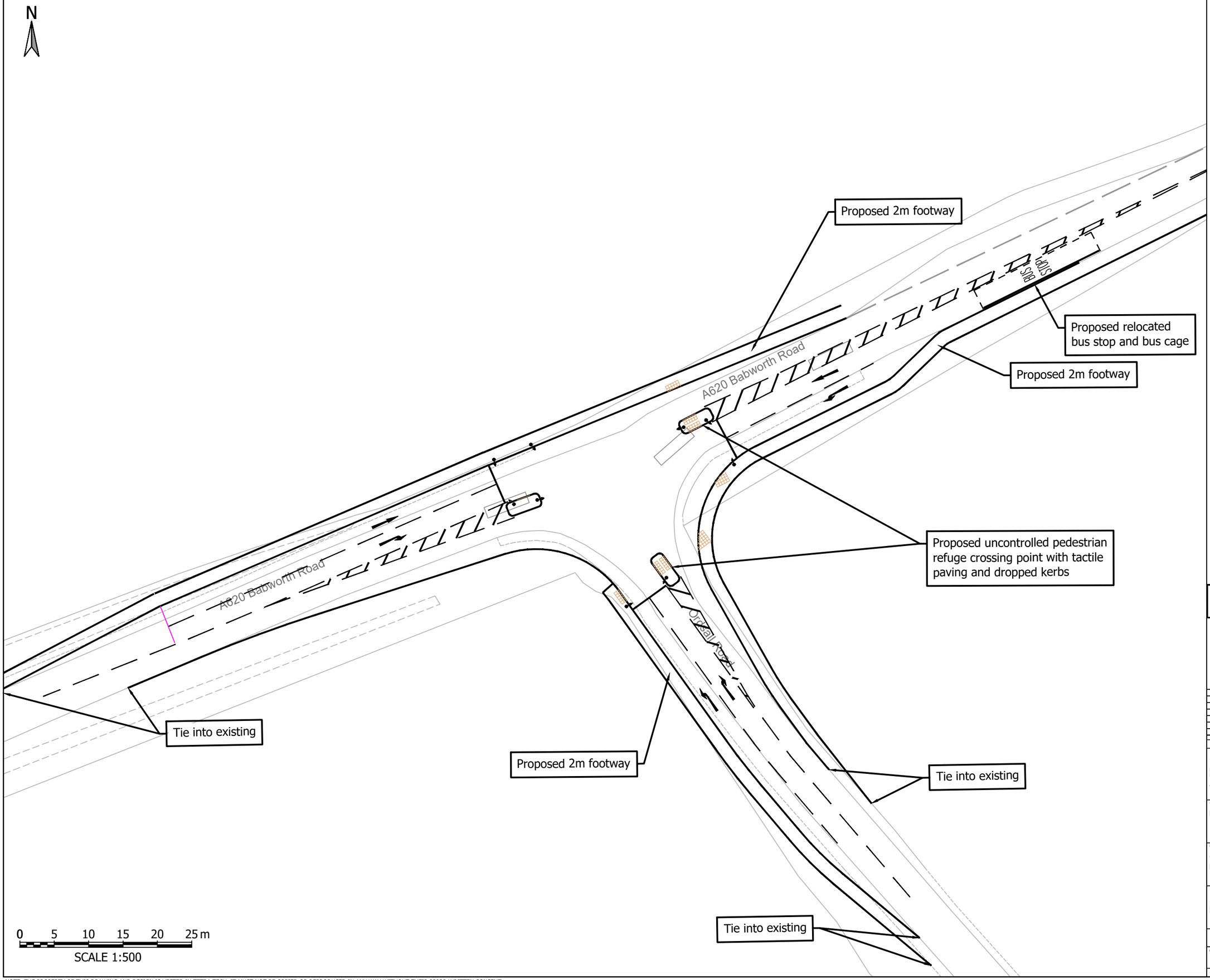

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Executive Park, Avalon Way, Anstey, Leicester, United Kingdom, LE7 7GR

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Client

Bassetlaw District Council

Project Name

Ordsall, Retford Proposed Residential Development

Sheet Title

JUNCTION 7
MINI ROUNDABOUT A620 Babworth / Ordsall Road

TTE Project Number	Drawn By	Date	Checked By	Date	Approved By	Date	Scale @ A3	Suitability
B023665	SJR	AUG 21	BM	AUG 21	RH	AUG 21	1:500	S3

Client Project Number	Originator	Volume/System	Level/Location	Type/Code	Role	Number	Revision
B023665	TTE	00	XX	SK	O	0003	P01

TTE_MT_v1

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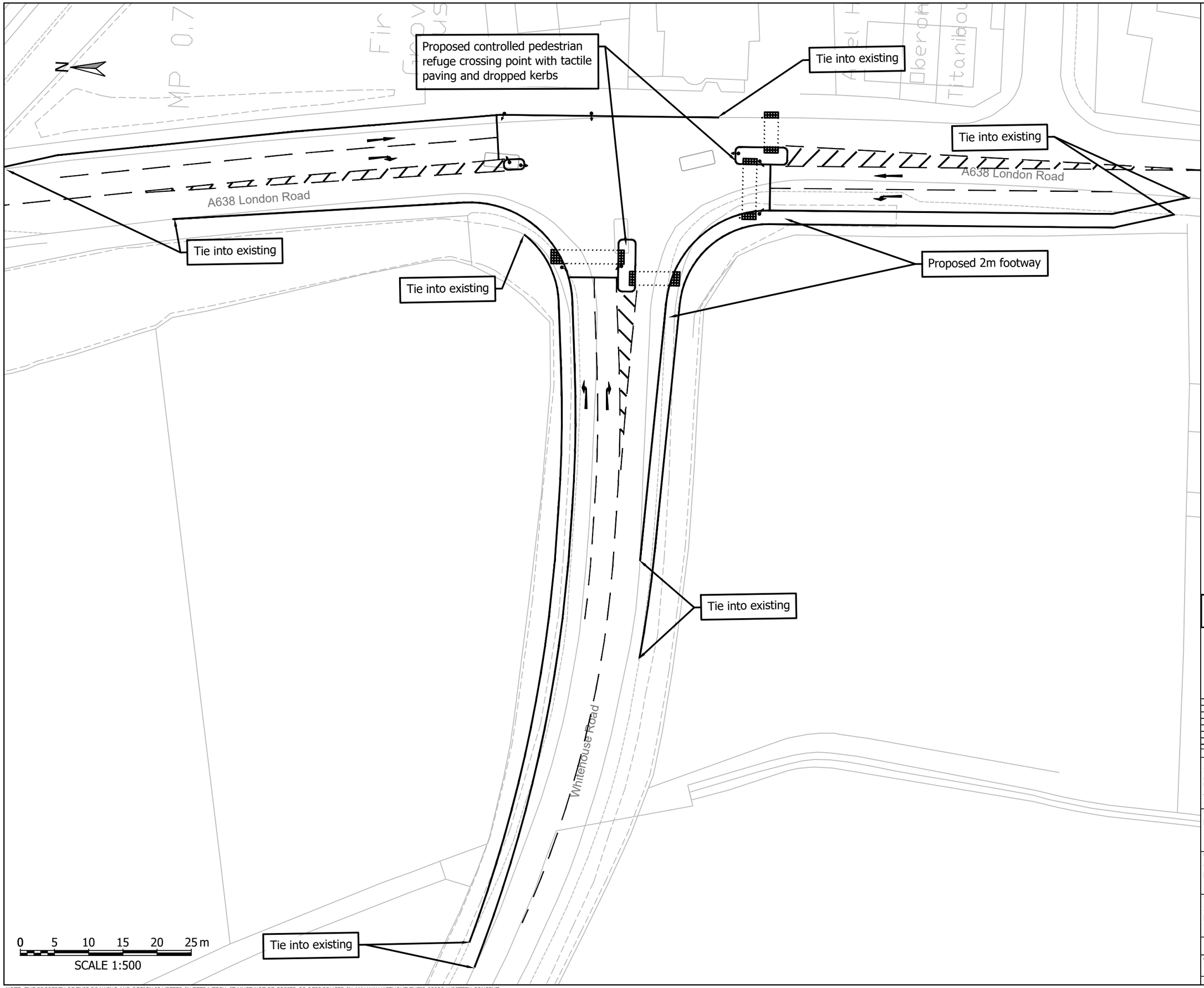

Notes:

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Client

Bassetlaw District Council

Project Name

Ordsall, Retford Proposed Residential Development

Sheet Title

JUNCTION 14
MINI ROUNDABOUT A638 London Road / Whitehouses Road

TTE Project Number	Drawn By	Date	Checked By	Date	Approved By	Date	Scale @ A3	Suitability
B023665	SJR	AUG 21	BM	AUG 21	RH	AUG 21	1:500	S3

Client Project Number	Originator	Volume/System	Level/Location	Type/Code	Role	Number	Revision
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