A large, thick, blue stylized letter 'R' is positioned on the right side of the page, extending from the top to the bottom. It has a curved top and a diagonal stem.

Land North Of Don White  
Road, Wellingborough  
Transport Assessment

# LAND NORTH OF DON WHITE ROAD

## WELLINGBOROUGH

### TRANSPORT ASSESSMENT

For  
Covanta

DATE: April 2022

REV: P03

P21-340

21340-RLL-22-XX-RP-D-5001

## Document History

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Date : 17/01/22

Document Status : For Submission

Revision : P03

Revision	Date	Comment	Editor
P01	17/01/22	1 <sup>st</sup> Issue for Client Comment	AM
P02	04/03/22	For Submission	AM
P03	21/04/22	For Submission	AM

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## 1.0 Introduction

### 1.1. General

Rodgers Leask Ltd (RLL) have been appointed by Covanta to provide transport planning advice, as well as produce relevant reports, in support of a planning application for the development of an aggregate processing plant and erection of a hydraulically bound mixtures plant (HBM) with parking provision, ancillary development and on-site biodiversity enhancements on Land North of Don White Road, Wellingborough.

The proposed layout of the site is shown on the site layout included as **Appendix A**.

The proposed development will be operated by Day Group Ltd, a company experienced in the removal of IBA, as well as in the recycling and marketing of incinerator bottom ash aggregate (IBAA).

### 1.2. Site Location

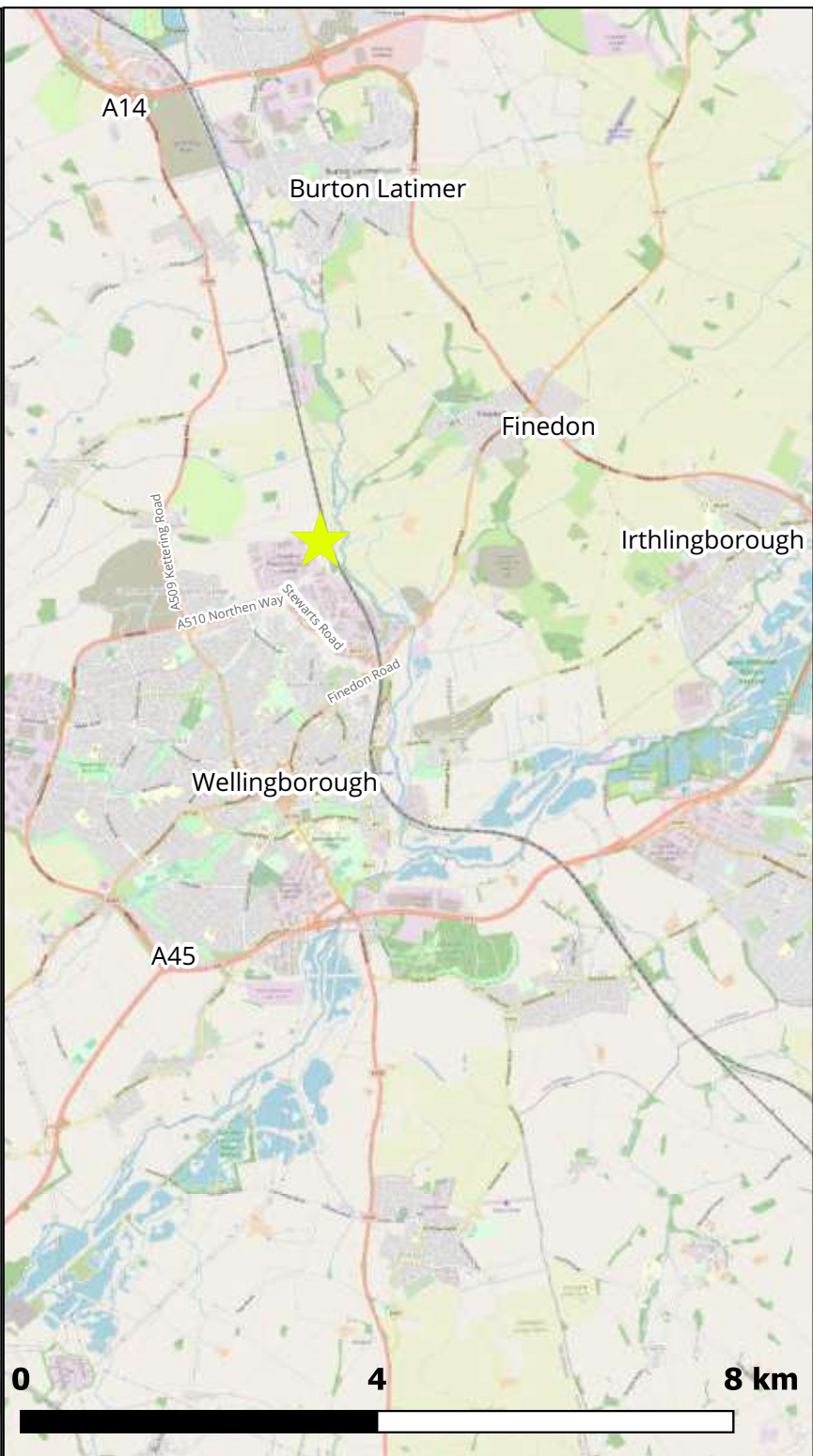
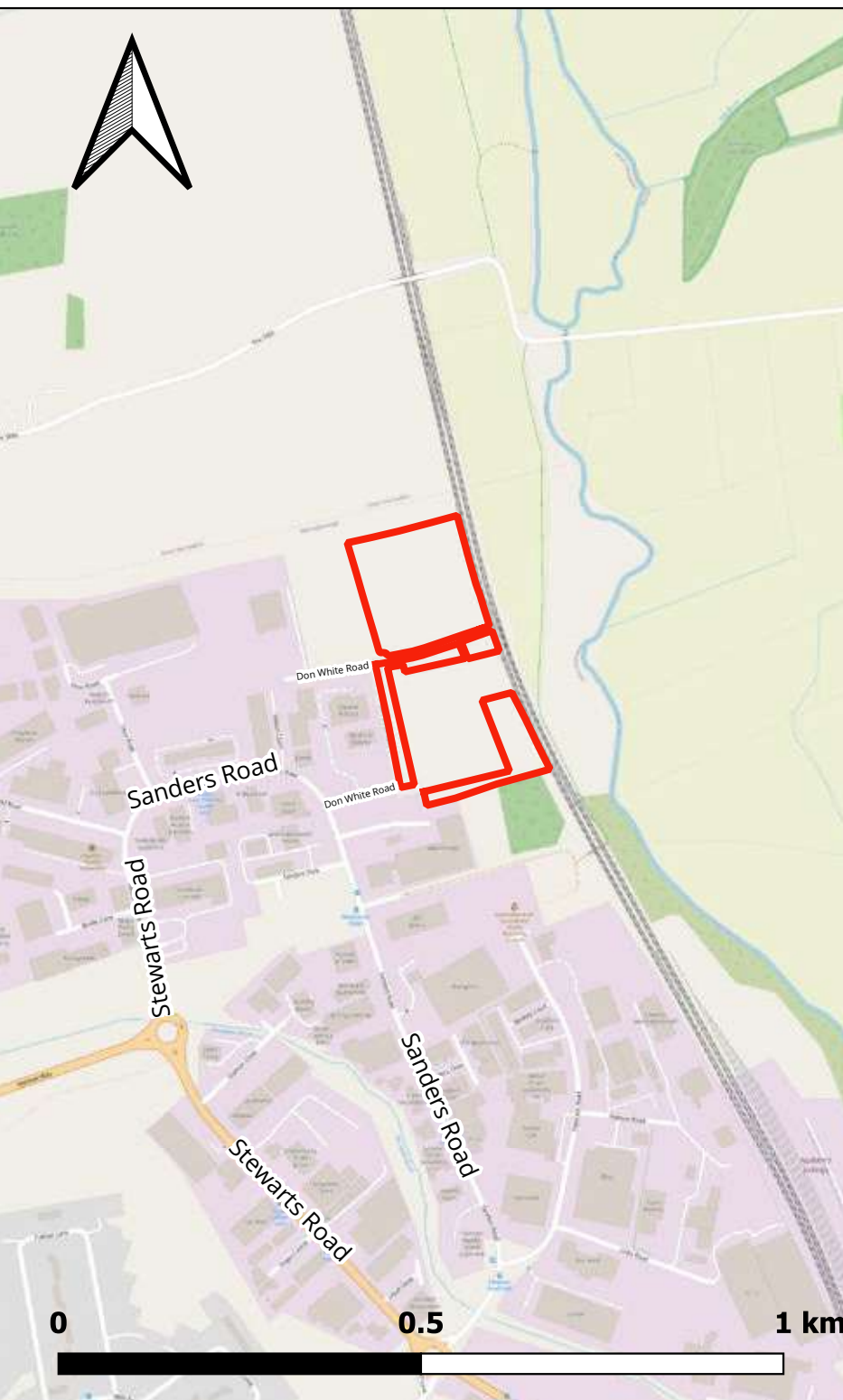
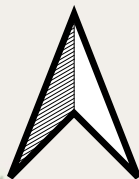
The site is approximately 2 miles from the centre of Wellingborough within the existing employment area of the Finedon Road Industrial Estate. The Industrial Estate itself contains a mixture of B1 (Business), B2 (General Industrial) and B8 (Storage and Distribution) land uses.



The midlands mainline forms the eastern boundary of the site with Don White Road forming the southern boundary. An existing B8 use abuts the western boundary with existing agricultural land forming the northern boundary. The location of the site in the context of the Finedon Road Industrial Estate and in the wider context of Wellingborough is shown in **Figure 1**.

### 1.3. Transport Statement Scoping

A transport scoping form was sent to both Northamptonshire Highways and National Highways to agree the methodology to assess the transport implications of the site. The completed transport scoping forms have been included as **Appendix B**. Comments raised in the scoping forms have been addressed within this Transport Assessment.





- Legend**
-  Site Location
  -  Indicative Site Boundary

Source: © OpenStreetMap contributors, CC-BY-SA



Client:  
Covanta

Project:  
Land North of Don White Road, Wellingborough

Figure Title:  
Site Location

Status:  
FOR INFORMATION

Scale:  
A4 @ 1:Varies

Drawn	Checked	Date
JWB	JWL	17/11/2021

Figure Number:  
Figure 1

St James House, Mansfield Road, Derby, DE1 3TQ, Tel: 01332 285000, Fax 01332 291728, www.rodgersleask.co.uk

## 1.4. Relevant Transport Planning Policy

A review of the relevant transport policy and technical guidance, both at national and local levels, has been undertaken.

The following policy documents have been considered and reviewed:

- The National Planning Policy Framework (July 2021).
- Department for Transport (DfT) Planning Practice Guidance on Travel Plans, Transport Assessments and Statements (March 2014).
- North Northamptonshire Joint Core Strategy 2011 - 2031 (adopted July 2016)
- The Plan for the Borough of Wellingborough (adopted February 2019)

The following guidance documents have been considered and reviewed where applicable:

- Chartered Institute of Highways and Transport (CIHT) “Better Planning, Better Transport, Better Places” (2019).
- Employment Land Review – The Plan for the Borough of Wellingborough: Background Paper (April 2016)
- Northamptonshire Road Freight Strategy (December 2013)

The purpose of this TA is to demonstrate that the proposed development can be accessed by all relevant transport modes without “severe” negative impacts upon the local highway network, in accordance with the National Planning Policy Framework (NPPF).

## 1.5. Report Structure

Following this Introduction, the remainder of the document comprises the following:

- **Section 2.0** presents a review of national and local policies and guidance relevant to the production of this TA.
- **Section 3.0** establishes the existing conditions of the local highway network and the existing local sustainable transport options and local personal injury accident records.

- **Section 4.0** describes all elements of the development proposals including site operation and access.
- **Section 5.0** presents the proposed trip generation, distribution, assignment, and the modal split for the development.
- **Section 6.0** considers the offsite vehicular impact of the development.
- **Section 7.0** sensitivity test of the offsite vehicular impact of the development.
- **Section 8.0** provides a brief description of construction traffic management.
- **Section 9.0** summarises the key points of the TA and final conclusions are presented.

---

## 2.0 Policy Context Review

### 2.1 The National Planning Policy Framework

The National Planning Policy Framework or NPPF (2021) sets out the government's current planning policies for England and how they should be applied. The key theme running through the NPPF is how planning should contribute to the achievement of sustainable development. Regarding Transport, this theme is applied to transport specific policies within Section 9: 'Promoting sustainable transport' of the document (paragraphs 104 to 113 of the NPPF).

As stated in paragraph 110; *'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 46; 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'.*

As stated in paragraph 111; *'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'.*

As stated in paragraph 113; *'all developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed'.*

## 2.2. DfT Planning Practice Guidance on Travel Plans, Transport Assessments & Statements

This guidance sets out the overarching principles of Travel Plans, Transport Assessments and Transport Statements.

As stated in paragraph 002, Travel Plans, Transport Assessments and Statements are all ways of assessing and mitigating the negative transport impacts of development in order to promote sustainable development. They are required for all developments which generate significant amounts of movements (*Reference ID: 42-002-20140306*).

As stated in paragraph 005, the Transport Assessment or Transport Statement may propose mitigation measures where these are necessary to avoid unacceptable or “severe” impacts. Travel Plans can play an effective role in taking forward those mitigation measures which relate to on-going occupation and operation of the development (*Reference ID: 42-005-20140306*).

As stated in paragraph 014, the need for, scale, scope and level of detail required of a Transport Assessment or Statement should be established as early in the development management process as possible as this may therefore positively influence the overall nature or the detailed design of the development (*Reference ID: 42-014-20140306*).

As stated in paragraph 015; ‘the scope and level of detail in a Transport Assessment or Statement will vary from site to site but the following should be considered when settling the scope of the proposed assessment:

- Information about the proposed development, site layout, (particularly proposed transport access and layout across all modes of transport)
- Information about neighbouring uses, amenity and character, existing functional classification of the nearby road network.
- Data about existing public transport provision, including provision/ frequency of services and proposed public transport changes.
- A qualitative and quantitative description of the travel characteristics of the proposed development, including movements across all modes of transport that would result from the development and in the vicinity of the site.
- An assessment of trips from all directly relevant committed development in the area (i.e. development that there is a reasonable degree of certainty will proceed within the next 3 years).
- Data about current traffic flows on links and at junctions (including by different modes of transport and the volume and type of vehicles) within

the study area and identification of critical links and junctions on the highways network.

- An analysis of the injury accident records on the public highway in the vicinity of the site access for the most recent 3-year period, or 5-year period if the proposed site has been identified as within a high accident area.
- An assessment of the associated environmental impacts of transport related to the development, particularly in relation to proximity to environmentally sensitive areas (such as air quality management areas or noise sensitive areas).
- Measures to improve the accessibility of the location (such as provision/enhancement of nearby footpath and cycle path linkages) where these are necessary to make the development acceptable in planning terms.
- A description of parking facilities in the area and the parking strategy of the development.
- Ways of encouraging environmental sustainability by reducing the need to travel; and
- Measures to mitigate the residual impacts of development (such as improvements to the public transport network, introducing walking and cycling facilities, physical improvements to existing roads'

Paragraph 015 also to state that; 'in general, assessments should be based on normal traffic flow and usage conditions (e.g. non-school holiday periods, typical weather conditions) but it may be necessary to consider the implications for any regular peak traffic and usage periods (such as rush hours) (*Reference ID: 42-015-20140306*)'.

### 2.3. North Northamptonshire Joint Core Strategy 2011 – 2031

The North Northamptonshire Joint Core Strategy (JCS) was adopted in July 2016 and was developed to help guide future planning decisions in the area.

Two road schemes are mentioned in the JCS which look to improve connectivity:

Policy 16 – 'Connecting the Network of Settlements' outlines the road infrastructure to facilitate development in North Northamptonshire and states the need for the proposed **A509/A45 Wellingborough Eastern Distributor Road** to facilitate development and strengthen connections between settlements.

Policy 17 – 'North Northamptonshire's Strategic Connections', outlines the priorities for further work and investment on the transport network within North Northamptonshire in the period to 2031 and specifies

plans to improve the A509 between the A14 Kettering and A45 Wellingborough through the proposed **Isham Bypass** and **Isham to Wellingborough improvements**.

The A509 Isham Bypass scheme has been proposed to accommodate anticipated future traffic growth on the A509. The bypass will commence at A14 Junction 9 and run in a southerly direction, west of the village of Isham, and re-join the A509 Kettering Road midway between Hill Top and Great Harrowden. A plan showing the proposed scheme has been included as **Appendix C**.

£1.859m of funding from the Department of Transport (DfT) was secured in October 2021 to be used towards developing the proposals for the Isham bypass. Current projections estimate that construction could begin mid 2024 with the bypass opening mid-2026.

## 2.4. The Plan for the Borough of Wellingborough (February 2019)

The Plan for the Borough of Wellingborough was adopted in February 2019 and together with the North Northamptonshire JCS) forms the 'local plan' for the borough.

Policy Site 6 'East of Eastfield Road' provides the policy framework for a new residential site of 10.9ha. The policy states that the residential proposals on the site should provide for a footpath/cycle route link between Finedon Road Industrial Estate and the railway.

In Appendix D of the plan, there is a map of the Wellingborough Town (ref D.20) which identifies the Finedon Road Industrial Estate as an established industrial estate, and it is stated with section 6.1 'Established Industrial Estates' that these areas are the main supply of employment land in the borough.

## 2.5. Northamptonshire Road Freight Strategy

The Northamptonshire Road Freight Strategy (December 2013) sets out a framework for road freight and freight related issues within the County and also looks at freight in a wider regional and national context.

Within Section 3 'Freight Operations' it is stated that, *The unnecessary use of inappropriate roads by HGVs is an emotive issue leading to complaints from local communities and other road users as well as causing significant highway damage leading to increased maintenance costs.*

The document includes Northamptonshire Lorry Route Maps which identify the roads suitable for HGV movements. The plans, which cover the Northamptonshire area as well as the key local towns individually have been included within this report as **Appendix D**.



## 3.0 Existing Conditions

### 3.1. The Application Site

The site is located within the established Finedon Road Industrial Estate. Within the context of the industrial estate, the site takes access onto the Sanders Road off the private road of Don White Road. The location of the site in the context of the Finedon Road Industrial Estate and in the wider context of Wellingborough is shown in **Figure 1**.

### 3.2. Local Highway Network

#### *Don White Road*

Down White Road is a private road located within the Finedon Road Industrial Estate. It has a carriageway width of 7.3m with 1.8m footways and is street lit. Don White Road is currently used to access a mixture of B2/B8 uses. Don White Road is shown below in **Photograph 1**.

#### *Photograph 1: Don White Road*



At the Sanders Road / Don White Road priority junction, there are footways either side of Don White Road. 100 metres to the east of the junction, Don White Road routes to the north with a footway only present on the western edge of

the carriageway. Don White Road continues north for 170m before routing to both the east to provide access to the site and existing B2/B8 uses and to the west to additional existing B2/B8 uses. Where Don White Road routes to the east, a footway is located on the southern side of the carriageway. There are dropped kerbs on Don White Road to facilitate pedestrian movements between the two footways.

The existing Sanders Road / Don White Road priority junction is a simple priority junction with 1.8m footways either side of Don White Road. At present there is a metal gate across Don White Road. In proximity to the junction, Sanders Road is 7.3m wide. There are dropped kerbs on the bellmouth of Don White Road to facilitate pedestrian movements along Sanders Road crossing Don White Road. The Sanders Road / Don White Road priority junction is shown on **Photograph 2** below.

**Photograph 2: Sanders Road / Don White Road Priority Junction**



### **Sanders Road**

Sanders Road is the estate road for the Finedon Road Industrial Estate and is served by multiple priority junctions. The two roundabouts of the A510 Northern Way/Stewarts Road and Rixon Road/Stewarts Road provide access to the A509 and A510 respectively. The road is subject to 30mph speed limit and is street lit. The road has a carriageway width of 7.3m and footways measuring 2.4m on either side of the road, separated from the carriageway by a 1.5m service strip.

Sanders Road in proximity to the Sanders Road / Don White Road priority junction is shown on **Photograph 3** below.

**Photograph 3: Sanders Road**



### **A510 Northen Way / A510 Stewarts Road Roundabout**

The A510 Northen Way / Stewarts Road roundabout is a 3-arm roundabout providing access to Finedon Road Industrial Estate to the north and Stewarts Road to the south. To the west the roundabout provides access towards the A509 via the A510. There are splitter islands on each arm of the roundabout with dropped kerbs allowing for pedestrian movements across each arm.

A street lit segregated cycle track routes between the Stewarts Road arm of the roundabout and Nest Farm Road providing access to a residential area to the west of the Finedon Road Industrial Estate. This cycle track routes on an east-west axis to the south of the A510 Northen Way.

### **A510 Northen Way**

The A510 Northen Way forms part of the primary road network and in the context of Wellingborough routes between the A509 (the bypass for Wellingborough) and the A14 to the northeast of the town. In the context of Finedon Road Industrial Estate the A510 Northen Way routes on an east-west axis between the A509 / Wellingborough Road / A510 Northen Way / A5193 / A509 Niort Way roundabout and the A510 Northen Way / Stewarts Road roundabout. The A510 is single carriageway and is districted (60mph) with the

speed limit reducing to 30mph on the approach to the A510 Northen Way / Stewarts Road roundabout. There is no frontage development on the A510.

The A510 is shown on the Northamptonshire Road Freight Strategy Lorry Route Map for Wellingborough town with the road highlighted as being a minor A-road.

Traffic flows along the A510 Northen Way were recorded over a 7-day period from Wednesday 1<sup>st</sup> December to Tuesday 7<sup>th</sup> December 2021 using an Automatic Traffic Counter (ATC). The summary of the weekday peak hour traffic flows and weekday and weekend daily traffic flow is shown below in **Table 1**.

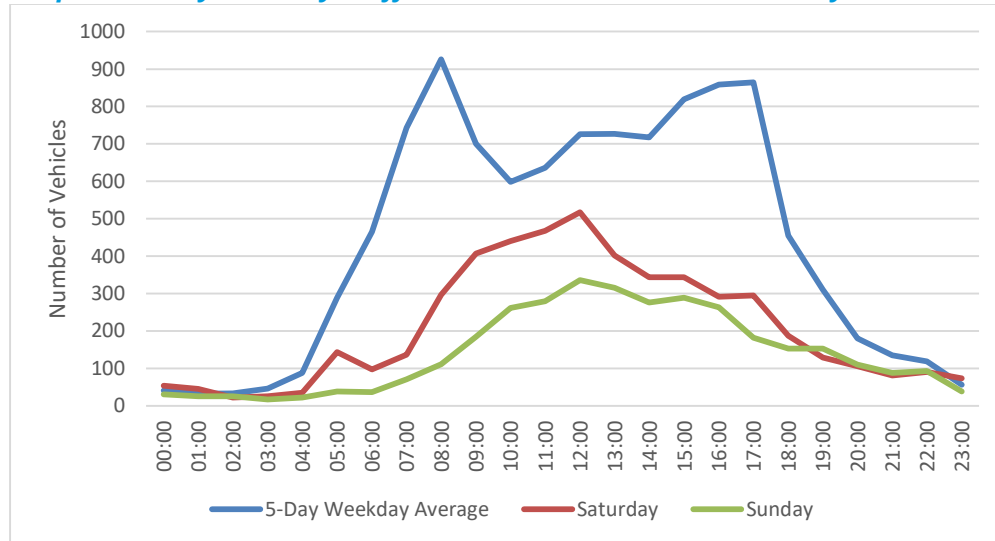
**Table 1: A510 Northen Way ATC Flows**

Time Period	Eastbound	Westbound	Two way
<b>5-day average weekday</b>			
08:00 - 09:00	540	386	926
17:00 - 18:00	269	595	864
24h Flow 00:00-24:00	5,023	5,541	10,564
<b>Saturday</b>			
24h Flow 00:00-24:00	2,467	2,562	5,029
<b>Sunday</b>			
24h Flow 00:00-24:00	1,715	1,685	3,400

The ATC has demonstrated that the weekday daily traffic flow on the A510 Northen Way is in the region of 10,000 vehicles a day. On a Saturday daily vehicles flows are in the order of 5,000 with Sunday daily flows in the order of 3,500 vehicle movements.

A graph showing the traffic profile for the two-way 5-day average weekday and Saturday and Sunday traffic flows is shown below in **Graph 1**.

**Graph 1: Hourly Two-way Traffic Flows on the A510 Northern Way**



**A509**

The A509 forms part of the primary route network and, in the context of Wellingborough, connects the A14 with the A45, acting as a bypass around the town. The A509 is predominantly a single carriageway road and is derestricted (60mph) with street lighting and no frontage development. A section of the A509 is subject to a 40mph on the approaches to the two signalised junctions of the A509 / Balharvie Road and A509 / Cheyney Road that provide access to the Glenvale Park residential development (under construction). A section of the A509 to the southwest of Wellingborough, between the A509 Park Farm Way / A4500 / A5128 Roundabout and the Wilby Way Roundabout, is dual carriageway.

The A509 is shown on the Northamptonshire Road Freight Strategy Lorry Route Map for Wellingborough town with the road highlighted as being a dual carriageway major A-road to the southwest of the town (short section) and a single carriageway major A-road where it routes around the western and northern sides of Wellingborough.

A DfT traffic counter to the north of the A509 / Wellingborough Road / A510 Northern Way / A5193 / A509 Niort Way roundabout estimated the 2019 daily traffic flow on the A509 to be in the order of 28,000 vehicles per day, factored from a manual count undertaken in 2017.

A second DfT traffic counter situated to the west of the A509 / Wellingborough Road / A510 Northern Way / A5193 / A509 Niort Way roundabout, on the A509 Niort Way, estimated the 2019 daily traffic flow on the A509 Niort Way to be in

the order of 17,500 vehicles per day, factored from a manual count undertaken in 2016.

**Rixon Road**

Rixon Road forms part of the A510 as it passes the Finedon Road Industrial Estate and is a 30mph street lit single carriageway road that routes between the A510 Finedon Road and Stewarts Road. It has 2m footways on both sides of the carriageway separated from the carriageway edge by 2m service strips.

Traffic flows along Rixon Road were recorded over a 7-day period from Wednesday 1<sup>st</sup> December to Tuesday 7<sup>th</sup> December 2021 using an ATC. The summary of the weekday peak hour traffic flows and weekday and weekend daily total area shown below in **Table 2**.

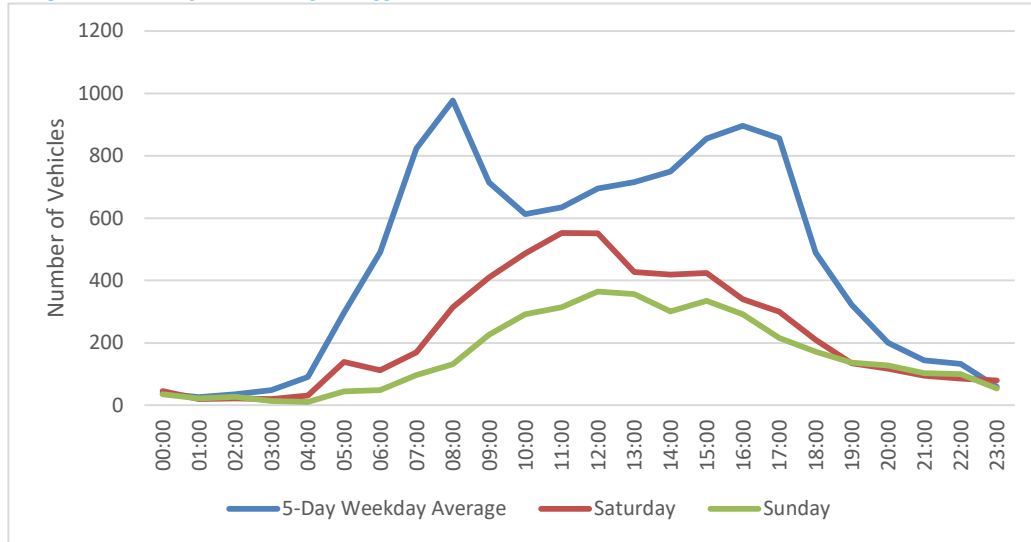
**Table 2: Rixon Road ATC Flows**

Time Period	Eastbound	Westbound	Two way
<b>5-day average weekday</b>			
08:00 - 09:00	347	630	997
17:00 - 18:00	498	359	857
24h Flow 00:00-24:00	4,986	5,925	10,911
<b>Saturday</b>			
24h Flow 00:00-24:00	2,647	2,863	5,510
<b>Sunday</b>			
24h Flow 00:00-24:00	1,836	1,985	3,821

The ATC has demonstrated that the weekday daily traffic flow on Rixon Road is in the region of 11,000 vehicles a day. On a Saturday daily vehicles flows are in the order of 5,500 with Sunday daily flows in the order of 4,000 vehicle movements.

A graph showing the traffic profile for the two-way 5-day average weekday as well as Saturday and Sunday traffic flows is shown below in **Graph 2**.

**Graph 2: Hourly Two-way Traffic Flows on Rixon Road**



**A510 Finedon Road / Meadow Close Junction**

Meadow Close is a single carriageway estate road that serves the Ise Valley Industrial Estate. The estate road provides access to the Wellingborough Railhead, a facility where aggregates can be collected. Meadow Close connects to the A510 Finedon Road via a priority junction with a ghost island right turn lane.

**Personal Injury Accident Analysis**

In order to assess whether there are any existing highway safety concerns on the local highway network, personal injury accident (PIA) data was obtained from Northamptonshire Highways.

Details of recorded PIAs during the most recent available 5-year period (August 2016 – July 2021) have been reviewed. The study area and PIA received from Northamptonshire Highways can be found in **Appendix E**.

It is noted that 14 PIAs occurred within the study area during the study period, the classifications can be found in **Table 3**.

**Table 3: Number of Accidents and Type of Classification**

Classification	Slight	Serious	Fatal
Accidents	11	2	1

The casualties by vehicle type of shown below in **Table 4**.

**Table 4: Casualties Classified by Vehicle Type**

Vehicle Type	Slight	Serious	Fatal	Total
Car Driver	11	1	0	12
Car Passenger	2	0	0	2
Motorcycle	1	0	1	2
Pedal Cycle	3	1	0	4
Goods vehicle less than 3.5 tonnes	0	0	0	0
Goods vehicle greater than 3.5 tonnes	0	0	0	0
<b>Total</b>	17	2	1	20

Of the 14 accidents occurring within the study area 20 casualties were sustained with 17 slight, 2 serious and 1 fatal.

The A509 Kettering Road has had three accidents in the five-year period. The first accident was caused by a poor turn or manoeuvre that was classified as being a slight severity with dry road conditions in daylight. The second accident was a fatal accident due to an attempted overtake. This accident was also in daylight with dry road conditions. The third accident was due to the driver failing to look properly, causing a slight accident in daylight and dry road conditions.

The A509 / A510 roundabout has had one accident. This accident has been classified as a slight severity due to dangerous driving whilst committing a crime. This accident was in daylight with dry road conditions.

The A510 Northen Way has also had one accident in the five-year period. This was a serious accident in darkness, but the road was well lit from streetlights. This was caused by the driver going westbound turning right into the eastbound lane colliding with the second driver.

The A510 / Sanders Road roundabout has had one accident, which was classified as a slight accident. This accident was in daylight, but the roads were in an icy condition. This accident was caused by the slippery road due to the



weather, as well as the original driver potentially not correctly judging the second drivers speed.

Sanders Road in the Finedon Road Industrial Estate has had one slight accident. This was in daylight with dry road conditions. This accident was due to the driver of vehicle 1 failing to stop at the junction therefore colliding with vehicle 2.

The Rixon Road / Sanders Road roundabout has had two accidents. The first accident was a slight collision in daylight with dry road conditions. This was caused by the driver of the first vehicle entering the roundabout colliding with the second vehicle, with the driver of the first vehicle failing to look properly. The second accident was classified as serious and was in daylight with dry road conditions. This was caused by the driver of vehicle 1 hitting vehicle 2 on the roundabout.

Rixon Road has had one slight accident. This was with dry road conditions and in daylight. This was caused by the driver of vehicle 1 who pulled out of the car park area and collided with the cyclist.

The Finedon Road / Rixon Road junction has had two accidents. They were both in dry road conditions in daylight. The first accident was caused by vehicle 1 colliding with vehicle 2 which was waiting to turn right at the junction. The second accident was caused by the driver of vehicle 1 turning right and colliding with vehicle 2, and then driving off from the scene of the collision.

None of the collisions involved HGVs on the road network. There is no clear correlations between any of the accidents and no accidents within the PIA records that suggest that there is a particular problem with the road network in the study area.

### 3.3. Public Transport: Bus Services

The nearest bus stops to the site are situated on Nest Lane, situated approximately 1.5km to the south-west of the site (an 18-minute walk) and is served by the W2 Wellingborough circular route, a service operating on a 30-minute frequency Monday to Saturday. Additional bus stop are located on the A510 Finedon Road approximately 1.9km to the south of the site (a 22-minute walk) and are served by the 47/48 service, a local route that travels between Kettering and Wellingborough on a 30-minute frequency Monday to Saturday.

Both these stops can be accessed by existing footways. The local bus services, routes and frequencies are listed below in **Table 5**. The local bus routes are shown in **Appendix F**.

**Table 5: Local Bus Timetable in Wellingborough**

Bus Service and Nearest Stop to the Site	Weekday			Weekend		
	Start Time	Frequency	End Time	Start Time	Frequency	End Time
<b>W2</b>						
Wellingborough Circular Route  (Nest Lane)	07:40	30 mins	19:27	07:40	30 Mins (Saturday)	19:27
<b>47/48</b>						
Kettering – Wellingborough  (The Locomotive Public House)	07:12	30 mins	20:12	07:27	Every 2 Hours  Saturday Service Only	18:27
Wellingborough – Kettering  (The Locomotive Public House)	06:50	30 mins	19:30	06:47	Every 2 Hours  Saturday Service Only	19:47

### 3.4. Walking and Cycling

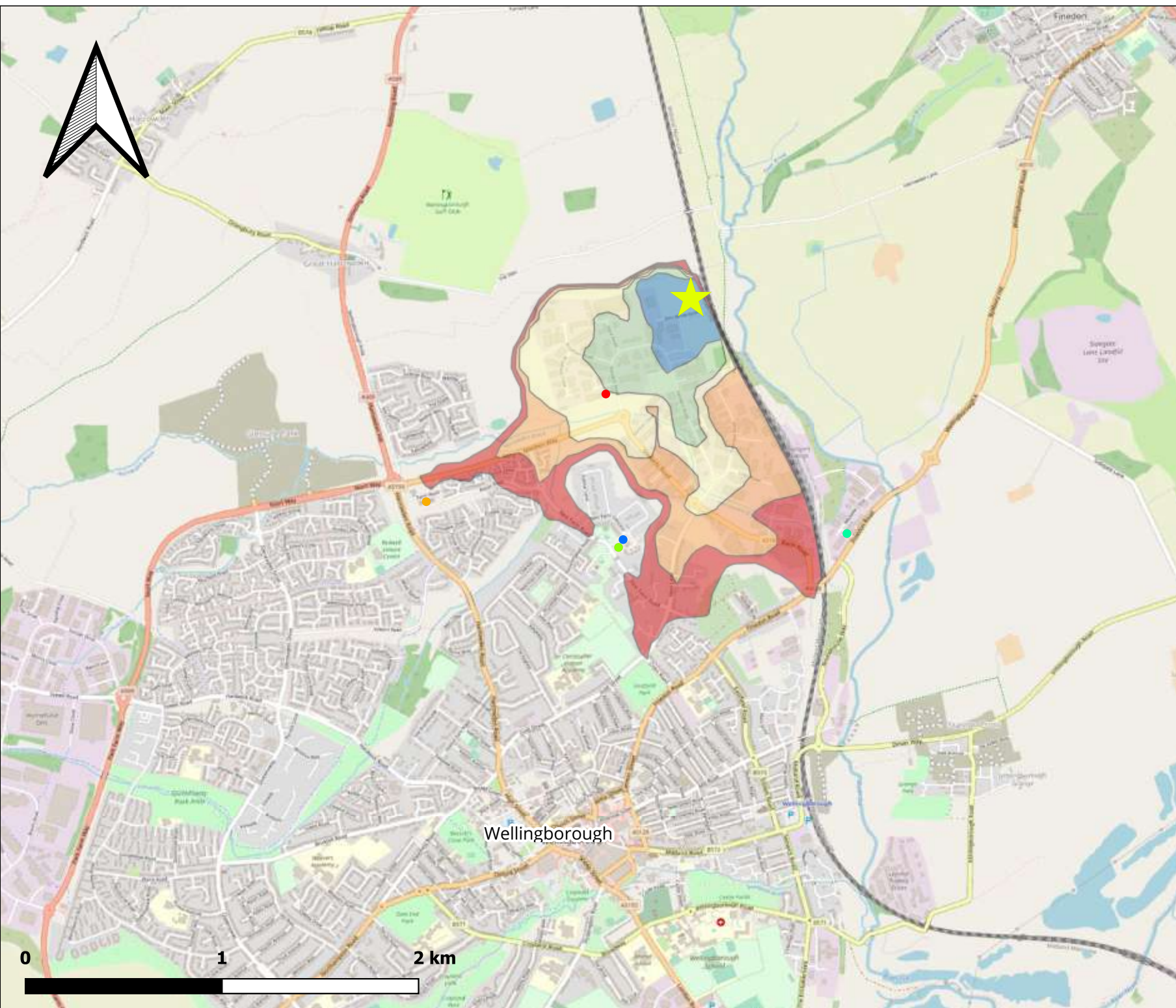
The main estate road of Sanders Road has footways either side of the carriageway and allows for pedestrian movements through the Finedon Road Industrial Estate. There is no specific cycle infrastructure within the industrial estate with the nearest designated infrastructure being the segregated cycle

track connecting Stewarts Way with Nest Farm Road. This track can be used by both pedestrian and cyclists and provides a traffic free route between the Finedon Road Industrial Estate and the residential areas to the north of Wellingborough.

The Chartered Institute for Highways and Transport (CIHT) in their 'Guidelines for Providing for Journeys on Foot' (2000) document, suggest a preferred maximum walking distance of 2km for commuting. A plan illustrating the geographical area within 2km of the site that are accessible by existing pedestrian routes is shown in **Figure 2**.

A map of the Wellingborough Cycle Network has been produced by North Northamptonshire which has been included as **Appendix G**. Sanders Road, Stewarts Road and Rixon Road are highlighted as 'busy roads, mostly low speeds with some complicated traffic movements'. Busy roads are labelled as being for cyclists with a medium to high level of skill. Don White Road is highlighted as accommodating 'moderate traffic and usually low speeds with turning and parking movements'. This map also highlights the cycle track that routes on an east west axis to the south of the A510.

As stated in the DfT Local Transport Note 1/20 "Cycling Infrastructure Design", the average cycling speed is 10mph (16.1kph). Findings from the National Travel Survey 2019 summarised that the average cycle time is approximately 23 minutes per trip. This results in an average distance of 6.2km travelled. **Figure 3** shows the 5km and 6.2km cycling catchments from the centre of the site to the surrounding area. The figure demonstrates that the whole of Wellingborough is accessible by bicycle.



**Legend**

 Site Location

**Walking Catchment**

-  400m
-  800m
-  1.2km
-  1.6km
-  2km

**Amenities**

-  Millies Cafe
-  Co-op
-  Well Cafe
-  Takeaway Van
-  K D Supermarket

Source: © OpenStreetMap contributors, CC-BY-SA



Client:  
Covanta

Project:  
Land North of Don White Road, Wellingborough

Figure Title:  
Walking Catchment

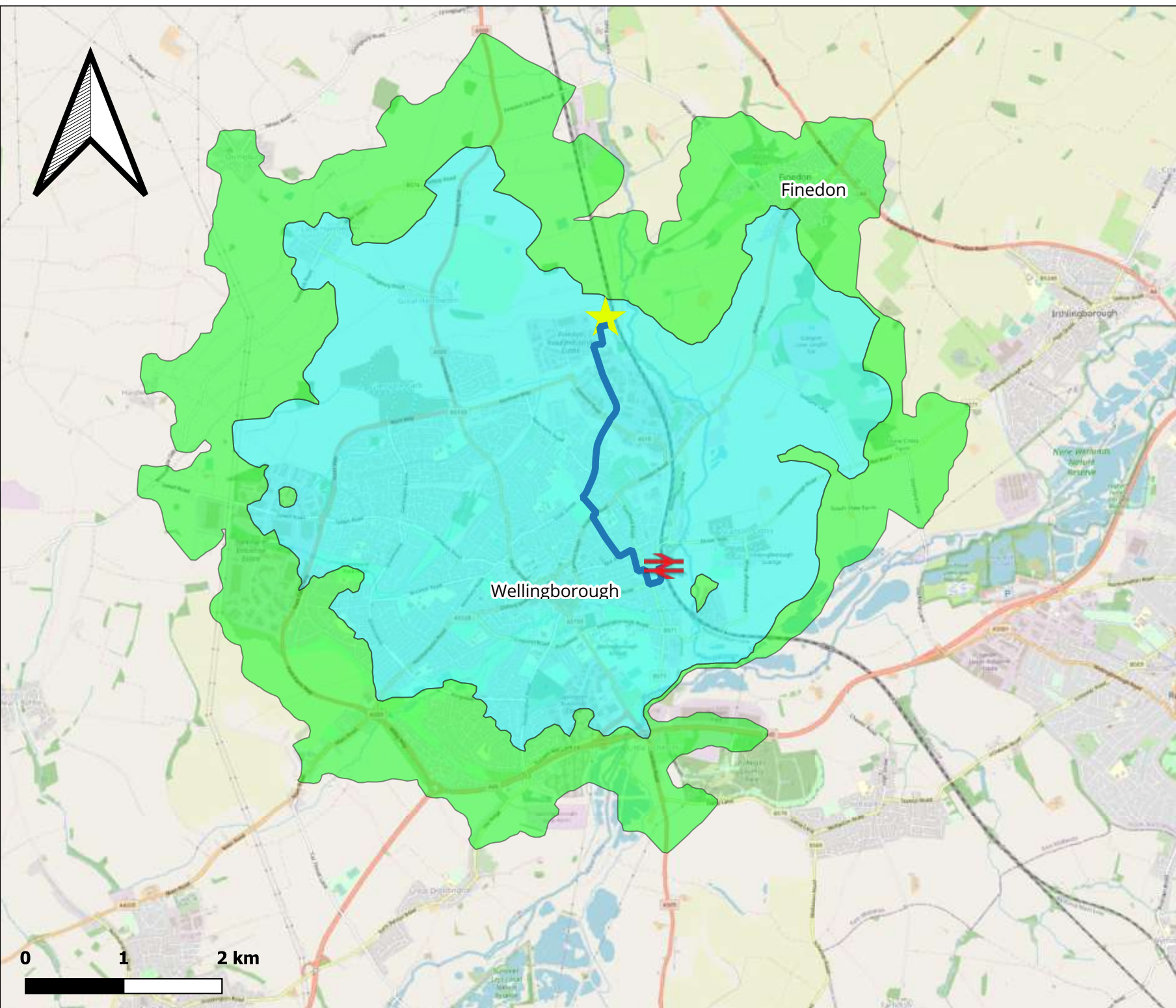
Status:  
**FOR INFORMATION**

Scale:  
A4 @ 1:25000




Drawn	Checked	Date
JWB	JWL	17/11/2021

Figure Number:  
Figure 2







**Legend**

-  Site Location
-  Train Station Route (12 minutes)
-  Train Station

**Cycle Catchment**

-  5KM (30 minutes)
-  6.2KM (37 minutes)

Source: © OpenStreetMap contributors, CC-BY-SA

**RLRE**  
Consulting Engineers

Client:  
Covanta

Project:  
Land North of Don White Road, Wellingborough

Figure Title:  
Cycling Catchment

Status:  
FOR INFORMATION

Scale:  
A4 @ 1:50000

Drawn	Checked	Date
JWB	JWL	17/11/2021

Figure Number:  
Figure 3

St James House, Mansfield Road, Derby, DE1 3TQ, Tel: 01332 285000, Fax 01332 291728, www.rldgersleask.co.uk

### 3.5. Accessibility to Local Facilities

The accessibility of local facilities in the area surrounding the Finedon Road Industrial Estate has been considered for future employees of the site. Walking and cycling times have been calculated based on the shortest possible routes between the centre of the site and the facilities based on an average walking speed of 1.4m/s (CIHT) and cycling speed of 10mph (LTN 1/20).

Where applicable, the journey time for using a local bus service has been included. It should be noted that the bus journey times include all parts of the journey (i.e. walking to/from the stops at the origin and destination, transfer times). Public transport times have not been assessed where a walking/cycling trip time is shown to be 15 minutes or less; any trips exceeding 90 minutes have also been disregarded as these are excessive.

**Table 6** provides the journey times when using sustainable forms of travel to access the local facilities from the centre of the site. The facilities listed are examples of existing local amenities considered of key importance and it does not represent an exhaustive list.

**Table 6: Accessibility to Key Facilities via Sustainable Transport**

Service Category	Local Facility/Amenity/Service	Approx. Dist. (km)	Approx. Journey Time (mins)		
			Foot	Bicycle	Bus
Food Retail (Cafe)	Millie's LTD	0.74	9	2	N/A
Food Retail (Supermarket)	Co-Op Food	2.25	24	7	N/A
Food Retail (Cafe)	Well Cafe	2.27	24	8	N/A
Food Retail (Supermarket)	K D Supermarket	2.28	26	9	N/A
Food Retail (Cafe)	Takeaway Van	2.41	27	7	N/A
Town Centre	Wellingborough	3.06	39	13	34
Transport	Wellingborough Train Station	3.38	41	12	33

Due to the site being in an industrial estate, the local facilities are primarily in the urban areas of Wellingborough. There is a cafe located 0.74km from the centre of the site (9-minute walk), and a convenience store located just under 2km away from the site (24-minute walk).

## 4.0 Development Proposals

### 4.1 Aggregate Processing Plant

The development proposals are for an Aggregate Processing Plant with associated parking. The site plan showing the proposed layout of the Aggregate Processing Plant is included in **Appendix A**. The development proposals will include the following:

- Processing plant which includes product storage bays, workshop, and control room.
- A storage facility.
- Offices and welfare facilities.
- Car Parking
- HGV Parking
- Cycle Parking

The proposed Wellingborough Aggregate Processing Plant will be able to process 200,000 tonnes of Incinerator Bottom Ash (IBA) and 200,000 tonnes of primary aggregate for the blending process per annum. The day-to-day operation of the site will see the arrival of IBA which will be blended with Primary Aggregate to create IBAA for delivery off-site. Unprocessed IBA will be brought to the site using HGV tipper vehicles. The material will be assessed on arrival and stockpiled until it has suitably aged prior to processing. The IBA is then screened to separate the ferrous and non-ferrous metals for external recycling, re-screening, then further metal removal and then the final product is stockpiled.

The proposed Wellingborough Aggregate Processing will employ approximately 20 employees with the site operating over the following hours listed below in **Table 7**.

**Table 7: Hours of Operation**

IBA and HBM Processing	Maintenance
06:00 – 23:00	04:00 – 00:00

### 4.2 Vehicular Site Access

The proposed development will be accessed off of Don White Road, a private road that connects to the public highway via a simple priority junction with Sanders Road, the estate road of the Finedon Road Industrial Estate. The site access off of Don White Road will take the form of a simple priority junction.

The proposed development will be served by OGV1 tipper vehicles transporting IBA and aggregates to/from the site. The specification of OGV1 tipper vehicles that will be using the site is shown below in **Figure 4**.

**Figure 4: 8-Wheel Rigid Tipper**



To determine suitable visibility splays for the site access junction the existing (and future) usage of Don White Road by HGVs has been considered.

At present Don White Road is used by HGVs to access existing B2 / B8 units. The proportion of HGVs using Don White Road on the day of the traffic surveys was recorded as 11% in the AM peak period (8 OGV1 & 2 OGV2), 8% in the intern peak period (6 OGV1) and 1% in the PM peak period (1 OGV1).

As the percentage of traffic on Don White Road will exceed 5%, the deceleration characteristics of heavy vehicles (0.375g deceleration rate and 1.5 second reaction time) have been used in the stopping sight distance calculations. Using the stopping sight distance calculator and a vehicle speed of 30mph, visibility splays of 2.4 x 47m have been calculated. A drawing of the sight access arrangements to the development which includes the visibility splays has been included as **Appendix H**.

It is proposed that HGVs will enter the development and navigate a one-way route through the development following the delivery of IBA or primary aggregates. Vehicles will then depart through the yard and around the attenuated water tanks and up through the parking area to reverse park into an allotted parking space.

A swept path analysis drawing showing an OGV1 rigid tipper accessing and egress the site has been included as **Appendix I**. This drawing shows a swept



path analysis for a vehicle traversing the site access junction, the length of Don White Road and the Sanders Road / Don White Road priority junction.

### 4.3. Pedestrian Access

#### *Pedestrians*

The Don White Road access junction includes 2m wide footways on either side of the bellmouth of the junction. Pedestrians can access the existing footway opposite the site junction, on the southern side of the Don White Road carriageway. The existing footways on Don White Road allow employees to walk to the existing pedestrian infrastructure within the Finedon Road Industrial estate.

Although there is no designated provision for cyclists, the low traffic flows on Don White Road would make the road viable for cycling. Once out of the industrial estate cyclists can use the segregated cycle track that starts/ends at the A510 / Stewarts Road roundabout and routes to neighbouring residential area on the northern side of Wellingborough.

### 4.4. Parking Provision

The following on-site parking provision is proposed for the development and is shown on the site plan:

- 17 car parking spaces
- 7 overflow car parking spaces
- 2 disabled parking spaces
- 4 electric charging parking spaces
- 12 HGV parking spaces
- Cycle parking

In accordance with the Northamptonshire parking standards (September 2016), disabled parking spaces are within 50m of the office and welfare facilities. Disabled spaces comprise 10% of the main designated parking area.

## 5.0 Trip Generation and Distribution

### 5.1 Proposed Trip Generation

The trip generation for the proposed Wellingborough Aggregate Processing Plant is presented below in **Table 8** with peak hours for development trips highlighted in bold.

**Table 8: Wellingborough Trip Generation Summary**

Time Period	Arrivals		Departures		Two-Way	
	All Veh	OGV2	All Veh	OGV2	All Veh	HGV
05:00 - 06:00	9	3	4	3	13	5
<b>06:00 - 07:00</b>	<b>38</b>	<b>15</b>	<b>25</b>	<b>24</b>	<b>63</b>	<b>39</b>
07:00 - 08:00	19	15	19	19	38	34
<b>08:00 - 09:00</b>	<b>29</b>	<b>21</b>	<b>20</b>	<b>20</b>	<b>49</b>	<b>41</b>
09:00 - 10:00	20	16	20	15	40	31
10:00 - 11:00	15	15	19	18	34	33
11:00 - 12:00	26	15	21	15	48	30
12:00 - 13:00	15	13	13	10	28	23
<b>13:00 - 14:00</b>	<b>23</b>	<b>21</b>	<b>28</b>	<b>23</b>	<b>50</b>	<b>44</b>
14:00 - 15:00	13	11	10	8	23	19
15:00 - 16:00	13	13	15	6	28	19
<b>16:00 - 17:00</b>	<b>13</b>	<b>11</b>	<b>26</b>	<b>8</b>	<b>39</b>	<b>19</b>
17:00 - 18:00	1	0	10	0	11	0
18:00 - 19:00	0	0	0	0	0	0
19:00 - 20:00	0	0	0	0	0	0
20:00 - 21:00	0	0	0	0	0	0
21:00 - 22:00	0	0	3	0	3	0
22:00 - 23:00	0	0	0	0	0	0
<b>05:00 - 23:00</b>	<b>231</b>	<b>169</b>	<b>231</b>	<b>166</b>	<b>463</b>	<b>335</b>

It has been calculated that over the 18-hour period of the site operation there will be 463 trips per day (231 arrivals and 231 departures generated by the proposed Wellingborough IBAA Processing Plant. Of these trips 463 vehicle movements 335 were made by OGV2s (169 arrivals and 166 departures).

**Table 8** shows the peak periods over the trip generation. The highest number of two-ways trips between 06:00 – 07:00. A second AM peak hour can be seen during the traditional 08:00 – 09:00 hour with the inter peak between 13:00 – 14:00. The PM peak hour for the site is between 16:00 – 17:00 corresponding to the end of the working day.

The daily traffic profile from the Wellingborough trip generation which is broken down into arrivals and departures by vehicle type, has been included as **Appendix J**.

When defining the PM peak hour, review of the traffic count data for the junctions surveyed around Wellingborough has shown that the PM peak hour falls between 16:30 – 17:30. The Wellingborough trip generation highlighted the PM ‘development’ peak to fall within the 16:00 – 17:00 time period. To ensure a robust assessment is undertaken for the PM peak hour the PM ‘highway’ peak hour of 16:30 – 17:30 has been assessed with the development traffic for the 16:00 – 17:00 time period.

Following this approach, the peak hours to be taken forward within this assessment have been identified as the following:

- AM ‘development peak’ 06:00 – 07:00
- AM ‘highway peak’ 08:00 – 09:00
- Inter peak 13:00 – 14:00
- PM peak hour 16:30 – 17:30

These peak hours will be used to identify areas of the local highway network where the development will be having an impact on highway capacity.

## 5.2. Night-time Operation

It should be considered that the Wellingborough site will operate primarily during daytime hours with HGV deliveries between 05:00 and 17:00. The assessment of the proposed Wellingborough IBA Processing Plant has focused on these core hours for the business to ensure that a robust assessment of the impact on the local highway network has been undertaken. If the development was to operate outside the core business hours with night-time movements, it is not envisaged that the total number of daily trips would increase. Instead the same number of trips would be spread throughout the longer hours of operation reducing trips during the traditional highway peak times.

## 5.3. Trip Distribution

Following discussions with Northamptonshire Highways and National England a study area of the local highway near to the site and the junctions of the strategic road network near to Wellingborough was identified. This initial study area has been used to distribute and assign development vehicle trips to understand the junctions where development trips will exceed 30 two-way trips

during any 1-hour period. This threshold is used to determine if further detailed capacity testing is required.

To allocate origins/destinations to development trips, two separate trip distributions have been applied to the estimated trip generation depending on vehicle class. The trip distribution for light vehicles, which represents employee vehicles trips, has been calculated using 2011 Census data. OGV1 / OGV2 deliveries to/from the proposed development will be from known origins/destinations and as such, these trips have been distributed on a first principle basis.

### Light Vehicles

Light vehicle trips have been distributed onto the local highway network using a distribution calculated from the 2011 Census dataset WU03EW – Location of usual residence and place of work by method of travel to work (Middle Super Output Area (MSOA) Level). **Table 9** show the proposed distribution for light vehicles on the local highway network.

**Table 9: Employee Trip Distribution for Light Vehicles (2011 Census)**

Route	Distribution
A509 Niort Way	8%
A5193 Harrowden Road	3%
Nest Farm Road	3%
Nest Lane	14%
A5128 Finedon Road	5%
A510 Finedon Road	23%
A509 Kettering Road	4%
A14 W	12%
A14 E	2%
A45 W	9%
A509 S	1%
B571	6%
Kettering	6%
Sywell Road	1%
A4500	3%
<b>Total</b>	<b>100%</b>

The trip distribution for light vehicles has been presented on a local highway network diagram and has been included as **Appendix K**.

**Heavy Vehicles**

The distribution of OGV1 and OGV2 movement has been based on the known locations of delivery origins and destinations. As the site is bringing in specific materials from known sources, i.e. IBA and primary aggregate, the suppliers, and likely customers for the IBAA are known by the site operator, Day Group Ltd. Delivers to/from the site can be categorised by the material they are transporting and have been summarised in **Table 10**.

**Table 10: Summary of OGV2 Movements**

Delivery	Movement	Location (from/to)	Proportion
Full (50%): Primary Aggregate	Arrival	Meadow Close Railhead	26%
Full (50%): IBA	Arrival	50% Newhurst Energy from Waste (Leicester) 50% Rookery Energy from Waste (Bedford)	26%
Empty	Arrival	To the north and south of Wellingborough	48%
<b>Total</b>			100%
Full (96%): Blended Aggregate	Departure	Even split in a 30-mile radius (Local Markets)	78%
Full (4%): Metals	Departure	37.5% Birmingham  62.5% Even split in a 50-mile radius	3%
Empty	Departure	Meadow Close Railhead	19%
<b>Total</b>			100%

The anticipated distribution of OGV2 trips to/from the development is shown below in **Table 11**.

**Table 11: OGV2 Trip Distribution**

Route	Distribution					
	Arrivals			Departures		
	Primary	IBA	Empty	Blended	Metals	Empty
A510 Finedon Road	100%	0%	0%	0%	0%	100%
A509 Kettering Road	0%	0%	0%	0%	0%	0%
A14 W	0%	50%	50%	25%	53%	0%
A14 E	0%	0%	0%	25%	16%	0%
A45 W	0%	0%	0%	25%	16%	0%
A509 S	0%	50%	50%	25%	16%	0%
<b>Total</b>	100%	100%	100%	100%	100%	100%

*Note: Rounding error to 1 decimal place*

The trip distribution for heavy vehicles has been presented on a local highway network diagram and has been included as **Appendix L**. The routing of OGV1 and OGV2 trips has taken into consideration the primary routes identified within the 'Northampton Road Freight Strategy'. It has been assumed that no OGV1 or OGV2s will be going through the town centre, and instead travelling on the A509 and A510.

## 5.4. Trip Assignment

Vehicle trips have been assigned to the local highway network using the proposed trip generation and trip distribution outlined above.

The traffic flow spreadsheets represent the areas examined before undertaking detailed traffic capacity assessments. As discussed with Northamptonshire during the scoping stage, any junctions likely to be impacted by an additional 30 two-way trips during the peak hours as a result of this development will be assessed in detail using standalone junction capacity software.

The traffic flow spreadsheets showing the assignment of development trips across the study area have been included as **Appendix M** of this report. Vehicle trips have been assigned for the 1-hour AM, Inter and PM peaks identified in **Section 5.1**.

**Table 12** provides a summary of the two-way development trips using each junction the AM, Inter and PM peak hours. For junctions with less than 30 two-way movements in the peak hours they do not require further detailed capacity testing.

**Table 12: Development Two Way Trips Summary**

Junction	Two Way Trips				Capacity Testing Required
	AM 06-07	AM 08-09	Inter 13-14	PM 16-17	
Sanders Road / Don White Road priority junction	63	49	50	36	YES
A510 Northen Way / Stewarts Road roundabout	42	39	38	22	YES
A510 Stewarts Road / Sanders Road / Rixon Road / Nest Lane roundabout	21	10	12	14	NO*
A509 / Wellingborough Road / A510 Northen Way / A5193 / A509 Niort Way roundabout	41	39	38	21	YES
Rixon Road / Finedon Road mini roundabout	16	8	11	11	NO*
Finedon Road / Meadow Close priority junction	14	8	19	15	NO*
A14 Junction 9	20	19	19	10	NO
A14 Junction 10	0	0	0	0	NO
A509 / A4500 / A5128	18	18	18	8	NO
Wilby Way Roundabout	17	18	18	8	NO
A45 J14	11	14	12	5	NO
A45 J16	2	0	0	1	NO

Note: \* Junctions capacity assessments undertaken due to proximity to site location

The assignment of development trips on the local highway network has identified the following junctions that will require detailed capacity assessment to be undertaken:

- Sanders Road / Don White Road priority junction
- A510 Northen Way / Stewarts Road roundabout
- A510 Stewarts Road / Sanders Road / Rixon Road / Nest Lane roundabout
- A509 / Wellingborough Road / A510 Northen Way / A5193 / A509 Niort Way roundabout
- Rixon Road / Finedon Road mini roundabout
- Finedon Road / Meadow Close priority junction

## 5.5. Modal Share (Employee Trips to Work)

To understand the proportion of employees who will travel to the site by modes other than the private car, modal share data from the Census dataset WP703EW 'Method of travel to work (Workplace population)' for the Wellingborough 002 MSOA has been used. The modal share which has been calculated from this data is shown below in **Table 13**.

**Table 13: Method of Travel to Work - Wellingborough 002**

	Vehicle Driver	Vehicle passenger	Motorcyclist	Pedestrian	Cyclist	Bus
Percentage (Census)	80%	8%	1%	6%	3%	1%
Daily Employee Trips	106	11	1	8	4	1

*Note: minor rounding errors are present due to application of travel to work at 1 decimal places*

The data shows that the majority of trips to / from the site (106) will be made by car drivers. 11 trips will be made by vehicle passengers with 8 trips and 1 trip made on foot and by local bus services respectively. 4 trips will be made by cyclists and 1 trip by a motorcycle. Measures and targets to reduce single occupancy car trips to/from the development in favour of alternative modes of travel are included within the Employee Travel Plan which has been submitted alongside this TA as part of the planning application.



## 5.6. Impact on Local Railway Bridges

Due to the status of the A510 as a primary route it is not expected that OGV2 movements associated with the proposed development will impact upon existing Finedon Road railway bridge. To quantify this, a comparison has been undertaken of the forecast 2027 two-way HGV movement across the bridge and the additional HGV trips associated with the proposed development. **Table 14** provides a comparison of the information.

**Table 14: A510 Finedon Road Railway Bridge Movements**

Time Period	2027	2027 + Dev	Increase (Veh)	Increase (%)
AM Peak 06:00 – 07:00	443	457	14	3%
AM Peak 08:00 – 09:00	1,078	1,086	8	1%
Inter Peak 13:00 – 14:00	685	696	11	2%
PM Peak 16:30 – 17:30	999	1,009	10	1%
Daily (24hr) 00:00 – 24:00	662	737	75	11%

*Note: 24hr traffic flow for A510 Finedon Road taken from DfT count point 17185 factored to 2027*

The results of **Table 14** demonstrates that the increase in HGV movements across the Finedon Road railway bridge will not be significant. It should also be considered that the OGV2 movements from the development will predominantly be 8-wheel rigid tippers which will carry 20 tonnes, this is noticeably less than the maximum of 44 tonnes that an existing 6 axel articulated OGV2 could be transporting when travelling on the A5128.

## 6.0 Highway Impact

### 6.1 Traffic Modelling Scenarios

To assess the impact of the proposed development on the local highway network forecast years need to be established to represent a time when the development is fully built out and operational. The forecast years have been defined as 2027, five years after the registration of the application (expected 2022) and 2031 at the request of North Northamptonshire Council in their scoping opinion to reflect the end of the local plan period.

The traffic modelling scenarios used for the assessment of the proposed development are presented below in **Table 15**.

**Table 15: Traffic Modelling Scenarios**

Scenarios	
1	2021 Base Year
2	2027 Forecast Year
3	2027 Forecast Year + Proposed Development
4	2031 Forecast Year
5	2031 Forecast Year + Proposed Development

To understand the impact of the development, key junctions are identified and modelled to reflect their existing operating conditions. This requires the existing 'base year' traffic flows through these junctions to be recorded. Once obtained, the 'base year' traffic flows are factored up to the appropriate forecast years, a process whereby growth is applied, to establish the forecast traffic conditions. Development traffic is then be added to the forecast year traffic flows to create a 'with development' scenario. These traffic flows are then input into standalone junction capacity models to allow for the comparison of junction performance in 'with' and 'without' development forecast year scenarios.

To establish the existing operational performance of the key junctions set out in **Table 12**, traffic surveys have been undertaken.

### *Turning Counts and Queue Lengths*

Turning count and queue length surveys were undertaken at key junctions in the local area on Wednesday 1<sup>st</sup> December 2021. The junction surveys collected data in 15-minute intervals for the following time periods:

- AM Peak Period                    06:00 – 09:00
- Inter Peak Period                12:30 – 14:30
- PM Peak Period                    15:30 – 18:30

The junctions surveyed are as follows:

- Sanders Road / Don White Road priority junction
- A510 Northen Way / Stewarts Road roundabout
- A510 Stewarts Road / Sanders Road / Rixon Road / Nest Lane roundabout
- A509 / Wellingborough Road / A510 Northen Way / A5193 / A509 Niort Way roundabout
- Rixon Road / Finedon Road mini roundabout
- Finedon Road / Meadow Close priority junction

### *Link Counts*

Two link counts were undertaken on the A510 using ATCs. Traffic flows and speed data in 1-hour intervals were recorded over a 7-day period from Wednesday 1st December to Tuesday 7th December 2021. The locations of the ATCs were as follows:

- A510 Northen Way
- A510 Rixon Road

A plan showing the locations of these surveys in the context of the local highway network has been included as **Appendix N**.

## 6.2. Traffic Flow Spreadsheets

The traffic flows for the key junctions identified in **Table 12** for each scenario presented in **Table 15** are provided in **Appendix O**.

When selecting the peak hour periods to assess, the trip generation data identified two AM and an inter peak hour for assessment. When defining the PM peak hour, review of the traffic count data for the junctions surveyed around Wellingborough has shown that the PM peak hour falls between 16:30 – 17:30. The Wellingborough trip generation highlighted the PM ‘development’ peak to fall within the 16:00 – 17:00 time period. To ensure a robust assessment is undertaken for the PM peak hour the PM ‘highway’ peak hour of 16:30 – 17:30 has been assessed with the development traffic for the 16:00 – 17:00 time period.

The assessment of the local highway network has been undertaken for the following the peak hours:

- AM ‘development peak’ 06:00 – 07:00
- AM ‘highway peak’ 08:00 – 09:00
- Inter peak 13:00 – 14:00
- PM peak hour 16:30 – 17:30

## 6.3. Traffic Growth

Traffic growth has been extracted from the TEMPro program (version 7.2), the industry standard tool for estimating traffic growth. TEMPro is a data browser that extracts results from The National Trip End Model (NTEM). The NTEM forecasts the growth in trip origin-destinations up to 2051 for use in transport modelling. The forecasts consider national projections of population, employment, housing, car ownership and trip rates.

Traffic growth factors have been extracted from TEMPro 7.2 using the following criteria:

- Trip ends by time period
- MSOA Wellingborough 002
- Forecast Period: 2021 – 2027 & 2021 – 2031
- Transport Mode: Car Driver
- Trip End Type: Origin/Destination

The traffic growth used in this assessment are presented below in **Table 16**.

**Table 16: Traffic Growth Factors (TEMPro 7.2)**

Growth Period	2021 - 2027	2021 - 2031
Weekday Off Peak (00:00 – 06:59 & 1900 – 23:59)	1.0427	1.0683
Weekday AM Peak Period (07:00 – 09:59)	1.0458	1.0731
Weekday Inter Peak Period (10:00 – 15:59)	1.0560	1.0909
Weekday PM Peak Period (16:00 – 18:59)	1.0451	1.0723

These traffic growth factors have been applied to the observed junction turning count data to calculate the forecast assessment year background traffic flows.

#### 6.4. Junction Capacity Assessments

To ensure that the junctions identified above will operate within capacity when the development is fully built out and operational the TRL programme 'Junctions 9' has been used. This program is recognised as industry standard traffic modelling software used for assessing the capacity of priority-controlled give-way junctions and roundabouts.

A Ratio of Flow to Capacity (RFC) value of 0.85 (85%) or less typically demonstrates that a junction arm or turning movement is operating "within capacity" and is therefore unlikely to experience regular queuing. RFC values between 0.85 and 1.00 represent variable operation, meaning that the junction is likely to experience intermittent periods of congestion and increased queue lengths but still operates within theoretical capacity. RFC values greater than 1.00 (100%) represent overloaded conditions i.e. the junction operates "over capacity". When conditions reach this level of congestion queues are noted to build over time as vehicles are arriving at the junction at a greater rate than they are departing.

The software also generates predicted maximum queue length and driver delay (in seconds or minutes) on each arm of the junction during the time period analysed. These estimated queue lengths have been validated against queue lengths recorded in the 2021 base year. This comparison ensures that the junction models reflect the existing junction operation and establish an accurate baseline for the assessment of future traffic flows.

Junctions 9 model geometric parameter inputs have been entered based on measurements taken from a combination of Ordnance Survey and Aerial imagery from Getmapping. This methodology was chosen to enable accurate assessment of the white lining of the roads whilst also being able to scale against the accurate OS map.

The results of the capacity testing are shown below.

**Sanders Road / Don White Road priority junction**

The results of the capacity testing of the Sanders Road / Don White Road priority junction are shown below in **Table 17** with the full Junctions 9 output available in **Appendix P**.

**Table 17: Sanders Road / Don White Road priority junction Junctions 9 Results**

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
<b>2021</b>																				
Stream B-C		0.0	0.00	0.00	A		0.0	7.15	0.02	A		0.0	5.65	0.03	A		0.0	5.53	0.01	A
Stream B-A	D1	0.0	0.00	0.00	A	D2	0.0	9.06	0.02	A	D3	0.0	7.05	0.02	A	D4	0.1	8.97	0.06	A
Stream C-AB		0.0	5.92	0.02	A		0.0	7.06	0.03	A		0.0	5.82	0.02	A		0.0	5.61	0.01	A
<b>2027</b>																				
Stream B-C		0.0	0.00	0.00	A		0.0	7.17	0.02	A		0.0	5.69	0.03	A		0.0	5.55	0.01	A
Stream B-A	D5	0.0	0.00	0.00	A	D6	0.0	9.11	0.02	A	D7	0.0	7.08	0.02	A	D8	0.1	7.01	0.06	A
Stream C-AB		0.0	5.92	0.02	A		0.0	7.08	0.03	A		0.0	5.83	0.02	A		0.0	5.60	0.01	A
<b>2027 + Dev</b>																				
Stream B-C		0.0	9.20	0.02	A		0.0	8.75	0.03	A		0.0	6.49	0.03	A		0.0	5.61	0.01	A
Stream B-A	D9	0.1	13.30	0.08	B	D10	0.1	12.97	0.09	B	D11	0.1	12.23	0.11	B	D12	0.1	8.36	0.07	A
Stream C-AB		0.1	8.95	0.05	A		0.1	7.29	0.04	A		0.1	8.41	0.06	A		0.0	8.34	0.01	A
<b>2031</b>																				
Stream B-C		0.0	0.00	0.00	A		0.0	7.21	0.02	A		0.0	5.69	0.03	A		0.0	5.54	0.02	A
Stream B-A	D13	0.0	0.00	0.00	A	D14	0.0	9.14	0.02	A	D15	0.0	7.10	0.02	A	D16	0.1	7.04	0.06	A
Stream C-AB		0.0	5.92	0.02	A		0.0	7.07	0.03	A		0.0	5.82	0.02	A		0.0	5.59	0.01	A
<b>2031 + Dev</b>																				
Stream B-C		0.0	9.13	0.02	A		0.0	8.80	0.03	A		0.0	6.39	0.03	A		0.0	5.69	0.03	A
Stream B-A	D17	0.1	13.24	0.08	B	D18	0.1	13.08	0.09	B	D19	0.1	12.13	0.11	B	D20	0.1	8.74	0.11	A
Stream C-AB		0.0	6.11	0.04	A		0.1	7.88	0.05	A		0.1	8.31	0.06	A		0.0	8.39	0.03	A

Note: Stream A = Sanders Road North, Stream B = Don White Road, Stream C = Sanders Road South

The Junctions 9 capacity testing results show that the Sanders Road / Don White Road priority will operate within capacity in both the forecast years, with and without the proposed development, in all four peak hour periods assessed.

**A510 Northen Way / Stewarts Road roundabout**

The results of the capacity testing of the A510 Northen Way / Stewarts Road roundabout are shown below in **Table 18** with the full Junctions 9 output available in **Appendix Q**.

**Table 18: A510 Northen Way / Stewarts Road roundabout Junctions 9 Results**

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
<b>2021</b>																				
1 - Stewarts Road (S)	D1	0.2	2.54	0.13	A	D2	0.4	3.07	0.27	A	D3	0.3	3.25	0.24	A	D4	0.4	3.23	0.30	A
2 - A510 Northen Way		0.3	3.13	0.23	A		0.8	4.60	0.44	A		0.4	3.80	0.26	A		0.3	3.13	0.21	A
3 - Stewarts Road (N)		0.1	2.66	0.05	A		0.1	2.98	0.10	A		0.2	2.83	0.14	A		0.4	2.91	0.30	A
<b>2027</b>																				
1 - Stewarts Road (S)	D5	0.2	2.56	0.14	A	D6	0.4	3.13	0.28	A	D7	0.3	3.32	0.25	A	D8	0.5	3.32	0.32	A
2 - A510 Northen Way		0.3	3.18	0.24	A		0.9	4.79	0.46	A		0.4	3.90	0.30	A		0.3	3.18	0.22	A
3 - Stewarts Road (N)		0.1	2.66	0.06	A		0.1	3.02	0.10	A		0.2	2.87	0.15	A		0.5	2.98	0.32	A
<b>2027 + Dev</b>																				
1 - Stewarts Road (S)	D9	0.2	2.60	0.14	A	D10	0.4	3.19	0.29	A	D11	0.3	3.41	0.25	A	D12	0.5	3.37	0.32	A
2 - A510 Northen Way		0.4	3.36	0.26	A		1.0	5.16	0.49	A		0.5	4.06	0.32	A		0.3	3.27	0.23	A
3 - Stewarts Road (N)		0.1	3.04	0.08	A		0.1	3.33	0.13	A		0.2	3.18	0.18	A		0.5	3.07	0.33	A
<b>2031</b>																				
1 - Stewarts Road (S)	D13	0.2	2.57	0.14	A	D14	0.4	3.17	0.29	A	D15	0.3	3.37	0.26	A	D16	0.5	3.36	0.33	A
2 - A510 Northen Way		0.3	3.21	0.25	A		0.9	4.92	0.48	A		0.5	3.97	0.31	A		0.3	3.20	0.23	A
3 - Stewarts Road (N)		0.1	2.69	0.06	A		0.1	3.04	0.11	A		0.2	2.91	0.15	A		0.5	3.03	0.33	A
<b>2031 + Dev</b>																				
1 - Stewarts Road (S)	D17	0.2	2.62	0.15	A	D18	0.4	3.23	0.29	A	D19	0.4	3.46	0.26	A	D20	0.5	3.42	0.33	A
2 - A510 Northen Way		0.4	3.42	0.27	A		1.0	5.31	0.50	A		0.5	4.15	0.33	A		0.3	3.29	0.23	A
3 - Stewarts Road (N)		0.1	3.05	0.08	A		0.1	3.34	0.13	A		0.2	3.20	0.18	A		0.5	3.12	0.34	A

The Junctions 9 capacity testing results show that the A510 Northen Way / Stewarts Road roundabout will operate within capacity in both the forecast years, with and without the proposed development, in all four peak hour periods assessed.



**A510 Stewarts Road / Sanders Road / Rixon Road / Nest Lane roundabout**

The results of the capacity testing of the A510 Stewarts Road / Sanders Road / Rixon Road / Nest Lane roundabout are shown below in **Table 19** with the full Junctions 9 output available in **Appendix R**.

**Table 19: A510 Stewarts Road / Sanders Road / Rixon Road / Nest Lane roundabout Junctions 9 Results**

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
<b>2021</b>																				
1 - Sanders Road	D1	0.0	2.79	0.04	A	D2	0.1	3.12	0.09	A	D3	0.1	3.15	0.12	A	D4	0.3	3.10	0.24	A
2 - Rixon Road		0.3	4.21	0.24	A		1.1	7.05	0.53	A		0.6	5.90	0.37	A		0.6	5.69	0.39	A
3 - Nest Lane		0.1	2.49	0.09	A		0.2	3.04	0.13	A		0.1	2.72	0.10	A		0.1	2.54	0.07	A
4 - Stewarts Road		0.2	3.69	0.15	A		0.6	5.73	0.39	A		0.5	5.15	0.33	A		0.7	4.88	0.41	A
<b>2027</b>																				
1 - Sanders Road	D5	0.0	2.81	0.05	A	D6	0.1	3.15	0.10	A	D7	0.2	3.20	0.13	A	D8	0.3	3.19	0.26	A
2 - Rixon Road		0.3	4.28	0.25	A		1.2	7.47	0.56	A		0.6	6.13	0.39	A		0.7	5.92	0.41	A
3 - Nest Lane		0.1	2.52	0.10	A		0.2	3.11	0.14	A		0.1	2.77	0.11	A		0.1	2.57	0.08	A
4 - Stewarts Road		0.2	3.74	0.16	A		0.7	5.96	0.41	A		0.5	5.33	0.35	A		0.7	5.05	0.43	A
<b>2027 + Dev</b>																				
1 - Sanders Road	D9	0.1	2.94	0.05	A	D10	0.1	3.22	0.10	A	D11	0.2	3.20	0.13	A	D12	0.4	3.21	0.26	A
2 - Rixon Road		0.4	4.40	0.27	A		1.3	7.64	0.56	A		0.7	6.41	0.40	A		0.7	6.10	0.42	A
3 - Nest Lane		0.1	2.54	0.10	A		0.2	3.13	0.14	A		0.1	2.79	0.11	A		0.1	2.58	0.08	A
4 - Stewarts Road		0.2	3.77	0.16	A		0.7	6.00	0.41	A		0.5	5.40	0.36	A		0.7	5.09	0.43	A
<b>2031</b>																				
1 - Sanders Road	D13	0.0	2.81	0.05	A	D14	0.1	3.18	0.10	A	D15	0.2	3.23	0.14	A	D16	0.4	3.24	0.27	A
2 - Rixon Road		0.4	4.33	0.26	A		1.3	7.75	0.57	A		0.7	6.29	0.40	A		0.7	6.05	0.42	A
3 - Nest Lane		0.1	2.53	0.10	A		0.2	3.15	0.15	A		0.1	2.80	0.11	A		0.1	2.59	0.08	A
4 - Stewarts Road		0.2	3.77	0.17	A		0.7	6.10	0.42	A		0.6	5.45	0.37	A		0.8	5.15	0.44	A
<b>2031 + Dev</b>																				
1 - Sanders Road	D17	0.1	2.94	0.05	A	D18	0.1	3.24	0.10	A	D19	0.2	3.23	0.14	A	D20	0.4	3.26	0.27	A
2 - Rixon Road		0.4	4.44	0.27	A		1.4	7.93	0.58	A		0.7	6.60	0.42	A		0.8	6.26	0.44	A
3 - Nest Lane		0.1	2.56	0.10	A		0.2	3.17	0.15	A		0.1	2.83	0.11	A		0.1	2.60	0.08	A
4 - Stewarts Road		0.2	3.80	0.17	A		0.7	6.14	0.42	A		0.6	5.53	0.37	A		0.8	5.20	0.44	A

The Junctions 9 capacity testing results show that the A510 Stewarts Road / Sanders Road / Rixon Road / Nest Lane roundabout will operate within capacity in both the forecast years, with and without the proposed development, in all four peak hour periods assessed.

**A509 / Wellingborough Road / A510 Northern Way / A5193 / A509 Niort Way roundabout**

The results of the capacity testing of the A509 / Wellingborough Road / A510 Northern Way / A5193 / A509 Niort Way roundabout are shown below in **Table 20** with the full junctions 9 output available in **Appendix S**.

**Table 20: A509 / Wellingborough Road / A510 Northern Way / A5193 / A509 Niort Way roundabout Junctions 9 Results**

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
<b>2021</b>																				
1 - A510 Northern Way	D1	0.2	3.37	0.16	A	D2	1.0	7.18	0.50	A	D3	0.6	4.86	0.38	A	D4	1.3	6.57	0.56	A
2 - A5193		0.3	3.65	0.21	A		1.1	7.70	0.51	A		0.6	5.18	0.37	A		1.0	7.32	0.51	A
3 - A509 Niort Way		0.4	4.09	0.29	A		1.8	9.13	0.64	A		1.2	7.10	0.54	A		1.8	8.93	0.65	A
4 - A509		0.6	4.12	0.39	A		3.9	13.84	0.80	B		1.1	5.82	0.52	A		1.7	7.06	0.64	A
5 - Wellingborough Road		0.0	4.14	0.05	A		0.9	12.82	0.46	B		0.1	5.19	0.10	A		0.1	5.82	0.10	A
<b>2027</b>																				
1 - A510 Northern Way	D5	0.2	3.44	0.17	A	D6	1.2	7.94	0.54	A	D7	0.7	5.16	0.40	A	D8	1.5	7.27	0.60	A
2 - A5193		0.3	3.75	0.23	A		1.2	8.65	0.55	A		0.7	5.58	0.40	A		1.2	8.16	0.55	A
3 - A509 Niort Way		0.4	4.20	0.30	A		2.1	10.38	0.68	B		1.4	7.87	0.58	A		2.2	10.33	0.69	B
4 - A509		0.7	4.26	0.40	A		5.2	17.66	0.84	C		1.2	6.30	0.55	A		2.0	7.79	0.67	A
5 - Wellingborough Road		0.1	4.24	0.05	A		1.1	15.28	0.52	C		0.1	5.45	0.11	A		0.1	6.11	0.11	A
<b>2027 + Dev</b>																				
1 - A510 Northern Way	D9	0.2	3.75	0.19	A	D10	1.3	8.63	0.57	A	D11	0.8	5.67	0.44	A	D12	1.5	7.66	0.62	A
2 - A5193		0.3	3.84	0.23	A		1.3	9.07	0.57	A		0.7	5.83	0.41	A		1.3	8.38	0.56	A
3 - A509 Niort Way		0.5	4.35	0.32	A		2.3	11.36	0.70	B		1.5	8.33	0.60	A		2.3	10.69	0.70	B
4 - A509		0.7	4.40	0.42	A		5.1	20.71	0.86	C		1.3	6.53	0.56	A		2.1	7.97	0.67	A
5 - Wellingborough Road		0.1	4.32	0.05	A		1.2	16.75	0.54	C		0.1	5.56	0.11	A		0.1	6.18	0.11	A
<b>2031</b>																				
1 - A510 Northern Way	D13	0.2	3.48	0.17	A	D14	1.3	8.47	0.56	A	D15	0.7	5.37	0.42	A	D16	1.5	7.77	0.62	A
2 - A5193		0.3	3.81	0.23	A		1.4	9.39	0.58	A		0.7	5.87	0.42	A		1.3	8.76	0.57	A
3 - A509 Niort Way		0.5	4.28	0.31	A		2.3	11.34	0.70	B		1.5	8.40	0.61	A		2.5	11.44	0.72	B
4 - A509		0.7	4.35	0.41	A		5.4	21.34	0.87	C		1.3	6.62	0.57	A		2.2	8.30	0.69	A
5 - Wellingborough Road		0.1	4.30	0.05	A		1.2	17.41	0.56	C		0.1	5.63	0.12	A		0.1	6.30	0.11	A
<b>2031 + Dev</b>																				
1 - A510 Northern Way	D17	0.2	3.79	0.20	A	D18	1.4	9.29	0.59	A	D19	0.8	5.93	0.46	A	D20	1.7	8.19	0.64	A
2 - A5193		0.3	3.90	0.24	A		1.4	9.88	0.59	A		0.8	6.14	0.44	A		1.4	9.01	0.58	A
3 - A509 Niort Way		0.5	4.43	0.33	A		2.6	12.50	0.72	B		1.6	8.96	0.62	A		2.6	11.89	0.73	B
4 - A509		0.7	4.50	0.43	A		7.7	25.63	0.89	D		1.4	6.90	0.59	A		2.3	8.53	0.69	A
5 - Wellingborough Road		0.1	4.38	0.05	A		1.4	19.24	0.58	C		0.1	5.76	0.12	A		0.1	6.37	0.11	A

The Junctions 9 capacity testing results show that the A509 / Wellingborough Road / A510 Northern Way / A5193 / A509 Niort Way roundabout will operate within capacity in both the forecast years, with and without the proposed development, in three of peak hour periods assessed. In the 08:00 - 09:00 AM peak hour the A509 North approach arm to the junction is operating near to capacity in the 2031 'without development' and both 'with development' and forecast year scenarios. The inclusion of development trips is seeing a further reduction in the RFC in both forecast years however, the queuing is only increasing by approximately 1 vehicle in both forecast years. On this basis the impact at the junction a cannot be considered significant.

**Rixon Road / Finedon Road mini roundabout**

The results of the capacity testing of the Rixon Road / Finedon Road mini roundabout are shown below in **Table 21** with the full Junctions 9 output available in **Appendix T**.

**Table 21: Rixon Road / Finedon Road mini roundabout Junctions 9 Results**

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
<b>2021</b>																				
1 - Finedon Road (NE)		0.5	5.77	0.35	A		16.9	69.98	0.98	F		1.3	9.34	0.57	A		1.7	10.87	0.54	E
2 - Finedon Road (SW)	D1	0.4	6.19	0.29	A	D2	2.4	19.04	0.71	C	D3	1.0	9.19	0.48	A	D4	6.3	43.32	0.91	E
3 - Rixon Road		0.3	0.07	0.22	A		1.1	11.73	0.62	B		1.0	10.79	0.50	B		01.0	302.00	1.22	F

The Junctions 9 capacity testing results show that the Rixon Road / Finedon Road mini roundabout exceeds capacity in the base year for the AM 08:00 – 09:00 and PM 16:30 – 17:30 peak hours. The capacity issues are primarily on the Finedon Road north-eastern arm in the AM peak hour and on the Rixon Road arm in the PM peak hour.

At the time of the traffic surveys, there was a road closure on the B571 Irthlingborough Road. This would have resulted in vehicle movements between Wellingborough and Irthlingborough using the diversion route signposted along the A510 Finedon Road. It should be considered that the 2021 base year model may be assessing a higher traffic demand along Finedon Road that is typical.

Discussions with Northamptonshire Highways have confirmed that a new scheme to improve the operational performance of the roundabout has received technical approval. The scheme for the Finedon Road / Rixon Road mini roundabout includes minor widening on the Rixon Road approach to accommodate a second lane, the effective width of the A5128 Finedon Road approach being reduced with the introduction of white lining and new a pedestrian refuge introduced on the A510 Finedon Road which reduces the current two lanes arrangement at the stop line to one lane. In addition the centre of the roundabout is to be relocated approximately 4m to the northwest of its existing location. The Rixon Road / Finedon Road mini roundabout improvement scheme is shown on the Woods Hardwick drawing “17411-831 E” and has been included as **Appendix U**.

It was agreed with Northamptonshire Highways that the scheme would be implemented before 2027. On this basis the 2027 and 2031 forecast year scenarios, both ‘with’ and ‘without’, have included this improvement scheme. The results of the capacity testing of the Rixon Road / Finedon Road mini roundabout improvement scheme are shown below in **Table 22** with the full Junctions 9 output available in **Appendix V**.

**Table 22 : Rixon Road / Finedon Road mini roundabout Woods Hardwick improvement scheme Junctions 9 Results**

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
<b>2027</b>																				
1 - Finedon Road (NE)		0.5	5.26	0.34	A		12.3	49.96	0.95	E		1.3	8.86	0.56	A		1.6	9.98	0.63	A
2 - Finedon Road (SW)	D5	0.4	6.11	0.30	A	D6	2.7	20.58	0.74	C	D7	1.0	9.34	0.51	A	D8	10.0	49.61	0.93	E
3 - Rixon Road		0.2	3.95	0.16	A		0.6	6.05	0.37	A		0.6	5.80	0.36	A		3.7	21.73	0.80	C
<b>2027 + Dev</b>																				
1 - Finedon Road (NE)		0.5	5.42	0.36	A		13.1	52.62	0.95	F		1.4	9.36	0.58	A		1.8	10.49	0.64	B
2 - Finedon Road (SW)	D9	0.4	6.22	0.30	A	D10	2.7	21.11	0.74	C	D11	1.1	9.64	0.52	A	D12	11.1	55.05	0.94	F
3 - Rixon Road		0.2	4.09	0.17	A		0.6	6.14	0.38	A		0.6	5.81	0.36	A		3.9	22.30	0.81	C
<b>2031</b>																				
1 - Finedon Road (NE)		0.5	5.34	0.35	A		16.6	64.19	0.98	F		1.4	9.30	0.58	A		1.8	10.55	0.65	B
2 - Finedon Road (SW)	D13	0.4	6.22	0.30	A	D14	3.0	22.88	0.76	C	D15	1.1	9.83	0.53	A	D16	13.4	63.87	0.96	F
3 - Rixon Road		0.2	3.98	0.17	A		0.6	6.20	0.38	A		0.6	5.99	0.38	A		4.5	25.54	0.83	D
<b>2031 + Dev</b>																				
1 - Finedon Road (NE)		0.6	5.51	0.36	A		17.5	67.01	0.98	F		1.5	9.85	0.60	A		1.9	11.00	0.66	B
2 - Finedon Road (SW)	D17	0.4	6.33	0.31	A	D18	3.1	23.39	0.77	C	D19	1.2	10.17	0.54	B	D20	14.7	69.39	0.97	F
3 - Rixon Road		0.2	4.12	0.18	A		0.6	6.30	0.39	A		0.6	6.00	0.38	A		4.6	26.23	0.84	D

The Junctions 9 capacity testing results for the forecast scenarios show that the Rixon Road / Finedon Road mini roundabout improvement scheme will operate within capacity in the 06:00 – 07:00 and 13:00 – 14:00 time periods.

The junction will operate near to capacity in both the AM 08:00 – 09:00 and PM 16:30 – 17:30 peak hours. For the AM peak hour the A510 Finedon Road arm will operate near to capacity although a comparison of the 2027 and 2031 ‘with’ and ‘without’ development forecast scenarios demonstrates that vehicle queuing will only increase by approximately one vehicle in both forecast scenarios as a consequence of the proposed development.

For the PM peak hour the A5128 Finedon Road arm will operate near to capacity. A comparison of the 2027 and 2031 ‘with’ and ‘without’ development forecast scenarios demonstrates that vehicle queuing will only increase by approximately one vehicle in both forecast scenarios as a consequence of the proposed development.

**Finedon Road / Meadow Close priority junction**

The results of the capacity testing of the Finedon Road / Meadow Close priority junction are shown below in **Table 23** with the full Junctions 9 output available in **Appendix W**.

**Table 23: Finedon Road / Meadow Close priority junction Junctions 9 Results**

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
<b>2021</b>																				
Stream B-C		0.0	0.00	0.00	A		0.0	0.00	0.00	A		0.0	7.46	0.02	A		0.1	8.94	0.09	A
Stream B-A	D1	0.0	10.59	0.02	B	D2	0.0	10.59	0.02	B	D3	0.1	12.56	0.09	B	D4	0.3	23.83	0.22	C
Stream C-AB		0.0	5.53	0.02	A		0.0	5.53	0.02	A		0.0	7.29	0.03	A		0.0	11.80	0.01	B
<b>2027</b>																				
Stream B-C		0.0	0.00	0.00	A		0.0	6.03	0.03	A		0.0	7.62	0.02	A		0.1	9.46	0.10	A
Stream B-A	D5	0.0	10.77	0.02	B	D6	0.1	17.94	0.12	C	D7	0.1	13.31	0.11	B	D8	0.3	27.87	0.26	D
Stream C-AB		0.0	5.57	0.02	A		0.0	6.19	0.04	A		0.0	7.44	0.03	A		0.0	12.22	0.01	B
<b>2027 + Dev</b>																				
Stream B-C		0.0	0.00	0.00	A		0.0	6.11	0.03	A		0.0	7.81	0.02	A		0.1	9.84	0.11	A
Stream B-A	D9	0.0	12.02	0.04	B	D10	0.2	19.92	0.15	C	D11	0.2	16.73	0.16	C	D12	0.5	34.18	0.33	D
Stream C-AB		0.0	5.59	0.02	A		0.0	6.41	0.04	A		0.1	9.62	0.07	A		0.0	15.49	0.03	C
<b>2031</b>																				
Stream B-C		0.0	0.00	0.00	A		0.0	6.10	0.03	A		0.0	7.71	0.02	A		0.1	9.81	0.11	A
Stream B-A	D13	0.0	10.91	0.03	B	D14	0.1	18.91	0.13	C	D15	0.1	13.77	0.11	B	D16	0.4	31.00	0.29	D
Stream C-AB		0.0	5.59	0.02	A		0.0	6.26	0.04	A		0.0	7.53	0.03	A		0.0	12.49	0.01	B
<b>2031 + Dev</b>																				
Stream B-C		0.0	0.00	0.00	A		0.0	6.19	0.03	A		0.0	7.92	0.02	A		0.1	10.26	0.11	B
Stream B-A	D17	0.0	12.19	0.04	B	D18	0.2	20.96	0.16	C	D19	0.2	17.30	0.17	C	D20	0.5	38.62	0.36	E
Stream C-AB		0.0	5.62	0.02	A		0.0	6.47	0.05	A		0.1	9.67	0.07	A		0.0	15.84	0.03	C

Note: Stream A = Finedon Road South, Stream B = Meadow Close, Stream C = Finedon Road North

The Junctions 9 capacity testing results show that the Finedon Road / Meadow Close priority junction will operate within capacity in both the forecast years, with and without the proposed development, in all four peak hour periods assessed.

## 7.0 Sensitivity Test

Northamptonshire Council recommend that a factor is applied to the surveyed traffic flows and development trips given that the shift to people working from home is not a guaranteed phenomenon. Using this methodology, a sensitivity test on the six junctions assessed has been undertaken with the background traffic flows and development trips factored up as follows:

- Developments trips increased by 5%; and
- Background traffic flows increased by 10%.

The results for this sensitivity test have been provided below with each of the six junctions assessed for the factored 2021 Base and 2027 Forecast Year 'with and without development' scenarios.

**Sanders Road / Don White Road priority junction**

The results of the capacity testing of the Sanders Road / Don White Road priority junction using the factored-up data are shown below in **Table 24** with the full Junctions 9 output available in **Appendix X**.

**Table 24: Sanders Road / Don White Road priority junction sensitivity test Junctions 9 results**

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
<b>2021</b>																				
Stream B-C		0.0	0.00	0.00	A		0.0	7.21	0.02	A		0.0	5.69	0.03	A		0.0	5.56	0.02	A
Stream B-A	D1	0.0	0.00	0.00	A	D2	0.0	9.16	0.02	A	D3	0.0	7.12	0.02	A	D4	0.1	7.07	0.06	A
Stream C-AB		0.0	5.92	0.02	A		0.0	7.07	0.03	A		0.0	5.82	0.02	A		0.0	5.59	0.01	A
<b>2027</b>																				
Stream B-C		0.0	0.00	0.00	A		0.0	7.23	0.02	A		0.0	5.70	0.03	A		0.0	5.58	0.02	A
Stream B-A	D5	0.0	0.00	0.00	A	D6	0.0	9.20	0.02	A	D7	0.0	7.15	0.02	A	D8	0.1	7.10	0.07	A
Stream C-AB		0.0	5.92	0.02	A		0.0	7.10	0.03	A		0.0	5.82	0.02	A		0.0	5.57	0.01	A
<b>2027 + Dev</b>																				
Stream B-C		0.0	9.14	0.02	A		0.0	8.35	0.03	A		0.0	6.43	0.04	A		0.0	5.72	0.03	A
Stream B-A	D9	0.1	13.35	0.08	B	D10	0.1	12.34	0.09	B	D11	0.1	12.17	0.12	B	D12	0.1	8.51	0.11	A
Stream C-AB		0.1	6.95	0.06	A		0.1	6.91	0.05	A		0.1	8.30	0.06	A		0.0	8.29	0.03	A

Note: Stream A = Sanders Road North, Stream B = Don White Road, Stream C = Sanders Road South

The Junctions 9 capacity testing results show that the Sanders Road / Don White Road priority will operate within capacity in the forecast year, with and without the proposed development, in all four peak hour periods assessed when using the sensitivity test.

**A510 Northen Way / Stewarts Road roundabout**

The results of the capacity testing of the A510 Northen Way / Stewarts Road roundabout using the factored-up data are shown below in **Table 25** with the full Junctions 9 output available in **Appendix Y**.

**Table 25: A510 Northen Way / Stewarts Road roundabout sensitivity test Junctions 9 Results**

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
<b>2021</b>																				
1 - Stewarts Road (S)		0.2	2.58	0.15	A		0.4	3.20	0.30	A		0.4	3.36	0.26	A		0.5	3.44	0.34	A
2 - A510 Northen Way	D1	0.3	3.24	0.25	A	D2	1.0	5.05	0.49	A	D3	0.5	3.98	0.31	A	D4	0.3	3.23	0.23	A
3 - Stewarts Road (N)		0.1	2.70	0.06	A		0.1	3.07	0.11	A		0.2	2.91	0.15	A		0.5	3.08	0.33	A
<b>2027</b>																				
1 - Stewarts Road (S)		0.2	2.61	0.15	A		0.5	3.28	0.31	A		0.4	3.46	0.28	A		0.5	3.56	0.35	A
2 - A510 Northen Way	D5	0.4	3.30	0.27	A	D6	1.0	5.30	0.51	A	D7	0.5	4.10	0.33	A	D8	0.3	3.28	0.24	A
3 - Stewarts Road (N)		0.1	2.71	0.06	A		0.1	3.11	0.12	A		0.2	2.97	0.16	A		0.5	3.17	0.35	A
<b>2027 + Dev</b>																				
1 - Stewarts Road (S)		0.2	2.66	0.16	A		0.5	3.35	0.32	A		0.4	3.56	0.28	A		0.6	3.62	0.36	A
2 - A510 Northen Way	D9	0.4	3.50	0.29	A	D10	1.2	5.78	0.54	A	D11	0.5	4.30	0.35	A	D12	0.3	3.38	0.25	A
3 - Stewarts Road (N)		0.1	3.08	0.09	A		0.2	3.42	0.14	A		0.2	3.26	0.20	A		0.6	3.29	0.37	A

The Junctions 9 capacity testing results show that the A510 Northen Way / Stewarts Road roundabout will operate within capacity in the forecast years, with and without the proposed development, in all four peak hour periods assessed using the sensitivity test.



**A510 Stewarts Road / Sanders Road / Rixon Road / Nest Lane roundabout**

The results of the capacity testing of the A510 Stewarts Road / Sanders Road / Rixon Road / Nest Lane roundabout using the factored-up data are shown below in **Table 26** with the full Junctions 9 output available in **Appendix Z**.

**Table 26: A510 Stewarts Road / Sanders Road / Rixon Road / Nest Lane roundabout sensitivity test Junctions 9 Results**

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
<b>2021</b>																				
1 - Sanders Road	D1	0.1	2.83	0.05	A	D2	0.1	3.20	0.10	A	D3	0.2	3.25	0.14	A	D4	0.4	3.30	0.28	A
2 - Rixon Road		0.4	4.38	0.27	A		1.4	8.05	0.59	A		0.7	6.35	0.41	A		0.8	6.22	0.44	A
3 - Nest Lane		0.1	2.55	0.10	A		0.2	3.20	0.15	A		0.1	2.81	0.11	A		0.1	2.61	0.08	A
4 - Stewarts Road		0.2	3.79	0.17	A		0.8	6.24	0.43	A		0.6	5.48	0.37	A		0.8	5.27	0.45	A
<b>2027</b>																				
1 - Sanders Road	D5	0.1	2.85	0.05	A	D6	0.1	3.25	0.11	A	D7	0.2	3.31	0.15	A	D8	0.4	3.41	0.29	A
2 - Rixon Road		0.4	4.45	0.28	A		1.6	8.66	0.62	A		0.8	6.66	0.43	A		0.9	6.54	0.46	A
3 - Nest Lane		0.1	2.58	0.11	A		0.2	3.29	0.16	A		0.1	2.87	0.12	A		0.1	2.64	0.09	A
4 - Stewarts Road		0.2	3.84	0.18	A		0.8	6.56	0.46	A		0.6	5.71	0.39	A		0.9	5.49	0.47	A
<b>2027 + Dev</b>																				
1 - Sanders Road	D9	0.1	2.99	0.06	A	D10	0.1	3.30	0.11	A	D11	0.2	3.29	0.15	A	D12	0.4	3.38	0.29	A
2 - Rixon Road		0.4	4.57	0.29	A		1.6	8.91	0.62	A		0.8	6.99	0.45	A		0.9	6.76	0.47	A
3 - Nest Lane		0.1	2.60	0.11	A		0.2	3.31	0.16	A		0.1	2.89	0.12	A		0.1	2.58	0.08	A
4 - Stewarts Road		0.2	3.88	0.18	A		0.8	6.62	0.46	A		0.6	5.79	0.39	A		0.9	5.39	0.47	A

The Junctions 9 capacity testing results show that the A510 Stewarts Road / Sanders Road / Rixon Road / Nest Lane roundabout will operate within capacity in both the forecast years, with and without the proposed development, in all four peak hour periods assessed using the sensitivity test.

**A509 / Wellingborough Road / A510 Northern Way / A5193 / A509 Niort Way roundabout**

The results of the capacity testing of the A509 / Wellingborough Road / A510 Northern Way / A5193 / A509 Niort Way roundabout using the factored-up data are shown below in **Table 27** with the full junctions 9 output available in **Appendix AA**.

**Table 27: A509 / Wellingborough Road / A510 Northern Way / A5193 / A509 Niort Way roundabout sensitivity test Junctions 9 Results**

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
<b>2021</b>																				
1 - A510 Northern Way	D1	0.2	3.52	0.18	A	D2	1.4	9.10	0.58	A	D3	0.7	5.35	0.42	A	D4	1.8	8.34	0.64	A
2 - A5193		0.3	3.88	0.24	A		1.5	10.22	0.61	B		0.7	5.84	0.43	A		1.5	9.50	0.60	A
3 - A509 Niort Way		0.5	4.36	0.32	A		2.6	12.49	0.73	B		1.6	8.59	0.61	A		2.9	12.83	0.74	B
4 - A509		0.7	4.44	0.43	A		8.0	26.48	0.89	D		1.4	6.73	0.58	A		2.4	8.90	0.71	A
5 - Wellingborough Road		0.1	4.36	0.05	A		1.5	20.09	0.60	C		0.1	5.56	0.09	A		0.1	6.53	0.12	A
<b>2027</b>																				
1 - A510 Northern Way	D5	0.2	3.59	0.18	A	D6	1.7	10.43	0.63	B	D7	0.8	5.67	0.45	A	D8	2.2	9.62	0.68	A
2 - A5193		0.3	4.00	0.25	A		1.9	12.14	0.66	B		0.9	6.43	0.46	A		1.8	11.13	0.65	B
3 - A509 Niort Way		0.5	4.49	0.34	A		3.3	15.21	0.77	C		1.8	9.50	0.64	A		3.8	16.36	0.80	C
4 - A509		0.8	4.62	0.45	A		14.6	46.71	0.94	E		1.6	7.31	0.61	A		2.9	10.21	0.74	B
5 - Wellingborough Road		0.1	4.48	0.06	A		2.1	27.62	0.68	D		0.1	5.82	0.10	A		0.1	6.91	0.13	A
<b>2027 + Dev</b>																				
1 - A510 Northern Way	D9	0.3	3.91	0.21	A	D10	1.9	11.66	0.66	B	D11	1.0	6.53	0.50	A	D12	2.4	10.38	0.70	B
2 - A5193		0.3	4.10	0.26	A		2.0	12.99	0.67	B		0.9	6.93	0.48	A		1.9	11.64	0.66	B
3 - A509 Niort Way		0.5	4.66	0.35	A		3.9	17.39	0.80	C		2.1	10.68	0.68	B		4.1	17.39	0.81	C
4 - A509		0.9	4.80	0.46	A		21.5	68.31	0.97	F		1.7	7.82	0.63	A		3.0	10.56	0.75	B
5 - Wellingborough Road		0.1	4.58	0.06	A		2.4	32.47	0.72	D		0.2	6.22	0.14	A		0.1	7.00	0.13	A

The Junctions 9 capacity testing results show that the A509 / Wellingborough Road / A510 Northern Way / A5193 / A509 Niort Way roundabout will operate within capacity in the forecast year, with and without the proposed development, in three of peak hour periods assessed. In the 08:00 – 09:00 AM peak hour the A509 North approach arm to the junction is operating near to capacity in the ‘without development’ forecast year scenario. The inclusion of development trips is seeing a further reduction in the RFC in the forecast year and the queuing is increasing by 7 vehicles in 2027 and vehicle delay only increases by 20 seconds. On this basis the impact at the junction a cannot be considered significant when using the sensitivity test.

**Rixon Road / Finedon Road mini roundabout**

The results of the capacity testing of the Rixon Road / Finedon Road mini roundabout using the factored-up data are shown below in **Table 28** with the full Junctions 9 output available in **Appendix AB**.

**Table 28: Rixon Road / Finedon Road mini roundabout sensitivity test Junctions 9 Results**

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
<b>2021</b>																				
1 - Finedon Road (NE)		0.6	6.13	0.39	A		50.5	169.58	1.09	F		1.7	11.63	0.64	B		2.2	12.96	0.70	B
2 - Finedon Road (SW)	D1	0.5	6.61	0.32	A	D2	3.5	26.28	0.79	D	D3	1.2	10.62	0.55	B	D4	24.6	107.41	1.02	F
3 - Rixon Road		0.3	6.35	0.25	A		1.4	14.10	0.59	B		1.3	12.69	0.56	B		123.1	780.92	1.41	F

The Junctions 9 capacity testing results show that the Rixon Road / Finedon Road mini roundabout exceeds capacity in the base year for the 08:00 – 09:00 AM highway peak hour and the 16:30 – 17:30 PM peak hour.

The results of the capacity testing of the Rixon Road / Finedon Road mini roundabout improvement scheme are shown below in **Table 29** with the full Junctions 9 output available in **Appendix AC**.

**Table 29 : Rixon Road / Finedon Road mini roundabout Woods Hardwick improvement scheme sensitivity test Junctions 9 Results**

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
<b>2027</b>																				
1 - Finedon Road (NE)		0.4	3.98	0.30	A		5.0	18.08	0.84	C		1.0	6.26	0.50	A		1.3	6.84	0.56	A
2 - Finedon Road (SW)	D5	0.5	6.53	0.33	A	D6	5.1	36.71	0.85	E	D7	1.3	10.92	0.57	B	D8	32.2	129.40	1.05	F
3 - Rixon Road		0.2	4.07	0.18	A		0.7	6.68	0.42	A		0.7	6.37	0.40	A		7.5	40.67	0.90	E
<b>2027 + Dev</b>																				
1 - Finedon Road (NE)		0.5	4.09	0.31	A		5.2	18.69	0.85	C		1.0	6.55	0.51	A		1.3	7.09	0.57	A
2 - Finedon Road (SW)	D9	0.5	6.68	0.34	A	D10	5.4	38.64	0.86	E	D11	1.4	11.34	0.58	B	D12	35.4	141.15	1.06	F
3 - Rixon Road		0.2	4.21	0.19	A		0.7	6.78	0.42	A		0.7	6.38	0.41	A		7.9	42.09	0.91	E

The Junctions 9 capacity testing results for the forecast scenarios show that the Rixon Road / Finedon Road mini roundabout improvement scheme will operate within capacity in the 06:00 – 07:00 and 13:00 – 14:00 time periods.

The junction will operate near to capacity in both the AM 08:00 – 09:00 and PM 16:30 – 17:30 peak hours. For the PM peak hour the A510 Finedon Road SW arm will operate over capacity although a comparison of the 2027 ‘with’ and ‘without’ development forecast scenario demonstrates that vehicle queuing will only increase by two vehicles in the 2027 forecast scenario as a consequence of the proposed development.

For the PM peak hour the A5128 Finedon Road SW arm will operate over capacity. A comparison of the 2027 ‘with’ and ‘without’ development forecast

scenarios demonstrates that vehicle queuing will only increase by three vehicles in the forecast scenario using the sensitivity test as a consequence of the proposed development. On this basis the impact at this junction is not considered severe.

**Finendon Road / Meadow Close priority junction**

The results of the capacity testing of the Finendon Road / Meadow Close priority junction using the factored-up data are shown below in **Table 30** with the full Junctions 9 output available in **Appendix AD**.

**Table 30: Finendon Road / Meadow Close priority junction sensitivity test Junctions 9 Results**

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
<b>2021</b>																				
Stream B-C		0.0	0.00	0.00	A		0.0	6.17	0.03	A		0.0	7.75	0.02	A		0.1	10.22	0.12	B
Stream B-A	D1	0.0	10.79	0.03	B	D2	0.2	19.87	0.14	C	D3	0.1	13.95	0.11	B	D4	0.4	34.97	0.32	D
Stream C-AB		0.0	5.61	0.02	A		0.0	6.32	0.04	A		0.0	7.55	0.03	A		0.0	12.78	0.01	B
<b>2027</b>																				
Stream B-C		0.0	0.00	0.00	A		0.0	6.32	0.03	A		0.0	7.94	0.02	A		0.1	11.14	0.13	B
Stream B-A	D5	0.0	10.98	0.03	B	D6	0.2	22.15	0.16	C	D7	0.1	14.90	0.12	B	D8	0.6	45.35	0.39	E
Stream C-AB		0.0	5.65	0.02	A		0.0	6.44	0.05	A		0.0	7.73	0.04	A		0.0	13.31	0.01	B
<b>2027 + Dev</b>																				
Stream B-C		0.0	0.00	0.00	A		0.0	6.42	0.03	A		0.0	6.16	0.02	A		0.2	12.14	0.14	B
Stream B-A	D9	0.0	12.46	0.04	B	D10	0.2	24.65	0.19	C	D11	0.2	18.91	0.19	C	D12	0.9	61.39	0.49	F
Stream C-AB		0.0	5.68	0.02	A		0.1	6.68	0.05	A		0.1	9.93	0.07	A		0.0	16.94	0.04	C

Note: Stream A = Finendon Road South, Stream B = Meadow Close, Stream C = Finendon Road North

The Junctions 9 capacity testing results show that the Finendon Road / Meadow Close priority junction will operate within capacity in the forecast year, with and without the proposed development, in all four peak hour periods assessed when using a sensitivity test.

## 8.0 Construction Traffic

Construction of the proposed development will require construction of the site itself as well as civil engineering works. The construction phase development will require deliveries of materials, plant and products, the majority of which will be transported by HGVs however, the construction phase is short term in the life cycle of the development and given the nature of the proposed development, HGV trips during this phase will be lower than during the sites operation. The construction phase will operate 07:00 – 17:30 on weekdays, and between 08:00 – 13:00 on Saturdays.

Light vehicles will also associate with the construction phases particularly with site staff travelling to site. Due to the working hours of construction sites, these trips are likely to made outside the typical highway peak hours.

The construction phase will be undertaken in accordance with health and safety legislation requirements and site practices. A construction management plan will be produced prior to the start of the site construction and will outline measures to protect the environment

A construction traffic routing plan will be implemented to ensure that routes to the site are known to HGV drivers. This will be produced following advice and guidance in the Northamptonshire Road Freight Strategy to ensure that inappropriate routes to site are not used, i.e. though residential areas. Road signs can be installed to guide delivery drivers along routes. A suitable, risk assessed vehicle route to the site is specified and communicated to all workers during the construction phase. Consideration will also be given to weight restrictions, low bridges, and cumulative impacts of construction on the local highway network.

Consideration will also be given to the timings and arrangements for deliveries and the loading and storing of materials and plant. This can ensure that deliveries are not made within the highway peaks wherever possible. If there is a school in the local vicinity of the route, then deliveries should be restricted to the hours of 09:30 – 15:00 on weekdays during term time.

## 9.0 Summary and Conclusions

Rodgers Leask Ltd (RLL) have been appointed by Covanta to provide transport planning advice, as well as produce relevant reports, in support of a planning application for an Aggregate processing plant on Land North of Don White Road, Wellingborough.

The proposed development will be operated by Day Group Ltd, a company experienced in the removal of IBA, as well as in the recycling and marketing of incinerator bottom ash aggregate (IBAA). The proposed development will be able to process 200,000 tonnes of Incinerator Bottom Ash (IBA) and 200,000 tonnes of primary aggregate for the blending process per annum.

The site is located within the established Finedon Road Industrial Estate. The proposed development will be accessed off of Don White Road, a private road that connects to the public highway via a simple priority junction with Sanders Road, the estate road of the Finedon Road Industrial Estate.

There are existing footways throughout the Finedon Road Industrial Estate which will be accessible from the proposed site access and local cycle infrastructure in proximity to the Industrial Estate. The nearest bus stops to the site are situated on Nest Lane and Finedon Road although the location of the site in the far north-eastern corner of the Industrial Estate means these bus stops are an approximate 20-minute walk from the site.

Personal injury accident (PIA) data on the local highway was obtained from Northamptonshire Highways. There was no clear correlations between any of the accidents and no accidents within the PIA records that suggest that there is a particular problem with the road network in the study area.

Trip generation in Wellingborough over an 18-hour period (05:00 to 23:00) has been provided.

The calculated vehicle trips from the development were distributed on the local highway network using 2011 Census data for light vehicles (employees) and on a first principle basis for OGV1 and OGV2 (deliveries) as both the locations of the material suppliers and aggregate customers is known.

As part of the highway impact assessment of the development once fully built out and operational, forecast years were defined as 2027, five years after the registration of the application (expected 2022) and 2031 at the request of North Northamptonshire Council.

Turning count and queue length surveys were undertaken at key junctions in the local area on Wednesday 1<sup>st</sup> December 2021. Peak hours for assessment were identified following review of the 2021 traffic surveys and development traffic peaks from the Wellingborough trip generation.

Following the assignment of development of trips on the local highway network, any junctions impacted by an additional 30 two-way trips during the peak hours as a result of this development were assessed in detail using the TRL programme 'Junctions 9'. The results of these capacity assessments identified that all junctions assessed with forecast year 'with' and 'without' development traffic flows would operate within theoretical capacity during all peak periods.

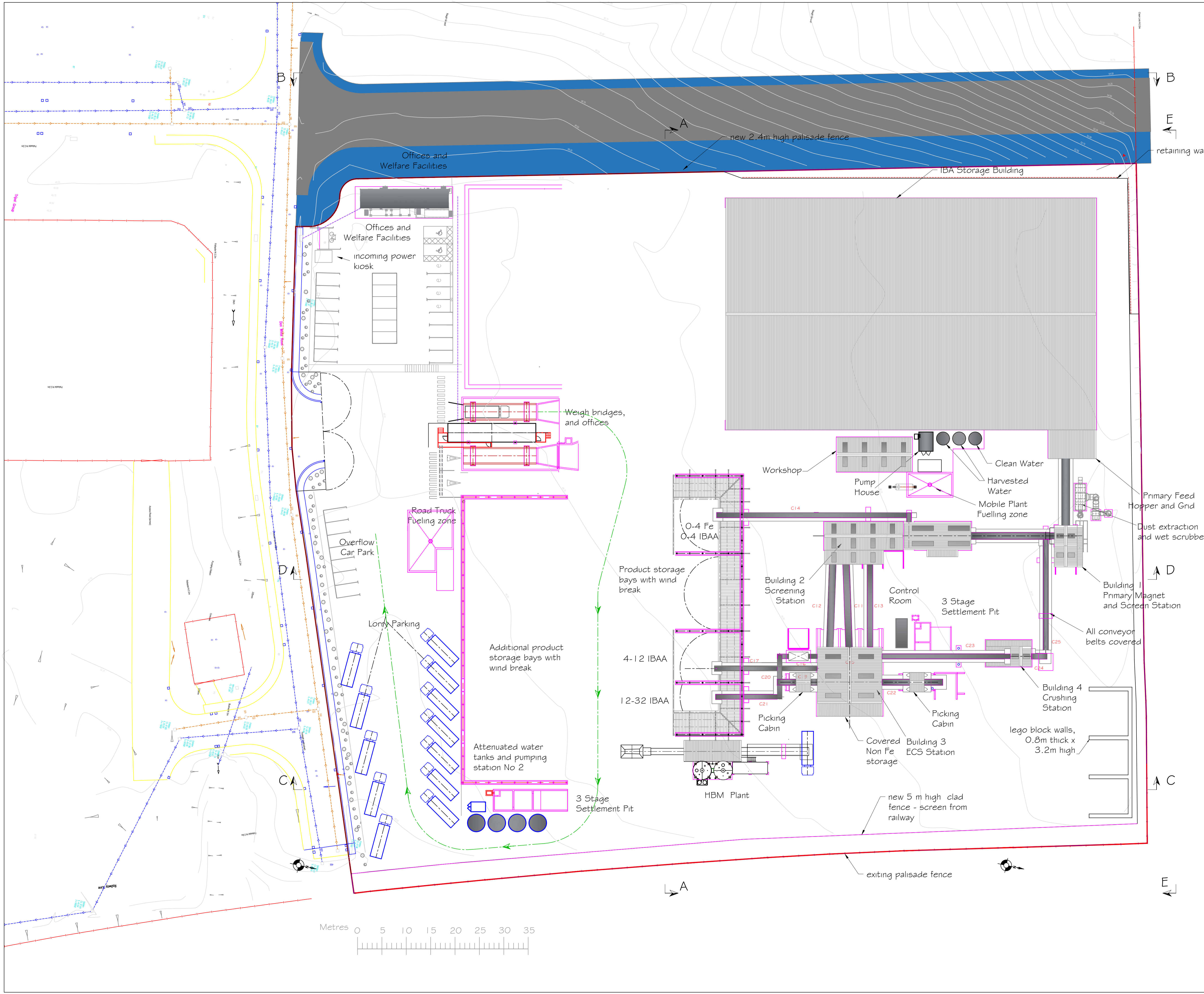
A sensitivity test was also undertaken for all six junctions at the request of NCC with a factors applied to both the surveyed and development traffic flows. This exercise demonstrated that the Rixon Road / Finedon Road mini roundabout will operate over capacity in 2027 however the impact on junction operation as a consequence of the development is not considered severe.

This TA has examined the transport impacts of the proposed development and identified the opportunities for alternative methods of travel to the site other than single occupancy private car. It can be concluded from this TA that the development when operational will not have a severe impact on the surrounding local highway network. There is therefore no reason in transport terms why the proposed development should not be permitted.

## **Appendix A - Site Boundary**



Refer to drawing WEO01-06 for view references.



7	28.03.22	Lego block walls 3.2m high added	snf
6	17.03.22	screen fence now 5m high	jwj
5	21.01.22	Translucent panels added	jwj
4	18.01.22	P2, T1 & T12 Civils updated	jwj
3	15.12.21	No Fe bays - P5 shortened by 2.4m - improved access to pole drums	jwj
2	16.09.21	0-4 conveyors combined; screening station adjusted	snf
1	05.08.21	HBM Plant relocated	snf
RevDate		Details	Drawn

Project:  
Proposed Wellingborough IBA Plant

Description:  
Plan of proposed plant and buildings

**DAY AGGREGATES**  
 Transport Avenue  
 Brentford  
 Middlesex  
 TW8 9HF  
 ©2021 Day Aggregates Ltd.

Date	Scale	Drawn
29.06.21	1:500	snf
Drawing No.	Rev	
WEO01-05	7	
Status	FOR INFORMATION	
Checked	Print	
JWJ	A2	

## Appendix B - Pre App Responses

**Town and Country Planning Act 1990 (As Amended)**  
**Local Highway Authority (LHA) Response**

<b>Application Reference</b>	NN/21/00051/SCO		
<b>Proposal</b>	Scoping opinion for aggregate processing plant		
<b>Location</b>	Land north of Don White Road, Wellingborough		
<b>Case Officer</b>	P Moor		
<b>Date Consulted</b>	15 October 2021	<b>Date Sent</b>	22 October 2021

In respect of the above planning application, the Local Highway Authority (LHA) has the following observations, comments and recommendations: -

1.0 Recommendations

1.1 The Environmental Impact Assessment must include a Transport Assessment to address the following requirements.

2.0 Observations

2.1 The ways giving access to the site of the application do not comprise highway maintainable until meeting the junction with Sanders Road.

2.2 It is appropriate for a Transport Assessment to be undertaken assessing the effect of the proposed development on the local highway network to the year 2030.

2.3 The assessment should include the junction between Don White Road and Sanders Road and also the junctions of Sanders Road with Rixon Road/Stewarts Road and Northen Way/Stewarts Road.

The application site is not affected by a Public Right of Way

Signed *DR Jones*

Development Management Engineer

For Assistant Director for Highways and Waste  
Bowling Green Road, Kettering, Northants NN15 7QX

Web: [northnorthants.gov.uk](http://northnorthants.gov.uk)

Email: [REDACTED]

*Planning Permission does not give or imply permission for adoption of new highway or to implement any works within the highway and / or a Public Right of Way*

*The views, observations, comments and recommendations contained in this response represent those of North Northamptonshire Council as Local Highway Authority and in no other function or authority.*



Our Ref:  
Your Ref: NN/21/00051/SCO

**Martin Seldon**  
**Assistant Spatial Planner**

Peter Moor  
Northamptonshire Minerals and Waste  
Planning Service  
One Angel Square  
Angel Street  
Northampton  
NN1 1ED  
Via Email: [REDACTED]

National Highways  
The Cube  
199 Wharfside Street  
Birmingham  
B1 1RN  
Direct Line: [REDACTED]  
[www.highwaysengland.co.uk](http://www.highwaysengland.co.uk)

29 October 2021

Dear Peter

**Land North of Don White Road, Wellingborough, Northamptonshire, NN8 4FT –  
EIA Scoping Opinion**

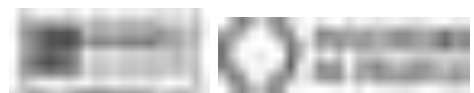
Thank you for inviting National Highways to provide comments on the EIA scoping opinion for the proposed development of an aggregate processing plant, erection of a hydraulically bound mixtures (HBM) plant, parking provisions and ancillary development at Land North Of Don White Road, Wellingborough, Northamptonshire, NN8 4FT.

We note that the site is located approximately 4km north from the A45 which is the nearest part of the Strategic Road Network (SRN).

We have set out below both the general and specific areas of concern that National Highways would wish to see considered as part of the EIA. The comments relate specifically to matters arising from National Highways responsibilities to manage and maintain the SRN in England. Comments relating to the local road network should be sought from the appropriate local highway authority.

General aspects to be addressed in all cases include:

- An assessment of transport related impacts of the proposal should be carried out and reported as described in the Department for Transport 'Guidance on Transport Assessment (GTA)' and in accordance with Circular 02/2013. It is noted that this guidance has been archived, however still provides a good practice guide in preparing a TA. In addition, the Ministry of Housing, Communities and Local Government also provide guidance on preparing TAs.



- Environmental impact arising from any disruption during construction, traffic volume, composition or routing change and transport infrastructure modification should be fully assessed and reported.
- Adverse change to noise and air quality should be particularly considered, including in relation to compliance with the European air quality limit values and/or in local authority designated Air Quality Management Areas (AQMAs).

National Highways recommends the following site-specific considerations should inform the final EIA:

- Based on the information that has been provided, we do not expect the impact on the SRN to be significant. However, we advise that the impact on the A45/A509 and A45 Junctions 14 and 16 should be considered for trips travelling south and A14 Junctions 9 and 10 for trips travelling north of the site.

If required, junction capacity assessments must be carried out for the following scenarios in line with DfT Circular 02/2013:

- Opening Year (the year in which the development is expected to be opened) Reference Case Scenario: This scenario should include all the committed developments in the vicinity of the site based on their likely build out by the opening year in line with DfT Circular 02/2013.
- Opening Year With Development Scenario – Opening Year Reference Case Scenario + Proposed development. This scenario will determine whether any mitigation is required for the SRN.
- The impact of the development should also be assessed for 10 years after the year the application is registered or the end of the plan period (whichever is greater). This will help inform National Highways programme of works for the future.

Committed developments and infrastructure on the surroundings of the site should be included in all future year assessments. We recommend liaising with relevant local planning authorities to determine the consented developments to be incorporated in the assessment.

We also recommend that the TA is agreed in a staged approach, that is the overall methodology and elements such as assessment years, trip generation and distribution be agreed prior to further assessment work being carried out. This approach should avoid any abortive work.

These comments are only advisory, as the responsibility for determining the final scope of the Environmental Statement would rest with the Local Planning Authority.

These comments imply no pre-determined view as to the acceptability of the proposed development in traffic, environmental or highway terms. Should the applicant wish to

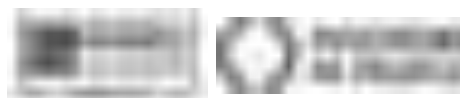


discuss the merits of the proposal in terms of the likely impact on the SRN please contact me on [REDACTED] or [REDACTED]

Yours sincerely,



Martin Seldon  
Assistant Spatial Planner  
Email: [REDACTED]



## Jake Blay

---

**To:** Andy Miles  
**Subject:** RE: P21-340 - Finedon Road, Wellingborough - Transport Scoping Form

---

**From:** Martin Draper <[REDACTED]>  
**Sent:** 06 December 2021 17:10  
**To:** Andy Miles <[REDACTED]>  
**Cc:** David Jones <[REDACTED]>  
**Subject:** RE: P21-340 - Finedon Road, Wellingborough - Transport Scoping Form

**ALERT:** External email. Check the address. Think before you click links and attachments.

Good afternoon Andy

I was passed the Scoping form for the above proposals which I have filled out and should assist.

Should you have any queries please do not hesitate to contact either myself or David

Kind regards

Martin

**Martin Draper BEng (Hons)**  
**Senior Development Management Engineer**  
North Northamptonshire Council  
Bowling Green Road, Kettering, Northants NN15 7QX

Twitter: @NNorthantsC  
Facebook: @NorthNorthants  
Web: [www.northnorthants.gov.uk](http://www.northnorthants.gov.uk)



---

**From:** Andy Miles <[REDACTED]>  
**Sent:** 29 November 2021 17:52  
**To:** NCC Highways <[REDACTED]>

Cc: Jake Blay <[REDACTED]>

Subject: P21-340 - Finedon Road, Wellingborough - Transport Scoping Form

To whom this may concern,

I am writing to obtain your view on the proposed methodology to undertake a Transport Assessment for a proposed IBAA processing plant at the Finedon Road Industrial Estate (NN/21/00051/SCO). Please see attached a scoping form which sets out the proposed methodology.

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

Regards  
Andy



**Andy Miles** BA (Hons) MSc MTPS  
Principal Transport Planner

**Rodgers Leask Limited**

2430/2440 The Quadrant, Aztec West, Almondsbury, Bristol BS32 4AQ

[rodgersleask.co.uk](http://rodgersleask.co.uk)

Civil | Structural | Geo-environmental | Traffic & Transport Planning

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## TRANSPORT SCOPING FORM

<b>Document Reference No</b>	21340-RLL-21-XX-TN-D-5001	<b>Date</b>	29 November 2021
<b>Author</b>	AM	<b>Recipient</b>	-
<b>Job Title</b>	Principal Transport Planner	<b>Highway Authority</b>	Northamptonshire Highways
<b>Project Reference</b>	P21-340	<b>Project Title</b>	Finedon Road, Wellingborough

Ref	Item	Description	Highway Authority Comments	Accepted
1.0	Proposed Development	<p>The proposed development is for an Incinerator Bottom Ash Aggregate (IBAA) processing plant on land on the north-eastern side of Finedon Road Industrial Estate, Wellingborough. A site location plan had been included with this form as <b>Attachment 1</b>.</p> <p>Unprocessed IBA and primary aggregate will be brought into the site using OGV2 rigid vehicles. The material will be assessed on arrival and then stockpiled for processing. Once processed, the blended aggregate will leave the site in OGV2 rigid vehicles for sale to customers.</p> <p>The development will be served by off of Don White Road, a private road in the Finedon Road Industrial Estate. Don White Road connects to the public highway via a priority junction with Sanders Road, the estate road through the industrial estate.</p>	Tracking required for site access.	N/A



Ref	Item	Description	Highway Authority Comments	Accepted
2.0	Local Authority Contact Details	<p>To ensure that we contact the appropriate people within the local authority during the application process, please could you provide the contact details for the following local authority departments. It should be noted that any contact details provided will be concealed if this document is submitted as part of the planning application (usually within the appendices of the Transport Assessment).</p> <ul style="list-style-type: none"><li>▪ <b>Data collection team</b> - to understand the availability of existing traffic data in the area.</li><li>▪ <b>Travel Plan team</b> - to provide guidance and advice on the preparation and implementation of the workplace travel plan</li></ul>	<p>Data collection: Richard Ryan [REDACTED]</p> <p>Data contained within Northamptonshire Strategic Transport Model: Bill Prendergast [REDACTED]</p> <p>Travel Choices Team: Georgia Carpenter [REDACTED]</p>	<b>N/A</b>



Ref	Item	Description	Highway Authority Comments	Accepted
3.0	Policy Review	<p>Policy documents to be reviewed within the Transport Assessment:</p> <ul style="list-style-type: none"><li>▪ National Planning Policy Framework (NPPF) (Jul 2021)</li><li>▪ Planning Practice Guidance on Travel Plans, Transport Assessments &amp; Statements (March 2014)</li></ul> <p>Documents to be referred to during the preparation of the Transport Assessment:</p> <ul style="list-style-type: none"><li>▪ Northamptonshire Road Freight Strategy (December 2013)</li><li>▪ North Northamptonshire Adopted Local Plan Part 1</li><li>▪ North Northamptonshire Adopted Local Plan Part 2 (once adopted)</li></ul> <p>Please could you confirm any other design guidance that would be relevant to this application.</p>		<b>Yes:</b> <input checked="" type="checkbox"/> <b>No:</b> <input type="checkbox"/>
4.0	Walking / Cycling	<p>Information on existing walking and cycling infrastructure will be included within the Transport Assessment.</p>		<b>Yes:</b> <input checked="" type="checkbox"/> <b>No:</b> <input type="checkbox"/>
5.0	Public Transport	<p>Local bus services will be summarised within the TA which will include bus timetable, existing bus infrastructure and bus routes. Distances from the site to local bus stops will be included.</p>	<p>Please note the maximum walking distance to a bus stop should be no more than 400metres. Please liaise with our Bus and Rail Team for specific requirements. James Loader [REDACTED]</p>	<b>Yes:</b> <input checked="" type="checkbox"/> <b>No:</b> <input type="checkbox"/>



Ref	Item	Description	Highway Authority Comments	Accepted
6.0	Collision Records	Collision records will be obtained from Crash Map for the most recent 5-year period. The study area for the collision record analysis is shown on <b>Attachment 2</b> .	Crashmap data is not accepted. Please obtain 5yr collision data held by the Authority. The appropriate contact is Simon Mills [REDACTED]	<b>Yes:</b> <input type="checkbox"/> <b>No:</b> <input checked="" type="checkbox"/>



7.0	Traffic Survey Data	<p>Due to the sites specialist use, a classified link count was undertaken at the Day Aggregates site at Avonmouth, Bristol, to be used as a proxy to establish suitable trip generation for the proposed Wellingborough site. The survey was undertaken on Wednesday 20<sup>th</sup> October from 5:00 to 23:00. The raw survey data is included as <b>Attachment 3</b>.</p> <p>Further details on the trip generation for the site are included within this scoping form under section <b>9.0</b>.</p> <p>To understand the existing traffic flows on the local highway network, a third-party specialist traffic survey company will be commissioned to record turning counts and queue length junctions at key junctions in proximity to the site on Thursday 2<sup>nd</sup> December 2021.</p> <p>The data will be collected at the following junctions:</p> <ol style="list-style-type: none"><li>1. Sanders Rd / Don White Rd priority junction</li><li>2. A510 Northern Way / Stewarts Rd roundabout</li><li>3. A510 Stewarts Rd / Sanders Rd / Rixon Rd / Nest Ln roundabout</li><li>4. A509 / Wellingborough Rd / A510 Northern Way / A5193 / A509 Niort Way roundabout</li><li>5. Rixon Rd / Finedon Rd priority junction</li><li>6. Finedon Rd / Meadows Close priority junction</li></ol>	<p>Traffic Survey down times -</p> <p>1st January – 1st February Half term 1st July – 30th September Half term 1st November – 31st December</p>	<p><b>Yes:</b> <input type="checkbox"/></p> <p><b>No:</b> <input checked="" type="checkbox"/></p>
-----	---------------------	--	---	---



Ref	Item	Description	Highway Authority Comments	Accepted
		<p>Automatic Traffic Counters will be used to record hourly directional traffic flows and speed data over a 7-day period. Automatic traffic counters will be located on the following roads:</p> <ul style="list-style-type: none"><li><i>a. Northen Way</i></li><li><i>b. Rixon Road</i></li><li><i>c. A509 Kettering Road</i></li></ul> <p>A plan showing the locations to be surveyed has been attached as <b>Attachment 4</b>.</p>		



Ref	Item	Description	Highway Authority Comments	Accepted																						
8.0	Traffic Growth	<p>Traffic growth will be applied to the observed junction turning count data to calculate the forecast assessment year background traffic. The forecast years will be 2027, five years after the registration of the application (expected 2022) and 2030 at the request of North Northamptonshire Council in their scoping opinion dated 22 Oct 2021 (ref: NN/21/00051/SCO).</p> <p>Traffic growth factors have been extracted from TEMPro 7.2 using the following criteria:</p> <ul style="list-style-type: none"> <li>▪ Trip ends by time period</li> <li>▪ MSOA Wellingborough 002</li> <li>▪ Forecast Period: 2021 – 2027 &amp; 2021 – 2030</li> <li>▪ Transport Mode: Car Driver</li> <li>▪ Trip End Type: Origin/Destination</li> </ul> <p>The NTM adjusted growth factors (RTF 2018 Scenario 1) to be used in the Transport Assessment are as follows:</p> <p><b>TEMPro Growth Factors 2021 to 2027</b></p> <table border="1" data-bbox="338 1052 900 1192"> <thead> <tr> <th rowspan="2">Time Period</th> <th colspan="2">Road Type</th> </tr> <tr> <th>Principal</th> <th>Minor</th> </tr> </thead> <tbody> <tr> <td>AM Peak Period</td> <td>1.0458</td> <td>1.0442</td> </tr> <tr> <td>PM Peak Period</td> <td>1.0451</td> <td>1.0435</td> </tr> </tbody> </table> <p><b>TEMPro Growth Factors 2021 to 2030</b></p> <table border="1" data-bbox="338 1247 900 1386"> <thead> <tr> <th rowspan="2">Time Period</th> <th colspan="2">Road Type</th> </tr> <tr> <th>Principal</th> <th>Minor</th> </tr> </thead> <tbody> <tr> <td>AM Peak Period</td> <td>1.0661</td> <td>1.0641</td> </tr> <tr> <td>PM Peak Period</td> <td>1.0653</td> <td>1.0633</td> </tr> </tbody> </table>	Time Period	Road Type		Principal	Minor	AM Peak Period	1.0458	1.0442	PM Peak Period	1.0451	1.0435	Time Period	Road Type		Principal	Minor	AM Peak Period	1.0661	1.0641	PM Peak Period	1.0653	1.0633	<p>NNC requirements for assessment are opening year and future year to coincide with the end of the local plan which is 2031.</p>	<p><b>Yes:</b> <input type="checkbox"/></p> <p><b>No:</b> <input checked="" type="checkbox"/></p>
Time Period	Road Type																									
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9.0	Trip Generation	<p>Wellingborough trip generation has been calculated for arrivals and departures broken down into arrivals and departures, which can be seen in the table below.</p> <table border="1" data-bbox="338 500 1255 1166"> <tr> <td colspan="8" style="background-color: black; height: 15px;">[Redacted]</td> </tr> <tr> <td style="background-color: black;">[Redacted]</td> <td colspan="2" style="background-color: black;">[Redacted]</td> <td colspan="2" style="background-color: black;">[Redacted]</td> <td colspan="2" style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> </tr> <tr> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> </tr> <tr> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> </tr> <tr> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> </tr> <tr> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> </tr> <tr> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> </tr> <tr> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> </tr> <tr> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> <td style="background-color: black;">[Redacted]</td> </tr> </table> <p>This trip generation data will be used as part of the highway impact assessment of the proposed development on the local highway network.</p>	[Redacted]								[Redacted]	[Redacted]		[Redacted]		[Redacted]		[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]		<p><b>Yes:</b> <input checked="" type="checkbox"/></p> <p><b>No:</b> <input type="checkbox"/></p>
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<b>10.0</b>	<b>Trip Distribution</b>	<p>The distribution of trips for this site has been split in accordance with the type of vehicles accessing the site:</p> <ul style="list-style-type: none"> <li>▪ Light Vehicles &amp; OGV1 – MSOA Wellingborough 002</li> <li>▪ OGV2 (rigid) trips – first principles</li> </ul> <p><b><u>Light Vehicle Trips &amp; OGV1</u></b></p> <p>Light vehicles trips were primary associated with employees travelling to the site with the low number of OGV1 trips associated with minor deliveries. Both light vehicle and OGV1 trips were distributed using the 2011 Census data.</p> <p><b>Trip Distribution (Journeys to Work) – MSOA Wellingborough 002</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Route</th> <th style="text-align: left;">Distribution</th> </tr> </thead> <tbody> <tr><td>A509 W Niort Way</td><td>8%</td></tr> <tr><td>A5193 Harrowden Road</td><td>3%</td></tr> <tr><td>Nest Farm Rd</td><td>3%</td></tr> <tr><td>Nest Lane</td><td>14%</td></tr> <tr><td>A5128 Finedon Road</td><td>5%</td></tr> <tr><td>A510 Finedon Road</td><td>23%</td></tr> <tr><td>A509 N (Before Kettering)</td><td>4%</td></tr> <tr><td>A14 W</td><td>12%</td></tr> <tr><td>A14 E</td><td>2%</td></tr> <tr><td>A45 W</td><td>9%</td></tr> <tr><td>A509 S</td><td>1%</td></tr> <tr><td>B571</td><td>6%</td></tr> <tr><td>Kettering (A509 Pytchley Road)</td><td>6%</td></tr> <tr><td>Sywell Road</td><td>1%</td></tr> <tr><td>A4500 Main Road</td><td>3%</td></tr> <tr><td>Total</td><td>100%</td></tr> </tbody> </table>	Route	Distribution	A509 W Niort Way	8%	A5193 Harrowden Road	3%	Nest Farm Rd	3%	Nest Lane	14%	A5128 Finedon Road	5%	A510 Finedon Road	23%	A509 N (Before Kettering)	4%	A14 W	12%	A14 E	2%	A45 W	9%	A509 S	1%	B571	6%	Kettering (A509 Pytchley Road)	6%	Sywell Road	1%	A4500 Main Road	3%	Total	100%	<p><b>Yes:</b> <input checked="" type="checkbox"/></p> <p><b>No:</b> <input type="checkbox"/></p>
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Ref	Item	Description	Highway Authority Comments	Accepted																																																															
		<p><b><u>OGV2 Trips</u></b></p> <p>As the deliveries of unprocessed aggregates and IBA are from fixed location and the blended aggregate is to be sold in the local area, the local routes of arrival and departure trips are known.</p> <p>The assignment of local trips on the network are shown below.</p> <p><b>Trip Distribution (OGV2 Movements) – First Principles</b></p> <table border="1" data-bbox="329 695 1287 1203"> <thead> <tr> <th></th> <th colspan="3">Arrivals</th> <th colspan="3">Departures</th> </tr> <tr> <th>Route</th> <th>Primary Agg.</th> <th>IBA</th> <th>Empty</th> <th>Blended Agg.</th> <th>Metal</th> <th>Empty</th> </tr> </thead> <tbody> <tr> <td>A510 Finedon Rd</td> <td>100%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>20%</td> </tr> <tr> <td>A509 N</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>A14 W</td> <td>0%</td> <td>50%</td> <td>50%</td> <td>25%</td> <td>53%</td> <td>20%</td> </tr> <tr> <td>A14 E</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>25%</td> <td>16%</td> <td>20%</td> </tr> <tr> <td>A45 W</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>25%</td> <td>16%</td> <td>20%</td> </tr> <tr> <td>A509 S</td> <td>0%</td> <td>50%</td> <td>50%</td> <td>25%</td> <td>16%</td> <td>20%</td> </tr> <tr> <td>Total</td> <td>100%</td> <td>100%</td> <td>100%</td> <td>100%</td> <td>100%</td> <td>100%</td> </tr> </tbody> </table> <p>Trip assignment on the local network is shown on <b>Attachment 5</b> for each of the 'highway' and 'development' peak hours, as well as site operating hours.</p>		Arrivals			Departures			Route	Primary Agg.	IBA	Empty	Blended Agg.	Metal	Empty	A510 Finedon Rd	100%	0%	0%	0%	0%	20%	A509 N	0%	0%	0%	0%	0%	0%	A14 W	0%	50%	50%	25%	53%	20%	A14 E	0%	0%	0%	25%	16%	20%	A45 W	0%	0%	0%	25%	16%	20%	A509 S	0%	50%	50%	25%	16%	20%	Total	100%	100%	100%	100%	100%	100%		
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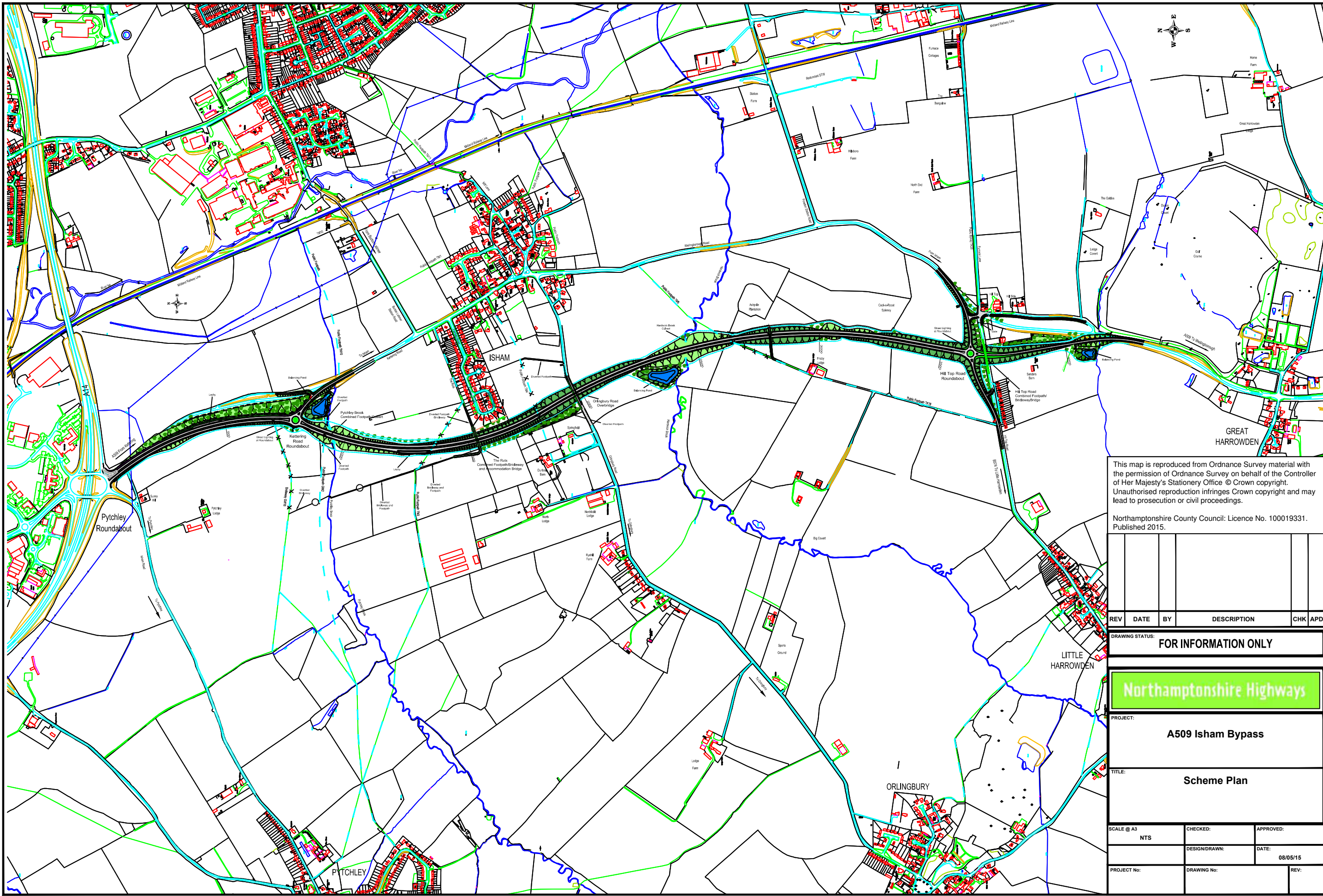
Ref	Item	Description	Highway Authority Comments	Accepted
11.0	Junctions	<p>To understand the impact on the local highway network from the proposed development, junctions in proximity to the site are to be assessed within the Transport Assessment:</p> <ul style="list-style-type: none"> <li>▪ Sanders Rd / Don White Rd priority junction</li> <li>▪ A510 Northern Way / Stewarts Rd roundabout</li> <li>▪ A510 Stewarts Rd / Sanders Rd / Rixon Rd / Nest Ln roundabout</li> <li>▪ A509 / Wellingborough Rd / A510 Northern Way / A5193 / A509 Niort Way roundabout</li> <li>▪ Rixon Rd / Finedon Rd priority junction</li> <li>▪ Finedon Rd / Meadows Close priority junction</li> </ul> <p>Junction capacity assessments results will be included within the Transport Assessment for review.</p>	Please include any other junctions likely to be impacted by an additional 30 two-way trips as a result of this application	<p><b>Yes:</b> <input checked="" type="checkbox"/></p> <p><b>No:</b> <input type="checkbox"/></p>
12.0	Travel Plan	An Employee Travel Plan (TP) will be submitted alongside the TA as part of the planning application. The TP will provide targets, objectives, and measures to encourage sustainable travel to/from the site and incentivise employees to reduce single occupancy car trips.		<p><b>Yes:</b> <input checked="" type="checkbox"/></p> <p><b>No:</b> <input type="checkbox"/></p>



Ref	Item	Description	Highway Authority Comments	Accepted
13.0	Additional Comments	Please include any additional comments about the scope for the Transport Assessment in the adjacent box.		N/A

## **Appendix C – Isham Bypass**

CAD File: L:\GROWTH\HIGHWAY DESIGN\2015-16\A509 ISHAM BYPASS 2014\AUTOCAD\DWG NH08AR64-001&003-SCHEME PLAN MAY 2009.DWG



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REV	DATE	BY	DESCRIPTION	CHK	APD

DRAWING STATUS: **FOR INFORMATION ONLY**

**Northamptonshire Highways**

PROJECT: **A509 Isham Bypass**

TITLE: **Scheme Plan**

SCALE @ A3 NTS	CHECKED:	APPROVED:
	DESIGN/DRAWN:	DATE: 08/05/15

PROJECT No:	DRAWING No:	REV:

## **Appendix D – Northamptonshire Adopted Freight Strategy (2013)**

# Northamptonshire Road Freight Strategy

## Fit for Purpose

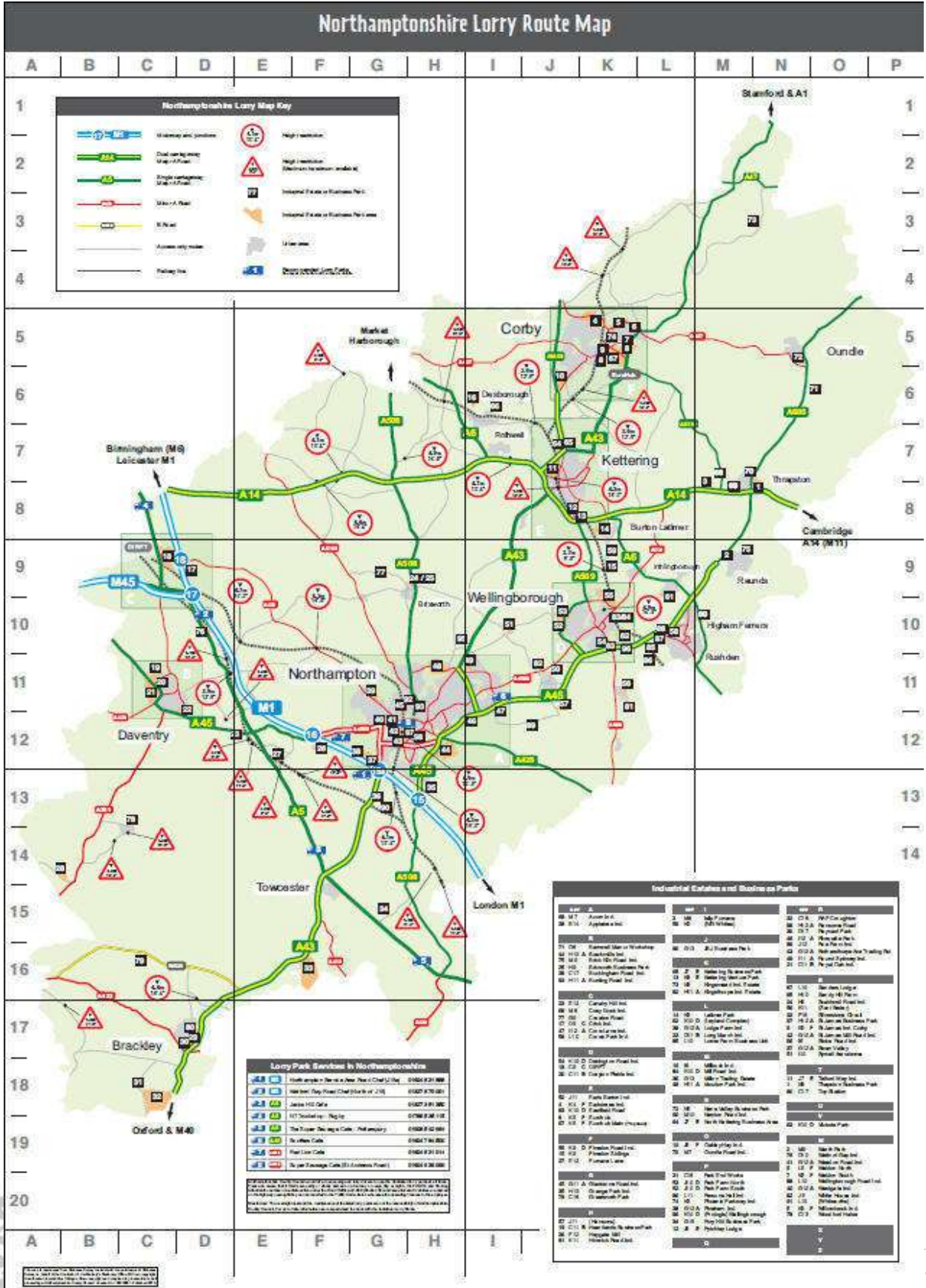


December 2013





Appendix 3 – Northamptonshire Lorry Route Maps

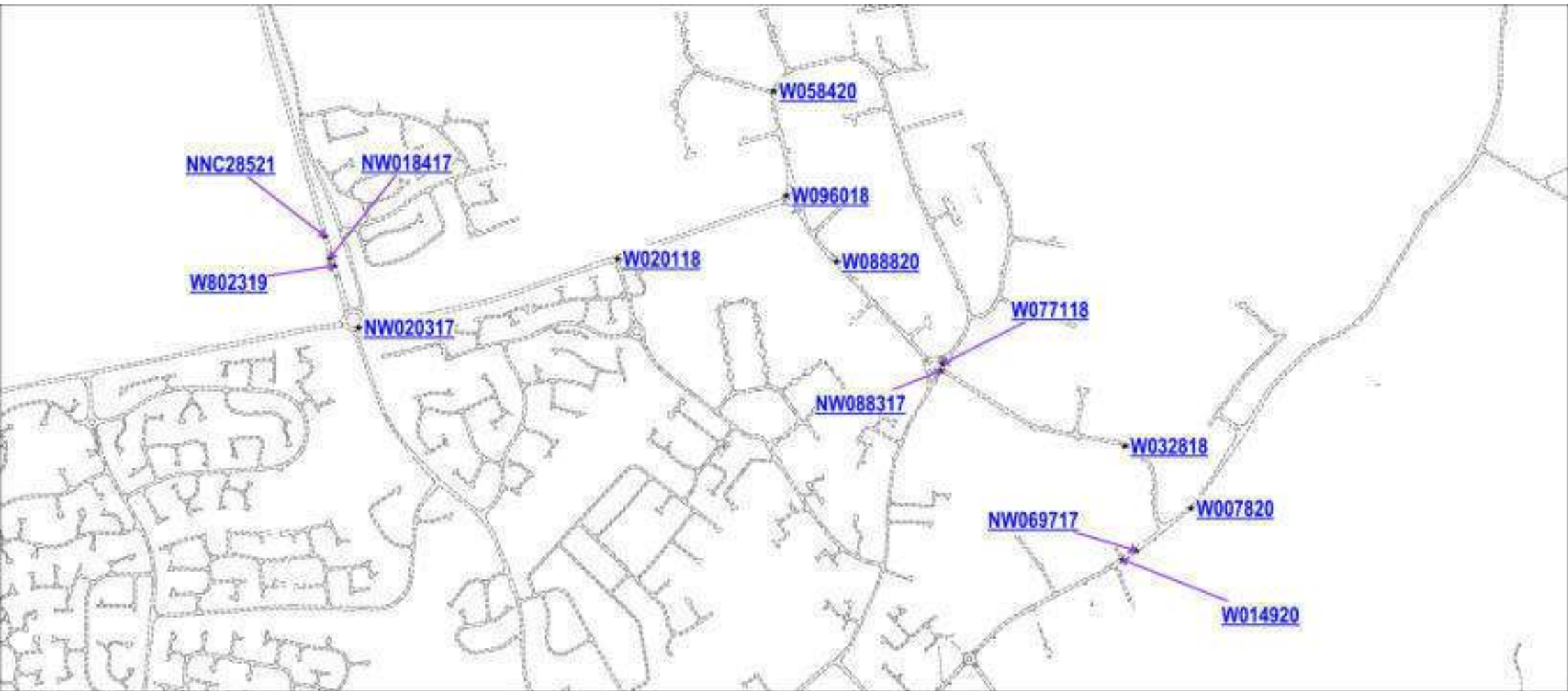




**Northamptonshire Lorry Map Key**

Motorway and junctions	Dual or single lane roads	Single carriageway	Major A-road	Minor A-road	B-road	Access only route	Railway line	Large industrial	High industrial (Medium to heavy vehicles)	Industrial Centre or Business Park	Industrial Centre or Business Park area	Urban area	Lake & River
Recommended Lorry Route for the area concerned to use													

## Appendix E – PIA Data



Date	Police_ref	Veh_ref	Type	Manvres	Movef	Movet	Impact	Drvsex	Drvage
18/03/2017	NW018417	1	9. Car	6. U-turn	4. SE	4. SE	1. Front	2. Female	39
18/03/2017	NW018417	2	9. Car	18. Going ahead other	4. SE	8. NW	1. Front	2. Female	20
24/03/2017	NW020317	1	9. Car	18. Going ahead other	2. NE	6. SW	1. Front	1. Male	
24/03/2017	NW020317	2	9. Car	18. Going ahead other	2. NE	6. SW	2. Back	1. Male	24
24/03/2017	NW020317	3	9. Car	18. Going ahead other	2. NE	6. SW	2. Back	1. Male	64
24/03/2017	NW020317	4	9. Car	18. Going ahead other	2. NE	6. SW	0. Did not impact	1. Male	
30/08/2017	NW069717	1	9. Car	10. Waiting to turn right	2. NE	8. NW	2. Back	1. Male	26
30/08/2017	NW069717	2	9. Car	18. Going ahead other	2. NE	6. SW	1. Front	2. Female	50
30/10/2017	NW088317	1	9. Car	18. Going ahead other	4. SE	8. NW	1. Front	2. Female	59
30/10/2017	NW088317	2	2. Motorcycle 50cc and under	18. Going ahead other	2. NE	6. SW	4. Nearside	1. Male	55
15/03/2018	W020118	1	9. Car	9. Turning right	6. SW	2. NE	1. Front	2. Female	33
15/03/2018	W020118	2	9. Car	18. Going ahead other	2. NE	6. SW	1. Front	1. Male	24
18/05/2018	W032818	1	8. Taxi/Private hire car	5. Starting	0. Parked	1. N	1. Front	1. Male	
18/05/2018	W032818	2	1. Pedal Cycle	18. Going ahead other	4. SE	8. NW	1. Front	1. Male	32
23/10/2018	W077118	1	9. Car	18. Going ahead other	1. N	3. E	2. Back	9. Unknown	
23/10/2018	W077118	2	1. Pedal Cycle	18. Going ahead other	1. N	5. S	0. Did not impact	1. Male	42
14/12/2018	W096018	1	9. Car	5. Starting	7. W	3. E	1. Front	2. Female	
14/12/2018	W096018	2	1. Pedal Cycle	18. Going ahead other	5. S	1. N	1. Front	1. Male	32
07/09/2019	W802319	1	9. Car	12. Changing lane to right	5. S	1. N	4. Nearside	1. Male	45
07/09/2019	W802319	2	5. Motorcycle over 500cc	13. Overtaking moving vehicle O/S	5. S	1. N	1. Front	1. Male	34
07/09/2019	W802319	3	9. Car	18. Going ahead other	1. N	5. S	1. Front	2. Female	36
06/02/2020	W007820	1	9. Car	18. Going ahead other	2. NE	6. SW	1. Front	2. Female	40
06/02/2020	W007820	2	9. Car	18. Going ahead other	2. NE	6. SW	2. Back	1. Male	52
16/03/2020	W014920	1	19. Van / Goods 3.5 tonnes mgw and under	9. Turning right	1. N	5. S	1. Front	1. Male	
16/03/2020	W014920	2	9. Car	18. Going ahead other	2. NE	6. SW	3. Offside	2. Female	25
10/09/2020	W058420	1	19. Van / Goods 3.5 tonnes mgw and under	18. Going ahead other	8. NW	4. SE	1. Front	1. Male	24
10/09/2020	W058420	2	1. Pedal Cycle	18. Going ahead other	5. S	1. N	4. Nearside	1. Male	70
11/12/2020	W088820	1	9. Car	18. Going ahead other	4. SE	8. NW	1. Front	2. Female	19
11/12/2020	W088820	2	9. Car	18. Going ahead other	8. NW	4. SE	1. Front	1. Male	35
16/07/2021	NNC28521	1	19. Van / Goods 3.5 tonnes mgw and under	15. Overtaking nearside	5. S	1. N	3. Offside	1. Male	39
16/07/2021	NNC28521	2	9. Car	15. Overtaking nearside	5. S	1. N	4. Nearside	2. Female	34
16/07/2021	NNC28521	3	9. Car	18. Going ahead other	1. N	5. S	1. Front	1. Male	42

## **Appendix F – Public Transport in Wellingborough**

# public transport in Wellingborough, Rushden Lakes, Rushden and Higham Ferrers

from 1 September 2020

## core bus services

(for full route details see frequency guide right)

route 25	25	Late evening journey only	47*
route 47,48	47,48	Sunday & Monday to Saturday early morning and evening journeys	50*
route 49	49	One early am journey	X46†
route 50	50	Peak time journey only	X47**
route H1	H1	Early am journey only	VH1*
route R1	R1	Saturday only	W8*
route R2	R2	Peak times only	
route R3	R3	One-way operation of route	
route W1	W1	Other bus services	X44
route W2	W2		
route W8	W8		
route X4	X4		
route X46	X46		
route X47	X47		

Other bus services

Other bus services

Bus stops (see town centre map)

Railway and Station

places of interest/public buildings

Museum

Public building

Library (Apply here for your concessionary bus pass)



During the coronavirus pandemic some services may run at a reduced frequency

## wellingborough town bus services

service number	operator	route description	monday to saturday daytime	monday to saturday evening	sunday daytime
W1	Stagecoach	Town Centre - Queensway	Every 20 minutes	No Service	No Service
W2	Stagecoach	Town Centre - Nest Farm Road	Every 20 minutes	No Service	No Service
47	Stagecoach	Town Centre - Elsdon Road (for Rail Station)	Hourly	No Service	No Service
48	Stagecoach	Town Centre - Elsdon Road (for Rail Station)	Hourly	Early evening only	No Service
49	Stagecoach	Town Centre - London Road	Hourly	No Service	No Service
VH1	Cogenhoe & Whiston P.C.	Town Centre - London Road	Saturday only 4 journeys each way	No Service	No Service
W8	Grant Palmer	Town Centre - London Road	M-F, hourly	No Service	No Service
X4	Stagecoach	Northampton Road - Town Centre - Harrowden Road (Limited stop)	Every 30 minutes	Hourly	Hourly
X46	Stagecoach	Northampton Road - Town Centre - London Road	Hourly	Early evening only	No Service
X47	Stagecoach	Town Centre - Doddington Road	Hourly	Early evening only	Hourly
X47	Stagecoach	Town Centre - London Road	Hourly	Hourly	Every 30 minutes, eves hourly

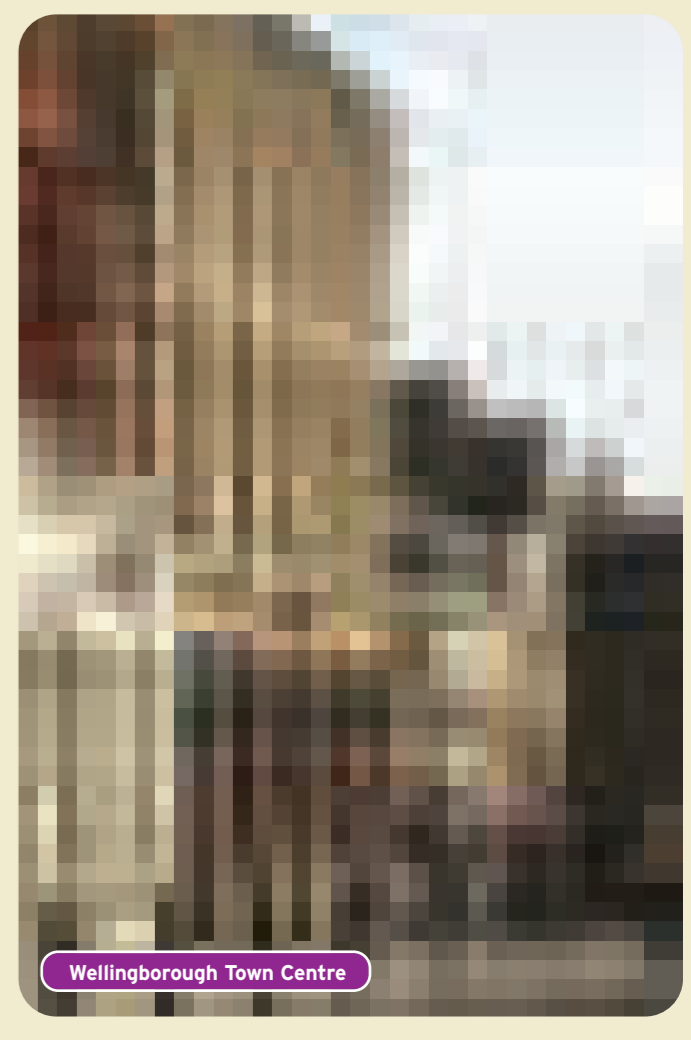
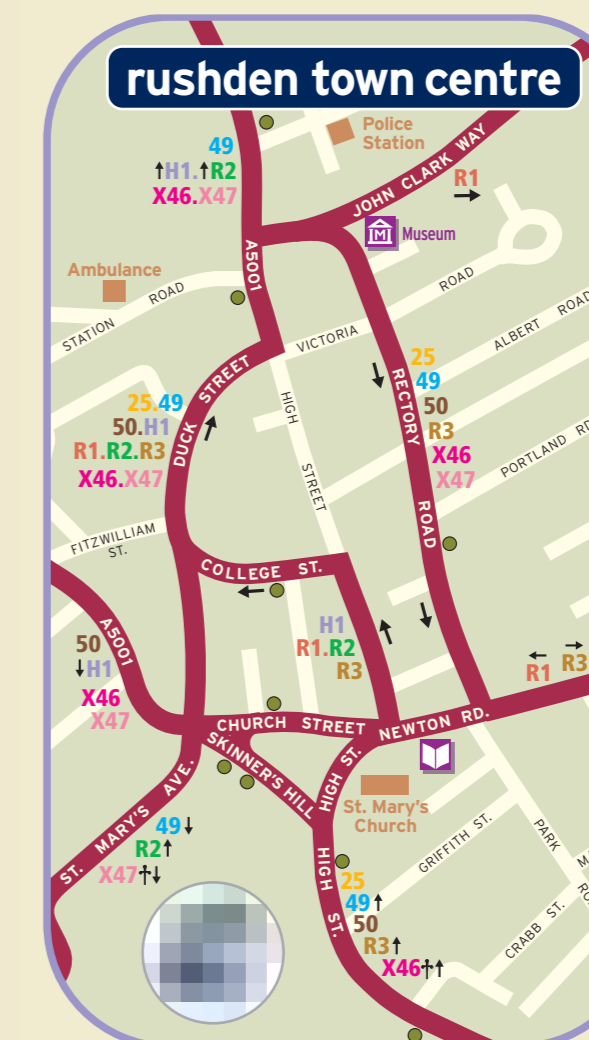
## inter-urban bus services

service number	operator	route description	monday to saturday daytime	monday to saturday evening	sunday daytime
25	Grant Palmer	Rushden - Bedford	4 journeys each way	No Service	No Service
44	Stagecoach	Irthlingborough - Wellingborough	M-F, one journey	No Service	No Service
47	Stagecoach	Rushden Lakes - Irthlingborough - Kettering	No Service	M-F, one journey each way	No Service
47	Stagecoach	Wellingborough - Finedon - Kettering	Hourly	No Service	No Service
48	Stagecoach	Wellingborough - Irthlingborough - Finedon - Kettering	Hourly	Early evening only	No Service
49	Stagecoach	Wellingborough - Irchester - Rushden - Higham Ferrers - Irthlingborough - Kettering	Hourly	No Service	No Service
50	Stagecoach	Kettering - Irthlingborough - Rushden Lakes - Rushden - Bedford	Hourly	1 to 3 journeys each way	Every 2 hours
206	Hamilton's Coaches	Burton Latimer - Irthlingborough - Thrapston - Oundle - Peterborough	Thursday only 1 journey each way	No Service	No Service
VH1	Cogenhoe & Whiston P.C.	Wellingborough - Wollaston - Bozeat - Northampton	Saturday only 4 journeys each way	No Service	No Service
W8	Grant Palmer	Wellingborough - Bozeat	M-F, hourly	No Service	No Service
X4	Stagecoach	Northampton - Wellingborough - Kettering - Corby - Peterborough (Limited stop)	30 minutes	Hourly, between Northampton and Corby	Hourly (every 2 hours between Corby and Peterborough)
X44	Stagecoach	Wellingborough - Brackmills - Northampton	M-F, 3 journeys each way	No Service	No Service
X46	Stagecoach	Raunds - Higham Ferrers - Rushden - Wellingborough - Northampton	Hourly	Early evening only	No Service
X47	Stagecoach	Raunds - Higham Ferrers - Rushden - Rushden Lakes - Wellingborough - Northampton	Hourly	Hourly between Higham Ferrers and Wellingborough only	Hourly between Raunds and Northampton. Every 30 mins between Higham Ferrers and Wellingborough, hourly eves

## rushden lakes, rushden town and higham ferrers bus services

service number	operator	route description	monday to saturday daytime	monday to saturday evening	sunday daytime
49	Stagecoach	Grangeway - Town Centre - Higham Ferrers	Hourly	No Service	No Service
50	Stagecoach	Town Centre - Rushden Lakes - Higham Ferrers - Town Centre	Hourly	1 to 3 journeys each way	Every 2 hours
H1	Expresslines	Town Centre - Meadow View - Elizabeth Way - Town Centre	Hourly, off peak only	No Service	No Service
R1	Expresslines	Town Centre - Balmoral Avenue - Oval Crescent - Town Centre	Hourly, off peak only	No Service	No Service
R2	Expresslines	Town Centre - Masfield Drive - Park Avenue - Town Centre	Hourly, off peak only	No Service	No Service
R3	Expresslines	Town Centre - Roberts Street - Jubilee Park - Town Centre	Hourly, off peak only	No Service	No Service
X46	Stagecoach	Rushden Lakes - Town Centre - Higham Ferrers	Hourly	Early evening only	No Service
X47	Stagecoach	Rushden Lakes - Town Centre - Higham Ferrers	Hourly	Hourly	Every 30 mins, evenings hourly

This service will be operated by wheelchair accessible buses



## Shire Community Services

This service provides a Demand Responsive Transport (DRT) network across the Borough of Wellingborough, on a door to door basis.

It must be pre-booked by phoning (01933) 223636 between 0900 and 1300 on Mondays to Fridays. It operates between 0900 and 1700 on Mondays to Fridays within the town, and to surrounding villages on various days of the week also between 0900 and 1700.

1-3 Orient Way, Wellingborough, Northants NN8 1AF

**traveline**  
public transport info  
0871 200 22 33  
Calls cost 12p per minute plus your phone company's access charge  
www.traveline.info

**Northamptonshire County Council**

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Digital Cartography by Pindar Creative 17/9/20  
www.pindarcreative.co.uk

## **Appendix G – Wellingborough Cycling Network**



# Wellingborough Cycle Network

## Key

- Roads that are normally hazardous for cyclists, but experienced adult highway users may find them useful especially in quiet periods.
- Busy principal roads with high speeds, HGVs. and complex junctions. Suitable for highly skilled commuting cyclists.
- Busy roads mostly lower speeds, some complicated traffic movements. A medium to high level of skill is required for trouble-free cycling.
- Through routes with moderate traffic and usually low speeds, but often turning and parking movements. Well trained school children should cope.
- Quiet roads with low traffic speed and volume. Suitable for all cyclists behaving responsibly if they have some training.
- Pedestrianised street.
- Cycle track, path or bridleway with tarmac, stone all weather surface, or calmed advisory route.
- Bridleway or other path with soft surface. May be unsuitable for cycling, especially on a road bike, in wet weather.
- Footpaths
- Cycle shop (see overleaf for contact details)
- Cycle parking
- Toucan crossing
- Residential
- Employment



## General Information

Wellingborough has a good network of cycling routes, including a large number of off-road cycle tracks and shared-use pathways, which can be used for many journeys around the town. The road network is also suitable for many journeys by bike and has been graded on this map according to the degree of skill and experience needed to cycle along each road. If you are a beginner or are worried about cars, you should build up your confidence and basic skill on the yellow roads where traffic is lighter and speeds are low. As your cycling skills and confidence increase you can begin to explore the higher graded routes. Bridleways are also permitted for use by cyclists although their surfaces can often be muddy and may not be suitable for cycling during the winter.

With the wide cycle network in Wellingborough, travel to many places is convenient by bike, including to sites of employment such as Park Farm, Finedon Road and Victoria Park Industrial Estates. For recreation, Irchester Country Park can be reached from Wellingborough Town Centre by cycle routes that are nearly all traffic free. The park itself allows cycling on its surfaced paths.

The right to cycle on a particular road or path can be a complicated question, so, although care has been taken in preparation, this map is not evidence of a right to use any road or path or of its legal status. For more information please contact Northamptonshire County Council (please see Useful Contacts section overleaf).

## Why Cycle?

There are many benefits that can be realised by cycling regularly instead of making car journeys. People who cycle regularly suffer less from ill-health and illnesses such as heart disease, strokes, diabetes, obesity and stress. Mental Health and sense of well-being are improved in addition to the well-established benefits to physical health. A good cycle home after a stressful day at work, for example, can help you relax more easily than sitting in your car during heavy traffic.

Cycling as part of your daily routine can also save you time and money, as you are naturally getting exercise without the need for taking up time going to the gym, etc. The number of calories that you burn depends on lots of factors such as the speed you cycle, gradient, body weight, and even how windy it is, but a 30 minute journey at 10 miles per hour can burn as much as 300 calories. The Government recommends that everyone takes exercise for 30 minutes on five or more days a week. For many, cycling to work and back will be enough to achieve this and more! For most local urban journeys cycling is usually quicker door-to-door than car journeys during rush-hour. And of course it is the cheapest form of transport aside from walking, so you can save even more money – no need to pay fuel or parking costs. What's more, the Government's Cycle to Work scheme can assist with the purchase of a bike through your employer allowing you to pay for it over a number of months and also make a saving on the VAT that you pay. Visit [www.cyclescheme.co.uk](http://www.cyclescheme.co.uk) or speak to your employer to see if they are already a member of the scheme.

Wider benefits can also be realised as more and more people choose cycling as their main mode of transport. The number of cars on the road decreases, thereby reducing congestion and helping those that do have to drive, including making public transport more efficient and reliable.

Cycling is an ideal way to interact with the environment whilst causing it no harm. CO<sub>2</sub> emissions from cycling are virtually zero, so if you cycle regularly, your carbon footprint will be much smaller than if you drive the same journeys. To check how much carbon you are saving on a particular journey, visit Transport Direct [www.transportdirect.info](http://www.transportdirect.info), the national journey planning website. If you click on the 'Check CO<sub>2</sub> emissions' link and enter the distance of your journey, it will show you the amount of carbon that would be emitted from the equivalent car journey. For example a 3 mile journey in a small car emits 0.6kgs of CO<sub>2</sub>, or 1.2kgs in a large car. If you can save this amount from just one cycle journey, just think how much you can save over a whole year!

For details within this area, please see inset map overleaf

For details within this area, please see inset map overleaf

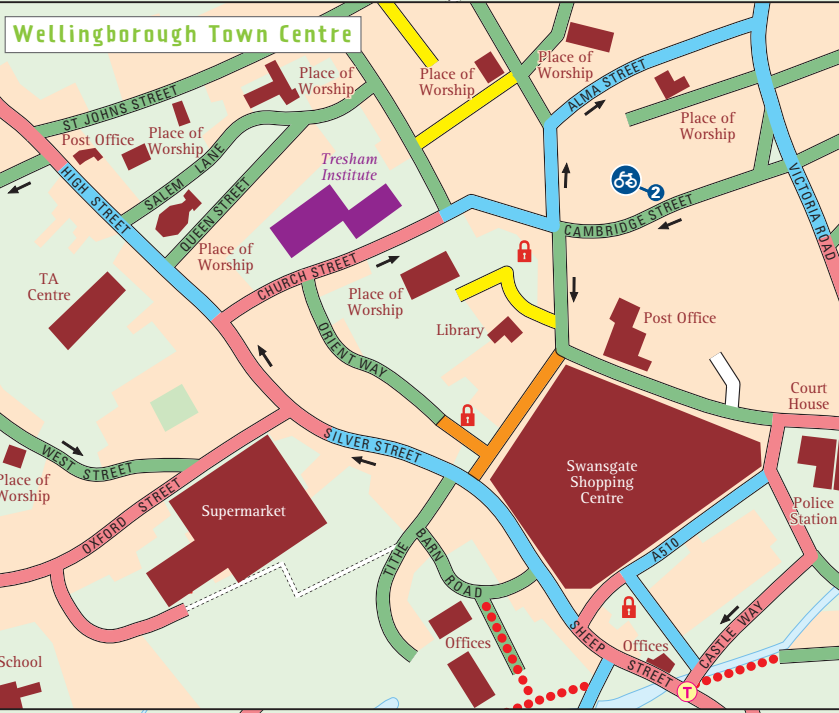
For details within this area, please see inset map overleaf



Most destinations in Wellingborough are easily accessible by bike

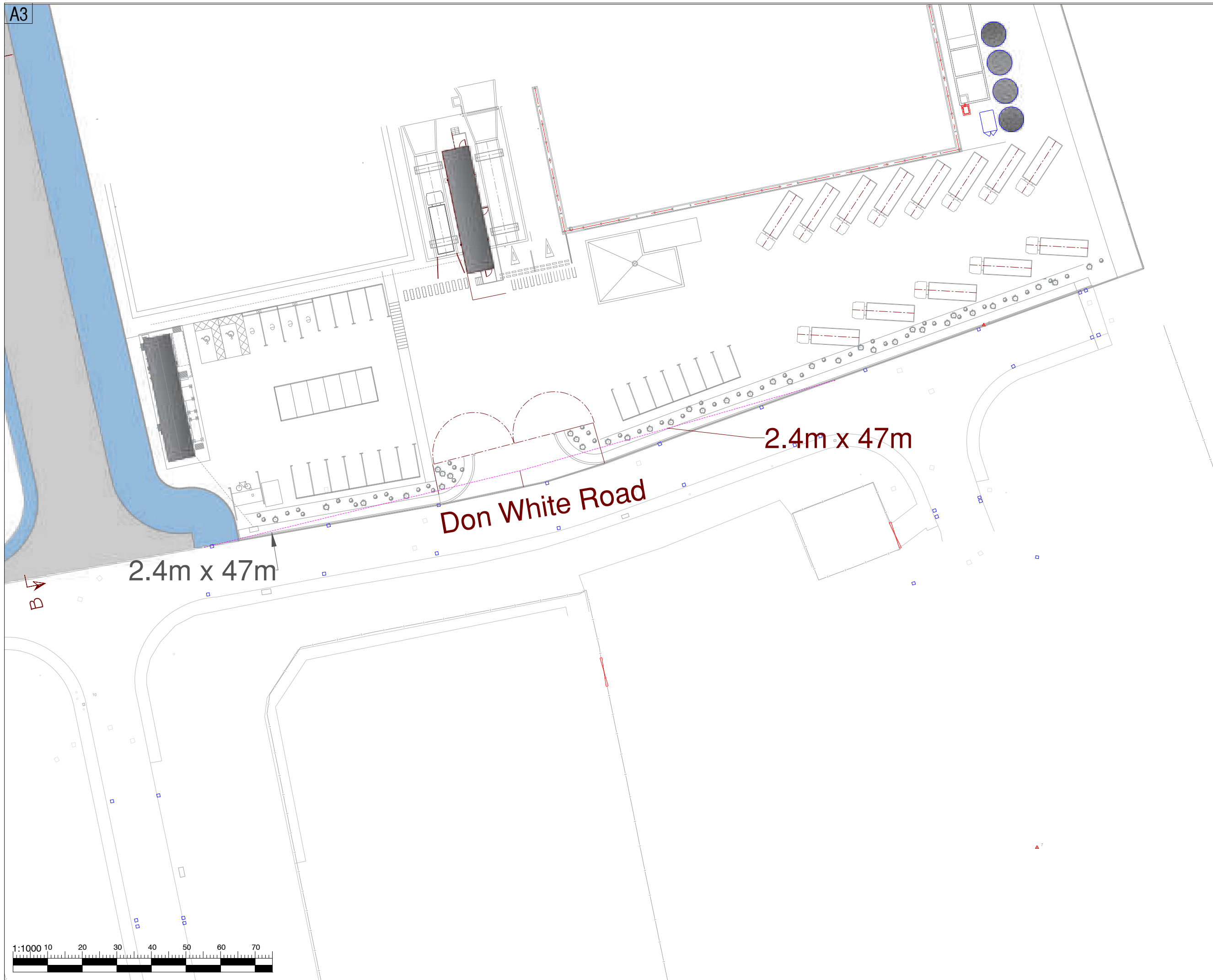


Wellingborough has a good network of safe off-road cycle paths



**Appendix H – Site Access Drawing (Drawing number:  
21340-RLL-21-XX-DR-D-5004)**

A3



**Legend:**

----- Junction Visibility Splay

**NOTE**

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Do not scale from this drawing.

Rev	Date	Amendments	By	Chk



Client

Covanta

Project

Land North of Don White Road  
Wellingborough

Drawing Title

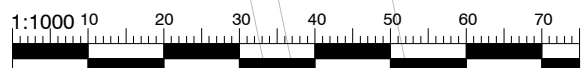
Primary Site Access  
Visibility Splays

Status

For Information

Scale	Drawn	Checked	Date
A3@ 1:500	JWB	ADM	17/01/2022

Drawing No.	Rev.
21340-RLL-21-XX-DR-D-5004	#



## **Appendix I – Swept Path Analysis**

**Drawing Number – 21340-RLL-21-XX-DR-D-5001 REV B**

**Drawing Number – 21340-RLL-21-XX-DR-D-5003 REV B**

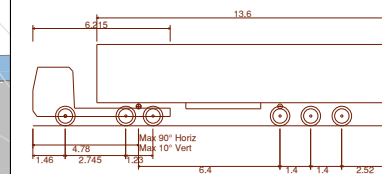
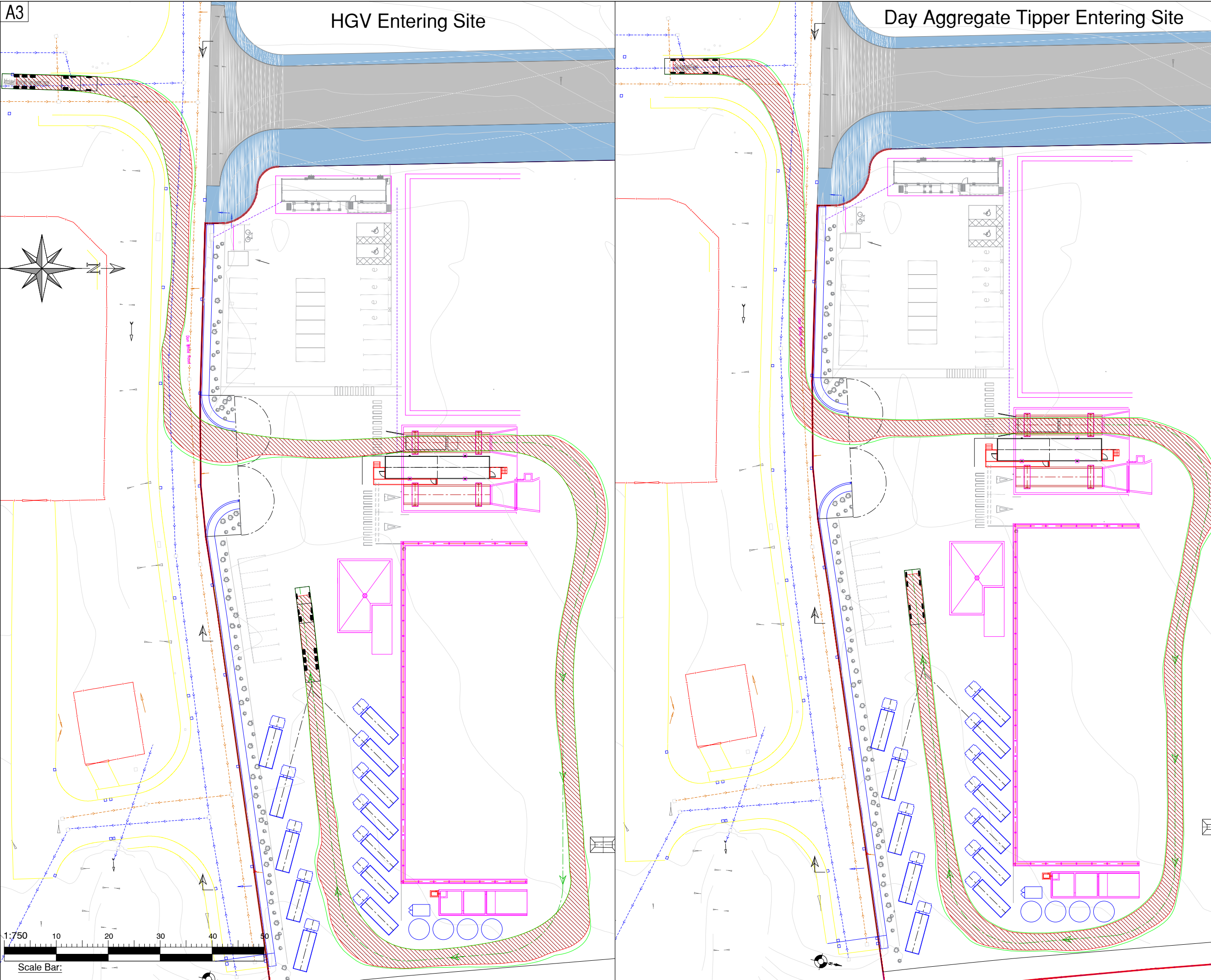
**Drawing Number – 21340-RLL-21-XX-DR-D-5005**

**Drawing Number – 21340-RLL-21-XX-DR-D-5006**

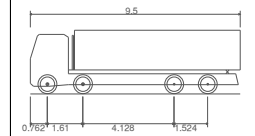
A3

### HGV Entering Site

### Day Aggregate Tipper Entering Site



Articulated Vehicle with Twin Steered Tractor  
 Overall Length 16.500m  
 Overall Width 2.550m  
 Overall Body Height 3.692m  
 Min Body Ground Clearance 0.426m  
 Max Track Width 2.500m  
 Lock to lock time 6.00s  
 Kerb to Kerb Turning Radius 6.987m



Day Aggregate Tipper  
 Overall Length 9.500m  
 Overall Width 2.750m  
 Overall Body Height 2.890m  
 Min Body Ground Clearance 0.341m  
 Track Width 2.471m  
 Lock to lock time 6.00s  
 Kerb to Kerb Turning Radius 12.500m

**NOTE**  
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Do not scale from this drawing.

Rev	Date	Amendments	By	Chk
C	31/3/22	New background map, changed scale and added HGV path	JWB	ADM
B	23/02/202	New background map and changed scale	JWB	ADM
A	2			



Client  
**Covanta**

Project  
**Land North of Don White Road  
 Wellingborough**

Drawing Title  
**Vehicles Entering The Site**

Status

For Information

Scale	Drawn	Checked	Date
A3@1:600	JWB	PES	24/11/2021

Drawing No. Rev.

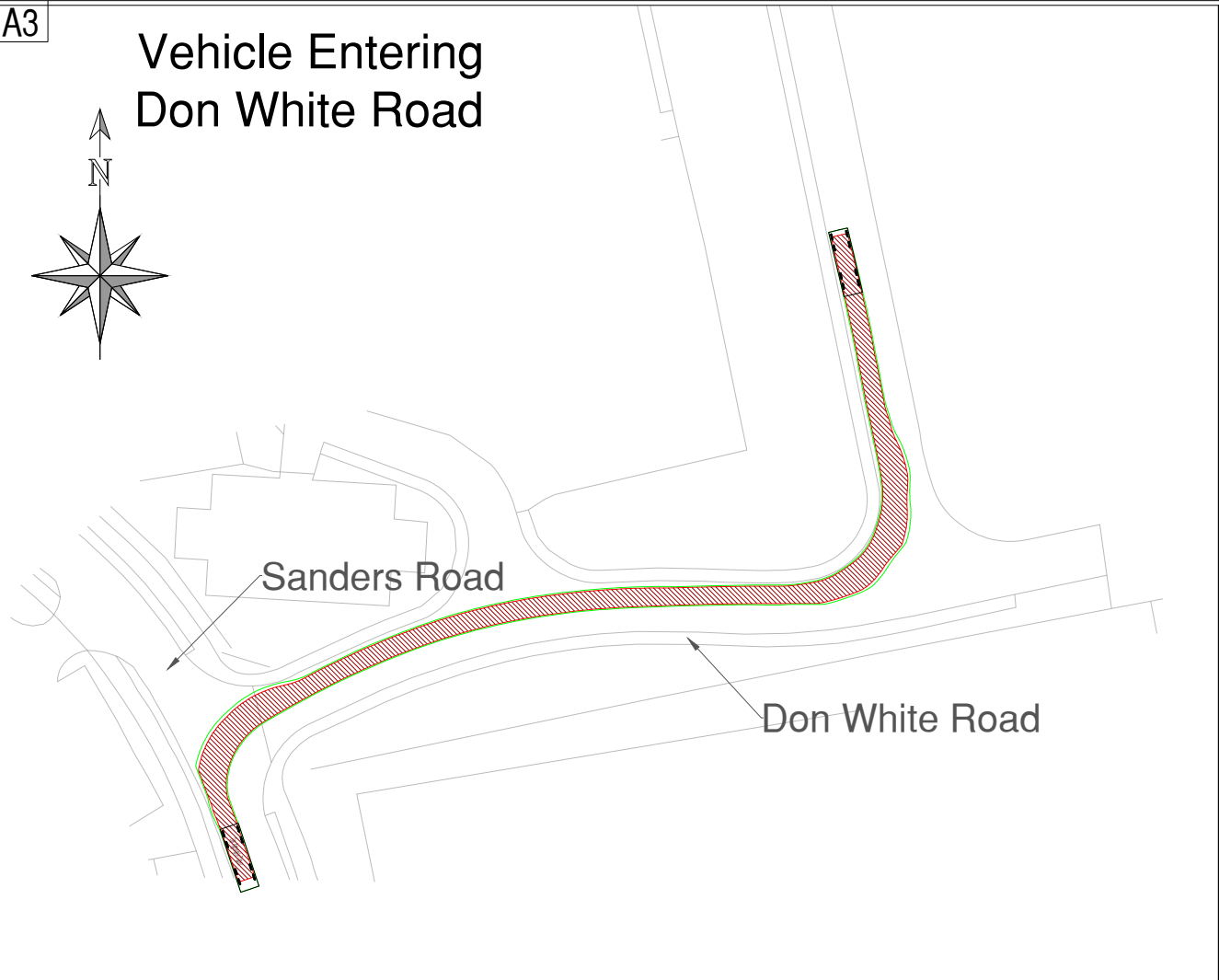
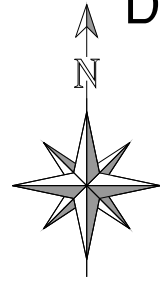
21340-RLL-22-XX-DR-D-5001 C

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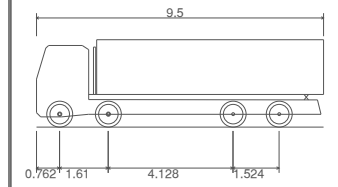
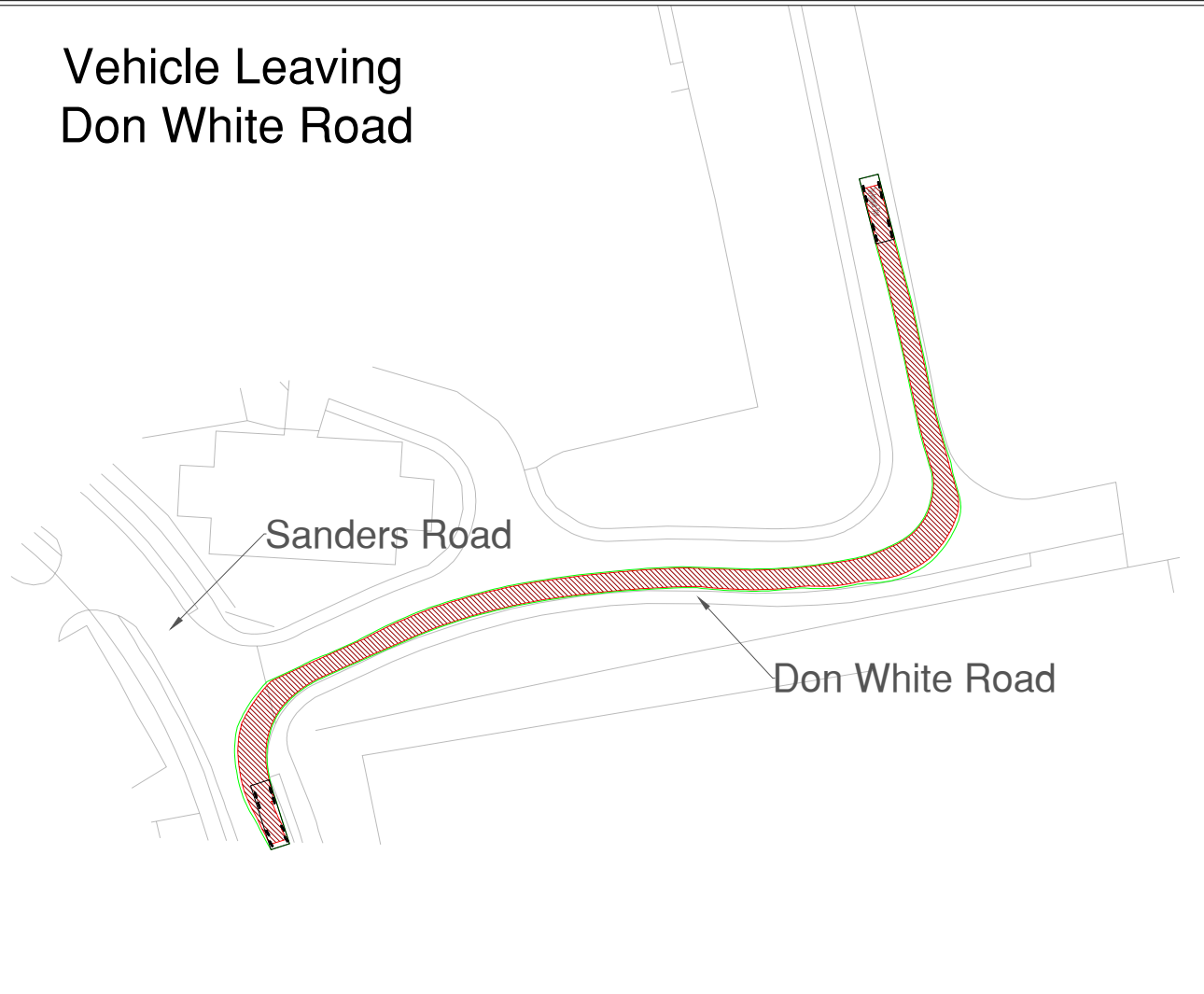
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A3

### Vehicle Entering Don White Road



### Vehicle Leaving Don White Road



Day Aggregate Tipper  
 Overall Length 9.500m  
 Overall Width 2.750m  
 Overall Body Height 2.890m  
 Min Body Ground Clearance 0.341m  
 Track Width 2.471m  
 Lock to lock time 6.00s  
 Kerb to Kerb Turning Radius 12.500m

Vehicle Wheelbase  
 Vehicle Overhang

**NOTE**  
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Rev	Date	Amendments	By	Chk
B	20/10/2021	New paths using new tipper	JWB	PES



Client  
 Covanta

Project  
 Land North of Don White Road  
 Wellingborough

Drawing Title  
 Vehicles Entering and Leaving the Site

Status

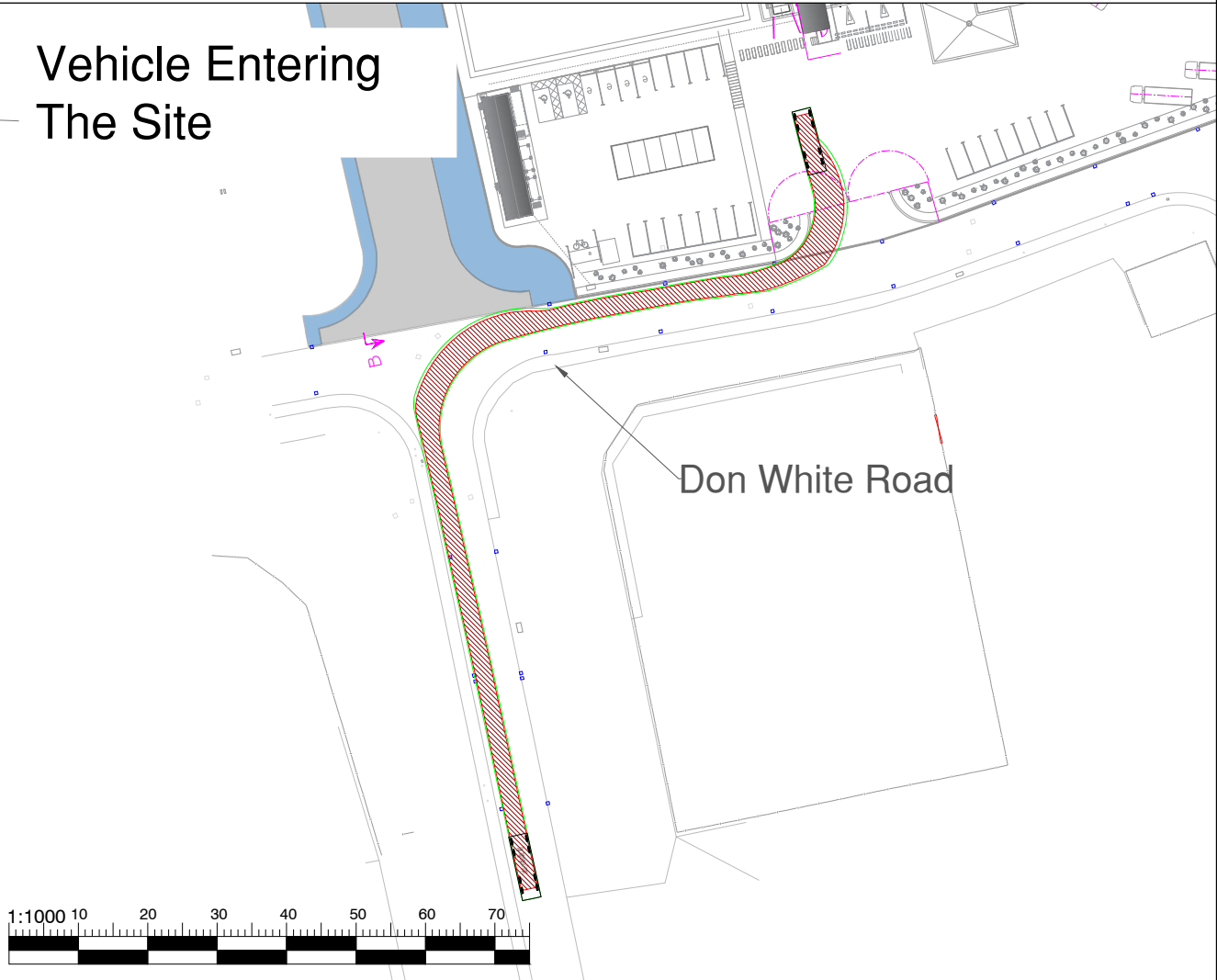
#### For Information

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A3@ 1:1000	JWB	PES	08/12/2021

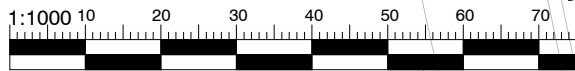
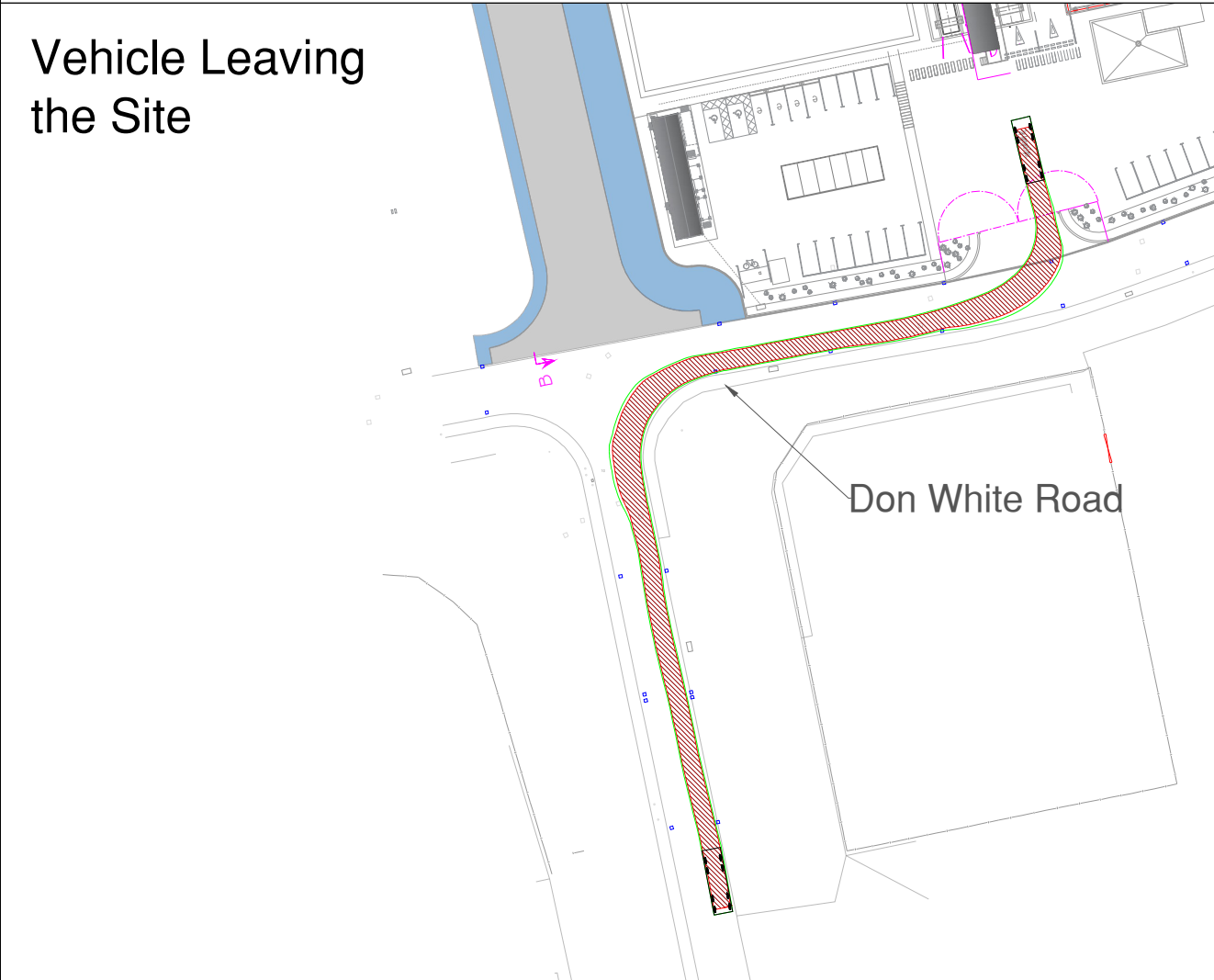
Drawing No. 21340-RLL-21-XX-DR-D-5003 Rev. B

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### Vehicle Entering The Site



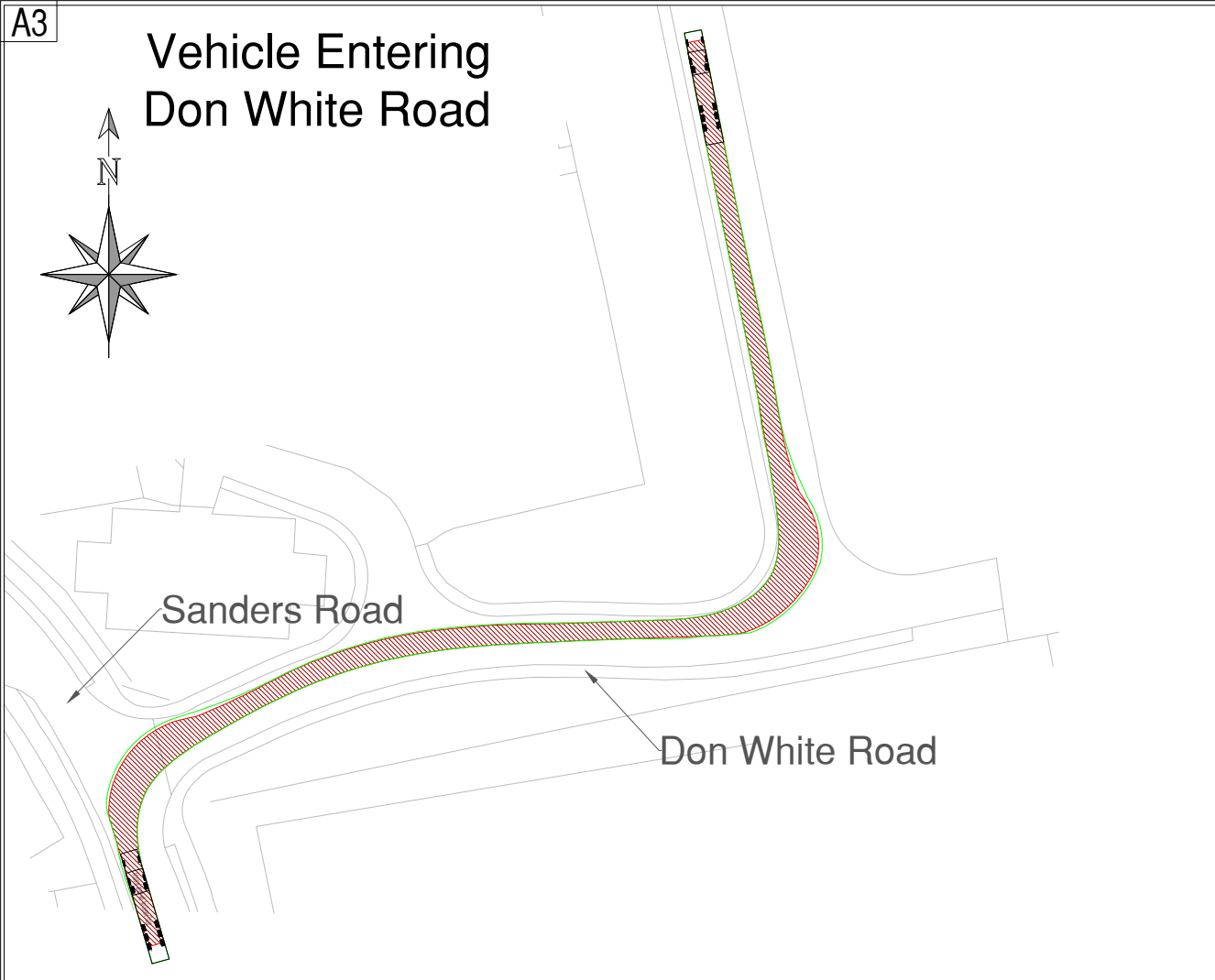
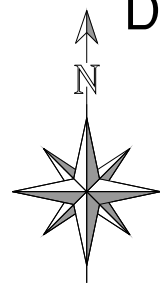
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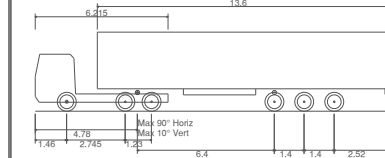
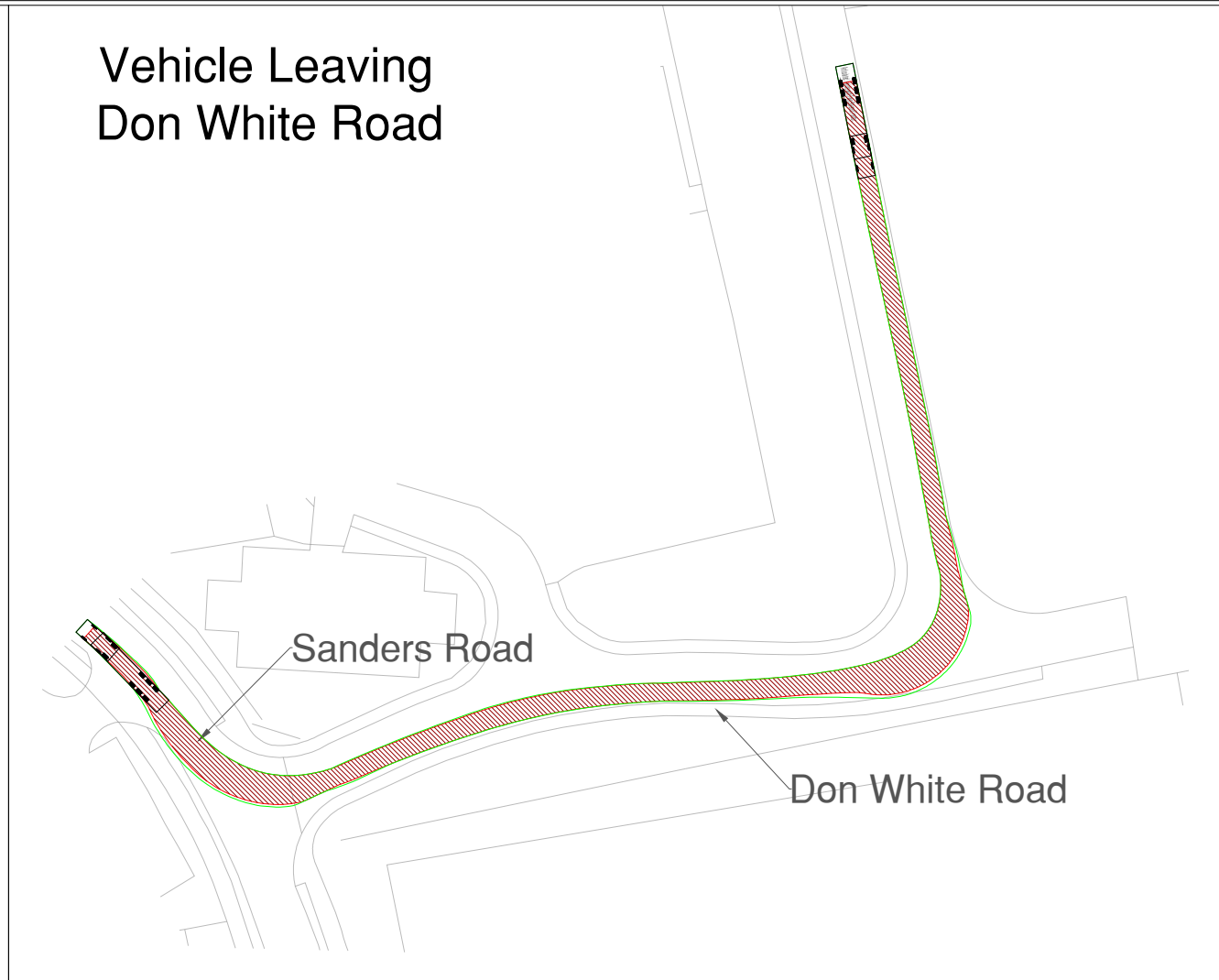
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A3

### Vehicle Entering Don White Road



### Vehicle Leaving Don White Road

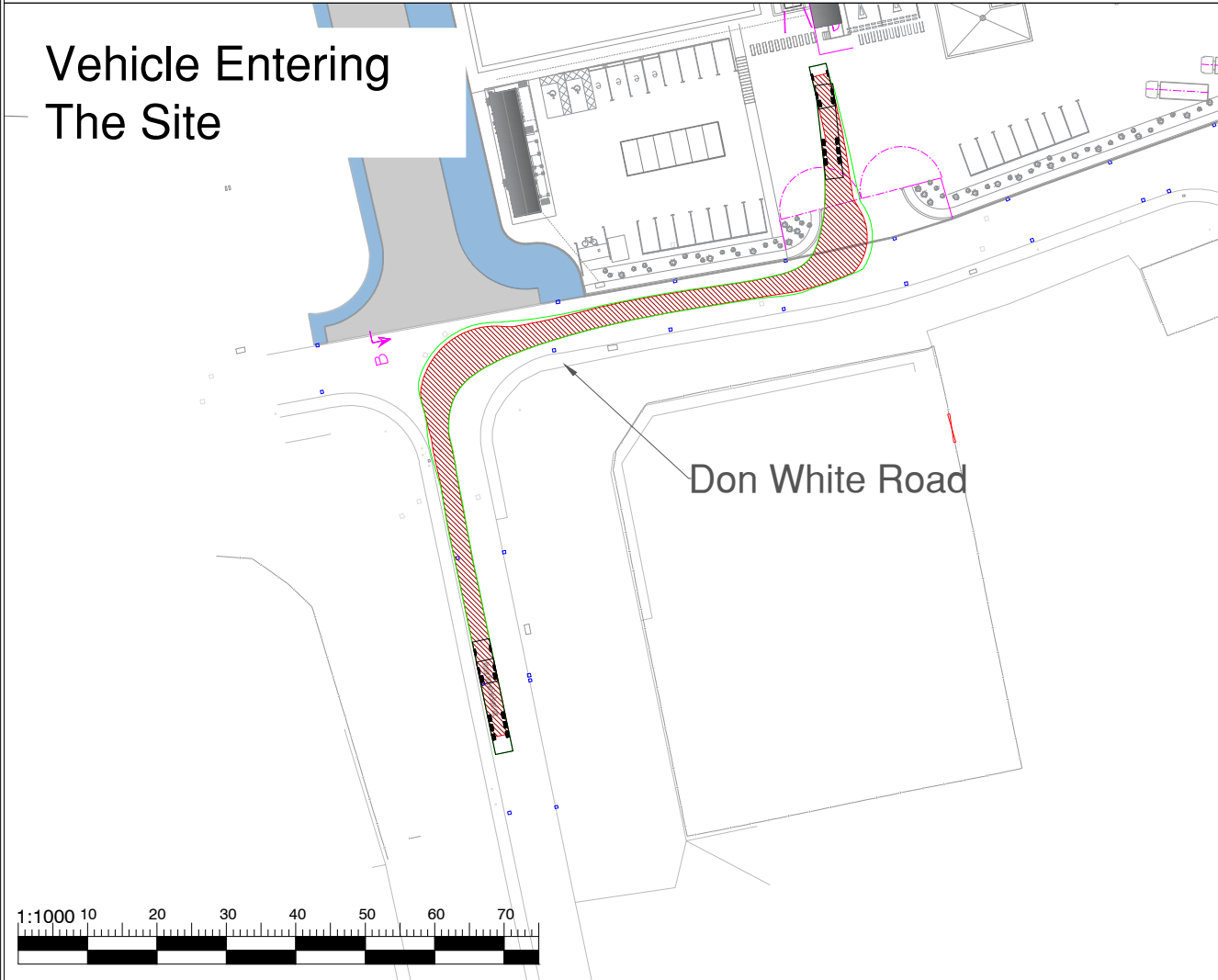


Articulated Vehicle with Twin Steered Tractor  
Overall Length 18.500m  
Overall Width 2.550m  
Overall Body Height 3.691m  
Min Body Ground Clearance 0.426m  
Max Track Width 2.500m  
Lock to lock time 6.00s  
Kerb to Kerb Turning Radius 6.987m

 Vehicle Wheelbase

 Vehicle Overhang

### Vehicle Entering The Site



### Vehicle Leaving the Site



**NOTE**  
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Do not scale from this drawing.

Rev	Date	Amendments	By	Chk



Client  
Covanta

Project  
Land North of Don White Road  
Wellingborough

Drawing Title  
Vehicles Entering and Leaving the Site

Status  
For Information

Scale	Drawn	Checked	Date
A3@ 1:1000	JWB	PES	08/12/2021

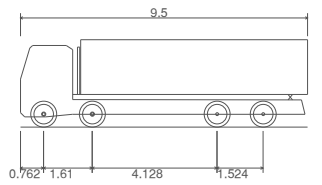
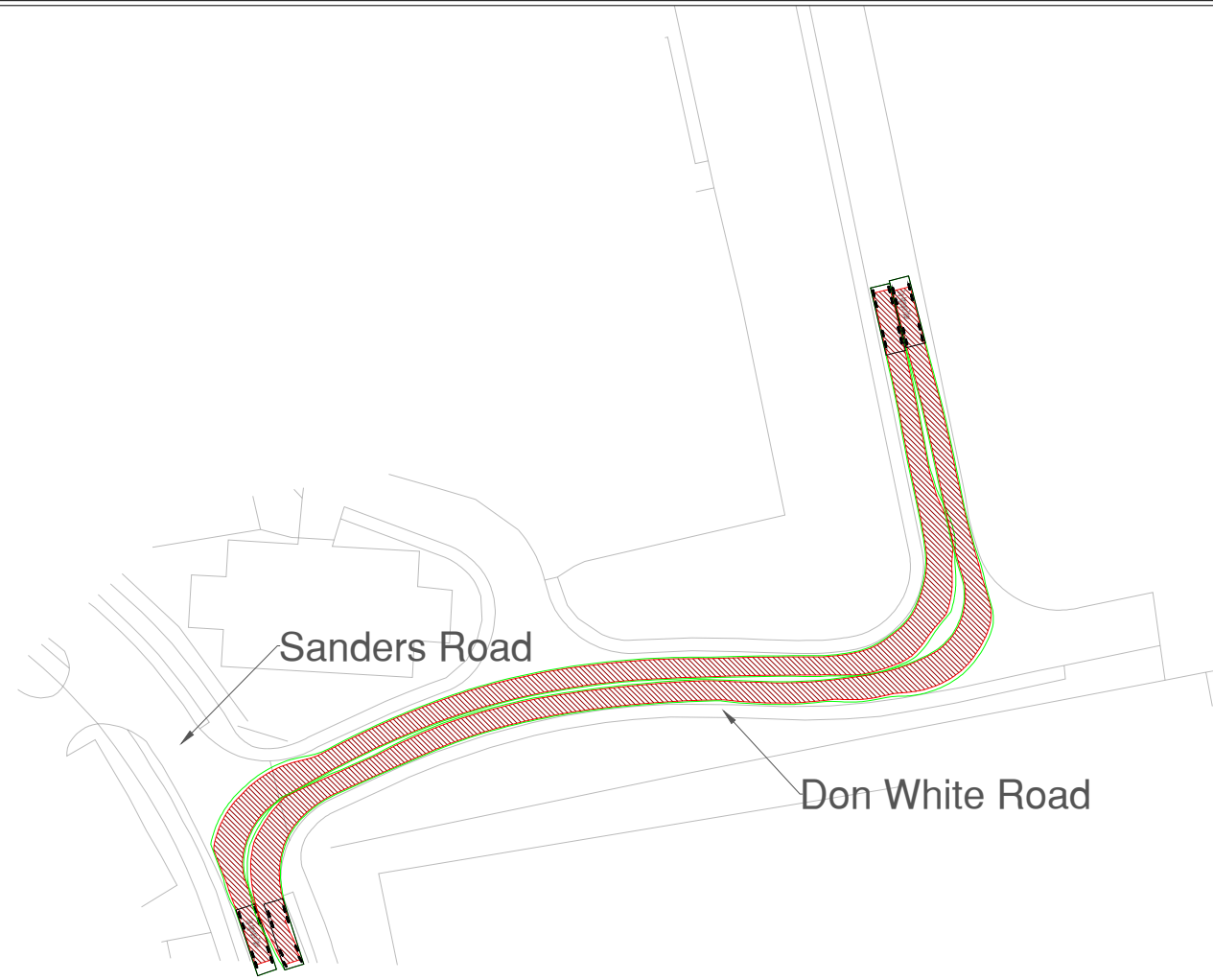
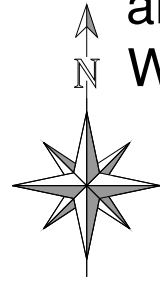
Drawing No. 21340-RLL-21-XX-DR-D-5005 Rev. A

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A3

# Vehicles Entering and Leaving Don White Road



Day Aggregate Tipper  
 Overall Length 9.500m  
 Overall Width 2.750m  
 Overall Body Height 2.890m  
 Min Body Ground Clearance 0.341m  
 Track Width 2.471m  
 Lock to lock time 6.00s  
 Kerb to Kerb Turning Radius 12.500m

 Vehicle Wheelbase  
 Vehicle Overhang

**NOTE**  
 Preliminary scheme only for comment & review. Based upon information provided / available at the time.

Detailed design subject to further review and amendment if required via S278 / technical approval process, to be secured via condition.

Do not scale from this drawing.

Rev	Date	Amendments	By	Chk



Client  
**Covanta**

Project  
**Land North of Don White Road  
 Wellingborough**

Drawing Title  
**Vehicles Passing as They  
 Enter and Leave the Site**

Status  
**For Information**

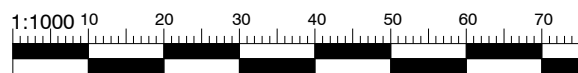
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Drawing No.	Rev.
21340-RLL-21-XX-DR-D-5006	A

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# Vehicles Entering and Leaving The Site

25m

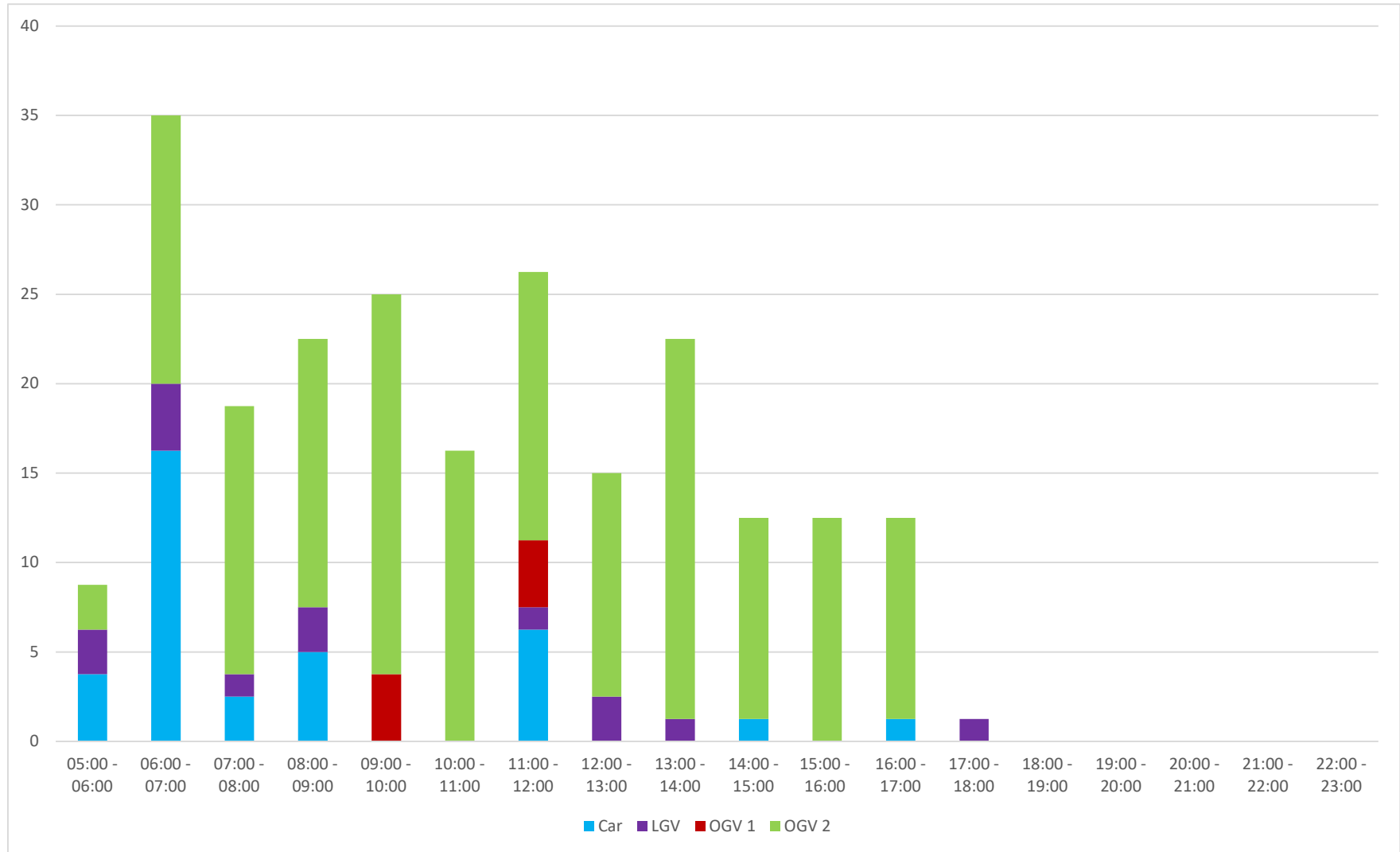


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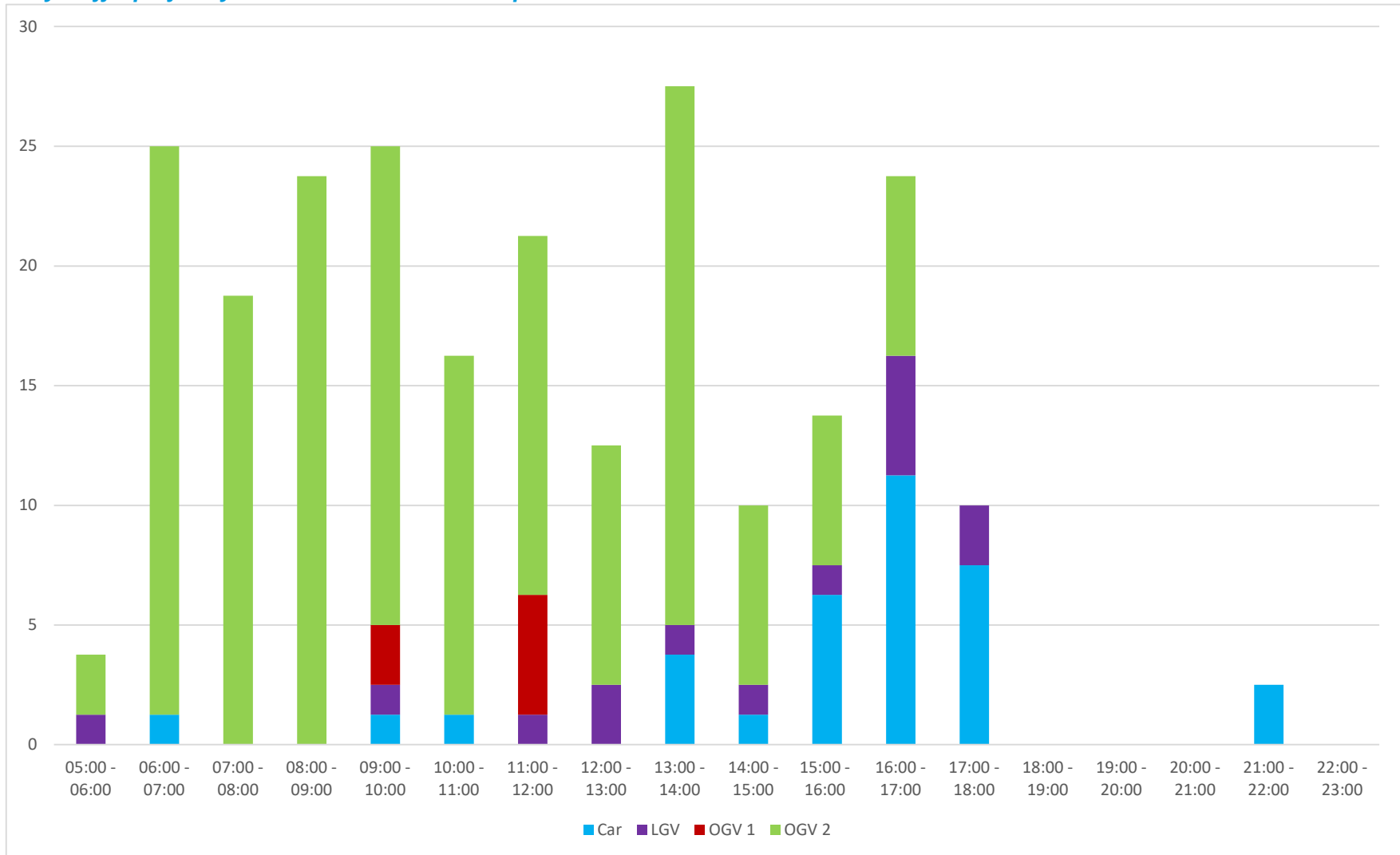


## **Appendix J – Wellingborough Daily Traffic Profile**

Daily traffic profile by hour and vehicle class - Arrivals

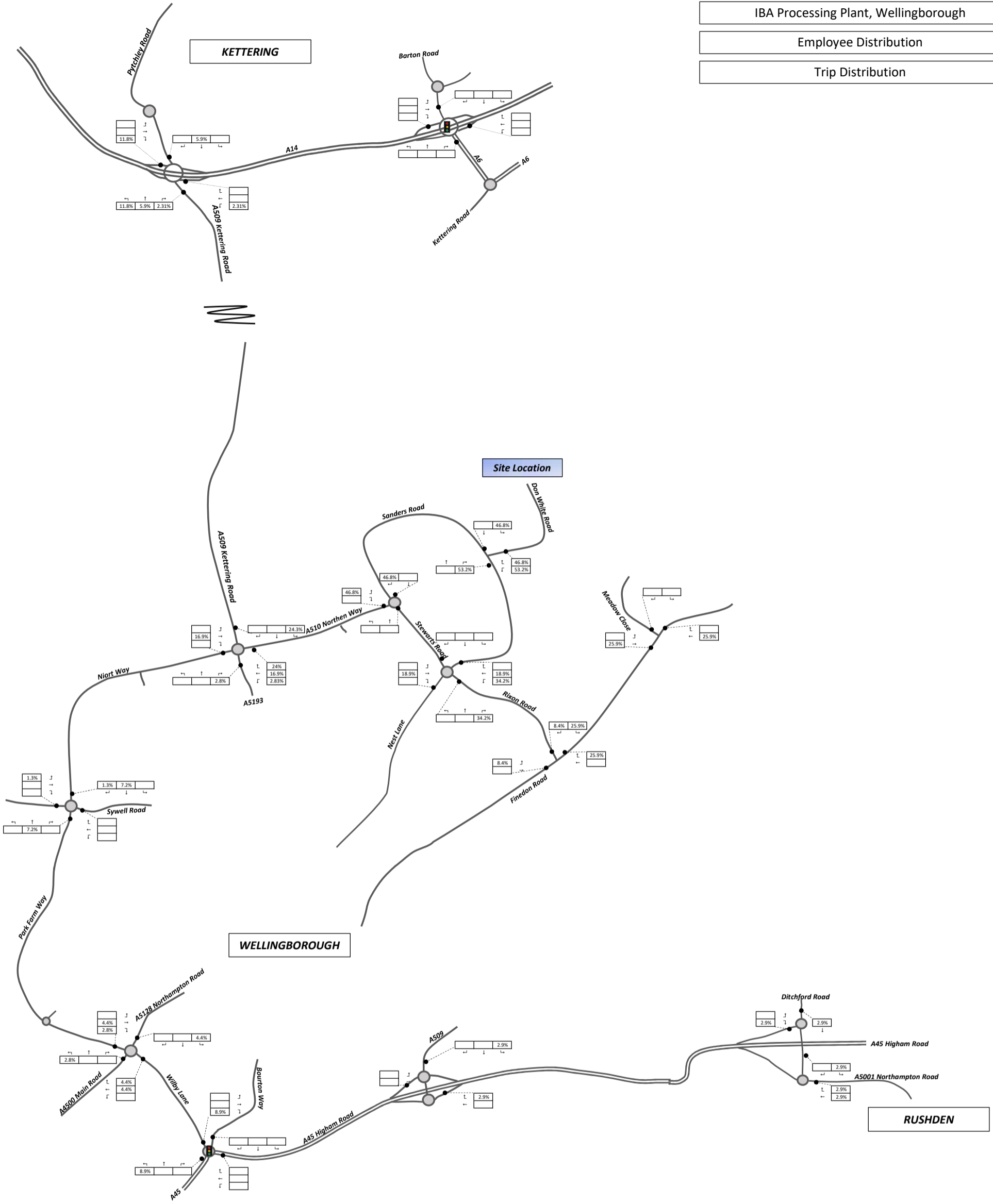


Daily traffic profile by hour and vehicle class - Departures



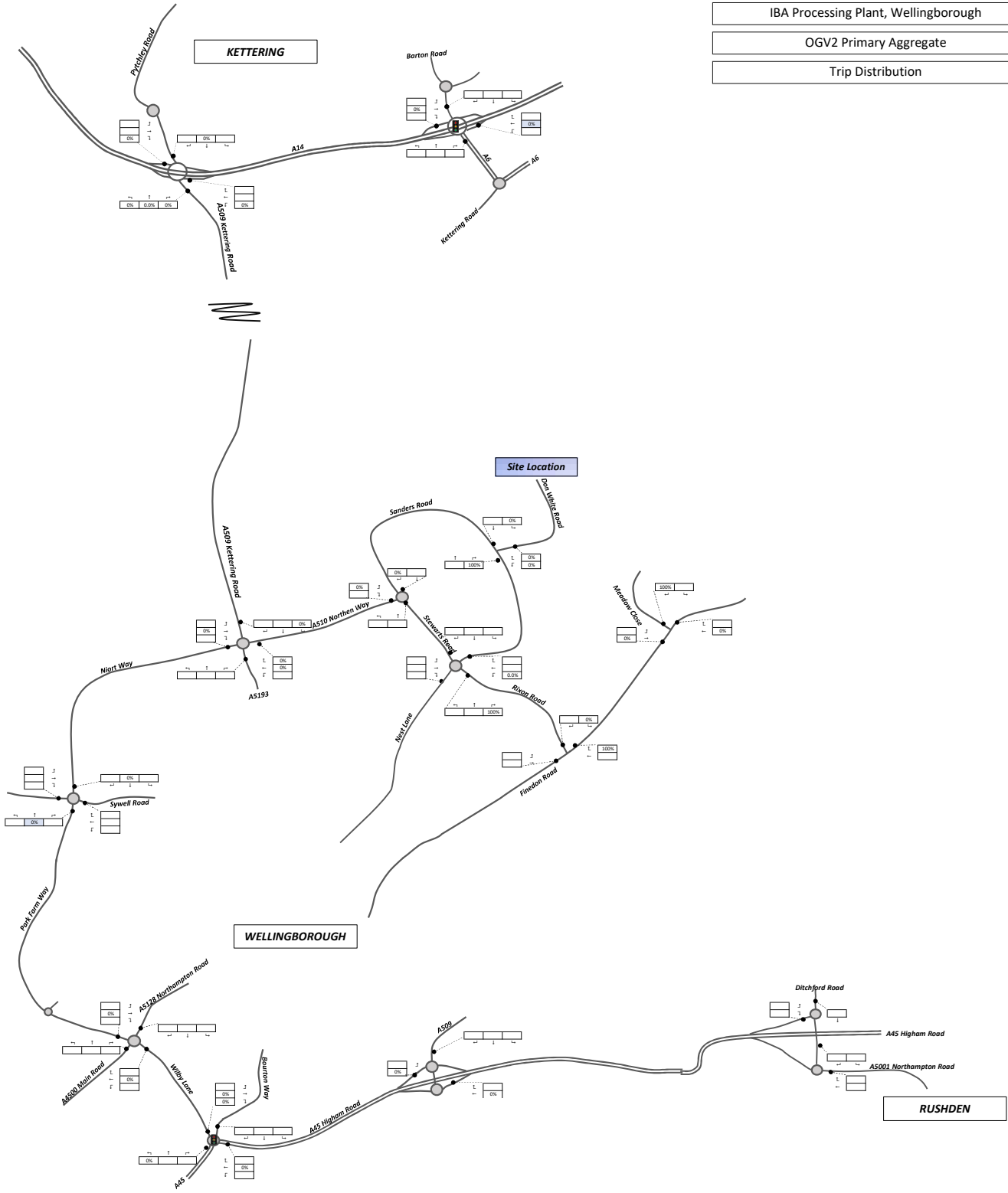
## **Appendix K – 2011 Census Distribution**

IBA Processing Plant, Wellingborough  
Employee Distribution  
Trip Distribution

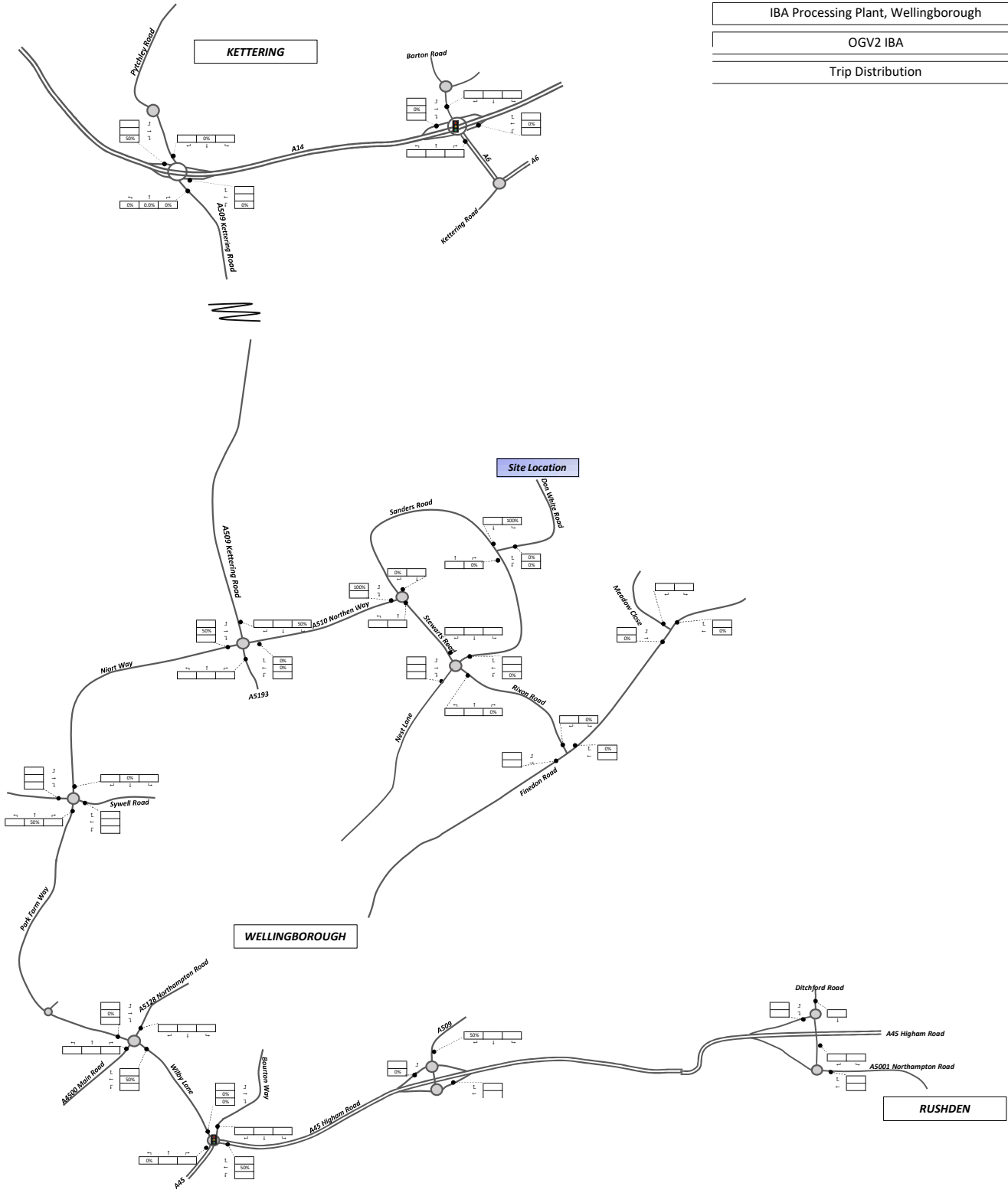


## Appendix L – OGV2 Distribution

IBA Processing Plant, Wellingborough  
OGV2 Primary Aggregate  
Trip Distribution

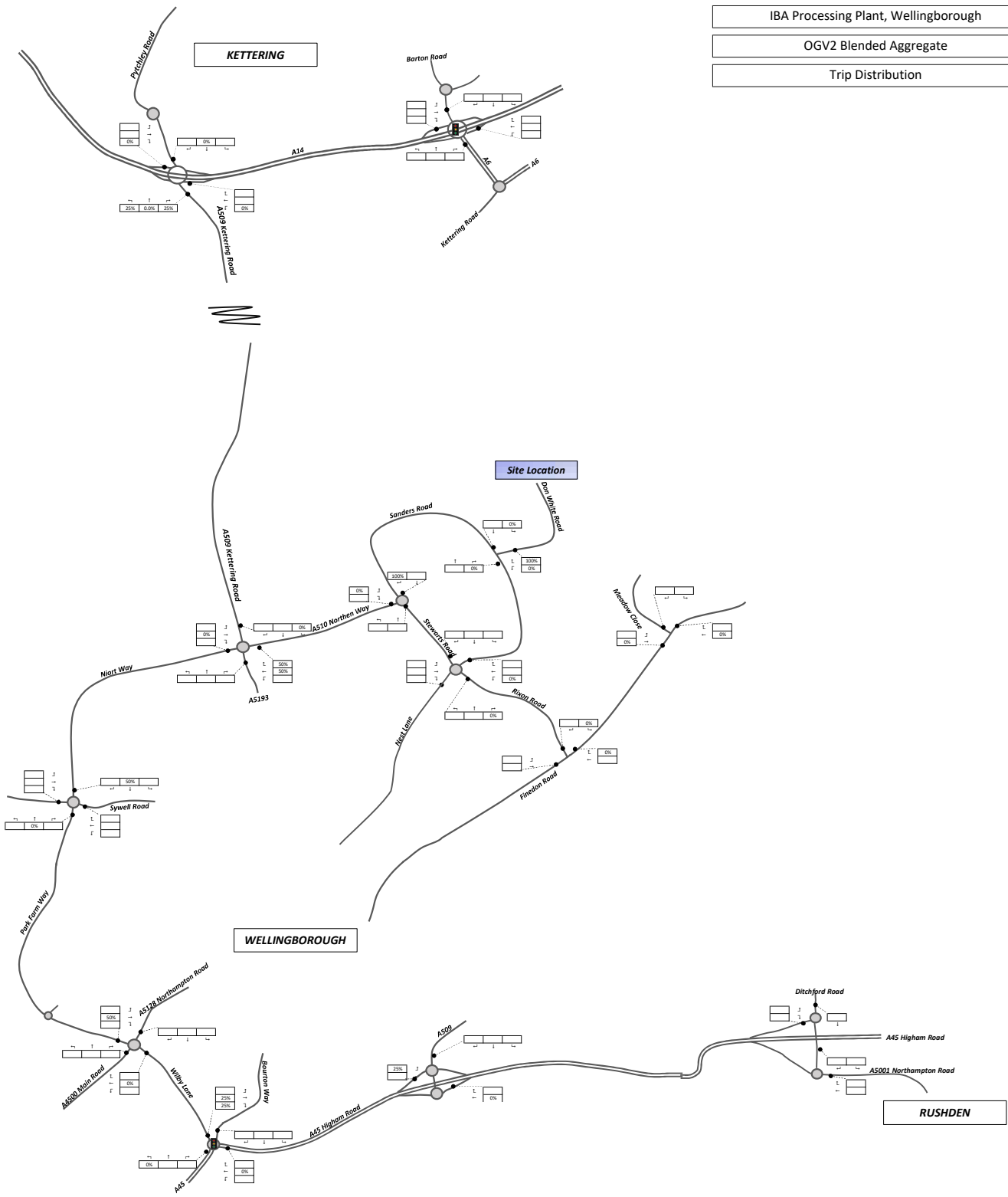


IBA Processing Plant, Wellingborough
OGV2 IBA
Trip Distribution

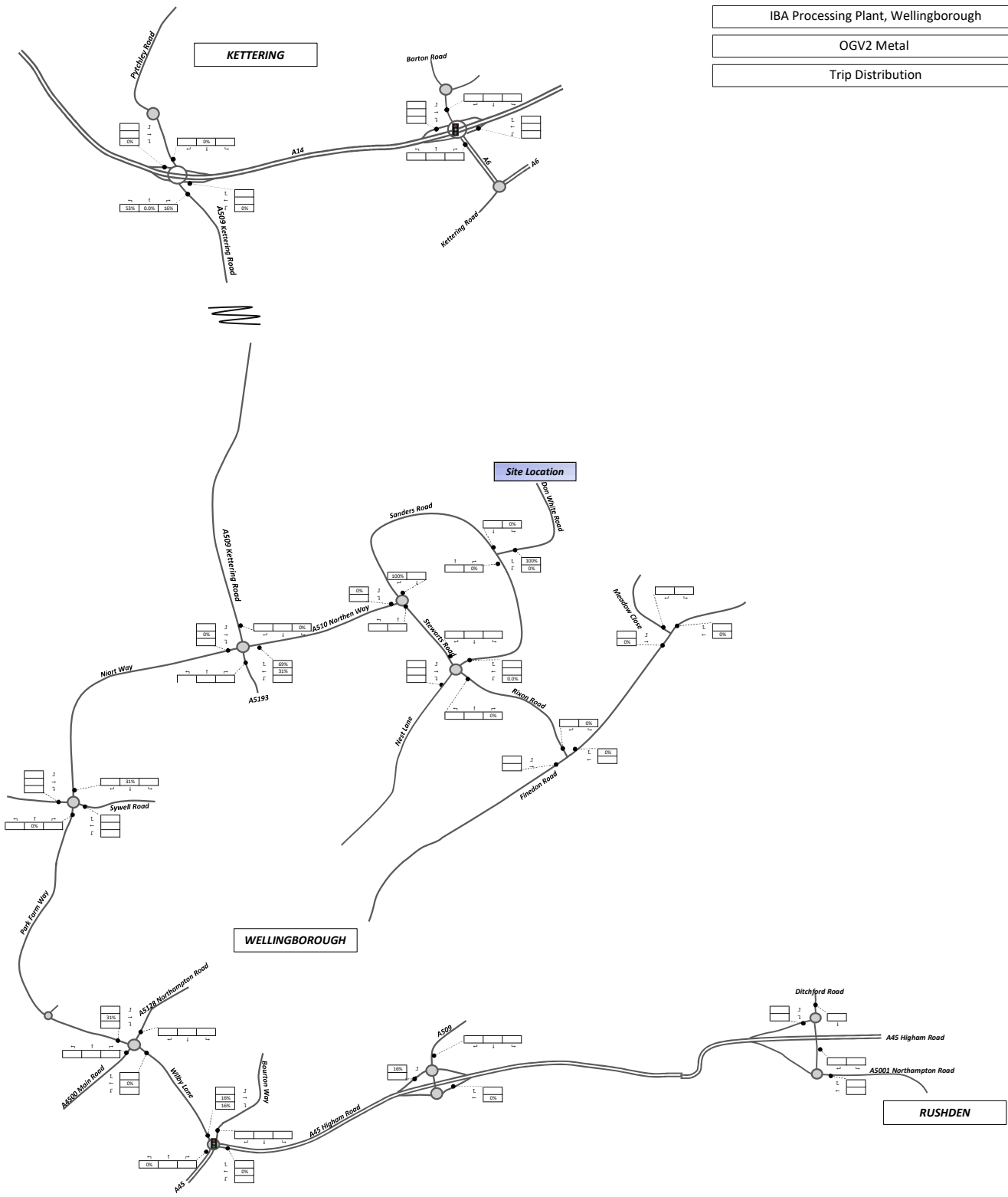




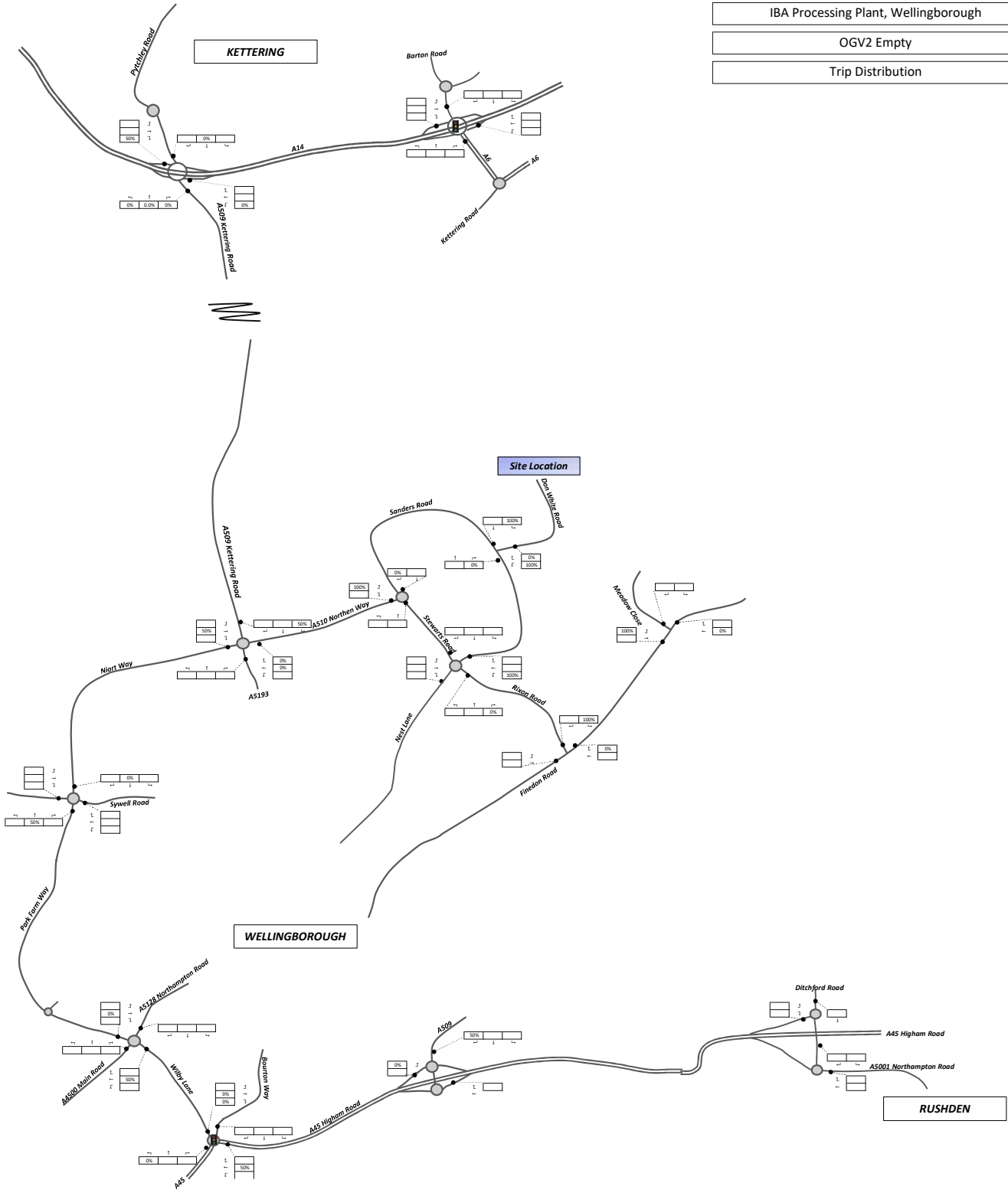
IBA Processing Plant, Wellingborough  
OGV2 Blended Aggregate  
Trip Distribution



IBA Processing Plant, Wellingborough  
OGV2 Metal  
Trip Distribution



IBA Processing Plant, Wellingborough  
OGV2 Empty  
Trip Distribution

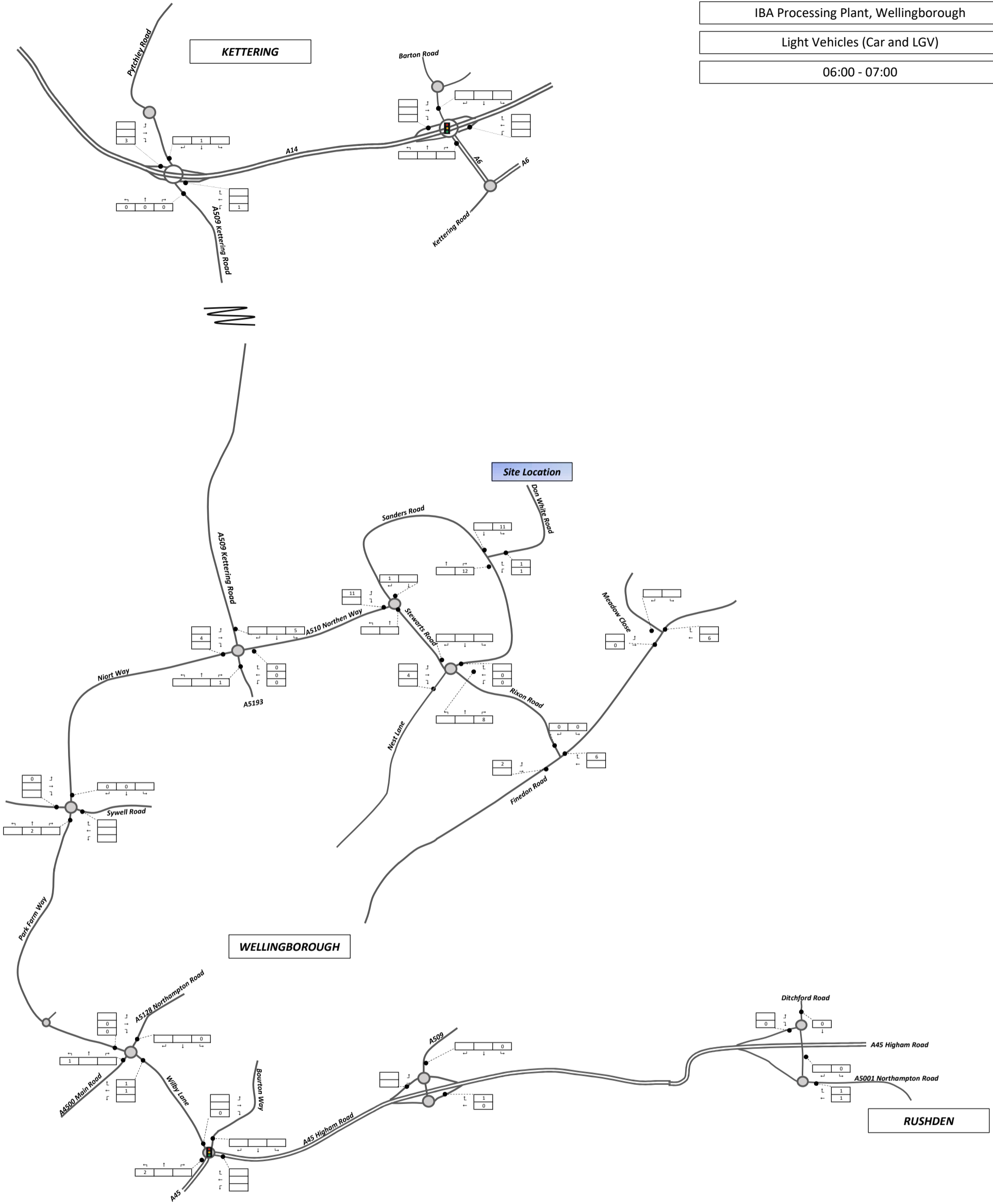


## **Appendix M – Traffic Flow Spreadsheets: Development Trips**

IBA Processing Plant, Wellingborough

Light Vehicles (Car and LGV)

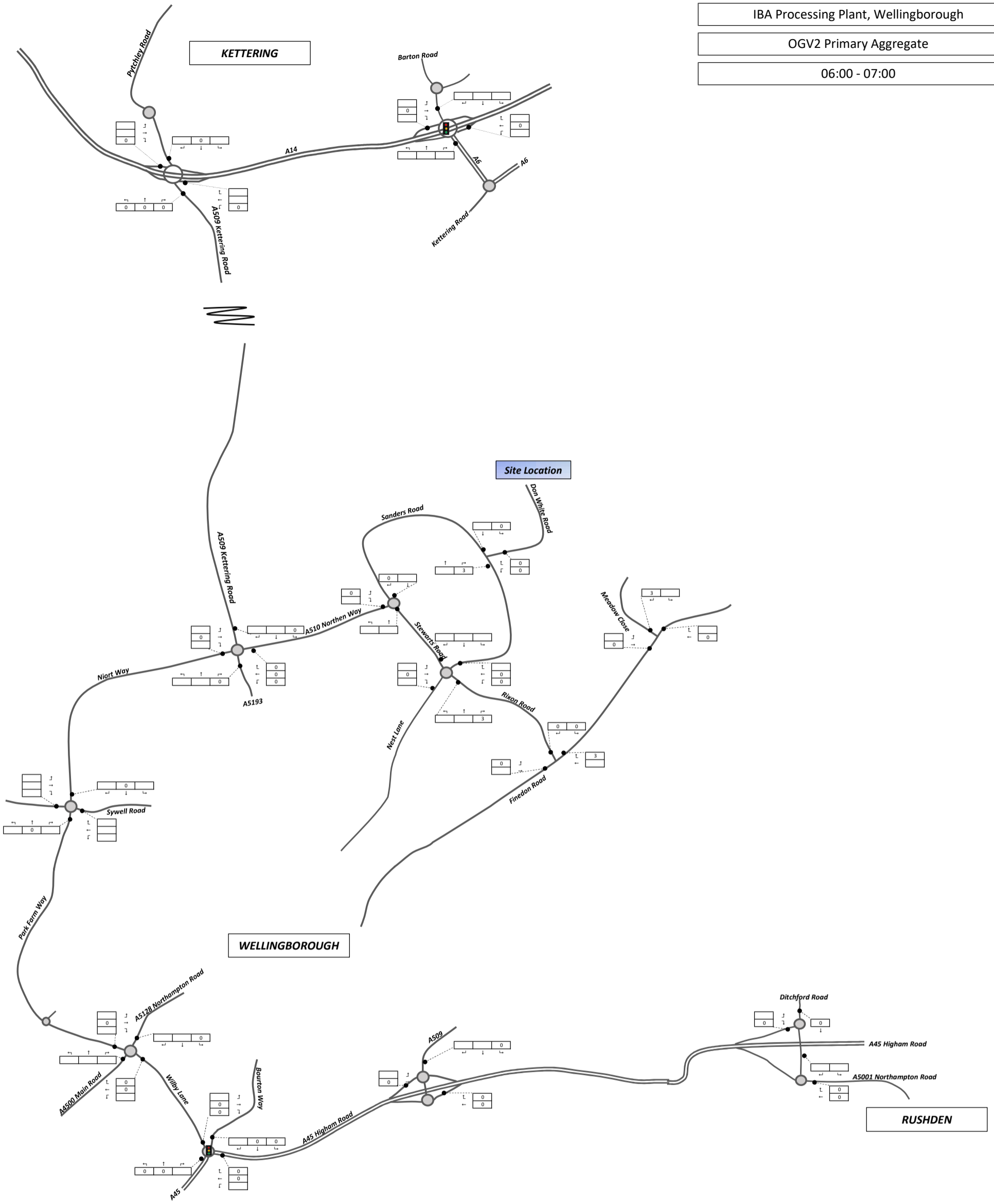
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IBA Processing Plant, Wellingborough

OGV2 Primary Aggregate

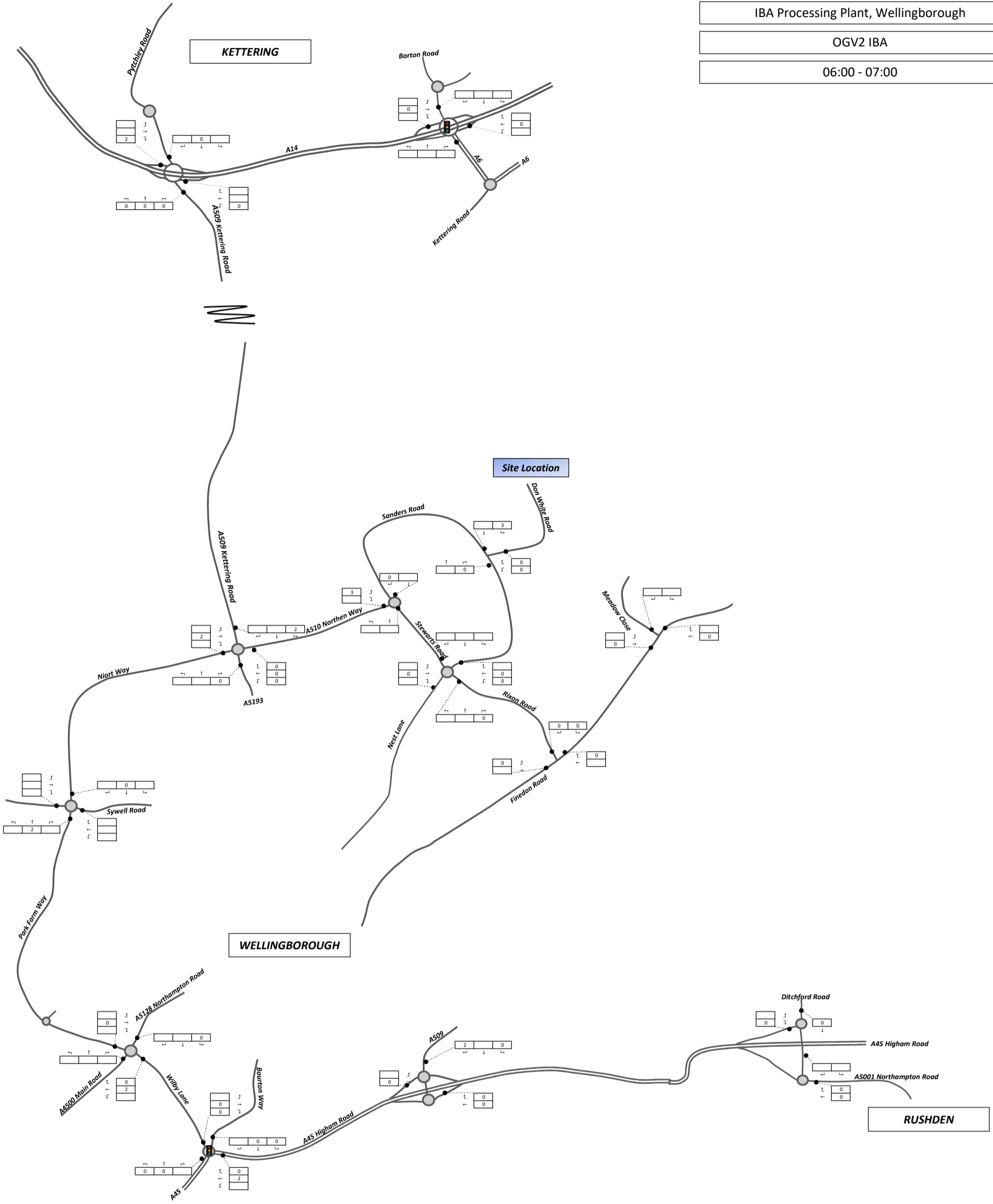
06:00 - 07:00



IBA Processing Plant, Wellingborough

OGV2 IBA

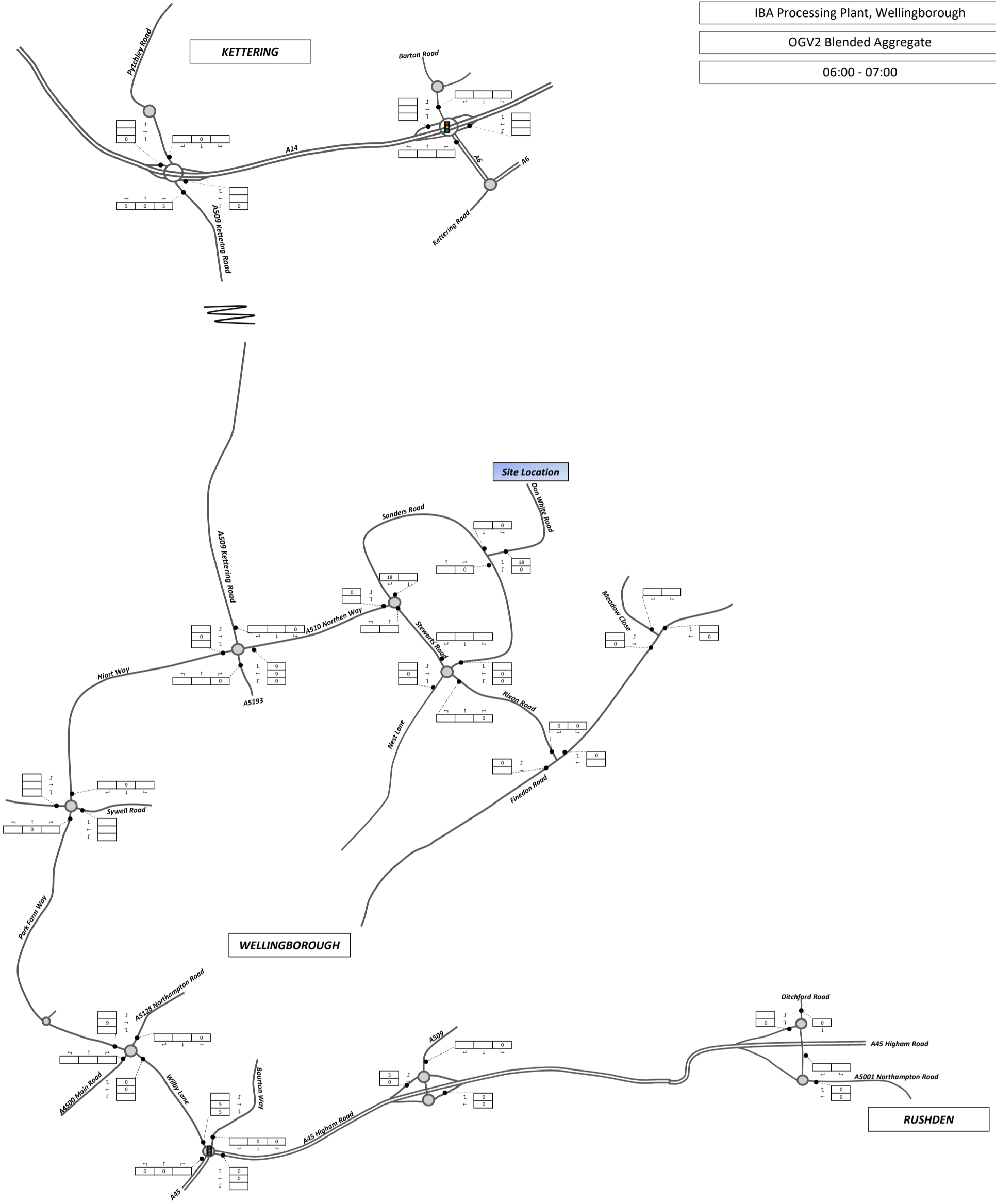
06:00 - 07:00



IBA Processing Plant, Wellingborough

OGV2 Blended Aggregate

06:00 - 07:00

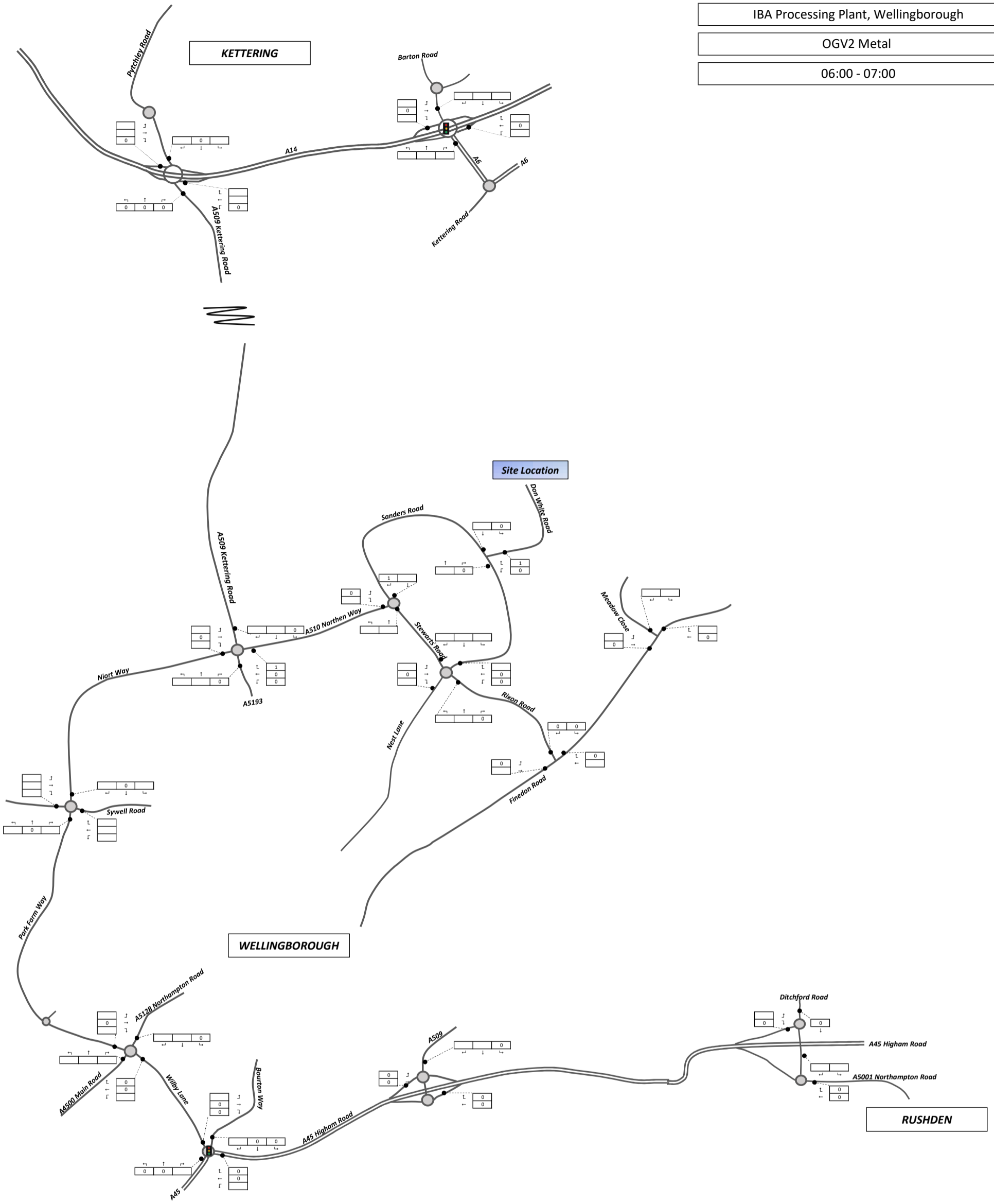




IBA Processing Plant, Wellingborough

OGV2 Metal

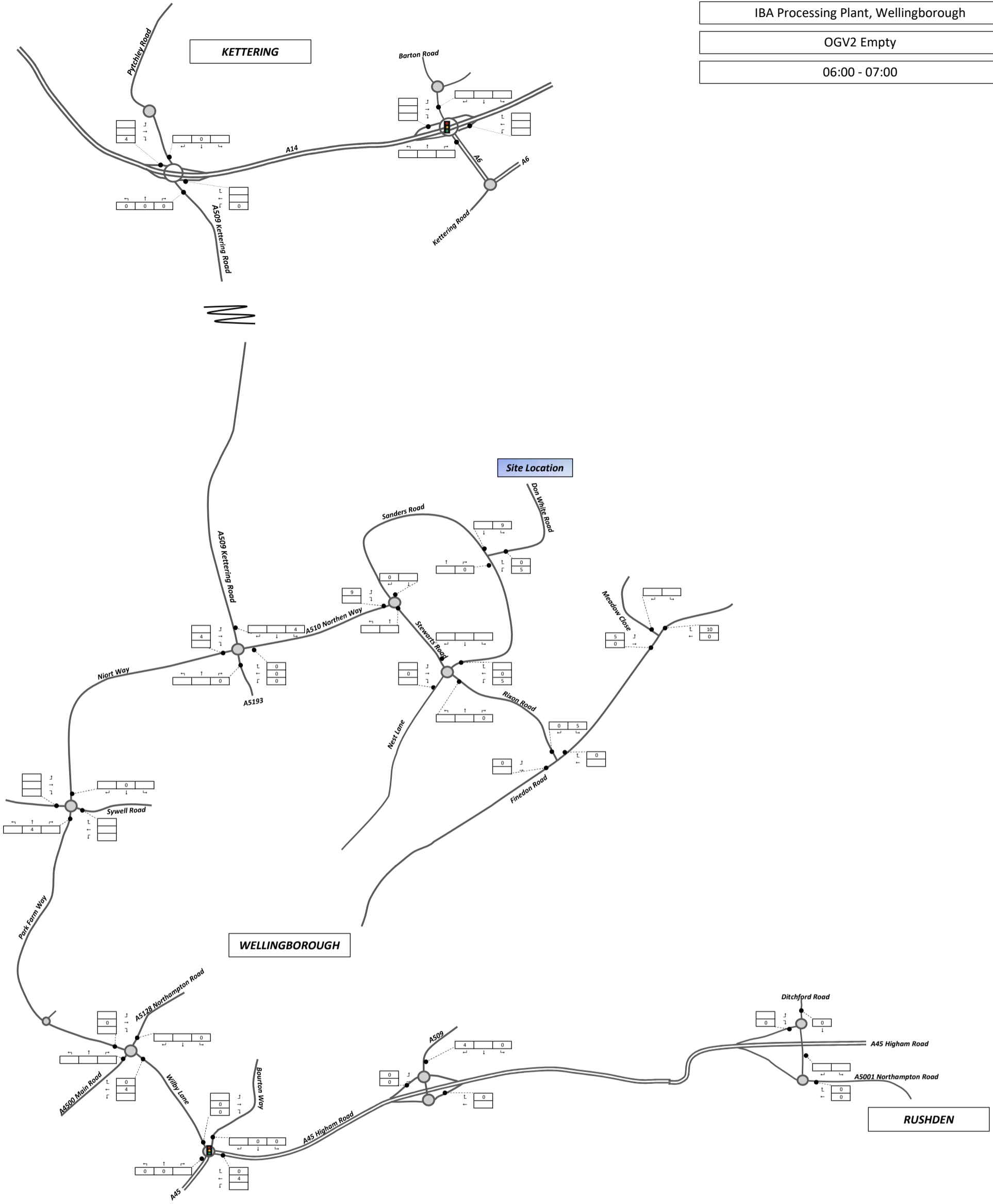
06:00 - 07:00



IBA Processing Plant, Wellingborough

OGV2 Empty

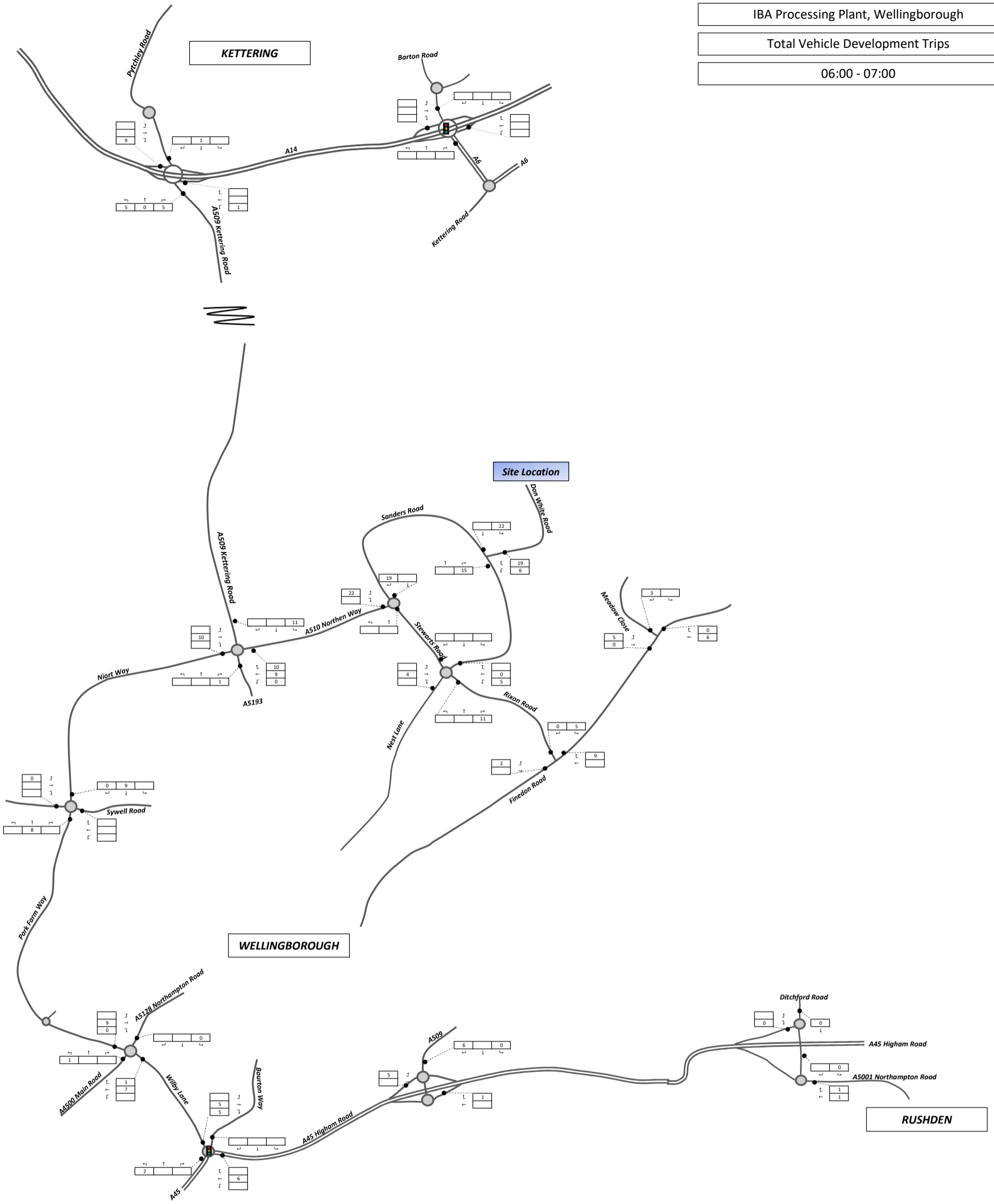
06:00 - 07:00



IBA Processing Plant, Wellingborough

Total Vehicle Development Trips

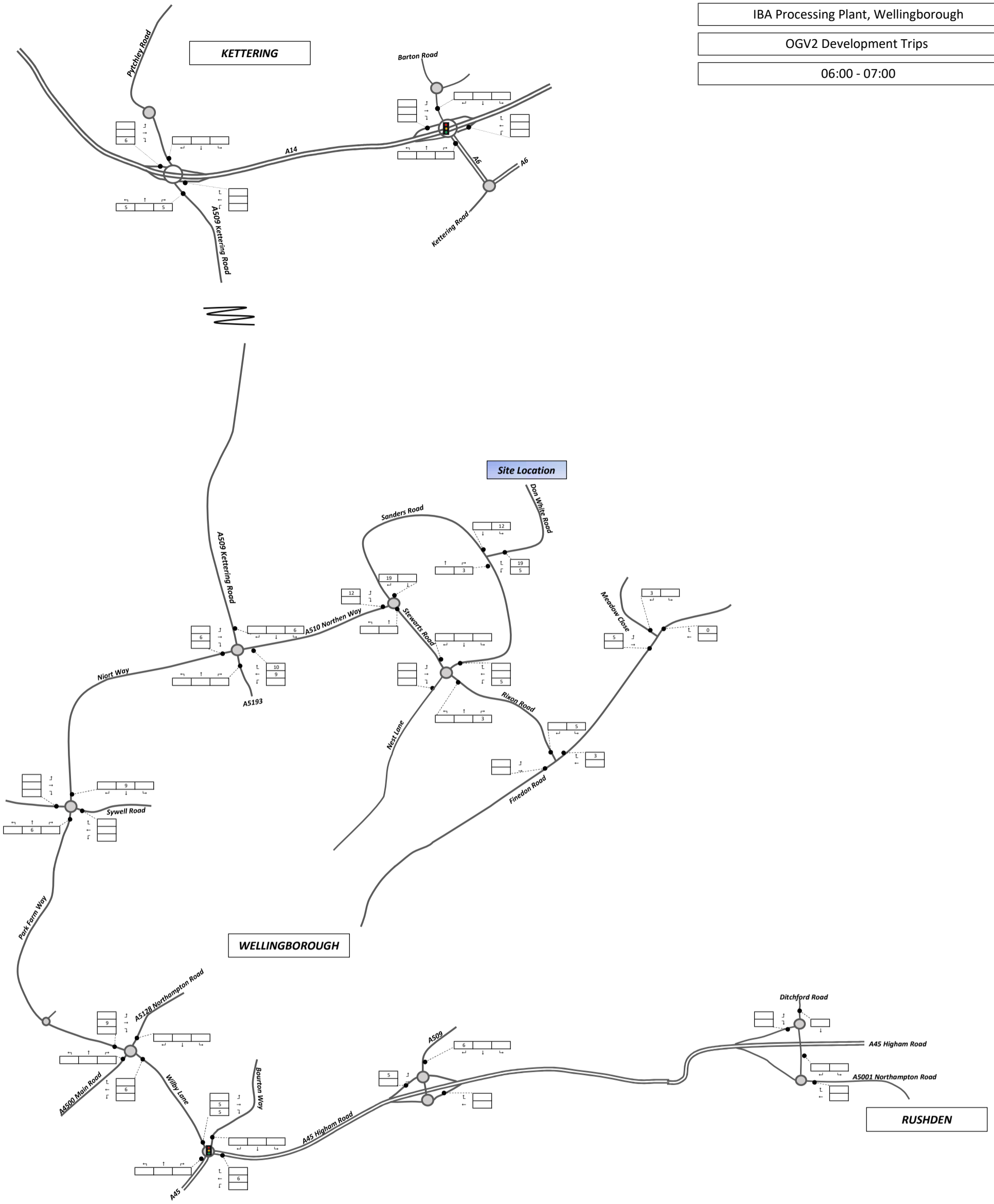
06:00 - 07:00



IBA Processing Plant, Wellingborough

OGV2 Development Trips

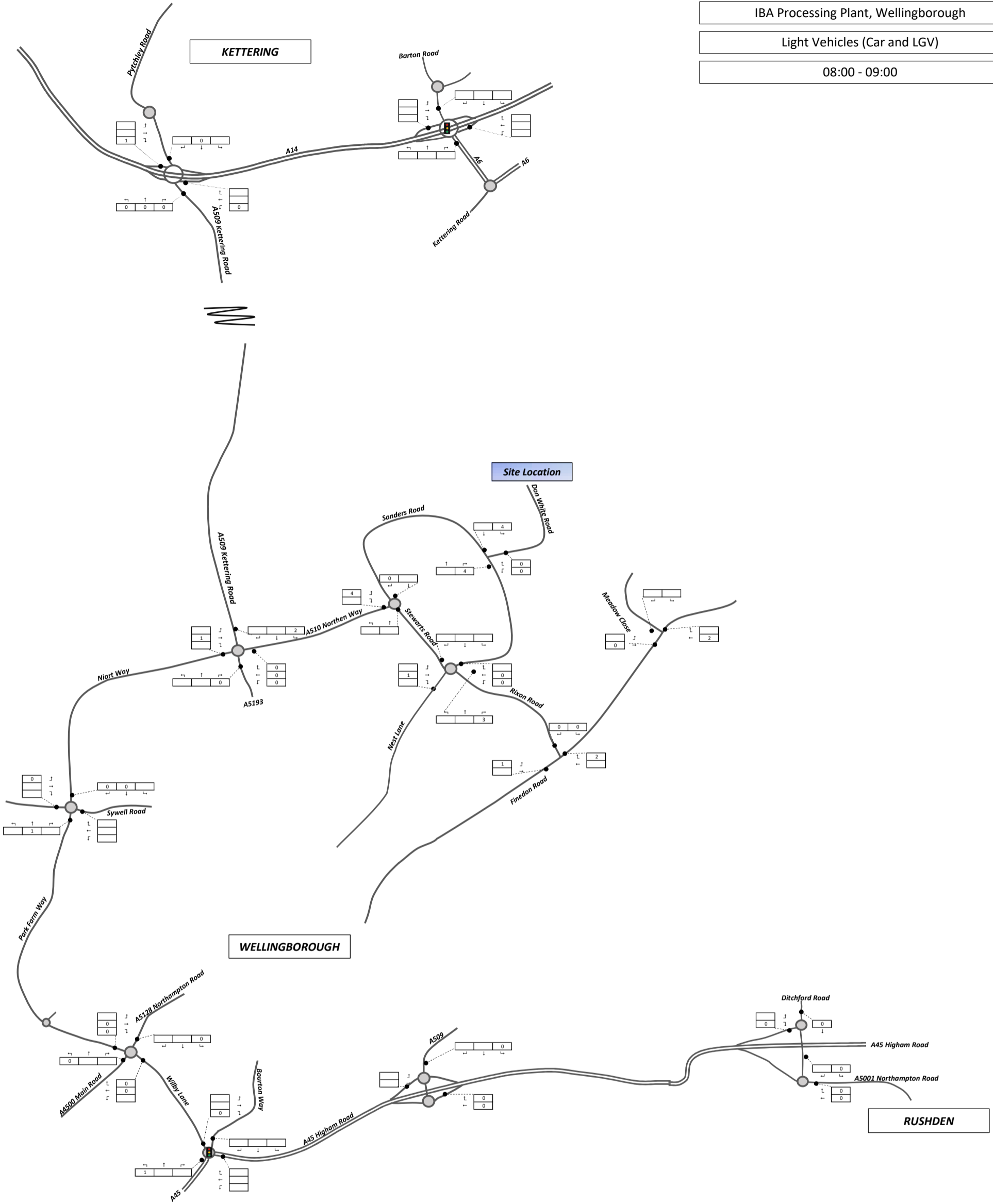
06:00 - 07:00



IBA Processing Plant, Wellingborough

Light Vehicles (Car and LGV)

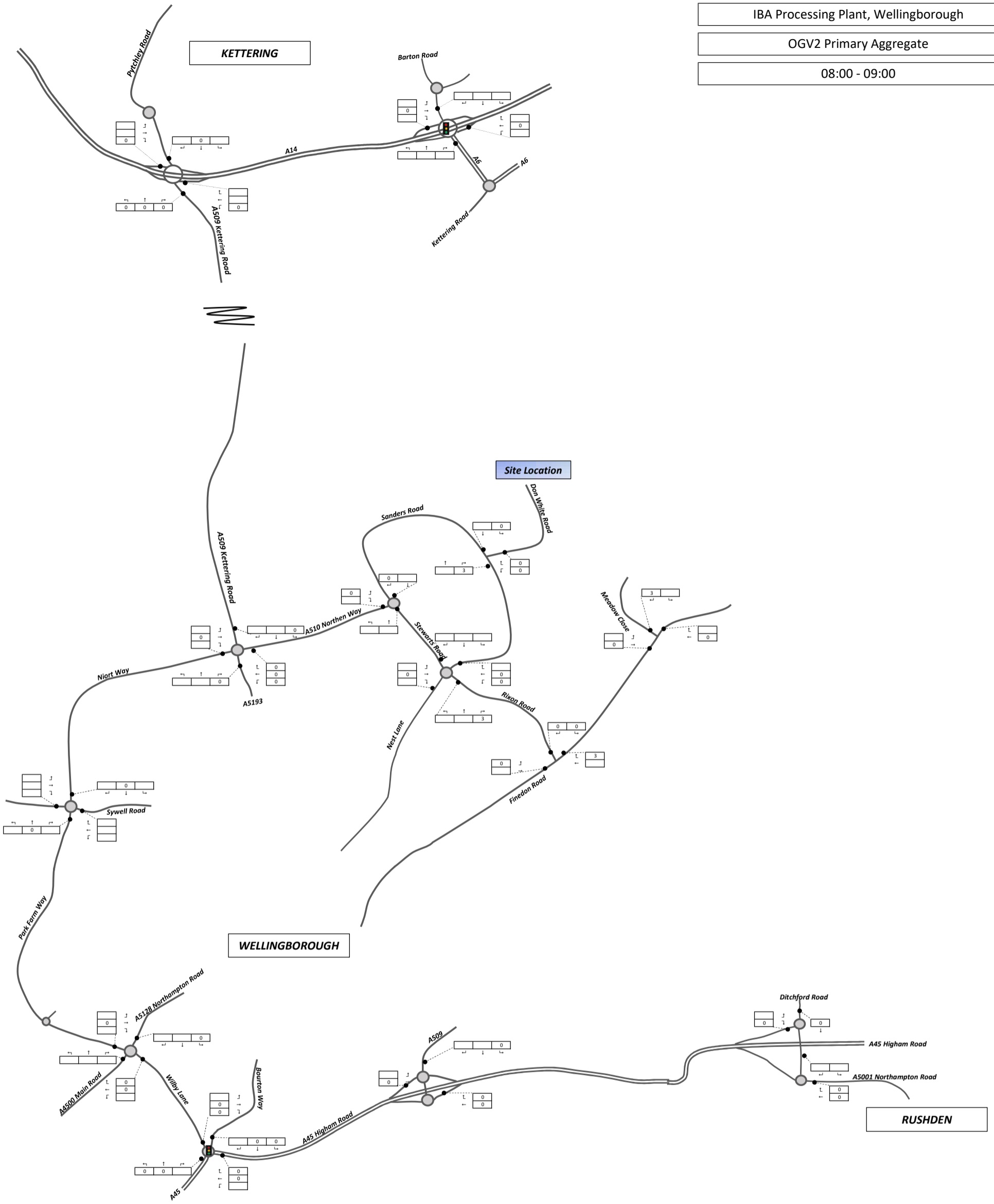
08:00 - 09:00



IBA Processing Plant, Wellingborough

OGV2 Primary Aggregate

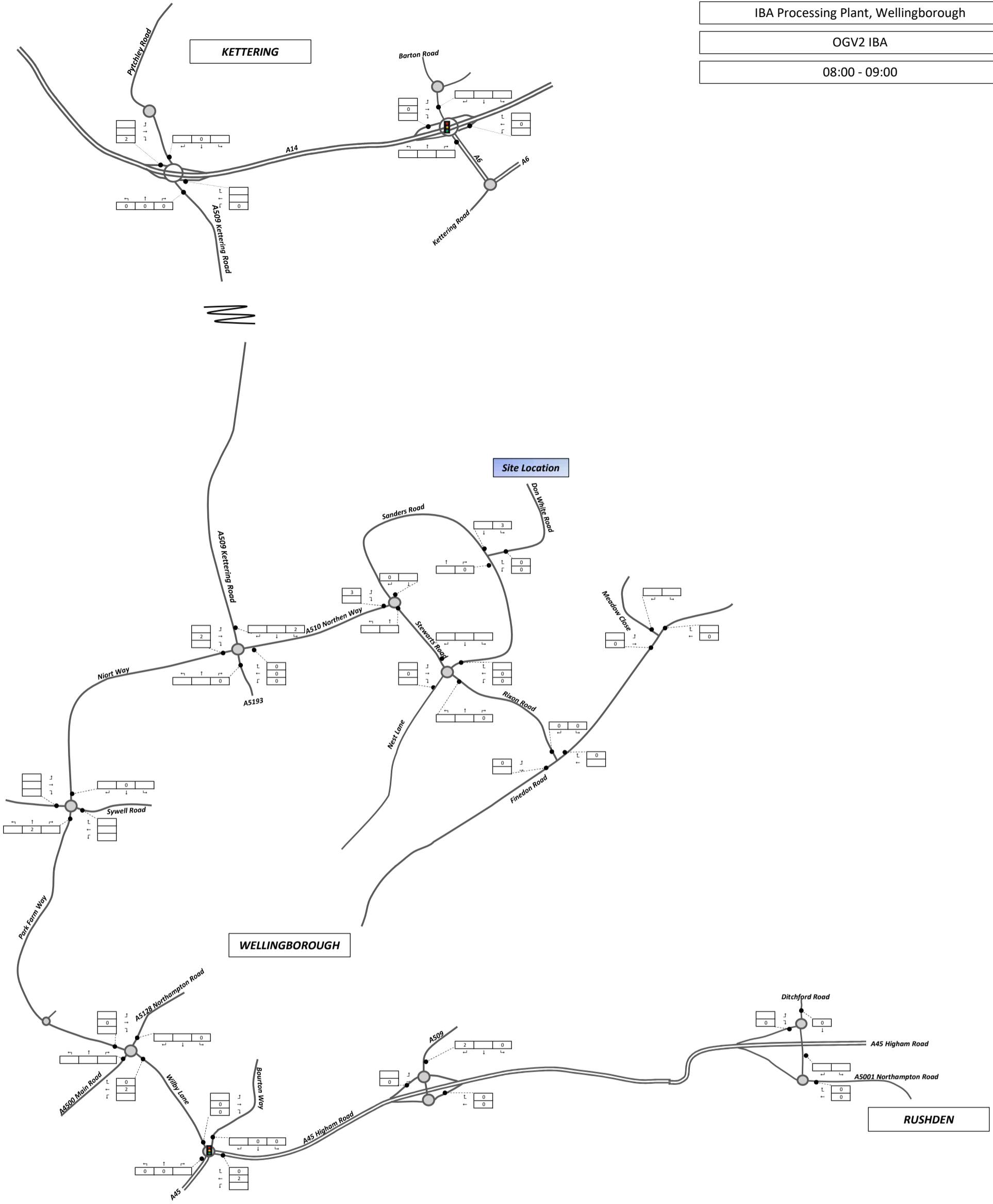
08:00 - 09:00



IBA Processing Plant, Wellingborough

OGV2 IBA

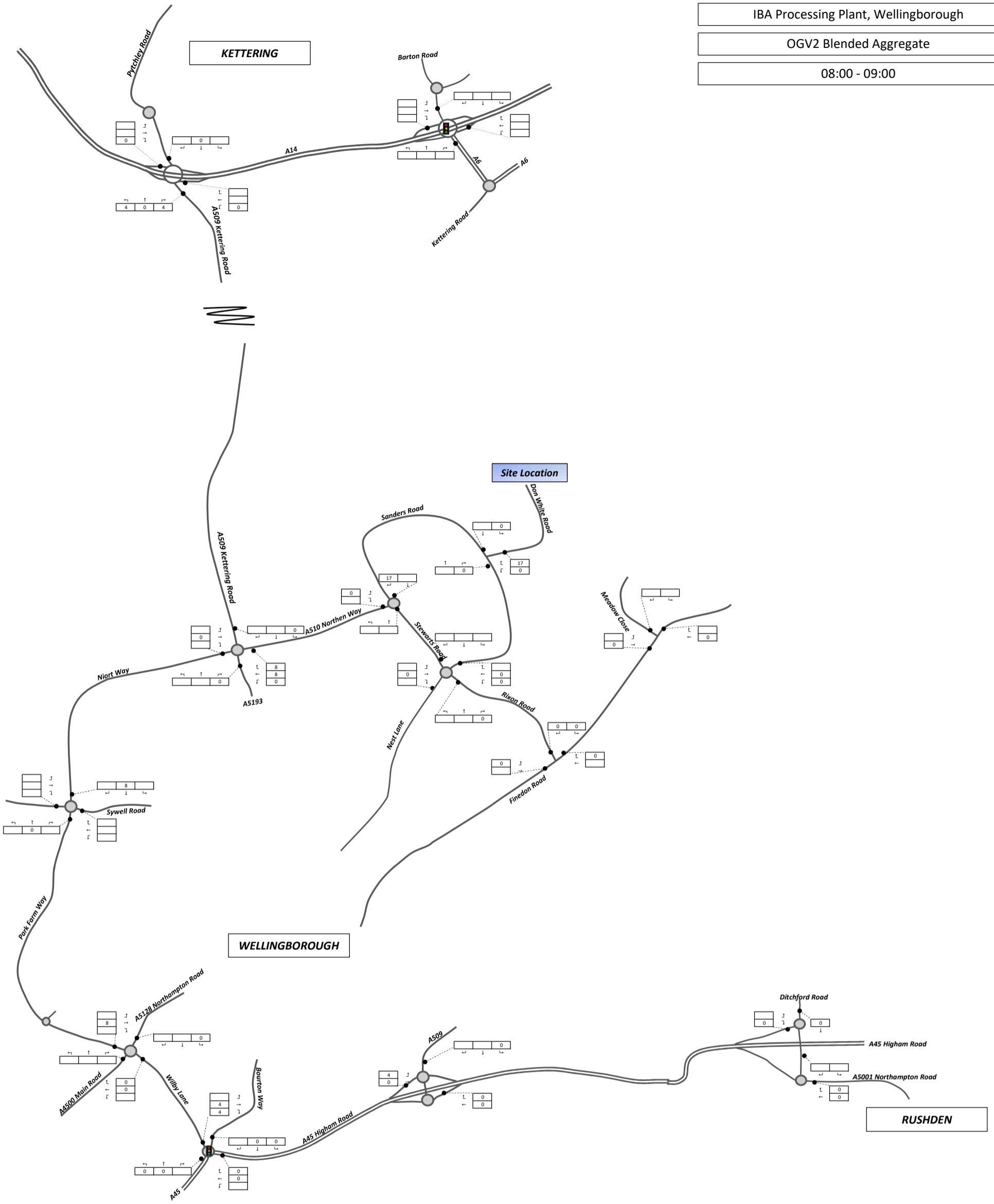
08:00 - 09:00



IBA Processing Plant, Wellingborough

OGV2 Blended Aggregate

08:00 - 09:00

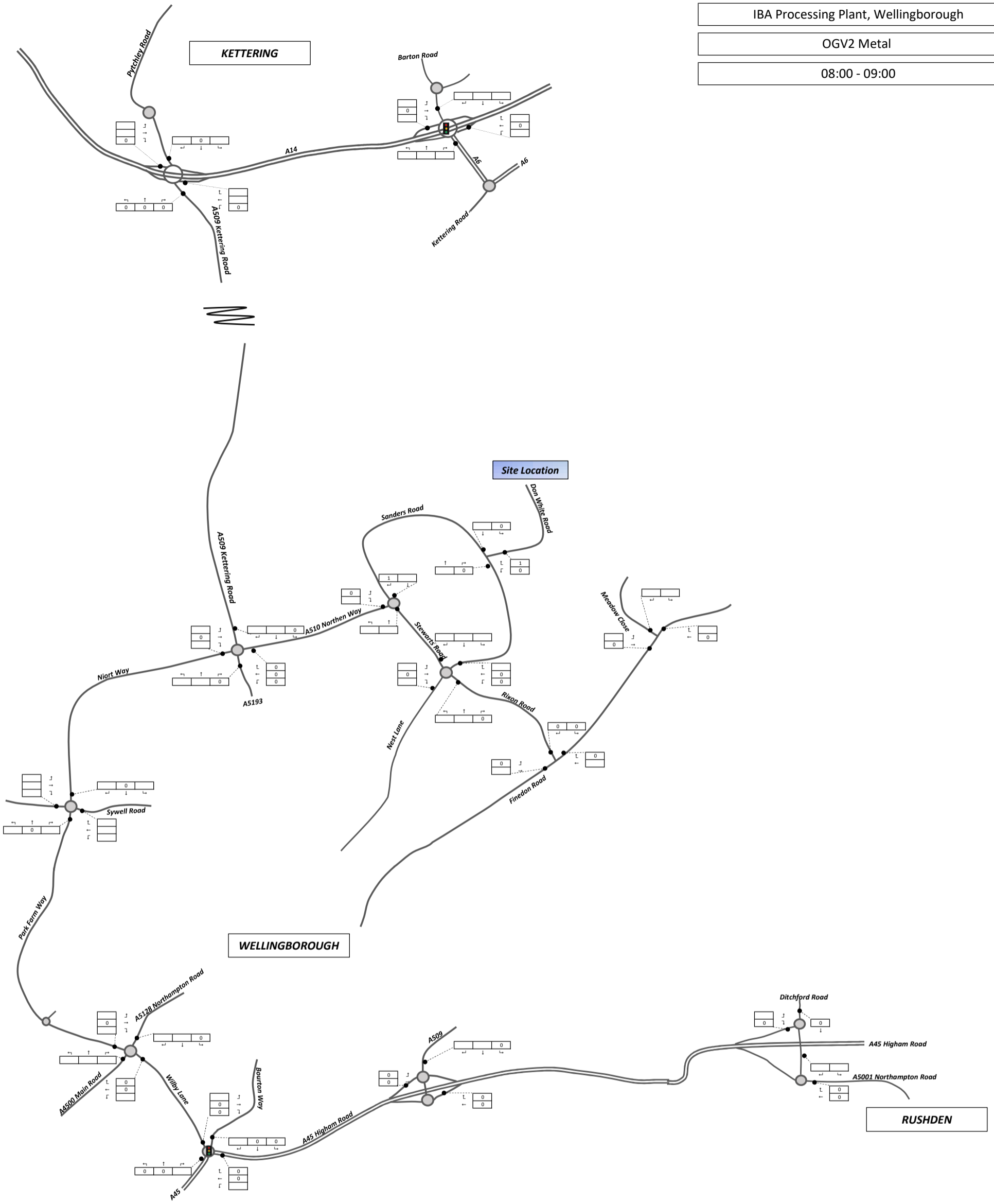




IBA Processing Plant, Wellingborough

OGV2 Metal

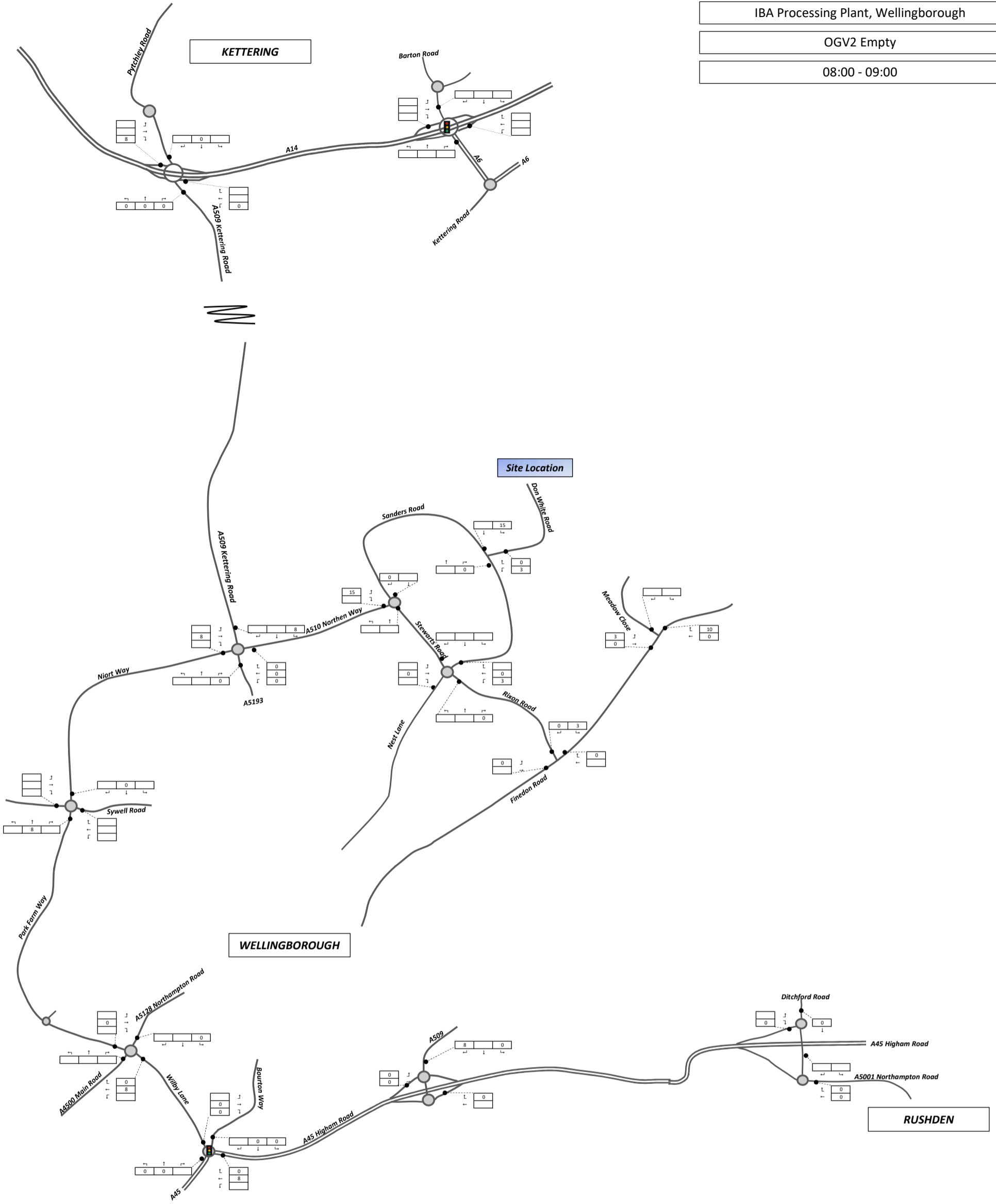
08:00 - 09:00



IBA Processing Plant, Wellingborough

OGV2 Empty

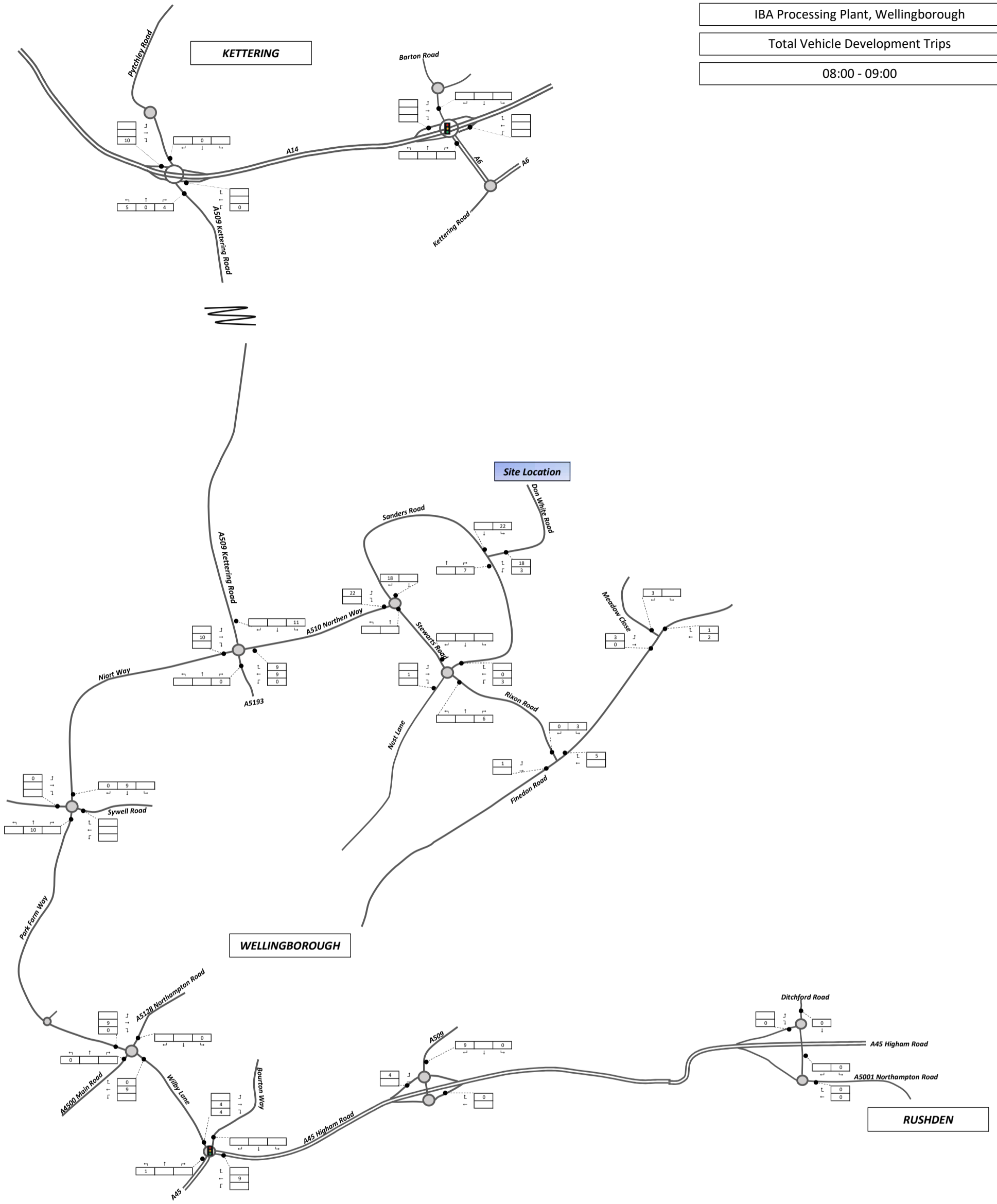
08:00 - 09:00



IBA Processing Plant, Wellingborough

Total Vehicle Development Trips

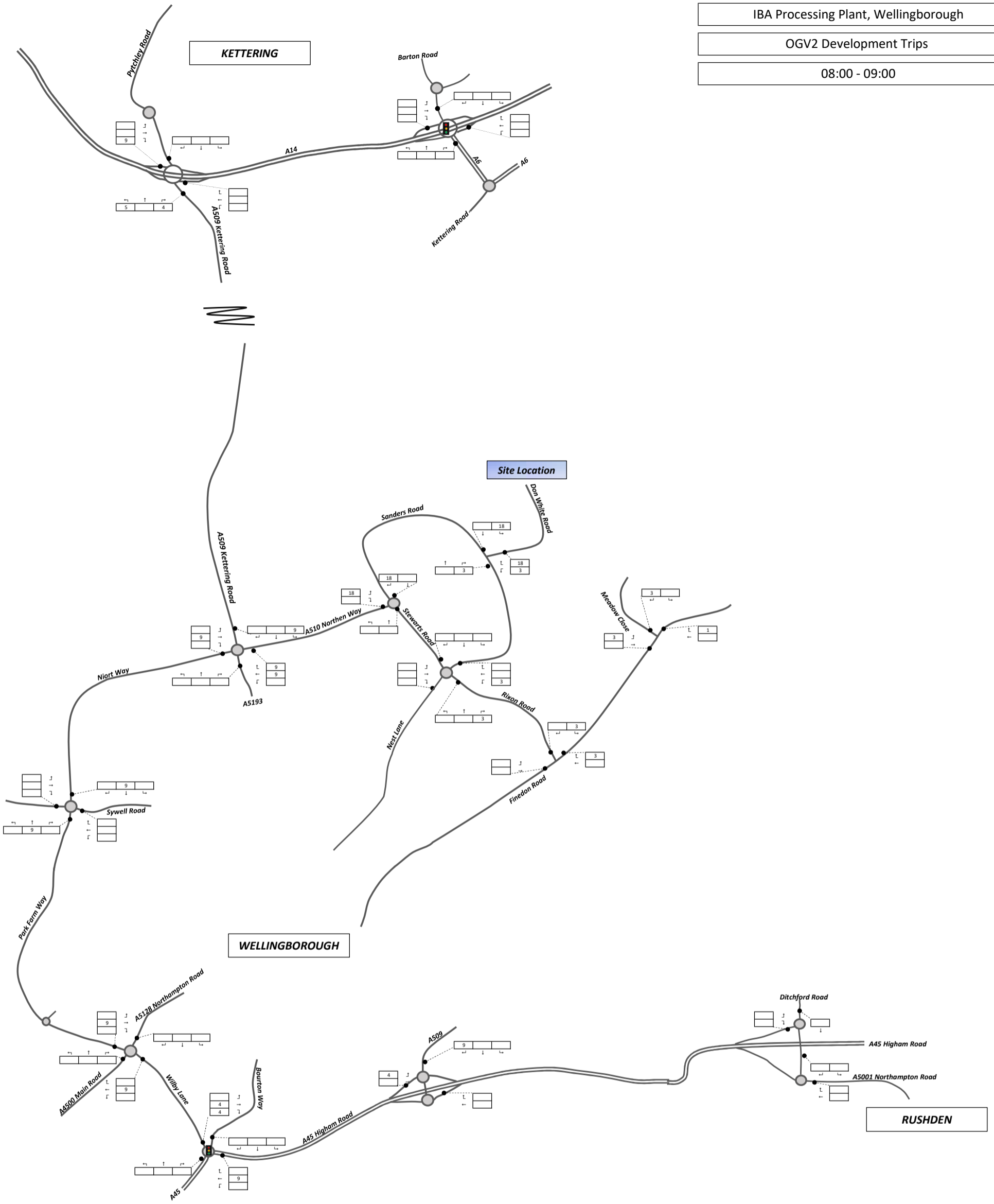
08:00 - 09:00



IBA Processing Plant, Wellingborough

OGV2 Development Trips

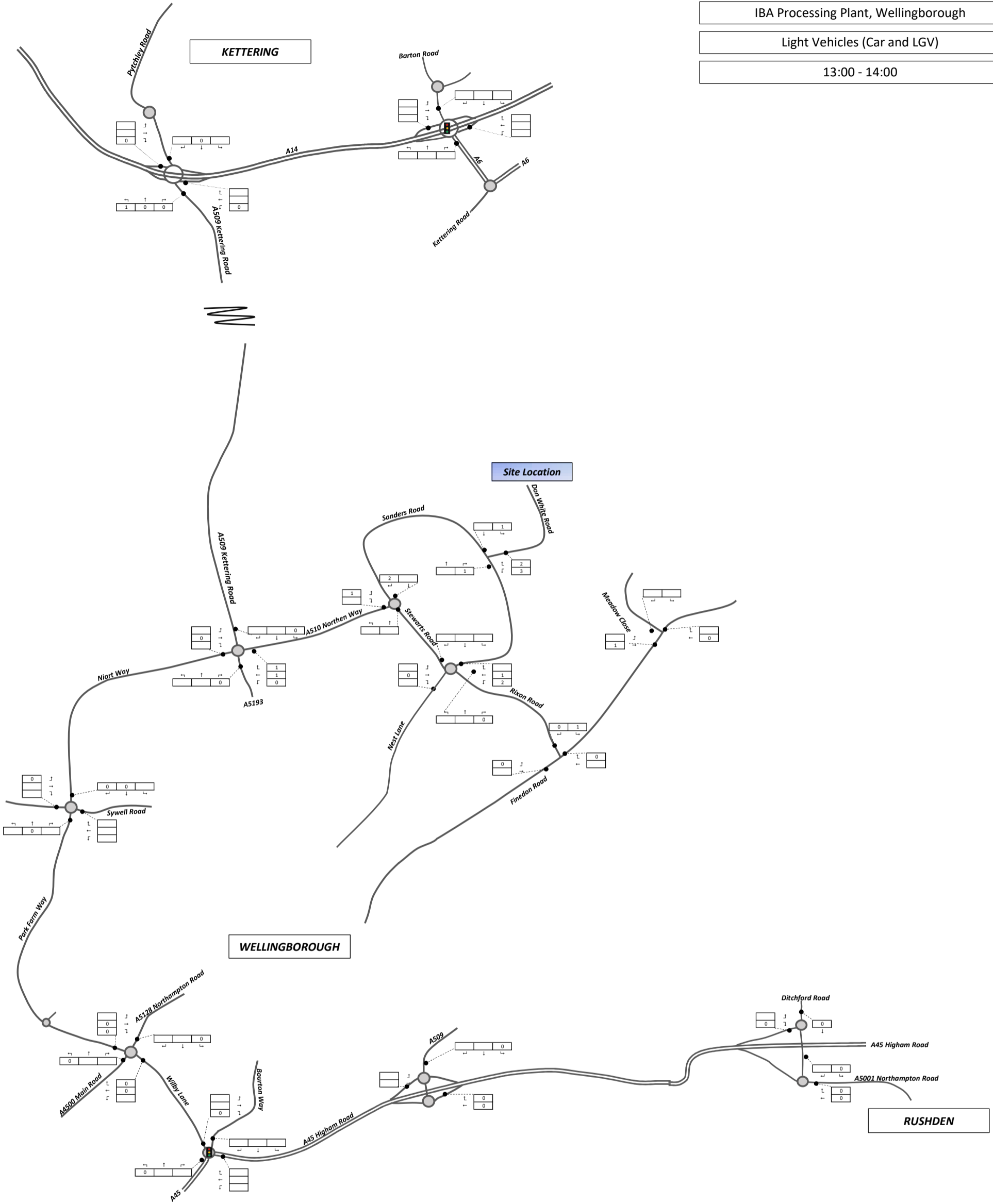
08:00 - 09:00



IBA Processing Plant, Wellingborough

Light Vehicles (Car and LGV)

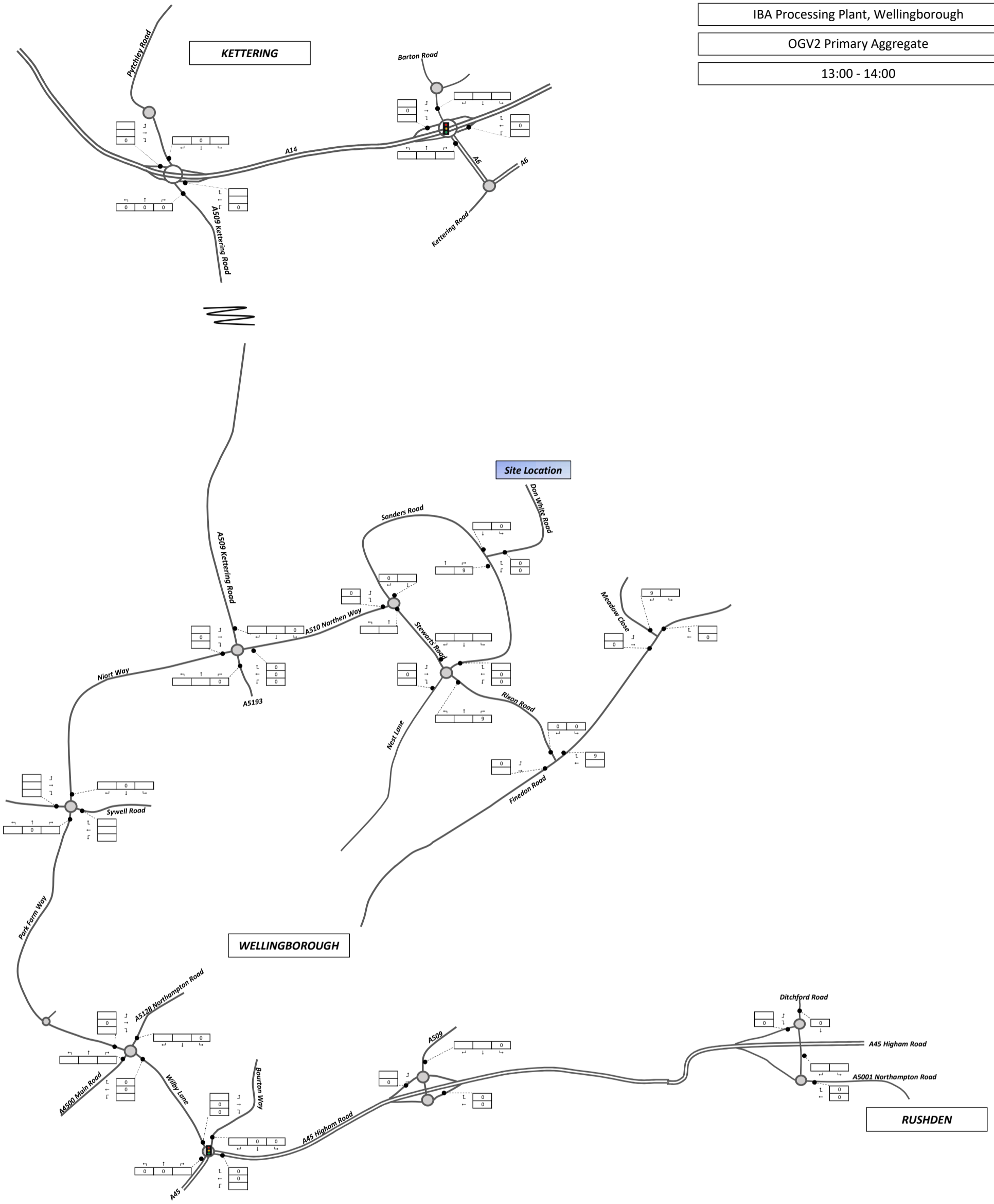
13:00 - 14:00



IBA Processing Plant, Wellingborough

OGV2 Primary Aggregate

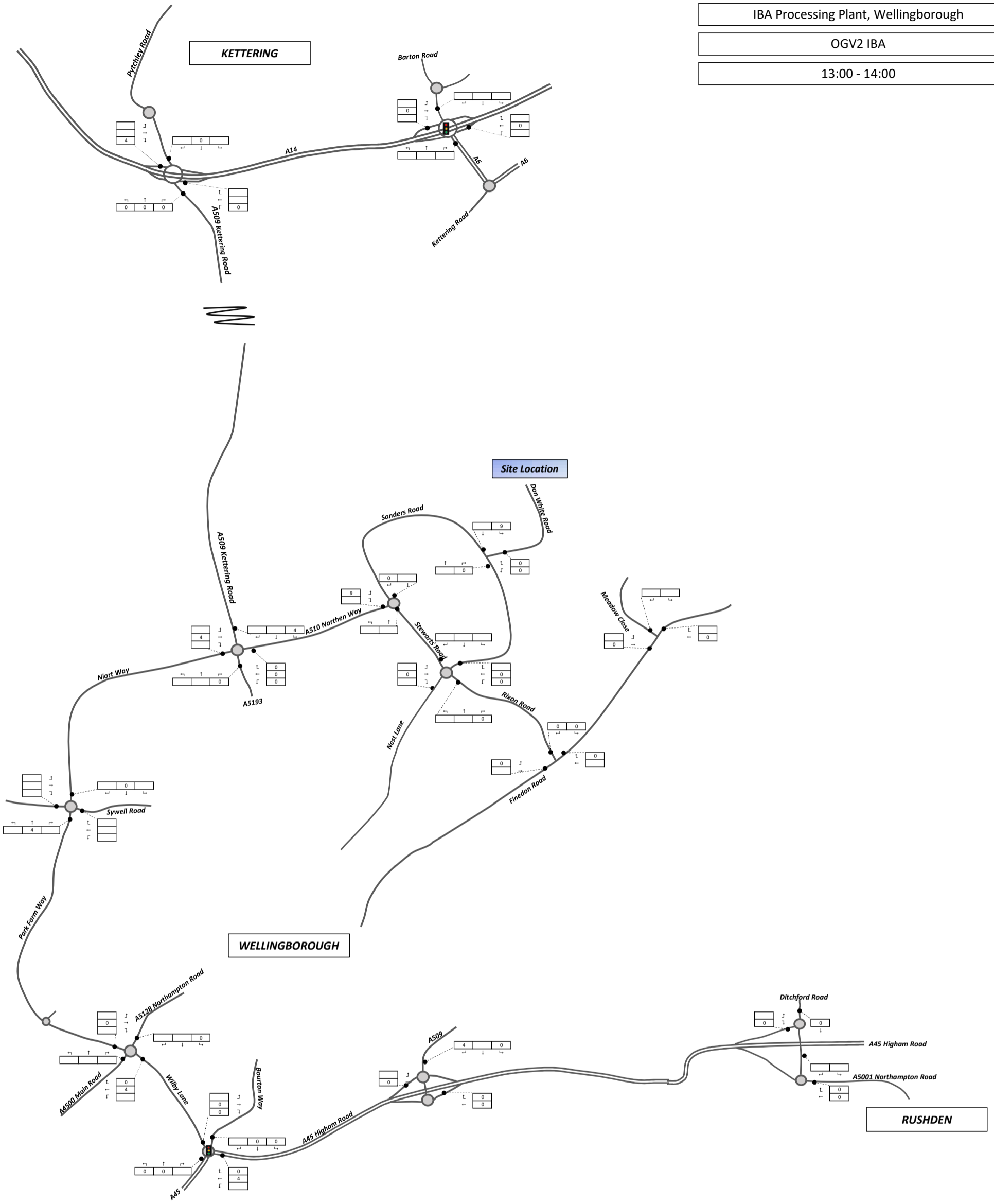
13:00 - 14:00



IBA Processing Plant, Wellingborough

OGV2 IBA

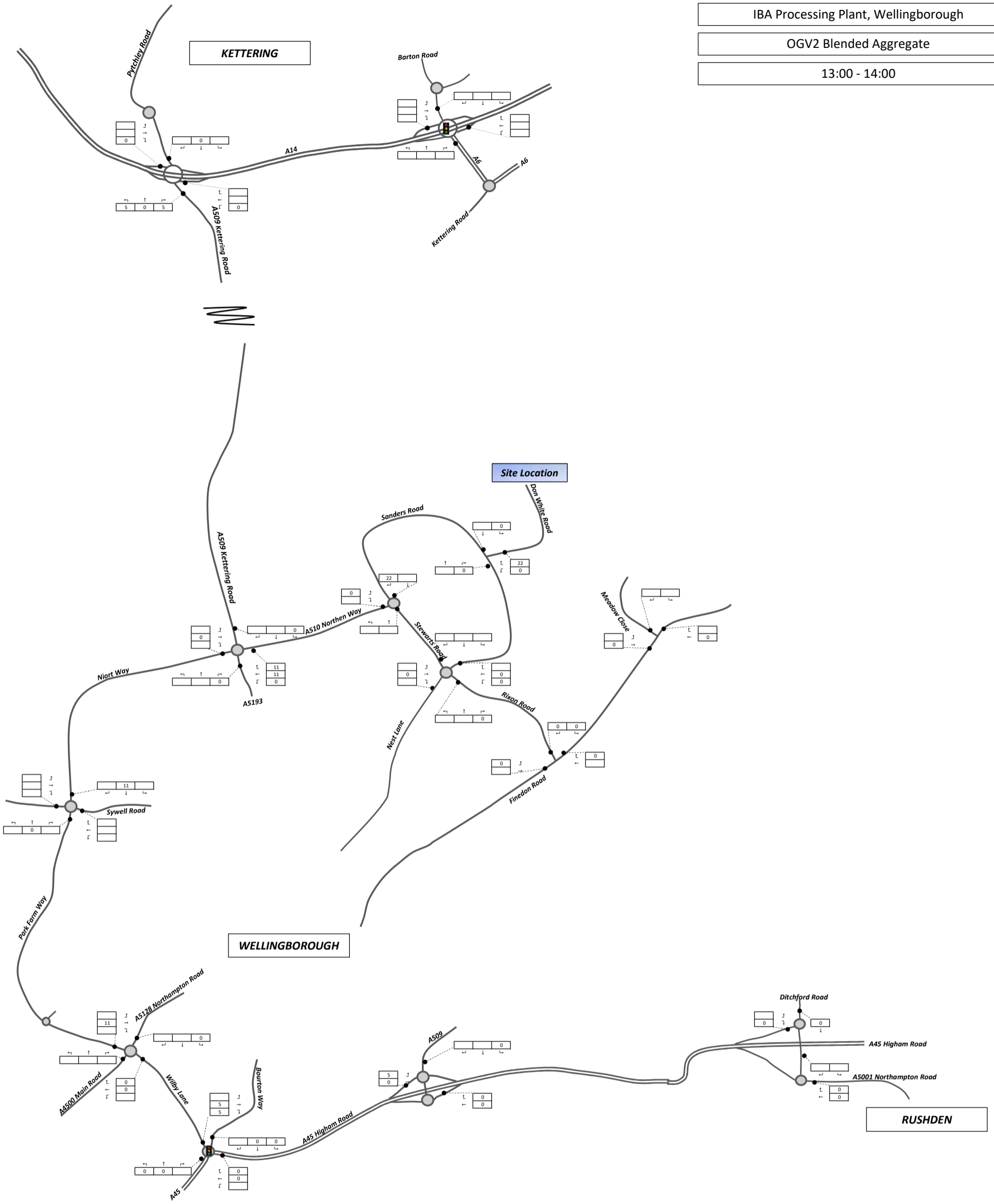
13:00 - 14:00



IBA Processing Plant, Wellingborough

OGV2 Blended Aggregate

13:00 - 14:00

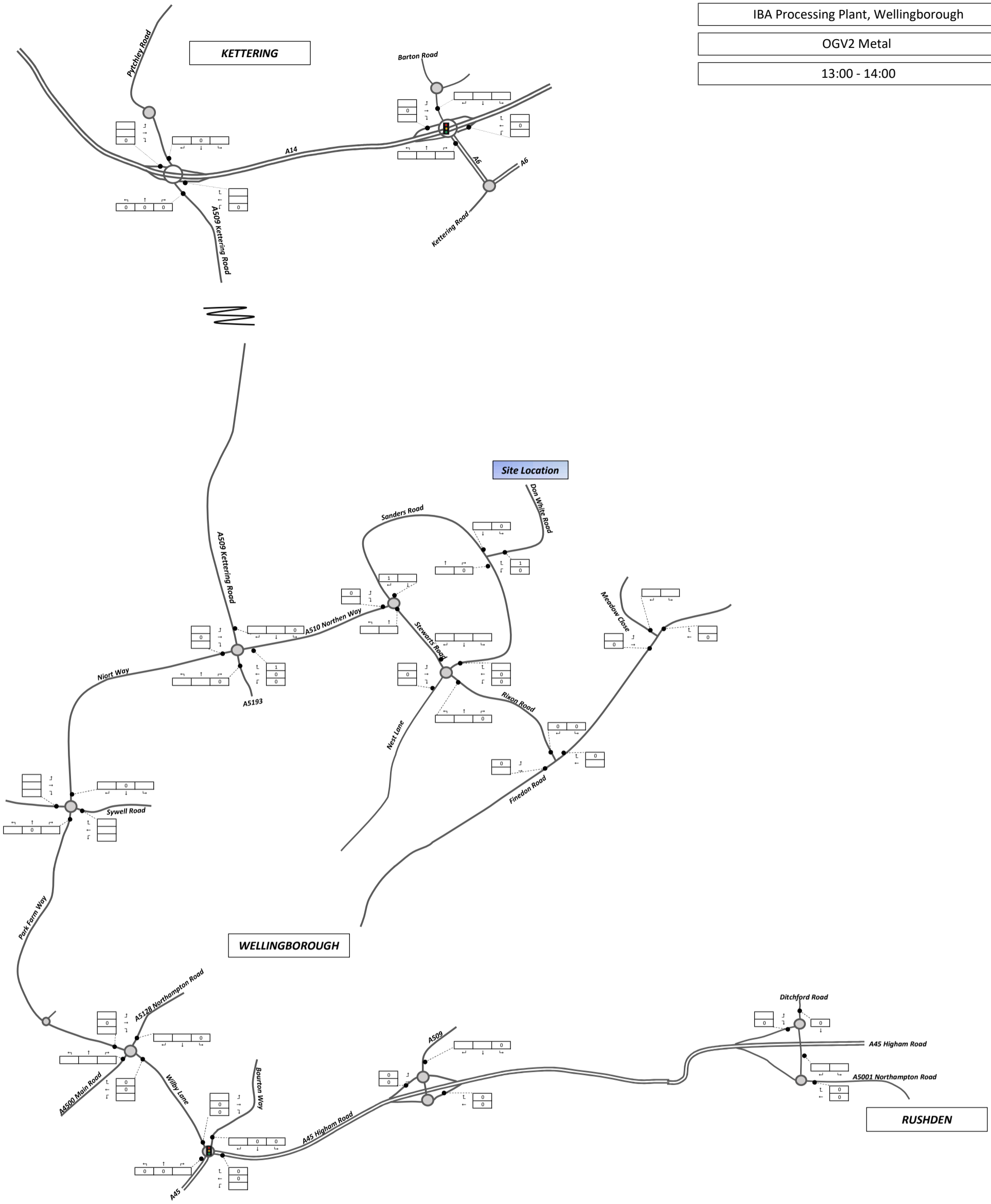




IBA Processing Plant, Wellingborough

OGV2 Metal

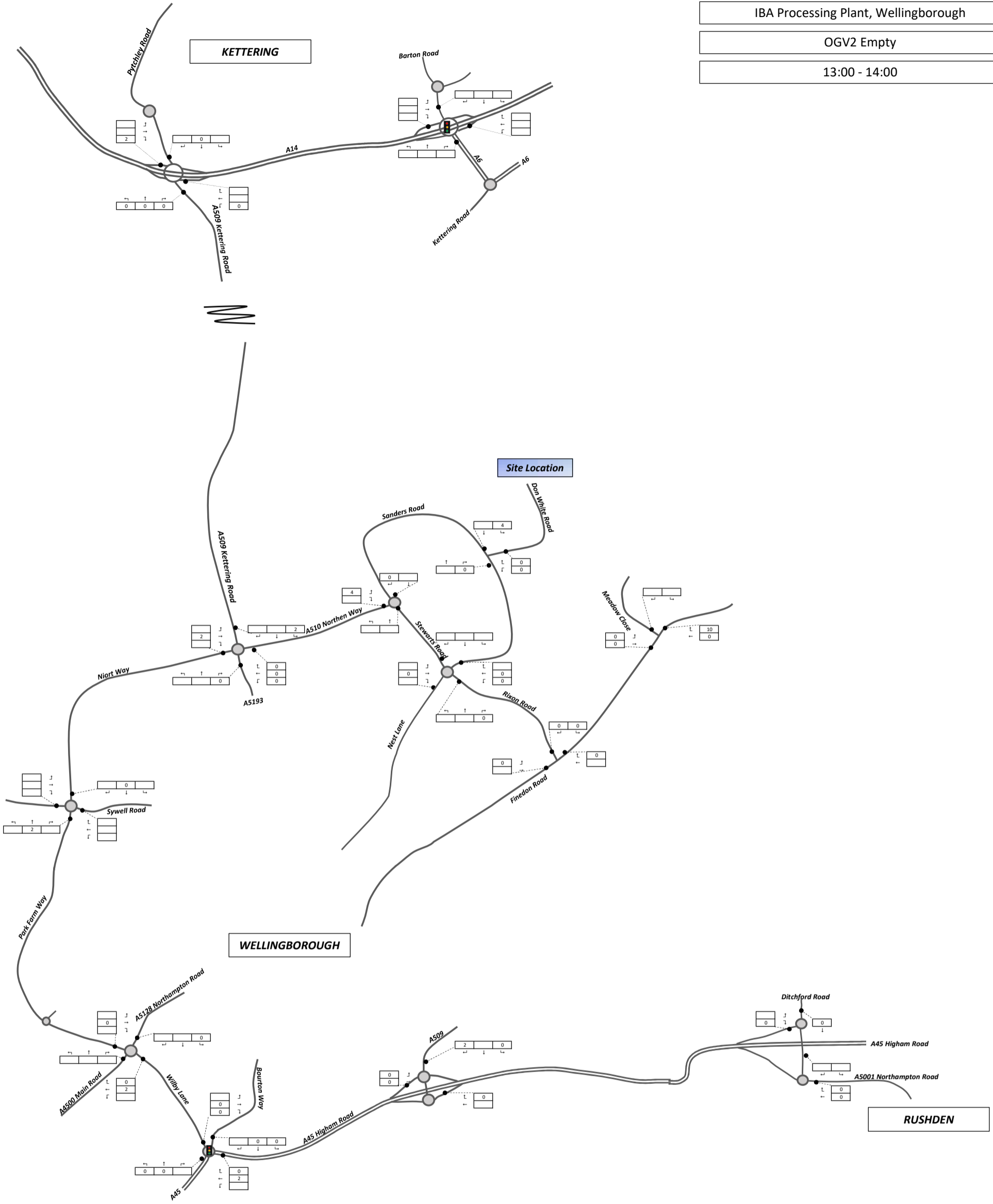
13:00 - 14:00



IBA Processing Plant, Wellingborough

OGV2 Empty

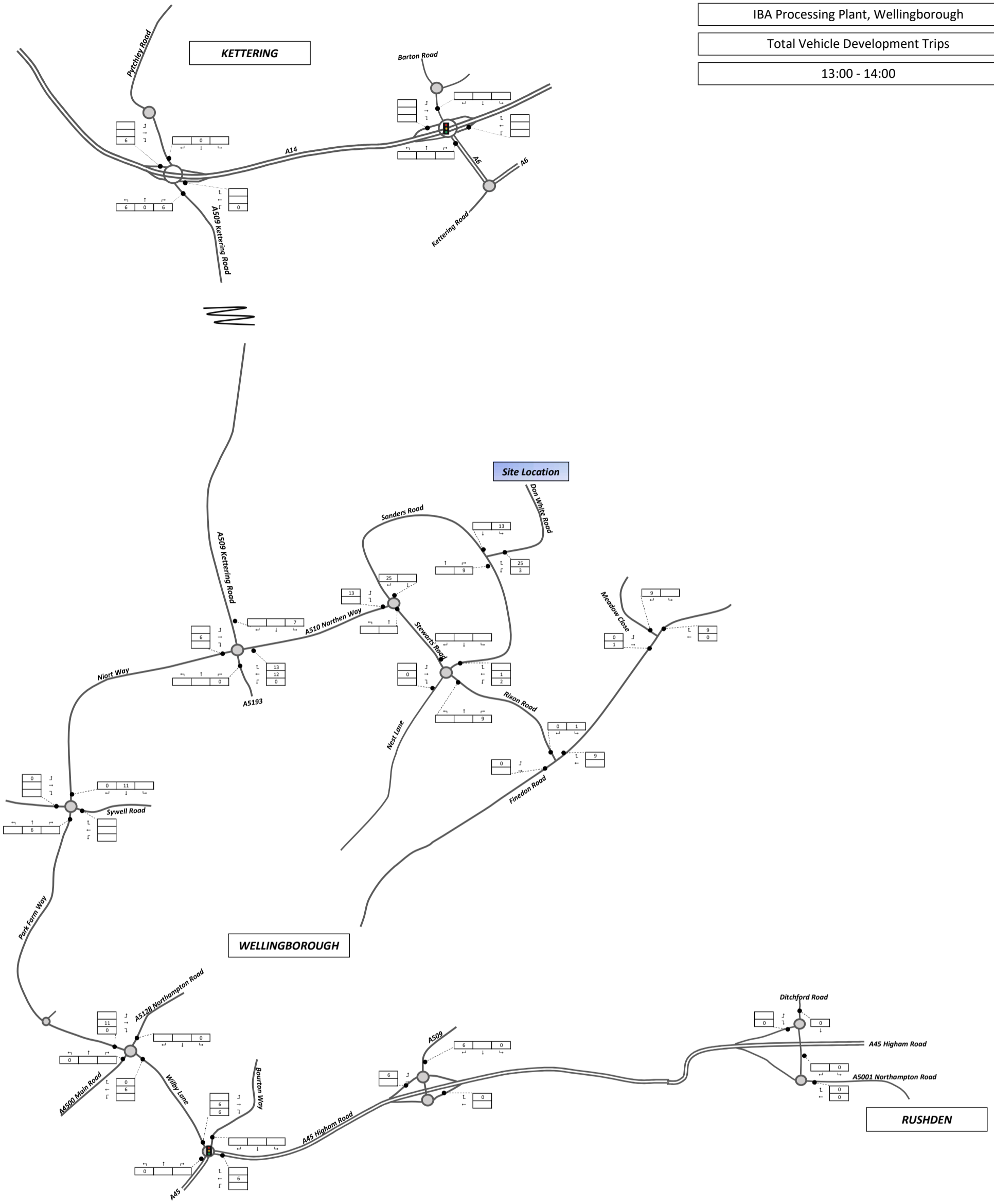
13:00 - 14:00



IBA Processing Plant, Wellingborough

Total Vehicle Development Trips

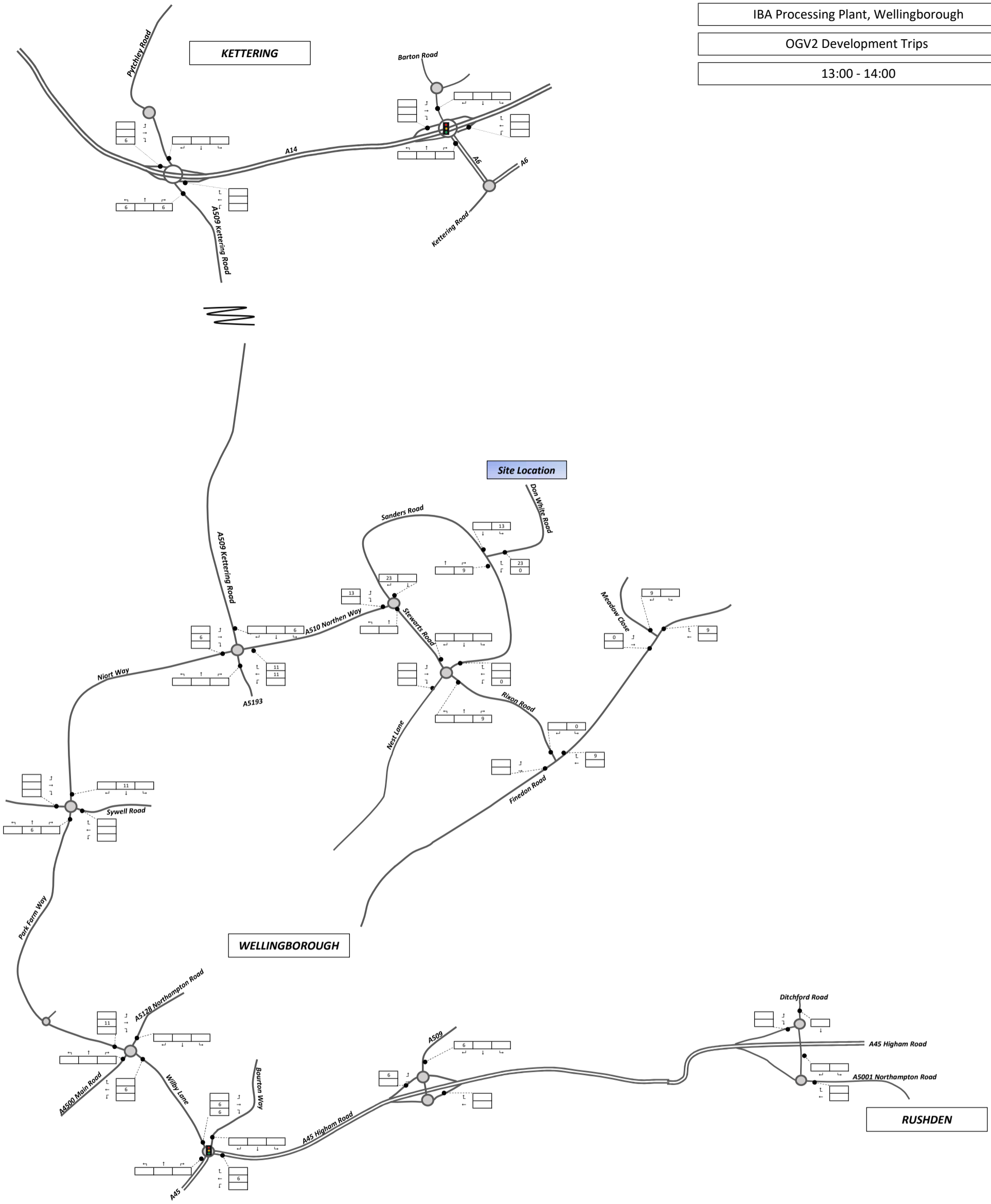
13:00 - 14:00



IBA Processing Plant, Wellingborough

OGV2 Development Trips

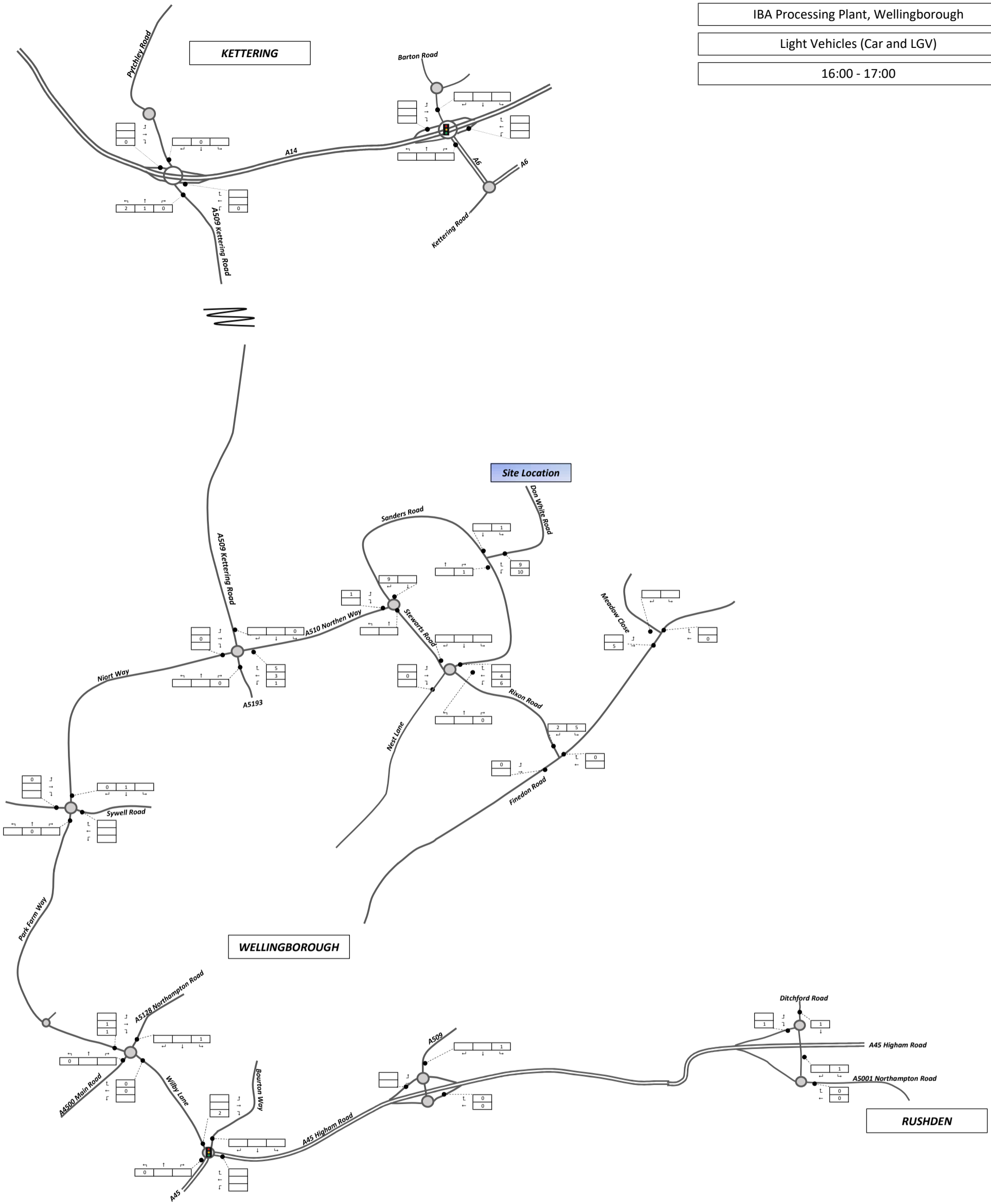
13:00 - 14:00



IBA Processing Plant, Wellingborough

Light Vehicles (Car and LGV)

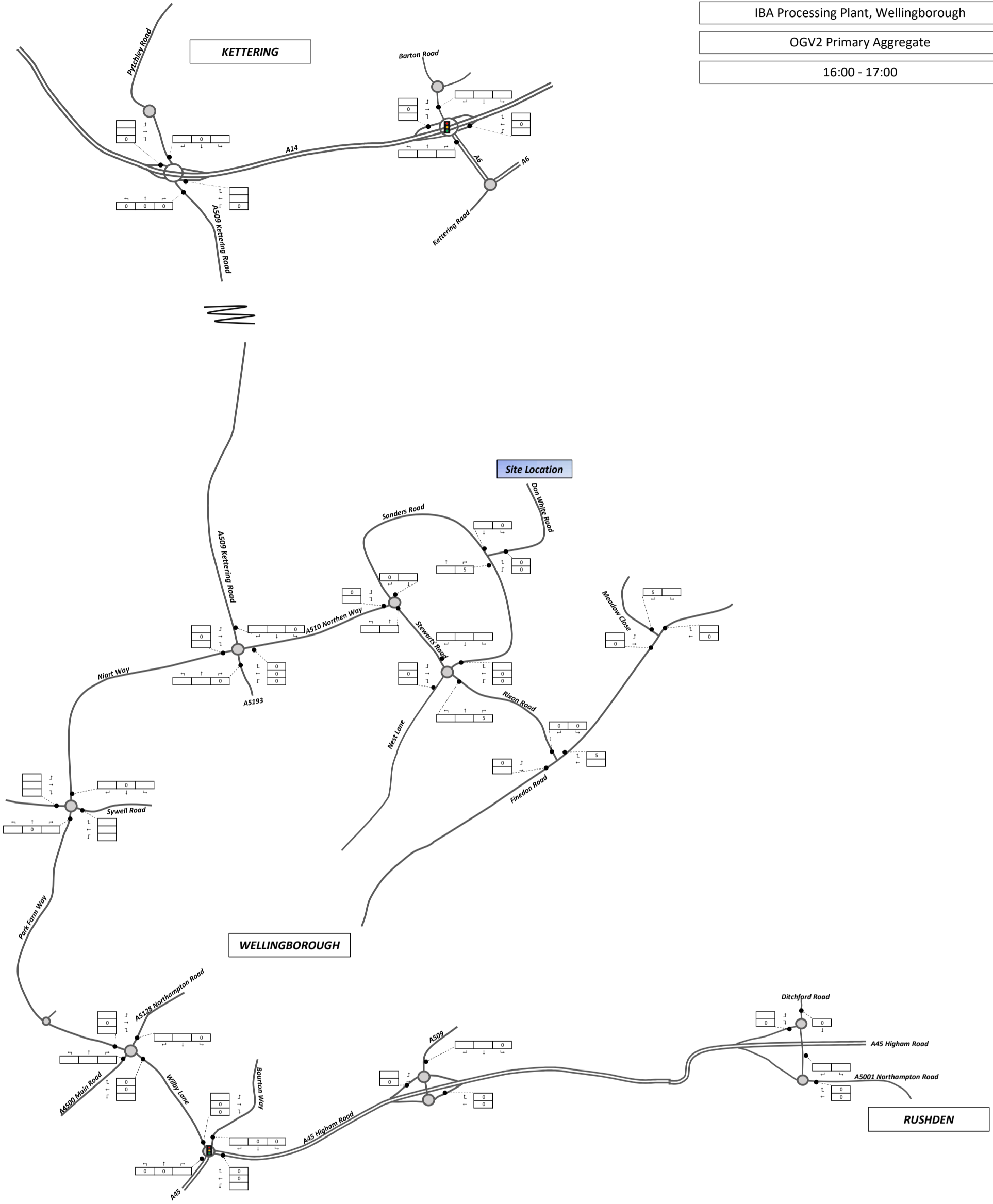
16:00 - 17:00



IBA Processing Plant, Wellingborough

OGV2 Primary Aggregate

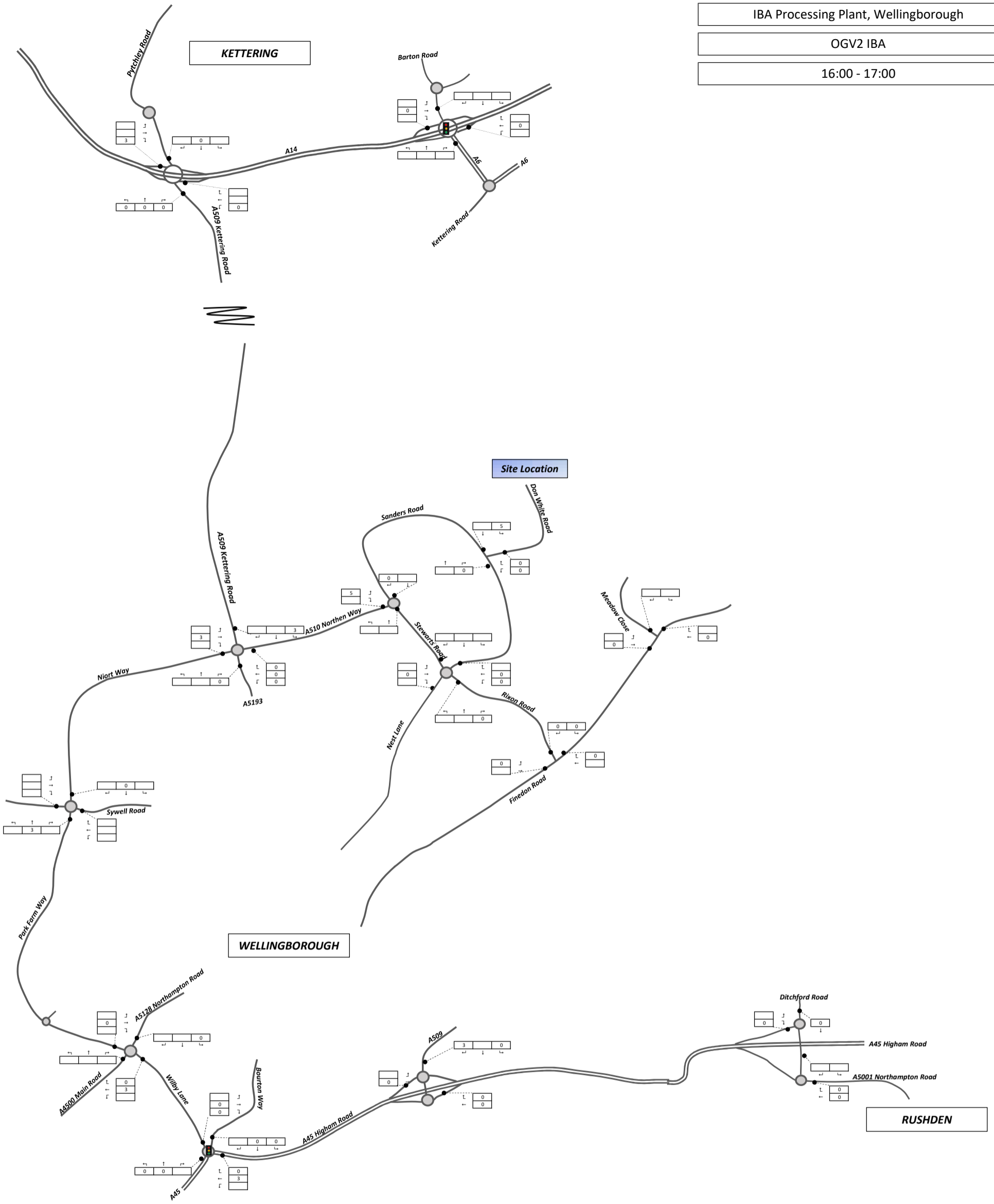
16:00 - 17:00



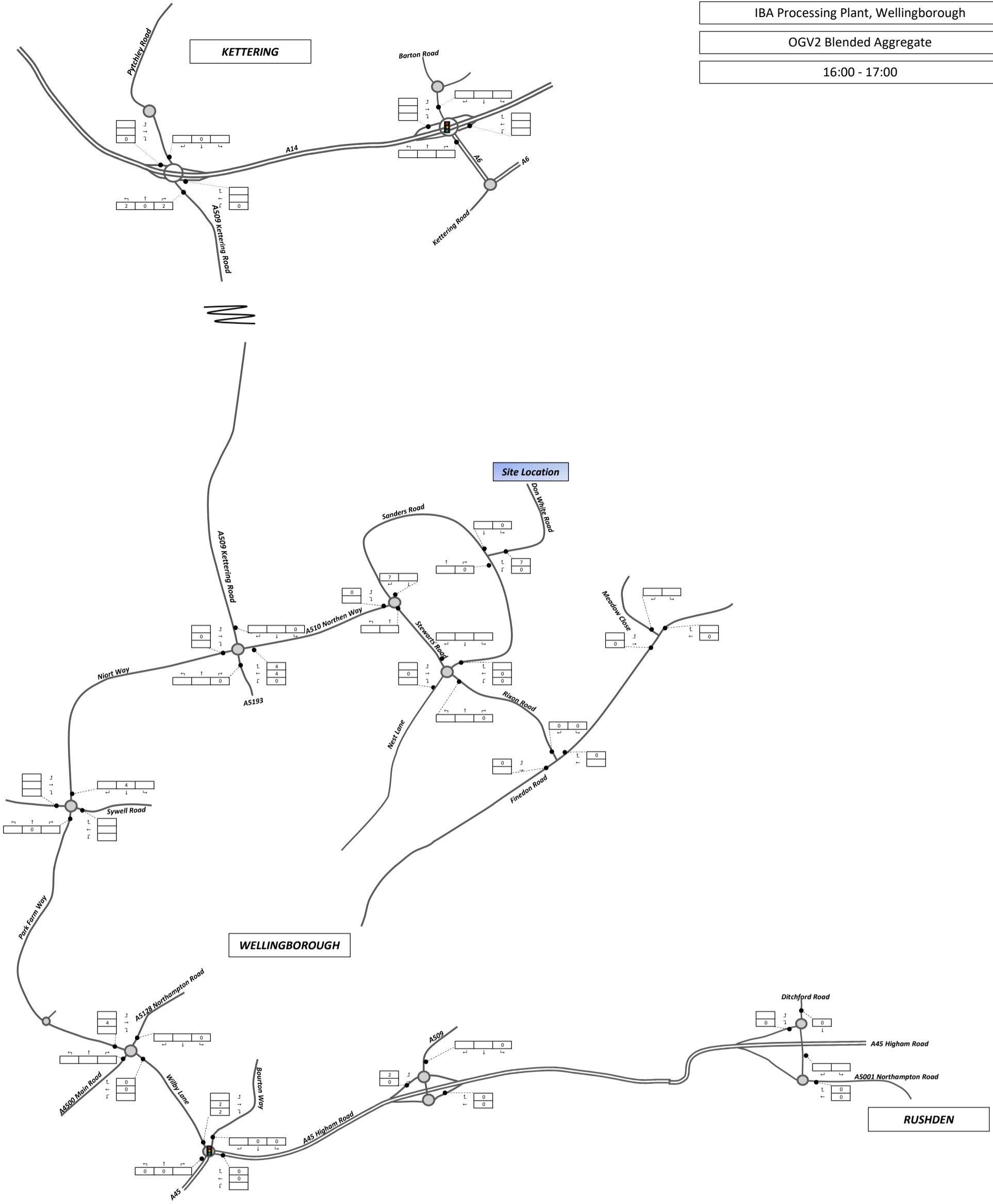
IBA Processing Plant, Wellingborough

OGV2 IBA

16:00 - 17:00



IBA Processing Plant, Wellingborough  
OGV2 Blended Aggregate  
16:00 - 17:00

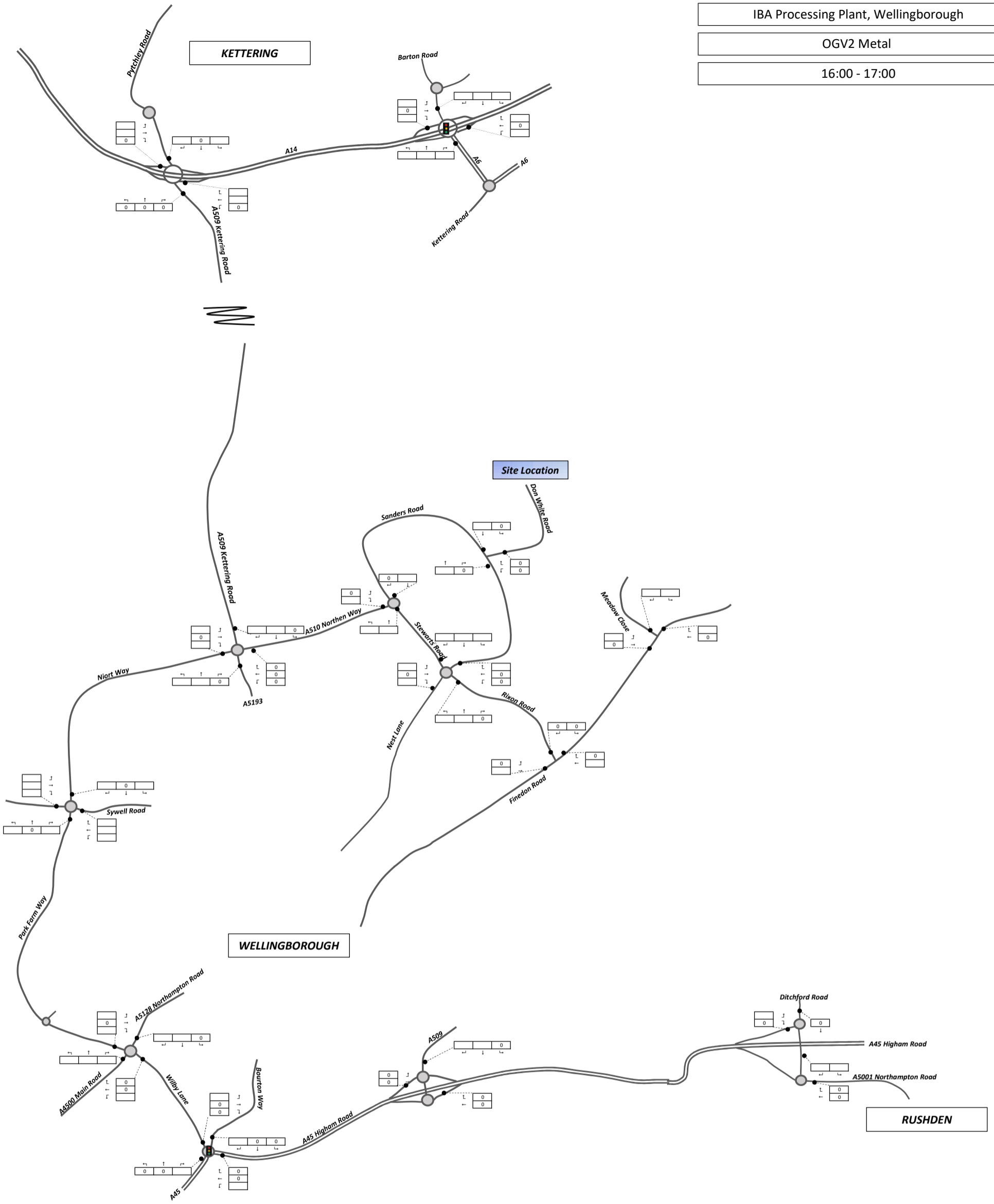




IBA Processing Plant, Wellingborough

OGV2 Metal

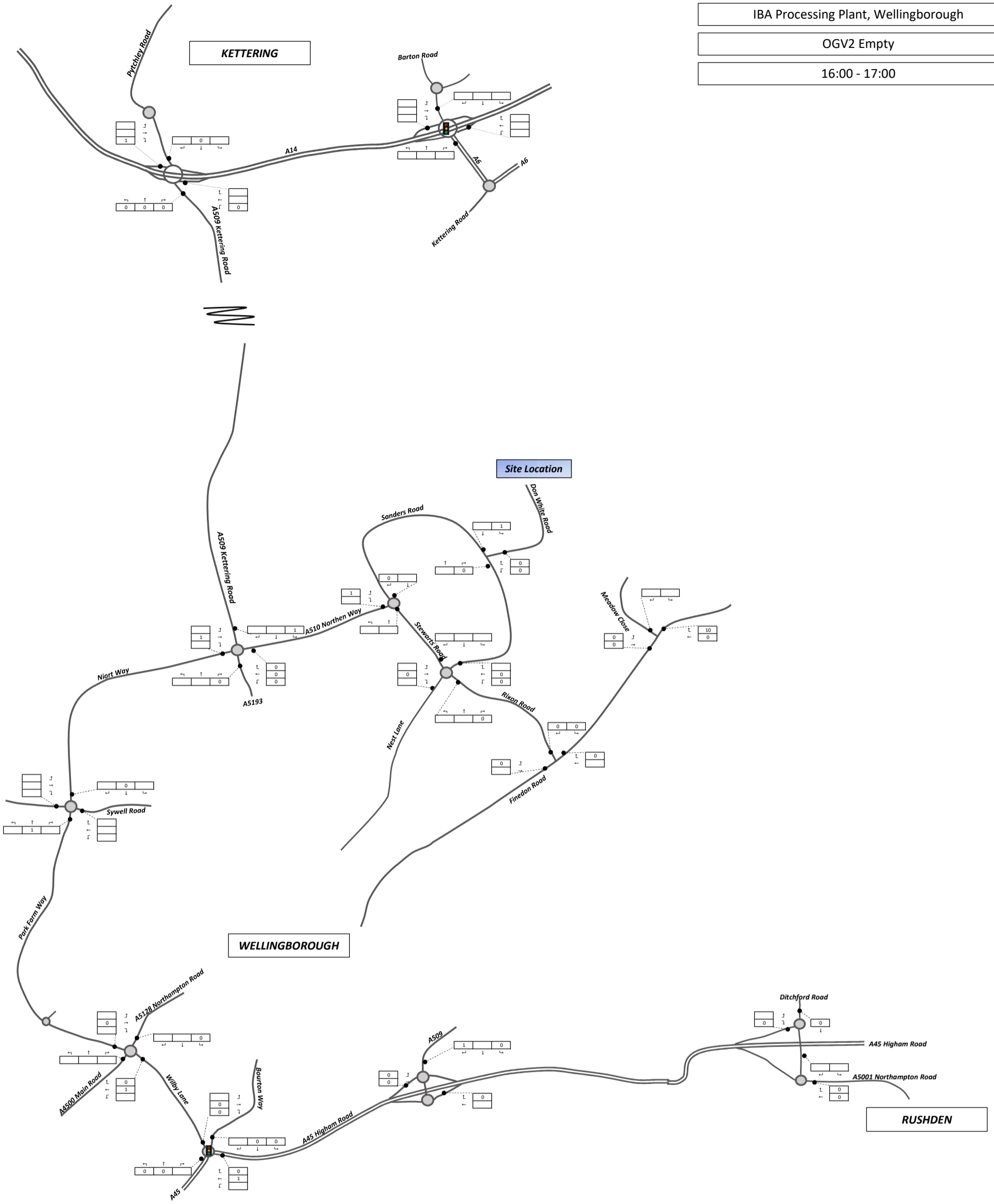
16:00 - 17:00



IBA Processing Plant, Wellingborough

OGV2 Empty

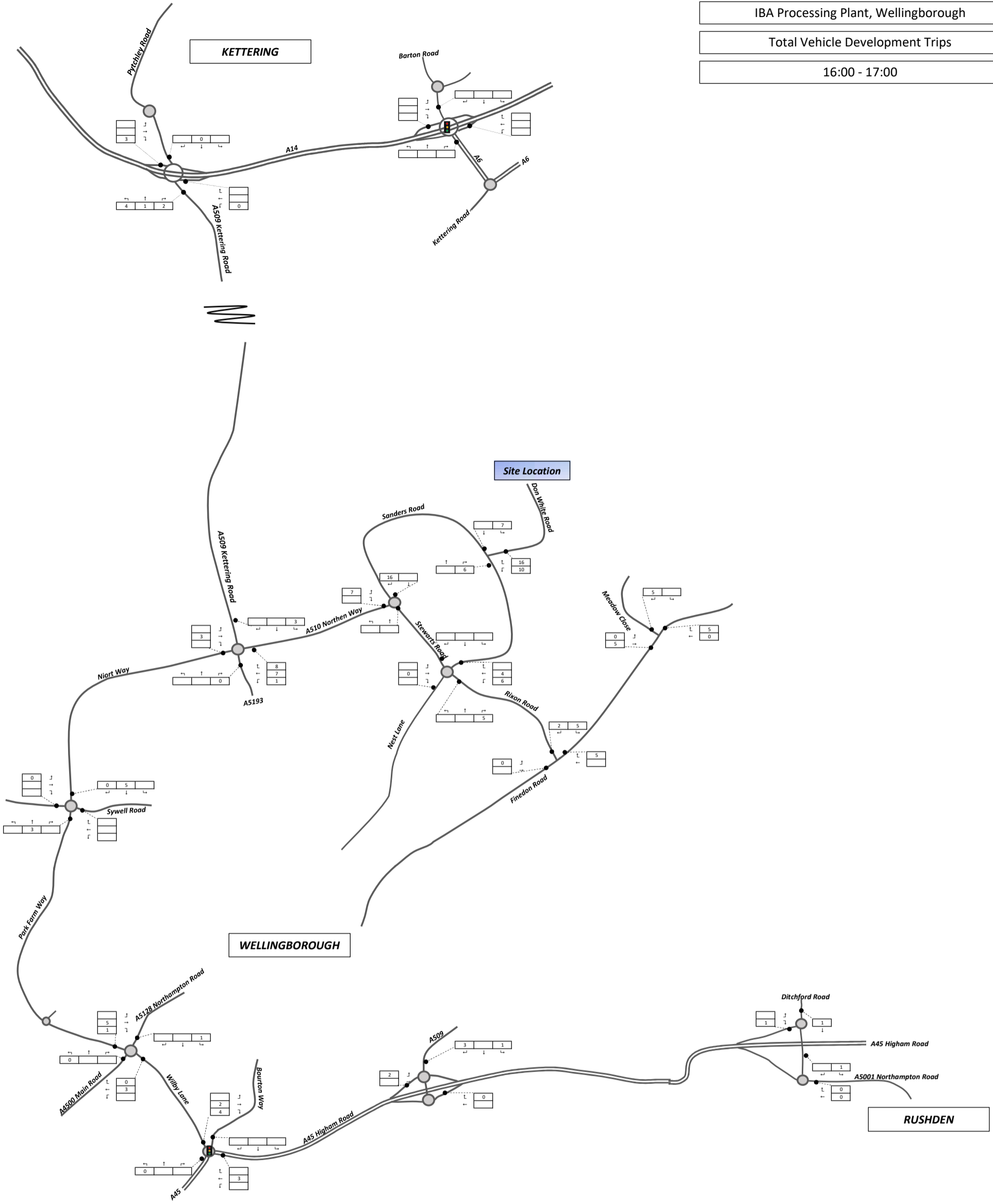
16:00 - 17:00



IBA Processing Plant, Wellingborough

Total Vehicle Development Trips

16:00 - 17:00



KETTERING

WELLINGBOROUGH

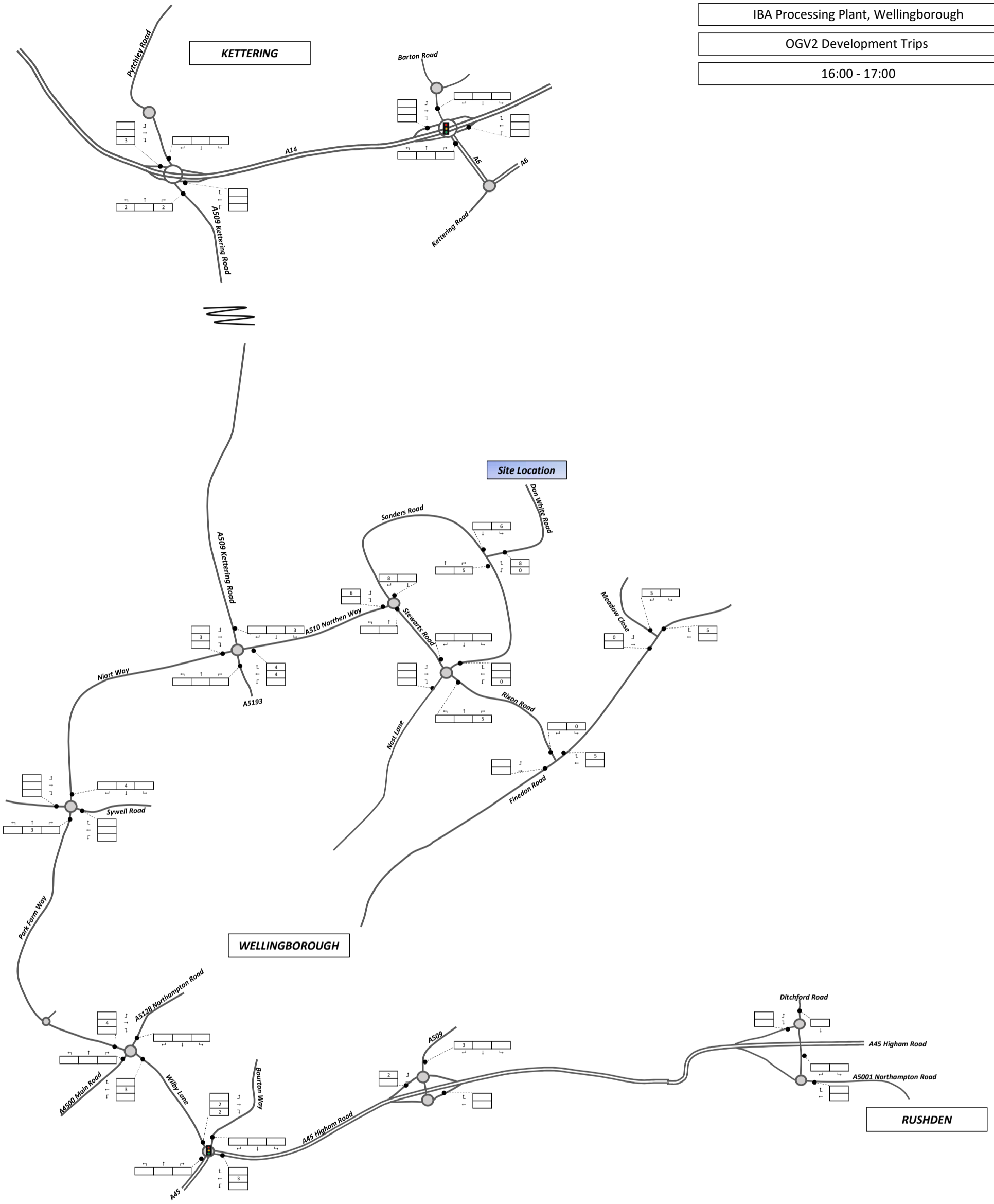
RUSHDEN

Site Location

IBA Processing Plant, Wellingborough

OGV2 Development Trips

16:00 - 17:00



## **Appendix N – Traffic Survey Locations**

# TRAFFIC SURVEY LOCATION PLAN

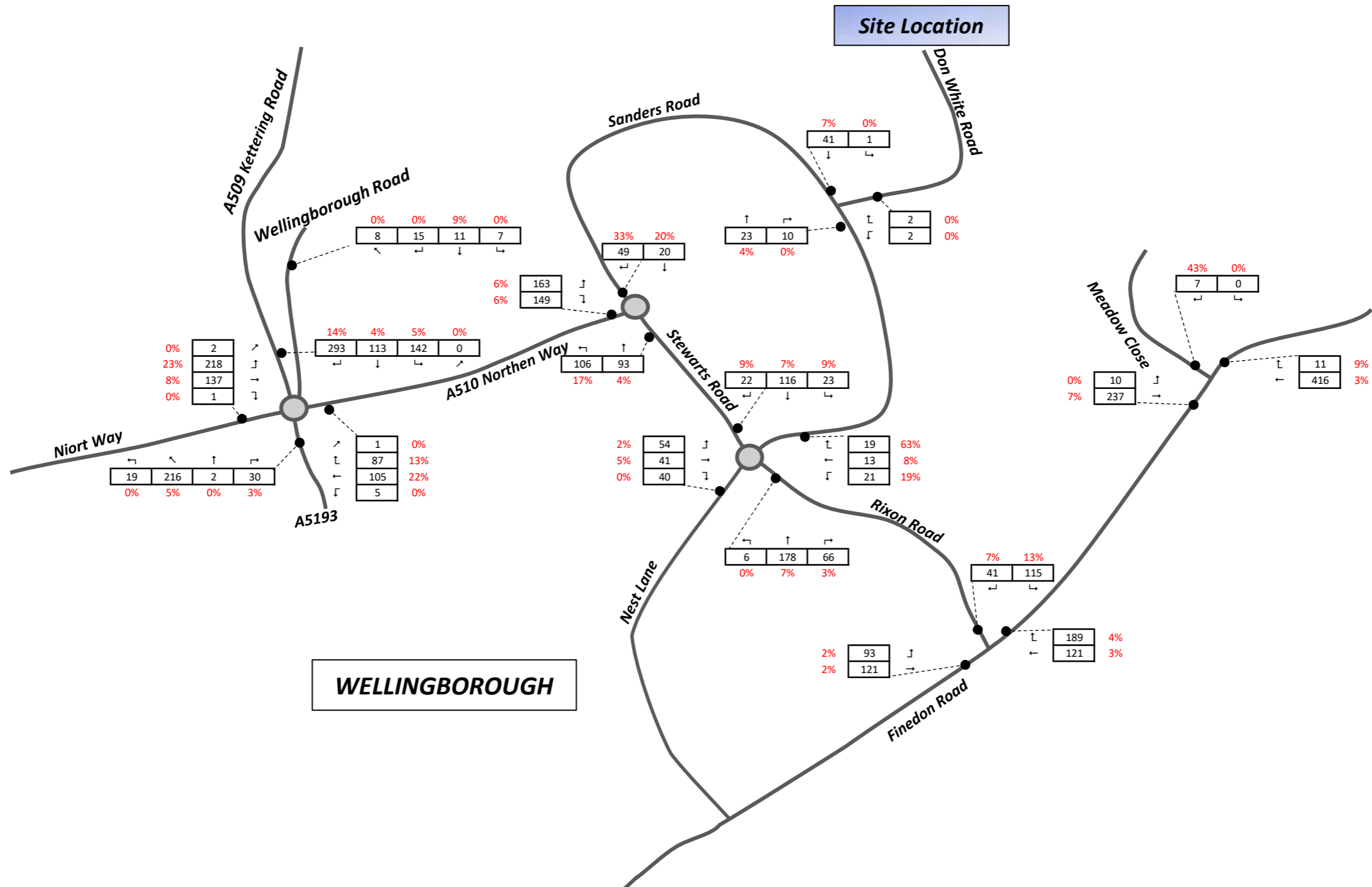


## **Appendix O – Traffic Flow Spreadsheets: Forecast Scenarios**

IBA Processing Plant, Wellingborough

2021 Observed Traffic Flows (Base)

06:00 - 07:00

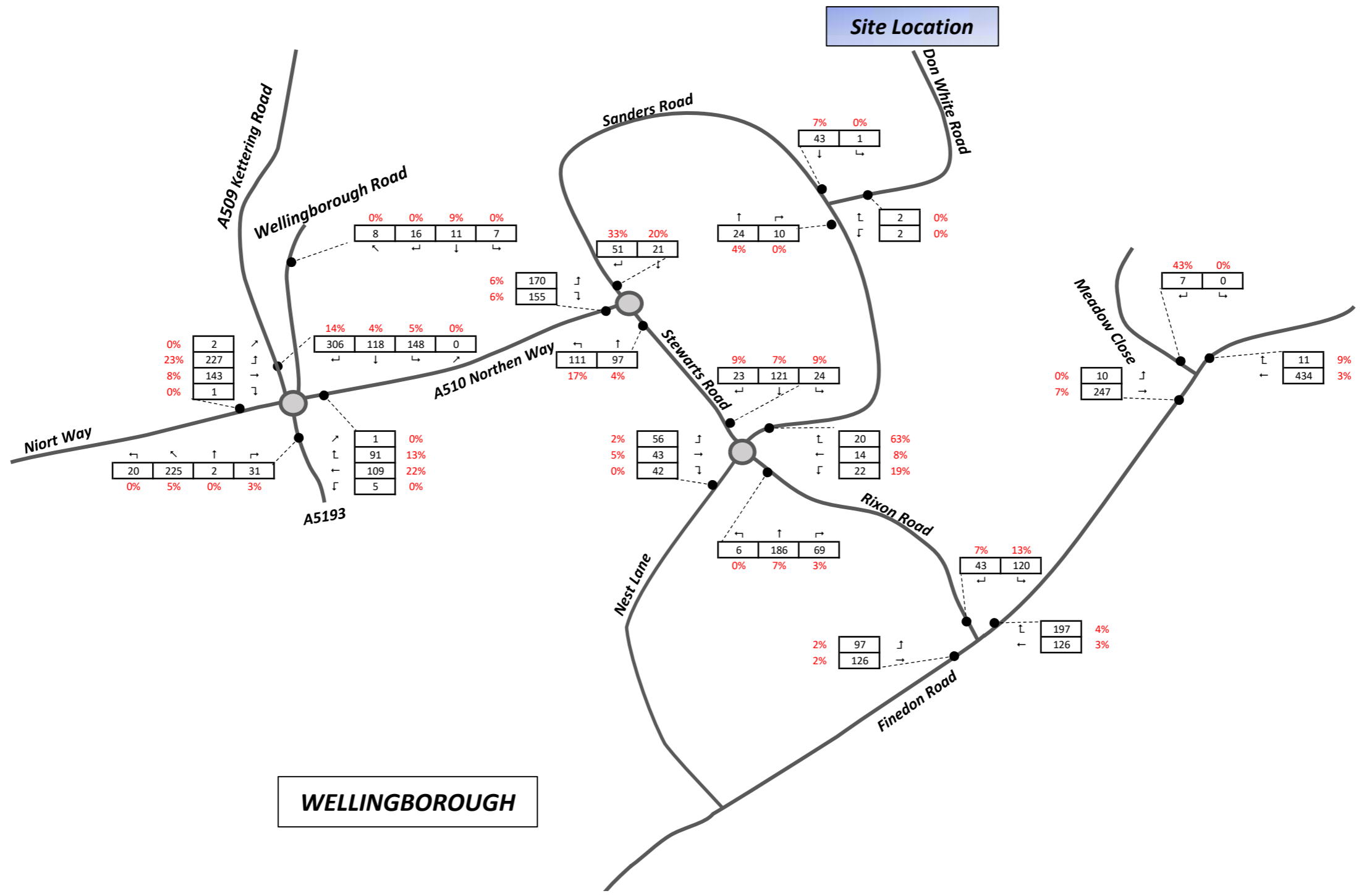




IBA Processing Plant, Wellingborough

2027 Background Traffic Flows

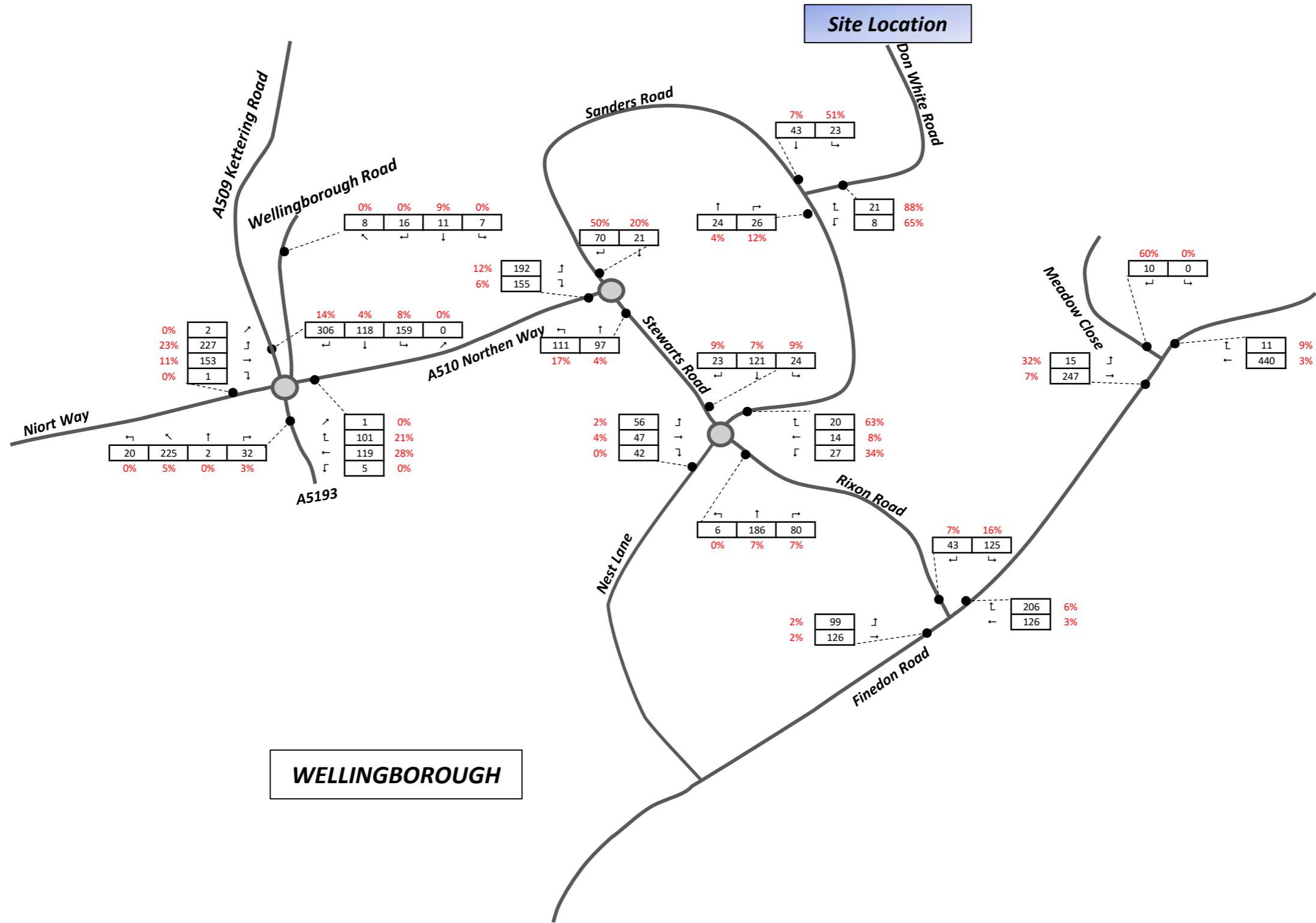
06:00 - 07:00



IBA Processing Plant, Wellingborough

2027 Background Traffic Flows + Development

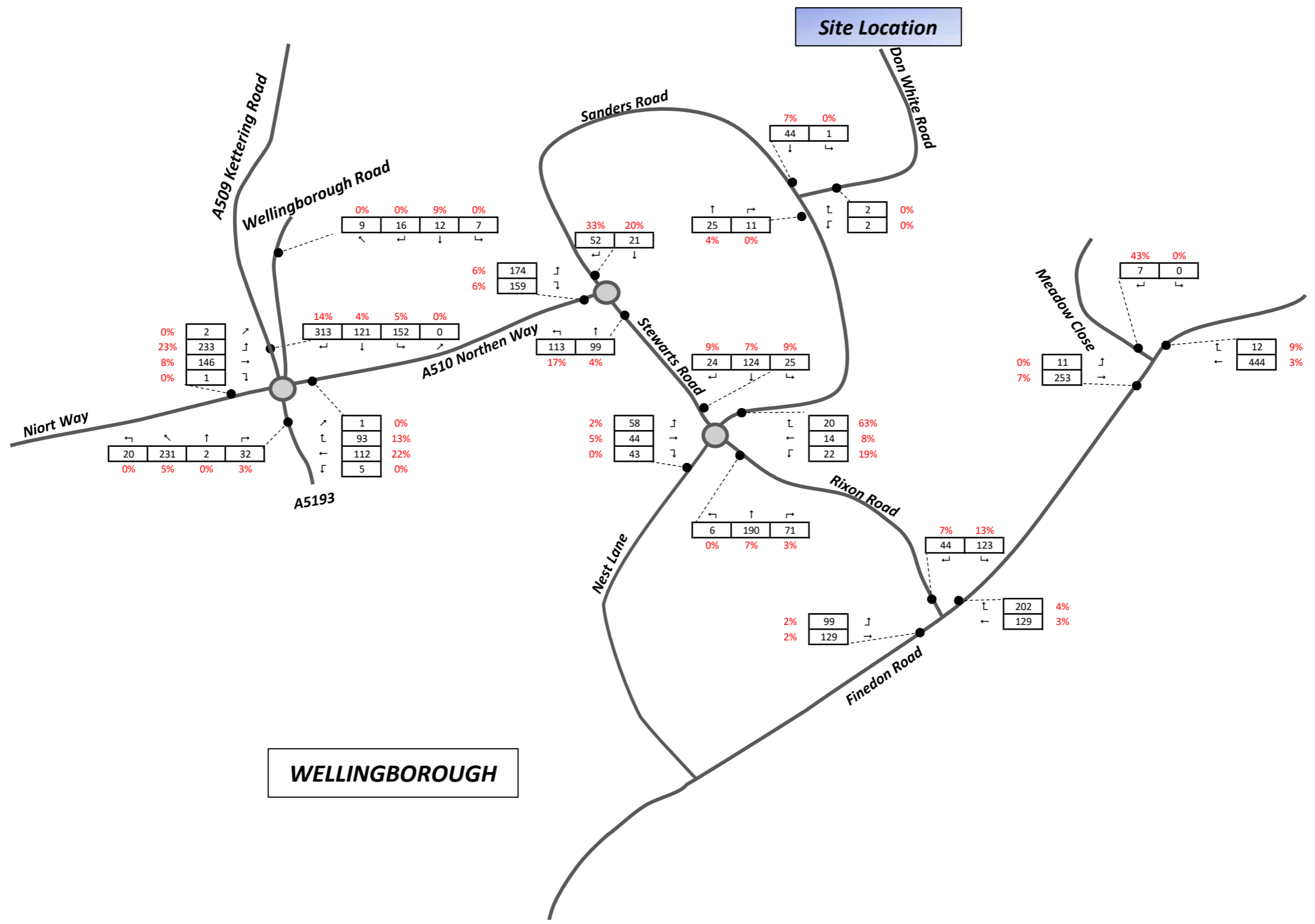
06:00 - 07:00



IBA Processing Plant, Wellingborough

2031 Background Traffic Flows

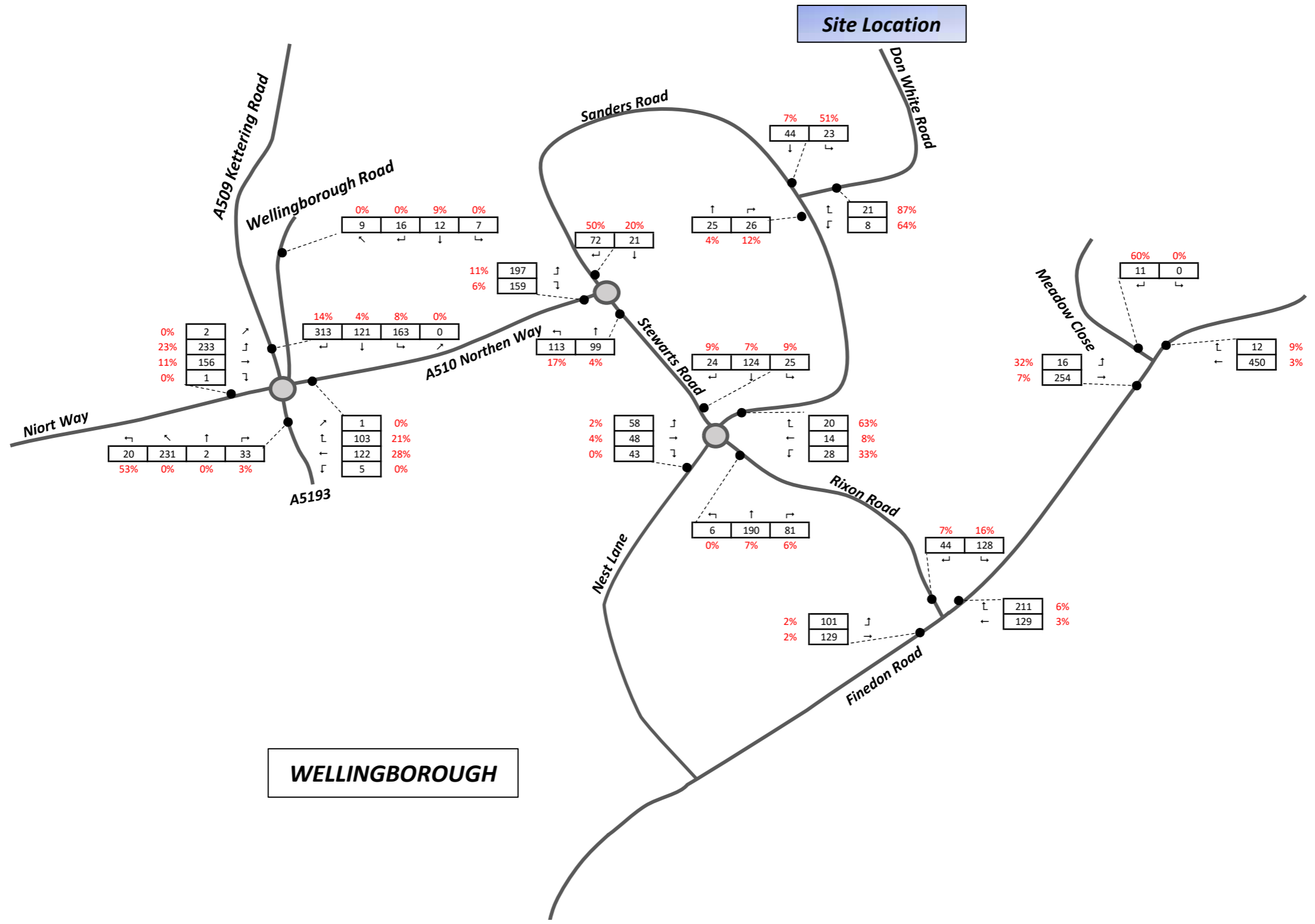
06:00 - 07:00



IBA Processing Plant, Wellingborough

2031 Background Traffic Flows + Development

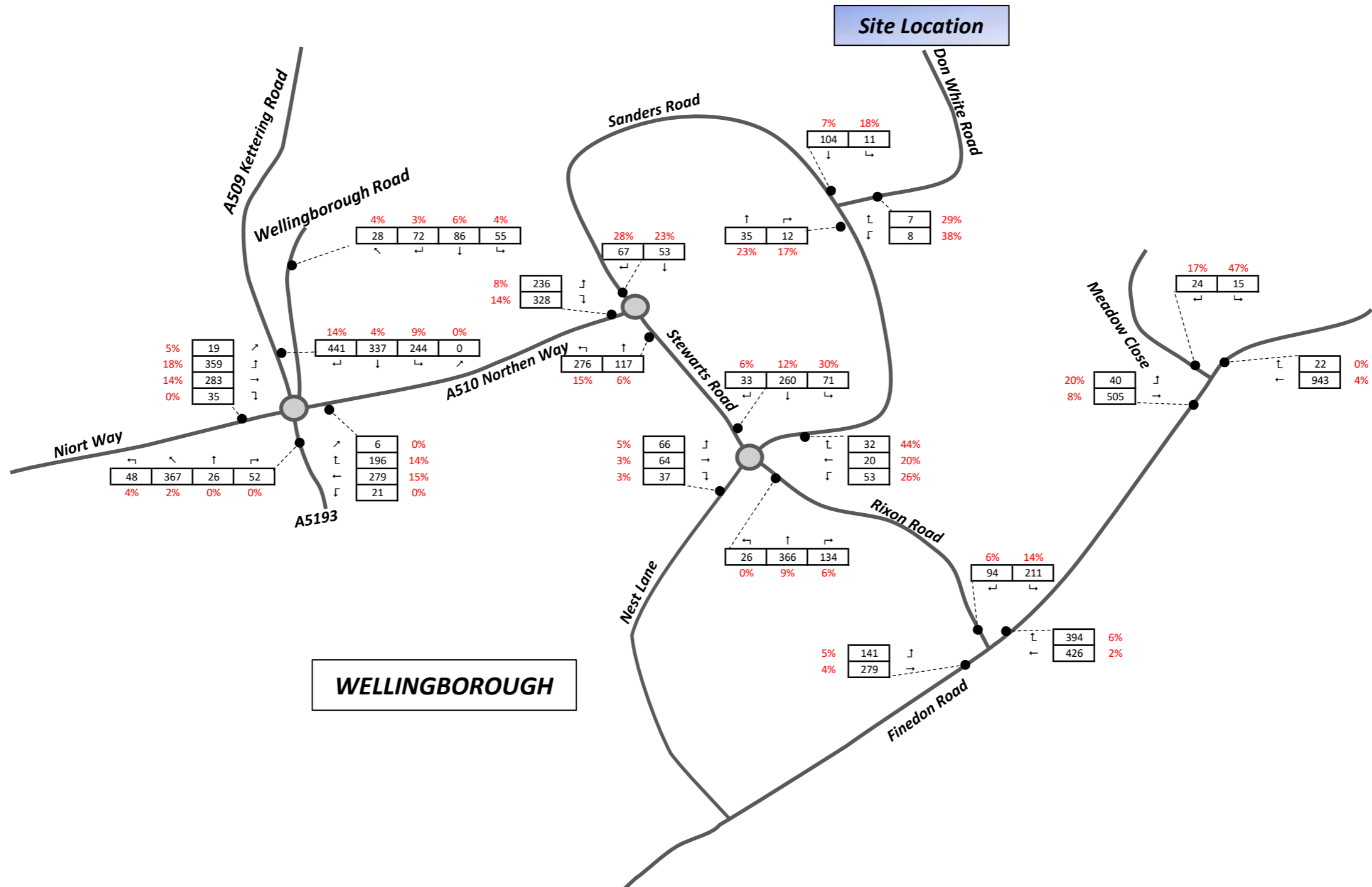
06:00 - 07:00



IBA Processing Plant, Wellingborough

2021 Observed Traffic Flows (Base)

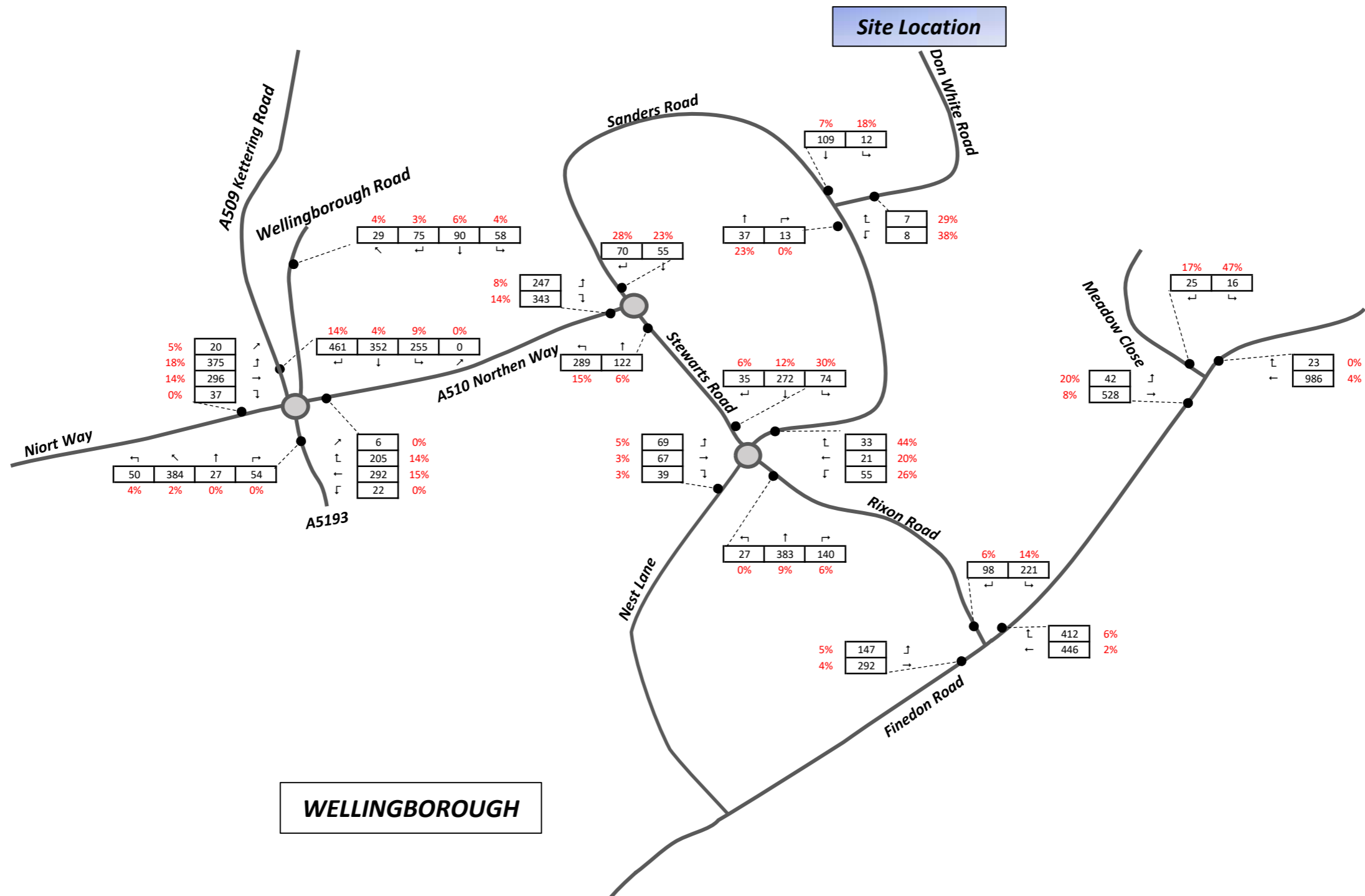
08:00 - 09:00



IBA Processing Plant, Wellingborough

2027 Background Traffic Flows

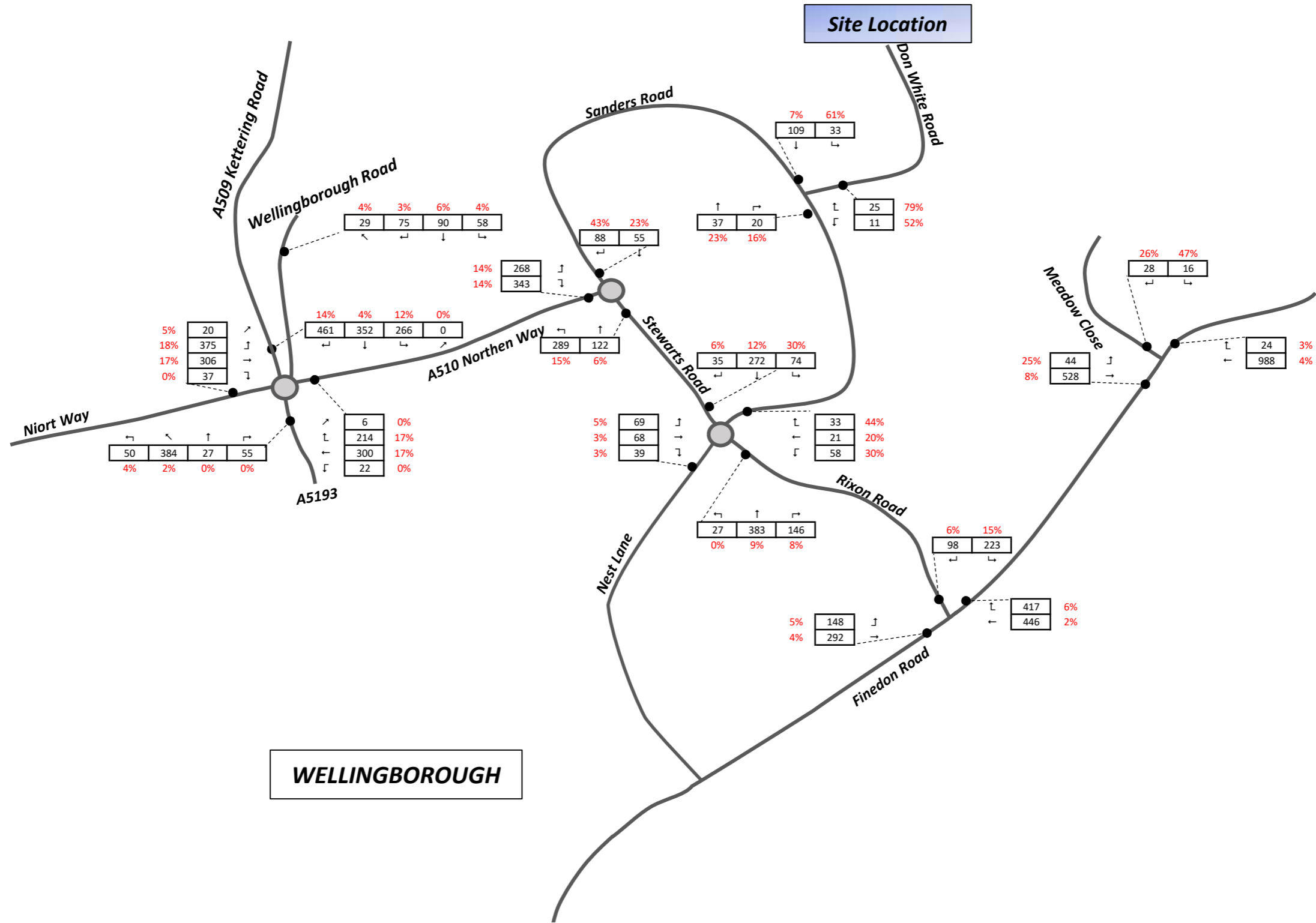
08:00 - 09:00



IBA Processing Plant, Wellingborough

2027 Background Traffic Flows + Development

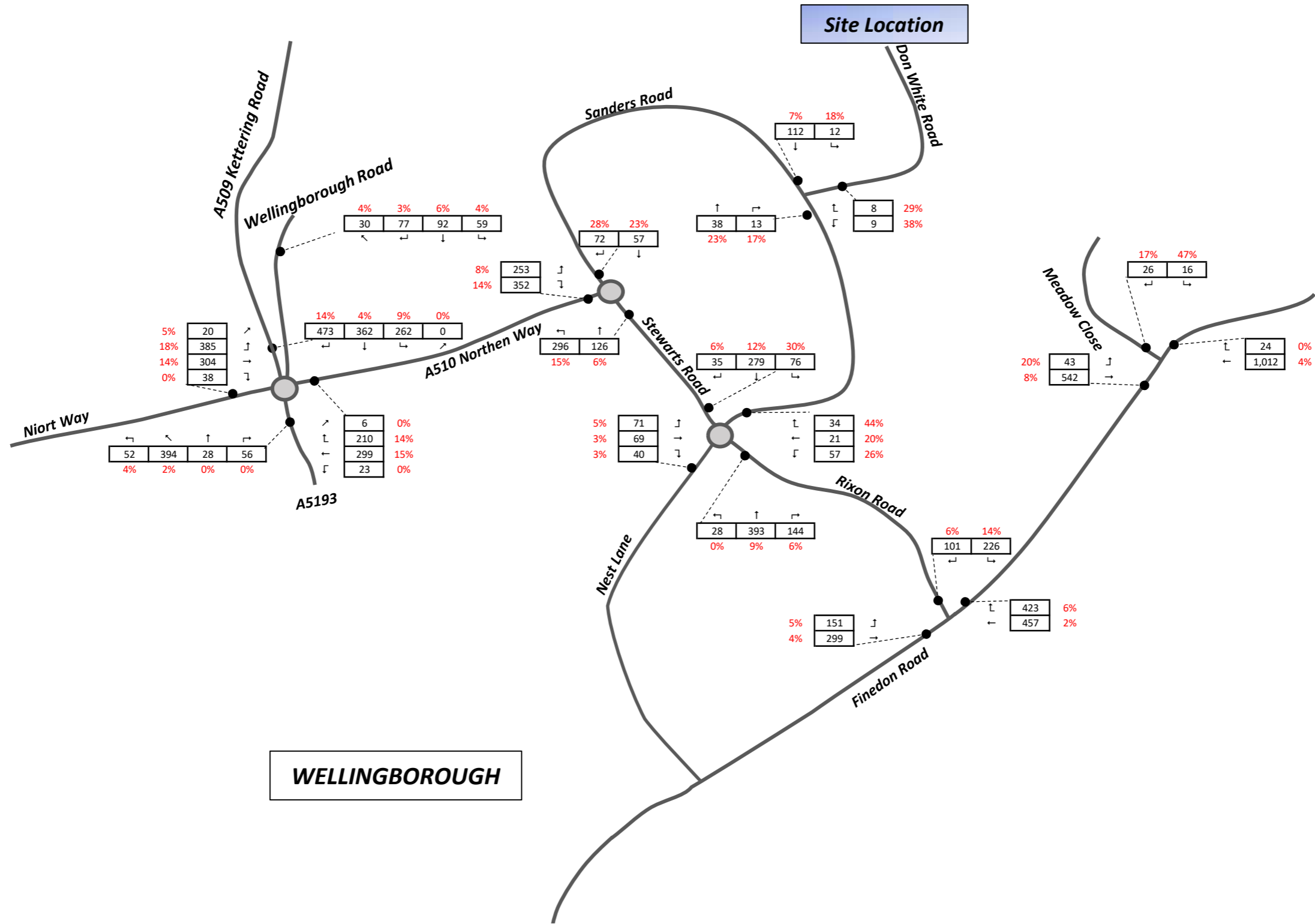
08:00 - 09:00



IBA Processing Plant, Wellingborough

2031 Background Traffic Flows

08:00 - 09:00

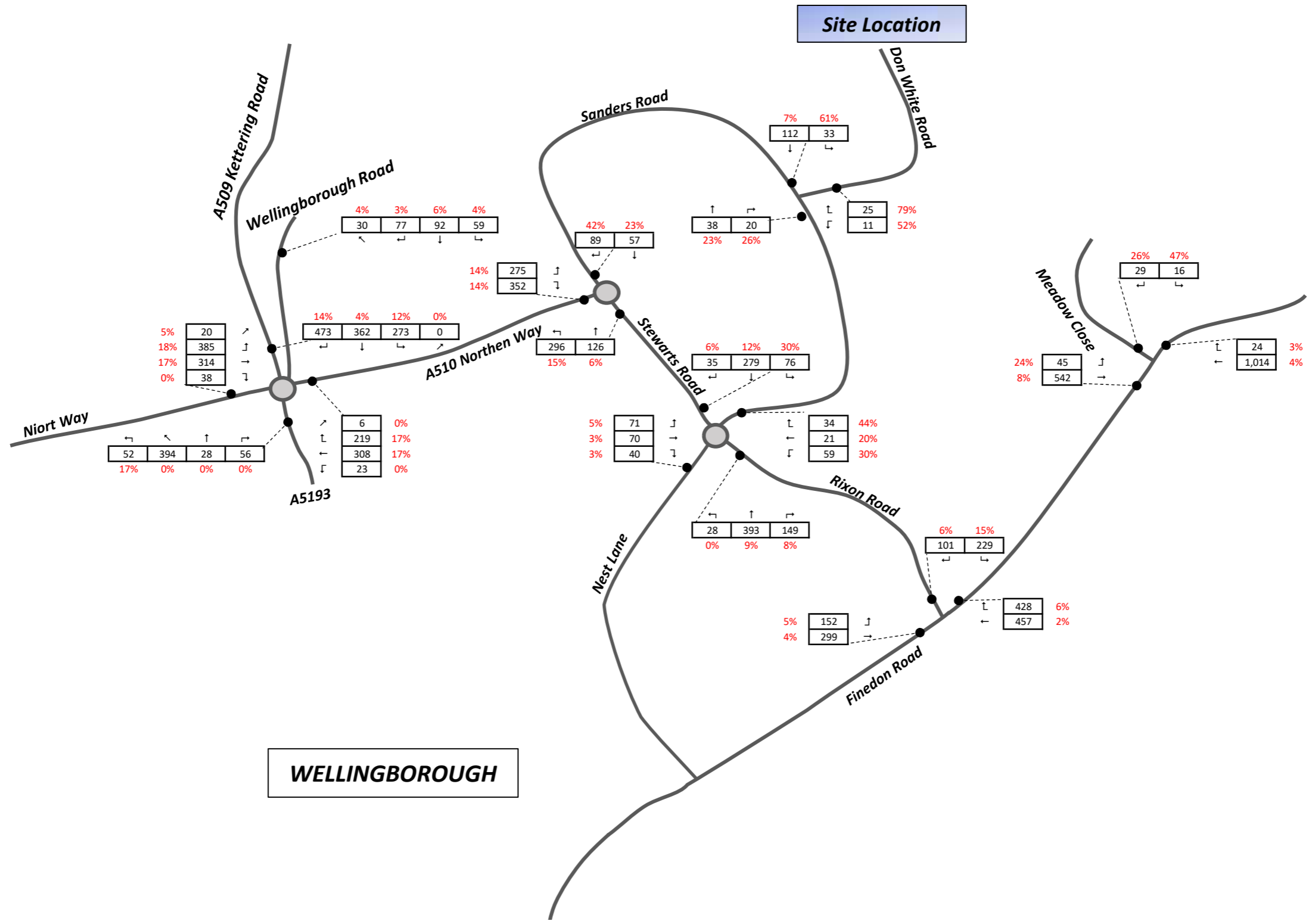




IBA Processing Plant, Wellingborough

2031 Background Traffic Flows + Development

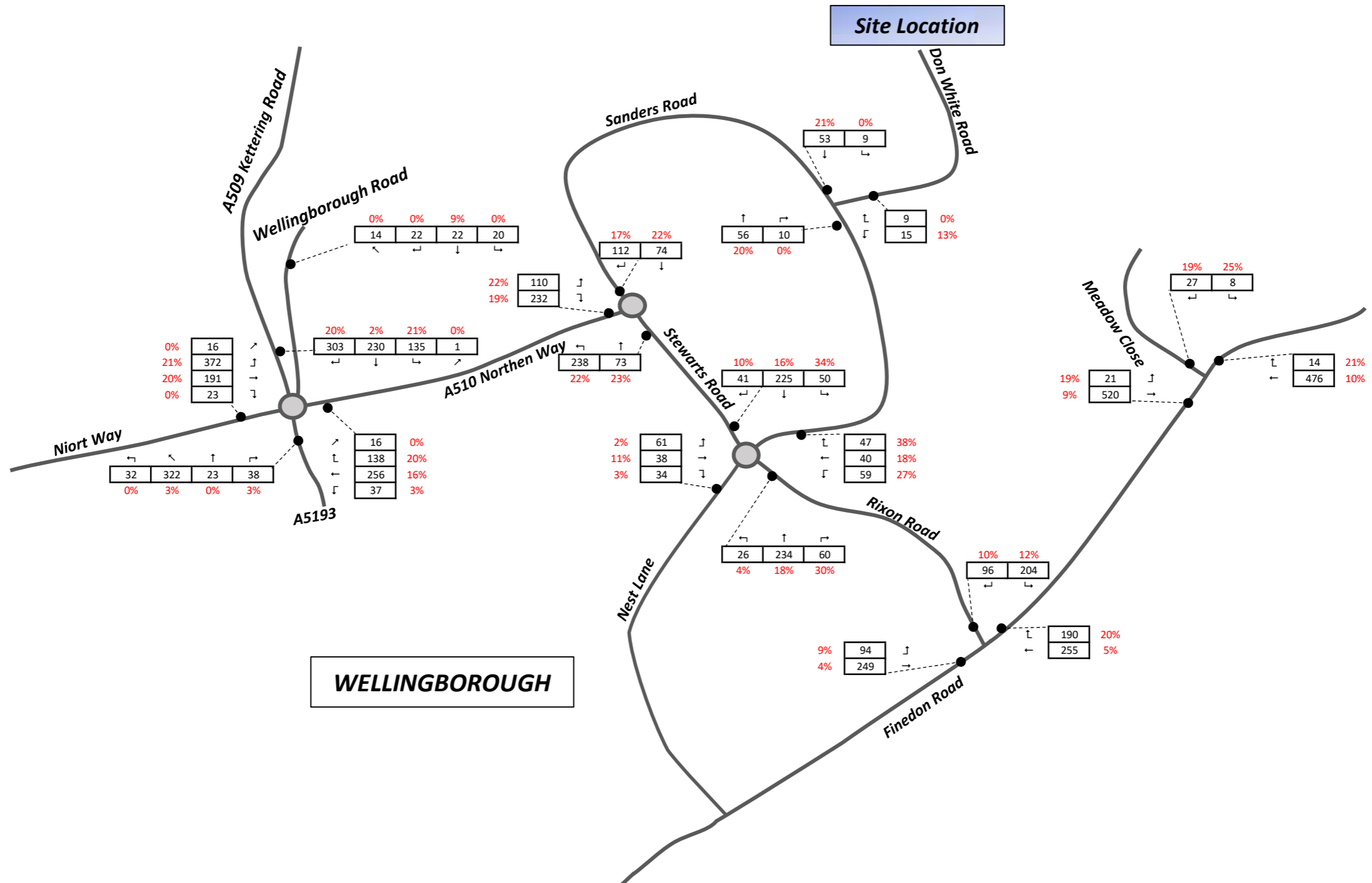
08:00 - 09:00



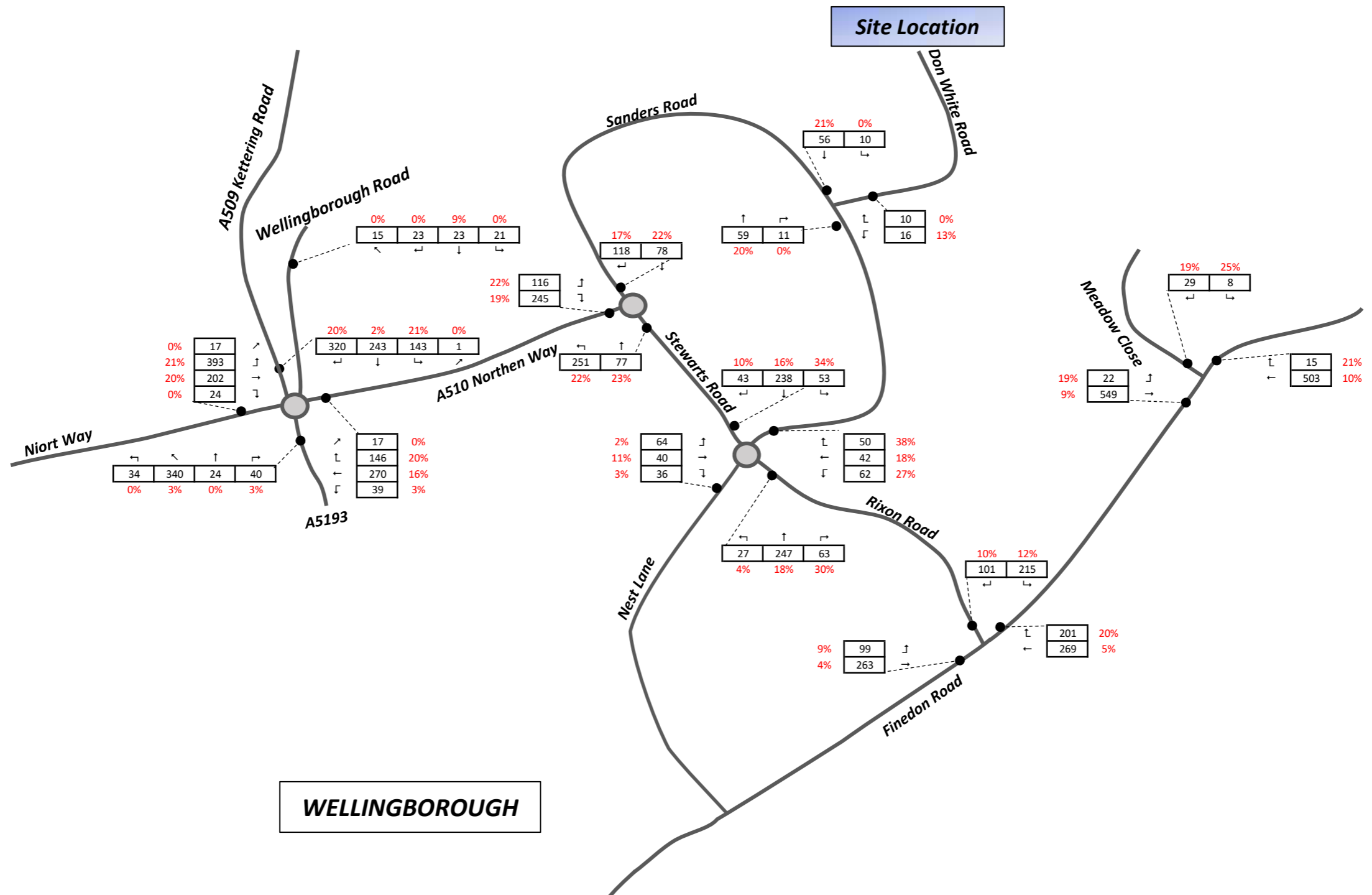
IBA Processing Plant, Wellingborough

2021 Observed Traffic Flows (Base)

13:00 - 14:00



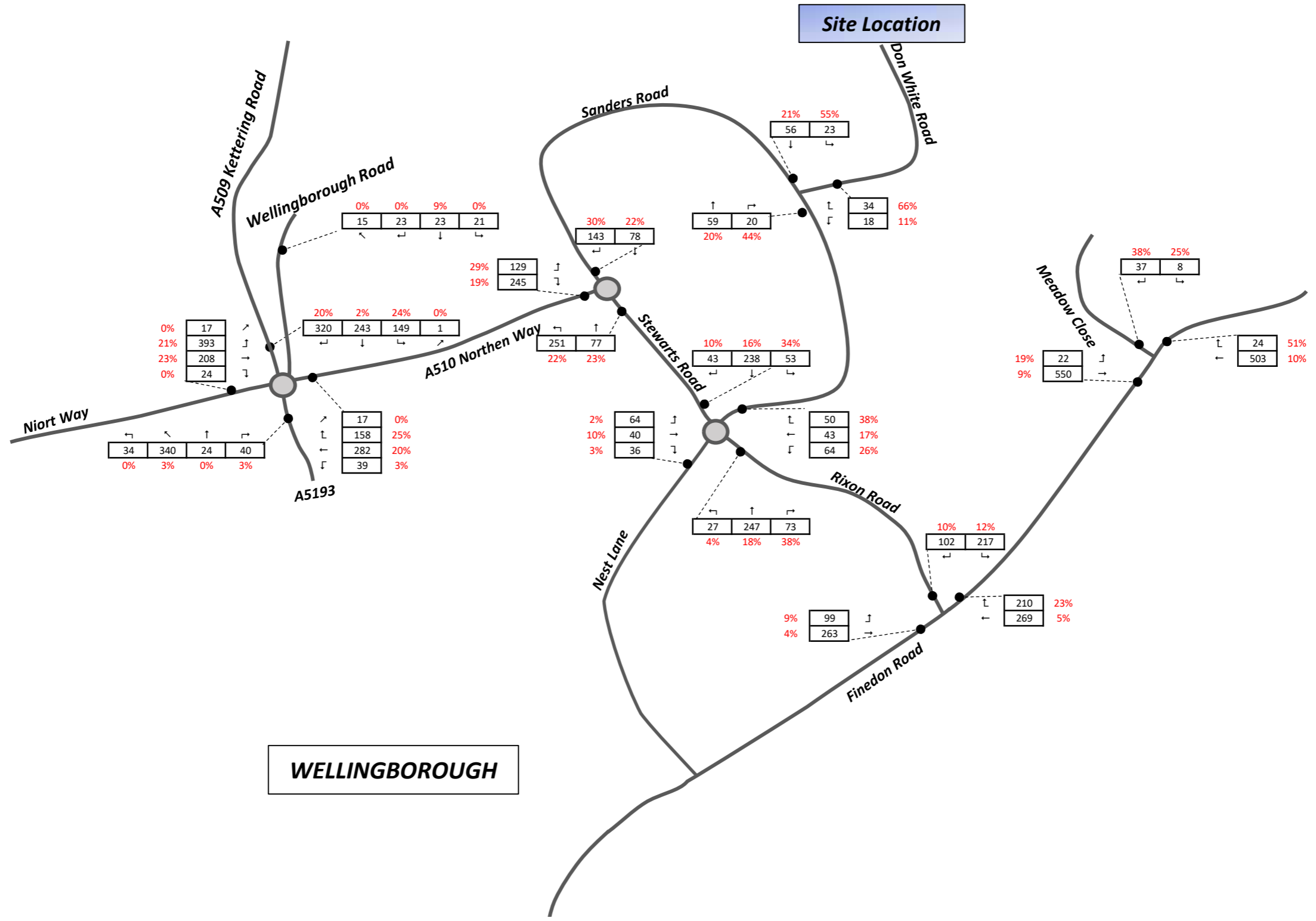
IBA Processing Plant, Wellingborough  
2027 Background Traffic Flows  
13:00 - 14:00



IBA Processing Plant, Wellingborough

2027 Background Traffic Flows + Development

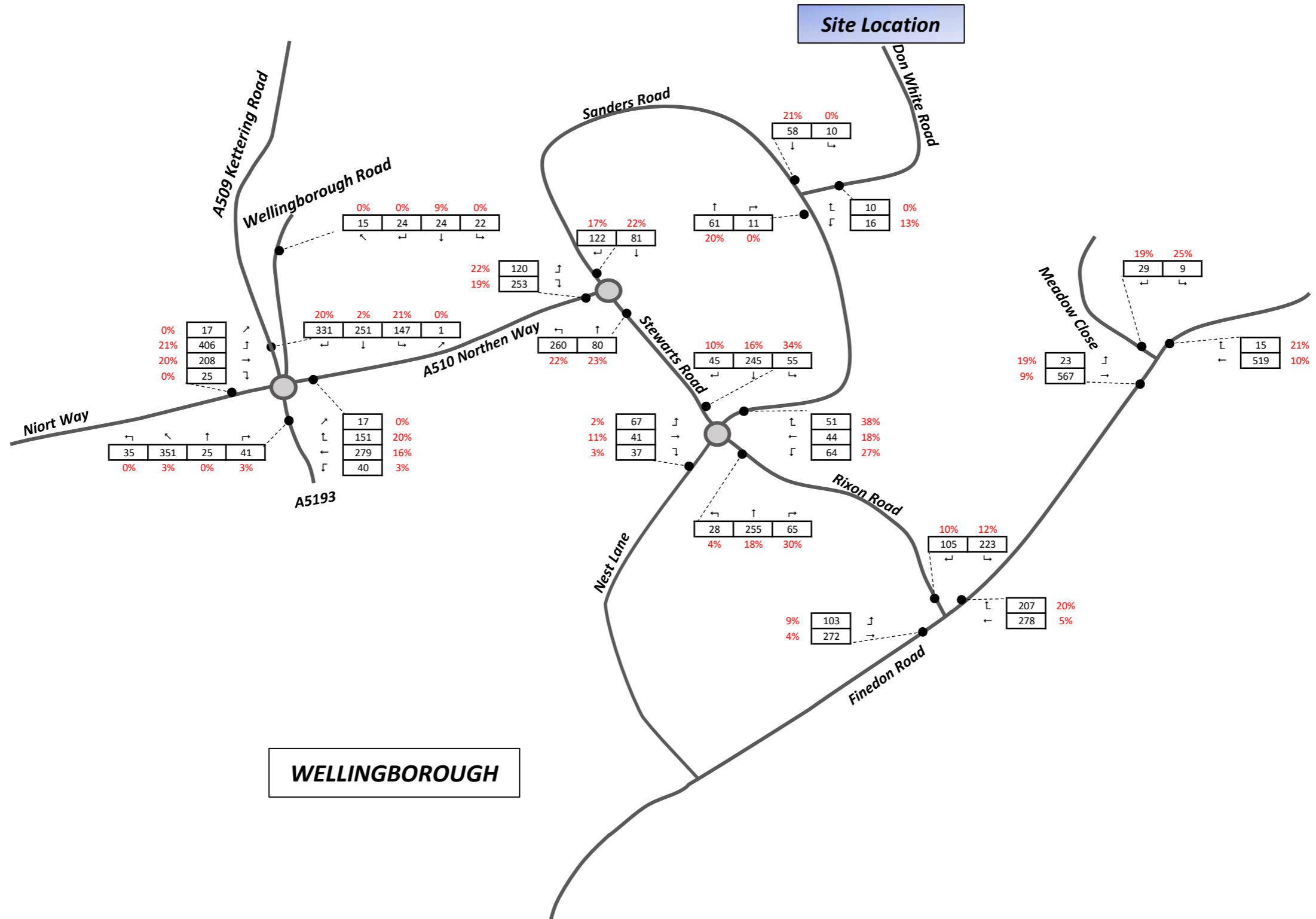
13:00 - 14:00



IBA Processing Plant, Wellingborough

2031 Background Traffic Flows

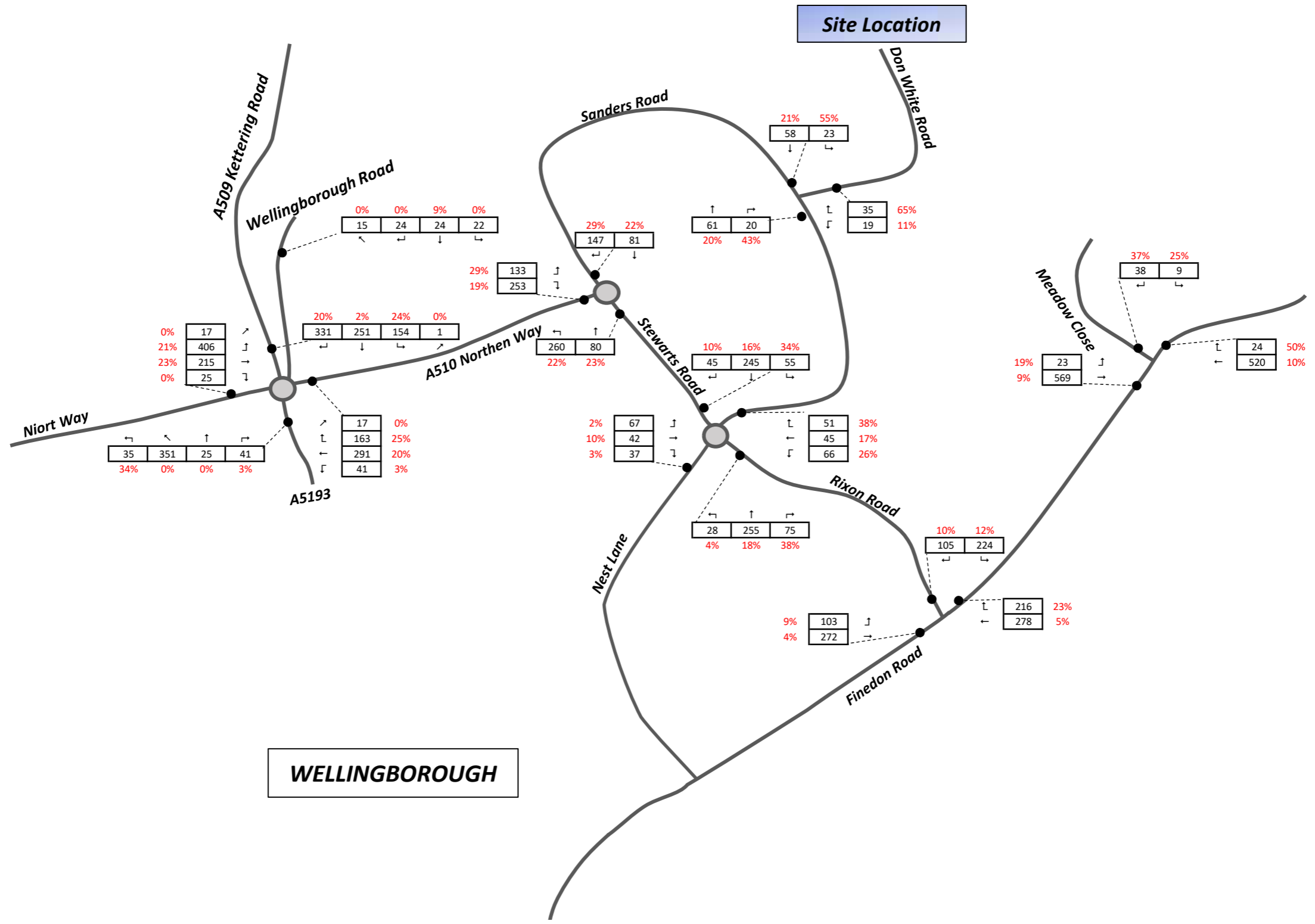
13:00 - 14:00



IBA Processing Plant, Wellingborough

2031 Background Traffic Flows + Development

13:00 - 14:00

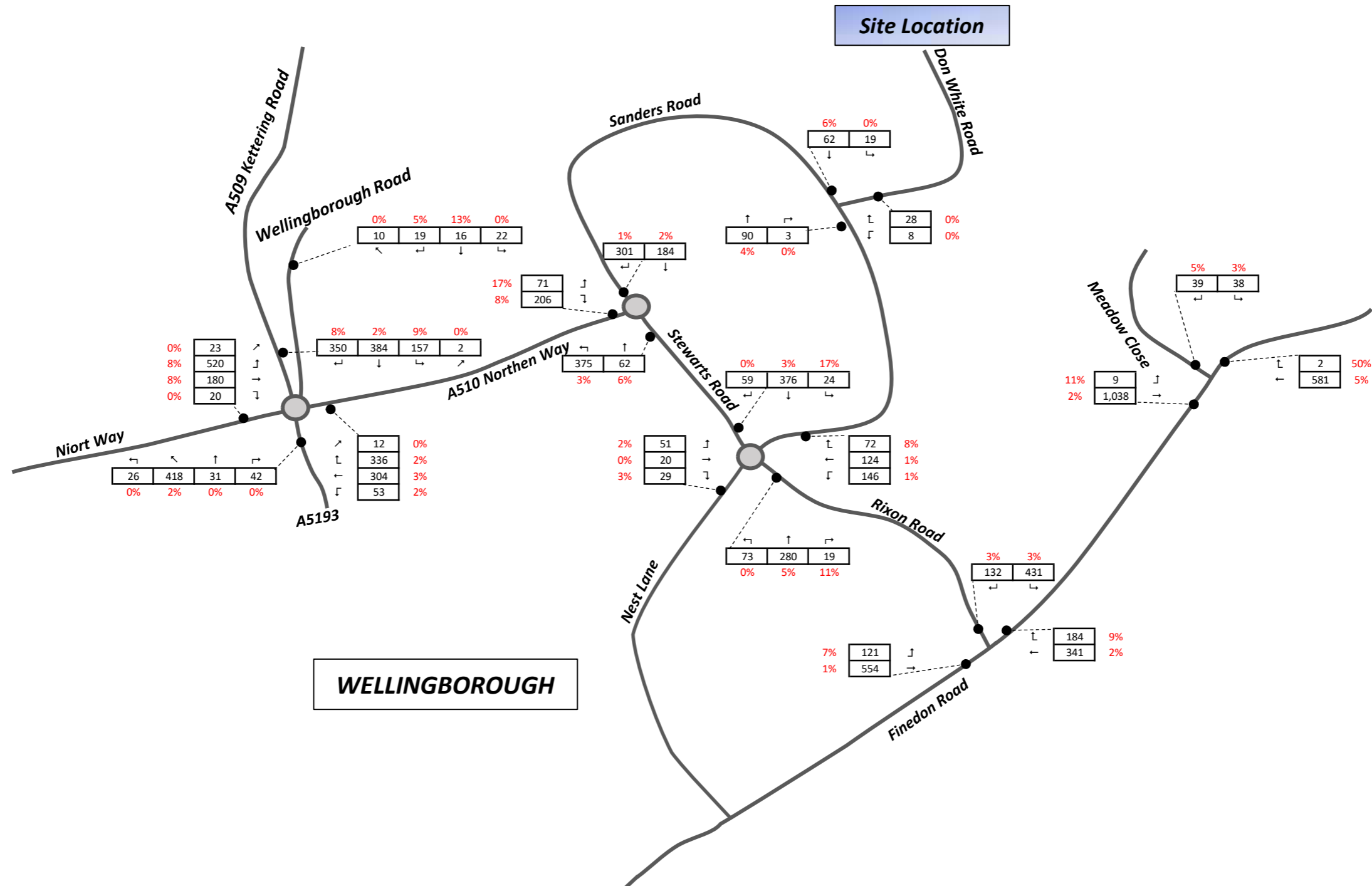


IBA Processing Plant, Wellingborough

2021 Observed Traffic Flows (Base)

16:00 - 17:00

Note: 16:30 - 17:30 background traffic flows have been used as this represents the highway peak hour

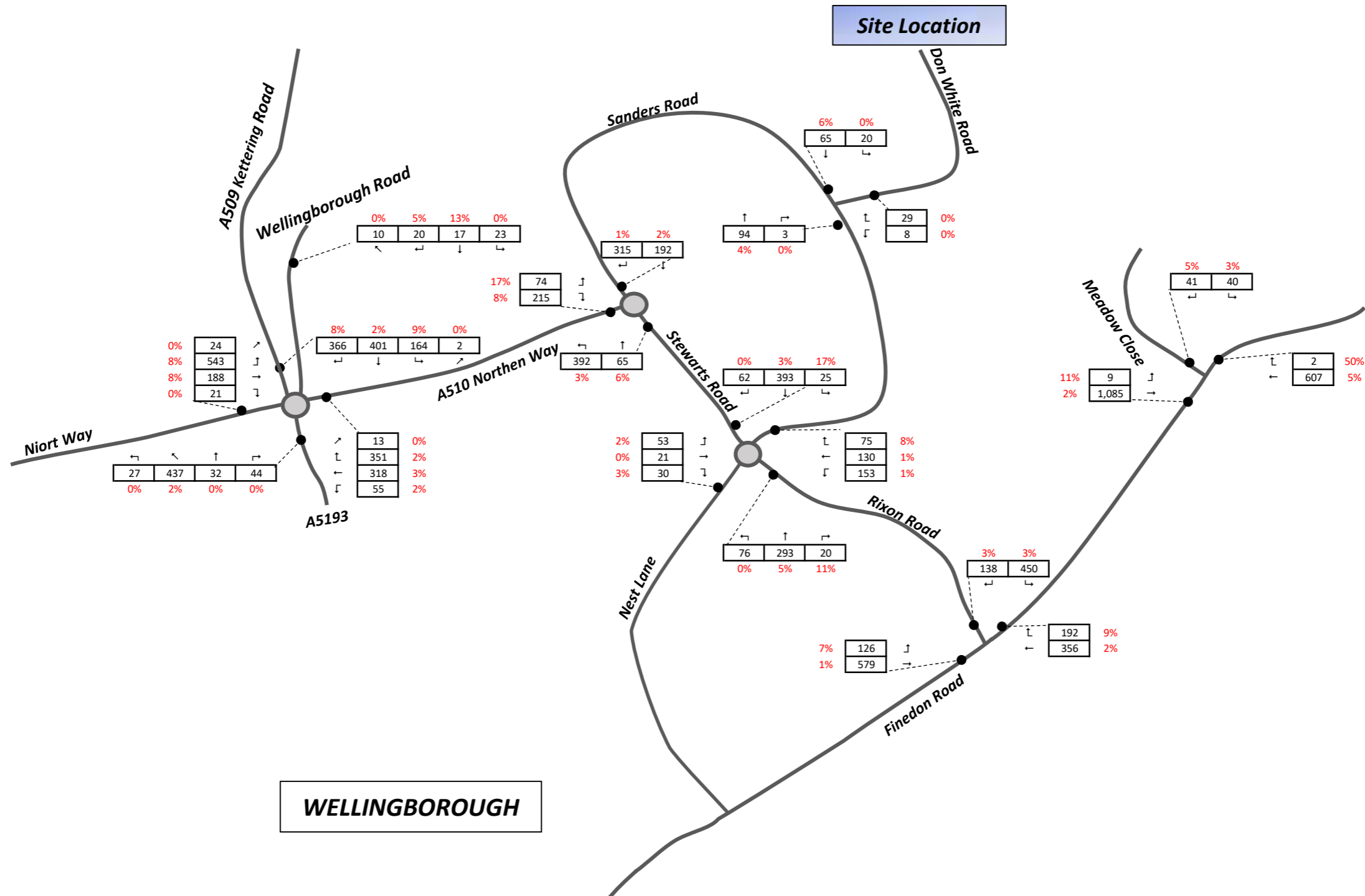


IBA Processing Plant, Wellingborough

2027 Background Traffic Flows

16:00 - 17:00

Note: 16:30 - 17:30 background traffic flows have been used as this represents the highway peak hour



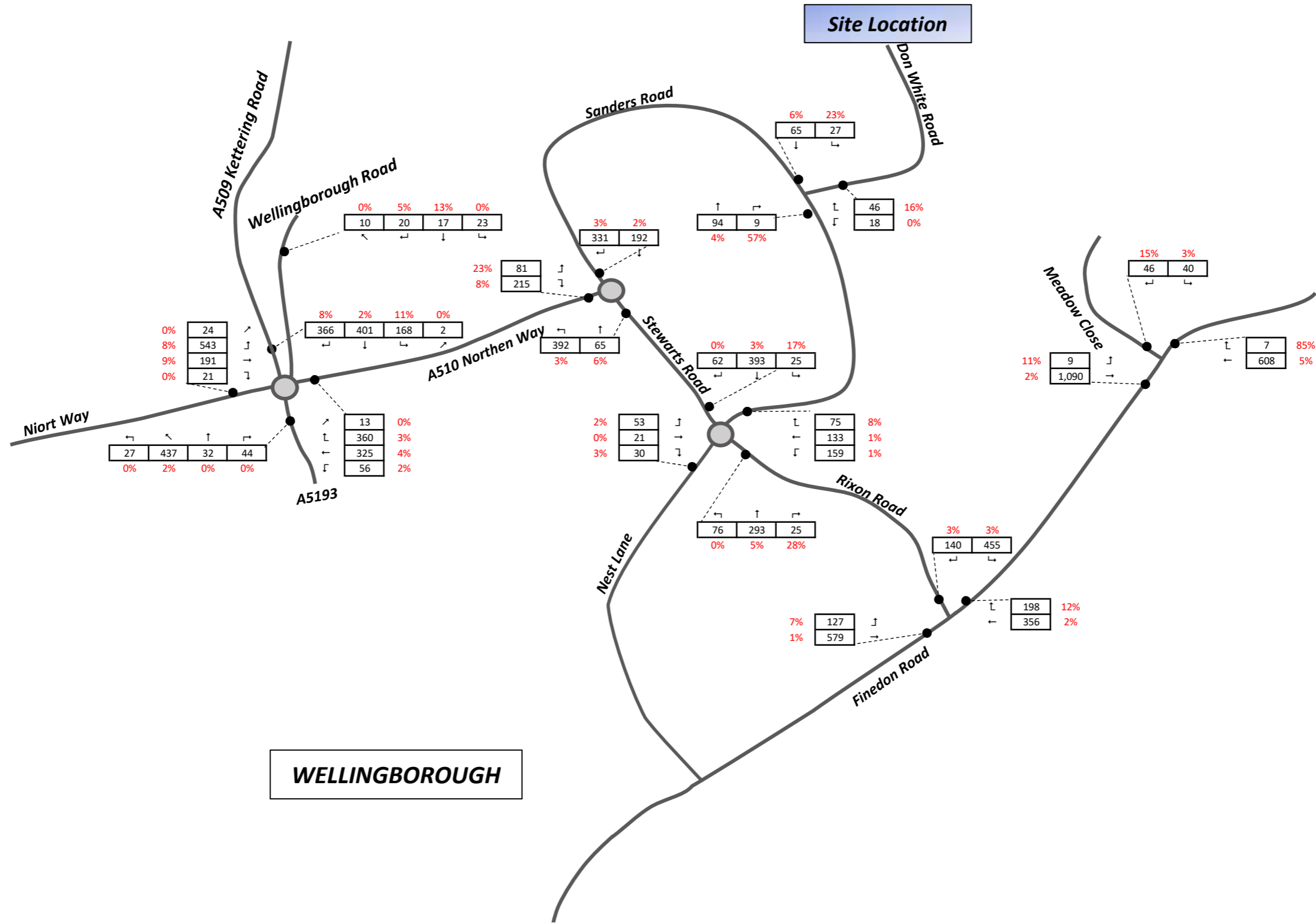


IBA Processing Plant, Wellingborough

2027 Background Traffic Flows + Development

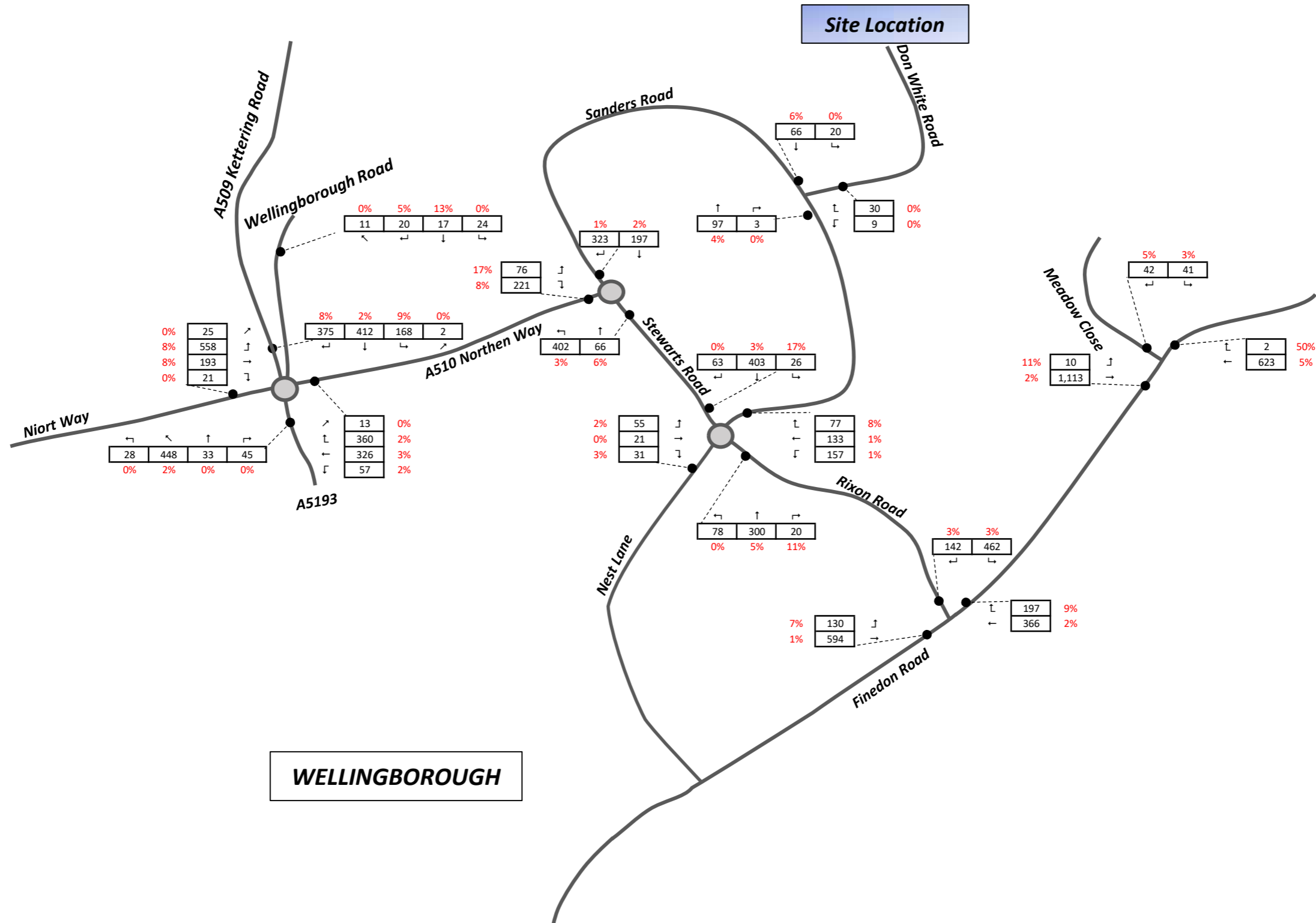
16:00 - 17:00

Note: 16:30 - 17:30 background traffic flows have been used as this represents the highway peak hour



IBA Processing Plant, Wellingborough  
2031 Background Traffic Flows  
16:00 - 17:00

Note: 16:30 - 17:30 background traffic flows have been used as this represents the highway peak hour

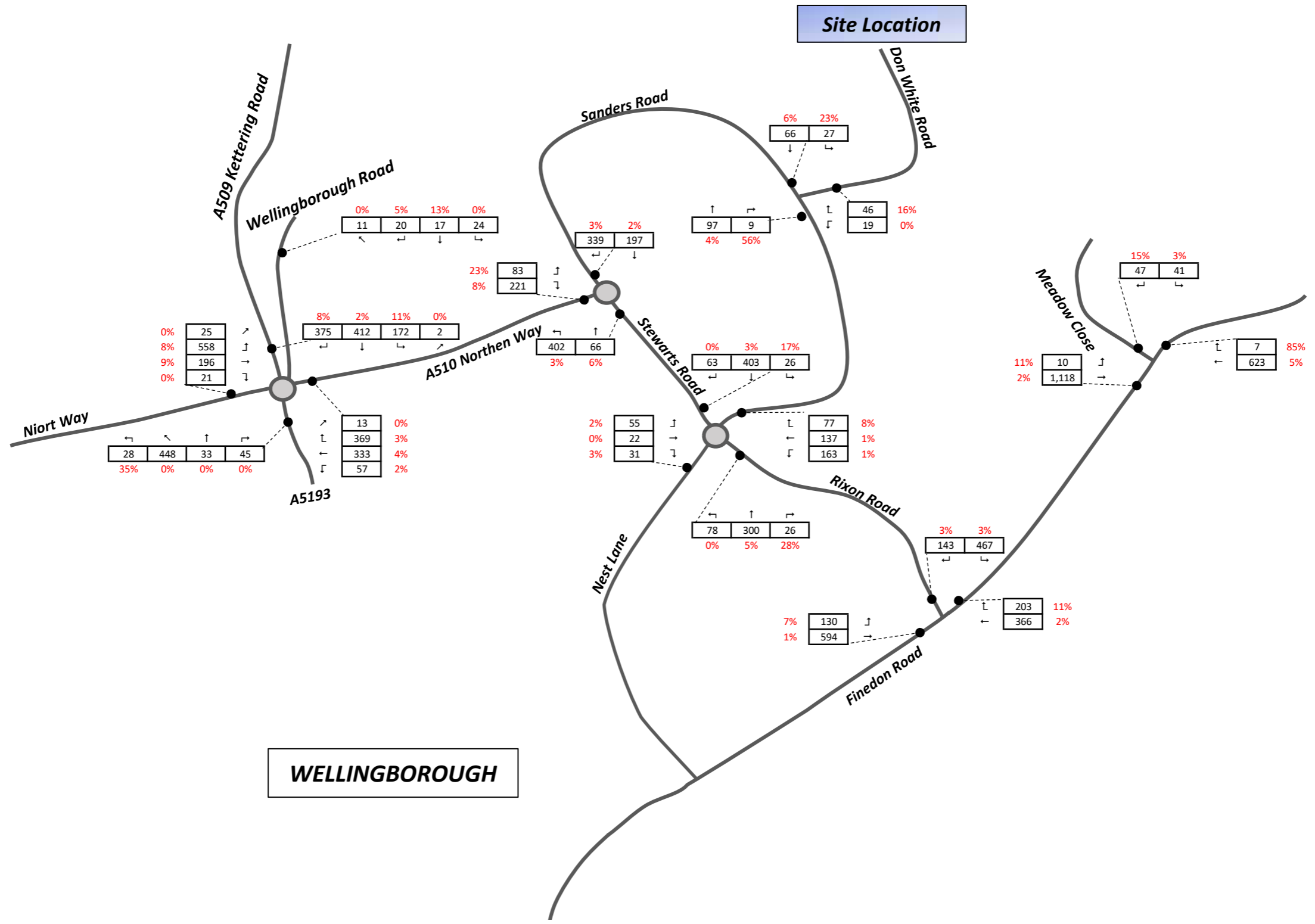


IBA Processing Plant, Wellingborough

2031 Background Traffic Flows + Development

16:00 - 17:00

Note: 16:30 - 17:30 background traffic flows have been used as this represents the highway peak hour



## **Appendix P – Sanders Road / Don White Road Junctions 9 Results**



<b>Junctions 9</b>
<b>PICADY 9 - Priority Intersection Module</b>
Version: 9.5.1.7462 © Copyright TRL Limited, 2019
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk
<b>The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution</b>

**Filename:** Don White Road.j9

**Path:** P:\2021\P21-340\T&T\Capacity Assessments\Junctions 9

**Report generation date:** 06/01/2022 16:09:36

- 
- »2021, 06:00 - 07:00
  - »2021, 08:00 - 09:00
  - »2021, 13:00 - 14:00
  - »2021, 16:30 - 17:30
  - »2027, 06:00 - 07:00
  - »2027, 08:00 - 09:00
  - »2027, 13:00 - 14:00
  - »2027, 16:30 - 17:30
  - »2027 + Dev, 06:00 - 07:00
  - »2027 + Dev, 08:00 - 09:00
  - »2027 + Dev, 13:00 - 14:00
  - »2027 + Dev, 16:30 - 17:30
  - »2031, 06:00 - 07:00
  - »2031, 08:00 - 09:00
  - »2031, 13:00 - 14:00
  - »2031, 16:30 - 17:30
  - »2031 + Dev, 06:00 - 07:00
  - »2031 + Dev, 08:00 - 09:00
  - »2031 + Dev, 13:00 - 14:00
  - »2031 + Dev, 16:30 - 17:30



### Summary of junction performance

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30					
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	
<b>2021</b>																					
Stream B-C	D1	0.0	0.00	0.00	A	D2	0.0	7.15	0.02	A	D3	0.0	5.65	0.03	A	D4	0.0	5.53	0.01	A	
Stream B-A		0.0	0.00	0.00	A		0.0	9.06	0.02	A		0.0	7.05	0.02	A		0.1	6.97	0.06	A	
Stream C-AB		0.0	5.92	0.02	A		0.0	7.06	0.03	A		0.0	5.82	0.02	A		0.0	5.61	0.01	A	
<b>2027</b>																					
Stream B-C	D5	0.0	0.00	0.00	A	D6	0.0	7.17	0.02	A	D7	0.0	5.69	0.03	A	D8	0.0	5.55	0.01	A	
Stream B-A		0.0	0.00	0.00	A		0.0	9.11	0.02	A		0.0	7.08	0.02	A		0.1	7.01	0.06	A	
Stream C-AB		0.0	5.92	0.02	A		0.0	7.08	0.03	A		0.0	5.83	0.02	A		0.0	5.60	0.01	A	
<b>2027 + Dev</b>																					
Stream B-C	D9	0.0	9.20	0.02	A	D10	0.0	8.75	0.03	A	D11	0.0	6.49	0.03	A	D12	0.0	5.61	0.01	A	
Stream B-A		0.1	13.30	0.08	B		0.1	12.97	0.09	B		0.1	12.23	0.11	B		0.1	8.36	0.07	A	
Stream C-AB		0.1	6.95	0.05	A		0.1	7.29	0.04	A		0.1	8.41	0.06	A		0.0	8.34	0.01	A	
<b>2031</b>																					
Stream B-C	D13	0.0	0.00	0.00	A	D14	0.0	7.21	0.02	A	D15	0.0	5.69	0.03	A	D16	0.0	5.54	0.02	A	
Stream B-A		0.0	0.00	0.00	A		0.0	9.14	0.02	A		0.0	7.10	0.02	A		0.1	7.04	0.06	A	
Stream C-AB		0.0	5.92	0.02	A		0.0	7.07	0.03	A		0.0	5.82	0.02	A		0.0	5.59	0.01	A	
<b>2031 + Dev</b>																					
Stream B-C	D17	0.0	9.13	0.02	A	D18	0.0	8.80	0.03	A	D19	0.0	6.39	0.03	A	D20	0.0	5.69	0.03	A	
Stream B-A		0.1	13.24	0.08	B		0.1	13.08	0.09	B		0.1	12.13	0.11	B		0.1	8.74	0.11	A	
Stream C-AB		0.0	6.11	0.04	A		0.1	7.88	0.05	A		0.1	8.31	0.06	A		0.0	8.39	0.03	A	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

### File summary

#### File Description

Title	Sanders Road Don White Road Junction
Location	Wellingborough
Site number	
Date	02/12/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	HQjake.blay
Description	

### Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

### Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00



### Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D2	2021	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D3	2021	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D4	2021	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D5	2027	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D6	2027	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D7	2027	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D8	2027	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D9	2027 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D10	2027 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D11	2027 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D12	2027 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D13	2031	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D14	2031	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D15	2031	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D16	2031	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D17	2031 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D18	2031 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D19	2031 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D20	2031 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

### Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

# 2021, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		0.78	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description	Arm type
A	Sanders Road (N)		Major
B	Don White Road		Minor
C	Sanders Road (S)		Major

### Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Sanders Road (S)	7.30			70.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

### Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Don White Road	One lane plus flare	10.00	4.90	3.65	3.65	3.65	✓	1.00	24	100

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	573	0.098	0.249	0.157	0.356
B-C	737	0.107	0.269	-	-
C-B	615	0.225	0.225	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.



## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	42	100.000
B - Don White Road		ONE HOUR	✓	4	100.000
C - Sanders Road (S)		ONE HOUR	✓	33	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	1	41
	B - Don White Road	2	0	2
	C - Sanders Road (S)	23	10	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	0	7
	B - Don White Road	0	0	0
	C - Sanders Road (S)	4	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.00	0.00	0.0	A	0	0
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.02	5.92	0.0	A	10	14
C-A					21	31
AB					0.92	1
AC					38	56

**Main Results for each time segment****05:45 - 06:00**

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	728	0.000	0	0.0	0.0	0.000	A
B-A	0	0	559	0.000	0	0.0	0.0	0.000	A
C-AB	8	2	618	0.013	8	0.0	0.0	5.897	A
C-A	17	4			17				
A-B	0.75	0.19			0.75				
A-C	31	8			31				

**06:00 - 06:15**

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	726	0.000	0	0.0	0.0	0.000	A
B-A	0	0	557	0.000	0	0.0	0.0	0.000	A
C-AB	9	2	619	0.015	9	0.0	0.0	5.904	A
C-A	20	5			20				
A-B	0.90	0.22			0.90				
A-C	37	9			37				

**06:15 - 06:30**

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	724	0.000	0	0.0	0.0	0.000	A
B-A	0	0	553	0.000	0	0.0	0.0	0.000	A
C-AB	11	3	620	0.019	11	0.0	0.0	5.915	A
C-A	25	6			25				
A-B	1	0.28			1				
A-C	45	11			45				

**06:30 - 06:45**

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	724	0.000	0	0.0	0.0	0.000	A
B-A	0	0	553	0.000	0	0.0	0.0	0.000	A
C-AB	11	3	620	0.019	11	0.0	0.0	5.918	A
C-A	25	6			25				
A-B	1	0.28			1				
A-C	45	11			45				

**06:45 - 07:00**

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	726	0.000	0	0.0	0.0	0.000	A
B-A	0	0	557	0.000	0	0.0	0.0	0.000	A
C-AB	9	2	619	0.015	9	0.0	0.0	5.906	A
C-A	20	5			20				
A-B	0.90	0.22			0.90				
A-C	37	9			37				



07:00 - 07:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	728	0.000	0	0.0	0.0	0.000	A
B-A	0	0	559	0.000	0	0.0	0.0	0.000	A
C-AB	8	2	618	0.013	8	0.0	0.0	5.898	A
C-A	17	4			17				
AB	0.75	0.19			0.75				
AC	31	8			31				

# 2021, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		1.33	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2021	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	115	100.000
B - Don White Road		ONE HOUR	✓	15	100.000
C - Sanders Road (S)		ONE HOUR	✓	47	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	11	104
	B - Don White Road	7	0	8
	C - Sanders Road (S)	35	12	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	18	7
	B - Don White Road	29	0	38
	C - Sanders Road (S)	23	17	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.02	7.15	0.0	A	7	11
B-A	0.02	9.06	0.0	A	6	10
C-AB	0.03	7.06	0.0	A	12	18
C-A					31	47
A-B					10	15
A-C					95	143

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6	2	521	0.012	6	0.0	0.0	6.989	A
B-A	5	1	416	0.013	5	0.0	0.0	8.768	A
C-AB	10	2	524	0.018	9	0.0	0.0	6.989	A
C-A	26	6			26				
A-B	8	2			8				
A-C	78	20			78				

#### 08:00 - 08:15

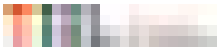
Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	517	0.014	7	0.0	0.0	7.056	A
B-A	6	2	411	0.015	6	0.0	0.0	8.890	A
C-AB	11	3	524	0.022	11	0.0	0.0	7.016	A
C-A	31	8			31				
A-B	10	2			10				
A-C	93	23			93				

#### 08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	9	2	512	0.017	9	0.0	0.0	7.151	A
B-A	8	2	405	0.019	8	0.0	0.0	9.063	A
C-AB	14	4	524	0.027	14	0.0	0.0	7.054	A
C-A	37	9			37				
A-B	12	3			12				
A-C	115	29			115				

#### 08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	9	2	512	0.017	9	0.0	0.0	7.151	A
B-A	8	2	405	0.019	8	0.0	0.0	9.063	A
C-AB	14	4	524	0.027	14	0.0	0.0	7.057	A
C-A	37	9			37				
A-B	12	3			12				
A-C	115	29			115				



08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	517	0.014	7	0.0	0.0	7.057	A
B-A	6	2	411	0.015	6	0.0	0.0	8.892	A
C-AB	11	3	524	0.022	12	0.0	0.0	7.024	A
C-A	31	8			31				
AB	10	2			10				
AC	93	23			93				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6	2	521	0.012	6	0.0	0.0	6.990	A
B-A	5	1	416	0.013	5	0.0	0.0	8.769	A
C-AB	10	2	524	0.018	10	0.0	0.0	6.992	A
C-A	26	6			26				
AB	8	2			8				
AC	78	20			78				

# 2021, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		1.27	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2021	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	62	100.000
B - Don White Road		ONE HOUR	✓	24	100.000
C - Sanders Road (S)		ONE HOUR	✓	66	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	9	53
	B - Don White Road	9	0	15
	C - Sanders Road (S)	56	10	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	0	21
	B - Don White Road	0	0	13
	C - Sanders Road (S)	20	0	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.03	5.65	0.0	A	14	21
B-A	0.02	7.05	0.0	A	8	12
C-AB	0.02	5.82	0.0	A	10	15
C-A					51	76
A-B					8	12
A-C					49	73

### Main Results for each time segment

#### 12:45 - 13:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	11	3	660	0.017	11	0.0	0.0	5.547	A
B-A	7	2	531	0.013	7	0.0	0.0	6.871	A
C-AB	8	2	627	0.013	8	0.0	0.0	5.812	A
C-A	42	10			42				
A-B	7	2			7				
A-C	40	10			40				

#### 13:00 - 13:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	13	3	657	0.021	13	0.0	0.0	5.591	A
B-A	8	2	526	0.015	8	0.0	0.0	6.946	A
C-AB	10	2	630	0.016	10	0.0	0.0	5.797	A
C-A	50	12			50				
A-B	8	2			8				
A-C	48	12			48				

#### 13:15 - 13:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	17	4	653	0.025	16	0.0	0.0	5.653	A
B-A	10	2	520	0.019	10	0.0	0.0	7.053	A
C-AB	12	3	634	0.019	12	0.0	0.0	5.784	A
C-A	60	15			60				
A-B	10	2			10				
A-C	58	15			58				

#### 13:30 - 13:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	17	4	653	0.025	17	0.0	0.0	5.653	A
B-A	10	2	520	0.019	10	0.0	0.0	7.053	A
C-AB	12	3	633	0.019	12	0.0	0.0	5.796	A
C-A	60	15			60				
A-B	10	2			10				
A-C	58	15			58				





13:45 - 14:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	13	3	657	0.021	14	0.0	0.0	5.594	A
B-A	8	2	526	0.015	8	0.0	0.0	6.946	A
C-AB	10	2	630	0.016	10	0.0	0.0	5.816	A
C-A	50	12			50				
AB	8	2			8				
AC	48	12			48				

14:00 - 14:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	11	3	660	0.017	11	0.0	0.0	5.550	A
B-A	7	2	531	0.013	7	0.0	0.0	6.871	A
C-AB	8	2	627	0.013	8	0.0	0.0	5.823	A
C-A	42	10			42				
AB	7	2			7				
AC	40	10			40				

# 2021, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		1.19	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2021	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	81	100.000
B - Don White Road		ONE HOUR	✓	36	100.000
C - Sanders Road (S)		ONE HOUR	✓	93	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	19	62
	B - Don White Road	28	0	8
	C - Sanders Road (S)	90	3	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	0	6
	B - Don White Road	0	0	0
	C - Sanders Road (S)	4	0	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.01	5.53	0.0	A	7	11
B-A	0.06	6.97	0.1	A	26	39
C-AB	0.01	5.61	0.0	A	3	5
C-A					82	123
A-B					17	26
A-C					57	85

### Main Results for each time segment

#### 16:15 - 16:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6	2	670	0.009	6	0.0	0.0	5.424	A
B-A	21	5	559	0.038	21	0.0	0.0	6.686	A
C-AB	3	0.63	644	0.004	3	0.0	0.0	5.607	A
C-A	67	17			67				
A-B	14	4			14				
A-C	47	12			47				

#### 16:30 - 16:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	666	0.011	7	0.0	0.0	5.467	A
B-A	25	6	554	0.045	25	0.0	0.0	6.804	A
C-AB	3	0.77	650	0.005	3	0.0	0.0	5.559	A
C-A	81	20			81				
A-B	17	4			17				
A-C	56	14			56				

#### 16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	9	2	660	0.013	9	0.0	0.0	5.527	A
B-A	31	8	547	0.056	31	0.0	0.1	6.971	A
C-AB	4	0.97	659	0.006	4	0.0	0.0	5.495	A
C-A	99	25			99				
A-B	21	5			21				
A-C	68	17			68				

#### 17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	9	2	660	0.013	9	0.0	0.0	5.528	A
B-A	31	8	547	0.056	31	0.1	0.1	6.971	A
C-AB	4	0.97	659	0.006	4	0.0	0.0	5.497	A
C-A	99	25			99				
A-B	21	5			21				
A-C	68	17			68				



## 17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	666	0.011	7	0.0	0.0	5.470	A
B-A	25	6	554	0.045	25	0.1	0.0	6.808	A
C-AB	3	0.77	650	0.005	3	0.0	0.0	5.564	A
C-A	81	20			81				
AB	17	4			17				
AC	56	14			56				

## 17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6	2	670	0.009	6	0.0	0.0	5.427	A
B-A	21	5	559	0.038	21	0.0	0.0	6.692	A
C-AB	3	0.63	644	0.004	3	0.0	0.0	5.612	A
C-A	67	17			67				
AB	14	4			14				
AC	47	12			47				

# 2027, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		0.75	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2027	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	44	100.000
B - Don White Road		ONE HOUR	✓	4	100.000
C - Sanders Road (S)		ONE HOUR	✓	34	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	1	43
	B - Don White Road	2	0	2
	C - Sanders Road (S)	24	10	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	0	7
	B - Don White Road	0	0	0
	C - Sanders Road (S)	4	0	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.00	0.00	0.0	A	0	0
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.02	5.92	0.0	A	10	14
C-A					22	33
A-B					0.92	1
A-C					39	59

### Main Results for each time segment

#### 05:45 - 06:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	727	0.000	0	0.0	0.0	0.000	A
B-A	0	0	559	0.000	0	0.0	0.0	0.000	A
C-AB	8	2	618	0.013	8	0.0	0.0	5.895	A
C-A	18	4			18				
A-B	0.75	0.19			0.75				
A-C	32	8			32				

#### 06:00 - 06:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	726	0.000	0	0.0	0.0	0.000	A
B-A	0	0	556	0.000	0	0.0	0.0	0.000	A
C-AB	9	2	619	0.015	9	0.0	0.0	5.903	A
C-A	21	5			21				
A-B	0.90	0.22			0.90				
A-C	39	10			39				

#### 06:15 - 06:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	723	0.000	0	0.0	0.0	0.000	A
B-A	0	0	552	0.000	0	0.0	0.0	0.000	A
C-AB	12	3	620	0.019	11	0.0	0.0	5.913	A
C-A	26	6			26				
A-B	1	0.28			1				
A-C	47	12			47				

#### 06:30 - 06:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	723	0.000	0	0.0	0.0	0.000	A
B-A	0	0	552	0.000	0	0.0	0.0	0.000	A
C-AB	12	3	620	0.019	12	0.0	0.0	5.917	A
C-A	26	6			26				
A-B	1	0.28			1				
A-C	47	12			47				



06:45 - 07:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	726	0.000	0	0.0	0.0	0.000	A
B-A	0	0	556	0.000	0	0.0	0.0	0.000	A
C-AB	9	2	619	0.015	9	0.0	0.0	5.907	A
C-A	21	5			21				
AB	0.90	0.22			0.90				
AC	39	10			39				

07:00 - 07:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	727	0.000	0	0.0	0.0	0.000	A
B-A	0	0	559	0.000	0	0.0	0.0	0.000	A
C-AB	8	2	618	0.013	8	0.0	0.0	5.896	A
C-A	18	4			18				
AB	0.75	0.19			0.75				
AC	32	8			32				

# 2027, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		1.31	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2027	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	121	100.000
B - Don White Road		ONE HOUR	✓	15	100.000
C - Sanders Road (S)		ONE HOUR	✓	50	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	12	109
	B - Don White Road	7	0	8
	C - Sanders Road (S)	37	13	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	18	7
	B - Don White Road	29	0	38
	C - Sanders Road (S)	23	17	0





## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.02	7.17	0.0	A	7	11
B-A	0.02	9.11	0.0	A	6	10
C-AB	0.03	7.08	0.0	A	13	19
C-A					33	50
A-B					11	17
A-C					100	150

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6	2	520	0.012	6	0.0	0.0	7.001	A
B-A	5	1	414	0.013	5	0.0	0.0	8.796	A
C-AB	10	3	525	0.020	10	0.0	0.0	7.000	A
C-A	27	7			27				
A-B	9	2			9				
A-C	82	21			82				

#### 08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	516	0.014	7	0.0	0.0	7.071	A
B-A	6	2	410	0.015	6	0.0	0.0	8.924	A
C-AB	12	3	524	0.024	12	0.0	0.0	7.028	A
C-A	32	8			32				
A-B	11	3			11				
A-C	98	24			98				

#### 08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	9	2	511	0.017	9	0.0	0.0	7.169	A
B-A	8	2	403	0.019	8	0.0	0.0	9.107	A
C-AB	16	4	524	0.030	15	0.0	0.0	7.070	A
C-A	40	10			40				
A-B	13	3			13				
A-C	120	30			120				

#### 08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	9	2	511	0.017	9	0.0	0.0	7.169	A
B-A	8	2	403	0.019	8	0.0	0.0	9.107	A
C-AB	16	4	524	0.030	16	0.0	0.0	7.076	A
C-A	40	10			40				
A-B	13	3			13				
A-C	120	30			120				



08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	516	0.014	7	0.0	0.0	7.074	A
B-A	6	2	410	0.015	6	0.0	0.0	8.927	A
C-AB	12	3	524	0.024	13	0.0	0.0	7.034	A
C-A	32	8			32				
AB	11	3			11				
AC	98	24			98				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6	2	520	0.012	6	0.0	0.0	7.002	A
B-A	5	1	414	0.013	5	0.0	0.0	8.799	A
C-AB	10	3	525	0.020	10	0.0	0.0	7.006	A
C-A	27	7			27				
AB	9	2			9				
AC	82	21			82				

# 2027, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		1.31	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2027	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	66	100.000
B - Don White Road		ONE HOUR	✓	26	100.000
C - Sanders Road (S)		ONE HOUR	✓	70	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	10	56
	B - Don White Road	10	0	16
	C - Sanders Road (S)	59	11	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	0	21
	B - Don White Road	0	0	13
	C - Sanders Road (S)	20	0	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.03	5.69	0.0	A	15	22
B-A	0.02	7.08	0.0	A	9	14
C-AB	0.02	5.83	0.0	A	11	17
C-A					53	80
A-B					9	14
A-C					51	77

### Main Results for each time segment

#### 12:45 - 13:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	12	3	658	0.018	12	0.0	0.0	5.574	A
B-A	8	2	530	0.014	7	0.0	0.0	6.884	A
C-AB	9	2	628	0.014	9	0.0	0.0	5.814	A
C-A	44	11			44				
A-B	8	2			8				
A-C	42	11			42				

#### 13:00 - 13:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	14	4	655	0.022	14	0.0	0.0	5.621	A
B-A	9	2	526	0.017	9	0.0	0.0	6.965	A
C-AB	11	3	631	0.017	11	0.0	0.0	5.800	A
C-A	52	13			52				
A-B	9	2			9				
A-C	50	13			50				

#### 13:15 - 13:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	18	4	650	0.027	18	0.0	0.0	5.687	A
B-A	11	3	519	0.021	11	0.0	0.0	7.081	A
C-AB	14	3	634	0.021	13	0.0	0.0	5.788	A
C-A	64	16			64				
A-B	11	3			11				
A-C	62	15			62				

#### 13:30 - 13:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	18	4	650	0.027	18	0.0	0.0	5.688	A
B-A	11	3	519	0.021	11	0.0	0.0	7.081	A
C-AB	14	3	634	0.021	14	0.0	0.0	5.800	A
C-A	64	16			64				
A-B	11	3			11				
A-C	62	15			62				



13:45 - 14:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	14	4	655	0.022	14	0.0	0.0	5.624	A
B-A	9	2	526	0.017	9	0.0	0.0	6.965	A
C-AB	11	3	631	0.017	11	0.0	0.0	5.820	A
C-A	52	13			52				
AB	9	2			9				
AC	50	13			50				

14:00 - 14:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	12	3	658	0.018	12	0.0	0.0	5.577	A
B-A	8	2	530	0.014	8	0.0	0.0	6.886	A
C-AB	9	2	628	0.014	9	0.0	0.0	5.826	A
C-A	44	11			44				
AB	8	2			8				
AC	42	11			42				



# 2027, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		1.18	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2027	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	85	100.000
B - Don White Road		ONE HOUR	✓	37	100.000
C - Sanders Road (S)		ONE HOUR	✓	97	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	20	65
	B - Don White Road	29	0	8
	C - Sanders Road (S)	94	3	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	0	6
	B - Don White Road	0	0	0
	C - Sanders Road (S)	4	0	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.01	5.55	0.0	A	7	11
B-A	0.06	7.01	0.1	A	27	40
C-AB	0.01	5.60	0.0	A	3	5
C-A					86	129
A-B					18	28
A-C					60	89

### Main Results for each time segment

#### 16:15 - 16:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6	2	668	0.009	6	0.0	0.0	5.439	A
B-A	22	5	558	0.039	22	0.0	0.0	6.706	A
C-AB	3	0.63	646	0.004	3	0.0	0.0	5.596	A
C-A	70	18			70				
A-B	15	4			15				
A-C	49	12			49				

#### 16:30 - 16:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	663	0.011	7	0.0	0.0	5.484	A
B-A	26	7	553	0.047	26	0.0	0.0	6.830	A
C-AB	3	0.78	652	0.005	3	0.0	0.0	5.545	A
C-A	84	21			84				
A-B	18	4			18				
A-C	58	15			58				

#### 16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	9	2	658	0.013	9	0.0	0.0	5.547	A
B-A	32	8	546	0.059	32	0.0	0.1	7.006	A
C-AB	4	0.98	661	0.006	4	0.0	0.0	5.479	A
C-A	103	26			103				
A-B	22	6			22				
A-C	72	18			72				

#### 17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	9	2	658	0.013	9	0.0	0.0	5.547	A
B-A	32	8	546	0.059	32	0.1	0.1	7.005	A
C-AB	4	0.98	661	0.006	4	0.0	0.0	5.484	A
C-A	103	26			103				
A-B	22	6			22				
A-C	72	18			72				



17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	663	0.011	7	0.0	0.0	5.487	A
B-A	26	7	553	0.047	26	0.1	0.0	6.831	A
C-AB	3	0.78	652	0.005	3	0.0	0.0	5.551	A
C-A	84	21			84				
AB	18	4			18				
AC	58	15			58				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6	2	668	0.009	6	0.0	0.0	5.440	A
B-A	22	5	558	0.039	22	0.0	0.0	6.710	A
C-AB	3	0.63	646	0.004	3	0.0	0.0	5.599	A
C-A	70	18			70				
AB	15	4			15				
AC	49	12			49				





# 2027 + Dev, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		4.58	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2027 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	64	100.000
B - Don White Road		ONE HOUR	✓	29	100.000
C - Sanders Road (S)		ONE HOUR	✓	47	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	21	43
	B - Don White Road	21	0	8
	C - Sanders Road (S)	24	23	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	56	7
	B - Don White Road	88	0	66
	C - Sanders Road (S)	4	13	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.02	9.20	0.0	A	7	11
B-A	0.08	13.30	0.1	B	19	29
C-AB	0.05	6.95	0.1	A	22	33
C-A					21	32
A-B					19	29
A-C					39	59

### Main Results for each time segment

#### 05:45 - 06:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6	2	406	0.015	6	0.0	0.0	8.993	A
B-A	16	4	299	0.053	16	0.0	0.1	12.687	B
C-AB	18	4	545	0.033	18	0.0	0.0	6.832	A
C-A	17	4			17				
A-B	16	4			16				
A-C	32	8			32				

#### 06:00 - 06:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	404	0.018	7	0.0	0.0	9.082	A
B-A	19	5	297	0.064	19	0.1	0.1	12.944	B
C-AB	22	5	545	0.040	22	0.0	0.0	6.881	A
C-A	21	5			21				
A-B	19	5			19				
A-C	39	10			39				

#### 06:15 - 06:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	9	2	400	0.022	9	0.0	0.0	9.203	A
B-A	23	6	294	0.079	23	0.1	0.1	13.291	B
C-AB	27	7	545	0.049	27	0.0	0.1	6.946	A
C-A	25	6			25				
A-B	23	6			23				
A-C	47	12			47				

#### 06:30 - 06:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	9	2	400	0.022	9	0.0	0.0	9.204	A
B-A	23	6	294	0.079	23	0.1	0.1	13.296	B
C-AB	27	7	545	0.049	27	0.1	0.1	6.944	A
C-A	25	6			25				
A-B	23	6			23				
A-C	47	12			47				



06:45 - 07:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	403	0.018	7	0.0	0.0	9.087	A
B-A	19	5	297	0.064	19	0.1	0.1	12.952	B
C-AB	22	5	545	0.040	22	0.1	0.0	6.881	A
C-A	21	5			21				
AB	19	5			19				
AC	39	10			39				

07:00 - 07:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6	2	406	0.015	6	0.0	0.0	9.000	A
B-A	16	4	299	0.053	16	0.1	0.1	12.712	B
C-AB	18	4	545	0.033	18	0.0	0.0	6.836	A
C-A	17	4			17				
AB	16	4			16				
AC	32	8			32				



# 2027 + Dev, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		3.03	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2027 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	141	100.000
B - Don White Road		ONE HOUR	✓	36	100.000
C - Sanders Road (S)		ONE HOUR	✓	56	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	32	109
	B - Don White Road	25	0	11
	C - Sanders Road (S)	37	19	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	62	7
	B - Don White Road	79	0	52
	C - Sanders Road (S)	23	17	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.03	8.75	0.0	A	10	15
B-A	0.09	12.97	0.1	B	23	34
C-AB	0.04	7.29	0.1	A	19	28
C-A					33	49
A-B					29	44
A-C					100	150

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	8	2	435	0.019	8	0.0	0.0	8.429	A
B-A	19	5	315	0.060	19	0.0	0.1	12.130	B
C-AB	15	4	519	0.029	15	0.0	0.0	7.138	A
C-A	27	7			27				
A-B	24	6			24				
A-C	82	21			82				

#### 08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	10	2	430	0.023	10	0.0	0.0	8.563	A
B-A	22	6	311	0.072	22	0.1	0.1	12.476	B
C-AB	18	5	518	0.035	18	0.0	0.0	7.199	A
C-A	32	8			32				
A-B	29	7			29				
A-C	98	24			98				

#### 08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	12	3	423	0.029	12	0.0	0.0	8.752	A
B-A	28	7	305	0.090	27	0.1	0.1	12.965	B
C-AB	23	6	517	0.044	23	0.0	0.1	7.284	A
C-A	39	10			39				
A-B	35	9			35				
A-C	120	30			120				

#### 08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	12	3	423	0.029	12	0.0	0.0	8.753	A
B-A	28	7	305	0.090	28	0.1	0.1	12.972	B
C-AB	23	6	517	0.044	23	0.1	0.1	7.290	A
C-A	39	10			39				
A-B	35	9			35				
A-C	120	30			120				



08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	10	2	430	0.023	10	0.0	0.0	8.566	A
B-A	22	6	311	0.072	23	0.1	0.1	12.487	B
C-AB	18	5	518	0.035	18	0.1	0.0	7.206	A
C-A	32	8			32				
A-B	29	7			29				
A-C	98	24			98				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	8	2	435	0.019	8	0.0	0.0	8.437	A
B-A	19	5	315	0.060	19	0.1	0.1	12.152	B
C-AB	15	4	519	0.029	15	0.0	0.0	7.144	A
C-A	27	7			27				
A-B	24	6			24				
A-C	82	21			82				

# 2027 + Dev, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		3.76	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2027 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	78	100.000
B - Don White Road		ONE HOUR	✓	52	100.000
C - Sanders Road (S)		ONE HOUR	✓	79	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	22	56
	B - Don White Road	34	0	18
	C - Sanders Road (S)	59	20	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	21	56
	B - Don White Road	66	0	13
	C - Sanders Road (S)	20	44	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.03	6.49	0.0	A	17	25
B-A	0.11	12.23	0.1	B	31	47
C-AB	0.06	8.41	0.1	A	21	31
C-A					52	77
A-B					20	30
A-C					51	77

### Main Results for each time segment

#### 12:45 - 13:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	14	3	589	0.023	13	0.0	0.0	6.257	A
B-A	26	6	342	0.075	25	0.0	0.1	11.355	B
C-AB	17	4	446	0.038	17	0.0	0.0	8.390	A
C-A	43	11			43				
A-B	17	4			17				
A-C	42	11			42				

#### 13:00 - 13:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	16	4	583	0.028	16	0.0	0.0	6.352	A
B-A	31	8	338	0.091	30	0.1	0.1	11.714	B
C-AB	20	5	449	0.045	20	0.0	0.1	8.405	A
C-A	51	13			51				
A-B	20	5			20				
A-C	50	13			50				

#### 13:15 - 13:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	20	5	575	0.034	20	0.0	0.0	6.487	A
B-A	37	9	332	0.113	37	0.1	0.1	12.223	B
C-AB	26	6	455	0.057	26	0.1	0.1	8.410	A
C-A	61	15			61				
A-B	24	6			24				
A-C	62	15			62				

#### 13:30 - 13:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	20	5	575	0.034	20	0.0	0.0	6.489	A
B-A	37	9	332	0.113	37	0.1	0.1	12.226	B
C-AB	26	6	455	0.057	26	0.1	0.1	8.397	A
C-A	61	15			61				
A-B	24	6			24				
A-C	62	15			62				





13:45 - 14:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	16	4	583	0.028	16	0.0	0.0	6.355	A
B-A	31	8	338	0.090	31	0.1	0.1	11.728	B
C-AB	20	5	449	0.045	20	0.1	0.1	8.374	A
C-A	51	13			51				
A-B	20	5			20				
A-C	50	13			50				

14:00 - 14:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	14	3	588	0.023	14	0.0	0.0	6.262	A
B-A	26	6	342	0.075	26	0.1	0.1	11.381	B
C-AB	17	4	446	0.038	17	0.1	0.0	8.382	A
C-A	43	11			43				
A-B	17	4			17				
A-C	42	11			42				

# 2027 + Dev, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		1.58	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2027 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	85	100.000
B - Don White Road		ONE HOUR	✓	37	100.000
C - Sanders Road (S)		ONE HOUR	✓	97	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	20	65
	B - Don White Road	29	0	8
	C - Sanders Road (S)	94	3	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	24	6
	B - Don White Road	18	0	0
	C - Sanders Road (S)	4	58	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.01	5.61	0.0	A	7	11
B-A	0.07	8.36	0.1	A	27	40
C-AB	0.01	8.34	0.0	A	3	5
C-A					86	128
A-B					18	28
A-C					60	89

### Main Results for each time segment

#### 16:15 - 16:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6	2	662	0.009	6	0.0	0.0	5.488	A
B-A	22	5	474	0.046	22	0.0	0.0	7.962	A
C-AB	3	1	434	0.006	3	0.0	0.0	8.343	A
C-A	70	18			70				
A-B	15	4			15				
A-C	49	12			49				

#### 16:30 - 16:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	657	0.011	7	0.0	0.0	5.537	A
B-A	26	7	469	0.056	26	0.0	0.1	8.126	A
C-AB	3	1	443	0.008	3	0.0	0.0	8.222	A
C-A	84	21			84				
A-B	18	4			18				
A-C	58	15			58				

#### 16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	9	2	651	0.014	9	0.0	0.0	5.605	A
B-A	32	8	463	0.069	32	0.1	0.1	8.358	A
C-AB	4	1	456	0.009	4	0.0	0.0	8.024	A
C-A	103	26			103				
A-B	22	6			22				
A-C	72	18			72				

#### 17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	9	2	651	0.014	9	0.0	0.0	5.605	A
B-A	32	8	463	0.069	32	0.1	0.1	8.360	A
C-AB	4	1	456	0.009	4	0.0	0.0	7.977	A
C-A	103	26			103				
A-B	22	6			22				
A-C	72	18			72				



17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	657	0.011	7	0.0	0.0	5.538	A
B-A	26	7	469	0.056	26	0.1	0.1	8.132	A
C-AB	3	1	443	0.008	3	0.0	0.0	8.121	A
C-A	84	21			84				
AB	18	4			18				
AC	58	15			58				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6	2	662	0.009	6	0.0	0.0	5.492	A
B-A	22	5	474	0.046	22	0.1	0.0	7.970	A
C-AB	3	1	434	0.006	3	0.0	0.0	8.291	A
C-A	70	18			70				
AB	15	4			15				
AC	49	12			49				

# 2031, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		0.80	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2031	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	45	100.000
B - Don White Road		ONE HOUR	✓	4	100.000
C - Sanders Road (S)		ONE HOUR	✓	36	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	1	44
	B - Don White Road	2	0	2
	C - Sanders Road (S)	25	11	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	0	7
	B - Don White Road	0	0	0
	C - Sanders Road (S)	4	0	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.00	0.00	0.0	A	0	0
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.02	5.92	0.0	A	10	16
C-A					23	34
A-B					0.92	1
A-C					40	61

### Main Results for each time segment

#### 05:45 - 06:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	727	0.000	0	0.0	0.0	0.000	A
B-A	0	0	558	0.000	0	0.0	0.0	0.000	A
C-AB	9	2	619	0.014	8	0.0	0.0	5.900	A
C-A	19	5			19				
A-B	0.75	0.19			0.75				
A-C	33	8			33				

#### 06:00 - 06:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	725	0.000	0	0.0	0.0	0.000	A
B-A	0	0	555	0.000	0	0.0	0.0	0.000	A
C-AB	10	3	619	0.017	10	0.0	0.0	5.908	A
C-A	22	6			22				
A-B	0.90	0.22			0.90				
A-C	40	10			40				

#### 06:15 - 06:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	723	0.000	0	0.0	0.0	0.000	A
B-A	0	0	551	0.000	0	0.0	0.0	0.000	A
C-AB	13	3	621	0.020	13	0.0	0.0	5.920	A
C-A	27	7			27				
A-B	1	0.28			1				
A-C	48	12			48				

#### 06:30 - 06:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	723	0.000	0	0.0	0.0	0.000	A
B-A	0	0	551	0.000	0	0.0	0.0	0.000	A
C-AB	13	3	621	0.020	13	0.0	0.0	5.921	A
C-A	27	7			27				
A-B	1	0.28			1				
A-C	48	12			48				



## 06:45 - 07:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	725	0.000	0	0.0	0.0	0.000	A
B-A	0	0	555	0.000	0	0.0	0.0	0.000	A
C-AB	10	3	619	0.017	10	0.0	0.0	5.913	A
C-A	22	6			22				
A-B	0.90	0.22			0.90				
A-C	40	10			40				

## 07:00 - 07:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	727	0.000	0	0.0	0.0	0.000	A
B-A	0	0	558	0.000	0	0.0	0.0	0.000	A
C-AB	9	2	619	0.014	9	0.0	0.0	5.903	A
C-A	19	5			19				
A-B	0.75	0.19			0.75				
A-C	33	8			33				

# 2031, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		1.37	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2031	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	124	100.000
B - Don White Road		ONE HOUR	✓	17	100.000
C - Sanders Road (S)		ONE HOUR	✓	51	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	12	112
	B - Don White Road	8	0	9
	C - Sanders Road (S)	38	13	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	18	7
	B - Don White Road	29	0	38
	C - Sanders Road (S)	23	17	0





## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.02	7.21	0.0	A	8	12
B-A	0.02	9.14	0.0	A	7	11
C-AB	0.03	7.07	0.0	A	13	19
C-A					34	51
A-B					11	17
A-C					103	154

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	519	0.013	7	0.0	0.0	7.027	A
B-A	6	2	414	0.015	6	0.0	0.0	8.816	A
C-AB	10	3	525	0.020	10	0.0	0.0	7.000	A
C-A	28	7			28				
A-B	9	2			9				
A-C	84	21			84				

#### 08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	8	2	515	0.016	8	0.0	0.0	7.102	A
B-A	7	2	409	0.018	7	0.0	0.0	8.951	A
C-AB	13	3	525	0.024	12	0.0	0.0	7.028	A
C-A	33	8			33				
A-B	11	3			11				
A-C	101	25			101				

#### 08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	10	2	509	0.019	10	0.0	0.0	7.206	A
B-A	9	2	403	0.022	9	0.0	0.0	9.143	A
C-AB	16	4	525	0.030	16	0.0	0.0	7.070	A
C-A	41	10			41				
A-B	13	3			13				
A-C	123	31			123				

#### 08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	10	2	509	0.019	10	0.0	0.0	7.206	A
B-A	9	2	403	0.022	9	0.0	0.0	9.143	A
C-AB	16	4	525	0.030	16	0.0	0.0	7.073	A
C-A	41	10			41				
A-B	13	3			13				
A-C	123	31			123				



## 08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	8	2	515	0.016	8	0.0	0.0	7.102	A
B-A	7	2	409	0.018	7	0.0	0.0	8.954	A
C-AB	13	3	525	0.024	13	0.0	0.0	7.037	A
C-A	33	8			33				
AB	11	3			11				
AC	101	25			101				

## 09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	519	0.013	7	0.0	0.0	7.031	A
B-A	6	2	414	0.015	6	0.0	0.0	8.820	A
C-AB	10	3	525	0.020	10	0.0	0.0	7.003	A
C-A	28	7			28				
AB	9	2			9				
AC	84	21			84				

# 2031, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		1.28	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D15	2031	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	68	100.000
B - Don White Road		ONE HOUR	✓	26	100.000
C - Sanders Road (S)		ONE HOUR	✓	72	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	10	58
	B - Don White Road	10	0	16
	C - Sanders Road (S)	61	11	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	0	21
	B - Don White Road	0	0	13
	C - Sanders Road (S)	20	0	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.03	5.69	0.0	A	15	22
B-A	0.02	7.10	0.0	A	9	14
C-AB	0.02	5.82	0.0	A	11	17
C-A					55	82
A-B					9	14
A-C					53	80

### Main Results for each time segment

#### 12:45 - 13:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	12	3	657	0.018	12	0.0	0.0	5.578	A
B-A	8	2	530	0.014	7	0.0	0.0	6.893	A
C-AB	9	2	628	0.014	9	0.0	0.0	5.810	A
C-A	45	11			45				
A-B	8	2			8				
A-C	44	11			44				

#### 13:00 - 13:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	14	4	654	0.022	14	0.0	0.0	5.626	A
B-A	9	2	525	0.017	9	0.0	0.0	6.976	A
C-AB	11	3	631	0.017	11	0.0	0.0	5.794	A
C-A	54	13			54				
A-B	9	2			9				
A-C	52	13			52				

#### 13:15 - 13:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	18	4	650	0.027	18	0.0	0.0	5.693	A
B-A	11	3	518	0.021	11	0.0	0.0	7.095	A
C-AB	14	3	635	0.021	14	0.0	0.0	5.781	A
C-A	66	16			66				
A-B	11	3			11				
A-C	64	16			64				

#### 13:30 - 13:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	18	4	650	0.027	18	0.0	0.0	5.694	A
B-A	11	3	518	0.021	11	0.0	0.0	7.095	A
C-AB	14	3	635	0.021	14	0.0	0.0	5.793	A
C-A	66	16			66				
A-B	11	3			11				
A-C	64	16			64				



13:45 - 14:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	14	4	654	0.022	14	0.0	0.0	5.627	A
B-A	9	2	525	0.017	9	0.0	0.0	6.977	A
C-AB	11	3	631	0.017	11	0.0	0.0	5.815	A
C-A	54	13			54				
AB	9	2			9				
AC	52	13			52				

14:00 - 14:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	12	3	657	0.018	12	0.0	0.0	5.579	A
B-A	8	2	530	0.014	8	0.0	0.0	6.893	A
C-AB	9	2	628	0.014	9	0.0	0.0	5.822	A
C-A	45	11			45				
AB	8	2			8				
AC	44	11			44				

# 2031, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		1.21	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D16	2031	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	86	100.000
B - Don White Road		ONE HOUR	✓	39	100.000
C - Sanders Road (S)		ONE HOUR	✓	100	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	20	66
	B - Don White Road	30	0	9
	C - Sanders Road (S)	97	3	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	0	6
	B - Don White Road	0	0	0
	C - Sanders Road (S)	4	0	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.02	5.54	0.0	A	8	12
B-A	0.06	7.04	0.1	A	28	41
C-AB	0.01	5.59	0.0	A	3	5
C-A					89	133
A-B					18	28
A-C					61	91

### Main Results for each time segment

#### 16:15 - 16:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	670	0.010	7	0.0	0.0	5.430	A
B-A	23	6	557	0.041	22	0.0	0.0	6.732	A
C-AB	3	0.64	647	0.004	3	0.0	0.0	5.585	A
C-A	73	18			73				
A-B	15	4			15				
A-C	50	12			50				

#### 16:30 - 16:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	8	2	665	0.012	8	0.0	0.0	5.477	A
B-A	27	7	552	0.049	27	0.0	0.1	6.860	A
C-AB	3	0.78	653	0.005	3	0.0	0.0	5.532	A
C-A	87	22			87				
A-B	18	4			18				
A-C	59	15			59				

#### 16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	10	2	659	0.015	10	0.0	0.0	5.542	A
B-A	33	8	544	0.061	33	0.1	0.1	7.042	A
C-AB	4	0.99	662	0.006	4	0.0	0.0	5.463	A
C-A	106	27			106				
A-B	22	6			22				
A-C	73	18			73				

#### 17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	10	2	659	0.015	10	0.0	0.0	5.543	A
B-A	33	8	544	0.061	33	0.1	0.1	7.042	A
C-AB	4	0.99	662	0.006	4	0.0	0.0	5.468	A
C-A	106	27			106				
A-B	22	6			22				
A-C	73	18			73				



17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	8	2	665	0.012	8	0.0	0.0	5.477	A
B-A	27	7	552	0.049	27	0.1	0.1	6.861	A
C-AB	3	0.78	653	0.005	3	0.0	0.0	5.538	A
C-A	87	22			87				
AB	18	4			18				
AC	59	15			59				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	670	0.010	7	0.0	0.0	5.431	A
B-A	23	6	557	0.041	23	0.1	0.0	6.735	A
C-AB	3	0.64	647	0.004	3	0.0	0.0	5.588	A
C-A	73	18			73				
AB	15	4			15				
AC	50	12			50				



# 2031 + Dev, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		4.65	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D17	2031 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Am	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	65	100.000
B - Don White Road		ONE HOUR	✓	29	100.000
C - Sanders Road (S)		ONE HOUR	✓	48	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	21	44
	B - Don White Road	21	0	8
	C - Sanders Road (S)	25	23	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	0	7
	B - Don White Road	88	0	65
	C - Sanders Road (S)	4	0	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.02	9.13	0.0	A	7	11
B-A	0.08	13.24	0.1	B	19	29
C-AB	0.04	6.11	0.0	A	22	33
C-A					22	33
A-B					19	29
A-C					40	61

### Main Results for each time segment

#### 05:45 - 06:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6	2	409	0.015	6	0.0	0.0	8.931	A
B-A	16	4	300	0.053	16	0.0	0.1	12.653	B
C-AB	18	4	615	0.029	18	0.0	0.0	6.023	A
C-A	18	5			18				
A-B	16	4			16				
A-C	33	8			33				

#### 06:00 - 06:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	406	0.018	7	0.0	0.0	9.017	A
B-A	19	5	298	0.063	19	0.1	0.1	12.901	B
C-AB	21	5	615	0.035	21	0.0	0.0	6.059	A
C-A	22	5			22				
A-B	19	5			19				
A-C	40	10			40				

#### 06:15 - 06:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	9	2	403	0.022	9	0.0	0.0	9.134	A
B-A	23	6	295	0.078	23	0.1	0.1	13.237	B
C-AB	27	7	616	0.043	26	0.0	0.0	6.108	A
C-A	26	7			26				
A-B	23	6			23				
A-C	48	12			48				

#### 06:30 - 06:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	9	2	403	0.022	9	0.0	0.0	9.135	A
B-A	23	6	295	0.078	23	0.1	0.1	13.242	B
C-AB	27	7	616	0.043	27	0.0	0.0	6.112	A
C-A	26	7			26				
A-B	23	6			23				
A-C	48	12			48				



06:45 - 07:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	406	0.018	7	0.0	0.0	9.020	A
B-A	19	5	298	0.063	19	0.1	0.1	12.910	B
C-AB	21	5	615	0.035	22	0.0	0.0	6.062	A
C-A	22	5			22				
A-B	19	5			19				
A-C	40	10			40				

07:00 - 07:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6	2	409	0.015	6	0.0	0.0	8.938	A
B-A	16	4	300	0.053	16	0.1	0.1	12.677	B
C-AB	18	4	615	0.029	18	0.0	0.0	6.027	A
C-A	18	5			18				
A-B	16	4			16				
A-C	33	8			33				

# 2031 + Dev, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		3.10	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D18	2031 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	145	100.000
B - Don White Road		ONE HOUR	✓	36	100.000
C - Sanders Road (S)		ONE HOUR	✓	57	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	33	112
	B - Don White Road	25	0	11
	C - Sanders Road (S)	38	19	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	7	20
	B - Don White Road	79	0	52
	C - Sanders Road (S)	23	27	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.03	8.80	0.0	A	10	15
B-A	0.09	13.08	0.1	B	23	34
C-AB	0.05	7.88	0.1	A	19	28
C-A					33	50
A-B					30	45
A-C					103	154

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	8	2	434	0.019	8	0.0	0.0	8.457	A
B-A	19	5	313	0.060	19	0.0	0.1	12.196	B
C-AB	15	4	481	0.032	15	0.0	0.0	7.727	A
C-A	28	7			28				
A-B	25	6			25				
A-C	84	21			84				

#### 08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	10	2	429	0.023	10	0.0	0.0	8.599	A
B-A	22	6	309	0.073	22	0.1	0.1	12.560	B
C-AB	18	5	480	0.038	18	0.0	0.0	7.793	A
C-A	33	8			33				
A-B	30	7			30				
A-C	101	25			101				

#### 08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	12	3	421	0.029	12	0.0	0.0	8.798	A
B-A	28	7	303	0.091	27	0.1	0.1	13.077	B
C-AB	23	6	480	0.048	23	0.0	0.1	7.881	A
C-A	40	10			40				
A-B	36	9			36				
A-C	123	31			123				

#### 08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	12	3	421	0.029	12	0.0	0.0	8.799	A
B-A	28	7	303	0.091	28	0.1	0.1	13.084	B
C-AB	23	6	480	0.048	23	0.1	0.1	7.880	A
C-A	40	10			40				
A-B	36	9			36				
A-C	123	31			123				



## 08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	10	2	428	0.023	10	0.0	0.0	8.602	A
B-A	22	6	309	0.073	23	0.1	0.1	12.574	B
C-AB	18	5	480	0.038	18	0.1	0.0	7.793	A
C-A	33	8			33				
AB	30	7			30				
AC	101	25			101				

## 09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	8	2	434	0.019	8	0.0	0.0	8.464	A
B-A	19	5	314	0.060	19	0.1	0.1	12.222	B
C-AB	15	4	481	0.032	15	0.0	0.0	7.732	A
C-A	28	7			28				
AB	25	6			25				
AC	84	21			84				

# 2031 + Dev, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		3.80	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D19	2031 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	81	100.000
B - Don White Road		ONE HOUR	✓	52	100.000
C - Sanders Road (S)		ONE HOUR	✓	81	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	23	58
	B - Don White Road	34	0	18
	C - Sanders Road (S)	61	20	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	55	21
	B - Don White Road	66	0	12
	C - Sanders Road (S)	20	43	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.03	6.39	0.0	A	17	25
B-A	0.11	12.13	0.1	B	31	47
C-AB	0.06	8.31	0.1	A	21	32
C-A					53	80
A-B					21	32
A-C					53	80

### Main Results for each time segment

#### 12:45 - 13:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	14	3	596	0.023	13	0.0	0.0	6.178	A
B-A	26	6	344	0.075	25	0.0	0.1	11.297	B
C-AB	17	4	450	0.037	17	0.0	0.0	8.297	A
C-A	44	11			44				
A-B	17	4			17				
A-C	44	11			44				

#### 13:00 - 13:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	16	4	591	0.027	16	0.0	0.0	6.266	A
B-A	31	8	340	0.090	30	0.1	0.1	11.642	B
C-AB	20	5	455	0.045	20	0.0	0.1	8.306	A
C-A	52	13			52				
A-B	21	5			21				
A-C	52	13			52				

#### 13:15 - 13:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	20	5	583	0.034	20	0.0	0.0	6.391	A
B-A	37	9	334	0.112	37	0.1	0.1	12.125	B
C-AB	26	6	460	0.056	26	0.1	0.1	8.302	A
C-A	63	16			63				
A-B	25	6			25				
A-C	64	16			64				

#### 13:30 - 13:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	20	5	583	0.034	20	0.0	0.0	6.392	A
B-A	37	9	334	0.112	37	0.1	0.1	12.132	B
C-AB	26	6	460	0.056	26	0.1	0.1	8.289	A
C-A	63	16			63				
A-B	25	6			25				
A-C	64	16			64				





13:45 - 14:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	16	4	590	0.027	16	0.0	0.0	6.271	A
B-A	31	8	340	0.090	31	0.1	0.1	11.654	B
C-AB	20	5	455	0.045	21	0.1	0.1	8.276	A
C-A	52	13			52				
AB	21	5			21				
AC	52	13			52				

14:00 - 14:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	14	3	596	0.023	14	0.0	0.0	6.185	A
B-A	26	6	344	0.074	26	0.1	0.1	11.324	B
C-AB	17	4	450	0.037	17	0.1	0.0	8.288	A
C-A	44	11			44				
AB	17	4			17				
AC	44	11			44				

# 2031 + Dev, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		2.37	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D20	2031 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	93	100.000
B - Don White Road		ONE HOUR	✓	59	100.000
C - Sanders Road (S)		ONE HOUR	✓	106	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	27	66
	B - Don White Road	44	0	15
	C - Sanders Road (S)	97	9	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	23	6
	B - Don White Road	17	0	0
	C - Sanders Road (S)	4	57	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.03	5.69	0.0	A	14	21
B-A	0.11	8.74	0.1	A	40	61
C-AB	0.03	8.39	0.0	A	10	16
C-A					87	130
A-B					25	37
A-C					61	91

### Main Results for each time segment

#### 16:15 - 16:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	11	3	663	0.017	11	0.0	0.0	5.525	A
B-A	33	8	473	0.070	33	0.0	0.1	8.176	A
C-AB	8	2	437	0.019	8	0.0	0.0	8.386	A
C-A	72	18			72				
A-B	20	5			20				
A-C	50	12			50				

#### 16:30 - 16:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	13	3	657	0.021	13	0.0	0.0	5.594	A
B-A	40	10	468	0.085	39	0.1	0.1	8.409	A
C-AB	10	3	446	0.023	10	0.0	0.0	8.288	A
C-A	85	21			85				
A-B	24	6			24				
A-C	59	15			59				

#### 16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	17	4	649	0.025	16	0.0	0.0	5.691	A
B-A	48	12	460	0.105	48	0.1	0.1	8.739	A
C-AB	13	3	459	0.028	13	0.0	0.0	8.119	A
C-A	104	26			104				
A-B	30	7			30				
A-C	73	18			73				

#### 17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	17	4	649	0.025	17	0.0	0.0	5.692	A
B-A	48	12	460	0.105	48	0.1	0.1	8.742	A
C-AB	13	3	459	0.028	13	0.0	0.0	8.071	A
C-A	104	26			104				
A-B	30	7			30				
A-C	73	18			73				



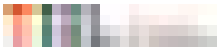
## 17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	13	3	657	0.021	14	0.0	0.0	5.595	A
B-A	40	10	468	0.085	40	0.1	0.1	8.416	A
C-AB	10	3	447	0.023	10	0.0	0.0	8.185	A
C-A	85	21			85				
A-B	24	6			24				
A-C	59	15			59				

## 17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	11	3	662	0.017	11	0.0	0.0	5.530	A
B-A	33	8	473	0.070	33	0.1	0.1	8.191	A
C-AB	8	2	438	0.019	8	0.0	0.0	8.337	A
C-A	72	18			72				
A-B	20	5			20				
A-C	50	12			50				

## **Appendix Q – A510 Northen Way / Stewarts Road Roundabout Junctions 9 Results**



<b>Junctions 9</b>
<b>ARCADY 9 - Roundabout Module</b>
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**Filename:** A510 Northern Way Stewarts Road Roundabout.j9  
**Path:** P:\2021\P21-340\T&T\Capacity Assessments\Junctions 9  
**Report generation date:** 06/01/2022 16:08:13

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- »2021, 06:00 - 07:00
- »2021, 08:00 - 09:00
- »2021, 13:00 - 14:00
- »2021, 16:30 - 17:30
- »2027, 06:00 - 07:00
- »2027, 08:00 - 09:00
- »2027, 13:00 - 14:00
- »2027, 16:30 - 17:30
- »2027 + Dev, 06:00 - 07:00
- »2027 + Dev, 08:00 - 09:00
- »2027 + Dev, 13:00 - 14:00
- »2027 + Dev, 16:30 - 17:30
- »2031, 06:00 - 07:00
- »2031, 08:00 - 09:00
- »2031, 13:00 - 14:00
- »2031, 16:30 - 17:30
- »2031 + Dev, 06:00 - 07:00
- »2031 + Dev, 08:00 - 09:00
- »2031 + Dev, 13:00 - 14:00
- »2031 + Dev, 16:30 - 17:30



### Summary of junction performance

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30					
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	
<b>2021</b>																					
1 - Stewarts Road (S)	D1	0.2	2.54	0.13	A	D2	0.4	3.07	0.27	A	D3	0.3	3.25	0.24	A	D4	0.4	3.23	0.30	A	
2 - A510 Northen Way		0.3	3.13	0.23	A		0.8	4.60	0.44	A		0.4	3.80	0.28	A		0.3	3.13	0.21	A	
3 - Stewarts Road (N)		0.1	2.66	0.05	A		0.1	2.98	0.10	A		0.2	2.83	0.14	A		0.4	2.91	0.30	A	
<b>2027</b>																					
1 - Stewarts Road (S)	D5	0.2	2.56	0.14	A	D6	0.4	3.13	0.28	A	D7	0.3	3.32	0.25	A	D8	0.5	3.32	0.32	A	
2 - A510 Northen Way		0.3	3.18	0.24	A		0.9	4.79	0.46	A		0.4	3.90	0.30	A		0.3	3.18	0.22	A	
3 - Stewarts Road (N)		0.1	2.68	0.06	A		0.1	3.02	0.10	A		0.2	2.87	0.15	A		0.5	2.98	0.32	A	
<b>2027 + Dev</b>																					
1 - Stewarts Road (S)	D9	0.2	2.60	0.14	A	D10	0.4	3.19	0.29	A	D11	0.3	3.41	0.25	A	D12	0.5	3.37	0.32	A	
2 - A510 Northen Way		0.4	3.38	0.26	A		1.0	5.16	0.49	A		0.5	4.08	0.32	A		0.3	3.27	0.23	A	
3 - Stewarts Road (N)		0.1	3.04	0.08	A		0.1	3.33	0.13	A		0.2	3.18	0.18	A		0.5	3.07	0.33	A	
<b>2031</b>																					
1 - Stewarts Road (S)	D13	0.2	2.57	0.14	A	D14	0.4	3.17	0.29	A	D15	0.3	3.37	0.26	A	D16	0.5	3.38	0.33	A	
2 - A510 Northen Way		0.3	3.21	0.25	A		0.9	4.92	0.48	A		0.5	3.97	0.31	A		0.3	3.20	0.23	A	
3 - Stewarts Road (N)		0.1	2.69	0.06	A		0.1	3.04	0.11	A		0.2	2.91	0.15	A		0.5	3.03	0.33	A	
<b>2031 + Dev</b>																					
1 - Stewarts Road (S)	D17	0.2	2.62	0.15	A	D18	0.4	3.23	0.29	A	D19	0.4	3.46	0.26	A	D20	0.5	3.42	0.33	A	
2 - A510 Northen Way		0.4	3.42	0.27	A		1.0	5.31	0.50	A		0.5	4.15	0.33	A		0.3	3.29	0.23	A	
3 - Stewarts Road (N)		0.1	3.05	0.08	A		0.1	3.34	0.13	A		0.2	3.20	0.18	A		0.5	3.12	0.34	A	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

### File summary

#### File Description

Title	A510 Northen Way/Stewarts Road
Location	Wellingborough
Site number	
Date	01/12/2021
Version	
Status	Existing
Identifier	
Client	
Jobnumber	P21-340
Enumerator	HQjake.blay
Description	

### Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

### Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00



### Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D2	2021	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D3	2021	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D4	2021	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D5	2027	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D6	2027	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D7	2027	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D8	2027	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D9	2027 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D10	2027 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D11	2027 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D12	2027 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D13	2031	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D14	2031	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D15	2031	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D16	2031	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D17	2031 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D18	2031 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D19	2031 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D20	2031 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

### Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000



# 2021, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	2.86	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
1	Stewarts Road (S)	
2	A510 Northen Way	
3	Stewarts Road (N)	

### Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - Stewarts Road (S)	3.65	7.04	26.9	28.9	51.4	30.4	
2 - A510 Northen Way	3.64	7.30	12.6	28.9	51.4	40.0	
3 - Stewarts Road (N)	3.70	7.39	27.3	31.5	51.5	26.8	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Stewarts Road (S)	0.637	1863
2 - A510 Northen Way	0.586	1645
3 - Stewarts Road (N)	0.658	1958

The slope and intercept shown above include any corrections and adjustments.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00



### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	199	100.000
2 - A510 Northen Way		ONE HOUR	✓	312	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	69	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	106	93
	2 - A510 Northen Way	149	0	163
	3 - Stewarts Road (N)	20	49	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	17	4
	2 - A510 Northen Way	6	0	6
	3 - Stewarts Road (N)	20	33	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.13	2.54	0.2	A	183	274
2 - A510 Northen Way	0.23	3.13	0.3	A	286	429
3 - Stewarts Road (N)	0.05	2.66	0.1	A	63	95

### Main Results for each time segment

#### 05:45 - 06:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	150	37	37	1651	0.091	149	127	0.0	0.1	2.396	A
2 - A510 Northen Way	235	59	70	1512	0.155	234	116	0.0	0.2	2.816	A
3 - Stewarts Road (N)	52	13	112	1454	0.036	52	192	0.0	0.0	2.566	A

#### 06:00 - 06:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	179	45	44	1646	0.109	179	152	0.1	0.1	2.453	A
2 - A510 Northen Way	280	70	84	1504	0.187	280	139	0.2	0.2	2.941	A
3 - Stewarts Road (N)	62	16	134	1443	0.043	62	230	0.0	0.0	2.607	A

## 06:15 - 06:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	219	55	54	1638	0.134	219	186	0.1	0.2	2.536	A
2 - A510 Northern Way	344	86	102	1493	0.230	343	171	0.2	0.3	3.130	A
3 - Stewarts Road (N)	76	19	164	1426	0.053	76	282	0.0	0.1	2.665	A

## 06:30 - 06:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	219	55	54	1638	0.134	219	186	0.2	0.2	2.536	A
2 - A510 Northern Way	344	86	102	1493	0.230	344	171	0.3	0.3	3.130	A
3 - Stewarts Road (N)	76	19	164	1426	0.053	76	282	0.1	0.1	2.665	A

## 06:45 - 07:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	179	45	44	1646	0.109	179	152	0.2	0.1	2.455	A
2 - A510 Northern Way	280	70	84	1504	0.187	281	139	0.3	0.2	2.943	A
3 - Stewarts Road (N)	62	16	134	1442	0.043	62	230	0.1	0.0	2.609	A

## 07:00 - 07:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	150	37	37	1651	0.091	150	127	0.1	0.1	2.399	A
2 - A510 Northern Way	235	59	70	1512	0.155	235	117	0.2	0.2	2.822	A
3 - Stewarts Road (N)	52	13	112	1454	0.036	52	193	0.0	0.0	2.566	A

# 2021, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	3.85	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2021	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	393	100.000
2 - A510 Northen Way		ONE HOUR	✓	564	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	120	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	276	117
	2 - A510 Northen Way	328	0	236
	3 - Stewarts Road (N)	53	67	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	15	6
	2 - A510 Northen Way	14	0	8
	3 - Stewarts Road (N)	23	28	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.27	3.07	0.4	A	361	541
2 - A510 Northen Way	0.44	4.60	0.8	A	518	776
3 - Stewarts Road (N)	0.10	2.98	0.1	A	110	165

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	296	74	50	1622	0.182	295	286	0.0	0.2	2.711	A
2 - A510 Northen Way	425	106	88	1427	0.298	423	257	0.0	0.4	3.580	A
3 - Stewarts Road (N)	90	23	246	1410	0.064	90	265	0.0	0.1	2.728	A

#### 08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	353	88	60	1615	0.219	353	342	0.2	0.3	2.852	A
2 - A510 Northen Way	507	127	105	1417	0.358	506	308	0.4	0.6	3.951	A
3 - Stewarts Road (N)	108	27	295	1381	0.078	108	317	0.1	0.1	2.827	A

#### 08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	433	108	74	1605	0.270	432	419	0.3	0.4	3.069	A
2 - A510 Northen Way	621	155	129	1404	0.442	620	377	0.6	0.8	4.587	A
3 - Stewarts Road (N)	132	33	361	1341	0.099	132	388	0.1	0.1	2.976	A

#### 08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	433	108	74	1605	0.270	433	419	0.4	0.4	3.069	A
2 - A510 Northen Way	621	155	129	1404	0.442	621	378	0.8	0.8	4.598	A
3 - Stewarts Road (N)	132	33	361	1341	0.099	132	389	0.1	0.1	2.977	A

#### 08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	353	88	60	1615	0.219	354	343	0.4	0.3	2.856	A
2 - A510 Northen Way	507	127	105	1417	0.358	508	309	0.8	0.6	3.964	A
3 - Stewarts Road (N)	108	27	295	1380	0.078	108	318	0.1	0.1	2.831	A

## 09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	296	74	50	1622	0.182	296	287	0.3	0.2	2.717	A
2 - A510 Northen Way	425	106	88	1426	0.298	425	258	0.6	0.4	3.596	A
3 - Stewarts Road (N)	90	23	247	1409	0.064	90	266	0.1	0.1	2.732	A

# 2021, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	3.38	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2021	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	311	100.000
2 - A510 Northen Way		ONE HOUR	✓	342	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	186	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	238	73
	2 - A510 Northen Way	232	0	110
	3 - Stewarts Road (N)	74	112	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	22	23
	2 - A510 Northen Way	19	0	22
	3 - Stewarts Road (N)	22	17	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.24	3.25	0.3	A	285	428
2 - A510 Northen Way	0.28	3.80	0.4	A	314	471
3 - Stewarts Road (N)	0.14	2.83	0.2	A	171	256

### Main Results for each time segment

#### 12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	234	59	84	1473	0.159	233	230	0.0	0.2	2.903	A
2 - A510 Northen Way	257	64	55	1338	0.192	257	263	0.0	0.2	3.324	A
3 - Stewarts Road (N)	140	35	174	1531	0.091	140	137	0.0	0.1	2.588	A

#### 13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	280	70	101	1463	0.191	279	275	0.2	0.2	3.041	A
2 - A510 Northen Way	307	77	66	1332	0.231	307	314	0.2	0.3	3.513	A
3 - Stewarts Road (N)	167	42	208	1508	0.111	167	164	0.1	0.1	2.684	A

#### 13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	342	86	123	1449	0.236	342	337	0.2	0.3	3.252	A
2 - A510 Northen Way	377	94	80	1323	0.285	376	385	0.3	0.4	3.799	A
3 - Stewarts Road (N)	205	51	255	1477	0.139	205	201	0.1	0.2	2.828	A

#### 13:30 - 13:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	342	86	123	1449	0.236	342	337	0.3	0.3	3.252	A
2 - A510 Northen Way	377	94	80	1323	0.285	377	385	0.4	0.4	3.802	A
3 - Stewarts Road (N)	205	51	255	1477	0.139	205	201	0.2	0.2	2.828	A

#### 13:45 - 14:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	280	70	101	1463	0.191	280	275	0.3	0.2	3.043	A
2 - A510 Northen Way	307	77	66	1332	0.231	308	315	0.4	0.3	3.516	A
3 - Stewarts Road (N)	167	42	209	1508	0.111	167	165	0.2	0.1	2.685	A





## 14:00 - 14:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	234	59	84	1473	0.159	234	231	0.2	0.2	2.909	A
2 - A510 Northen Way	257	64	55	1338	0.192	258	264	0.3	0.2	3.334	A
3 - Stewarts Road (N)	140	35	175	1530	0.092	140	138	0.1	0.1	2.589	A

# 2021, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	3.08	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2021	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	437	100.000
2 - A510 Northen Way		ONE HOUR	✓	277	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	485	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	375	62
	2 - A510 Northen Way	206	0	71
	3 - Stewarts Road (N)	184	301	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	3	6
	2 - A510 Northen Way	8	0	17
	3 - Stewarts Road (N)	2	1	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.30	3.23	0.4	A	401	601
2 - A510 Northen Way	0.21	3.13	0.3	A	254	381
3 - Stewarts Road (N)	0.30	2.91	0.4	A	445	668

### Main Results for each time segment

#### 16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	329	82	226	1661	0.198	328	293	0.0	0.2	2.700	A
2 - A510 Northen Way	209	52	47	1465	0.142	208	507	0.0	0.2	2.862	A
3 - Stewarts Road (N)	365	91	155	1823	0.200	364	100	0.0	0.2	2.467	A

#### 16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	393	98	270	1633	0.241	393	350	0.2	0.3	2.901	A
2 - A510 Northen Way	249	62	56	1460	0.171	249	607	0.2	0.2	2.972	A
3 - Stewarts Road (N)	436	109	185	1801	0.242	436	119	0.2	0.3	2.636	A

#### 16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	481	120	331	1595	0.302	481	429	0.3	0.4	3.227	A
2 - A510 Northen Way	305	76	68	1453	0.210	305	744	0.2	0.3	3.135	A
3 - Stewarts Road (N)	534	133	227	1772	0.301	534	146	0.3	0.4	2.906	A

#### 17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	481	120	331	1595	0.302	481	429	0.4	0.4	3.230	A
2 - A510 Northen Way	305	76	68	1453	0.210	305	744	0.3	0.3	3.135	A
3 - Stewarts Road (N)	534	133	227	1772	0.301	534	146	0.4	0.4	2.907	A

#### 17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	393	98	271	1633	0.241	393	351	0.4	0.3	2.906	A
2 - A510 Northen Way	249	62	56	1460	0.171	249	608	0.3	0.2	2.975	A
3 - Stewarts Road (N)	436	109	185	1801	0.242	436	120	0.4	0.3	2.640	A



## 17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	329	82	227	1660	0.198	329	294	0.3	0.2	2.704	A
2 - A510 Northen Way	209	52	47	1465	0.142	209	509	0.2	0.2	2.867	A
3 - Stewarts Road (N)	365	91	155	1822	0.200	365	100	0.3	0.3	2.473	A

# 2027, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	2.90	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2027	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	208	100.000
2 - A510 Northen Way		ONE HOUR	✓	326	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	72	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	111	97
	2 - A510 Northen Way	156	0	170
	3 - Stewarts Road (N)	21	51	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	17	4
	2 - A510 Northen Way	6	0	6
	3 - Stewarts Road (N)	20	33	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.14	2.56	0.2	A	191	286
2 - A510 Northen Way	0.24	3.18	0.3	A	299	449
3 - Stewarts Road (N)	0.06	2.68	0.1	A	66	99

### Main Results for each time segment

#### 05:45 - 06:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	157	39	38	1650	0.095	156	133	0.0	0.1	2.409	A
2 - A510 Northen Way	245	61	73	1510	0.163	245	122	0.0	0.2	2.843	A
3 - Stewarts Road (N)	54	14	117	1452	0.037	54	200	0.0	0.0	2.575	A

#### 06:00 - 06:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	187	47	46	1644	0.114	187	159	0.1	0.1	2.469	A
2 - A510 Northen Way	293	73	87	1502	0.195	293	146	0.2	0.2	2.977	A
3 - Stewarts Road (N)	65	16	140	1439	0.045	65	240	0.0	0.0	2.618	A

#### 06:15 - 06:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	229	57	56	1637	0.140	229	195	0.1	0.2	2.557	A
2 - A510 Northen Way	359	90	107	1491	0.241	359	178	0.2	0.3	3.180	A
3 - Stewarts Road (N)	79	20	172	1422	0.056	79	294	0.0	0.1	2.679	A

#### 06:30 - 06:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	229	57	56	1636	0.140	229	195	0.2	0.2	2.557	A
2 - A510 Northen Way	359	90	107	1491	0.241	359	178	0.3	0.3	3.180	A
3 - Stewarts Road (N)	79	20	172	1422	0.056	79	294	0.1	0.1	2.679	A

#### 06:45 - 07:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	187	47	46	1644	0.114	187	159	0.2	0.1	2.470	A
2 - A510 Northen Way	293	73	87	1502	0.195	293	146	0.3	0.2	2.979	A
3 - Stewarts Road (N)	65	16	140	1439	0.045	65	240	0.1	0.0	2.618	A



07:00 - 07:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	157	39	38	1650	0.095	157	133	0.1	0.1	2.410	A
2 - A510 Northen Way	245	61	73	1510	0.163	246	122	0.2	0.2	2.849	A
3 - Stewarts Road (N)	54	14	118	1452	0.037	54	201	0.0	0.0	2.575	A

# 2027, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	3.97	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2027	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	411	100.000
2 - A510 Northen Way		ONE HOUR	✓	590	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	125	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	289	122
	2 - A510 Northen Way	343	0	247
	3 - Stewarts Road (N)	55	70	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	15	6
	2 - A510 Northen Way	14	0	8
	3 - Stewarts Road (N)	23	28	0





## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.28	3.13	0.4	A	377	566
2 - A510 Northen Way	0.46	4.79	0.9	A	541	812
3 - Stewarts Road (N)	0.10	3.02	0.1	A	115	172

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	309	77	53	1620	0.191	308	298	0.0	0.2	2.743	A
2 - A510 Northen Way	444	111	92	1425	0.312	442	269	0.0	0.5	3.659	A
3 - Stewarts Road (N)	94	24	257	1403	0.067	94	277	0.0	0.1	2.750	A

#### 08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	369	92	63	1613	0.229	369	357	0.2	0.3	2.894	A
2 - A510 Northen Way	530	133	110	1414	0.375	530	323	0.5	0.6	4.067	A
3 - Stewarts Road (N)	112	28	308	1372	0.082	112	331	0.1	0.1	2.856	A

#### 08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	453	113	77	1603	0.282	452	438	0.3	0.4	3.129	A
2 - A510 Northen Way	650	162	134	1401	0.464	649	395	0.6	0.9	4.779	A
3 - Stewarts Road (N)	138	34	377	1331	0.103	138	406	0.1	0.1	3.015	A

#### 08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	453	113	77	1603	0.282	453	438	0.4	0.4	3.129	A
2 - A510 Northen Way	650	162	134	1401	0.464	650	395	0.9	0.9	4.792	A
3 - Stewarts Road (N)	138	34	378	1331	0.103	138	406	0.1	0.1	3.016	A

#### 08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	369	92	63	1613	0.229	370	358	0.4	0.3	2.898	A
2 - A510 Northen Way	530	133	110	1414	0.375	531	323	0.9	0.6	4.081	A
3 - Stewarts Road (N)	112	28	309	1372	0.082	112	332	0.1	0.1	2.860	A

## 09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	309	77	53	1620	0.191	310	300	0.3	0.2	2.748	A
2 - A510 Northen Way	444	111	92	1424	0.312	445	270	0.6	0.5	3.676	A
3 - Stewarts Road (N)	94	24	259	1402	0.067	94	278	0.1	0.1	2.752	A

# 2027, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	3.46	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2027	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	328	100.000
2 - A510 Northen Way		ONE HOUR	✓	361	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	196	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	251	77
	2 - A510 Northen Way	245	0	116
	3 - Stewarts Road (N)	78	118	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	22	23
	2 - A510 Northen Way	19	0	22
	3 - Stewarts Road (N)	22	17	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.25	3.32	0.3	A	301	451
2 - A510 Northen Way	0.30	3.90	0.4	A	331	497
3 - Stewarts Road (N)	0.15	2.87	0.2	A	180	270

### Main Results for each time segment

#### 12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	247	62	89	1470	0.168	246	242	0.0	0.2	2.940	A
2 - A510 Northen Way	272	68	58	1337	0.203	271	277	0.0	0.3	3.374	A
3 - Stewarts Road (N)	148	37	184	1524	0.097	147	145	0.0	0.1	2.614	A

#### 13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	295	74	106	1460	0.202	295	290	0.2	0.3	3.090	A
2 - A510 Northen Way	325	81	69	1330	0.244	324	332	0.3	0.3	3.580	A
3 - Stewarts Road (N)	176	44	220	1500	0.117	176	173	0.1	0.1	2.718	A

#### 13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	361	90	130	1445	0.250	361	355	0.3	0.3	3.320	A
2 - A510 Northen Way	397	99	85	1320	0.301	397	406	0.3	0.4	3.897	A
3 - Stewarts Road (N)	216	54	269	1468	0.147	216	212	0.1	0.2	2.874	A

#### 13:30 - 13:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	361	90	130	1445	0.250	361	356	0.3	0.3	3.320	A
2 - A510 Northen Way	397	99	85	1320	0.301	397	406	0.4	0.4	3.900	A
3 - Stewarts Road (N)	216	54	270	1468	0.147	216	212	0.2	0.2	2.874	A

#### 13:45 - 14:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	295	74	106	1459	0.202	295	291	0.3	0.3	3.094	A
2 - A510 Northen Way	325	81	69	1330	0.244	325	332	0.4	0.3	3.586	A
3 - Stewarts Road (N)	176	44	221	1500	0.117	176	174	0.2	0.1	2.721	A

## 14:00 - 14:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	247	62	89	1470	0.168	247	243	0.3	0.2	2.946	A
2 - A510 Northen Way	272	68	58	1336	0.203	272	278	0.3	0.3	3.384	A
3 - Stewarts Road (N)	148	37	185	1524	0.097	148	145	0.1	0.1	2.615	A

# 2027, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	3.15	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2027	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	457	100.000
2 - A510 Northen Way		ONE HOUR	✓	289	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	507	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	392	65
	2 - A510 Northen Way	215	0	74
	3 - Stewarts Road (N)	192	315	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	3	6
	2 - A510 Northen Way	8	0	17
	3 - Stewarts Road (N)	2	1	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.32	3.32	0.5	A	419	629
2 - A510 Northen Way	0.22	3.18	0.3	A	265	398
3 - Stewarts Road (N)	0.32	2.98	0.5	A	465	698

### Main Results for each time segment

#### 16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	344	86	236	1654	0.208	343	305	0.0	0.3	2.742	A
2 - A510 Northen Way	218	54	49	1464	0.149	217	531	0.0	0.2	2.885	A
3 - Stewarts Road (N)	382	95	161	1818	0.210	381	104	0.0	0.3	2.504	A

#### 16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	411	103	283	1625	0.253	411	366	0.3	0.3	2.963	A
2 - A510 Northen Way	260	65	58	1458	0.178	260	635	0.2	0.2	3.002	A
3 - Stewarts Road (N)	456	114	193	1796	0.254	455	125	0.3	0.3	2.686	A

#### 16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	503	126	347	1586	0.317	503	448	0.3	0.5	3.321	A
2 - A510 Northen Way	318	80	71	1451	0.219	318	778	0.2	0.3	3.176	A
3 - Stewarts Road (N)	558	140	237	1765	0.316	558	153	0.3	0.5	2.979	A

#### 17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	503	126	347	1586	0.317	503	448	0.5	0.5	3.324	A
2 - A510 Northen Way	318	80	72	1451	0.219	318	778	0.3	0.3	3.177	A
3 - Stewarts Road (N)	558	140	237	1765	0.316	558	153	0.5	0.5	2.982	A

#### 17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	411	103	283	1625	0.253	411	366	0.5	0.3	2.966	A
2 - A510 Northen Way	260	65	59	1458	0.178	260	636	0.3	0.2	3.006	A
3 - Stewarts Road (N)	456	114	193	1795	0.254	456	125	0.5	0.3	2.688	A



17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	344	86	237	1654	0.208	344	307	0.3	0.3	2.751	A
2 - A510 Northern Way	218	54	49	1464	0.149	218	533	0.2	0.2	2.888	A
3 - Stewarts Road (N)	382	95	162	1817	0.210	382	105	0.3	0.3	2.507	A



# 2027 + Dev, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	3.08	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2027 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	208	100.000
2 - A510 Northen Way		ONE HOUR	✓	347	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	91	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	111	97
	2 - A510 Northen Way	156	0	191
	3 - Stewarts Road (N)	21	70	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	17	4
	2 - A510 Northen Way	6	0	12
	3 - Stewarts Road (N)	20	50	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.14	2.60	0.2	A	191	286
2 - A510 Northen Way	0.26	3.38	0.4	A	318	478
3 - Stewarts Road (N)	0.08	3.04	0.1	A	84	125

### Main Results for each time segment

#### 05:45 - 06:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	157	39	53	1634	0.096	156	133	0.0	0.1	2.436	A
2 - A510 Northen Way	261	65	73	1464	0.178	260	136	0.0	0.2	2.989	A
3 - Stewarts Road (N)	69	17	117	1311	0.052	68	216	0.0	0.1	2.896	A

#### 06:00 - 06:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	187	47	63	1625	0.115	187	159	0.1	0.1	2.502	A
2 - A510 Northen Way	312	78	87	1456	0.214	312	163	0.2	0.3	3.144	A
3 - Stewarts Road (N)	82	20	140	1300	0.063	82	259	0.1	0.1	2.954	A

#### 06:15 - 06:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	229	57	77	1613	0.142	229	195	0.1	0.2	2.600	A
2 - A510 Northen Way	382	96	107	1446	0.264	382	199	0.3	0.4	3.384	A
3 - Stewarts Road (N)	100	25	172	1285	0.078	100	317	0.1	0.1	3.038	A

#### 06:30 - 06:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	229	57	77	1613	0.142	229	195	0.2	0.2	2.600	A
2 - A510 Northen Way	382	96	107	1445	0.264	382	199	0.4	0.4	3.384	A
3 - Stewarts Road (N)	100	25	172	1285	0.078	100	317	0.1	0.1	3.039	A

#### 06:45 - 07:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	187	47	63	1625	0.115	187	159	0.2	0.1	2.505	A
2 - A510 Northen Way	312	78	87	1456	0.214	312	163	0.4	0.3	3.149	A
3 - Stewarts Road (N)	82	20	140	1300	0.063	82	259	0.1	0.1	2.955	A



07:00 - 07:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	157	39	53	1634	0.096	157	133	0.1	0.1	2.436	A
2 - A510 Northen Way	261	65	73	1464	0.178	261	136	0.3	0.2	2.995	A
3 - Stewarts Road (N)	69	17	118	1311	0.052	69	217	0.1	0.1	2.899	A

# 2027 + Dev, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	4.23	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2027 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	411	100.000
2 - A510 Northen Way		ONE HOUR	✓	611	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	143	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	289	122
	2 - A510 Northen Way	343	0	268
	3 - Stewarts Road (N)	55	88	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	15	6
	2 - A510 Northen Way	14	0	14
	3 - Stewarts Road (N)	23	43	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.29	3.19	0.4	A	377	566
2 - A510 Northen Way	0.49	5.16	1.0	A	561	841
3 - Stewarts Road (N)	0.13	3.33	0.1	A	131	197

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	309	77	66	1605	0.193	308	298	0.0	0.2	2.775	A
2 - A510 Northen Way	460	115	92	1393	0.330	458	283	0.0	0.5	3.842	A
3 - Stewarts Road (N)	108	27	257	1304	0.083	107	292	0.0	0.1	3.007	A

#### 08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	369	92	79	1594	0.232	369	357	0.2	0.3	2.938	A
2 - A510 Northen Way	549	137	110	1383	0.397	549	339	0.5	0.7	4.309	A
3 - Stewarts Road (N)	129	32	308	1276	0.101	128	350	0.1	0.1	3.136	A

#### 08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	453	113	97	1580	0.286	452	437	0.3	0.4	3.191	A
2 - A510 Northen Way	673	168	134	1370	0.491	672	415	0.7	1.0	5.147	A
3 - Stewarts Road (N)	157	39	377	1238	0.127	157	429	0.1	0.1	3.331	A

#### 08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	453	113	97	1580	0.286	453	438	0.4	0.4	3.192	A
2 - A510 Northen Way	673	168	134	1370	0.491	673	415	1.0	1.0	5.163	A
3 - Stewarts Road (N)	157	39	378	1237	0.127	157	429	0.1	0.1	3.332	A

#### 08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	369	92	79	1594	0.232	370	359	0.4	0.3	2.942	A
2 - A510 Northen Way	549	137	110	1383	0.397	550	339	1.0	0.7	4.330	A
3 - Stewarts Road (N)	129	32	309	1275	0.101	129	351	0.1	0.1	3.141	A



09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	309	77	66	1605	0.193	310	300	0.3	0.2	2.779	A
2 - A510 Northen Way	460	115	92	1393	0.330	461	284	0.7	0.5	3.865	A
3 - Stewarts Road (N)	108	27	259	1303	0.083	108	294	0.1	0.1	3.010	A

# 2027 + Dev, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	3.62	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2027 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	328	100.000
2 - A510 Northen Way		ONE HOUR	✓	374	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	221	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	251	77
	2 - A510 Northen Way	245	0	129
	3 - Stewarts Road (N)	78	143	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	22	23
	2 - A510 Northen Way	19	0	29
	3 - Stewarts Road (N)	22	30	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.25	3.41	0.3	A	301	451
2 - A510 Northen Way	0.32	4.08	0.5	A	343	515
3 - Stewarts Road (N)	0.18	3.18	0.2	A	203	304

### Main Results for each time segment

#### 12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	247	62	107	1451	0.170	246	242	0.0	0.2	2.985	A
2 - A510 Northen Way	282	70	58	1309	0.215	280	296	0.0	0.3	3.496	A
3 - Stewarts Road (N)	166	42	184	1426	0.117	166	155	0.0	0.1	2.854	A

#### 13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	295	74	128	1437	0.205	295	290	0.2	0.3	3.150	A
2 - A510 Northen Way	336	84	69	1303	0.258	336	354	0.3	0.3	3.723	A
3 - Stewarts Road (N)	199	50	220	1404	0.142	199	185	0.1	0.2	2.986	A

#### 13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	361	90	157	1418	0.255	361	355	0.3	0.3	3.406	A
2 - A510 Northen Way	412	103	85	1294	0.318	411	433	0.3	0.5	4.079	A
3 - Stewarts Road (N)	243	61	269	1373	0.177	243	227	0.2	0.2	3.184	A

#### 13:30 - 13:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	361	90	157	1418	0.255	361	356	0.3	0.3	3.407	A
2 - A510 Northen Way	412	103	85	1294	0.318	412	434	0.5	0.5	4.082	A
3 - Stewarts Road (N)	243	61	270	1373	0.177	243	227	0.2	0.2	3.185	A

#### 13:45 - 14:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	295	74	129	1437	0.205	295	291	0.3	0.3	3.155	A
2 - A510 Northen Way	336	84	69	1303	0.258	337	355	0.5	0.3	3.730	A
3 - Stewarts Road (N)	199	50	221	1404	0.142	199	185	0.2	0.2	2.990	A





## 14:00 - 14:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	247	62	108	1451	0.170	247	243	0.3	0.2	2.989	A
2 - A510 Northen Way	282	70	58	1309	0.215	282	297	0.3	0.3	3.506	A
3 - Stewarts Road (N)	166	42	185	1426	0.117	167	155	0.2	0.1	2.858	A

# 2027 + Dev, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	3.22	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2027 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	457	100.000
2 - A510 Northen Way		ONE HOUR	✓	296	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	520	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	392	65
	2 - A510 Northen Way	215	0	81
	3 - Stewarts Road (N)	192	328	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	3	6
	2 - A510 Northen Way	8	0	23
	3 - Stewarts Road (N)	2	3	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.32	3.37	0.5	A	419	629
2 - A510 Northern Way	0.23	3.27	0.3	A	272	407
3 - Stewarts Road (N)	0.33	3.07	0.5	A	477	716

### Main Results for each time segment

#### 16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	344	86	246	1645	0.209	343	305	0.0	0.3	2.761	A
2 - A510 Northern Way	223	56	49	1440	0.155	222	540	0.0	0.2	2.953	A
3 - Stewarts Road (N)	391	98	161	1796	0.218	390	110	0.0	0.3	2.558	A

#### 16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	411	103	295	1614	0.254	411	366	0.3	0.3	2.990	A
2 - A510 Northern Way	266	67	58	1435	0.185	266	647	0.2	0.2	3.078	A
3 - Stewarts Road (N)	467	117	193	1774	0.264	467	131	0.3	0.4	2.755	A

#### 16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	503	126	361	1572	0.320	503	448	0.3	0.5	3.363	A
2 - A510 Northern Way	326	81	71	1428	0.228	326	792	0.2	0.3	3.266	A
3 - Stewarts Road (N)	573	143	237	1744	0.328	572	161	0.4	0.5	3.070	A

#### 17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	503	126	361	1572	0.320	503	448	0.5	0.5	3.366	A
2 - A510 Northern Way	326	81	72	1428	0.228	326	793	0.3	0.3	3.266	A
3 - Stewarts Road (N)	573	143	237	1744	0.328	573	161	0.5	0.5	3.073	A

#### 17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	411	103	295	1614	0.255	411	366	0.5	0.3	2.993	A
2 - A510 Northern Way	266	67	59	1435	0.185	266	648	0.3	0.2	3.082	A
3 - Stewarts Road (N)	467	117	193	1773	0.264	468	131	0.5	0.4	2.758	A



17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	344	86	247	1645	0.209	344	307	0.3	0.3	2.768	A
2 - A510 Northen Way	223	56	49	1440	0.155	223	543	0.2	0.2	2.957	A
3 - Stewarts Road (N)	391	98	162	1795	0.218	392	110	0.4	0.3	2.565	A

# 2031, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	2.92	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2031	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	214	100.000
2 - A510 Northen Way		ONE HOUR	✓	335	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	74	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	114	100
	2 - A510 Northen Way	160	0	175
	3 - Stewarts Road (N)	21	53	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	17	4
	2 - A510 Northen Way	6	0	6
	3 - Stewarts Road (N)	20	33	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.14	2.57	0.2	A	196	295
2 - A510 Northern Way	0.25	3.21	0.3	A	307	461
3 - Stewarts Road (N)	0.06	2.69	0.1	A	68	102

### Main Results for each time segment

#### 05:45 - 06:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	161	40	40	1649	0.098	161	136	0.0	0.1	2.418	A
2 - A510 Northern Way	252	63	75	1509	0.167	251	125	0.0	0.2	2.862	A
3 - Stewarts Road (N)	56	14	120	1449	0.038	56	206	0.0	0.0	2.583	A

#### 06:00 - 06:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	192	48	48	1643	0.117	192	163	0.1	0.1	2.480	A
2 - A510 Northern Way	301	75	90	1500	0.201	301	150	0.2	0.3	3.001	A
3 - Stewarts Road (N)	67	17	144	1436	0.046	66	247	0.0	0.0	2.627	A

#### 06:15 - 06:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	236	59	58	1635	0.144	235	199	0.1	0.2	2.572	A
2 - A510 Northern Way	369	92	110	1489	0.248	369	184	0.3	0.3	3.214	A
3 - Stewarts Road (N)	81	20	176	1419	0.057	81	303	0.0	0.1	2.691	A

#### 06:30 - 06:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	236	59	58	1635	0.144	236	199	0.2	0.2	2.572	A
2 - A510 Northern Way	369	92	110	1489	0.248	369	184	0.3	0.3	3.214	A
3 - Stewarts Road (N)	81	20	176	1419	0.057	81	303	0.1	0.1	2.691	A

#### 06:45 - 07:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	192	48	48	1643	0.117	193	163	0.2	0.1	2.483	A
2 - A510 Northern Way	301	75	90	1500	0.201	301	150	0.3	0.3	3.005	A
3 - Stewarts Road (N)	67	17	144	1436	0.046	67	247	0.1	0.0	2.629	A

## 07:00 - 07:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	161	40	40	1649	0.098	161	136	0.1	0.1	2.421	A
2 - A510 Northen Way	252	63	75	1509	0.167	252	126	0.3	0.2	2.867	A
3 - Stewarts Road (N)	56	14	121	1449	0.038	56	207	0.0	0.0	2.585	A

# 2031, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	4.05	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2031	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	422	100.000
2 - A510 Northen Way		ONE HOUR	✓	605	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	129	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	296	126
	2 - A510 Northen Way	352	0	253
	3 - Stewarts Road (N)	57	72	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	15	6
	2 - A510 Northen Way	14	0	8
	3 - Stewarts Road (N)	23	28	0





## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.29	3.17	0.4	A	387	581
2 - A510 Northen Way	0.48	4.92	0.9	A	555	833
3 - Stewarts Road (N)	0.11	3.04	0.1	A	118	178

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	318	79	54	1620	0.196	317	307	0.0	0.2	2.762	A
2 - A510 Northen Way	455	114	95	1423	0.320	454	276	0.0	0.5	3.709	A
3 - Stewarts Road (N)	97	24	264	1399	0.069	97	284	0.0	0.1	2.764	A

#### 08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	379	95	65	1612	0.235	379	367	0.2	0.3	2.920	A
2 - A510 Northen Way	544	136	113	1412	0.385	543	331	0.5	0.6	4.139	A
3 - Stewarts Road (N)	116	29	316	1368	0.085	116	340	0.1	0.1	2.875	A

#### 08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	465	116	79	1601	0.290	464	450	0.3	0.4	3.166	A
2 - A510 Northen Way	666	167	139	1398	0.476	665	405	0.6	0.9	4.903	A
3 - Stewarts Road (N)	142	36	387	1326	0.107	142	417	0.1	0.1	3.041	A

#### 08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	465	116	79	1601	0.290	465	450	0.4	0.4	3.166	A
2 - A510 Northen Way	666	167	139	1398	0.476	666	405	0.9	0.9	4.917	A
3 - Stewarts Road (N)	142	36	388	1325	0.107	142	417	0.1	0.1	3.042	A

#### 08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	379	95	65	1612	0.235	380	368	0.4	0.3	2.924	A
2 - A510 Northen Way	544	136	113	1412	0.385	545	331	0.9	0.6	4.155	A
3 - Stewarts Road (N)	116	29	317	1367	0.085	116	341	0.1	0.1	2.877	A

## 09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	318	79	54	1619	0.196	318	308	0.3	0.2	2.766	A
2 - A510 Northen Way	455	114	95	1423	0.320	456	277	0.6	0.5	3.729	A
3 - Stewarts Road (N)	97	24	265	1398	0.069	97	286	0.1	0.1	2.767	A

# 2031, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	3.51	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D15	2031	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	340	100.000
2 - A510 Northen Way		ONE HOUR	✓	373	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	203	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	260	80
	2 - A510 Northen Way	253	0	120
	3 - Stewarts Road (N)	81	122	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	22	23
	2 - A510 Northen Way	19	0	22
	3 - Stewarts Road (N)	22	17	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.26	3.37	0.3	A	312	468
2 - A510 Northen Way	0.31	3.97	0.5	A	342	513
3 - Stewarts Road (N)	0.15	2.91	0.2	A	186	279

### Main Results for each time segment

#### 12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	256	64	92	1468	0.174	255	251	0.0	0.2	2.966	A
2 - A510 Northen Way	281	70	60	1335	0.210	280	287	0.0	0.3	3.408	A
3 - Stewarts Road (N)	153	38	190	1520	0.101	152	150	0.0	0.1	2.632	A

#### 13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	306	76	110	1457	0.210	305	300	0.2	0.3	3.125	A
2 - A510 Northen Way	335	84	72	1328	0.252	335	343	0.3	0.3	3.625	A
3 - Stewarts Road (N)	182	46	227	1496	0.122	182	180	0.1	0.1	2.740	A

#### 13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	374	94	134	1442	0.260	374	367	0.3	0.3	3.370	A
2 - A510 Northen Way	411	103	88	1318	0.312	410	420	0.3	0.4	3.962	A
3 - Stewarts Road (N)	224	56	278	1462	0.153	223	220	0.1	0.2	2.906	A

#### 13:30 - 13:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	374	94	134	1442	0.260	374	368	0.3	0.3	3.370	A
2 - A510 Northen Way	411	103	88	1318	0.312	411	421	0.4	0.5	3.965	A
3 - Stewarts Road (N)	224	56	279	1462	0.153	224	220	0.2	0.2	2.906	A

#### 13:45 - 14:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	306	76	110	1457	0.210	306	301	0.3	0.3	3.129	A
2 - A510 Northen Way	335	84	72	1328	0.253	336	344	0.5	0.3	3.628	A
3 - Stewarts Road (N)	182	46	228	1495	0.122	183	180	0.2	0.1	2.744	A



## 14:00 - 14:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	256	64	92	1468	0.174	256	252	0.3	0.2	2.972	A
2 - A510 Northen Way	281	70	60	1335	0.210	281	288	0.3	0.3	3.415	A
3 - Stewarts Road (N)	153	38	191	1520	0.101	153	151	0.1	0.1	2.633	A

# 2031, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	3.20	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D16	2031	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	468	100.000
2 - A510 Northen Way		ONE HOUR	✓	297	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	520	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	402	66
	2 - A510 Northen Way	221	0	76
	3 - Stewarts Road (N)	197	323	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	3	6
	2 - A510 Northen Way	8	0	17
	3 - Stewarts Road (N)	2	1	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.33	3.38	0.5	A	429	644
2 - A510 Northen Way	0.23	3.20	0.3	A	273	409
3 - Stewarts Road (N)	0.33	3.03	0.5	A	477	716

### Main Results for each time segment

#### 16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	352	88	242	1651	0.213	351	314	0.0	0.3	2.768	A
2 - A510 Northen Way	224	56	50	1463	0.153	223	544	0.0	0.2	2.900	A
3 - Stewarts Road (N)	391	98	166	1815	0.216	390	107	0.0	0.3	2.526	A

#### 16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	421	105	290	1621	0.260	420	376	0.3	0.3	2.998	A
2 - A510 Northen Way	267	67	59	1458	0.183	267	651	0.2	0.2	3.021	A
3 - Stewarts Road (N)	467	117	199	1792	0.261	467	128	0.3	0.4	2.717	A

#### 16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	515	129	355	1580	0.326	515	460	0.3	0.5	3.376	A
2 - A510 Northen Way	327	82	73	1451	0.225	327	797	0.2	0.3	3.203	A
3 - Stewarts Road (N)	573	143	243	1761	0.325	572	156	0.4	0.5	3.027	A

#### 17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	515	129	356	1580	0.326	515	460	0.5	0.5	3.379	A
2 - A510 Northen Way	327	82	73	1450	0.225	327	798	0.3	0.3	3.203	A
3 - Stewarts Road (N)	573	143	243	1760	0.325	573	156	0.5	0.5	3.029	A

#### 17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	421	105	291	1621	0.260	421	376	0.5	0.4	3.004	A
2 - A510 Northen Way	267	67	59	1458	0.183	267	653	0.3	0.2	3.023	A
3 - Stewarts Road (N)	467	117	199	1792	0.261	468	128	0.5	0.4	2.720	A



## 17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	352	88	243	1650	0.214	353	315	0.4	0.3	2.777	A
2 - A510 Northen Way	224	56	50	1463	0.153	224	546	0.2	0.2	2.903	A
3 - Stewarts Road (N)	391	98	167	1814	0.216	392	107	0.4	0.3	2.532	A



# 2031 + Dev, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	3.10	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D17	2031 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	214	100.000
2 - A510 Northen Way		ONE HOUR	✓	355	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	93	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	114	100
	2 - A510 Northen Way	160	0	195
	3 - Stewarts Road (N)	21	72	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	17	4
	2 - A510 Northen Way	6	0	12
	3 - Stewarts Road (N)	20	50	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.15	2.62	0.2	A	196	295
2 - A510 Northen Way	0.27	3.42	0.4	A	326	489
3 - Stewarts Road (N)	0.08	3.05	0.1	A	85	128

### Main Results for each time segment

#### 05:45 - 06:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	161	40	54	1633	0.099	161	136	0.0	0.1	2.445	A
2 - A510 Northen Way	267	67	75	1463	0.183	266	140	0.0	0.2	3.007	A
3 - Stewarts Road (N)	70	18	120	1308	0.054	70	221	0.0	0.1	2.906	A

#### 06:00 - 06:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	192	48	65	1624	0.118	192	163	0.1	0.1	2.514	A
2 - A510 Northen Way	319	80	90	1455	0.219	319	167	0.2	0.3	3.168	A
3 - Stewarts Road (N)	84	21	144	1297	0.064	84	265	0.1	0.1	2.966	A

#### 06:15 - 06:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	236	59	79	1611	0.146	235	199	0.1	0.2	2.616	A
2 - A510 Northen Way	391	98	110	1444	0.271	391	205	0.3	0.4	3.418	A
3 - Stewarts Road (N)	102	26	176	1281	0.080	102	325	0.1	0.1	3.053	A

#### 06:30 - 06:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	236	59	79	1611	0.146	236	199	0.2	0.2	2.616	A
2 - A510 Northen Way	391	98	110	1444	0.271	391	205	0.4	0.4	3.418	A
3 - Stewarts Road (N)	102	26	176	1281	0.080	102	325	0.1	0.1	3.053	A

#### 06:45 - 07:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	192	48	65	1624	0.118	193	163	0.2	0.1	2.517	A
2 - A510 Northen Way	319	80	90	1455	0.219	319	167	0.4	0.3	3.173	A
3 - Stewarts Road (N)	84	21	144	1297	0.064	84	265	0.1	0.1	2.969	A

## 07:00 - 07:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	161	40	54	1633	0.099	161	136	0.1	0.1	2.447	A
2 - A510 Northen Way	267	67	75	1463	0.183	267	140	0.3	0.2	3.013	A
3 - Stewarts Road (N)	70	18	121	1308	0.054	70	222	0.1	0.1	2.907	A

# 2031 + Dev, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	4.32	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D18	2031 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	422	100.000
2 - A510 Northen Way		ONE HOUR	✓	626	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	146	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	296	126
	2 - A510 Northen Way	352	0	274
	3 - Stewarts Road (N)	57	89	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	15	6
	2 - A510 Northen Way	14	0	14
	3 - Stewarts Road (N)	23	42	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.29	3.23	0.4	A	387	581
2 - A510 Northen Way	0.50	5.31	1.0	A	574	862
3 - Stewarts Road (N)	0.13	3.34	0.1	A	134	201

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	318	79	67	1605	0.198	317	307	0.0	0.2	2.793	A
2 - A510 Northen Way	471	118	95	1391	0.339	469	289	0.0	0.5	3.895	A
3 - Stewarts Road (N)	110	27	264	1308	0.084	110	300	0.0	0.1	3.005	A

#### 08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	379	95	80	1594	0.238	379	367	0.2	0.3	2.962	A
2 - A510 Northen Way	563	141	113	1381	0.407	562	346	0.5	0.7	4.390	A
3 - Stewarts Road (N)	131	33	316	1278	0.103	131	359	0.1	0.1	3.137	A

#### 08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	465	116	98	1580	0.294	464	450	0.3	0.4	3.226	A
2 - A510 Northen Way	689	172	139	1367	0.504	688	424	0.7	1.0	5.288	A
3 - Stewarts Road (N)	161	40	387	1239	0.130	161	440	0.1	0.1	3.337	A

#### 08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	465	116	98	1580	0.294	465	450	0.4	0.4	3.227	A
2 - A510 Northen Way	689	172	139	1367	0.504	689	424	1.0	1.0	5.307	A
3 - Stewarts Road (N)	161	40	388	1239	0.130	161	440	0.1	0.1	3.339	A

#### 08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	379	95	80	1594	0.238	380	368	0.4	0.3	2.966	A
2 - A510 Northen Way	563	141	113	1381	0.407	564	346	1.0	0.7	4.411	A
3 - Stewarts Road (N)	131	33	317	1278	0.103	131	360	0.1	0.1	3.142	A

## 09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	318	79	67	1605	0.198	318	308	0.3	0.2	2.799	A
2 - A510 Northen Way	471	118	95	1391	0.339	472	290	0.7	0.5	3.920	A
3 - Stewarts Road (N)	110	27	265	1307	0.084	110	302	0.1	0.1	3.010	A

# 2031 + Dev, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	3.67	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D19	2031 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	340	100.000
2 - A510 Northen Way		ONE HOUR	✓	386	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	228	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	260	80
	2 - A510 Northen Way	253	0	133
	3 - Stewarts Road (N)	81	147	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	22	23
	2 - A510 Northen Way	19	0	29
	3 - Stewarts Road (N)	22	29	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.26	3.46	0.4	A	312	468
2 - A510 Northern Way	0.33	4.15	0.5	A	354	531
3 - Stewarts Road (N)	0.18	3.20	0.2	A	209	314

### Main Results for each time segment

#### 12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	256	64	110	1450	0.177	255	251	0.0	0.2	3.011	A
2 - A510 Northern Way	291	73	60	1308	0.222	289	305	0.0	0.3	3.531	A
3 - Stewarts Road (N)	172	43	190	1430	0.120	171	160	0.0	0.1	2.858	A

#### 13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	306	76	132	1435	0.213	305	300	0.2	0.3	3.185	A
2 - A510 Northern Way	347	87	72	1301	0.267	347	366	0.3	0.4	3.771	A
3 - Stewarts Road (N)	205	51	227	1407	0.146	205	191	0.1	0.2	2.994	A

#### 13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	374	94	162	1415	0.264	374	367	0.3	0.4	3.456	A
2 - A510 Northern Way	425	106	88	1292	0.329	424	448	0.4	0.5	4.150	A
3 - Stewarts Road (N)	251	63	278	1375	0.183	251	234	0.2	0.2	3.201	A

#### 13:30 - 13:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	374	94	162	1415	0.264	374	368	0.4	0.4	3.457	A
2 - A510 Northern Way	425	106	88	1292	0.329	425	448	0.5	0.5	4.153	A
3 - Stewarts Road (N)	251	63	279	1375	0.183	251	235	0.2	0.2	3.202	A

#### 13:45 - 14:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	306	76	132	1435	0.213	306	301	0.4	0.3	3.190	A
2 - A510 Northern Way	347	87	72	1301	0.267	347	366	0.5	0.4	3.779	A
3 - Stewarts Road (N)	205	51	228	1406	0.146	205	192	0.2	0.2	2.999	A





14:00 - 14:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	256	64	111	1450	0.177	256	252	0.3	0.2	3.016	A
2 - A510 Northen Way	291	73	60	1308	0.222	291	307	0.4	0.3	3.539	A
3 - Stewarts Road (N)	172	43	191	1429	0.120	172	161	0.2	0.1	2.862	A

# 2031 + Dev, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	3.27	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D20	2031 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	468	100.000
2 - A510 Northen Way		ONE HOUR	✓	304	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	533	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	402	66
	2 - A510 Northen Way	221	0	83
	3 - Stewarts Road (N)	197	336	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	3	6
	2 - A510 Northen Way	8	0	23
	3 - Stewarts Road (N)	2	3	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.33	3.42	0.5	A	429	644
2 - A510 Northern Way	0.23	3.29	0.3	A	279	418
3 - Stewarts Road (N)	0.34	3.12	0.5	A	489	734

### Main Results for each time segment

#### 16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	352	88	252	1641	0.215	351	314	0.0	0.3	2.787	A
2 - A510 Northern Way	229	57	50	1440	0.159	228	554	0.0	0.2	2.969	A
3 - Stewarts Road (N)	401	100	166	1793	0.224	400	112	0.0	0.3	2.582	A

#### 16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	421	105	302	1610	0.261	420	376	0.3	0.4	3.026	A
2 - A510 Northern Way	273	68	59	1435	0.190	273	663	0.2	0.2	3.099	A
3 - Stewarts Road (N)	479	120	199	1770	0.271	479	134	0.3	0.4	2.788	A

#### 16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	515	129	370	1567	0.329	515	460	0.4	0.5	3.419	A
2 - A510 Northern Way	335	84	73	1427	0.235	334	812	0.2	0.3	3.294	A
3 - Stewarts Road (N)	587	147	243	1739	0.337	586	164	0.4	0.5	3.121	A

#### 17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	515	129	370	1567	0.329	515	460	0.5	0.5	3.422	A
2 - A510 Northern Way	335	84	73	1427	0.235	335	813	0.3	0.3	3.294	A
3 - Stewarts Road (N)	587	147	243	1739	0.337	587	164	0.5	0.5	3.123	A

#### 17:15 - 17:30

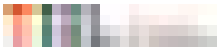
Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	421	105	302	1610	0.261	421	376	0.5	0.4	3.030	A
2 - A510 Northern Way	273	68	59	1435	0.191	274	664	0.3	0.2	3.103	A
3 - Stewarts Road (N)	479	120	199	1770	0.271	480	134	0.5	0.4	2.791	A

## 17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	352	88	253	1641	0.215	353	315	0.4	0.3	2.794	A
2 - A510 Northen Way	229	57	50	1440	0.159	229	556	0.2	0.2	2.975	A
3 - Stewarts Road (N)	401	100	167	1792	0.224	402	112	0.4	0.3	2.591	A



## **Appendix R – A510 Stewarts Road / Sanders Road / Rixon Road / Nest Lane roundabout Junctions 9 Results**



<b>Junctions 9</b>
<b>ARCADY 9 - Roundabout Module</b>
Version: 9.5.1.7462 © Copyright TRL Limited, 2019
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**Filename:** Nest Lane Rixon Road Roundabout.j9  
**Path:** P:\2021\P21-340\T&T\Capacity Assessments\Junctions 9  
**Report generation date:** 11/01/2022 12:09:22

---

- »2021, 06:00 - 07:00
- »2021, 08:00 - 09:00
- »2021 , 13:00 - 14:00
- »2021, 16:30 - 17:30
- »2027, 06:00 - 07:00
- »2027, 08:00 - 09:00
- »2027, 13:00 - 14:00
- »2027, 16:30 - 17:30
- »2027 + Dev, 06:00 - 07:00
- »2027 + Dev, 08:00 - 09:00
- »2027 + Dev, 13:00 - 14:00
- »2027 + Dev, 16:30 - 17:30
- »2031, 06:00 - 07:00
- »2031, 08:00 - 09:00
- »2031, 13:00 - 14:00
- »2031, 16:30 - 17:30
- »2031 + Dev, 06:00 - 07:00
- »2031 + Dev, 08:00 - 09:00
- »2031 + Dev, 13:00 - 14:00
- »2031 + Dev, 16:30 - 17:30



### Summary of junction performance

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
<b>2021</b>																				
1 - Sanders Road	D1	0.0	2.79	0.04	A	D2	0.1	3.12	0.09	A	D3	0.1	3.15	0.12	A	D4	0.3	3.10	0.24	A
2 - Rixon Road		0.3	4.21	0.24	A		1.1	7.05	0.53	A		0.6	5.90	0.37	A		0.6	5.69	0.39	A
3 - Nest Lane		0.1	2.49	0.09	A		0.2	3.04	0.13	A		0.1	2.72	0.10	A		0.1	2.54	0.07	A
4 - Stewarts Road		0.2	3.69	0.15	A		0.6	5.73	0.39	A		0.5	5.15	0.33	A		0.7	4.88	0.41	A
<b>2027</b>																				
1 - Sanders Road	D5	0.0	2.81	0.05	A	D6	0.1	3.15	0.10	A	D7	0.2	3.20	0.13	A	D8	0.3	3.19	0.26	A
2 - Rixon Road		0.3	4.28	0.25	A		1.2	7.47	0.56	A		0.6	6.13	0.39	A		0.7	5.92	0.41	A
3 - Nest Lane		0.1	2.52	0.10	A		0.2	3.11	0.14	A		0.1	2.77	0.11	A		0.1	2.57	0.08	A
4 - Stewarts Road		0.2	3.74	0.16	A		0.7	5.96	0.41	A		0.5	5.33	0.35	A		0.7	5.05	0.43	A
<b>2027 + Dev</b>																				
1 - Sanders Road	D9	0.1	2.94	0.05	A	D10	0.1	3.22	0.10	A	D11	0.2	3.20	0.13	A	D12	0.4	3.21	0.26	A
2 - Rixon Road		0.4	4.40	0.27	A		1.3	7.64	0.56	A		0.7	6.41	0.40	A		0.7	6.10	0.42	A
3 - Nest Lane		0.1	2.54	0.10	A		0.2	3.13	0.14	A		0.1	2.79	0.11	A		0.1	2.58	0.08	A
4 - Stewarts Road		0.2	3.77	0.16	A		0.7	6.00	0.41	A		0.5	5.40	0.36	A		0.7	5.09	0.43	A
<b>2031</b>																				
1 - Sanders Road	D13	0.0	2.81	0.05	A	D14	0.1	3.18	0.10	A	D15	0.2	3.23	0.14	A	D16	0.4	3.24	0.27	A
2 - Rixon Road		0.4	4.33	0.26	A		1.3	7.75	0.57	A		0.7	6.29	0.40	A		0.7	6.05	0.42	A
3 - Nest Lane		0.1	2.53	0.10	A		0.2	3.15	0.15	A		0.1	2.80	0.11	A		0.1	2.59	0.08	A
4 - Stewarts Road		0.2	3.77	0.17	A		0.7	6.10	0.42	A		0.6	5.45	0.37	A		0.8	5.15	0.44	A
<b>2031 + Dev</b>																				
1 - Sanders Road	D17	0.1	2.94	0.05	A	D18	0.1	3.24	0.10	A	D19	0.2	3.23	0.14	A	D20	0.4	3.26	0.27	A
2 - Rixon Road		0.4	4.44	0.27	A		1.4	7.93	0.58	A		0.7	6.60	0.42	A		0.8	6.26	0.44	A
3 - Nest Lane		0.1	2.56	0.10	A		0.2	3.17	0.15	A		0.1	2.83	0.11	A		0.1	2.60	0.08	A
4 - Stewarts Road		0.2	3.80	0.17	A		0.7	6.14	0.42	A		0.6	5.53	0.37	A		0.8	5.20	0.44	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

### File summary

#### File Description

Title	Rixon Road Nest Lane Roundabout
Location	Wellingborough
Site number	
Date	02/12/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	HQjake.blay
Description	

### Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

### Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

**Demand Set Summary**

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D2	2021	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D3	2021	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D4	2021	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D5	2027	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D6	2027	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D7	2027	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D8	2027	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D9	2027 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D10	2027 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D11	2027 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D12	2027 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D13	2031	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D14	2031	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D15	2031	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D16	2031	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D17	2031 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D18	2031 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D19	2031 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D20	2031 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

**Analysis Set Details**

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000



# 2021, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	3.55	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
1	Sanders Road	
2	Rixon Road	
3	Nest Lane	
4	Stewarts Road	

### Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - Sanders Road	3.65	8.62	26.5	18.2	46.8	47.3	
2 - Rixon Road	3.65	6.26	4.0	12.2	46.8	47.7	
3 - Nest Lane	3.66	7.07	29.9	30.2	46.8	39.5	
4 - Stewarts Road	3.65	6.91	5.3	20.7	46.8	52.8	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Sanders Road	0.644	1913
2 - Rixon Road	0.504	1233
3 - Nest Lane	0.643	1835
4 - Stewarts Road	0.526	1326

The slope and intercept shown above include any corrections and adjustments.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

**Demand overview (Traffic)**

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	53	100.000
2 - Rixon Road		ONE HOUR	✓	250	100.000
3 - Nest Lane		ONE HOUR	✓	135	100.000
4 - Stewarts Road		ONE HOUR	✓	161	100.000

**Origin-Destination Data****Demand (Veh/hr)**

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	21	13	19
	2 - Rixon Road	66	0	6	178
	3 - Nest Lane	41	40	0	54
	4 - Stewarts Road	23	116	22	0

**Vehicle Mix****Heavy Vehicle Percentages**

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	19	8	63
	2 - Rixon Road	3	0	0	7
	3 - Nest Lane	5	0	0	2
	4 - Stewarts Road	9	7	9	0

**Results****Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.04	2.79	0.0	A	49	73
2 - Rixon Road	0.24	4.21	0.3	A	229	344
3 - Nest Lane	0.09	2.49	0.1	A	124	186
4 - Stewarts Road	0.15	3.69	0.2	A	148	222

# 2021, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	5.67	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2021	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	105	100.000
2 - Rixon Road		ONE HOUR	✓	526	100.000
3 - Nest Lane		ONE HOUR	✓	167	100.000
4 - Stewarts Road		ONE HOUR	✓	364	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	53	20	32
	2 - Rixon Road	134	0	26	366
	3 - Nest Lane	64	37	0	66
	4 - Stewarts Road	71	260	33	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	26	20	44
	2 - Rixon Road	6	0	0	9
	3 - Nest Lane	3	3	0	5
	4 - Stewarts Road	30	12	6	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.09	3.12	0.1	A	96	145
2 - Rixon Road	0.53	7.05	1.1	A	483	724
3 - Nest Lane	0.13	3.04	0.2	A	153	230
4 - Stewarts Road	0.39	5.73	0.6	A	334	501



# 2021 , 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	4.76	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2021	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	146	100.000
2 - Rixon Road		ONE HOUR	✓	320	100.000
3 - Nest Lane		ONE HOUR	✓	133	100.000
4 - Stewarts Road		ONE HOUR	✓	316	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	59	40	47
	2 - Rixon Road	60	0	26	234
	3 - Nest Lane	34	38	0	61
	4 - Stewarts Road	50	225	41	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	27	18	38
	2 - Rixon Road	30	0	4	18
	3 - Nest Lane	11	3	0	2
	4 - Stewarts Road	34	16	10	0



## Results

### Results Summary for whole modelled period

Am	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.12	3.15	0.1	A	134	201
2 - Rixon Road	0.37	5.90	0.6	A	294	440
3 - Nest Lane	0.10	2.72	0.1	A	122	183
4 - Stewarts Road	0.33	5.15	0.5	A	290	435

# 2021, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	4.46	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2021	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	342	100.000
2 - Rixon Road		ONE HOUR	✓	372	100.000
3 - Nest Lane		ONE HOUR	✓	100	100.000
4 - Stewarts Road		ONE HOUR	✓	459	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	146	124	72
	2 - Rixon Road	19	0	73	280
	3 - Nest Lane	20	29	0	51
	4 - Stewarts Road	24	376	59	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	1	1	8
	2 - Rixon Road	11	0	0	5
	3 - Nest Lane	0	3	0	2
	4 - Stewarts Road	17	3	0	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.24	3.10	0.3	A	314	471
2 - Rixon Road	0.39	5.69	0.6	A	341	512
3 - Nest Lane	0.07	2.54	0.1	A	92	138
4 - Stewarts Road	0.41	4.88	0.7	A	421	632



# 2027, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	3.60	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2027	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	56	100.000
2 - Rixon Road		ONE HOUR	✓	261	100.000
3 - Nest Lane		ONE HOUR	✓	141	100.000
4 - Stewarts Road		ONE HOUR	✓	168	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	22	14	20
	2 - Rixon Road	69	0	6	186
	3 - Nest Lane	43	42	0	56
	4 - Stewarts Road	24	121	23	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	19	8	63
	2 - Rixon Road	3	0	0	7
	3 - Nest Lane	5	0	0	2
	4 - Stewarts Road	9	7	9	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.05	2.81	0.0	A	51	77
2 - Rixon Road	0.25	4.28	0.3	A	239	359
3 - Nest Lane	0.10	2.52	0.1	A	129	194
4 - Stewarts Road	0.16	3.74	0.2	A	154	231

# 2027, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	5.94	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2027	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	109	100.000
2 - Rixon Road		ONE HOUR	✓	550	100.000
3 - Nest Lane		ONE HOUR	✓	175	100.000
4 - Stewarts Road		ONE HOUR	✓	381	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	55	21	33
	2 - Rixon Road	140	0	27	383
	3 - Nest Lane	67	39	0	69
	4 - Stewarts Road	74	272	35	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	26	20	44
	2 - Rixon Road	6	0	0	9
	3 - Nest Lane	3	3	0	5
	4 - Stewarts Road	30	12	6	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.10	3.15	0.1	A	100	150
2 - Rixon Road	0.56	7.47	1.2	A	505	757
3 - Nest Lane	0.14	3.11	0.2	A	161	241
4 - Stewarts Road	0.41	5.96	0.7	A	350	524

# 2027, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	4.92	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2027	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	154	100.000
2 - Rixon Road		ONE HOUR	✓	337	100.000
3 - Nest Lane		ONE HOUR	✓	140	100.000
4 - Stewarts Road		ONE HOUR	✓	334	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	62	42	50
	2 - Rixon Road	63	0	27	247
	3 - Nest Lane	40	36	0	64
	4 - Stewarts Road	53	238	43	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	27	18	38
	2 - Rixon Road	30	0	4	18
	3 - Nest Lane	11	3	0	2
	4 - Stewarts Road	34	16	10	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.13	3.20	0.2	A	141	212
2 - Rixon Road	0.39	6.13	0.6	A	309	464
3 - Nest Lane	0.11	2.77	0.1	A	128	193
4 - Stewarts Road	0.35	5.33	0.5	A	306	460

# 2027, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	4.62	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2027	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	358	100.000
2 - Rixon Road		ONE HOUR	✓	389	100.000
3 - Nest Lane		ONE HOUR	✓	104	100.000
4 - Stewarts Road		ONE HOUR	✓	480	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	153	130	75
	2 - Rixon Road	20	0	76	293
	3 - Nest Lane	21	30	0	53
	4 - Stewarts Road	25	393	62	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	1	1	8
	2 - Rixon Road	11	0	0	5
	3 - Nest Lane	0	3	0	2
	4 - Stewarts Road	17	3	0	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.26	3.19	0.3	A	329	493
2 - Rixon Road	0.41	5.92	0.7	A	357	535
3 - Nest Lane	0.08	2.57	0.1	A	95	143
4 - Stewarts Road	0.43	5.05	0.7	A	440	661



# 2027 + Dev, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	3.67	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2027 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	61	100.000
2 - Rixon Road		ONE HOUR	✓	270	100.000
3 - Nest Lane		ONE HOUR	✓	144	100.000
4 - Stewarts Road		ONE HOUR	✓	168	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	27	14	20
	2 - Rixon Road	78	0	6	186
	3 - Nest Lane	46	42	0	56
	4 - Stewarts Road	24	121	23	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	34	8	63
	2 - Rixon Road	7	0	0	7
	3 - Nest Lane	5	0	0	2
	4 - Stewarts Road	9	7	9	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.05	2.94	0.1	A	56	84
2 - Rixon Road	0.27	4.40	0.4	A	248	372
3 - Nest Lane	0.10	2.54	0.1	A	132	198
4 - Stewarts Road	0.16	3.77	0.2	A	154	231



# 2027 + Dev, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	6.04	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2027 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	112	100.000
2 - Rixon Road		ONE HOUR	✓	555	100.000
3 - Nest Lane		ONE HOUR	✓	176	100.000
4 - Stewarts Road		ONE HOUR	✓	381	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	58	21	33
	2 - Rixon Road	145	0	27	383
	3 - Nest Lane	68	39	0	69
	4 - Stewarts Road	74	272	35	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	30	20	44
	2 - Rixon Road	8	0	0	9
	3 - Nest Lane	3	3	0	5
	4 - Stewarts Road	30	12	6	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.10	3.22	0.1	A	103	154
2 - Rixon Road	0.56	7.64	1.3	A	509	764
3 - Nest Lane	0.14	3.13	0.2	A	162	242
4 - Stewarts Road	0.41	6.00	0.7	A	350	524

# 2027 + Dev, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	5.06	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2027 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	157	100.000
2 - Rixon Road		ONE HOUR	✓	346	100.000
3 - Nest Lane		ONE HOUR	✓	140	100.000
4 - Stewarts Road		ONE HOUR	✓	334	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	64	43	50
	2 - Rixon Road	72	0	27	247
	3 - Nest Lane	40	36	0	64
	4 - Stewarts Road	53	238	43	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	27	17	38
	2 - Rixon Road	38	0	4	18
	3 - Nest Lane	10	3	0	2
	4 - Stewarts Road	34	16	10	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.13	3.20	0.2	A	144	216
2 - Rixon Road	0.40	6.41	0.7	A	317	476
3 - Nest Lane	0.11	2.79	0.1	A	128	193
4 - Stewarts Road	0.36	5.40	0.5	A	306	460

# 2027 + Dev, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	4.70	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2027 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	364	100.000
2 - Rixon Road		ONE HOUR	✓	394	100.000
3 - Nest Lane		ONE HOUR	✓	104	100.000
4 - Stewarts Road		ONE HOUR	✓	480	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	157	132	75
	2 - Rixon Road	25	0	76	293
	3 - Nest Lane	21	30	0	53
	4 - Stewarts Road	25	393	62	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	1	1	8
	2 - Rixon Road	28	0	0	5
	3 - Nest Lane	0	3	0	2
	4 - Stewarts Road	17	3	0	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.26	3.21	0.4	A	334	501
2 - Rixon Road	0.42	6.10	0.7	A	362	542
3 - Nest Lane	0.08	2.58	0.1	A	95	143
4 - Stewarts Road	0.43	5.09	0.7	A	440	661



# 2031, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	3.63	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2031	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	57	100.000
2 - Rixon Road		ONE HOUR	✓	268	100.000
3 - Nest Lane		ONE HOUR	✓	145	100.000
4 - Stewarts Road		ONE HOUR	✓	173	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	23	14	20
	2 - Rixon Road	71	0	6	191
	3 - Nest Lane	44	43	0	58
	4 - Stewarts Road	25	124	24	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	19	8	63
	2 - Rixon Road	3	0	0	7
	3 - Nest Lane	5	0	0	2
	4 - Stewarts Road	9	7	9	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.05	2.81	0.0	A	52	78
2 - Rixon Road	0.26	4.33	0.4	A	246	369
3 - Nest Lane	0.10	2.53	0.1	A	133	200
4 - Stewarts Road	0.17	3.77	0.2	A	159	238

# 2031, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	6.12	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2031	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	112	100.000
2 - Rixon Road		ONE HOUR	✓	565	100.000
3 - Nest Lane		ONE HOUR	✓	180	100.000
4 - Stewarts Road		ONE HOUR	✓	390	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	57	21	34
	2 - Rixon Road	144	0	28	393
	3 - Nest Lane	69	40	0	71
	4 - Stewarts Road	76	279	35	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	26	20	44
	2 - Rixon Road	6	0	0	9
	3 - Nest Lane	3	3	0	5
	4 - Stewarts Road	30	12	6	0



## Results

### Results Summary for whole modelled period

Am	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.10	3.18	0.1	A	103	154
2 - Rixon Road	0.57	7.75	1.3	A	518	778
3 - Nest Lane	0.15	3.15	0.2	A	165	248
4 - Stewarts Road	0.42	6.10	0.7	A	358	537

# 2031, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	5.02	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D15	2031	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	159	100.000
2 - Rixon Road		ONE HOUR	✓	348	100.000
3 - Nest Lane		ONE HOUR	✓	145	100.000
4 - Stewarts Road		ONE HOUR	✓	345	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	64	44	51
	2 - Rixon Road	65	0	28	255
	3 - Nest Lane	41	37	0	67
	4 - Stewarts Road	55	245	45	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	27	18	38
	2 - Rixon Road	30	0	4	18
	3 - Nest Lane	11	3	0	2
	4 - Stewarts Road	34	16	10	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.14	3.23	0.2	A	146	219
2 - Rixon Road	0.40	6.29	0.7	A	319	479
3 - Nest Lane	0.11	2.80	0.1	A	133	200
4 - Stewarts Road	0.37	5.45	0.6	A	317	475

# 2031, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	4.71	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D16	2031	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	367	100.000
2 - Rixon Road		ONE HOUR	✓	398	100.000
3 - Nest Lane		ONE HOUR	✓	107	100.000
4 - Stewarts Road		ONE HOUR	✓	492	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	157	133	77
	2 - Rixon Road	20	0	78	300
	3 - Nest Lane	21	31	0	55
	4 - Stewarts Road	26	403	63	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	1	1	8
	2 - Rixon Road	11	0	0	5
	3 - Nest Lane	0	3	0	2
	4 - Stewarts Road	17	3	0	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.27	3.24	0.4	A	337	505
2 - Rixon Road	0.42	6.05	0.7	A	365	548
3 - Nest Lane	0.08	2.59	0.1	A	98	147
4 - Stewarts Road	0.44	5.15	0.8	A	451	677





# 2031 + Dev, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	3.70	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D17	2031 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	62	100.000
2 - Rixon Road		ONE HOUR	✓	277	100.000
3 - Nest Lane		ONE HOUR	✓	148	100.000
4 - Stewarts Road		ONE HOUR	✓	173	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	28	14	20
	2 - Rixon Road	80	0	6	191
	3 - Nest Lane	47	43	0	58
	4 - Stewarts Road	25	124	24	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	33	8	63
	2 - Rixon Road	7	0	0	7
	3 - Nest Lane	5	0	0	2
	4 - Stewarts Road	9	7	9	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.05	2.94	0.1	A	57	85
2 - Rixon Road	0.27	4.44	0.4	A	254	381
3 - Nest Lane	0.10	2.56	0.1	A	136	204
4 - Stewarts Road	0.17	3.80	0.2	A	159	238

# 2031 + Dev, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	6.22	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D18	2031 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	114	100.000
2 - Rixon Road		ONE HOUR	✓	570	100.000
3 - Nest Lane		ONE HOUR	✓	181	100.000
4 - Stewarts Road		ONE HOUR	✓	390	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	59	21	34
	2 - Rixon Road	149	0	28	393
	3 - Nest Lane	70	40	0	71
	4 - Stewarts Road	76	279	35	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	30	20	44
	2 - Rixon Road	8	0	0	9
	3 - Nest Lane	3	3	0	5
	4 - Stewarts Road	30	12	6	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.10	3.24	0.1	A	105	157
2 - Rixon Road	0.58	7.93	1.4	A	523	785
3 - Nest Lane	0.15	3.17	0.2	A	166	249
4 - Stewarts Road	0.42	6.14	0.7	A	358	537

# 2031 + Dev, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	5.18	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D19	2031 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	161	100.000
2 - Rixon Road		ONE HOUR	✓	358	100.000
3 - Nest Lane		ONE HOUR	✓	146	100.000
4 - Stewarts Road		ONE HOUR	✓	345	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	66	44	51
	2 - Rixon Road	75	0	28	255
	3 - Nest Lane	42	37	0	67
	4 - Stewarts Road	55	245	45	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	27	17	38
	2 - Rixon Road	38	0	4	18
	3 - Nest Lane	10	3	0	2
	4 - Stewarts Road	34	16	10	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.14	3.23	0.2	A	148	222
2 - Rixon Road	0.42	6.60	0.7	A	329	493
3 - Nest Lane	0.11	2.83	0.1	A	134	201
4 - Stewarts Road	0.37	5.53	0.6	A	317	475



# 2031 + Dev, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	4.80	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D20	2031 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	373	100.000
2 - Rixon Road		ONE HOUR	✓	404	100.000
3 - Nest Lane		ONE HOUR	✓	108	100.000
4 - Stewarts Road		ONE HOUR	✓	492	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	161	135	77
	2 - Rixon Road	26	0	78	300
	3 - Nest Lane	22	31	0	55
	4 - Stewarts Road	26	403	63	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	1	1	8
	2 - Rixon Road	28	0	0	5
	3 - Nest Lane	0	3	0	2
	4 - Stewarts Road	17	3	0	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.27	3.26	0.4	A	342	513
2 - Rixon Road	0.44	6.26	0.8	A	371	556
3 - Nest Lane	0.08	2.60	0.1	A	99	149
4 - Stewarts Road	0.44	5.20	0.8	A	451	677



**Appendix S – A509 / Wellingborough Road / A510  
Northen Way / A5193 / A509 Niort Way roundabout  
Junctions 9 Results**



<h1>Junctions 9</h1>
<h2>ARCADY 9 - Roundabout Module</h2>
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**Filename:** A509 A510 Roundabout.j9

**Path:** P:\2021\P21-340\T&T\Capacity Assessments\Junctions 9

**Report generation date:** 15/02/2022 12:27:52

- 
- »2021 , 06:00 - 07:00
  - »2021, 08:00 - 09:00
  - »2021, 13:00 - 14:00
  - »2021, 16:30 - 17:30
  - »2027, 06:00 - 07:00
  - »2027, 08:00 - 09:00
  - »2027, 13:00 - 14:00
  - »2027, 16:30 - 17:30
  - »2027 + Dev, 06:00 - 07:00
  - »2027 + Dev, 08:00 - 09:00
  - »2027 + Dev, 13:00 - 14:00
  - »2027 + Dev, 16:30 - 17:30
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  - »2031, 08:00 - 09:00
  - »2031, 13:00 - 14:00
  - »2031, 16:30 - 17:30
  - »2031 + Dev, 06:00 - 07:00
  - »2031 + Dev, 08:00 - 09:00
  - »2031 + Dev, 13:00 - 14:00
  - »2031 + Dev, 16:30 - 17:30



### Summary of junction performance

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	
<b>2021</b>																				
1 - A510 Northen Way	D1	0.2	3.37	0.16	A	D2	1.0	7.18	0.50	A	D3	0.6	4.86	0.38	A	D4	1.3	6.57	0.56	
2 - A5193		0.3	3.65	0.21	A		1.1	7.70	0.51	A		0.6	5.18	0.37	A		1.0	7.32	0.51	
3 - A509 Niort Way		0.4	4.09	0.29	A		1.8	9.13	0.64	A		1.2	7.10	0.54	A		1.8	8.93	0.65	
4 - A509		0.6	4.12	0.39	A		3.9	13.84	0.80	B		1.1	5.82	0.52	A		1.7	7.06	0.64	
5 - Wellingborough Road		0.0	4.14	0.05	A		0.9	12.82	0.46	B		0.1	5.19	0.10	A		0.1	5.82	0.10	
<b>2027</b>																				
1 - A510 Northen Way	D5	0.2	3.44	0.17	A	D6	1.2	7.94	0.54	A	D7	0.7	5.16	0.40	A	D8	1.5	7.27	0.60	
2 - A5193		0.3	3.75	0.23	A		1.2	8.65	0.55	A		0.7	5.58	0.40	A		1.2	8.16	0.55	
3 - A509 Niort Way		0.4	4.20	0.30	A		2.1	10.38	0.68	B		1.4	7.87	0.58	A		2.2	10.33	0.69	
4 - A509		0.7	4.26	0.40	A		5.2	17.66	0.84	C		1.2	6.30	0.55	A		2.0	7.79	0.67	
5 - Wellingborough Road		0.1	4.24	0.05	A		1.1	15.28	0.52	C		0.1	5.45	0.11	A		0.1	6.11	0.11	
<b>2027 + Dev</b>																				
1 - A510 Northen Way	D9	0.2	3.75	0.19	A	D10	1.3	8.63	0.57	A	D11	0.8	5.67	0.44	A	D12	1.6	7.66	0.62	
2 - A5193		0.3	3.84	0.23	A		1.3	9.07	0.57	A		0.7	5.83	0.41	A		1.3	8.38	0.56	
3 - A509 Niort Way		0.5	4.35	0.32	A		2.3	11.36	0.70	B		1.5	8.33	0.60	A		2.3	10.69	0.70	
4 - A509		0.7	4.40	0.42	A		6.1	20.71	0.86	C		1.3	6.53	0.56	A		2.1	7.97	0.67	
5 - Wellingborough Road		0.1	4.32	0.05	A		1.2	16.75	0.54	C		0.1	5.56	0.11	A		0.1	6.18	0.11	
<b>2031</b>																				
1 - A510 Northen Way	D13	0.2	3.48	0.17	A	D14	1.3	8.47	0.56	A	D15	0.7	5.37	0.42	A	D16	1.6	7.77	0.62	
2 - A5193		0.3	3.81	0.23	A		1.4	9.39	0.58	A		0.7	5.87	0.42	A		1.3	8.76	0.57	
3 - A509 Niort Way		0.5	4.28	0.31	A		2.3	11.34	0.70	B		1.5	8.40	0.61	A		2.5	11.44	0.72	
4 - A509		0.7	4.35	0.41	A		6.4	21.34	0.87	C		1.3	6.62	0.57	A		2.2	8.30	0.69	
5 - Wellingborough Road		0.1	4.30	0.05	A		1.2	17.41	0.56	C		0.1	5.63	0.12	A		0.1	6.30	0.11	
<b>2031 + Dev</b>																				
1 - A510 Northen Way	D17	0.2	3.79	0.20	A	D18	1.4	9.29	0.59	A	D19	0.8	5.93	0.46	A	D20	1.7	8.19	0.64	
2 - A5193		0.3	3.90	0.24	A		1.4	9.88	0.59	A		0.8	6.14	0.44	A		1.4	9.01	0.58	
3 - A509 Niort Way		0.5	4.43	0.33	A		2.6	12.50	0.72	B		1.6	8.96	0.62	A		2.6	11.89	0.73	
4 - A509		0.7	4.50	0.43	A		7.7	25.63	0.89	D		1.4	6.90	0.59	A		2.3	8.53	0.69	
5 - Wellingborough Road		0.1	4.38	0.05	A		1.4	19.24	0.58	C		0.1	5.76	0.12	A		0.1	6.37	0.11	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

### File summary

#### File Description

Title	A509 A510 Roundabout
Location	Wellingborough
Site number	
Date	02/12/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	HQjake.blay
Description	

### Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

**Analysis Options**

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

**Demand Set Summary**

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2021	06:00 - 07:00	FLAT	05:45	07:15	90	15	✓
D2	2021	08:00 - 09:00	FLAT	07:45	09:15	90	15	✓
D3	2021	13:00 - 14:00	FLAT	12:45	14:15	90	15	✓
D4	2021	16:30 - 17:30	FLAT	16:15	17:45	90	15	✓
D5	2027	06:00 - 07:00	FLAT	05:45	07:15	90	15	✓
D6	2027	08:00 - 09:00	FLAT	07:45	09:15	90	15	✓
D7	2027	13:00 - 14:00	FLAT	12:45	14:15	90	15	✓
D8	2027	16:30 - 17:30	FLAT	16:15	17:45	90	15	✓
D9	2027 + Dev	06:00 - 07:00	FLAT	05:45	07:15	90	15	✓
D10	2027 + Dev	08:00 - 09:00	FLAT	07:45	09:15	90	15	✓
D11	2027 + Dev	13:00 - 14:00	FLAT	12:45	14:15	90	15	✓
D12	2027 + Dev	16:30 - 17:30	FLAT	16:15	17:45	90	15	✓
D13	2031	06:00 - 07:00	FLAT	05:45	07:15	90	15	✓
D14	2031	08:00 - 09:00	FLAT	07:45	09:15	90	15	✓
D15	2031	13:00 - 14:00	FLAT	12:45	14:15	90	15	✓
D16	2031	16:30 - 17:30	FLAT	16:15	17:45	90	15	✓
D17	2031 + Dev	06:00 - 07:00	FLAT	05:45	07:15	90	15	✓
D18	2031 + Dev	08:00 - 09:00	FLAT	07:45	09:15	90	15	✓
D19	2031 + Dev	13:00 - 14:00	FLAT	12:45	14:15	90	15	✓
D20	2031 + Dev	16:30 - 17:30	FLAT	16:15	17:45	90	15	✓

**Analysis Set Details**

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

# 2021 , 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	3.92	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
1	A510 Northern Way	
2	A5193	
3	A509 Niort Way	
4	A509	
5	Wellingborough Road	

### Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A510 Northern Way	3.65	7.61	26.4	18.3	54.6	51.3	
2 - A5193	3.65	6.64	14.0	35.0	54.6	35.8	
3 - A509 Niort Way	3.65	7.42	14.7	30.1	54.6	47.3	
4 - A509	4.78	8.00	5.8	16.3	54.6	49.0	
5 - Wellingborough Road	3.65	5.47	4.5	25.9	54.6	35.1	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A510 Northern Way	0.577	1766
2 - A5193	0.577	1645
3 - A509 Niort Way	0.567	1658
4 - A509	0.558	1661
5 - Wellingborough Road	0.518	1337

The slope and intercept shown above include any corrections and adjustments.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2021	06:00 - 07:00	FLAT	05:45	07:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northen Way		FLAT	✓	198	100.000
2 - A5193		FLAT	✓	267	100.000
3 - A509 Niort Way		FLAT	✓	358	100.000
4 - A509		FLAT	✓	548	100.000
5 - Wellingborough Road		FLAT	✓	41	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northen Way	0	5	105	87	1
	2 - A5193	30	0	19	216	2
	3 - A509 Niort Way	137	1	0	218	2
	4 - A509	142	113	293	0	0
	5 - Wellingborough Road	7	11	15	8	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northen Way	0	0	22	13	0
	2 - A5193	3	0	0	5	0
	3 - A509 Niort Way	8	0	0	23	0
	4 - A509	5	4	14	0	0
	5 - Wellingborough Road	0	9	0	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.16	3.37	0.2	A	198	297
2 - A5193	0.21	3.65	0.3	A	267	401
3 - A509 Niort Way	0.29	4.09	0.4	A	358	537
4 - A509	0.39	4.12	0.6	A	548	822
5 - Wellingborough Road	0.05	4.14	0.0	A	41	61

# 2021, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	10.48	B

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D2	2021	08:00 - 09:00	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northern Way		FLAT	✓	502	100.000
2 - A5193		FLAT	✓	493	100.000
3 - A509 Niort Way		FLAT	✓	696	100.000
4 - A509		FLAT	✓	1022	100.000
5 - Wellingborough Road		FLAT	✓	241	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northern Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northern Way	0	21	279	196	6
	2 - A5193	52	0	48	367	26
	3 - A509 Niort Way	283	35	0	359	19
	4 - A509	244	337	441	0	0
	5 - Wellingborough Road	55	86	72	28	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To				
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
1 - A510 Northen Way	0	0	15	14	0
2 - A5193	0	0	4	2	0
3 - A509 Niort Way	14	0	0	18	5
4 - A509	9	4	14	0	0
5 - Wellingborough Road	4	6	3	4	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.50	7.18	1.0	A	502	753
2 - A5193	0.51	7.70	1.1	A	493	740
3 - A509 Niort Way	0.64	9.13	1.8	A	696	1044
4 - A509	0.80	13.84	3.9	B	1022	1533
5 - Wellingborough Road	0.46	12.82	0.9	B	241	361





# 2021, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	5.86	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2021	13:00 - 14:00	FLAT	12:45	14:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northern Way		FLAT	✓	448	100.000
2 - A5193		FLAT	✓	415	100.000
3 - A509 Niort Way		FLAT	✓	602	100.000
4 - A509		FLAT	✓	669	100.000
5 - Wellingborough Road		FLAT	✓	78	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northern Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northern Way	0	37	256	138	17
	2 - A5193	38	0	32	322	23
	3 - A509 Niort Way	191	23	0	372	16
	4 - A509	135	230	303	0	1
	5 - Wellingborough Road	20	22	22	14	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To					
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road	
1 - A510 Northen Way	0	3	16	20	0	
2 - A5193	3	0	0	3	0	
3 - A509 Niort Way	20	0	0	21	0	
4 - A509	21	2	20	0	0	
5 - Wellingborough Road	0	9	0	0	0	

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.38	4.86	0.6	A	448	672
2 - A5193	0.37	5.18	0.6	A	415	623
3 - A509 Niort Way	0.54	7.10	1.2	A	602	903
4 - A509	0.52	5.82	1.1	A	669	1003
5 - Wellingborough Road	0.10	5.19	0.1	A	78	117

# 2021, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	7.43	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	2021	16:30 - 17:30	FLAT	16:15	17:45	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northern Way		FLAT	✓	705	100.000
2 - A5193		FLAT	✓	517	100.000
3 - A509 Niort Way		FLAT	✓	743	100.000
4 - A509		FLAT	✓	893	100.000
5 - Wellingborough Road		FLAT	✓	67	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northern Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northern Way	0	53	304	336	12
	2 - A5193	42	0	26	418	31
	3 - A509 Niort Way	180	20	0	520	23
	4 - A509	157	384	350	0	2
	5 - Wellingborough Road	22	16	19	10	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To				
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
1 - A510 Northen Way	0	2	3	2	0
2 - A5193	0	0	0	2	0
3 - A509 Niort Way	8	0	8	0	0
4 - A509	9	2	8	0	0
5 - Wellingborough Road	0	13	5	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.56	6.57	1.3	A	705	1058
2 - A5193	0.51	7.32	1.0	A	517	776
3 - A509 Niort Way	0.65	8.93	1.8	A	743	1115
4 - A509	0.64	7.06	1.7	A	893	1339
5 - Wellingborough Road	0.10	5.82	0.1	A	67	101

# 2027, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	4.03	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D5	2027	06:00 - 07:00	FLAT	05:45	07:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northern Way		FLAT	✓	207	100.000
2 - A5193		FLAT	✓	279	100.000
3 - A509 Niort Way		FLAT	✓	374	100.000
4 - A509		FLAT	✓	573	100.000
5 - Wellingborough Road		FLAT	✓	43	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northern Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northern Way	0	5	110	91	1
	2 - A5193	31	0	20	226	2
	3 - A509 Niort Way	143	1	0	228	2
	4 - A509	149	118	306	0	0
	5 - Wellingborough Road	7	12	16	8	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To				
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
1 - A510 Northen Way	0	0	22	13	0
2 - A5193	3	0	0	5	0
3 - A509 Niort Way	8	0	0	23	0
4 - A509	5	4	14	0	0
5 - Wellingborough Road	0	9	0	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.17	3.44	0.2	A	207	310
2 - A5193	0.23	3.75	0.3	A	279	418
3 - A509 Niort Way	0.30	4.20	0.4	A	374	561
4 - A509	0.40	4.26	0.7	A	573	860
5 - Wellingborough Road	0.05	4.24	0.1	A	43	64

# 2027, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	12.57	B

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D6	2027	08:00 - 09:00	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northern Way		FLAT	✓	525	100.000
2 - A5193		FLAT	✓	515	100.000
3 - A509 Niort Way		FLAT	✓	728	100.000
4 - A509		FLAT	✓	1068	100.000
5 - Wellingborough Road		FLAT	✓	252	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northern Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northern Way	0	22	292	205	6
	2 - A5193	54	0	50	384	27
	3 - A509 Niort Way	296	37	0	375	20
	4 - A509	255	352	461	0	0
	5 - Wellingborough Road	58	90	75	29	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To					
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road	
1 - A510 Northen Way	0	0	15	14	0	
2 - A5193	0	0	4	2	0	
3 - A509 Niort Way	14	0	0	18	5	
4 - A509	9	4	14	0	0	
5 - Wellingborough Road	4	6	3	4	0	

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.54	7.94	1.2	A	525	787
2 - A5193	0.55	8.65	1.2	A	515	772
3 - A509 Niort Way	0.68	10.38	2.1	B	728	1092
4 - A509	0.84	17.66	5.2	C	1068	1602
5 - Wellingborough Road	0.52	15.28	1.1	C	252	378



# 2027, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	6.37	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D7	2027	13:00 - 14:00	FLAT	12:45	14:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northern Way		FLAT	✓	472	100.000
2 - A5193		FLAT	✓	438	100.000
3 - A509 Niort Way		FLAT	✓	636	100.000
4 - A509		FLAT	✓	707	100.000
5 - Wellingborough Road		FLAT	✓	82	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northern Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northern Way	0	39	270	146	17
	2 - A5193	40	0	34	340	24
	3 - A509 Niort Way	202	24	0	393	17
	4 - A509	143	243	320	0	1
	5 - Wellingborough Road	21	23	23	15	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To					
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road	
1 - A510 Northen Way	0	3	16	20	0	
2 - A5193	3	0	0	3	0	
3 - A509 Niort Way	20	0	0	21	0	
4 - A509	21	2	20	0	0	
5 - Wellingborough Road	0	9	0	0	0	

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.40	5.16	0.7	A	472	708
2 - A5193	0.40	5.58	0.7	A	438	657
3 - A509 Niort Way	0.58	7.87	1.4	A	636	954
4 - A509	0.55	6.30	1.2	A	707	1061
5 - Wellingborough Road	0.11	5.45	0.1	A	82	123

# 2027, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	8.33	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D8	2027	16:30 - 17:30	FLAT	16:15	17:45	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northern Way		FLAT	✓	737	100.000
2 - A5193		FLAT	✓	540	100.000
3 - A509 Niort Way		FLAT	✓	776	100.000
4 - A509		FLAT	✓	933	100.000
5 - Wellingborough Road		FLAT	✓	70	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northern Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northern Way	0	55	318	351	13
	2 - A5193	44	0	27	437	32
	3 - A509 Niort Way	188	21	0	543	24
	4 - A509	164	401	366	0	2
	5 - Wellingborough Road	23	17	20	10	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To					
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road	
1 - A510 Northen Way	0	2	3	2	0	
2 - A5193	0	0	0	2	0	
3 - A509 Niort Way	8	0	8	0	0	
4 - A509	9	2	8	0	0	
5 - Wellingborough Road	0	13	5	0	0	

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.60	7.27	1.5	A	737	1106
2 - A5193	0.55	8.16	1.2	A	540	810
3 - A509 Niort Way	0.69	10.33	2.2	B	776	1164
4 - A509	0.67	7.79	2.0	A	933	1399
5 - Wellingborough Road	0.11	6.11	0.1	A	70	105

# 2027 + Dev, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	4.18	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D9	2027 + Dev	06:00 - 07:00	FLAT	05:45	07:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northen Way		FLAT	✓	226	100.000
2 - A5193		FLAT	✓	280	100.000
3 - A509 Niort Way		FLAT	✓	383	100.000
4 - A509		FLAT	✓	583	100.000
5 - Wellingborough Road		FLAT	✓	43	100.000

## Origin-Destination Data

### Demand (Veh/hr)

From	To					
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road	
1 - A510 Northen Way	0	5	119	101	1	
2 - A5193	32	0	20	226	2	
3 - A509 Niort Way	152	1	0	228	2	
4 - A509	159	118	306	0	0	
5 - Wellingborough Road	7	12	16	8	0	

## Vehicle Mix

### Heavy Vehicle Percentages

From	To					
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road	
1 - A510 Northen Way	0	0	28	21	0	
2 - A5193	3	0	0	5	0	
3 - A509 Niort Way	11	0	0	23	0	
4 - A509	8	4	14	0	0	
5 - Wellingborough Road	0	9	0	0	0	

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.19	3.75	0.2	A	226	339
2 - A5193	0.23	3.84	0.3	A	280	420
3 - A509 Niort Way	0.32	4.35	0.5	A	383	575
4 - A509	0.42	4.40	0.7	A	583	874
5 - Wellingborough Road	0.05	4.32	0.1	A	43	64

# 2027 + Dev, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	14.13	B

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D10	2027 + Dev	08:00 - 09:00	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northern Way		FLAT	✓	542	100.000
2 - A5193		FLAT	✓	516	100.000
3 - A509 Niort Way		FLAT	✓	738	100.000
4 - A509		FLAT	✓	1079	100.000
5 - Wellingborough Road		FLAT	✓	252	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northern Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northern Way	0	22	300	214	6
	2 - A5193	55	0	50	384	27
	3 - A509 Niort Way	306	37	0	375	20
	4 - A509	266	352	461	0	0
	5 - Wellingborough Road	58	90	75	29	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To					
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road	
1 - A510 Northen Way	0	0	17	17	0	
2 - A5193	0	0	4	2	0	
3 - A509 Niort Way	17	0	0	18	5	
4 - A509	12	4	14	0	0	
5 - Wellingborough Road	4	6	3	4	0	

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.57	8.63	1.3	A	542	813
2 - A5193	0.57	9.07	1.3	A	516	774
3 - A509 Niort Way	0.70	11.36	2.3	B	738	1107
4 - A509	0.86	20.71	6.1	C	1079	1618
5 - Wellingborough Road	0.54	16.75	1.2	C	252	378



# 2027 + Dev, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	6.71	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D11	2027 + Dev	13:00 - 14:00	FLAT	12:45	14:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northen Way		FLAT	✓	496	100.000
2 - A5193		FLAT	✓	438	100.000
3 - A509 Niort Way		FLAT	✓	642	100.000
4 - A509		FLAT	✓	713	100.000
5 - Wellingborough Road		FLAT	✓	82	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northen Way	0	39	282	158	17
	2 - A5193	40	0	34	340	24
	3 - A509 Niort Way	208	24	0	393	17
	4 - A509	149	243	320	0	1
	5 - Wellingborough Road	21	23	23	15	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To					
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road	
1 - A510 Northen Way	0	3	20	25	0	
2 - A5193	3	0	0	3	0	
3 - A509 Niort Way	23	0	0	21	0	
4 - A509	24	2	20	0	0	
5 - Wellingborough Road	0	9	0	0	0	

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.44	5.67	0.8	A	496	744
2 - A5193	0.41	5.83	0.7	A	438	657
3 - A509 Niort Way	0.60	8.33	1.5	A	642	963
4 - A509	0.56	6.53	1.3	A	713	1070
5 - Wellingborough Road	0.11	5.56	0.1	A	82	123

# 2027 + Dev, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	8.60	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D12	2027 + Dev	16:30 - 17:30	FLAT	16:15	17:45	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northen Way		FLAT	✓	751	100.000
2 - A5193		FLAT	✓	540	100.000
3 - A509 Niort Way		FLAT	✓	779	100.000
4 - A509		FLAT	✓	936	100.000
5 - Wellingborough Road		FLAT	✓	70	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northen Way	0	56	324	358	13
	2 - A5193	44	0	27	437	32
	3 - A509 Niort Way	191	21	0	543	24
	4 - A509	167	401	366	0	2
	5 - Wellingborough Road	23	17	20	10	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To				
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
1 - A510 Northen Way	0	2	4	3	0
2 - A5193	0	0	0	2	0
3 - A509 Niort Way	9	0	8	0	0
4 - A509	11	2	8	0	0
5 - Wellingborough Road	0	13	5	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.62	7.66	1.6	A	751	1126
2 - A5193	0.56	8.38	1.3	A	540	810
3 - A509 Niort Way	0.70	10.69	2.3	B	779	1168
4 - A509	0.67	7.97	2.1	A	936	1404
5 - Wellingborough Road	0.11	6.18	0.1	A	70	105

# 2031, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	4.10	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D13	2031	06:00 - 07:00	FLAT	05:45	07:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northern Way		FLAT	✓	212	100.000
2 - A5193		FLAT	✓	286	100.000
3 - A509 Niort Way		FLAT	✓	384	100.000
4 - A509		FLAT	✓	587	100.000
5 - Wellingborough Road		FLAT	✓	45	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northern Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northern Way	0	5	113	93	1
	2 - A5193	32	0	20	232	2
	3 - A509 Niort Way	147	1	0	234	2
	4 - A509	152	121	314	0	0
	5 - Wellingborough Road	8	12	16	9	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To				
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
1 - A510 Northen Way	0	0	22	13	0
2 - A5193	3	0	0	5	0
3 - A509 Niort Way	8	0	0	23	0
4 - A509	5	4	14	0	0
5 - Wellingborough Road	0	9	0	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.17	3.48	0.2	A	212	318
2 - A5193	0.23	3.81	0.3	A	286	429
3 - A509 Niort Way	0.31	4.28	0.5	A	384	576
4 - A509	0.41	4.35	0.7	A	587	881
5 - Wellingborough Road	0.05	4.30	0.1	A	45	68

# 2031, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	14.45	B

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D14	2031	08:00 - 09:00	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northen Way		FLAT	✓	538	100.000
2 - A5193		FLAT	✓	530	100.000
3 - A509 Niort Way		FLAT	✓	747	100.000
4 - A509		FLAT	✓	1097	100.000
5 - Wellingborough Road		FLAT	✓	259	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northen Way	0	23	299	210	6
	2 - A5193	56	0	52	394	28
	3 - A509 Niort Way	304	38	0	385	20
	4 - A509	262	362	473	0	0
	5 - Wellingborough Road	59	92	77	31	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To				
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
1 - A510 Northen Way	0	0	15	14	0
2 - A5193	0	0	4	2	0
3 - A509 Niort Way	14	0	0	18	5
4 - A509	9	4	14	0	0
5 - Wellingborough Road	4	6	3	4	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.56	8.47	1.3	A	538	807
2 - A5193	0.58	9.39	1.4	A	530	795
3 - A509 Niort Way	0.70	11.34	2.3	B	747	1121
4 - A509	0.87	21.34	6.4	C	1097	1645
5 - Wellingborough Road	0.56	17.41	1.2	C	259	389



# 2031, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	6.72	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D15	2031	13:00 - 14:00	FLAT	12:45	14:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northern Way		FLAT	✓	487	100.000
2 - A5193		FLAT	✓	452	100.000
3 - A509 Niort Way		FLAT	✓	656	100.000
4 - A509		FLAT	✓	730	100.000
5 - Wellingborough Road		FLAT	✓	85	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northern Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northern Way	0	40	279	151	17
	2 - A5193	41	0	35	351	25
	3 - A509 Niort Way	208	25	0	406	17
	4 - A509	147	251	331	0	1
	5 - Wellingborough Road	22	24	24	15	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To					
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road	
1 - A510 Northen Way	0	3	16	20	0	
2 - A5193	3	0	0	3	0	
3 - A509 Niort Way	20	0	0	21	0	
4 - A509	21	2	20	0	0	
5 - Wellingborough Road	0	9	0	0	0	

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.42	5.37	0.7	A	487	730
2 - A5193	0.42	5.87	0.7	A	452	678
3 - A509 Niort Way	0.61	8.40	1.5	A	656	984
4 - A509	0.57	6.62	1.3	A	730	1095
5 - Wellingborough Road	0.12	5.63	0.1	A	85	128

# 2031, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	8.99	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D16	2031	16:30 - 17:30	FLAT	16:15	17:45	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northen Way		FLAT	✓	756	100.000
2 - A5193		FLAT	✓	554	100.000
3 - A509 Niort Way		FLAT	✓	797	100.000
4 - A509		FLAT	✓	957	100.000
5 - Wellingborough Road		FLAT	✓	72	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northen Way	0	57	326	360	13
	2 - A5193	45	0	28	448	33
	3 - A509 Niort Way	193	21	0	558	25
	4 - A509	168	412	375	0	2
	5 - Wellingborough Road	24	17	20	11	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To					
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road	
1 - A510 Northen Way	0	2	3	2	0	
2 - A5193	0	0	0	2	0	
3 - A509 Niort Way	8	0	8	0	0	
4 - A509	9	2	8	0	0	
5 - Wellingborough Road	0	13	5	0	0	

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.62	7.77	1.6	A	756	1134
2 - A5193	0.57	8.76	1.3	A	554	831
3 - A509 Niort Way	0.72	11.44	2.5	B	797	1196
4 - A509	0.69	8.30	2.2	A	957	1435
5 - Wellingborough Road	0.11	6.30	0.1	A	72	108

# 2031 + Dev, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	4.26	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D17	2031 + Dev	06:00 - 07:00	FLAT	05:45	07:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northen Way		FLAT	✓	231	100.000
2 - A5193		FLAT	✓	287	100.000
3 - A509 Niort Way		FLAT	✓	393	100.000
4 - A509		FLAT	✓	598	100.000
5 - Wellingborough Road		FLAT	✓	45	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northen Way	0	5	122	103	1
	2 - A5193	33	0	20	232	2
	3 - A509 Niort Way	156	1	0	234	2
	4 - A509	163	121	314	0	0
	5 - Wellingborough Road	8	12	16	9	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To					
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road	
1 - A510 Northen Way	0	0	28	21	0	
2 - A5193	3	0	0	5	0	
3 - A509 Niort Way	11	0	0	23	0	
4 - A509	8	4	14	0	0	
5 - Wellingborough Road	0	9	0	0	0	

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.20	3.79	0.2	A	231	346
2 - A5193	0.24	3.90	0.3	A	287	430
3 - A509 Niort Way	0.33	4.43	0.5	A	393	590
4 - A509	0.43	4.50	0.7	A	598	897
5 - Wellingborough Road	0.05	4.38	0.1	A	45	68

# 2031 + Dev, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	16.53	C

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D18	2031 + Dev	08:00 - 09:00	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northen Way		FLAT	✓	556	100.000
2 - A5193		FLAT	✓	530	100.000
3 - A509 Niort Way		FLAT	✓	757	100.000
4 - A509		FLAT	✓	1107	100.000
5 - Wellingborough Road		FLAT	✓	259	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northen Way	0	23	308	219	6
	2 - A5193	56	0	52	394	28
	3 - A509 Niort Way	314	38	0	385	20
	4 - A509	272	362	473	0	0
	5 - Wellingborough Road	59	92	77	31	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To					
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road	
1 - A510 Northen Way	0	0	17	17	0	
2 - A5193	0	0	4	2	0	
3 - A509 Niort Way	17	0	0	18	5	
4 - A509	12	4	14	0	0	
5 - Wellingborough Road	4	6	3	4	0	

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.59	9.29	1.4	A	556	834
2 - A5193	0.59	9.88	1.4	A	530	795
3 - A509 Niort Way	0.72	12.50	2.6	B	757	1136
4 - A509	0.89	25.63	7.7	D	1107	1661
5 - Wellingborough Road	0.58	19.24	1.4	C	259	389



# 2031 + Dev, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	7.11	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D19	2031 + Dev	13:00 - 14:00	FLAT	12:45	14:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northen Way		FLAT	✓	511	100.000
2 - A5193		FLAT	✓	452	100.000
3 - A509 Niort Way		FLAT	✓	663	100.000
4 - A509		FLAT	✓	737	100.000
5 - Wellingborough Road		FLAT	✓	85	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northen Way	0	40	291	163	17
	2 - A5193	41	0	35	351	25
	3 - A509 Niort Way	215	25	0	406	17
	4 - A509	154	251	331	0	1
	5 - Wellingborough Road	22	24	24	15	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To				
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
1 - A510 Northen Way	0	3	20	25	0
2 - A5193	3	0	0	3	0
3 - A509 Niort Way	23	0	0	21	0
4 - A509	24	2	20	0	0
5 - Wellingborough Road	0	9	0	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.46	5.93	0.8	A	511	766
2 - A5193	0.44	6.14	0.8	A	452	678
3 - A509 Niort Way	0.62	8.96	1.6	A	663	995
4 - A509	0.59	6.90	1.4	A	737	1106
5 - Wellingborough Road	0.12	5.76	0.1	A	85	128

# 2031 + Dev, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	9.32	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D20	2031 + Dev	16:30 - 17:30	FLAT	16:15	17:45	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northen Way		FLAT	✓	769	100.000
2 - A5193		FLAT	✓	554	100.000
3 - A509 Niort Way		FLAT	✓	800	100.000
4 - A509		FLAT	✓	961	100.000
5 - Wellingborough Road		FLAT	✓	72	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northen Way	0	57	332	367	13
	2 - A5193	45	0	28	448	33
	3 - A509 Niort Way	196	21	0	558	25
	4 - A509	172	412	375	0	2
	5 - Wellingborough Road	24	17	20	11	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To					
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road	
1 - A510 Northen Way	0	2	4	3	0	
2 - A5193	0	0	0	2	0	
3 - A509 Niort Way	9	0	8	0	0	
4 - A509	11	2	8	0	0	
5 - Wellingborough Road	0	13	5	0	0	

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.64	8.19	1.7	A	769	1153
2 - A5193	0.58	9.01	1.4	A	554	831
3 - A509 Niort Way	0.73	11.89	2.6	B	800	1200
4 - A509	0.69	8.53	2.3	A	961	1441
5 - Wellingborough Road	0.11	6.37	0.1	A	72	108



## **Appendix T – Rixon Road / Finedon Road mini roundabout Existing Conditions Junctions 9 Results**

<b>Junctions 9</b>
<b>ARCADY 9 - Roundabout Module</b>
Version: 9.5.1.7462 © Copyright TRL Limited, 2019
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**Filename:** Finedon Road Rixon Road Roundabout\_2021 Only.j9  
**Path:** P:\2021\21-340\T&T\Capacity Assessments\Junctions 9  
**Report generation date:** 21/01/2022 11:57:22

- »2021, 06:00 - 07:00
- »2021, 08:00 - 09:00
- »2021, 13:00 - 14:00
- »2021, 16:30 - 17:30

**Summary of junction performance**

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
<b>2021</b>																				
<b>1 - Finedon Road (NE)</b>	D1	0.5	5.77	0.35	A	D2	16.9	69.98	0.98	F	D3	1.3	9.84	0.57	A	D4	1.7	10.87	0.64	B
<b>2 - Finedon Road (SW)</b>		0.4	6.19	0.29	A		2.4	19.04	0.71	C		1.0	9.19	0.49	A		8.3	43.32	0.91	E
<b>3 - Rixon Road</b>		0.3	6.07	0.22	A		1.1	11.73	0.52	B		1.0	10.79	0.50	B		61.6	352.50	1.22	F

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

**File summary**

**File Description**

<b>Title</b>	Finedon Road Rixon Road Roundabout
<b>Location</b>	Wellingborough
<b>Site number</b>	
<b>Date</b>	03/12/2021
<b>Version</b>	
<b>Status</b>	(new file)
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	
<b>Enumerator</b>	HQjake.blay
<b>Description</b>	

**Units**

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

**Analysis Options**

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9	5.75				0.85	36.00	20.00

### Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D2	2021	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D3	2021	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D4	2021	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

### Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

# 2021, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	5.97	A

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Arms

### Arms

Arm	Name	Description
1	Finedon Road (NE)	
2	Finedon Road (SW)	
3	Rixon Road	

### Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1 - Finedon Road (NE)	3.65	3.48	6.48	7.1	19.42	2.00	0.0	
2 - Finedon Road (SW)	4.30	4.12	6.44	2.8	16.19	12.05	0.0	
3 - Rixon Road	4.06	4.06	5.70	3.2	17.05	12.55	0.0	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Finedon Road (NE)	0.657	1030
2 - Finedon Road (SW)	0.662	977
3 - Rixon Road	0.661	928

The slope and intercept shown above include any corrections and adjustments.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00



### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	310	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	214	100.000
3 - Rixon Road		ONE HOUR	✓	156	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	121	189
	2 - Finedon Road (SW)	121	0	93
	3 - Rixon Road	115	41	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	3	4
	2 - Finedon Road (SW)	2	0	2
	3 - Rixon Road	13	0	7

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.35	5.77	0.5	A	284	427
2 - Finedon Road (SW)	0.29	6.19	0.4	A	196	295
3 - Rixon Road	0.22	6.07	0.3	A	143	215

### Main Results for each time segment

#### 05:45 - 06:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	233	58	31	974	0.240	232	177	0.0	0.3	4.843	A
2 - Finedon Road (SW)	161	40	142	862	0.187	160	121	0.0	0.2	5.121	A
3 - Rixon Road	117	29	91	791	0.149	117	211	0.0	0.2	5.335	A

#### 06:00 - 06:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	279	70	37	970	0.287	278	212	0.3	0.4	5.199	A
2 - Finedon Road (SW)	192	48	170	843	0.228	192	145	0.2	0.3	5.525	A
3 - Rixon Road	140	35	109	780	0.180	140	253	0.2	0.2	5.627	A

**06:15 - 06:30**

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	341	85	45	965	0.354	341	259	0.4	0.5	5.760	A
2 - Finedon Road (SW)	236	59	208	818	0.288	235	178	0.3	0.4	6.177	A
3 - Rixon Road	172	43	133	765	0.225	171	310	0.2	0.3	6.065	A

**06:30 - 06:45**

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	341	85	45	965	0.354	341	260	0.5	0.5	5.770	A
2 - Finedon Road (SW)	236	59	208	817	0.288	236	178	0.4	0.4	6.187	A
3 - Rixon Road	172	43	133	765	0.225	172	310	0.3	0.3	6.072	A

**06:45 - 07:00**

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	279	70	37	970	0.287	279	213	0.5	0.4	5.212	A
2 - Finedon Road (SW)	192	48	170	843	0.228	193	146	0.4	0.3	5.542	A
3 - Rixon Road	140	35	109	779	0.180	141	254	0.3	0.2	5.636	A

**07:00 - 07:15**

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	233	58	31	974	0.240	234	178	0.4	0.3	4.863	A
2 - Finedon Road (SW)	161	40	143	862	0.187	161	122	0.3	0.2	5.142	A
3 - Rixon Road	117	29	91	790	0.149	118	213	0.2	0.2	5.351	A

# 2021, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	44.13	E

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2021	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	820	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	420	100.000
3 - Rixon Road		ONE HOUR	✓	305	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	426	394
	2 - Finedon Road (SW)	279	0	141
	3 - Rixon Road	211	94	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	2	6
	2 - Finedon Road (SW)	4	0	5
	3 - Rixon Road	14	6	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.98	69.98	16.9	F	752	1129
2 - Finedon Road (SW)	0.71	19.04	2.4	C	385	578
3 - Rixon Road	0.52	11.73	1.1	B	280	420

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	617	154	70	944	0.654	610	366	0.0	1.8	10.571	B
2 - Finedon Road (SW)	316	79	293	739	0.428	313	387	0.0	0.7	8.394	A
3 - Rixon Road	230	57	208	703	0.326	228	398	0.0	0.5	7.537	A

#### 08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	737	184	84	934	0.789	731	439	1.8	3.4	17.134	C
2 - Finedon Road (SW)	378	94	351	700	0.539	376	464	0.7	1.1	11.044	B
3 - Rixon Road	274	69	250	678	0.405	273	477	0.5	0.7	8.886	A

#### 08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	903	226	103	922	0.979	865	536	3.4	12.8	46.182	E
2 - Finedon Road (SW)	462	116	416	657	0.704	458	553	1.1	2.2	17.728	C
3 - Rixon Road	336	84	304	644	0.521	334	570	0.7	1.1	11.556	B

#### 08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	903	226	103	921	0.980	886	539	12.8	16.9	69.977	F
2 - Finedon Road (SW)	462	116	426	650	0.711	462	564	2.2	2.4	19.036	C
3 - Rixon Road	336	84	307	643	0.523	336	581	1.1	1.1	11.725	B

#### 08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	737	184	85	934	0.789	788	444	16.9	4.1	30.761	D
2 - Finedon Road (SW)	378	94	379	682	0.554	382	495	2.4	1.3	12.177	B
3 - Rixon Road	274	69	254	675	0.406	276	507	1.1	0.7	9.044	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	617	154	71	943	0.655	626	371	4.1	2.0	11.646	B
2 - Finedon Road (SW)	316	79	301	734	0.431	318	396	1.3	0.8	8.698	A
3 - Rixon Road	230	57	211	701	0.327	230	408	0.7	0.5	7.658	A

# 2021, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	9.91	A

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2021	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	445	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	343	100.000
3 - Rixon Road		ONE HOUR	✓	300	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	255	190
	2 - Finedon Road (SW)	249	0	94
	3 - Rixon Road	204	96	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	5	20
	2 - Finedon Road (SW)	4	0	9
	3 - Rixon Road	12	10	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.57	9.84	1.3	A	408	613
2 - Finedon Road (SW)	0.49	9.19	1.0	A	315	472
3 - Rixon Road	0.50	10.79	1.0	B	275	413

### Main Results for each time segment

#### 12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	335	84	72	878	0.382	333	338	0.0	0.6	6.575	A
2 - Finedon Road (SW)	258	65	142	820	0.315	256	262	0.0	0.5	6.365	A
3 - Rixon Road	226	56	186	718	0.315	224	212	0.0	0.5	7.261	A

#### 13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	400	100	86	868	0.461	399	406	0.6	0.8	7.656	A
2 - Finedon Road (SW)	308	77	170	799	0.386	308	315	0.5	0.6	7.320	A
3 - Rixon Road	270	67	223	695	0.388	269	255	0.5	0.6	8.435	A

#### 13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	490	122	105	856	0.572	488	497	0.8	1.3	9.735	A
2 - Finedon Road (SW)	378	94	208	770	0.490	376	385	0.6	0.9	9.111	A
3 - Rixon Road	330	83	273	664	0.497	329	312	0.6	1.0	10.688	B

#### 13:30 - 13:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	490	122	106	856	0.573	490	499	1.3	1.3	9.837	A
2 - Finedon Road (SW)	378	94	209	770	0.491	378	386	0.9	1.0	9.185	A
3 - Rixon Road	330	83	274	664	0.498	330	313	1.0	1.0	10.790	B

#### 13:45 - 14:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	400	100	87	868	0.461	402	409	1.3	0.9	7.753	A
2 - Finedon Road (SW)	308	77	172	798	0.386	310	317	1.0	0.6	7.391	A
3 - Rixon Road	270	67	225	694	0.388	271	256	1.0	0.6	8.534	A

14:00 - 14:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	335	84	73	877	0.382	336	342	0.9	0.6	6.663	A
2 - Finedon Road (SW)	258	65	143	819	0.315	259	265	0.6	0.5	6.436	A
3 - Rixon Road	226	56	188	717	0.315	227	214	0.6	0.5	7.353	A



# 2021, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	132.19	F

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2021	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	525	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	675	100.000
3 - Rixon Road		ONE HOUR	✓	563	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	341	184
	2 - Finedon Road (SW)	554	0	121
	3 - Rixon Road	431	132	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	2	9
	2 - Finedon Road (SW)	1	0	7
	3 - Rixon Road	3	3	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.64	10.87	1.7	B	482	723
2 - Finedon Road (SW)	0.91	43.32	8.3	E	619	929
3 - Rixon Road	1.22	352.50	61.6	F	517	775

### Main Results for each time segment

#### 16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	395	99	98	923	0.428	392	731	0.0	0.7	6.752	A
2 - Finedon Road (SW)	508	127	137	860	0.591	503	352	0.0	1.4	9.925	A
3 - Rixon Road	424	106	412	633	0.669	416	228	0.0	1.9	16.071	C

#### 16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	472	118	116	911	0.518	471	872	0.7	1.1	8.156	A
2 - Finedon Road (SW)	607	152	165	841	0.722	603	421	1.4	2.5	14.863	B
3 - Rixon Road	506	127	495	580	0.873	493	273	1.9	5.2	36.764	E

#### 16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	578	145	119	909	0.636	575	983	1.1	1.7	10.721	B
2 - Finedon Road (SW)	743	186	202	815	0.912	724	493	2.5	7.3	34.129	D
3 - Rixon Road	620	155	594	515	1.203	508	331	5.2	33.2	155.284	F

#### 17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	578	145	119	909	0.636	578	994	1.7	1.7	10.870	B
2 - Finedon Road (SW)	743	186	203	814	0.913	739	494	7.3	8.3	43.320	E
3 - Rixon Road	620	155	606	508	1.221	506	335	33.2	61.6	341.783	F

#### 17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	472	118	131	901	0.524	474	943	1.7	1.1	8.481	A
2 - Finedon Road (SW)	607	152	166	840	0.723	629	439	8.3	2.8	18.666	C
3 - Rixon Road	506	127	516	566	0.894	557	279	61.6	48.9	352.500	F

17:30 - 17:45

Am	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	395	99	142	893	0.442	397	886	1.1	0.8	7.262	A
2 - Finedon Road (SW)	508	127	139	859	0.592	513	400	2.8	1.5	10.564	B
3 - Rixon Road	424	106	421	628	0.675	608	231	48.9	2.9	156.593	F



**Appendix U – Finedon Road / Rixon Road improvement scheme (Drawing number: 17411-833 E)**

Road Marking Schedule					
Diagram No.	Length of mark (mm)	Length of gap (mm)	Width of mark (mm)	Extent of lining	Remarks
1003A	1000	1000	200	As layout	
1004	4000	2000	100	As layout	
1023	3750	-	1250	As layout	
1038	3750	-	1250	As layout	
1040	4000	2000	100	As layout	

SCHEDULE OF BOLLARDS								
Ref No.	Bollard Type	Material & Illumination	Faces Required				Location Chainage	No. Required
			1	2	3	4		
B1	Glasdon Signmaster™ Ultra Rebound	Reflective	B	B	Y	B	FINEDON RD NORTH-EAST SPLITTER ISLAND	1
B2	Glasdon Signmaster™ Ultra Rebound	Reflective	610L	B	Y	B	FINEDON RD NORTH-EAST SPLITTER ISLAND	1

IN ADDITION TO THE HAZARDS, RISKS NORMALLY ASSOCIATED WITH THE TYPE OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING SIGNIFICANT RISKS AND INFORMATION.

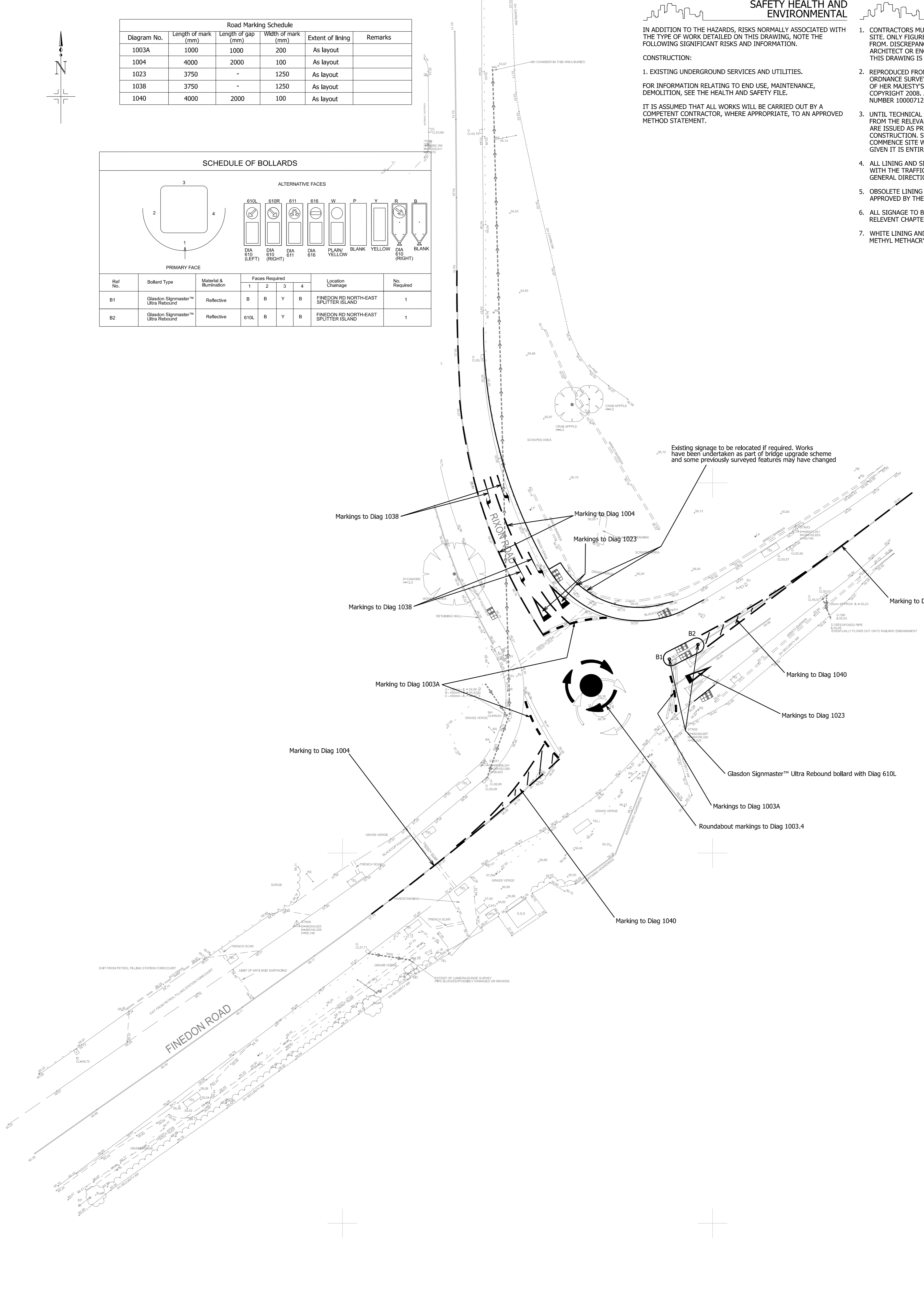
CONSTRUCTION:

- EXISTING UNDERGROUND SERVICES AND UTILITIES.

FOR INFORMATION RELATING TO END USE, MAINTENANCE, DEMOLITION, SEE THE HEALTH AND SAFETY FILE.

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT.

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- UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT AUTHORITIES, ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR COMMENCE SITE WORK PRIOR TO APPROVAL BEING GIVEN IT IS ENTIRELY AT HIS OWN RISK.
- ALL LINING AND SIGNAGE TO BE IN ACCORDANCE WITH THE TRAFFIC SIGNS REGULATIONS AND GENERAL DIRECTIONS 2016 DOCUMENT.
- OBSOLETE LINING TO BE REMOVED VIA A METHOD OF APPROVED BY THE HIGHWAY AUTHORITY.
- ALL SIGNAGE TO BE IN ACCORDANCE WITH THE RELEVANT CHAPTERS THE TRAFFIC SIGNS MANUAL.
- WHITE LINING AND MARKINGS TO BE APPLIED USING METHYL METHACRYLATE (MMA) BASED PRODUCT.



REVISION	DESCRIPTION	DRAWN	CHECKED	DATE
E	BOLLARD SPECIFICATION AMENDED. LINING 1003A NOTATION ADDED	DSH	AT	29.09.20
D	TENDER ISSUE	CG	AT	18.08.20
C	AMENDED TO SUIT REVISED LAYOUT	DSH	AT	03.02.20
B	SOUTH WEST ROUNDABOUT APPROACH ARRANGEMENT AMENDED	DSH	AT	10.12.19
A	AMENDED TO REFLECT STAGE 1 & 2 RSA COMMENTS	DSH	AT	10.12.18

PRELIMINARY  INFORMATION  TENDER  CONSTRUCTION  AS BUILT

**WOODS HARDWICK**  
ARCHITECTS, ENGINEERS AND DEVELOPMENT CONSULTANTS

TITLE: STANTON CROSS WELLINGBOROUGH

DETAILS: STRATEGIC ROADS - FINEDON ROAD ROUNDABOUT S278 MARKINGS AND SIGNAGE

SCALE: 1:250 @ A1 DATE: 22.08.18 DRAWN: DSH CHK: AT

15-17 GOLDINGTON ROAD BEDFORD MK40 3NH UNITED KINGDOM T. +44 (0)1234 268862 F. +44 (0)1234 263034 MAIL@WOODSHARDWICK.COM WWW.WOODSHARDWICK.COM

**Appendix V – Rixon Road / Finedon Road mini  
roundabout Woods Hardwick improvement scheme  
Junctions 9 Results**



<b>Junctions 9</b>
<b>ARCADY 9 - Roundabout Module</b>
Version: 9.5.1.7462 © Copyright TRL Limited, 2019
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<b>The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution</b>

**Filename:** Finedon Road Rixon Road Roundabout\_Woods Hardwick Improvement Scheme.j9  
**Path:** P:\2021\P21-340\T&T\Capacity Assessments\Junctions 9  
**Report generation date:** 04/02/2022 14:55:24

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- »2027, 06:00 - 07:00
- »2027, 08:00 - 09:00
- »2027, 13:00 - 14:00
- »2027, 16:30 - 17:30
- »2027 + Dev, 06:00 - 07:00
- »2027 + Dev, 08:00 - 09:00
- »2027 + Dev, 13:00 - 14:00
- »2027 + Dev, 16:30 - 17:30
- »2031, 06:00 - 07:00
- »2031, 08:00 - 09:00
- »2031, 13:00 - 14:00
- »2031, 16:30 - 17:30
- »2031 + Dev, 06:00 - 07:00
- »2031 + Dev, 08:00 - 09:00
- »2031 + Dev, 13:00 - 14:00
- »2031 + Dev, 16:30 - 17:30



### Summary of junction performance

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LO
<b>2027</b>																				
1 - Finedon Road (NE)	D5	0.5	5.26	0.34	A	D6	12.3	49.96	0.95	E	D7	1.3	8.86	0.56	A	D8	1.6	9.98	0.63	A
2 - Finedon Road (SW)		0.4	6.11	0.30	A		2.7	20.58	0.74	C		1.0	9.34	0.51	A		10.0	49.61	0.93	E
3 - Rixon Road		0.2	3.95	0.16	A		0.6	6.05	0.37	A		0.6	5.80	0.36	A		3.7	21.73	0.80	C
<b>2027 + Dev</b>																				
1 - Finedon Road (NE)	D9	0.5	5.42	0.36	A	D10	13.1	52.62	0.95	F	D11	1.4	9.36	0.58	A	D12	1.8	10.49	0.64	B
2 - Finedon Road (SW)		0.4	6.22	0.30	A		2.7	21.11	0.74	C		1.1	9.64	0.52	A		11.1	55.05	0.94	F
3 - Rixon Road		0.2	4.09	0.17	A		0.6	6.14	0.38	A		0.6	5.81	0.36	A		3.9	22.30	0.81	C
<b>2031</b>																				
1 - Finedon Road (NE)	D13	0.5	5.34	0.35	A	D14	16.6	64.19	0.98	F	D15	1.4	9.30	0.58	A	D16	1.8	10.55	0.65	B
2 - Finedon Road (SW)		0.4	6.22	0.30	A		3.0	22.88	0.76	C		1.1	9.83	0.53	A		13.4	63.87	0.96	F
3 - Rixon Road		0.2	3.98	0.17	A		0.6	6.20	0.38	A		0.6	5.99	0.38	A		4.5	25.54	0.83	D
<b>2031 + Dev</b>																				
1 - Finedon Road (NE)	D17	0.6	5.51	0.36	A	D18	17.5	67.01	0.98	F	D19	1.5	9.85	0.60	A	D20	1.9	11.00	0.66	B
2 - Finedon Road (SW)		0.4	6.33	0.31	A		3.1	23.39	0.77	C		1.2	10.17	0.54	B		14.7	69.39	0.97	F
3 - Rixon Road		0.2	4.12	0.18	A		0.6	6.30	0.39	A		0.6	6.00	0.38	A		4.6	26.23	0.84	D

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

### File summary

#### File Description

Title	Finedon Road Rixon Road Roundabout
Location	Wellingborough
Site number	
Date	03/12/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	HQ\jake.blay
Description	

### Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

### Analysis Options

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9	5.75				0.85	36.00	20.00





### Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2027	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D6	2027	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D7	2027	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D8	2027	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D9	2027 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D10	2027 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D11	2027 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D12	2027 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D13	2031	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D14	2031	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D15	2031	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D16	2031	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D17	2031 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D18	2031 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D19	2031 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D20	2031 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

### Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

# 2027, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	5.21	A

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Arms

### Arms

Arm	Name	Description
1	Finedon Road (NE)	
2	Finedon Road (SW)	
3	Rixon Road	

### Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1 - Finedon Road (NE)	3.95	3.92	6.02	8.9	19.20	2.00	0.0	
2 - Finedon Road (SW)	4.88	4.51	5.29	4.9	14.77	10.86	0.0	
3 - Rixon Road	3.65	3.65	7.38	37.2	16.47	11.56	0.0	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Finedon Road (NE)	0.670	1111
2 - Finedon Road (SW)	0.670	1004
3 - Rixon Road	0.726	1298

The slope and intercept shown above include any corrections and adjustments.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2027	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

**Demand overview (Traffic)**

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	325	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	224	100.000
3 - Rixon Road		ONE HOUR	✓	163	100.000

**Origin-Destination Data****Demand (Veh/hr)**

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	127	198
	2 - Finedon Road (SW)	127	0	97
	3 - Rixon Road	120	43	0

**Vehicle Mix****Heavy Vehicle Percentages**

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	3	4
	2 - Finedon Road (SW)	2	0	2
	3 - Rixon Road	13	0	7

**Results****Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.34	5.26	0.5	A	298	447
2 - Finedon Road (SW)	0.30	6.11	0.4	A	206	308
3 - Rixon Road	0.16	3.95	0.2	A	150	224

**Main Results for each time segment****05:45 - 06:00**

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	245	61	32	1052	0.233	243	185	0.0	0.3	4.448	A
2 - Finedon Road (SW)	169	42	148	883	0.191	168	127	0.0	0.2	5.027	A
3 - Rixon Road	123	31	95	1120	0.110	122	221	0.0	0.1	3.606	A

**06:00 - 06:15**

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	292	73	39	1047	0.279	292	222	0.3	0.4	4.762	A
2 - Finedon Road (SW)	201	50	178	863	0.233	201	153	0.2	0.3	5.437	A
3 - Rixon Road	147	37	114	1107	0.132	146	265	0.1	0.2	3.746	A

## 06:15 - 06:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	358	89	47	1042	0.343	357	272	0.4	0.5	5.254	A
2 - Finedon Road (SW)	247	62	218	836	0.295	246	187	0.3	0.4	6.108	A
3 - Rixon Road	179	45	140	1090	0.165	179	324	0.2	0.2	3.952	A

## 06:30 - 06:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	358	89	47	1042	0.343	358	272	0.5	0.5	5.262	A
2 - Finedon Road (SW)	247	62	218	835	0.295	247	187	0.4	0.4	6.114	A
3 - Rixon Road	179	45	140	1090	0.165	179	325	0.2	0.2	3.954	A

## 06:45 - 07:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	292	73	39	1047	0.279	293	222	0.5	0.4	4.774	A
2 - Finedon Road (SW)	201	50	178	862	0.233	202	153	0.4	0.3	5.452	A
3 - Rixon Road	147	37	114	1107	0.132	147	266	0.2	0.2	3.749	A

## 07:00 - 07:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	245	61	32	1052	0.233	245	186	0.4	0.3	4.465	A
2 - Finedon Road (SW)	169	42	149	882	0.191	169	128	0.3	0.2	5.047	A
3 - Rixon Road	123	31	96	1119	0.110	123	222	0.2	0.1	3.614	A

# 2027, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	32.91	D

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2027	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	858	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	439	100.000
3 - Rixon Road		ONE HOUR	✓	319	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	446	412
	2 - Finedon Road (SW)	292	0	147
	3 - Rixon Road	221	98	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	2	6
	2 - Finedon Road (SW)	4	0	5
	3 - Rixon Road	14	6	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.95	49.96	12.3	E	787	1181
2 - Finedon Road (SW)	0.74	20.58	2.7	C	403	604
3 - Rixon Road	0.37	6.05	0.6	A	293	439

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	646	161	73	1019	0.634	639	383	0.0	1.7	9.321	A
2 - Finedon Road (SW)	331	83	307	753	0.439	327	406	0.0	0.8	8.394	A
3 - Rixon Road	240	60	218	1016	0.236	239	417	0.0	0.3	4.619	A

#### 08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	771	193	88	1009	0.764	766	460	1.7	3.0	14.470	B
2 - Finedon Road (SW)	395	99	368	712	0.554	393	486	0.8	1.2	11.220	B
3 - Rixon Road	287	72	261	986	0.291	286	499	0.3	0.4	5.141	A

#### 08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	945	236	108	996	0.949	916	561	3.0	10.2	36.354	E
2 - Finedon Road (SW)	483	121	440	663	0.729	478	584	1.2	2.5	18.980	C
3 - Rixon Road	351	88	318	948	0.371	351	600	0.4	0.6	6.018	A

#### 08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	945	236	108	995	0.949	936	564	10.2	12.3	49.961	E
2 - Finedon Road (SW)	483	121	449	656	0.737	483	594	2.5	2.7	20.584	C
3 - Rixon Road	351	88	321	946	0.371	351	611	0.6	0.6	6.053	A

#### 08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	771	193	88	1009	0.765	807	465	12.3	3.5	20.375	C
2 - Finedon Road (SW)	395	99	387	699	0.565	400	508	2.7	1.3	12.261	B
3 - Rixon Road	287	72	266	983	0.292	287	521	0.6	0.4	5.179	A



09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	646	161	74	1019	0.634	653	388	3.5	1.8	10.011	B
2 - Finedon Road (SW)	331	83	313	749	0.441	333	413	1.3	0.8	8.692	A
3 - Rixon Road	240	60	221	1013	0.237	241	425	0.4	0.3	4.661	A



# 2027, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	8.15	A

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2027	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	470	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	362	100.000
3 - Rixon Road		ONE HOUR	✓	316	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	269	201
	2 - Finedon Road (SW)	263	0	99
	3 - Rixon Road	215	101	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	5	20
	2 - Finedon Road (SW)	4	0	9
	3 - Rixon Road	12	10	0





## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.56	8.86	1.3	A	431	647
2 - Finedon Road (SW)	0.51	9.34	1.0	A	332	498
3 - Rixon Road	0.36	5.80	0.6	A	290	435

### Main Results for each time segment

#### 12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	354	88	76	947	0.374	351	358	0.0	0.6	6.024	A
2 - Finedon Road (SW)	273	68	150	838	0.325	271	277	0.0	0.5	6.324	A
3 - Rixon Road	238	59	197	1032	0.231	237	224	0.0	0.3	4.521	A

#### 13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	423	106	91	937	0.451	422	429	0.6	0.8	6.970	A
2 - Finedon Road (SW)	325	81	180	815	0.399	325	332	0.5	0.7	7.329	A
3 - Rixon Road	284	71	236	1005	0.283	284	269	0.3	0.4	4.988	A

#### 13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	517	129	111	924	0.560	516	525	0.8	1.2	8.781	A
2 - Finedon Road (SW)	399	100	221	785	0.508	397	406	0.7	1.0	9.258	A
3 - Rixon Road	348	87	289	969	0.359	347	329	0.4	0.6	5.780	A

#### 13:30 - 13:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	517	129	111	924	0.560	517	526	1.2	1.3	8.857	A
2 - Finedon Road (SW)	399	100	221	784	0.508	399	407	1.0	1.0	9.337	A
3 - Rixon Road	348	87	290	969	0.359	348	330	0.6	0.6	5.797	A

#### 13:45 - 14:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	423	106	91	937	0.451	424	431	1.3	0.8	7.041	A
2 - Finedon Road (SW)	325	81	181	814	0.400	327	334	1.0	0.7	7.404	A
3 - Rixon Road	284	71	237	1004	0.283	285	271	0.6	0.4	5.008	A



## 14:00 - 14:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	354	88	76	947	0.374	355	361	0.8	0.6	6.090	A
2 - Finedon Road (SW)	273	68	152	837	0.326	273	279	0.7	0.5	6.393	A
3 - Rixon Road	238	59	199	1031	0.231	238	226	0.4	0.3	4.547	A

# 2027, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	28.76	D

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2027	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	548	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	705	100.000
3 - Rixon Road		ONE HOUR	✓	588	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	356	192
	2 - Finedon Road (SW)	579	0	126
	3 - Rixon Road	450	138	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	2	9
	2 - Finedon Road (SW)	1	0	7
	3 - Rixon Road	3	3	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.63	9.98	1.6	A	503	754
2 - Finedon Road (SW)	0.93	49.61	10.0	E	647	970
3 - Rixon Road	0.80	21.73	3.7	C	540	809

### Main Results for each time segment

#### 16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	413	103	103	996	0.414	410	767	0.0	0.7	6.115	A
2 - Finedon Road (SW)	531	133	144	881	0.603	525	369	0.0	1.5	9.957	A
3 - Rixon Road	443	111	431	953	0.465	439	237	0.0	0.9	6.966	A

#### 16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	493	123	124	982	0.502	491	920	0.7	1.0	7.318	A
2 - Finedon Road (SW)	634	158	172	860	0.737	629	443	1.5	2.6	15.257	C
3 - Rixon Road	529	132	517	892	0.593	526	285	0.9	1.4	9.791	A

#### 16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	603	151	150	965	0.625	601	1108	1.0	1.6	9.826	A
2 - Finedon Road (SW)	776	194	211	833	0.932	753	540	2.6	8.4	37.261	E
3 - Rixon Road	647	162	619	819	0.790	639	345	1.4	3.4	19.207	C

#### 17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	603	151	152	964	0.626	603	1127	1.6	1.6	9.983	A
2 - Finedon Road (SW)	776	194	211	832	0.933	770	544	8.4	10.0	49.614	E
3 - Rixon Road	647	162	632	809	0.800	646	349	3.4	3.7	21.731	C

#### 17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	493	123	126	980	0.502	495	955	1.6	1.0	7.457	A
2 - Finedon Road (SW)	634	158	173	859	0.737	662	448	10.0	3.0	20.383	C
3 - Rixon Road	529	132	543	873	0.606	537	292	3.7	1.6	10.994	B



17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	413	103	105	995	0.415	414	782	1.0	0.7	6.212	A
2 - Finedon Road (SW)	531	133	145	880	0.603	537	373	3.0	1.6	10.655	B
3 - Rixon Road	443	111	441	946	0.468	445	241	1.6	0.9	7.230	A

# 2027 + Dev, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	5.33	A

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2027 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	332	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	226	100.000
3 - Rixon Road		ONE HOUR	✓	169	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	127	205
	2 - Finedon Road (SW)	127	0	99
	3 - Rixon Road	126	43	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	3	6
	2 - Finedon Road (SW)	2	0	2
	3 - Rixon Road	16	0	7



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.36	5.42	0.5	A	305	457
2 - Finedon Road (SW)	0.30	6.22	0.4	A	207	311
3 - Rixon Road	0.17	4.09	0.2	A	155	233

### Main Results for each time segment

#### 05:45 - 06:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	250	62	32	1039	0.241	249	190	0.0	0.3	4.546	A
2 - Finedon Road (SW)	170	43	154	877	0.194	169	127	0.0	0.2	5.078	A
3 - Rixon Road	127	32	95	1096	0.116	127	228	0.0	0.1	3.710	A

#### 06:00 - 06:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	298	75	39	1035	0.288	298	227	0.3	0.4	4.882	A
2 - Finedon Road (SW)	203	51	184	856	0.237	203	153	0.2	0.3	5.508	A
3 - Rixon Road	152	38	114	1084	0.140	152	273	0.1	0.2	3.862	A

#### 06:15 - 06:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	366	91	47	1030	0.355	365	278	0.4	0.5	5.412	A
2 - Finedon Road (SW)	249	62	225	827	0.301	248	187	0.3	0.4	6.212	A
3 - Rixon Road	186	47	140	1067	0.174	186	334	0.2	0.2	4.085	A

#### 06:30 - 06:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	366	91	47	1030	0.355	366	279	0.5	0.5	5.421	A
2 - Finedon Road (SW)	249	62	226	827	0.301	249	187	0.4	0.4	6.224	A
3 - Rixon Road	186	47	140	1067	0.174	186	335	0.2	0.2	4.087	A

#### 06:45 - 07:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	298	75	39	1035	0.288	299	228	0.5	0.4	4.896	A
2 - Finedon Road (SW)	203	51	185	856	0.237	204	153	0.4	0.3	5.526	A
3 - Rixon Road	152	38	114	1084	0.140	152	274	0.2	0.2	3.865	A



## 07:00 - 07:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	250	62	32	1039	0.241	250	191	0.4	0.3	4.567	A
2 - Finedon Road (SW)	170	43	155	877	0.194	170	128	0.3	0.2	5.101	A
3 - Rixon Road	127	32	96	1096	0.116	127	229	0.2	0.1	3.716	A



# 2027 + Dev, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	34.43	D

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2027 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	863	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	440	100.000
3 - Rixon Road		ONE HOUR	✓	321	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	446	417
	2 - Finedon Road (SW)	292	0	148
	3 - Rixon Road	223	98	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	2	6
	2 - Finedon Road (SW)	4	0	5
	3 - Rixon Road	15	6	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.95	52.62	13.1	F	792	1188
2 - Finedon Road (SW)	0.74	21.11	2.7	C	404	606
3 - Rixon Road	0.38	6.14	0.6	A	295	442

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	650	162	73	1019	0.638	643	385	0.0	1.7	9.410	A
2 - Finedon Road (SW)	331	83	311	751	0.441	328	406	0.0	0.8	8.458	A
3 - Rixon Road	242	60	218	1009	0.239	240	421	0.0	0.3	4.674	A

#### 08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	776	194	88	1009	0.769	770	461	1.7	3.1	14.724	B
2 - Finedon Road (SW)	396	99	372	709	0.558	394	486	0.8	1.2	11.355	B
3 - Rixon Road	289	72	261	980	0.294	288	505	0.3	0.4	5.199	A

#### 08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	950	238	108	996	0.954	920	563	3.1	10.7	37.633	E
2 - Finedon Road (SW)	484	121	445	660	0.734	479	583	1.2	2.6	19.382	C
3 - Rixon Road	353	88	318	942	0.375	353	606	0.4	0.6	6.101	A

#### 08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	950	238	108	995	0.955	940	567	10.7	13.1	52.621	F
2 - Finedon Road (SW)	484	121	454	653	0.742	484	594	2.6	2.7	21.107	C
3 - Rixon Road	353	88	321	940	0.376	353	617	0.6	0.6	6.137	A

#### 08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	776	194	88	1009	0.769	814	467	13.1	3.6	21.407	C
2 - Finedon Road (SW)	396	99	393	695	0.570	401	509	2.7	1.4	12.485	B
3 - Rixon Road	289	72	266	977	0.295	289	528	0.6	0.4	5.240	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	650	162	74	1019	0.638	657	389	3.6	1.8	10.137	B
2 - Finedon Road (SW)	331	83	317	746	0.444	333	413	1.4	0.8	8.767	A
3 - Rixon Road	242	60	221	1007	0.240	242	430	0.4	0.3	4.708	A

# 2027 + Dev, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	8.46	A

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2027 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	479	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	362	100.000
3 - Rixon Road		ONE HOUR	✓	317	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	269	210
	2 - Finedon Road (SW)	263	0	99
	3 - Rixon Road	216	101	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	5	23
	2 - Finedon Road (SW)	4	0	9
	3 - Rixon Road	12	10	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.58	9.36	1.4	A	440	659
2 - Finedon Road (SW)	0.52	9.64	1.1	A	332	498
3 - Rixon Road	0.36	5.81	0.6	A	291	436

### Main Results for each time segment

#### 12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	361	90	76	935	0.386	358	358	0.0	0.6	6.216	A
2 - Finedon Road (SW)	273	68	157	830	0.328	271	277	0.0	0.5	6.414	A
3 - Rixon Road	239	60	197	1032	0.231	237	231	0.0	0.3	4.525	A

#### 13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	431	108	91	925	0.465	430	430	0.6	0.9	7.249	A
2 - Finedon Road (SW)	325	81	188	805	0.404	325	332	0.5	0.7	7.474	A
3 - Rixon Road	285	71	236	1005	0.284	285	277	0.3	0.4	4.994	A

#### 13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	527	132	111	912	0.578	525	526	0.9	1.3	9.271	A
2 - Finedon Road (SW)	399	100	230	773	0.516	397	406	0.7	1.0	9.546	A
3 - Rixon Road	349	87	288	969	0.360	348	339	0.4	0.6	5.790	A

#### 13:30 - 13:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	527	132	111	912	0.578	527	527	1.3	1.4	9.362	A
2 - Finedon Road (SW)	399	100	231	772	0.516	399	407	1.0	1.1	9.636	A
3 - Rixon Road	349	87	290	969	0.360	349	340	0.6	0.6	5.808	A

#### 13:45 - 14:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	431	108	91	925	0.466	433	432	1.4	0.9	7.341	A
2 - Finedon Road (SW)	325	81	190	805	0.405	327	334	1.1	0.7	7.559	A
3 - Rixon Road	285	71	237	1004	0.284	286	279	0.6	0.4	5.014	A

## 14:00 - 14:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	361	90	76	935	0.386	362	361	0.9	0.6	6.296	A
2 - Finedon Road (SW)	273	68	159	829	0.329	273	279	0.7	0.5	6.491	A
3 - Rixon Road	239	60	199	1030	0.232	239	233	0.4	0.3	4.552	A

# 2027 + Dev, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	31.01	D

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2027 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	554	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	706	100.000
3 - Rixon Road		ONE HOUR	✓	593	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	356	198
	2 - Finedon Road (SW)	579	0	127
	3 - Rixon Road	454	139	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	2	12
	2 - Finedon Road (SW)	1	0	7
	3 - Rixon Road	3	3	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.64	10.49	1.8	B	508	763
2 - Finedon Road (SW)	0.94	55.05	11.1	F	648	972
3 - Rixon Road	0.81	22.30	3.9	C	544	816

### Main Results for each time segment

#### 16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	417	104	104	985	0.424	414	770	0.0	0.7	6.280	A
2 - Finedon Road (SW)	532	133	148	875	0.608	525	370	0.0	1.5	10.143	B
3 - Rixon Road	446	112	431	953	0.469	443	243	0.0	0.9	7.014	A

#### 16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	498	125	124	971	0.513	497	923	0.7	1.0	7.569	A
2 - Finedon Road (SW)	635	159	178	853	0.744	630	444	1.5	2.7	15.779	C
3 - Rixon Road	533	133	516	892	0.598	531	291	0.9	1.4	9.906	A

#### 16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	610	152	151	954	0.640	607	1110	1.0	1.7	10.306	B
2 - Finedon Road (SW)	777	194	217	824	0.943	752	541	2.7	9.2	39.989	E
3 - Rixon Road	653	163	616	821	0.796	645	352	1.4	3.5	19.574	C

#### 17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	610	152	153	953	0.640	610	1130	1.7	1.8	10.492	B
2 - Finedon Road (SW)	777	194	218	823	0.944	769	545	9.2	11.1	55.049	F
3 - Rixon Road	653	163	631	810	0.806	652	356	3.5	3.9	22.304	C

#### 17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	498	125	127	969	0.514	501	962	1.8	1.1	7.726	A
2 - Finedon Road (SW)	635	159	179	852	0.745	667	449	11.1	3.1	22.208	C
3 - Rixon Road	533	133	547	870	0.613	542	299	3.9	1.6	11.248	B





17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	417	104	105	984	0.424	418	785	1.1	0.7	6.383	A
2 - Finedon Road (SW)	532	133	150	874	0.608	538	374	3.1	1.6	10.906	B
3 - Rixon Road	446	112	441	946	0.472	449	246	1.6	0.9	7.295	A

# 2031, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	5.28	A

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2031	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	333	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	230	100.000
3 - Rixon Road		ONE HOUR	✓	167	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	130	203
	2 - Finedon Road (SW)	130	0	100
	3 - Rixon Road	123	44	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	3	4
	2 - Finedon Road (SW)	2	0	2
	3 - Rixon Road	13	0	7



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.35	5.34	0.5	A	306	458
2 - Finedon Road (SW)	0.30	6.22	0.4	A	211	317
3 - Rixon Road	0.17	3.98	0.2	A	153	230

### Main Results for each time segment

#### 05:45 - 06:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	251	63	33	1051	0.239	249	190	0.0	0.3	4.484	A
2 - Finedon Road (SW)	173	43	152	880	0.197	172	130	0.0	0.2	5.077	A
3 - Rixon Road	126	31	97	1118	0.112	125	227	0.0	0.1	3.622	A

#### 06:00 - 06:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	299	75	40	1047	0.286	299	227	0.3	0.4	4.811	A
2 - Finedon Road (SW)	207	52	182	860	0.241	206	156	0.2	0.3	5.508	A
3 - Rixon Road	150	38	117	1105	0.136	150	272	0.1	0.2	3.768	A

#### 06:15 - 06:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	367	92	48	1041	0.352	366	278	0.4	0.5	5.328	A
2 - Finedon Road (SW)	253	63	223	832	0.304	253	191	0.3	0.4	6.211	A
3 - Rixon Road	184	46	143	1088	0.169	184	333	0.2	0.2	3.981	A

#### 06:30 - 06:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	367	92	48	1041	0.352	367	279	0.5	0.5	5.336	A
2 - Finedon Road (SW)	253	63	224	832	0.305	253	192	0.4	0.4	6.223	A
3 - Rixon Road	184	46	143	1087	0.169	184	334	0.2	0.2	3.983	A

#### 06:45 - 07:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	299	75	40	1047	0.286	300	228	0.5	0.4	4.824	A
2 - Finedon Road (SW)	207	52	183	859	0.241	207	157	0.4	0.3	5.525	A
3 - Rixon Road	150	38	117	1105	0.136	150	273	0.2	0.2	3.773	A

## 07:00 - 07:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	251	63	33	1051	0.239	251	191	0.4	0.3	4.501	A
2 - Finedon Road (SW)	173	43	153	880	0.197	173	131	0.3	0.2	5.098	A
3 - Rixon Road	126	31	98	1118	0.112	126	228	0.2	0.1	3.631	A

# 2031, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	41.00	E

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2031	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	880	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	450	100.000
3 - Rixon Road		ONE HOUR	✓	327	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	457	423
	2 - Finedon Road (SW)	299	0	151
	3 - Rixon Road	226	101	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	2	6
	2 - Finedon Road (SW)	4	0	5
	3 - Rixon Road	14	6	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.98	64.19	16.6	F	808	1211
2 - Finedon Road (SW)	0.76	22.88	3.0	C	413	619
3 - Rixon Road	0.38	6.20	0.6	A	300	450

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	663	166	76	1018	0.651	655	392	0.0	1.8	9.755	A
2 - Finedon Road (SW)	339	85	315	748	0.453	336	416	0.0	0.8	8.666	A
3 - Rixon Road	246	62	223	1012	0.243	245	428	0.0	0.3	4.683	A

#### 08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	791	198	91	1007	0.785	785	470	1.8	3.4	15.729	C
2 - Finedon Road (SW)	405	101	377	705	0.573	403	498	0.8	1.3	11.806	B
3 - Rixon Road	294	73	267	982	0.299	294	512	0.3	0.4	5.223	A

#### 08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	969	242	111	993	0.975	931	574	3.4	12.7	42.881	E
2 - Finedon Road (SW)	495	124	448	657	0.754	489	595	1.3	2.8	20.713	C
3 - Rixon Road	360	90	325	943	0.382	359	612	0.4	0.6	6.158	A

#### 08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	969	242	111	993	0.976	954	577	12.7	16.6	64.186	F
2 - Finedon Road (SW)	495	124	458	650	0.762	495	606	2.8	3.0	22.876	C
3 - Rixon Road	360	90	329	941	0.383	360	624	0.6	0.6	6.197	A

#### 08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	791	198	91	1007	0.786	841	477	16.6	4.0	26.685	D
2 - Finedon Road (SW)	405	101	404	687	0.589	411	528	3.0	1.5	13.305	B
3 - Rixon Road	294	73	273	979	0.300	295	542	0.6	0.4	5.271	A



09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	663	166	76	1017	0.651	671	397	4.0	1.9	10.633	B
2 - Finedon Road (SW)	339	85	322	743	0.456	341	425	1.5	0.9	9.022	A
3 - Rixon Road	246	62	227	1010	0.244	247	437	0.4	0.3	4.720	A

# 2031, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	8.53	A

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D15	2031	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	485	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	375	100.000
3 - Rixon Road		ONE HOUR	✓	328	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	278	207
	2 - Finedon Road (SW)	272	0	103
	3 - Rixon Road	223	105	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	5	20
	2 - Finedon Road (SW)	4	0	9
	3 - Rixon Road	12	10	0





## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.58	9.30	1.4	A	445	668
2 - Finedon Road (SW)	0.53	9.83	1.1	A	344	516
3 - Rixon Road	0.38	5.99	0.6	A	301	451

### Main Results for each time segment

#### 12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	365	91	79	945	0.386	363	370	0.0	0.6	6.152	A
2 - Finedon Road (SW)	282	71	155	835	0.338	280	287	0.0	0.5	6.471	A
3 - Rixon Road	247	62	203	1027	0.240	246	232	0.0	0.3	4.598	A

#### 13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	436	109	94	935	0.466	435	444	0.6	0.9	7.188	A
2 - Finedon Road (SW)	337	84	186	811	0.416	336	344	0.5	0.7	7.570	A
3 - Rixon Road	295	74	244	1000	0.295	294	278	0.3	0.4	5.102	A

#### 13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	534	133	115	921	0.580	532	543	0.9	1.3	9.207	A
2 - Finedon Road (SW)	413	103	227	779	0.530	411	420	0.7	1.1	9.734	A
3 - Rixon Road	361	90	298	963	0.375	360	340	0.4	0.6	5.968	A

#### 13:30 - 13:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	534	133	116	921	0.580	534	545	1.3	1.4	9.297	A
2 - Finedon Road (SW)	413	103	228	779	0.530	413	422	1.1	1.1	9.832	A
3 - Rixon Road	361	90	299	962	0.375	361	341	0.6	0.6	5.989	A

#### 13:45 - 14:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	436	109	95	935	0.466	438	447	1.4	0.9	7.271	A
2 - Finedon Road (SW)	337	84	187	810	0.416	339	346	1.1	0.7	7.660	A
3 - Rixon Road	295	74	246	999	0.295	296	280	0.6	0.4	5.125	A

## 14:00 - 14:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	365	91	79	945	0.386	366	374	0.9	0.6	6.228	A
2 - Finedon Road (SW)	282	71	156	834	0.339	283	289	0.7	0.5	6.549	A
3 - Rixon Road	247	62	205	1026	0.241	247	234	0.4	0.3	4.627	A

# 2031, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	35.55	E

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D16	2031	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	563	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	724	100.000
3 - Rixon Road		ONE HOUR	✓	604	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	366	197
	2 - Finedon Road (SW)	594	0	130
	3 - Rixon Road	462	142	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	2	9
	2 - Finedon Road (SW)	1	0	7
	3 - Rixon Road	3	3	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.65	10.55	1.8	B	517	775
2 - Finedon Road (SW)	0.96	63.87	13.4	F	664	997
3 - Rixon Road	0.83	25.54	4.5	D	554	831

### Main Results for each time segment

#### 16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	424	106	106	994	0.427	421	787	0.0	0.7	6.254	A
2 - Finedon Road (SW)	545	136	147	878	0.621	539	380	0.0	1.6	10.423	B
3 - Rixon Road	455	114	442	945	0.481	451	244	0.0	0.9	7.236	A

#### 16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	506	127	127	980	0.517	505	943	0.7	1.1	7.559	A
2 - Finedon Road (SW)	651	163	177	857	0.759	645	455	1.6	2.9	16.578	C
3 - Rixon Road	543	136	530	883	0.615	540	293	0.9	1.6	10.443	B

#### 16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	620	155	154	962	0.644	617	1130	1.1	1.8	10.348	B
2 - Finedon Road (SW)	797	199	216	829	0.962	767	555	2.9	10.6	44.103	E
3 - Rixon Road	665	166	629	812	0.819	655	354	1.6	4.0	21.746	C

#### 17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	620	155	156	961	0.645	620	1152	1.8	1.8	10.546	B
2 - Finedon Road (SW)	797	199	217	828	0.962	786	559	10.6	13.4	63.869	F
3 - Rixon Road	665	166	645	801	0.831	663	358	4.0	4.5	25.540	D

#### 17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	506	127	130	978	0.518	509	990	1.8	1.1	7.722	A
2 - Finedon Road (SW)	651	163	178	856	0.760	691	461	13.4	3.4	25.880	D
3 - Rixon Road	543	136	567	856	0.634	554	302	4.5	1.8	12.297	B



17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	424	106	108	993	0.427	425	803	1.1	0.8	6.360	A
2 - Finedon Road (SW)	545	136	149	877	0.621	552	384	3.4	1.7	11.305	B
3 - Rixon Road	455	114	453	937	0.485	458	248	1.8	1.0	7.567	A

# 2031 + Dev, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	5.41	A

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D17	2031 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	341	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	231	100.000
3 - Rixon Road		ONE HOUR	✓	173	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	130	211
	2 - Finedon Road (SW)	130	0	101
	3 - Rixon Road	129	44	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	3	6
	2 - Finedon Road (SW)	2	0	2
	3 - Rixon Road	16	0	7



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.36	5.51	0.6	A	313	469
2 - Finedon Road (SW)	0.31	6.33	0.4	A	212	318
3 - Rixon Road	0.18	4.12	0.2	A	159	238

### Main Results for each time segment

#### 05:45 - 06:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	257	64	33	1039	0.247	255	194	0.0	0.3	4.589	A
2 - Finedon Road (SW)	174	43	158	874	0.199	173	130	0.0	0.2	5.126	A
3 - Rixon Road	130	33	97	1095	0.119	130	234	0.0	0.1	3.728	A

#### 06:00 - 06:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	307	77	40	1034	0.296	306	233	0.3	0.4	4.941	A
2 - Finedon Road (SW)	208	52	189	852	0.244	207	156	0.2	0.3	5.579	A
3 - Rixon Road	156	39	117	1082	0.144	155	280	0.1	0.2	3.885	A

#### 06:15 - 06:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	375	94	48	1029	0.365	375	285	0.4	0.6	5.500	A
2 - Finedon Road (SW)	254	64	232	823	0.309	254	191	0.3	0.4	6.322	A
3 - Rixon Road	190	48	143	1065	0.179	190	343	0.2	0.2	4.115	A

#### 06:30 - 06:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	375	94	48	1029	0.365	375	285	0.6	0.6	5.509	A
2 - Finedon Road (SW)	254	64	232	823	0.309	254	192	0.4	0.4	6.335	A
3 - Rixon Road	190	48	143	1065	0.179	190	344	0.2	0.2	4.118	A

#### 06:45 - 07:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	307	77	40	1034	0.296	307	233	0.6	0.4	4.955	A
2 - Finedon Road (SW)	208	52	190	852	0.244	208	157	0.4	0.3	5.597	A
3 - Rixon Road	156	39	117	1082	0.144	156	281	0.2	0.2	3.888	A



## 07:00 - 07:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	257	64	33	1039	0.247	257	195	0.4	0.3	4.608	A
2 - Finedon Road (SW)	174	43	159	873	0.199	174	131	0.3	0.3	5.149	A
3 - Rixon Road	130	33	98	1094	0.119	130	235	0.2	0.1	3.736	A



# 2031 + Dev, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	42.57	E

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D18	2031 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	884	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	451	100.000
3 - Rixon Road		ONE HOUR	✓	330	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	457	427
	2 - Finedon Road (SW)	299	0	152
	3 - Rixon Road	229	101	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	2	6
	2 - Finedon Road (SW)	4	0	5
	3 - Rixon Road	15	6	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.98	67.01	17.5	F	811	1217
2 - Finedon Road (SW)	0.77	23.39	3.1	C	414	621
3 - Rixon Road	0.39	6.30	0.6	A	303	454

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	666	166	76	1017	0.654	658	394	0.0	1.8	9.833	A
2 - Finedon Road (SW)	340	85	318	746	0.455	336	416	0.0	0.8	8.722	A
3 - Rixon Road	248	62	223	1006	0.247	247	431	0.0	0.3	4.736	A

#### 08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	795	199	91	1007	0.789	788	473	1.8	3.5	15.962	C
2 - Finedon Road (SW)	405	101	381	703	0.577	403	498	0.8	1.3	11.932	B
3 - Rixon Road	297	74	267	976	0.304	296	517	0.3	0.4	5.292	A

#### 08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	973	243	111	993	0.980	934	577	3.5	13.3	44.105	E
2 - Finedon Road (SW)	497	124	451	655	0.758	490	594	1.3	2.9	21.097	C
3 - Rixon Road	363	91	325	937	0.388	363	616	0.4	0.6	6.257	A

#### 08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	973	243	111	993	0.980	956	581	13.3	17.5	67.015	F
2 - Finedon Road (SW)	497	124	462	648	0.767	496	606	2.9	3.1	23.386	C
3 - Rixon Road	363	91	329	935	0.389	363	629	0.6	0.6	6.298	A

#### 08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	795	199	91	1007	0.789	848	479	17.5	4.1	28.244	D
2 - Finedon Road (SW)	405	101	410	683	0.593	412	530	3.1	1.5	13.548	B
3 - Rixon Road	297	74	273	972	0.305	297	548	0.6	0.4	5.341	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	666	166	76	1017	0.654	674	400	4.1	2.0	10.748	B
2 - Finedon Road (SW)	340	85	326	741	0.458	342	425	1.5	0.9	9.092	A
3 - Rixon Road	248	62	227	1003	0.248	249	441	0.4	0.3	4.775	A

# 2031 + Dev, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	8.88	A

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D19	2031 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	494	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	375	100.000
3 - Rixon Road		ONE HOUR	✓	329	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	278	216
	2 - Finedon Road (SW)	272	0	103
	3 - Rixon Road	224	105	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	5	23
	2 - Finedon Road (SW)	4	0	9
	3 - Rixon Road	12	10	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.60	9.85	1.5	A	453	680
2 - Finedon Road (SW)	0.54	10.17	1.2	B	344	516
3 - Rixon Road	0.38	6.00	0.6	A	302	453

### Main Results for each time segment

#### 12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	372	93	79	933	0.399	369	371	0.0	0.7	6.356	A
2 - Finedon Road (SW)	282	71	161	826	0.342	280	286	0.0	0.5	6.568	A
3 - Rixon Road	248	62	203	1027	0.241	246	238	0.0	0.3	4.602	A

#### 13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	444	111	94	923	0.481	443	445	0.7	0.9	7.485	A
2 - Finedon Road (SW)	337	84	194	801	0.421	336	344	0.5	0.7	7.729	A
3 - Rixon Road	296	74	244	1000	0.296	295	286	0.3	0.4	5.109	A

#### 13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	544	136	115	909	0.598	542	544	0.9	1.5	9.741	A
2 - Finedon Road (SW)	413	103	237	767	0.538	411	420	0.7	1.1	10.056	B
3 - Rixon Road	362	91	298	963	0.376	362	350	0.4	0.6	5.978	A

#### 13:30 - 13:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	544	136	116	909	0.598	544	546	1.5	1.5	9.853	A
2 - Finedon Road (SW)	413	103	238	767	0.538	413	422	1.1	1.2	10.165	B
3 - Rixon Road	362	91	299	962	0.377	362	351	0.6	0.6	6.001	A

#### 13:45 - 14:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	444	111	95	923	0.481	446	448	1.5	0.9	7.590	A
2 - Finedon Road (SW)	337	84	195	800	0.421	339	346	1.2	0.7	7.830	A
3 - Rixon Road	296	74	246	999	0.296	296	288	0.6	0.4	5.132	A

## 14:00 - 14:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	372	93	79	933	0.399	373	374	0.9	0.7	6.443	A
2 - Finedon Road (SW)	282	71	163	825	0.342	283	289	0.7	0.5	6.651	A
3 - Rixon Road	248	62	205	1026	0.241	248	241	0.4	0.3	4.630	A

# 2031 + Dev, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	37.83	E

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D20	2031 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	569	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	724	100.000
3 - Rixon Road		ONE HOUR	✓	609	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
From	1 - Finedon Road (NE)	0	366	203
	2 - Finedon Road (SW)	594	0	130
	3 - Rixon Road	466	143	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
From		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
	1 - Finedon Road (NE)	0	2	11
	2 - Finedon Road (SW)	1	0	7
	3 - Rixon Road	3	3	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.66	11.00	1.9	B	522	783
2 - Finedon Road (SW)	0.97	69.39	14.7	F	664	997
3 - Rixon Road	0.84	26.23	4.6	D	559	838

### Main Results for each time segment

#### 16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	428	107	107	986	0.434	425	790	0.0	0.8	6.386	A
2 - Finedon Road (SW)	545	136	152	873	0.624	539	380	0.0	1.6	10.575	B
3 - Rixon Road	458	115	442	945	0.485	455	248	0.0	0.9	7.291	A

#### 16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	512	128	128	972	0.526	510	946	0.8	1.1	7.767	A
2 - Finedon Road (SW)	651	163	182	851	0.765	645	456	1.6	3.0	17.032	C
3 - Rixon Road	547	137	529	883	0.620	545	298	0.9	1.6	10.572	B

#### 16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	626	157	155	954	0.656	623	1132	1.1	1.8	10.778	B
2 - Finedon Road (SW)	797	199	222	821	0.970	764	556	3.0	11.3	46.611	E
3 - Rixon Road	671	168	627	813	0.824	660	360	1.6	4.1	22.194	C

#### 17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	626	157	157	953	0.657	626	1154	1.8	1.9	11.002	B
2 - Finedon Road (SW)	797	199	223	821	0.971	784	560	11.3	14.7	69.393	F
3 - Rixon Road	671	168	643	802	0.836	669	364	4.1	4.6	26.235	D

#### 17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	512	128	131	970	0.527	515	998	1.9	1.1	7.954	A
2 - Finedon Road (SW)	651	163	184	850	0.766	695	462	14.7	3.6	28.374	D
3 - Rixon Road	547	137	571	853	0.642	559	308	4.6	1.9	12.636	B



## 17:30 - 17:45

Am	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	428	107	108	985	0.435	430	807	1.1	0.8	6.503	A
2 - Finedon Road (SW)	545	136	153	872	0.625	552	385	3.6	1.7	11.523	B
3 - Rixon Road	458	115	453	937	0.489	462	253	1.9	1.0	7.634	A



## **Appendix W – Finedon Road / Meadow Close priority junction Junctions 9 Results**

<h1>Junctions 9</h1>
<h2>PICADY 9 - Priority Intersection Module</h2>
Version: 9.5.1.7462 © Copyright TRL Limited, 2019
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**Filename:** Finedon Road Meadow Close Rail Head Junction.j9  
**Path:** P:\2021\P21-340\T&T\Capacity Assessments\Junctions 9  
**Report generation date:** 17/01/2022 14:10:26

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- »2021, 06:00 - 07:00
- »2021, 08:00 - 09:00
- »2021 , 13:00 - 14:00
- »2021, 16:30 - 17:30
- »2027, 06:00 - 07:00
- »2027, 08:00 - 09:00
- »2027, 13:00 - 14:00
- »2027, 16:30 - 17:30
- »2027 + Dev, 06:00 - 07:00
- »2027 + Dev, 08:00 - 09:00
- »2027 + Dev, 13:00 - 14:00
- »2027 + Dev, 16:30 - 17:30
- »2031, 06:00 - 07:00
- »2031, 08:00 - 09:00
- »2031, 13:00 - 14:00
- »2031, 16:30 - 17:30
- »2031 + Dev, 06:00 - 07:00
- »2031 + Dev, 08:00 - 09:00
- »2031 + Dev, 13:00 - 14:00
- »2031 + Dev, 16:30 - 17:30

## Summary of junction performance

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
<b>2021</b>																				
Stream B-C	D1	0.0	0.00	0.00	A	D2	0.0	0.00	0.00	A	D3	0.0	7.46	0.02	A	D4	0.1	8.94	0.09	A
Stream B-A		0.0	10.59	0.02	B		0.0	10.59	0.02	B		0.1	12.56	0.09	B		0.3	23.83	0.22	C
Stream C-AB		0.0	5.53	0.02	A		0.0	5.53	0.02	A		0.0	7.29	0.03	A		0.0	11.80	0.01	B
<b>2027</b>																				
Stream B-C	D5	0.0	0.00	0.00	A	D6	0.0	6.03	0.03	A	D7	0.0	7.62	0.02	A	D8	0.1	9.46	0.10	A
Stream B-A		0.0	10.77	0.02	B		0.1	17.94	0.12	C		0.1	13.31	0.11	B		0.3	27.87	0.26	D
Stream C-AB		0.0	5.57	0.02	A		0.0	6.19	0.04	A		0.0	7.44	0.03	A		0.0	12.22	0.01	B
<b>2027 + Dev</b>																				
Stream B-C	D9	0.0	0.00	0.00	A	D10	0.0	6.11	0.03	A	D11	0.0	7.81	0.02	A	D12	0.1	9.84	0.11	A
Stream B-A		0.0	12.02	0.04	B		0.2	19.92	0.15	C		0.2	16.73	0.16	C		0.5	34.18	0.33	D
Stream C-AB		0.0	5.59	0.02	A		0.0	6.41	0.04	A		0.1	9.62	0.07	A		0.0	15.49	0.03	C
<b>2031</b>																				
Stream B-C	D13	0.0	0.00	0.00	A	D14	0.0	6.10	0.03	A	D15	0.0	7.71	0.02	A	D16	0.1	9.81	0.11	A
Stream B-A		0.0	10.91	0.03	B		0.1	18.91	0.13	C		0.1	13.77	0.11	B		0.4	31.00	0.29	D
Stream C-AB		0.0	5.59	0.02	A		0.0	6.26	0.04	A		0.0	7.53	0.03	A		0.0	12.49	0.01	B
<b>2031 + Dev</b>																				
Stream B-C	D17	0.0	0.00	0.00	A	D18	0.0	6.19	0.03	A	D19	0.0	7.92	0.02	A	D20	0.1	10.26	0.11	B
Stream B-A		0.0	12.19	0.04	B		0.2	20.98	0.16	C		0.2	17.30	0.17	C		0.5	38.62	0.36	E
Stream C-AB		0.0	5.62	0.02	A		0.0	6.47	0.05	A		0.1	9.67	0.07	A		0.0	15.84	0.03	C

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

## File summary

### File Description

Title	Finedon Road Meadows Close Junction
Location	Wellingborough
Site number	
Date	03/12/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	HQjake.blay
Description	

## Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

## Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

### Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D2	2021	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D3	2021	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D4	2021	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D5	2027	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D6	2027	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D7	2027	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D8	2027	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D9	2027 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D10	2027 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D11	2027 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D12	2027 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D13	2031	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D14	2031	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D15	2031	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D16	2031	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D17	2031 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D18	2031 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D19	2031 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D20	2031 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

### Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

# 2021, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		0.24	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description	Arm type
A	Finedon Road (S)		Major
B	Meadow Close		Minor
C	Finedon Road (N)		Major

### Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Finedon Road (N)	7.30		✓	3.65	215.0	✓	13.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

### Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Meadow Close	One lane plus flare	10.00	10.00	9.38	5.65	4.00		2.50	19	200

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	686	0.118	0.298	0.188	0.426
B-C	807	0.117	0.295	-	-
C-B	809	0.296	0.296	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	247	100.000
B - Meadow Close		ONE HOUR	✓	7	100.000
C - Finedon Road (N)		ONE HOUR	✓	427	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	10	237
	B - Meadow Close	7	0	0
	C - Finedon Road (N)	416	11	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	0	7
	B - Meadow Close	46	0	0
	C - Finedon Road (N)	3	9	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.00	0.00	0.0	A	0	0
B-A	0.02	10.59	0.0	B	6	10
C-AB	0.02	5.53	0.0	A	10	15
C-A					382	573
AB					9	14
AC					217	326

# 2021, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		0.24	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2021	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	545	100.000
B - Meadow Close		ONE HOUR	✓	39	100.000
C - Finedon Road (N)		ONE HOUR	✓	965	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	40	505
	B - Meadow Close	24	0	15
	C - Finedon Road (N)	943	22	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	20	8
	B - Meadow Close	17	47	0
	C - Finedon Road (N)	4	0	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.00	0.00	0.0	A	0	0
B-A	0.02	10.59	0.0	B	6	10
C-AB	0.02	5.53	0.0	A	10	15
C-A					382	573
A-B					9	14
A-C					217	326

# 2021 , 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		0.51	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2021	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	541	100.000
B - Meadow Close		ONE HOUR	✓	35	100.000
C - Finedon Road (N)		ONE HOUR	✓	490	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	21	520
	B - Meadow Close	27	0	8
	C - Finedon Road (N)	476	14	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	19	9
	B - Meadow Close	19	0	25
	C - Finedon Road (N)	10	21	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.02	7.46	0.0	A	7	11
B-A	0.09	12.56	0.1	B	25	37
C-AB	0.03	7.29	0.0	A	13	19
C-A					437	655
A-B					19	29
A-C					477	716

# 2021, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		0.77	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2021	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	1047	100.000
B - Meadow Close		ONE HOUR	✓	77	100.000
C - Finedon Road (N)		ONE HOUR	✓	583	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	9	1038
	B - Meadow Close	39	0	38
	C - Finedon Road (N)	581	2	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	11	2
	B - Meadow Close	5	0	3
	C - Finedon Road (N)	5	50	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.09	8.94	0.1	A	35	52
B-A	0.22	23.83	0.3	C	36	54
C-AB	0.01	11.80	0.0	B	2	3
C-A					533	800
A-B					8	12
A-C					952	1429

# 2027, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		0.24	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2027	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	258	100.000
B - Meadow Close		ONE HOUR	✓	7	100.000
C - Finedon Road (N)		ONE HOUR	✓	447	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	10	248
	B - Meadow Close	7	0	0
	C - Finedon Road (N)	435	12	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	0	7
	B - Meadow Close	46	0	0
	C - Finedon Road (N)	3	9	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.00	0.00	0.0	A	0	0
B-A	0.02	10.77	0.0	B	6	10
C-AB	0.02	5.57	0.0	A	11	17
C-A					399	599
A-B					9	14
A-C					228	341

# 2027, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		0.45	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2027	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	570	100.000
B - Meadow Close		ONE HOUR	✓	41	100.000
C - Finedon Road (N)		ONE HOUR	✓	1009	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	42	528
	B - Meadow Close	25	0	16
	C - Finedon Road (N)	986	23	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	20	8
	B - Meadow Close	17	47	0
	C - Finedon Road (N)	4	0	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.03	6.03	0.0	A	15	22
B-A	0.12	17.94	0.1	C	23	34
C-AB	0.04	6.19	0.0	A	21	32
C-A					905	1357
A-B					39	58
A-C					485	727

# 2027, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		0.54	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2027	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	571	100.000
B - Meadow Close		ONE HOUR	✓	37	100.000
C - Finedon Road (N)		ONE HOUR	✓	518	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	22	549
	B - Meadow Close	29	0	8
	C - Finedon Road (N)	503	15	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	19	9
	B - Meadow Close	19	0	25
	C - Finedon Road (N)	10	21	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.02	7.62	0.0	A	7	11
B-A	0.11	13.31	0.1	B	27	40
C-AB	0.03	7.44	0.0	A	14	21
C-A					462	692
A-B					20	30
A-C					504	756

# 2027, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		0.88	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2027	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	1094	100.000
B - Meadow Close		ONE HOUR	✓	81	100.000
C - Finedon Road (N)		ONE HOUR	✓	609	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	9	1085
	B - Meadow Close	41	0	40
	C - Finedon Road (N)	607	2	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	11	2
	B - Meadow Close	5	0	3
	C - Finedon Road (N)	5	50	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.10	9.46	0.1	A	37	55
B-A	0.26	27.87	0.3	D	38	56
C-AB	0.01	12.22	0.0	B	2	3
C-A					557	835
A-B					8	12
A-C					996	1493

# 2027 + Dev, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		0.35	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2027 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	263	100.000
B - Meadow Close		ONE HOUR	✓	10	100.000
C - Finedon Road (N)		ONE HOUR	✓	452	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	15	248
	B - Meadow Close	10	0	0
	C - Finedon Road (N)	440	12	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	32	7
	B - Meadow Close	60	0	0
	C - Finedon Road (N)	3	9	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.00	0.00	0.0	A	0	0
B-A	0.04	12.02	0.0	B	9	14
C-AB	0.02	5.59	0.0	A	11	17
C-A					404	606
A-B					14	21
A-C					228	341

# 2027 + Dev, 08:00 - 09:00

## Data Errors and Warnings

*No errors or warnings*

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		0.55	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2027 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	572	100.000
B - Meadow Close		ONE HOUR	✓	44	100.000
C - Finedon Road (N)		ONE HOUR	✓	1012	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	44	528
	B - Meadow Close	28	0	16
	C - Finedon Road (N)	988	24	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	25	8
	B - Meadow Close	26	47	0
	C - Finedon Road (N)	4	3	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.03	6.11	0.0	A	15	22
B-A	0.15	19.92	0.2	C	26	39
C-AB	0.04	6.41	0.0	A	22	33
C-A					907	1360
A-B					40	61
A-C					485	727

# 2027 + Dev, 13:00 - 14:00

## Data Errors and Warnings

*No errors or warnings*

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		1.00	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2027 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	572	100.000
B - Meadow Close		ONE HOUR	✓	45	100.000
C - Finedon Road (N)		ONE HOUR	✓	527	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	22	550
	B - Meadow Close	37	0	8
	C - Finedon Road (N)	503	24	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	19	9
	B - Meadow Close	38	0	25
	C - Finedon Road (N)	10	51	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.02	7.81	0.0	A	7	11
B-A	0.16	16.73	0.2	C	34	51
C-AB	0.07	9.62	0.1	A	22	33
C-A					462	692
A-B					20	30
A-C					505	757

# 2027 + Dev, 16:30 - 17:30

## Data Errors and Warnings

*No errors or warnings*

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		1.30	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2027 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	1097	100.000
B - Meadow Close		ONE HOUR	✓	86	100.000
C - Finedon Road (N)		ONE HOUR	✓	614	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	9	1088
	B - Meadow Close	46	0	40
	C - Finedon Road (N)	607	7	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	11	2
	B - Meadow Close	15	0	3
	C - Finedon Road (N)	5	85	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.11	9.84	0.1	A	37	55
B-A	0.33	34.18	0.5	D	42	63
C-AB	0.03	15.49	0.0	C	6	10
C-A					557	835
A-B					8	12
A-C					998	1498

# 2031, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		0.26	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2031	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	265	100.000
B - Meadow Close		ONE HOUR	✓	8	100.000
C - Finedon Road (N)		ONE HOUR	✓	458	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	11	254
	B - Meadow Close	8	0	0
	C - Finedon Road (N)	446	12	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	0	7
	B - Meadow Close	46	0	0
	C - Finedon Road (N)	3	9	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.00	0.00	0.0	A	0	0
B-A	0.03	10.91	0.0	B	7	11
C-AB	0.02	5.59	0.0	A	11	17
C-A					409	614
A-B					10	15
A-C					233	350

# 2031, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		0.47	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2031	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	585	100.000
B - Meadow Close		ONE HOUR	✓	42	100.000
C - Finedon Road (N)		ONE HOUR	✓	1036	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	43	542
	B - Meadow Close	26	0	16
	C - Finedon Road (N)	1012	24	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	20	8
	B - Meadow Close	17	47	0
	C - Finedon Road (N)	4	0	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.03	6.10	0.0	A	15	22
B-A	0.13	18.91	0.1	C	24	36
C-AB	0.04	6.26	0.0	A	22	33
C-A					929	1393
A-B					39	59
A-C					497	746

# 2031, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		0.55	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D15	2031	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	590	100.000
B - Meadow Close		ONE HOUR	✓	38	100.000
C - Finedon Road (N)		ONE HOUR	✓	534	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	23	567
	B - Meadow Close	29	0	9
	C - Finedon Road (N)	519	15	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	19	9
	B - Meadow Close	19	0	25
	C - Finedon Road (N)	10	21	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.02	7.71	0.0	A	8	12
B-A	0.11	13.77	0.1	B	27	40
C-AB	0.03	7.53	0.0	A	14	21
C-A					476	714
A-B					21	32
A-C					520	780

# 2031, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		0.96	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D16	2031	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	1123	100.000
B - Meadow Close		ONE HOUR	✓	83	100.000
C - Finedon Road (N)		ONE HOUR	✓	625	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	10	1113
	B - Meadow Close	42	0	41
	C - Finedon Road (N)	623	2	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	11	2
	B - Meadow Close	5	0	3
	C - Finedon Road (N)	5	50	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.11	9.81	0.1	A	38	56
B-A	0.29	31.00	0.4	D	39	58
C-AB	0.01	12.49	0.0	B	2	3
C-A					572	858
A-B					9	14
A-C					1021	1532

# 2031 + Dev, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		0.36	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D17	2031 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	271	100.000
B - Meadow Close		ONE HOUR	✓	11	100.000
C - Finedon Road (N)		ONE HOUR	✓	463	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	16	255
	B - Meadow Close	11	0	0
	C - Finedon Road (N)	451	12	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	32	7
	B - Meadow Close	60	0	0
	C - Finedon Road (N)	3	9	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.00	0.00	0.0	A	0	0
B-A	0.04	12.19	0.0	B	10	15
C-AB	0.02	5.62	0.0	A	11	17
C-A					414	621
A-B					15	22
A-C					234	351

# 2031 + Dev, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		0.58	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D18	2031 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	587	100.000
B - Meadow Close		ONE HOUR	✓	45	100.000
C - Finedon Road (N)		ONE HOUR	✓	1037	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	45	542
	B - Meadow Close	29	0	16
	C - Finedon Road (N)	1013	24	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	24	8
	B - Meadow Close	26	47	0
	C - Finedon Road (N)	4	3	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.03	6.19	0.0	A	15	22
B-A	0.16	20.98	0.2	C	27	40
C-AB	0.05	6.47	0.0	A	22	33
C-A					930	1394
A-B					41	62
A-C					497	746

# 2031 + Dev, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		1.02	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D19	2031 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	591	100.000
B - Meadow Close		ONE HOUR	✓	47	100.000
C - Finedon Road (N)		ONE HOUR	✓	544	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	23	568
	B - Meadow Close	38	0	9
	C - Finedon Road (N)	520	24	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	19	9
	B - Meadow Close	37	0	25
	C - Finedon Road (N)	10	50	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.02	7.92	0.0	A	8	12
B-A	0.17	17.30	0.2	C	35	52
C-AB	0.07	9.67	0.1	A	22	33
C-A					477	716
A-B					21	32
A-C					521	782

# 2031 + Dev, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		1.43	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D20	2031 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	1126	100.000
B - Meadow Close		ONE HOUR	✓	88	100.000
C - Finedon Road (N)		ONE HOUR	✓	630	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	10	1116
	B - Meadow Close	47	0	41
	C - Finedon Road (N)	623	7	0

## Vehicle Mix

### Heavy Vehicle Percentages

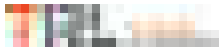
		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	11	2
	B - Meadow Close	15	0	3
	C - Finedon Road (N)	5	85	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.11	10.26	0.1	B	38	56
B-A	0.36	38.62	0.5	E	43	65
C-AB	0.03	15.84	0.0	C	6	10
C-A					572	858
A-B					9	14
A-C					1024	1536

## **Appendix X – Sanders Road / Don White Road priority junction sensitivity test Junctions 9 Results**



<h1>Junctions 9</h1>
<h2>PICADY 9 - Priority Intersection Module</h2>
Version: 9.5.1.7462 © Copyright TRL Limited, 2019
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk
<b>The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution</b>

Filename: Don White Road Sensitivity Test.j9

Path: P:\2021\P21-340\T&T\Capacity Assessments\Junctions 9\Sensitivity Test

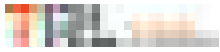
Report generation date: 15/02/2022 13:05:25

- »2021, 06:00 - 07:00
- »2021, 08:00 - 09:00
- »2021, 13:00 - 14:00
- »2021, 16:30 - 17:30
- »2027, 06:00 - 07:00
- »2027, 08:00 - 09:00
- »2027, 13:00 - 14:00
- »2027, 16:30 - 17:30
- »2027 + Dev, 06:00 - 07:00
- »2027 + Dev, 08:00 - 09:00
- »2027 + Dev, 13:00 - 14:00
- »2027 + Dev, 16:30 - 17:30

### Summary of junction performance

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
<b>2021</b>																				
Stream B-C	D1	0.0	0.00	0.00	A	D2	0.0	7.21	0.02	A	D3	0.0	5.69	0.03	A	D4	0.0	5.56	0.02	A
Stream B-A		0.0	0.00	0.00	A		0.0	9.16	0.02	A		0.0	7.12	0.02	A		0.1	7.07	0.06	A
Stream C-AB		0.0	5.92	0.02	A		0.0	7.07	0.03	A		0.0	5.82	0.02	A		0.0	5.59	0.01	A
<b>2027</b>																				
Stream B-C	D5	0.0	0.00	0.00	A	D6	0.0	7.23	0.02	A	D7	0.0	5.70	0.03	A	D8	0.0	5.58	0.02	A
Stream B-A		0.0	0.00	0.00	A		0.0	9.20	0.02	A		0.0	7.15	0.02	A		0.1	7.10	0.07	A
Stream C-AB		0.0	5.92	0.02	A		0.0	7.10	0.03	A		0.0	5.82	0.02	A		0.0	5.57	0.01	A
<b>2027 + Dev</b>																				
Stream B-C	D9	0.0	9.14	0.02	A	D10	0.0	8.35	0.03	A	D11	0.0	6.43	0.04	A	D12	0.0	5.72	0.03	A
Stream B-A		0.1	13.35	0.08	B		0.1	12.34	0.09	B		0.1	12.17	0.12	B		0.1	8.51	0.11	A
Stream C-AB		0.1	6.95	0.06	A		0.1	6.91	0.05	A		0.1	8.30	0.06	A		0.0	8.29	0.03	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.



## File summary

### File Description

<b>Title</b>	Sanders Road Don White Road Junction
<b>Location</b>	Wellingborough
<b>Site number</b>	
<b>Date</b>	02/12/2021
<b>Version</b>	
<b>Status</b>	(new file)
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	
<b>Enumerator</b>	HQjake.blay
<b>Description</b>	

## Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

## Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

## Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D2	2021	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D3	2021	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D4	2021	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D5	2027	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D6	2027	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D7	2027	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D8	2027	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D9	2027 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D10	2027 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D11	2027 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D12	2027 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

## Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000



# 2021, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		0.79	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description	Arm type
A	Sanders Road (N)		Major
B	Don White Road		Minor
C	Sanders Road (S)		Major

### Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Sanders Road (S)	7.30			70.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

### Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Don White Road	One lane plus flare	10.00	4.90	3.65	3.65	3.65	✓	1.00	24	100

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	573	0.098	0.249	0.157	0.356
B-C	737	0.107	0.269	-	-
C-B	615	0.225	0.225	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	46	100.000
B - Don White Road		ONE HOUR	✓	4	100.000
C - Sanders Road (S)		ONE HOUR	✓	36	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	1	45
	B - Don White Road	2	0	2
	C - Sanders Road (S)	25	11	0

## Vehicle Mix

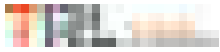
### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	0	6
	B - Don White Road	0	0	0
	C - Sanders Road (S)	4	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.00	0.00	0.0	A	0	0
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.02	5.92	0.0	A	10	16
C-A					23	34
AB					0.92	1
AC					41	62

**Main Results for each time segment****05:45 - 06:00**

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	727	0.000	0	0.0	0.0	0.000	A
B-A	0	0	558	0.000	0	0.0	0.0	0.000	A
C-AB	9	2	618	0.014	8	0.0	0.0	5.901	A
C-A	19	5			19				
A-B	0.75	0.19			0.75				
A-C	34	8			34				

**06:00 - 06:15**

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	725	0.000	0	0.0	0.0	0.000	A
B-A	0	0	555	0.000	0	0.0	0.0	0.000	A
C-AB	10	3	619	0.017	10	0.0	0.0	5.909	A
C-A	22	6			22				
A-B	0.90	0.22			0.90				
A-C	40	10			40				

**06:15 - 06:30**

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	722	0.000	0	0.0	0.0	0.000	A
B-A	0	0	551	0.000	0	0.0	0.0	0.000	A
C-AB	13	3	620	0.020	13	0.0	0.0	5.922	A
C-A	27	7			27				
A-B	1	0.28			1				
A-C	50	12			50				

**06:30 - 06:45**

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	722	0.000	0	0.0	0.0	0.000	A
B-A	0	0	551	0.000	0	0.0	0.0	0.000	A
C-AB	13	3	620	0.020	13	0.0	0.0	5.923	A
C-A	27	7			27				
A-B	1	0.28			1				
A-C	50	12			50				

**06:45 - 07:00**

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	725	0.000	0	0.0	0.0	0.000	A
B-A	0	0	555	0.000	0	0.0	0.0	0.000	A
C-AB	10	3	619	0.017	10	0.0	0.0	5.914	A
C-A	22	6			22				
A-B	0.90	0.22			0.90				
A-C	40	10			40				



07:00 - 07:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	727	0.000	0	0.0	0.0	0.000	A
B-A	0	0	558	0.000	0	0.0	0.0	0.000	A
C-AB	9	2	618	0.014	9	0.0	0.0	5.904	A
C-A	19	5			19				
AB	0.75	0.19			0.75				
AC	34	8			34				

# 2021, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		1.35	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2021	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	126	100.000
B - Don White Road		ONE HOUR	✓	17	100.000
C - Sanders Road (S)		ONE HOUR	✓	52	100.000

## Origin-Destination Data

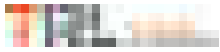
### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	12	114
	B - Don White Road	8	0	9
	C - Sanders Road (S)	39	13	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	18	7
	B - Don White Road	29	0	38
	C - Sanders Road (S)	23	17	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.02	7.21	0.0	A	8	12
B-A	0.02	9.16	0.0	A	7	11
C-AB	0.03	7.07	0.0	A	13	19
C-A					35	52
A-B					11	17
A-C					105	157

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	519	0.013	7	0.0	0.0	7.031	A
B-A	6	2	414	0.015	6	0.0	0.0	8.825	A
C-AB	10	3	525	0.020	10	0.0	0.0	6.997	A
C-A	29	7			29				
A-B	9	2			9				
A-C	86	21			86				

#### 08:00 - 08:15

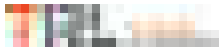
Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	8	2	515	0.016	8	0.0	0.0	7.107	A
B-A	7	2	409	0.018	7	0.0	0.0	8.963	A
C-AB	13	3	525	0.024	13	0.0	0.0	7.025	A
C-A	34	9			34				
A-B	11	3			11				
A-C	102	26			102				

#### 08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	10	2	509	0.019	10	0.0	0.0	7.213	A
B-A	9	2	402	0.022	9	0.0	0.0	9.158	A
C-AB	16	4	525	0.030	16	0.0	0.0	7.066	A
C-A	42	10			42				
A-B	13	3			13				
A-C	126	31			126				

#### 08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	10	2	509	0.019	10	0.0	0.0	7.213	A
B-A	9	2	402	0.022	9	0.0	0.0	9.157	A
C-AB	16	4	525	0.030	16	0.0	0.0	7.072	A
C-A	42	10			42				
A-B	13	3			13				
A-C	126	31			126				

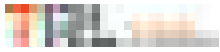


## 08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	8	2	515	0.016	8	0.0	0.0	7.111	A
B-A	7	2	409	0.018	7	0.0	0.0	8.963	A
C-AB	13	3	525	0.024	13	0.0	0.0	7.034	A
C-A	34	9			34				
AB	11	3			11				
AC	102	26			102				

## 09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	519	0.013	7	0.0	0.0	7.033	A
B-A	6	2	414	0.015	6	0.0	0.0	8.827	A
C-AB	10	3	525	0.020	10	0.0	0.0	7.001	A
C-A	29	7			29				
AB	9	2			9				
AC	86	21			86				



# 2021, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		1.30	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2021	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	68	100.000
B - Don White Road		ONE HOUR	✓	27	100.000
C - Sanders Road (S)		ONE HOUR	✓	73	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	10	58
	B - Don White Road	10	0	17
	C - Sanders Road (S)	62	11	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	0	21
	B - Don White Road	0	0	13
	C - Sanders Road (S)	20	0	0





## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.03	5.69	0.0	A	16	23
B-A	0.02	7.12	0.0	A	9	14
C-AB	0.02	5.82	0.0	A	11	17
C-A					56	84
A-B					9	14
A-C					53	80

### Main Results for each time segment

#### 12:45 - 13:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	13	3	659	0.019	13	0.0	0.0	5.567	A
B-A	8	2	528	0.014	7	0.0	0.0	6.918	A
C-AB	9	2	629	0.014	9	0.0	0.0	5.806	A
C-A	46	12			46				
A-B	8	2			8				
A-C	44	11			44				

#### 13:00 - 13:15

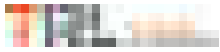
Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	4	656	0.023	15	0.0	0.0	5.616	A
B-A	9	2	523	0.017	9	0.0	0.0	7.002	A
C-AB	11	3	632	0.017	11	0.0	0.0	5.789	A
C-A	55	14			55				
A-B	9	2			9				
A-C	52	13			52				

#### 13:15 - 13:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	19	5	652	0.029	19	0.0	0.0	5.686	A
B-A	11	3	516	0.021	11	0.0	0.0	7.122	A
C-AB	14	3	636	0.021	14	0.0	0.0	5.775	A
C-A	67	17			67				
A-B	11	3			11				
A-C	64	16			64				

#### 13:30 - 13:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	19	5	652	0.029	19	0.0	0.0	5.686	A
B-A	11	3	516	0.021	11	0.0	0.0	7.122	A
C-AB	14	3	636	0.021	14	0.0	0.0	5.787	A
C-A	67	17			67				
A-B	11	3			11				
A-C	64	16			64				

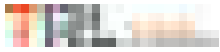


## 13:45 - 14:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	4	656	0.023	15	0.0	0.0	5.619	A
B-A	9	2	523	0.017	9	0.0	0.0	7.002	A
C-AB	11	3	632	0.017	11	0.0	0.0	5.810	A
C-A	55	14			55				
AB	9	2			9				
AC	52	13			52				

## 14:00 - 14:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	13	3	659	0.019	13	0.0	0.0	5.568	A
B-A	8	2	528	0.014	8	0.0	0.0	6.921	A
C-AB	9	2	629	0.014	9	0.0	0.0	5.818	A
C-A	46	12			46				
AB	8	2			8				
AC	44	11			44				



# 2021, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		1.21	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2021	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	89	100.000
B - Don White Road		ONE HOUR	✓	40	100.000
C - Sanders Road (S)		ONE HOUR	✓	102	100.000

## Origin-Destination Data

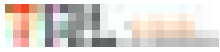
### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	21	68
	B - Don White Road	31	0	9
	C - Sanders Road (S)	99	3	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	0	6
	B - Don White Road	0	0	0
	C - Sanders Road (S)	4	0	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.02	5.56	0.0	A	8	12
B-A	0.06	7.07	0.1	A	28	43
C-AB	0.01	5.59	0.0	A	3	5
C-A					90	136
A-B					19	29
A-C					62	94

### Main Results for each time segment

#### 16:15 - 16:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	668	0.010	7	0.0	0.0	5.443	A
B-A	23	6	557	0.042	23	0.0	0.0	6.747	A
C-AB	3	0.64	648	0.004	3	0.0	0.0	5.581	A
C-A	74	19			74				
A-B	16	4			16				
A-C	51	13			51				

#### 16:30 - 16:45

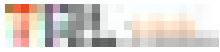
Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	8	2	664	0.012	8	0.0	0.0	5.492	A
B-A	28	7	551	0.051	28	0.0	0.1	6.880	A
C-AB	3	0.78	654	0.005	3	0.0	0.0	5.527	A
C-A	89	22			89				
A-B	19	5			19				
A-C	61	15			61				

#### 16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	10	2	657	0.015	10	0.0	0.0	5.559	A
B-A	34	9	543	0.063	34	0.1	0.1	7.068	A
C-AB	4	0.99	663	0.006	4	0.0	0.0	5.457	A
C-A	108	27			108				
A-B	23	6			23				
A-C	75	19			75				

#### 17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	10	2	657	0.015	10	0.0	0.0	5.560	A
B-A	34	9	543	0.063	34	0.1	0.1	7.068	A
C-AB	4	0.99	663	0.006	4	0.0	0.0	5.462	A
C-A	108	27			108				
A-B	23	6			23				
A-C	75	19			75				

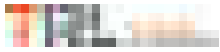


## 17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	8	2	663	0.012	8	0.0	0.0	5.492	A
B-A	28	7	551	0.051	28	0.1	0.1	6.881	A
C-AB	3	0.78	654	0.005	3	0.0	0.0	5.533	A
C-A	89	22			89				
AB	19	5			19				
AC	61	15			61				

## 17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	668	0.010	7	0.0	0.0	5.446	A
B-A	23	6	557	0.042	23	0.1	0.0	6.753	A
C-AB	3	0.64	647	0.004	3	0.0	0.0	5.586	A
C-A	74	19			74				
AB	16	4			16				
AC	51	13			51				



# 2027, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		0.76	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2027	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	48	100.000
B - Don White Road		ONE HOUR	✓	4	100.000
C - Sanders Road (S)		ONE HOUR	✓	37	100.000

## Origin-Destination Data

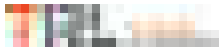
### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	1	47
	B - Don White Road	2	0	2
	C - Sanders Road (S)	26	11	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	0	6
	B - Don White Road	0	0	0
	C - Sanders Road (S)	4	0	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.00	0.00	0.0	A	0	0
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.02	5.92	0.0	A	11	16
C-A					23	35
A-B					0.92	1
A-C					43	65

### Main Results for each time segment

#### 05:45 - 06:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	727	0.000	0	0.0	0.0	0.000	A
B-A	0	0	558	0.000	0	0.0	0.0	0.000	A
C-AB	9	2	619	0.014	8	0.0	0.0	5.900	A
C-A	19	5			19				
A-B	0.75	0.19			0.75				
A-C	35	9			35				

#### 06:00 - 06:15

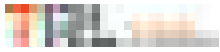
Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	725	0.000	0	0.0	0.0	0.000	A
B-A	0	0	555	0.000	0	0.0	0.0	0.000	A
C-AB	10	3	619	0.017	10	0.0	0.0	5.908	A
C-A	23	6			23				
A-B	0.90	0.22			0.90				
A-C	42	11			42				

#### 06:15 - 06:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	722	0.000	0	0.0	0.0	0.000	A
B-A	0	0	550	0.000	0	0.0	0.0	0.000	A
C-AB	13	3	621	0.020	13	0.0	0.0	5.920	A
C-A	28	7			28				
A-B	1	0.28			1				
A-C	52	13			52				

#### 06:30 - 06:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	722	0.000	0	0.0	0.0	0.000	A
B-A	0	0	550	0.000	0	0.0	0.0	0.000	A
C-AB	13	3	621	0.020	13	0.0	0.0	5.923	A
C-A	28	7			28				
A-B	1	0.28			1				
A-C	52	13			52				

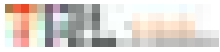
**06:45 - 07:00**

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	725	0.000	0	0.0	0.0	0.000	A
B-A	0	0	555	0.000	0	0.0	0.0	0.000	A
C-AB	10	3	619	0.017	10	0.0	0.0	5.912	A
C-A	23	6			23				
A-B	0.90	0.22			0.90				
A-C	42	11			42				

**07:00 - 07:15**

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	727	0.000	0	0.0	0.0	0.000	A
B-A	0	0	558	0.000	0	0.0	0.0	0.000	A
C-AB	9	2	619	0.014	9	0.0	0.0	5.903	A
C-A	19	5			19				
A-B	0.75	0.19			0.75				
A-C	35	9			35				





# 2027, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		1.34	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2027	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	133	100.000
B - Don White Road		ONE HOUR	✓	17	100.000
C - Sanders Road (S)		ONE HOUR	✓	54	100.000

## Origin-Destination Data

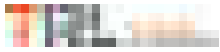
### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	13	120
	B - Don White Road	8	0	9
	C - Sanders Road (S)	40	14	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	18	7
	B - Don White Road	29	0	38
	C - Sanders Road (S)	23	17	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.02	7.23	0.0	A	8	12
B-A	0.02	9.20	0.0	A	7	11
C-AB	0.03	7.10	0.0	A	14	21
C-A					36	54
A-B					12	18
A-C					110	165

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	518	0.013	7	0.0	0.0	7.045	A
B-A	6	2	412	0.015	6	0.0	0.0	8.854	A
C-AB	11	3	524	0.021	11	0.0	0.0	7.016	A
C-A	29	7			29				
A-B	10	2			10				
A-C	90	23			90				

#### 08:00 - 08:15

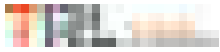
Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	8	2	513	0.016	8	0.0	0.0	7.124	A
B-A	7	2	407	0.018	7	0.0	0.0	8.998	A
C-AB	14	3	524	0.026	13	0.0	0.0	7.048	A
C-A	35	9			35				
A-B	12	3			12				
A-C	108	27			108				

#### 08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	10	2	507	0.020	10	0.0	0.0	7.235	A
B-A	9	2	400	0.022	9	0.0	0.0	9.204	A
C-AB	17	4	524	0.032	17	0.0	0.0	7.095	A
C-A	43	11			43				
A-B	14	4			14				
A-C	132	33			132				

#### 08:30 - 08:45

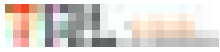
Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	10	2	507	0.020	10	0.0	0.0	7.235	A
B-A	9	2	400	0.022	9	0.0	0.0	9.204	A
C-AB	17	4	524	0.032	17	0.0	0.0	7.098	A
C-A	43	11			43				
A-B	14	4			14				
A-C	132	33			132				

**08:45 - 09:00**

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	8	2	513	0.016	8	0.0	0.0	7.128	A
B-A	7	2	407	0.018	7	0.0	0.0	9.001	A
C-AB	14	3	524	0.026	14	0.0	0.0	7.055	A
C-A	35	9			35				
A-B	12	3			12				
A-C	108	27			108				

**09:00 - 09:15**

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	518	0.013	7	0.0	0.0	7.050	A
B-A	6	2	413	0.015	6	0.0	0.0	8.856	A
C-AB	11	3	524	0.021	11	0.0	0.0	7.020	A
C-A	29	7			29				
A-B	10	2			10				
A-C	90	23			90				



# 2027, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		1.27	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2027	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	72	100.000
B - Don White Road		ONE HOUR	✓	27	100.000
C - Sanders Road (S)		ONE HOUR	✓	77	100.000

## Origin-Destination Data

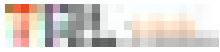
### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	10	62
	B - Don White Road	10	0	17
	C - Sanders Road (S)	65	12	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	0	21
	B - Don White Road	0	0	13
	C - Sanders Road (S)	20	0	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.03	5.70	0.0	A	16	23
B-A	0.02	7.15	0.0	A	9	14
C-AB	0.02	5.82	0.0	A	12	18
C-A					58	88
A-B					9	14
A-C					57	85

### Main Results for each time segment

#### 12:45 - 13:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	13	3	658	0.019	13	0.0	0.0	5.575	A
B-A	8	2	526	0.014	7	0.0	0.0	6.938	A
C-AB	10	2	629	0.016	10	0.0	0.0	5.808	A
C-A	48	12			48				
A-B	8	2			8				
A-C	47	12			47				

#### 13:00 - 13:15

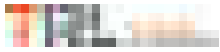
Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	4	655	0.023	15	0.0	0.0	5.626	A
B-A	9	2	521	0.017	9	0.0	0.0	7.027	A
C-AB	12	3	632	0.019	12	0.0	0.0	5.792	A
C-A	57	14			57				
A-B	9	2			9				
A-C	56	14			56				

#### 13:15 - 13:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	19	5	650	0.029	19	0.0	0.0	5.698	A
B-A	11	3	514	0.021	11	0.0	0.0	7.154	A
C-AB	15	4	637	0.023	15	0.0	0.0	5.779	A
C-A	70	17			70				
A-B	11	3			11				
A-C	68	17			68				

#### 13:30 - 13:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	19	5	650	0.029	19	0.0	0.0	5.698	A
B-A	11	3	514	0.021	11	0.0	0.0	7.154	A
C-AB	15	4	637	0.023	15	0.0	0.0	5.789	A
C-A	70	17			70				
A-B	11	3			11				
A-C	68	17			68				

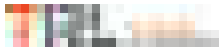


## 13:45 - 14:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	4	655	0.023	15	0.0	0.0	5.627	A
B-A	9	2	521	0.017	9	0.0	0.0	7.030	A
C-AB	12	3	632	0.019	12	0.0	0.0	5.814	A
C-A	57	14			57				
AB	9	2			9				
AC	56	14			56				

## 14:00 - 14:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	13	3	658	0.019	13	0.0	0.0	5.576	A
B-A	8	2	526	0.014	8	0.0	0.0	6.938	A
C-AB	10	2	629	0.016	10	0.0	0.0	5.819	A
C-A	48	12			48				
AB	8	2			8				
AC	47	12			47				



# 2027, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		1.20	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2027	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	93	100.000
B - Don White Road		ONE HOUR	✓	41	100.000
C - Sanders Road (S)		ONE HOUR	✓	106	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	22	71
	B - Don White Road	32	0	9
	C - Sanders Road (S)	103	3	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	0	6
	B - Don White Road	0	0	0
	C - Sanders Road (S)	4	0	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.02	5.58	0.0	A	8	12
B-A	0.07	7.10	0.1	A	29	44
C-AB	0.01	5.57	0.0	A	3	5
C-A					94	141
A-B					20	30
A-C					65	98

### Main Results for each time segment

#### 16:15 - 16:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	666	0.010	7	0.0	0.0	5.458	A
B-A	24	6	556	0.043	24	0.0	0.0	6.768	A
C-AB	3	0.64	649	0.004	3	0.0	0.0	5.570	A
C-A	77	19			77				
A-B	17	4			17				
A-C	53	13			53				

#### 16:30 - 16:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	8	2	662	0.012	8	0.0	0.0	5.508	A
B-A	29	7	550	0.052	29	0.0	0.1	6.907	A
C-AB	3	0.79	656	0.005	3	0.0	0.0	5.514	A
C-A	92	23			92				
A-B	20	5			20				
A-C	64	16			64				

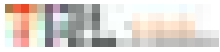
#### 16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	10	2	655	0.015	10	0.0	0.0	5.579	A
B-A	35	9	542	0.065	35	0.1	0.1	7.104	A
C-AB	4	1	665	0.006	4	0.0	0.0	5.441	A
C-A	113	28			113				
A-B	24	6			24				
A-C	78	20			78				

#### 17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	10	2	655	0.015	10	0.0	0.0	5.579	A
B-A	35	9	542	0.065	35	0.1	0.1	7.104	A
C-AB	4	1	665	0.006	4	0.0	0.0	5.446	A
C-A	113	28			113				
A-B	24	6			24				
A-C	78	20			78				



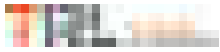


## 17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	8	2	661	0.012	8	0.0	0.0	5.509	A
B-A	29	7	550	0.052	29	0.1	0.1	6.908	A
C-AB	3	0.79	656	0.005	3	0.0	0.0	5.522	A
C-A	92	23			92				
AB	20	5			20				
AC	64	16			64				

## 17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	666	0.010	7	0.0	0.0	5.459	A
B-A	24	6	556	0.043	24	0.1	0.0	6.772	A
C-AB	3	0.64	649	0.004	3	0.0	0.0	5.575	A
C-A	77	19			77				
AB	17	4			17				
AC	53	13			53				



# 2027 + Dev, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		4.50	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2027 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	71	100.000
B - Don White Road		ONE HOUR	✓	30	100.000
C - Sanders Road (S)		ONE HOUR	✓	53	100.000

## Origin-Destination Data

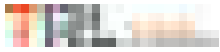
### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	24	47
	B - Don White Road	22	0	8
	C - Sanders Road (S)	26	27	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	50	6
	B - Don White Road	87	0	64
	C - Sanders Road (S)	4	12	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.02	9.14	0.0	A	7	11
B-A	0.08	13.35	0.1	B	20	30
C-AB	0.06	6.95	0.1	A	26	39
C-A					23	34
A-B					22	33
A-C					43	65

### Main Results for each time segment

#### 05:45 - 06:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6	2	409	0.015	6	0.0	0.0	8.924	A
B-A	17	4	300	0.055	16	0.0	0.1	12.691	B
C-AB	21	5	549	0.038	21	0.0	0.0	6.812	A
C-A	19	5			19				
A-B	18	5			18				
A-C	35	9			35				

#### 06:00 - 06:15

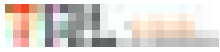
Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	406	0.018	7	0.0	0.0	9.016	A
B-A	20	5	297	0.067	20	0.1	0.1	12.972	B
C-AB	25	6	549	0.046	25	0.0	0.1	6.870	A
C-A	22	6			22				
A-B	22	5			22				
A-C	42	11			42				

#### 06:15 - 06:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	9	2	403	0.022	9	0.0	0.0	9.142	A
B-A	24	6	294	0.082	24	0.1	0.1	13.347	B
C-AB	31	8	550	0.057	31	0.1	0.1	6.948	A
C-A	27	7			27				
A-B	26	7			26				
A-C	52	13			52				

#### 06:30 - 06:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	9	2	403	0.022	9	0.0	0.0	9.143	A
B-A	24	6	294	0.082	24	0.1	0.1	13.352	B
C-AB	31	8	550	0.057	31	0.1	0.1	6.946	A
C-A	27	7			27				
A-B	26	7			26				
A-C	52	13			52				

**06:45 - 07:00**

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	406	0.018	7	0.0	0.0	9.021	A
B-A	20	5	297	0.067	20	0.1	0.1	12.982	B
C-AB	25	6	549	0.046	25	0.1	0.1	6.870	A
C-A	22	6			22				
A-B	22	5			22				
A-C	42	11			42				

**07:00 - 07:15**

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6	2	409	0.015	6	0.0	0.0	8.933	A
B-A	17	4	300	0.055	17	0.1	0.1	12.717	B
C-AB	21	5	549	0.038	21	0.1	0.0	6.817	A
C-A	19	5			19				
A-B	18	5			18				
A-C	35	9			35				

# 2027 + Dev, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		4.19	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2027 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	55	100.000
B - Don White Road		ONE HOUR	✓	38	100.000
C - Sanders Road (S)		ONE HOUR	✓	61	100.000

## Origin-Destination Data

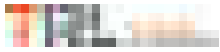
### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	35	20
	B - Don White Road	26	0	12
	C - Sanders Road (S)	40	21	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	60	7
	B - Don White Road	78	0	51
	C - Sanders Road (S)	23	15	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.03	8.35	0.0	A	11	17
B-A	0.09	12.34	0.1	B	24	36
C-AB	0.05	6.91	0.1	A	21	31
C-A					35	53
A-B					32	48
A-C					18	28

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	9	2	451	0.020	9	0.0	0.0	8.146	A
B-A	20	5	326	0.060	19	0.0	0.1	11.728	B
C-AB	17	4	542	0.031	17	0.0	0.0	6.846	A
C-A	29	7			29				
A-B	26	7			26				
A-C	15	4			15				

#### 08:00 - 08:15

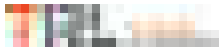
Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	11	3	448	0.024	11	0.0	0.0	8.232	A
B-A	23	6	324	0.072	23	0.1	0.1	11.985	B
C-AB	20	5	544	0.037	20	0.0	0.0	6.871	A
C-A	35	9			35				
A-B	31	8			31				
A-C	18	4			18				

#### 08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	13	3	444	0.030	13	0.0	0.0	8.350	A
B-A	29	7	320	0.089	29	0.1	0.1	12.332	B
C-AB	25	6	546	0.046	25	0.0	0.1	6.905	A
C-A	42	10			42				
A-B	39	10			39				
A-C	22	6			22				

#### 08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	13	3	444	0.030	13	0.0	0.0	8.351	A
B-A	29	7	320	0.089	29	0.1	0.1	12.337	B
C-AB	25	6	546	0.046	25	0.1	0.1	6.912	A
C-A	42	10			42				
A-B	39	10			39				
A-C	22	6			22				

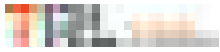


## 08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	11	3	448	0.024	11	0.0	0.0	8.235	A
B-A	23	6	324	0.072	23	0.1	0.1	11.994	B
C-AB	20	5	544	0.037	20	0.1	0.0	6.881	A
C-A	35	9			35				
A-B	31	8			31				
A-C	18	4			18				

## 09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	9	2	451	0.020	9	0.0	0.0	8.154	A
B-A	20	5	326	0.060	20	0.1	0.1	11.752	B
C-AB	17	4	542	0.031	17	0.0	0.0	6.855	A
C-A	29	7			29				
A-B	26	7			26				
A-C	15	4			15				



# 2027 + Dev, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		3.79	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2027 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	86	100.000
B - Don White Road		ONE HOUR	✓	56	100.000
C - Sanders Road (S)		ONE HOUR	✓	86	100.000

## Origin-Destination Data

### Demand (Veh/hr)

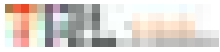
		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	24	62
	B - Don White Road	36	0	20
	C - Sanders Road (S)	65	21	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	54	21
	B - Don White Road	64	0	12
	C - Sanders Road (S)	20	43	0





## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.04	6.43	0.0	A	18	28
B-A	0.12	12.17	0.1	B	33	50
C-AB	0.06	8.30	0.1	A	22	33
C-A					57	85
A-B					22	33
A-C					57	85

### Main Results for each time segment

#### 12:45 - 13:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	4	596	0.025	15	0.0	0.0	6.192	A
B-A	27	7	346	0.078	27	0.0	0.1	11.279	B
C-AB	18	4	452	0.039	18	0.0	0.0	8.287	A
C-A	47	12			47				
A-B	18	5			18				
A-C	47	12			47				

#### 13:00 - 13:15

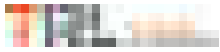
Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	18	4	590	0.030	18	0.0	0.0	6.288	A
B-A	32	8	341	0.095	32	0.1	0.1	11.644	B
C-AB	22	5	456	0.048	22	0.0	0.1	8.296	A
C-A	56	14			56				
A-B	22	5			22				
A-C	56	14			56				

#### 13:15 - 13:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	22	6	582	0.038	22	0.0	0.0	6.425	A
B-A	40	10	335	0.118	40	0.1	0.1	12.158	B
C-AB	27	7	462	0.059	27	0.1	0.1	8.291	A
C-A	67	17			67				
A-B	26	7			26				
A-C	68	17			68				

#### 13:30 - 13:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	22	6	582	0.038	22	0.0	0.0	6.426	A
B-A	40	10	335	0.118	40	0.1	0.1	12.167	B
C-AB	27	7	462	0.059	27	0.1	0.1	8.277	A
C-A	67	17			67				
A-B	26	7			26				
A-C	68	17			68				



## 13:45 - 14:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	18	4	590	0.030	18	0.0	0.0	6.293	A
B-A	32	8	341	0.095	32	0.1	0.1	11.656	B
C-AB	22	5	456	0.048	22	0.1	0.1	8.266	A
C-A	56	14			56				
AB	22	5			22				
AC	56	14			56				

## 14:00 - 14:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	4	596	0.025	15	0.0	0.0	6.197	A
B-A	27	7	346	0.078	27	0.1	0.1	11.308	B
C-AB	18	4	452	0.039	18	0.1	0.0	8.280	A
C-A	47	12			47				
AB	18	5			18				
AC	47	12			47				

# 2027 + Dev, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Don White Road Junction	T-Junction	Two-way		2.38	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2027 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Sanders Road (N)		ONE HOUR	✓	100	100.000
B - Don White Road		ONE HOUR	✓	69	100.000
C - Sanders Road (S)		ONE HOUR	✓	112	100.000

## Origin-Destination Data

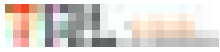
### Demand (Veh/hr)

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	29	71
	B - Don White Road	49	0	20
	C - Sanders Road (S)	103	9	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Sanders Road (N)	B - Don White Road	C - Sanders Road (S)
From	A - Sanders Road (N)	0	22	6
	B - Don White Road	16	0	0
	C - Sanders Road (S)	4	56	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.03	5.72	0.0	A	18	28
B-A	0.11	8.51	0.1	A	45	67
C-AB	0.03	8.29	0.0	A	11	16
C-A					92	138
A-B					27	40
A-C					65	98

### Main Results for each time segment

#### 16:15 - 16:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	4	666	0.023	15	0.0	0.0	5.527	A
B-A	37	9	491	0.075	37	0.0	0.1	7.915	A
C-AB	8	2	442	0.019	8	0.0	0.0	8.290	A
C-A	76	19			76				
A-B	22	5			22				
A-C	53	13			53				

#### 16:30 - 16:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	18	4	660	0.027	18	0.0	0.0	5.606	A
B-A	44	11	485	0.091	44	0.1	0.1	8.158	A
C-AB	10	3	452	0.023	10	0.0	0.0	8.187	A
C-A	90	23			90				
A-B	26	7			26				
A-C	64	16			64				

#### 16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	22	6	651	0.034	22	0.0	0.0	5.720	A
B-A	54	13	477	0.113	54	0.1	0.1	8.503	A
C-AB	13	3	465	0.028	13	0.0	0.0	8.010	A
C-A	110	28			110				
A-B	32	8			32				
A-C	78	20			78				

#### 17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	22	6	651	0.034	22	0.0	0.0	5.720	A
B-A	54	13	477	0.113	54	0.1	0.1	8.507	A
C-AB	13	3	465	0.028	13	0.0	0.0	7.961	A
C-A	110	28			110				
A-B	32	8			32				
A-C	78	20			78				



## 17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	18	4	660	0.027	18	0.0	0.0	5.610	A
B-A	44	11	485	0.091	44	0.1	0.1	8.163	A
C-AB	10	3	452	0.023	10	0.0	0.0	8.082	A
C-A	90	23			90				
AB	26	7			26				
AC	64	16			64				

## 17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	4	666	0.023	15	0.0	0.0	5.532	A
B-A	37	9	491	0.075	37	0.1	0.1	7.929	A
C-AB	8	2	443	0.019	8	0.0	0.0	8.239	A
C-A	76	19			76				
AB	22	5			22				
AC	53	13			53				

## **Appendix Y – A510 Northern Way / Stewarts Road roundabout sensitivity test Junctions 9 Results**



Junctions 9
ARCADY 9 - Roundabout Module
Version: 9.5.1.7462 © Copyright TRL Limited, 2019
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**Filename:** A510 Northern Way Stewarts Road Roundabout Sensitivity Test.j9  
**Path:** P:\2021\P21-340\T&T\Capacity Assessments\Junctions 9\Sensitivity Test  
**Report generation date:** 15/02/2022 13:10:05

- »2021, 06:00 - 07:00
- »2021, 08:00 - 09:00
- »2021, 13:00 - 14:00
- »2021, 16:30 - 17:30
- »2027, 06:00 - 07:00
- »2027, 08:00 - 09:00
- »2027, 13:00 - 14:00
- »2027, 16:30 - 17:30
- »2027 + Dev, 06:00 - 07:00
- »2027 + Dev, 08:00 - 09:00
- »2027 + Dev, 13:00 - 14:00
- »2027 + Dev, 16:30 - 17:30

**Summary of junction performance**

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
<b>2021</b>																				
1 - Stewarts Road (S)	D1	0.2	2.58	0.15	A	D2	0.4	3.20	0.30	A	D3	0.4	3.38	0.26	A	D4	0.5	3.44	0.34	A
2 - A510 Northern Way		0.3	3.24	0.25	A		1.0	5.05	0.49	A		0.5	3.98	0.31	A		0.3	3.23	0.23	A
3 - Stewarts Road (N)		0.1	2.70	0.06	A		0.1	3.07	0.11	A		0.2	2.91	0.15	A		0.5	3.08	0.33	A
<b>2027</b>																				
1 - Stewarts Road (S)	D5	0.2	2.61	0.15	A	D6	0.5	3.28	0.31	A	D7	0.4	3.46	0.28	A	D8	0.5	3.56	0.35	A
2 - A510 Northern Way		0.4	3.30	0.27	A		1.0	5.30	0.51	A		0.5	4.10	0.33	A		0.3	3.28	0.24	A
3 - Stewarts Road (N)		0.1	2.71	0.06	A		0.1	3.11	0.12	A		0.2	2.97	0.16	A		0.5	3.17	0.35	A
<b>2027 + Dev</b>																				
1 - Stewarts Road (S)	D9	0.2	2.66	0.16	A	D10	0.5	3.35	0.32	A	D11	0.4	3.56	0.28	A	D12	0.6	3.62	0.36	A
2 - A510 Northern Way		0.4	3.50	0.29	A		1.2	5.78	0.54	A		0.5	4.30	0.35	A		0.3	3.38	0.25	A
3 - Stewarts Road (N)		0.1	3.08	0.09	A		0.2	3.42	0.14	A		0.2	3.28	0.20	A		0.6	3.29	0.37	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.



## File summary

### File Description

<b>Title</b>	A510 Northern Way/Stewarts Road
<b>Location</b>	Wellingborough
<b>Site number</b>	
<b>Date</b>	01/12/2021
<b>Version</b>	
<b>Status</b>	Existing
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	P21-340
<b>Enumerator</b>	HQjake.blay
<b>Description</b>	

## Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

## Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

## Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D2	2021	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D3	2021	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D4	2021	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D5	2027	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D6	2027	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D7	2027	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D8	2027	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D9	2027 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D10	2027 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D11	2027 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D12	2027 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

## Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000



# 2021, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	2.94	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
1	Stewarts Road (S)	
2	A510 Northen Way	
3	Stewarts Road (N)	

### Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - Stewarts Road (S)	3.65	7.04	26.9	28.9	51.4	30.4	
2 - A510 Northen Way	3.64	7.30	12.6	28.9	51.4	40.0	
3 - Stewarts Road (N)	3.70	7.39	27.3	31.5	51.5	26.8	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Stewarts Road (S)	0.637	1863
2 - A510 Northen Way	0.586	1645
3 - Stewarts Road (N)	0.658	1958

The slope and intercept shown above include any corrections and adjustments.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

## Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	219	100.000
2 - A510 Northen Way		ONE HOUR	✓	343	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	76	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	117	102
	2 - A510 Northen Way	164	0	179
	3 - Stewarts Road (N)	22	54	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	17	4
	2 - A510 Northen Way	6	0	6
	3 - Stewarts Road (N)	20	33	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.15	2.58	0.2	A	201	301
2 - A510 Northen Way	0.25	3.24	0.3	A	315	472
3 - Stewarts Road (N)	0.06	2.70	0.1	A	70	105

### Main Results for each time segment

#### 05:45 - 06:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	165	41	41	1648	0.100	164	140	0.0	0.1	2.426	A
2 - A510 Northen Way	258	65	77	1508	0.171	257	128	0.0	0.2	2.877	A
3 - Stewarts Road (N)	57	14	123	1448	0.040	57	211	0.0	0.0	2.587	A

#### 06:00 - 06:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	197	49	49	1642	0.120	197	167	0.1	0.1	2.490	A
2 - A510 Northen Way	308	77	92	1499	0.206	308	154	0.2	0.3	3.022	A
3 - Stewarts Road (N)	68	17	147	1435	0.048	68	252	0.0	0.0	2.633	A

## 06:15 - 06:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	241	60	59	1634	0.148	241	205	0.1	0.2	2.584	A
2 - A510 Northen Way	378	94	112	1487	0.254	377	188	0.3	0.3	3.243	A
3 - Stewarts Road (N)	84	21	180	1417	0.059	84	309	0.0	0.1	2.698	A

## 06:30 - 06:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	241	60	59	1634	0.148	241	205	0.2	0.2	2.584	A
2 - A510 Northen Way	378	94	112	1487	0.254	378	188	0.3	0.3	3.243	A
3 - Stewarts Road (N)	84	21	181	1417	0.059	84	309	0.1	0.1	2.698	A

## 06:45 - 07:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	197	49	49	1642	0.120	197	167	0.2	0.1	2.492	A
2 - A510 Northen Way	308	77	92	1499	0.206	309	154	0.3	0.3	3.024	A
3 - Stewarts Road (N)	68	17	148	1435	0.048	68	253	0.1	0.1	2.633	A

## 07:00 - 07:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	165	41	41	1648	0.100	165	140	0.1	0.1	2.428	A
2 - A510 Northen Way	258	65	77	1508	0.171	258	129	0.3	0.2	2.883	A
3 - Stewarts Road (N)	57	14	124	1448	0.040	57	212	0.1	0.0	2.587	A

# 2021, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	4.14	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2021	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	433	100.000
2 - A510 Northen Way		ONE HOUR	✓	621	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	132	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	304	129
	2 - A510 Northen Way	361	0	260
	3 - Stewarts Road (N)	58	74	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	15	6
	2 - A510 Northen Way	14	0	8
	3 - Stewarts Road (N)	23	28	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.30	3.20	0.4	A	397	596
2 - A510 Northen Way	0.49	5.05	1.0	A	570	855
3 - Stewarts Road (N)	0.11	3.07	0.1	A	121	182

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	326	81	56	1618	0.201	325	314	0.0	0.3	2.783	A
2 - A510 Northen Way	468	117	97	1422	0.329	466	284	0.0	0.5	3.757	A
3 - Stewarts Road (N)	99	25	271	1395	0.071	99	292	0.0	0.1	2.778	A

#### 08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	389	97	66	1610	0.242	389	376	0.3	0.3	2.947	A
2 - A510 Northen Way	558	140	116	1411	0.396	558	340	0.5	0.6	4.216	A
3 - Stewarts Road (N)	119	30	324	1363	0.087	119	349	0.1	0.1	2.892	A

#### 08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	477	119	81	1600	0.298	476	461	0.3	0.4	3.205	A
2 - A510 Northen Way	684	171	142	1396	0.490	683	416	0.6	0.9	5.034	A
3 - Stewarts Road (N)	145	36	397	1320	0.110	145	428	0.1	0.1	3.065	A

#### 08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	477	119	81	1600	0.298	477	461	0.4	0.4	3.205	A
2 - A510 Northen Way	684	171	142	1396	0.490	684	416	0.9	1.0	5.051	A
3 - Stewarts Road (N)	145	36	397	1319	0.110	145	428	0.1	0.1	3.066	A

#### 08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	389	97	67	1610	0.242	390	377	0.4	0.3	2.949	A
2 - A510 Northen Way	558	140	116	1411	0.396	559	340	1.0	0.7	4.233	A
3 - Stewarts Road (N)	119	30	325	1362	0.087	119	350	0.1	0.1	2.894	A

## 09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	326	81	56	1618	0.201	326	316	0.3	0.3	2.786	A
2 - A510 Northen Way	468	117	97	1421	0.329	468	285	0.7	0.5	3.778	A
3 - Stewarts Road (N)	99	25	272	1394	0.071	99	293	0.1	0.1	2.782	A

# 2021, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	3.52	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2021	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	342	100.000
2 - A510 Northen Way		ONE HOUR	✓	376	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	204	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	262	80
	2 - A510 Northen Way	255	0	121
	3 - Stewarts Road (N)	81	123	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	22	23
	2 - A510 Northen Way	19	0	22
	3 - Stewarts Road (N)	22	17	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.26	3.38	0.4	A	314	471
2 - A510 Northen Way	0.31	3.98	0.5	A	345	518
3 - Stewarts Road (N)	0.15	2.91	0.2	A	187	281

### Main Results for each time segment

#### 12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	257	64	92	1468	0.175	257	252	0.0	0.2	2.971	A
2 - A510 Northen Way	283	71	60	1335	0.212	282	289	0.0	0.3	3.415	A
3 - Stewarts Road (N)	154	38	191	1519	0.101	153	151	0.0	0.1	2.635	A

#### 13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	307	77	111	1457	0.211	307	302	0.2	0.3	3.131	A
2 - A510 Northen Way	338	85	72	1328	0.255	338	346	0.3	0.3	3.635	A
3 - Stewarts Road (N)	183	46	229	1495	0.123	183	181	0.1	0.1	2.745	A

#### 13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	377	94	135	1442	0.261	376	370	0.3	0.4	3.379	A
2 - A510 Northen Way	414	103	88	1318	0.314	414	424	0.3	0.5	3.977	A
3 - Stewarts Road (N)	225	56	280	1461	0.154	224	221	0.1	0.2	2.911	A

#### 13:30 - 13:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	377	94	135	1442	0.261	377	370	0.4	0.4	3.379	A
2 - A510 Northen Way	414	103	88	1318	0.314	414	424	0.5	0.5	3.980	A
3 - Stewarts Road (N)	225	56	281	1461	0.154	225	221	0.2	0.2	2.912	A

#### 13:45 - 14:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	307	77	111	1457	0.211	308	302	0.4	0.3	3.133	A
2 - A510 Northen Way	338	85	72	1328	0.255	338	346	0.5	0.3	3.638	A
3 - Stewarts Road (N)	183	46	230	1494	0.123	184	181	0.2	0.1	2.748	A





## 14:00 - 14:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	257	64	93	1468	0.175	258	253	0.3	0.2	2.975	A
2 - A510 Northen Way	283	71	60	1335	0.212	283	290	0.3	0.3	3.425	A
3 - Stewarts Road (N)	154	38	192	1519	0.101	154	151	0.1	0.1	2.638	A

# 2021, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	3.25	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2021	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	481	100.000
2 - A510 Northen Way		ONE HOUR	✓	305	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	533	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	413	68
	2 - A510 Northen Way	227	0	78
	3 - Stewarts Road (N)	202	331	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	3	6
	2 - A510 Northen Way	8	0	17
	3 - Stewarts Road (N)	2	1	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.34	3.44	0.5	A	441	662
2 - A510 Northen Way	0.23	3.23	0.3	A	280	420
3 - Stewarts Road (N)	0.33	3.08	0.5	A	489	734

### Main Results for each time segment

#### 16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	362	91	248	1647	0.220	361	322	0.0	0.3	2.797	A
2 - A510 Northen Way	230	57	51	1463	0.157	229	558	0.0	0.2	2.916	A
3 - Stewarts Road (N)	401	100	170	1812	0.222	400	110	0.0	0.3	2.548	A

#### 16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	432	108	297	1616	0.268	432	385	0.3	0.4	3.039	A
2 - A510 Northen Way	274	69	61	1457	0.188	274	668	0.2	0.2	3.042	A
3 - Stewarts Road (N)	479	120	204	1788	0.268	479	131	0.3	0.4	2.749	A

#### 16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	530	132	364	1575	0.336	529	472	0.4	0.5	3.440	A
2 - A510 Northen Way	336	84	75	1449	0.232	336	818	0.2	0.3	3.232	A
3 - Stewarts Road (N)	587	147	250	1756	0.334	586	161	0.4	0.5	3.076	A

#### 17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	530	132	364	1575	0.336	530	472	0.5	0.5	3.443	A
2 - A510 Northen Way	336	84	75	1449	0.232	336	819	0.3	0.3	3.232	A
3 - Stewarts Road (N)	587	147	250	1756	0.334	587	161	0.5	0.5	3.078	A

#### 17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	432	108	298	1616	0.268	433	386	0.5	0.4	3.043	A
2 - A510 Northen Way	274	69	61	1457	0.188	274	670	0.3	0.2	3.044	A
3 - Stewarts Road (N)	479	120	204	1788	0.268	480	131	0.5	0.4	2.754	A

## 17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	362	91	249	1646	0.220	362	323	0.4	0.3	2.804	A
2 - A510 Northen Way	230	57	51	1463	0.157	230	561	0.2	0.2	2.922	A
3 - Stewarts Road (N)	401	100	171	1811	0.222	402	110	0.4	0.3	2.556	A

# 2027, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	2.98	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2027	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	229	100.000
2 - A510 Northen Way		ONE HOUR	✓	358	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	79	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	122	107
	2 - A510 Northen Way	171	0	187
	3 - Stewarts Road (N)	23	56	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	17	4
	2 - A510 Northen Way	6	0	6
	3 - Stewarts Road (N)	20	33	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.15	2.61	0.2	A	210	315
2 - A510 Northen Way	0.27	3.30	0.4	A	329	493
3 - Stewarts Road (N)	0.06	2.71	0.1	A	72	109

### Main Results for each time segment

#### 05:45 - 06:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	172	43	42	1647	0.105	172	146	0.0	0.1	2.440	A
2 - A510 Northen Way	270	67	80	1506	0.179	269	134	0.0	0.2	2.909	A
3 - Stewarts Road (N)	59	15	128	1446	0.041	59	221	0.0	0.0	2.596	A

#### 06:00 - 06:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	206	51	50	1641	0.125	206	174	0.1	0.1	2.507	A
2 - A510 Northen Way	322	80	96	1497	0.215	322	160	0.2	0.3	3.063	A
3 - Stewarts Road (N)	71	18	154	1432	0.050	71	264	0.0	0.1	2.644	A

#### 06:15 - 06:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	252	63	62	1632	0.154	252	213	0.1	0.2	2.607	A
2 - A510 Northen Way	394	99	118	1484	0.266	394	196	0.3	0.4	3.301	A
3 - Stewarts Road (N)	87	22	188	1413	0.062	87	323	0.1	0.1	2.713	A

#### 06:30 - 06:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	252	63	62	1632	0.154	252	214	0.2	0.2	2.607	A
2 - A510 Northen Way	394	99	118	1484	0.266	394	196	0.4	0.4	3.301	A
3 - Stewarts Road (N)	87	22	188	1413	0.062	87	324	0.1	0.1	2.713	A

#### 06:45 - 07:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	206	51	50	1641	0.125	206	175	0.2	0.1	2.510	A
2 - A510 Northen Way	322	80	96	1497	0.215	322	160	0.4	0.3	3.065	A
3 - Stewarts Road (N)	71	18	154	1432	0.050	71	265	0.1	0.1	2.646	A

## 07:00 - 07:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	172	43	42	1647	0.105	173	146	0.1	0.1	2.440	A
2 - A510 Northern Way	270	67	81	1506	0.179	270	134	0.3	0.2	2.915	A
3 - Stewarts Road (N)	59	15	129	1445	0.041	60	222	0.1	0.0	2.599	A

# 2027, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	4.30	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2027	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	453	100.000
2 - A510 Northen Way		ONE HOUR	✓	648	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	138	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	318	135
	2 - A510 Northen Way	377	0	271
	3 - Stewarts Road (N)	61	77	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	15	6
	2 - A510 Northen Way	14	0	8
	3 - Stewarts Road (N)	23	28	0





## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.31	3.28	0.5	A	416	624
2 - A510 Northen Way	0.51	5.30	1.0	A	595	892
3 - Stewarts Road (N)	0.12	3.11	0.1	A	127	190

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	341	85	58	1617	0.211	340	328	0.0	0.3	2.816	A
2 - A510 Northen Way	488	122	101	1419	0.344	486	296	0.0	0.5	3.849	A
3 - Stewarts Road (N)	104	26	283	1388	0.075	104	304	0.0	0.1	2.803	A

#### 08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	407	102	69	1609	0.253	407	393	0.3	0.3	2.996	A
2 - A510 Northen Way	583	146	121	1408	0.414	582	355	0.5	0.7	4.354	A
3 - Stewarts Road (N)	124	31	338	1354	0.092	124	365	0.1	0.1	2.925	A

#### 08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	499	125	85	1597	0.312	498	481	0.3	0.5	3.273	A
2 - A510 Northen Way	713	178	149	1393	0.512	712	435	0.7	1.0	5.278	A
3 - Stewarts Road (N)	152	38	414	1309	0.116	152	446	0.1	0.1	3.110	A

#### 08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	499	125	85	1597	0.312	499	482	0.5	0.5	3.276	A
2 - A510 Northen Way	713	178	149	1393	0.512	713	435	1.0	1.0	5.299	A
3 - Stewarts Road (N)	152	38	415	1309	0.116	152	447	0.1	0.1	3.111	A

#### 08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	407	102	69	1608	0.253	408	395	0.5	0.3	2.998	A
2 - A510 Northen Way	583	146	121	1408	0.414	584	355	1.0	0.7	4.376	A
3 - Stewarts Road (N)	124	31	340	1354	0.092	124	366	0.1	0.1	2.929	A



09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	341	85	58	1617	0.211	341	330	0.3	0.3	2.822	A
2 - A510 Northen Way	488	122	102	1419	0.344	489	298	0.7	0.5	3.872	A
3 - Stewarts Road (N)	104	26	284	1387	0.075	104	306	0.1	0.1	2.808	A

# 2027, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	3.61	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2027	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	361	100.000
2 - A510 Northen Way		ONE HOUR	✓	397	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	216	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	276	85
	2 - A510 Northen Way	269	0	128
	3 - Stewarts Road (N)	86	130	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	22	23
	2 - A510 Northen Way	19	0	22
	3 - Stewarts Road (N)	22	17	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.28	3.46	0.4	A	331	497
2 - A510 Northen Way	0.33	4.10	0.5	A	364	546
3 - Stewarts Road (N)	0.16	2.97	0.2	A	198	297

### Main Results for each time segment

#### 12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	272	68	98	1465	0.186	271	266	0.0	0.2	3.014	A
2 - A510 Northen Way	299	75	64	1333	0.224	298	305	0.0	0.3	3.475	A
3 - Stewarts Road (N)	163	41	202	1512	0.108	162	160	0.0	0.1	2.666	A

#### 13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	325	81	117	1453	0.223	324	319	0.2	0.3	3.189	A
2 - A510 Northen Way	357	89	76	1325	0.269	357	365	0.3	0.4	3.716	A
3 - Stewarts Road (N)	194	49	242	1486	0.131	194	191	0.1	0.1	2.785	A

#### 13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	397	99	143	1437	0.277	397	390	0.3	0.4	3.462	A
2 - A510 Northen Way	437	109	93	1315	0.332	437	447	0.4	0.5	4.095	A
3 - Stewarts Road (N)	238	59	296	1451	0.164	238	234	0.1	0.2	2.967	A

#### 13:30 - 13:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	397	99	143	1437	0.277	397	391	0.4	0.4	3.462	A
2 - A510 Northen Way	437	109	94	1315	0.332	437	447	0.5	0.5	4.100	A
3 - Stewarts Road (N)	238	59	296	1450	0.164	238	235	0.2	0.2	2.968	A

#### 13:45 - 14:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	325	81	117	1453	0.223	325	320	0.4	0.3	3.194	A
2 - A510 Northen Way	357	89	77	1325	0.269	357	365	0.5	0.4	3.720	A
3 - Stewarts Road (N)	194	49	242	1486	0.131	194	192	0.2	0.2	2.787	A



## 14:00 - 14:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	272	68	98	1464	0.186	272	268	0.3	0.2	3.019	A
2 - A510 Northen Way	299	75	64	1333	0.224	299	306	0.4	0.3	3.486	A
3 - Stewarts Road (N)	163	41	203	1512	0.108	163	161	0.2	0.1	2.670	A

# 2027, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	3.34	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2027	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	502	100.000
2 - A510 Northen Way		ONE HOUR	✓	319	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	558	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	431	71
	2 - A510 Northen Way	237	0	82
	3 - Stewarts Road (N)	212	346	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	3	6
	2 - A510 Northen Way	8	0	17
	3 - Stewarts Road (N)	2	1	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.35	3.56	0.5	A	461	691
2 - A510 Northen Way	0.24	3.28	0.3	A	293	439
3 - Stewarts Road (N)	0.35	3.17	0.5	A	512	768

### Main Results for each time segment

#### 16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	378	94	260	1640	0.230	377	337	0.0	0.3	2.847	A
2 - A510 Northen Way	240	60	53	1461	0.164	239	583	0.0	0.2	2.945	A
3 - Stewarts Road (N)	420	105	178	1806	0.233	419	115	0.0	0.3	2.592	A

#### 16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	451	113	311	1608	0.281	451	403	0.3	0.4	3.111	A
2 - A510 Northen Way	287	72	64	1455	0.197	287	698	0.2	0.2	3.080	A
3 - Stewarts Road (N)	502	125	213	1782	0.282	501	137	0.3	0.4	2.811	A

#### 16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	553	138	381	1565	0.353	552	494	0.4	0.5	3.553	A
2 - A510 Northen Way	351	88	78	1447	0.243	351	855	0.2	0.3	3.283	A
3 - Stewarts Road (N)	614	154	261	1748	0.351	614	168	0.4	0.5	3.171	A

#### 17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	553	138	381	1564	0.353	553	494	0.5	0.5	3.557	A
2 - A510 Northen Way	351	88	78	1447	0.243	351	855	0.3	0.3	3.283	A
3 - Stewarts Road (N)	614	154	261	1748	0.351	614	168	0.5	0.5	3.174	A

#### 17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	451	113	311	1608	0.281	452	404	0.5	0.4	3.118	A
2 - A510 Northen Way	287	72	64	1455	0.197	287	699	0.3	0.2	3.081	A
3 - Stewarts Road (N)	502	125	213	1781	0.282	502	138	0.5	0.4	2.814	A



## 17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	378	94	261	1639	0.231	378	338	0.4	0.3	2.857	A
2 - A510 Northen Way	240	60	54	1461	0.164	240	586	0.2	0.2	2.948	A
3 - Stewarts Road (N)	420	105	179	1806	0.233	420	115	0.4	0.3	2.600	A



# 2027 + Dev, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	3.16	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2027 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	229	100.000
2 - A510 Northen Way		ONE HOUR	✓	381	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	99	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	122	107
	2 - A510 Northen Way	171	0	210
	3 - Stewarts Road (N)	23	76	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	17	4
	2 - A510 Northen Way	6	0	11
	3 - Stewarts Road (N)	20	50	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.16	2.66	0.2	A	210	315
2 - A510 Northen Way	0.29	3.50	0.4	A	350	524
3 - Stewarts Road (N)	0.09	3.08	0.1	A	91	136

### Main Results for each time segment

#### 05:45 - 06:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	172	43	57	1630	0.106	172	146	0.0	0.1	2.468	A
2 - A510 Northen Way	287	72	80	1468	0.195	286	149	0.0	0.2	3.043	A
3 - Stewarts Road (N)	75	19	128	1306	0.057	74	238	0.0	0.1	2.922	A

#### 06:00 - 06:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	206	51	68	1621	0.127	206	174	0.1	0.1	2.543	A
2 - A510 Northen Way	343	86	96	1459	0.235	342	178	0.2	0.3	3.224	A
3 - Stewarts Road (N)	89	22	154	1294	0.069	89	285	0.1	0.1	2.987	A

#### 06:15 - 06:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	252	63	84	1608	0.157	252	213	0.1	0.2	2.655	A
2 - A510 Northen Way	419	105	118	1447	0.290	419	218	0.3	0.4	3.501	A
3 - Stewarts Road (N)	109	27	188	1277	0.085	109	349	0.1	0.1	3.081	A

#### 06:30 - 06:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	252	63	84	1607	0.157	252	214	0.2	0.2	2.655	A
2 - A510 Northen Way	419	105	118	1447	0.290	419	218	0.4	0.4	3.504	A
3 - Stewarts Road (N)	109	27	188	1277	0.085	109	349	0.1	0.1	3.081	A

#### 06:45 - 07:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	206	51	68	1621	0.127	206	175	0.2	0.1	2.546	A
2 - A510 Northen Way	343	86	96	1459	0.235	343	178	0.4	0.3	3.226	A
3 - Stewarts Road (N)	89	22	154	1294	0.069	89	285	0.1	0.1	2.988	A

## 07:00 - 07:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	172	43	57	1630	0.106	173	146	0.1	0.1	2.469	A
2 - A510 Northen Way	287	72	81	1467	0.195	287	149	0.3	0.2	3.049	A
3 - Stewarts Road (N)	75	19	129	1306	0.057	75	239	0.1	0.1	2.925	A

# 2027 + Dev, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	4.61	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2027 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	453	100.000
2 - A510 Northen Way		ONE HOUR	✓	671	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	156	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	318	135
	2 - A510 Northen Way	377	0	294
	3 - Stewarts Road (N)	61	95	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	15	6
	2 - A510 Northen Way	14	0	14
	3 - Stewarts Road (N)	23	42	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.32	3.35	0.5	A	416	624
2 - A510 Northen Way	0.54	5.78	1.2	A	616	924
3 - Stewarts Road (N)	0.14	3.42	0.2	A	143	215

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	341	85	71	1601	0.213	340	328	0.0	0.3	2.851	A
2 - A510 Northen Way	505	126	101	1388	0.364	503	310	0.0	0.6	4.057	A
3 - Stewarts Road (N)	117	29	283	1297	0.091	117	322	0.0	0.1	3.050	A

#### 08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	407	102	85	1590	0.256	407	393	0.3	0.3	3.043	A
2 - A510 Northen Way	603	151	121	1377	0.438	602	371	0.6	0.8	4.643	A
3 - Stewarts Road (N)	140	35	338	1266	0.111	140	385	0.1	0.1	3.196	A

#### 08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	499	125	105	1575	0.317	498	481	0.3	0.5	3.342	A
2 - A510 Northen Way	739	185	148	1362	0.542	737	454	0.8	1.2	5.745	A
3 - Stewarts Road (N)	172	43	414	1224	0.140	172	472	0.1	0.2	3.420	A

#### 08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	499	125	105	1575	0.317	499	482	0.5	0.5	3.345	A
2 - A510 Northen Way	739	185	149	1362	0.542	739	455	1.2	1.2	5.775	A
3 - Stewarts Road (N)	172	43	415	1223	0.140	172	472	0.2	0.2	3.422	A

#### 08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	407	102	85	1590	0.256	408	395	0.5	0.3	3.045	A
2 - A510 Northen Way	603	151	122	1377	0.438	605	372	1.2	0.8	4.672	A
3 - Stewarts Road (N)	140	35	340	1265	0.111	140	386	0.2	0.1	3.202	A



## 09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	341	85	72	1601	0.213	341	330	0.3	0.3	2.860	A
2 - A510 Northen Way	505	126	102	1388	0.364	506	311	0.8	0.6	4.087	A
3 - Stewarts Road (N)	117	29	284	1296	0.091	118	323	0.1	0.1	3.053	A

# 2027 + Dev, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	3.79	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2027 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	361	100.000
2 - A510 Northen Way		ONE HOUR	✓	410	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	242	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	276	85
	2 - A510 Northen Way	269	0	141
	3 - Stewarts Road (N)	86	156	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	22	23
	2 - A510 Northen Way	19	0	29
	3 - Stewarts Road (N)	22	29	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.28	3.56	0.4	A	331	497
2 - A510 Northen Way	0.35	4.30	0.5	A	376	564
3 - Stewarts Road (N)	0.20	3.28	0.2	A	222	333

### Main Results for each time segment

#### 12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	272	68	117	1445	0.188	271	266	0.0	0.2	3.060	A
2 - A510 Northen Way	309	77	64	1306	0.236	307	324	0.0	0.3	3.600	A
3 - Stewarts Road (N)	182	46	202	1423	0.128	182	170	0.0	0.1	2.899	A

#### 13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	325	81	140	1430	0.227	324	319	0.2	0.3	3.255	A
2 - A510 Northen Way	369	92	76	1299	0.284	368	388	0.3	0.4	3.869	A
3 - Stewarts Road (N)	218	54	242	1398	0.156	217	203	0.1	0.2	3.049	A

#### 13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	397	99	172	1409	0.282	397	390	0.3	0.4	3.555	A
2 - A510 Northen Way	451	113	93	1289	0.350	451	475	0.4	0.5	4.295	A
3 - Stewarts Road (N)	266	67	296	1364	0.195	266	249	0.2	0.2	3.278	A

#### 13:30 - 13:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	397	99	172	1409	0.282	397	391	0.4	0.4	3.559	A
2 - A510 Northen Way	451	113	94	1288	0.350	451	476	0.5	0.5	4.300	A
3 - Stewarts Road (N)	266	67	296	1364	0.195	266	249	0.2	0.2	3.278	A

#### 13:45 - 14:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	325	81	140	1430	0.227	325	320	0.4	0.3	3.258	A
2 - A510 Northen Way	369	92	77	1299	0.284	369	389	0.5	0.4	3.875	A
3 - Stewarts Road (N)	218	54	242	1398	0.156	218	203	0.2	0.2	3.051	A





## 14:00 - 14:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	272	68	118	1445	0.188	272	268	0.3	0.2	3.071	A
2 - A510 Northen Way	309	77	64	1306	0.236	309	326	0.4	0.3	3.611	A
3 - Stewarts Road (N)	182	46	203	1422	0.128	182	170	0.2	0.1	2.906	A

# 2027 + Dev, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A510 Northen Way Stewarts Road Roundabout	Standard Roundabout		1, 2, 3	3.43	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2027 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stewarts Road (S)		ONE HOUR	✓	502	100.000
2 - A510 Northen Way		ONE HOUR	✓	326	100.000
3 - Stewarts Road (N)		ONE HOUR	✓	575	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	431	71
	2 - A510 Northen Way	237	0	89
	3 - Stewarts Road (N)	212	363	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Stewarts Road (S)	2 - A510 Northen Way	3 - Stewarts Road (N)
From	1 - Stewarts Road (S)	0	3	6
	2 - A510 Northen Way	8	0	23
	3 - Stewarts Road (N)	2	3	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Stewarts Road (S)	0.36	3.62	0.6	A	461	691
2 - A510 Northen Way	0.25	3.38	0.3	A	299	449
3 - Stewarts Road (N)	0.37	3.29	0.6	A	528	791

### Main Results for each time segment

#### 16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	378	94	272	1629	0.232	377	337	0.0	0.3	2.873	A
2 - A510 Northen Way	245	61	53	1438	0.171	245	596	0.0	0.2	3.015	A
3 - Stewarts Road (N)	433	108	178	1784	0.243	432	120	0.0	0.3	2.659	A

#### 16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	451	113	326	1595	0.283	451	403	0.3	0.4	3.148	A
2 - A510 Northen Way	293	73	64	1432	0.205	293	713	0.2	0.3	3.159	A
3 - Stewarts Road (N)	517	129	213	1760	0.294	517	144	0.3	0.4	2.895	A

#### 16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	553	138	399	1548	0.357	552	494	0.4	0.6	3.612	A
2 - A510 Northen Way	359	90	78	1424	0.252	359	873	0.3	0.3	3.378	A
3 - Stewarts Road (N)	633	158	261	1727	0.367	632	176	0.4	0.6	3.287	A

#### 17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	553	138	400	1548	0.357	553	494	0.6	0.6	3.616	A
2 - A510 Northen Way	359	90	78	1424	0.252	359	874	0.3	0.3	3.378	A
3 - Stewarts Road (N)	633	158	261	1727	0.367	633	176	0.6	0.6	3.290	A

#### 17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	451	113	327	1594	0.283	452	404	0.6	0.4	3.152	A
2 - A510 Northen Way	293	73	64	1432	0.205	293	715	0.3	0.3	3.161	A
3 - Stewarts Road (N)	517	129	213	1760	0.294	518	144	0.6	0.4	2.901	A

## 17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Stewarts Road (S)	378	94	274	1628	0.232	378	338	0.4	0.3	2.883	A
2 - A510 Northen Way	245	61	54	1438	0.171	246	598	0.3	0.2	3.019	A
3 - Stewarts Road (N)	433	108	179	1784	0.243	433	121	0.4	0.3	2.667	A



## **Appendix Z – A510 Stewarts Road / Sanders Road / Rixon Road / Nest Lane roundabout sensitivity test Junctions 9 Results**

Junctions 9
ARCADY 9 - Roundabout Module
Version: 9.5.1.7462 © Copyright TRL Limited, 2019
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

**Filename:** Nest Lane Rixon Road Roundabout Sensitivity Test.j9  
**Path:** P:\2021\P21-340\T&T\Capacity Assessments\Junctions 9\Sensitivity Test  
**Report generation date:** 15/02/2022 13:04:50

- »2021, 06:00 - 07:00
- »2021, 08:00 - 09:00
- »2021, 13:00 - 14:00
- »2021, 16:30 - 17:30
- »2027, 06:00 - 07:00
- »2027, 08:00 - 09:00
- »2027, 13:00 - 14:00
- »2027, 16:30 - 17:30
- »2027 + Dev, 06:00 - 07:00
- »2027 + Dev, 08:00 - 09:00
- »2027 + Dev, 13:00 - 14:00
- »2027 + Dev, 16:30 - 17:30

**Summary of junction performance**

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
<b>2021</b>																				
1 - Sanders Road	D1	0.1	2.83	0.05	A	D2	0.1	3.20	0.10	A	D3	0.2	3.25	0.14	A	D4	0.4	3.30	0.28	A
2 - Rixon Road		0.4	4.38	0.27	A		1.4	8.05	0.59	A		0.7	6.35	0.41	A		0.8	6.22	0.44	A
3 - Nest Lane		0.1	2.55	0.10	A		0.2	3.20	0.15	A		0.1	2.81	0.11	A		0.1	2.61	0.08	A
4 - Stewarts Road		0.2	3.79	0.17	A		0.8	6.24	0.43	A		0.6	5.48	0.37	A		0.8	5.27	0.45	A
<b>2027</b>																				
1 - Sanders Road	D5	0.1	2.85	0.05	A	D6	0.1	3.25	0.11	A	D7	0.2	3.31	0.15	A	D8	0.4	3.41	0.29	A
2 - Rixon Road		0.4	4.45	0.28	A		1.6	8.66	0.62	A		0.8	6.66	0.43	A		0.9	6.54	0.46	A
3 - Nest Lane		0.1	2.58	0.11	A		0.2	3.29	0.16	A		0.1	2.87	0.12	A		0.1	2.64	0.09	A
4 - Stewarts Road		0.2	3.84	0.18	A		0.8	6.56	0.46	A		0.6	5.71	0.39	A		0.9	5.49	0.47	A
<b>2027 + Dev</b>																				
1 - Sanders Road	D9	0.1	2.99	0.06	A	D10	0.1	3.30	0.11	A	D11	0.2	3.29	0.15	A	D12	0.4	3.38	0.29	A
2 - Rixon Road		0.4	4.57	0.29	A		1.6	8.91	0.62	A		0.8	6.99	0.45	A		0.9	6.76	0.47	A
3 - Nest Lane		0.1	2.60	0.11	A		0.2	3.31	0.16	A		0.1	2.89	0.12	A		0.1	2.58	0.06	A
4 - Stewarts Road		0.2	3.88	0.18	A		0.8	6.62	0.46	A		0.6	5.79	0.39	A		0.9	5.39	0.47	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

## File summary

### File Description

<b>Title</b>	Rixon Road Nest Lane Roundabout
<b>Location</b>	Wellingborough
<b>Site number</b>	
<b>Date</b>	02/12/2021
<b>Version</b>	
<b>Status</b>	(new file)
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	
<b>Enumerator</b>	HQ\jake.blay
<b>Description</b>	

### Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

### Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

### Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D2	2021	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D3	2021	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D4	2021	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D5	2027	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D6	2027	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D7	2027	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D8	2027	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D9	2027 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D10	2027 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D11	2027 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D12	2027 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

### Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

# 2021, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	3.67	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
1	Sanders Road	
2	Rixon Road	
3	Nest Lane	
4	Stewarts Road	

### Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - Sanders Road	3.65	8.62	26.5	18.2	46.8	47.3	
2 - Rixon Road	3.65	6.26	4.0	12.2	46.8	47.7	
3 - Nest Lane	3.66	7.07	29.9	30.2	46.8	39.5	
4 - Stewarts Road	3.65	6.91	5.3	20.7	46.8	52.8	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Sanders Road	0.644	1913
2 - Rixon Road	0.504	1233
3 - Nest Lane	0.643	1835
4 - Stewarts Road	0.526	1326

The slope and intercept shown above include any corrections and adjustments.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00



### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	58	100.000
2 - Rixon Road		ONE HOUR	✓	276	100.000
3 - Nest Lane		ONE HOUR	✓	148	100.000
4 - Stewarts Road		ONE HOUR	✓	177	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	23	14	21
	2 - Rixon Road	73	0	7	196
	3 - Nest Lane	45	44	0	59
	4 - Stewarts Road	24	128	25	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	19	8	63
	2 - Rixon Road	3	0	0	7
	3 - Nest Lane	5	0	0	2
	4 - Stewarts Road	9	7	9	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.05	2.83	0.1	A	53	80
2 - Rixon Road	0.27	4.38	0.4	A	253	380
3 - Nest Lane	0.10	2.55	0.1	A	136	204
4 - Stewarts Road	0.17	3.79	0.2	A	162	244

# 2021, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	6.30	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2021	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	115	100.000
2 - Rixon Road		ONE HOUR	✓	579	100.000
3 - Nest Lane		ONE HOUR	✓	184	100.000
4 - Stewarts Road		ONE HOUR	✓	400	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	58	22	35
	2 - Rixon Road	147	0	29	403
	3 - Nest Lane	70	41	0	73
	4 - Stewarts Road	78	286	36	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	26	20	44
	2 - Rixon Road	6	0	0	9
	3 - Nest Lane	3	3	0	5
	4 - Stewarts Road	30	12	6	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.10	3.20	0.1	A	106	158
2 - Rixon Road	0.59	8.05	1.4	A	531	797
3 - Nest Lane	0.15	3.20	0.2	A	169	253
4 - Stewarts Road	0.43	6.24	0.8	A	367	551

# 2021 , 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	5.06	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2021	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	161	100.000
2 - Rixon Road		ONE HOUR	✓	352	100.000
3 - Nest Lane		ONE HOUR	✓	146	100.000
4 - Stewarts Road		ONE HOUR	✓	348	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	65	44	52
	2 - Rixon Road	66	0	29	257
	3 - Nest Lane	42	37	0	67
	4 - Stewarts Road	55	248	45	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	27	18	38
	2 - Rixon Road	30	0	4	18
	3 - Nest Lane	11	3	0	2
	4 - Stewarts Road	34	16	10	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.14	3.25	0.2	A	148	222
2 - Rixon Road	0.41	6.35	0.7	A	323	485
3 - Nest Lane	0.11	2.81	0.1	A	134	201
4 - Stewarts Road	0.37	5.48	0.6	A	319	479

# 2021, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	4.82	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2021	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	376	100.000
2 - Rixon Road		ONE HOUR	✓	409	100.000
3 - Nest Lane		ONE HOUR	✓	110	100.000
4 - Stewarts Road		ONE HOUR	✓	505	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	161	136	79
	2 - Rixon Road	21	0	80	308
	3 - Nest Lane	22	32	0	56
	4 - Stewarts Road	26	414	65	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	1	1	8
	2 - Rixon Road	11	0	0	5
	3 - Nest Lane	0	3	0	2
	4 - Stewarts Road	17	3	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.28	3.30	0.4	A	345	518
2 - Rixon Road	0.44	6.22	0.8	A	375	563
3 - Nest Lane	0.08	2.61	0.1	A	101	151
4 - Stewarts Road	0.45	5.27	0.8	A	463	695

# 2027, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	3.71	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2027	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	61	100.000
2 - Rixon Road		ONE HOUR	✓	287	100.000
3 - Nest Lane		ONE HOUR	✓	155	100.000
4 - Stewarts Road		ONE HOUR	✓	184	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	24	15	22
	2 - Rixon Road	76	0	7	204
	3 - Nest Lane	47	46	0	62
	4 - Stewarts Road	26	133	25	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	19	8	63
	2 - Rixon Road	3	0	0	7
	3 - Nest Lane	5	0	0	2
	4 - Stewarts Road	9	7	9	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.05	2.85	0.1	A	56	84
2 - Rixon Road	0.28	4.45	0.4	A	263	395
3 - Nest Lane	0.11	2.58	0.1	A	142	213
4 - Stewarts Road	0.18	3.84	0.2	A	169	253

# 2027, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	6.69	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2027	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	121	100.000
2 - Rixon Road		ONE HOUR	✓	605	100.000
3 - Nest Lane		ONE HOUR	✓	193	100.000
4 - Stewarts Road		ONE HOUR	✓	419	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	61	23	37
	2 - Rixon Road	154	0	30	421
	3 - Nest Lane	74	43	0	76
	4 - Stewarts Road	82	299	38	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	26	20	44
	2 - Rixon Road	6	0	0	9
	3 - Nest Lane	3	3	0	5
	4 - Stewarts Road	30	12	6	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.11	3.25	0.1	A	111	167
2 - Rixon Road	0.62	8.66	1.6	A	555	833
3 - Nest Lane	0.16	3.29	0.2	A	177	266
4 - Stewarts Road	0.46	6.56	0.8	A	384	577

# 2027, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	5.26	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2027	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	170	100.000
2 - Rixon Road		ONE HOUR	✓	372	100.000
3 - Nest Lane		ONE HOUR	✓	154	100.000
4 - Stewarts Road		ONE HOUR	✓	367	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	69	46	55
	2 - Rixon Road	70	0	30	272
	3 - Nest Lane	44	39	0	71
	4 - Stewarts Road	58	261	48	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	27	18	38
	2 - Rixon Road	30	0	4	18
	3 - Nest Lane	11	3	0	2
	4 - Stewarts Road	34	16	10	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.15	3.31	0.2	A	156	234
2 - Rixon Road	0.43	6.66	0.8	A	341	512
3 - Nest Lane	0.12	2.87	0.1	A	141	212
4 - Stewarts Road	0.39	5.71	0.6	A	337	505

# 2027, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	5.03	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2027	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	394	100.000
2 - Rixon Road		ONE HOUR	✓	428	100.000
3 - Nest Lane		ONE HOUR	✓	115	100.000
4 - Stewarts Road		ONE HOUR	✓	528	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	168	143	83
	2 - Rixon Road	22	0	84	322
	3 - Nest Lane	23	33	0	59
	4 - Stewarts Road	28	432	68	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	1	1	8
	2 - Rixon Road	11	0	0	5
	3 - Nest Lane	0	3	0	2
	4 - Stewarts Road	17	3	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.29	3.41	0.4	A	362	542
2 - Rixon Road	0.46	6.54	0.9	A	393	589
3 - Nest Lane	0.09	2.64	0.1	A	106	158
4 - Stewarts Road	0.47	5.49	0.9	A	485	727

# 2027 + Dev, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	3.79	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2027 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	67	100.000
2 - Rixon Road		ONE HOUR	✓	298	100.000
3 - Nest Lane		ONE HOUR	✓	159	100.000
4 - Stewarts Road		ONE HOUR	✓	184	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	30	15	22
	2 - Rixon Road	87	0	7	204
	3 - Nest Lane	51	46	0	62
	4 - Stewarts Road	25	133	26	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	34	8	63
	2 - Rixon Road	6	0	0	7
	3 - Nest Lane	4	0	0	2
	4 - Stewarts Road	9	7	9	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.06	2.99	0.1	A	61	92
2 - Rixon Road	0.29	4.57	0.4	A	273	410
3 - Nest Lane	0.11	2.60	0.1	A	146	219
4 - Stewarts Road	0.18	3.88	0.2	A	169	253

# 2027 + Dev, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	6.83	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2027 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	124	100.000
2 - Rixon Road		ONE HOUR	✓	611	100.000
3 - Nest Lane		ONE HOUR	✓	194	100.000
4 - Stewarts Road		ONE HOUR	✓	419	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	64	23	37
	2 - Rixon Road	160	0	30	421
	3 - Nest Lane	75	43	0	76
	4 - Stewarts Road	82	299	38	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	29	20	44
	2 - Rixon Road	8	0	0	9
	3 - Nest Lane	3	3	0	5
	4 - Stewarts Road	30	12	6	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.11	3.30	0.1	A	114	171
2 - Rixon Road	0.62	8.91	1.6	A	561	841
3 - Nest Lane	0.16	3.31	0.2	A	178	267
4 - Stewarts Road	0.46	6.62	0.8	A	384	577

# 2027 + Dev, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	5.43	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2027 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	172	100.000
2 - Rixon Road		ONE HOUR	✓	381	100.000
3 - Nest Lane		ONE HOUR	✓	154	100.000
4 - Stewarts Road		ONE HOUR	✓	367	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	70	47	55
	2 - Rixon Road	79	0	30	272
	3 - Nest Lane	44	39	0	71
	4 - Stewarts Road	58	261	48	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	26	17	38
	2 - Rixon Road	38	0	4	18
	3 - Nest Lane	10	3	0	2
	4 - Stewarts Road	34	16	10	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.15	3.29	0.2	A	158	237
2 - Rixon Road	0.45	6.99	0.8	A	350	524
3 - Nest Lane	0.12	2.89	0.1	A	141	212
4 - Stewarts Road	0.39	5.79	0.6	A	337	505

# 2027 + Dev, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Nest Lane Rixon Road Roundabout	Standard Roundabout		1, 2, 3, 4	5.09	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2027 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Sanders Road		ONE HOUR	✓	404	100.000
2 - Rixon Road		ONE HOUR	✓	433	100.000
3 - Nest Lane		ONE HOUR	✓	85	100.000
4 - Stewarts Road		ONE HOUR	✓	528	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	175	146	83
	2 - Rixon Road	27	0	84	322
	3 - Nest Lane	23	3	0	59
	4 - Stewarts Road	28	432	68	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Sanders Road	2 - Rixon Road	3 - Nest Lane	4 - Stewarts Road
From	1 - Sanders Road	0	1	1	8
	2 - Rixon Road	27	0	0	5
	3 - Nest Lane	0	3	0	2
	4 - Stewarts Road	17	3	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Sanders Road	0.29	3.38	0.4	A	371	556
2 - Rixon Road	0.47	6.76	0.9	A	397	596
3 - Nest Lane	0.06	2.58	0.1	A	78	117
4 - Stewarts Road	0.47	5.39	0.9	A	485	727

**Appendix AA – A509 / Wellingborough Road / A510  
Northen Way / A5193 / Niort Way roundabout sensitivity  
test Junctions 9 Results**





Junctions 9
ARCADY 9 - Roundabout Module
Version: 9.5.1.7462 © Copyright TRL Limited, 2019
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk
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Filename: A509 A510 Roundabout Sensitivity Test.j9  
 Path: P:\2021\21-340\T&T\Capacity Assessments\Junctions 9\Sensitivity Test  
 Report generation date: 15/02/2022 13:04:15

- »2021 , 06:00 - 07:00
- »2021, 08:00 - 09:00
- »2021, 13:00 - 14:00
- »2021, 16:30 - 17:30
- »2027, 06:00 - 07:00
- »2027, 08:00 - 09:00
- »2027, 13:00 - 14:00
- »2027, 16:30 - 17:30
- »2027 + Dev, 06:00 - 07:00
- »2027 + Dev, 08:00 - 09:00
- »2027 + Dev, 13:00 - 14:00
- »2027 + Dev, 16:30 - 17:30

**Summary of junction performance**

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30					
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	
<b>2021</b>																					
1 - A510 Northen Way	D1	0.2	3.52	0.18	A	D2	1.4	9.10	0.58	A	D3	0.7	5.35	0.42	A	D4	1.8	8.34	0.64		
2 - A5193		0.3	3.88	0.24	A		1.5	10.22	0.61	B		0.7	5.84	0.43	A		1.5	9.50	0.60		
3 - A509 Niort Way		0.5	4.36	0.32	A		2.6	12.49	0.73	B		1.6	8.59	0.61	A		2.9	12.83	0.74		
4 - A509		0.7	4.44	0.43	A		8.0	26.48	0.89	D		1.4	6.73	0.58	A		2.4	8.90	0.71		
5 - Wellingborough Road		0.1	4.36	0.05	A		1.5	20.09	0.60	C		0.1	5.56	0.09	A		0.1	6.53	0.12		
<b>2027</b>																					
1 - A510 Northen Way	D5	0.2	3.59	0.18	A	D6	1.7	10.43	0.63	B	D7	0.8	5.67	0.45	A	D8	2.2	9.62	0.68		
2 - A5193		0.3	4.00	0.25	A		1.9	12.14	0.66	B		0.9	6.43	0.46	A		1.8	11.13	0.65		
3 - A509 Niort Way		0.5	4.49	0.34	A		3.3	15.21	0.77	C		1.8	9.50	0.64	A		3.8	16.36	0.80		
4 - A509		0.8	4.62	0.45	A		14.6	46.71	0.94	E		1.6	7.31	0.61	A		2.9	10.21	0.74		
5 - Wellingborough Road		0.1	4.48	0.06	A		2.1	27.62	0.68	D		0.1	5.82	0.10	A		0.1	6.91	0.13		
<b>2027 + Dev</b>																					
1 - A510 Northen Way	D9	0.3	3.91	0.21	A	D10	1.9	11.66	0.66	B	D11	1.0	6.53	0.50	A	D12	2.4	10.38	0.70		
2 - A5193		0.3	4.10	0.26	A		2.0	12.99	0.67	B		0.9	6.93	0.48	A		1.9	11.64	0.66		
3 - A509 Niort Way		0.5	4.66	0.35	A		3.9	17.39	0.80	C		2.1	10.68	0.68	B		4.1	17.39	0.81		
4 - A509		0.9	4.80	0.46	A		21.6	68.31	0.97	F		1.7	7.82	0.63	A		3.0	10.56	0.75		
5 - Wellingborough Road		0.1	4.58	0.06	A		2.4	32.47	0.72	D		0.2	6.22	0.14	A		0.1	7.00	0.13		

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.



## File summary

### File Description

<b>Title</b>	A509 A510 Roundabout
<b>Location</b>	Wellingborough
<b>Site number</b>	
<b>Date</b>	02/12/2021
<b>Version</b>	
<b>Status</b>	(new file)
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	
<b>Enumerator</b>	HQJjake.blay
<b>Description</b>	

## Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

## Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

## Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2021	06:00 - 07:00	FLAT	05:45	07:15	90	15	✓
D2	2021	08:00 - 09:00	FLAT	07:45	09:15	90	15	✓
D3	2021	13:00 - 14:00	FLAT	12:45	14:15	90	15	✓
D4	2021	16:30 - 17:30	FLAT	16:15	17:45	90	15	✓
D5	2027	06:00 - 07:00	FLAT	05:45	07:15	90	15	✓
D6	2027	08:00 - 09:00	FLAT	07:45	09:15	90	15	✓
D7	2027	13:00 - 14:00	FLAT	12:45	14:15	90	15	✓
D8	2027	16:30 - 17:30	FLAT	16:15	17:45	90	15	✓
D9	2027 + Dev	06:00 - 07:00	FLAT	05:45	07:15	90	15	✓
D10	2027 + Dev	08:00 - 09:00	FLAT	07:45	09:15	90	15	✓
D11	2027 + Dev	13:00 - 14:00	FLAT	12:45	14:15	90	15	✓
D12	2027 + Dev	16:30 - 17:30	FLAT	16:15	17:45	90	15	✓

## Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

# 2021 , 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	4.18	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
1	A510 Northern Way	
2	A5193	
3	A509 Niort Way	
4	A509	
5	Wellingborough Road	

### Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A510 Northern Way	3.65	7.61	26.4	18.3	54.6	51.3	
2 - A5193	3.65	6.64	14.0	35.0	54.6	35.8	
3 - A509 Niort Way	3.65	7.42	14.7	30.1	54.6	47.3	
4 - A509	4.78	8.00	5.8	16.3	54.6	49.0	
5 - Wellingborough Road	3.65	5.47	4.5	25.9	54.6	35.1	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A510 Northern Way	0.577	1767
2 - A5193	0.577	1646
3 - A509 Niort Way	0.567	1657
4 - A509	0.558	1661
5 - Wellingborough Road	0.518	1336

The slope and intercept shown above include any corrections and adjustments.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2021	06:00 - 07:00	FLAT	05:45	07:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northen Way		FLAT	✓	219	100.000
2 - A5193		FLAT	✓	294	100.000
3 - A509 Niort Way		FLAT	✓	394	100.000
4 - A509		FLAT	✓	602	100.000
5 - Wellingborough Road		FLAT	✓	46	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northen Way	0	6	116	96	1
	2 - A5193	33	0	21	238	2
	3 - A509 Niort Way	151	1	0	240	2
	4 - A509	156	124	322	0	0
	5 - Wellingborough Road	8	12	17	9	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northen Way	0	0	22	13	0
	2 - A5193	3	0	0	5	0
	3 - A509 Niort Way	8	0	0	23	0
	4 - A509	5	4	14	0	0
	5 - Wellingborough Road	0	9	0	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.18	3.52	0.2	A	219	328
2 - A5193	0.24	3.88	0.3	A	294	441
3 - A509 Niort Way	0.32	4.36	0.5	A	394	591
4 - A509	0.43	4.44	0.7	A	602	903
5 - Wellingborough Road	0.05	4.36	0.1	A	46	69

# 2021, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	16.95	C

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D2	2021	08:00 - 09:00	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northern Way		FLAT	✓	553	100.000
2 - A5193		FLAT	✓	543	100.000
3 - A509 Niort Way		FLAT	✓	766	100.000
4 - A509		FLAT	✓	1124	100.000
5 - Wellingborough Road		FLAT	✓	266	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northern Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northern Way	0	23	307	216	7
	2 - A5193	57	0	53	404	29
	3 - A509 Niort Way	311	39	0	395	21
	4 - A509	268	371	485	0	0
	5 - Wellingborough Road	61	95	79	31	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To					
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road	
1 - A510 Northen Way	0	0	15	14	0	
2 - A5193	0	0	4	2	0	
3 - A509 Niort Way	14	0	0	18	5	
4 - A509	9	4	14	0	0	
5 - Wellingborough Road	4	6	3	4	0	

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.58	9.10	1.4	A	553	829
2 - A5193	0.61	10.22	1.5	B	543	815
3 - A509 Niort Way	0.73	12.49	2.6	B	766	1149
4 - A509	0.89	26.48	8.0	D	1124	1686
5 - Wellingborough Road	0.60	20.09	1.5	C	266	399



# 2021, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	6.80	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2021	13:00 - 14:00	FLAT	12:45	14:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northen Way		FLAT	✓	493	100.000
2 - A5193		FLAT	✓	456	100.000
3 - A509 Niort Way		FLAT	✓	662	100.000
4 - A509		FLAT	✓	736	100.000
5 - Wellingborough Road		FLAT	✓	65	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northen Way	0	41	282	152	18
	2 - A5193	42	0	35	354	25
	3 - A509 Niort Way	210	25	0	409	18
	4 - A509	149	253	333	0	1
	5 - Wellingborough Road	22	24	4	15	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To					
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road	
1 - A510 Northen Way	0	3	16	20	0	
2 - A5193	3	0	0	3	0	
3 - A509 Niort Way	20	0	0	21	0	
4 - A509	21	2	20	0	0	
5 - Wellingborough Road	0	9	0	0	0	

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.42	5.35	0.7	A	493	739
2 - A5193	0.43	5.84	0.7	A	456	684
3 - A509 Niort Way	0.61	8.59	1.6	A	662	993
4 - A509	0.58	6.73	1.4	A	736	1104
5 - Wellingborough Road	0.09	5.56	0.1	A	65	98



# 2021, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	9.80	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	2021	16:30 - 17:30	FLAT	16:15	17:45	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northern Way		FLAT	✓	775	100.000
2 - A5193		FLAT	✓	569	100.000
3 - A509 Niort Way		FLAT	✓	817	100.000
4 - A509		FLAT	✓	982	100.000
5 - Wellingborough Road		FLAT	✓	74	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northern Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northern Way	0	58	334	370	13
	2 - A5193	46	0	29	460	34
	3 - A509 Niort Way	198	22	0	572	25
	4 - A509	173	422	385	0	2
	5 - Wellingborough Road	24	18	21	11	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To					
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road	
1 - A510 Northen Way	0	2	3	2	0	
2 - A5193	0	0	0	2	0	
3 - A509 Niort Way	8	0	8	0	0	
4 - A509	9	2	8	0	0	
5 - Wellingborough Road	0	13	5	0	0	

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.64	8.34	1.8	A	775	1163
2 - A5193	0.60	9.50	1.5	A	569	853
3 - A509 Niort Way	0.74	12.83	2.9	B	817	1225
4 - A509	0.71	8.90	2.4	A	982	1473
5 - Wellingborough Road	0.12	6.53	0.1	A	74	111

# 2027, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	4.32	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D5	2027	06:00 - 07:00	FLAT	05:45	07:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northern Way		FLAT	✓	227	100.000
2 - A5193		FLAT	✓	306	100.000
3 - A509 Niort Way		FLAT	✓	410	100.000
4 - A509		FLAT	✓	629	100.000
5 - Wellingborough Road		FLAT	✓	47	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northern Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northern Way	0	6	120	100	1
	2 - A5193	34	0	22	248	2
	3 - A509 Niort Way	157	1	0	250	2
	4 - A509	163	130	336	0	0
	5 - Wellingborough Road	8	13	17	9	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northen Way	0	0	22	13	0
	2 - A5193	3	0	0	5	0
	3 - A509 Niort Way	8	0	0	23	0
	4 - A509	5	4	14	0	0
	5 - Wellingborough Road	0	9	0	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.18	3.59	0.2	A	227	340
2 - A5193	0.25	4.00	0.3	A	306	459
3 - A509 Niort Way	0.34	4.49	0.5	A	410	615
4 - A509	0.45	4.62	0.8	A	629	943
5 - Wellingborough Road	0.06	4.48	0.1	A	47	71

# 2027, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	25.72	D

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D6	2027	08:00 - 09:00	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northen Way		FLAT	✓	577	100.000
2 - A5193		FLAT	✓	567	100.000
3 - A509 Niort Way		FLAT	✓	801	100.000
4 - A509		FLAT	✓	1176	100.000
5 - Wellingborough Road		FLAT	✓	277	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northen Way	0	24	321	225	7
	2 - A5193	60	0	55	422	30
	3 - A509 Niort Way	326	40	0	413	22
	4 - A509	281	388	507	0	0
	5 - Wellingborough Road	63	99	83	32	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To					
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road	
1 - A510 Northen Way	0	0	15	14	0	
2 - A5193	0	0	4	2	0	
3 - A509 Niort Way	14	0	0	18	5	
4 - A509	9	4	14	0	0	
5 - Wellingborough Road	4	6	3	4	0	

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.63	10.43	1.7	B	577	866
2 - A5193	0.66	12.14	1.9	B	567	850
3 - A509 Niort Way	0.77	15.21	3.3	C	801	1202
4 - A509	0.94	46.71	14.6	E	1176	1764
5 - Wellingborough Road	0.68	27.62	2.1	D	277	416

# 2027, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	7.40	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D7	2027	13:00 - 14:00	FLAT	12:45	14:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northern Way		FLAT	✓	519	100.000
2 - A5193		FLAT	✓	482	100.000
3 - A509 Niort Way		FLAT	✓	680	100.000
4 - A509		FLAT	✓	777	100.000
5 - Wellingborough Road		FLAT	✓	71	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northern Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northern Way	0	43	297	160	19
	2 - A5193	44	0	37	374	27
	3 - A509 Niort Way	222	7	0	432	19
	4 - A509	157	267	352	0	1
	5 - Wellingborough Road	23	26	6	16	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To				
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
1 - A510 Northen Way	0	3	16	20	0
2 - A5193	3	0	0	3	0
3 - A509 Niort Way	20	0	0	21	0
4 - A509	21	2	20	0	0
5 - Wellingborough Road	0	9	0	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.45	5.67	0.8	A	519	779
2 - A5193	0.46	6.43	0.9	A	482	723
3 - A509 Niort Way	0.64	9.50	1.8	A	680	1020
4 - A509	0.61	7.31	1.6	A	777	1165
5 - Wellingborough Road	0.10	5.82	0.1	A	71	106



# 2027, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	11.70	B

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D8	2027	16:30 - 17:30	FLAT	16:15	17:45	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northern Way		FLAT	✓	810	100.000
2 - A5193		FLAT	✓	595	100.000
3 - A509 Niort Way		FLAT	✓	854	100.000
4 - A509		FLAT	✓	1025	100.000
5 - Wellingborough Road		FLAT	✓	76	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northern Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northern Way	0	61	349	386	14
	2 - A5193	48	0	30	481	36
	3 - A509 Niort Way	207	23	0	598	26
	4 - A509	180	441	402	0	2
	5 - Wellingborough Road	25	18	22	11	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To					
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road	
1 - A510 Northen Way	0	2	3	2	0	
2 - A5193	0	0	0	2	0	
3 - A509 Niort Way	8	0	8	0	0	
4 - A509	9	2	8	0	0	
5 - Wellingborough Road	0	13	5	0	0	

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.68	9.62	2.2	A	810	1215
2 - A5193	0.65	11.13	1.8	B	595	892
3 - A509 Niort Way	0.80	16.36	3.8	C	854	1281
4 - A509	0.74	10.21	2.9	B	1025	1537
5 - Wellingborough Road	0.13	6.91	0.1	A	76	114

# 2027 + Dev, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	4.49	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D9	2027 + Dev	06:00 - 07:00	FLAT	05:45	07:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northen Way		FLAT	✓	247	100.000
2 - A5193		FLAT	✓	307	100.000
3 - A509 Niort Way		FLAT	✓	420	100.000
4 - A509		FLAT	✓	641	100.000
5 - Wellingborough Road		FLAT	✓	47	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northen Way	0	6	130	110	1
	2 - A5193	35	0	22	248	2
	3 - A509 Niort Way	167	1	0	250	2
	4 - A509	175	130	336	0	0
	5 - Wellingborough Road	8	13	17	9	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To					
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road	
1 - A510 Northen Way	0	0	28	20	0	
2 - A5193	3	0	0	5	0	
3 - A509 Niort Way	11	0	0	23	0	
4 - A509	8	4	14	0	0	
5 - Wellingborough Road	0	9	0	0	0	

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.21	3.91	0.3	A	247	370
2 - A5193	0.26	4.10	0.3	A	307	461
3 - A509 Niort Way	0.35	4.66	0.5	A	420	630
4 - A509	0.46	4.80	0.9	A	641	961
5 - Wellingborough Road	0.06	4.58	0.1	A	47	71

# 2027 + Dev, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	34.31	D

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D10	2027 + Dev	08:00 - 09:00	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northen Way		FLAT	✓	596	100.000
2 - A5193		FLAT	✓	567	100.000
3 - A509 Niort Way		FLAT	✓	811	100.000
4 - A509		FLAT	✓	1187	100.000
5 - Wellingborough Road		FLAT	✓	277	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northen Way	0	24	330	235	7
	2 - A5193	60	0	55	422	30
	3 - A509 Niort Way	336	40	0	413	22
	4 - A509	292	388	507	0	0
	5 - Wellingborough Road	63	99	83	32	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To				
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
1 - A510 Northen Way	0	0	17	17	0
2 - A5193	0	0	4	2	0
3 - A509 Niort Way	17	0	0	18	5
4 - A509	12	4	14	0	0
5 - Wellingborough Road	4	6	3	4	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.66	11.66	1.9	B	596	894
2 - A5193	0.67	12.99	2.0	B	567	850
3 - A509 Niort Way	0.80	17.39	3.9	C	811	1217
4 - A509	0.97	68.31	21.6	F	1187	1781
5 - Wellingborough Road	0.72	32.47	2.4	D	277	416

# 2027 + Dev, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	8.16	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D11	2027 + Dev	13:00 - 14:00	FLAT	12:45	14:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northen Way		FLAT	✓	545	100.000
2 - A5193		FLAT	✓	482	100.000
3 - A509 Niort Way		FLAT	✓	707	100.000
4 - A509		FLAT	✓	784	100.000
5 - Wellingborough Road		FLAT	✓	91	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northen Way	0	43	310	173	19
	2 - A5193	44	0	37	374	27
	3 - A509 Niort Way	229	27	0	432	19
	4 - A509	164	267	352	0	1
	5 - Wellingborough Road	23	26	26	16	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To					
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road	
1 - A510 Northen Way	0	3	20	25	0	
2 - A5193	3	0	0	3	0	
3 - A509 Niort Way	23	0	0	21	0	
4 - A509	24	2	20	0	0	
5 - Wellingborough Road	0	9	0	0	0	

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.50	6.53	1.0	A	545	817
2 - A5193	0.48	6.93	0.9	A	482	723
3 - A509 Niort Way	0.68	10.68	2.1	B	707	1061
4 - A509	0.63	7.82	1.7	A	784	1176
5 - Wellingborough Road	0.14	6.22	0.2	A	91	137



# 2027 + Dev, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A509 A510 Roundabout	Standard Roundabout		1, 2, 3, 4, 5	12.33	B

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D12	2027 + Dev	16:30 - 17:30	FLAT	16:15	17:45	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A510 Northen Way		FLAT	✓	827	100.000
2 - A5193		FLAT	✓	595	100.000
3 - A509 Niort Way		FLAT	✓	857	100.000
4 - A509		FLAT	✓	1029	100.000
5 - Wellingborough Road		FLAT	✓	76	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To				
		1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road
From	1 - A510 Northen Way	0	61	357	395	14
	2 - A5193	48	0	30	481	36
	3 - A509 Niort Way	210	23	0	598	26
	4 - A509	184	441	402	0	2
	5 - Wellingborough Road	25	18	22	11	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To					
	1 - A510 Northen Way	2 - A5193	3 - A509 Niort Way	4 - A509	5 - Wellingborough Road	
1 - A510 Northen Way	0	2	4	3	0	
2 - A5193	0	0	0	2	0	
3 - A509 Niort Way	9	0	8	0	0	
4 - A509	11	2	8	0	0	
5 - Wellingborough Road	0	13	5	0	0	

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A510 Northen Way	0.70	10.38	2.4	B	827	1241
2 - A5193	0.66	11.64	1.9	B	595	892
3 - A509 Niort Way	0.81	17.39	4.1	C	857	1286
4 - A509	0.75	10.56	3.0	B	1029	1544
5 - Wellingborough Road	0.13	7.00	0.1	A	76	114



**Appendix AB – Rixon Road / Finedon Road mini  
roundabout Existing Conditions sensitivity test  
Junctions 9 Results**

<b>Junctions 9</b>
<b>ARCADY 9 - Roundabout Module</b>
Version: 9.5.1.7462 © Copyright TRL Limited, 2019
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**Filename:** Finedon Road Rixon Road Roundabout\_Existing Layout Sensitivity Test.j9  
**Path:** P:\2021\21-340\T&T\Capacity Assessments\Junctions 9\Sensitivity Test  
**Report generation date:** 27/01/2022 14:19:39

- »2021, 06:00 - 07:00
- »2021, 08:00 - 09:00
- »2021, 13:00 - 14:00
- »2021, 16:30 - 17:30

### Summary of junction performance

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
<b>2021</b>																				
1 - Finedon Road (NE)	D1	0.6	6.13	0.39	A	D2	50.5	169.58	1.09	F	D3	1.7	11.63	0.64	B	D4	2.2	12.96	0.70	B
2 - Finedon Road (SW)		0.5	6.61	0.32	A		3.5	26.28	0.79	D		1.2	10.62	0.55	B		24.8	107.41	1.02	F
3 - Rixon Road		0.3	6.35	0.25	A		1.4	14.10	0.59	B		1.3	12.69	0.56	B		123.1	780.92	1.41	F

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

### File summary

#### File Description

<b>Title</b>	Finedon Road Rixon Road Roundabout
<b>Location</b>	Wellingborough
<b>Site number</b>	
<b>Date</b>	03/12/2021
<b>Version</b>	
<b>Status</b>	(new file)
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	
<b>Enumerator</b>	HQjake.blay
<b>Description</b>	

### Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

### Analysis Options

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9	5.75				0.85	36.00	20.00

### Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D2	2021	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D3	2021	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D4	2021	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

### Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

# 2021, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	6.33	A

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Arms

### Arms

Arm	Name	Description
1	Finedon Road (NE)	
2	Finedon Road (SW)	
3	Rixon Road	

### Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1 - Finedon Road (NE)	3.65	3.48	6.48	7.1	19.42	2.00	0.0	
2 - Finedon Road (SW)	4.30	4.12	6.44	2.8	16.19	12.05	0.0	
3 - Rixon Road	4.06	4.06	5.70	3.2	17.05	12.55	0.0	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Finedon Road (NE)	0.657	1030
2 - Finedon Road (SW)	0.662	977
3 - Rixon Road	0.661	928

The slope and intercept shown above include any corrections and adjustments.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	341	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	235	100.000
3 - Rixon Road		ONE HOUR	✓	172	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	133	208
	2 - Finedon Road (SW)	133	0	102
	3 - Rixon Road	127	45	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	3	4
	2 - Finedon Road (SW)	2	0	2
	3 - Rixon Road	13	0	7

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.39	6.13	0.6	A	313	469
2 - Finedon Road (SW)	0.32	6.61	0.5	A	216	323
3 - Rixon Road	0.25	6.35	0.3	A	158	237

### Main Results for each time segment

#### 05:45 - 06:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	257	64	34	972	0.264	255	195	0.0	0.4	5.009	A
2 - Finedon Road (SW)	177	44	156	853	0.207	176	133	0.0	0.3	5.311	A
3 - Rixon Road	129	32	100	785	0.165	129	232	0.0	0.2	5.477	A

#### 06:00 - 06:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	307	77	40	968	0.317	306	233	0.4	0.5	5.434	A
2 - Finedon Road (SW)	211	53	187	832	0.254	211	160	0.3	0.3	5.796	A
3 - Rixon Road	155	39	119	773	0.200	154	278	0.2	0.2	5.819	A

**06:15 - 06:30**

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	375	94	49	962	0.390	375	286	0.5	0.6	6.118	A
2 - Finedon Road (SW)	259	65	229	804	0.322	258	196	0.3	0.5	6.594	A
3 - Rixon Road	189	47	146	757	0.250	189	341	0.2	0.3	6.339	A

**06:30 - 06:45**

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	375	94	50	962	0.390	375	286	0.6	0.6	6.133	A
2 - Finedon Road (SW)	259	65	229	803	0.322	259	196	0.5	0.5	6.610	A
3 - Rixon Road	189	47	146	756	0.250	189	341	0.3	0.3	6.349	A

**06:45 - 07:00**

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	307	77	41	968	0.317	307	234	0.6	0.5	5.452	A
2 - Finedon Road (SW)	211	53	187	831	0.254	212	160	0.5	0.3	5.817	A
3 - Rixon Road	155	39	120	773	0.200	155	279	0.3	0.3	5.832	A

**07:00 - 07:15**

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	257	64	34	972	0.264	257	196	0.5	0.4	5.036	A
2 - Finedon Road (SW)	177	44	157	852	0.208	177	134	0.3	0.3	5.337	A
3 - Rixon Road	129	32	100	785	0.165	130	234	0.3	0.2	5.499	A



# 2021, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	98.65	F

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2021	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	902	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	462	100.000
3 - Rixon Road		ONE HOUR	✓	335	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	469	433
	2 - Finedon Road (SW)	307	0	155
	3 - Rixon Road	232	103	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	2	6
	2 - Finedon Road (SW)	4	0	5
	3 - Rixon Road	14	6	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	1.09	169.58	50.5	F	828	1242
2 - Finedon Road (SW)	0.79	26.28	3.5	D	424	636
3 - Rixon Road	0.59	14.10	1.4	B	307	461

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	679	170	77	939	0.723	669	402	0.0	2.5	12.895	B
2 - Finedon Road (SW)	348	87	321	720	0.483	344	425	0.0	0.9	9.482	A
3 - Rixon Road	252	63	229	691	0.365	250	437	0.0	0.6	8.127	A

#### 08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	811	203	92	929	0.873	798	482	2.5	5.7	25.274	D
2 - Finedon Road (SW)	415	104	383	679	0.612	413	507	0.9	1.5	13.419	B
3 - Rixon Road	301	75	274	663	0.455	300	522	0.6	0.8	9.906	A

#### 08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	993	248	113	915	1.085	897	587	5.7	29.7	85.263	F
2 - Finedon Road (SW)	509	127	431	647	0.786	502	579	1.5	3.3	23.678	C
3 - Rixon Road	369	92	333	626	0.589	367	599	0.8	1.4	13.743	B

#### 08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	993	248	113	915	1.086	910	593	29.7	50.5	169.577	F
2 - Finedon Road (SW)	509	127	437	643	0.792	508	587	3.3	3.5	26.275	D
3 - Rixon Road	369	92	337	624	0.591	369	607	1.4	1.4	14.098	B

#### 08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	811	203	93	928	0.874	910	490	50.5	25.6	153.913	F
2 - Finedon Road (SW)	415	104	437	643	0.646	422	567	3.5	1.9	16.761	C
3 - Rixon Road	301	75	280	659	0.457	303	578	1.4	0.9	10.190	B

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	679	170	78	939	0.723	770	409	25.6	2.8	31.850	D
2 - Finedon Road (SW)	348	87	370	688	0.506	351	478	1.9	1.0	10.807	B
3 - Rixon Road	252	63	233	688	0.367	253	488	0.9	0.6	8.307	A

# 2021, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	11.62	B

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2021	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	490	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	377	100.000
3 - Rixon Road		ONE HOUR	✓	330	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	281	209
	2 - Finedon Road (SW)	274	0	103
	3 - Rixon Road	224	106	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	5	20
	2 - Finedon Road (SW)	4	0	9
	3 - Rixon Road	12	10	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.64	11.63	1.7	B	450	674
2 - Finedon Road (SW)	0.55	10.62	1.2	B	346	519
3 - Rixon Road	0.56	12.69	1.3	B	303	454

### Main Results for each time segment

#### 12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	369	92	79	873	0.423	366	372	0.0	0.7	7.062	A
2 - Finedon Road (SW)	284	71	156	810	0.351	282	289	0.0	0.5	6.793	A
3 - Rixon Road	248	62	205	707	0.352	246	233	0.0	0.5	7.785	A

#### 13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	440	110	95	863	0.511	439	446	0.7	1.0	8.479	A
2 - Finedon Road (SW)	339	85	187	786	0.431	338	347	0.5	0.7	8.022	A
3 - Rixon Road	297	74	246	681	0.435	296	280	0.5	0.8	9.314	A

#### 13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	539	135	116	849	0.635	537	546	1.0	1.7	11.434	B
2 - Finedon Road (SW)	415	104	229	755	0.550	413	424	0.7	1.2	10.494	B
3 - Rixon Road	363	91	300	648	0.561	361	342	0.8	1.2	12.493	B

#### 13:30 - 13:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	539	135	117	849	0.636	539	548	1.7	1.7	11.630	B
2 - Finedon Road (SW)	415	104	230	754	0.551	415	426	1.2	1.2	10.622	B
3 - Rixon Road	363	91	302	647	0.562	363	343	1.2	1.3	12.686	B

#### 13:45 - 14:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	440	110	96	862	0.511	443	450	1.7	1.1	8.644	A
2 - Finedon Road (SW)	339	85	189	785	0.432	341	350	1.2	0.8	8.139	A
3 - Rixon Road	297	74	248	680	0.436	299	282	1.3	0.8	9.481	A

14:00 - 14:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	369	92	80	872	0.423	370	376	1.1	0.7	7.186	A
2 - Finedon Road (SW)	284	71	158	808	0.351	285	292	0.8	0.5	6.890	A
3 - Rixon Road	248	62	207	705	0.352	249	236	0.8	0.6	7.912	A

# 2021, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	293.87	F

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2021	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	577	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	742	100.000
3 - Rixon Road		ONE HOUR	✓	619	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	375	202
	2 - Finedon Road (SW)	609	0	133
	3 - Rixon Road	474	145	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	2	9
	2 - Finedon Road (SW)	1	0	7
	3 - Rixon Road	3	3	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.70	12.96	2.2	B	529	794
2 - Finedon Road (SW)	1.02	107.41	24.8	F	681	1021
3 - Rixon Road	1.41	780.92	123.1	F	568	852

### Main Results for each time segment

#### 16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	434	109	106	917	0.474	431	800	0.0	0.9	7.356	A
2 - Finedon Road (SW)	559	140	151	851	0.657	551	386	0.0	1.8	11.761	B
3 - Rixon Road	466	117	452	607	0.767	454	250	0.0	3.0	22.063	C

#### 16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	519	130	121	907	0.572	517	938	0.9	1.3	9.186	A
2 - Finedon Road (SW)	667	167	181	829	0.804	660	457	1.8	3.7	20.351	C
3 - Rixon Road	556	139	541	550	1.012	518	299	3.0	12.7	72.806	F

#### 16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	635	159	115	911	0.697	632	1005	1.3	2.2	12.719	B
2 - Finedon Road (SW)	817	204	221	801	1.020	765	526	3.7	16.6	62.575	F
3 - Rixon Road	682	170	628	493	1.381	492	358	12.7	60.1	284.752	F

#### 17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	635	159	113	912	0.696	635	1014	2.2	2.2	12.960	B
2 - Finedon Road (SW)	817	204	222	800	1.021	784	526	16.6	24.8	107.414	F
3 - Rixon Road	682	170	644	483	1.410	483	363	60.1	109.8	634.421	F

#### 17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	519	130	118	909	0.570	522	998	2.2	1.4	9.381	A
2 - Finedon Road (SW)	667	167	183	828	0.806	747	457	24.8	4.9	58.314	F
3 - Rixon Road	556	139	613	503	1.105	503	317	109.8	123.1	780.922	F



17:30 - 17:45

Am	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	434	109	139	896	0.485	436	922	1.4	1.0	7.857	A
2 - Finedon Road (SW)	559	140	153	849	0.658	570	422	4.9	2.0	13.401	B
3 - Rixon Road	466	117	468	597	0.780	592	255	123.1	91.5	653.450	F



**Appendix AC – Rixon Road / Finedon Road mini  
roundabout Woods Hardwick improvement scheme  
sensitivity test Junctions 9 Results**

<b>Junctions 9</b>
<b>ARCADY 9 - Roundabout Module</b>
Version: 9.5.1.7462 © Copyright TRL Limited, 2019
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**Filename:** Finedon Rd Rixon Rd Roundabout\_WoodsHardwick Improvement SensitivityTest.j9  
**Path:** P:\2021\P21-340\T&T\Capacity Assessments\Junctions 9\Sensitivity Test  
**Report generation date:** 15/02/2022 13:06:24

- »2027, 06:00 - 07:00
- »2027, 08:00 - 09:00
- »2027, 13:00 - 14:00
- »2027, 16:30 - 17:30
- »2027 + Dev, 06:00 - 07:00
- »2027 + Dev, 08:00 - 09:00
- »2027 + Dev, 13:00 - 14:00
- »2027 + Dev, 16:30 - 17:30

**Summary of junction performance**

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LO
<b>2027</b>																				
1 - Finedon Road (NE)	D5	0.4	3.98	0.30	A	D6	5.0	18.08	0.84	C	D7	1.0	6.26	0.50	A	D8	1.3	6.84	0.56	A
2 - Finedon Road (SW)		0.5	6.53	0.33	A		5.1	36.71	0.85	E		1.3	10.92	0.57	B		32.2	129.40	1.05	F
3 - Rixon Road		0.2	4.07	0.18	A		0.7	6.68	0.42	A		0.7	6.37	0.40	A		7.5	40.67	0.90	E
<b>2027 + Dev</b>																				
1 - Finedon Road (NE)	D9	0.5	4.09	0.31	A	D10	5.2	18.69	0.85	C	D11	1.0	6.55	0.51	A	D12	1.3	7.09	0.57	A
2 - Finedon Road (SW)		0.5	6.68	0.34	A		5.4	38.64	0.86	E		1.4	11.34	0.58	B		35.4	141.15	1.06	F
3 - Rixon Road		0.2	4.21	0.19	A		0.7	6.78	0.42	A		0.7	6.38	0.41	A		7.9	42.09	0.91	E

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

**File summary**

**File Description**

<b>Title</b>	Finedon Road Rixon Road Roundabout
<b>Location</b>	Wellingborough
<b>Site number</b>	
<b>Date</b>	03/12/2021
<b>Version</b>	
<b>Status</b>	(new file)
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	
<b>Enumerator</b>	HQ\jake.blay
<b>Description</b>	

### Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

### Analysis Options

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9	5.75				0.85	36.00	20.00

### Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2027	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D6	2027	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D7	2027	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D8	2027	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D9	2027 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D10	2027 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D11	2027 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D12	2027 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

### Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

# 2027, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	4.79	A

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Arms

### Arms

Arm	Name	Description
1	Finedon Road (NE)	
2	Finedon Road (SW)	
3	Rixon Road	

### Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1 - Finedon Road (NE)	3.95	3.92	6.02	8.9	19.20	18.73	0.0	
2 - Finedon Road (SW)	4.88	4.51	5.29	4.9	14.77	10.86	0.0	
3 - Rixon Road	3.65	3.65	7.38	37.2	16.47	11.56	0.0	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Finedon Road (NE)	0.832	1387
2 - Finedon Road (SW)	0.670	1005
3 - Rixon Road	0.727	1298

The slope and intercept shown above include any corrections and adjustments.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2027	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	356	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	246	100.000
3 - Rixon Road		ONE HOUR	✓	179	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	139	217
	2 - Finedon Road (SW)	139	0	107
	3 - Rixon Road	132	47	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	3	4
	2 - Finedon Road (SW)	2	0	2
	3 - Rixon Road	13	0	7

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.30	3.98	0.4	A	327	490
2 - Finedon Road (SW)	0.33	6.53	0.5	A	226	339
3 - Rixon Road	0.18	4.07	0.2	A	164	246

### Main Results for each time segment

#### 05:45 - 06:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	268	67	35	1310	0.205	267	203	0.0	0.3	3.447	A
2 - Finedon Road (SW)	185	46	163	874	0.212	184	139	0.0	0.3	5.214	A
3 - Rixon Road	135	34	104	1114	0.121	134	243	0.0	0.1	3.673	A

#### 06:00 - 06:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	320	80	42	1305	0.245	320	243	0.3	0.3	3.654	A
2 - Finedon Road (SW)	221	55	195	852	0.260	221	167	0.3	0.3	5.704	A
3 - Rixon Road	161	40	125	1100	0.146	161	291	0.1	0.2	3.833	A

**06:15 - 06:30**

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	392	98	52	1297	0.302	392	298	0.3	0.4	3.973	A
2 - Finedon Road (SW)	271	68	239	822	0.330	270	205	0.3	0.5	6.520	A
3 - Rixon Road	197	49	153	1081	0.182	197	356	0.2	0.2	4.071	A

**06:30 - 06:45**

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	392	98	52	1297	0.302	392	298	0.4	0.4	3.976	A
2 - Finedon Road (SW)	271	68	239	822	0.330	271	205	0.5	0.5	6.535	A
3 - Rixon Road	197	49	153	1081	0.182	197	357	0.2	0.2	4.074	A

**06:45 - 07:00**

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	320	80	42	1305	0.245	320	244	0.4	0.3	3.658	A
2 - Finedon Road (SW)	221	55	195	851	0.260	222	167	0.5	0.4	5.723	A
3 - Rixon Road	161	40	125	1099	0.146	161	292	0.2	0.2	3.839	A

**07:00 - 07:15**

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	268	67	35	1310	0.205	268	204	0.3	0.3	3.457	A
2 - Finedon Road (SW)	185	46	164	873	0.212	186	140	0.4	0.3	5.237	A
3 - Rixon Road	135	34	105	1113	0.121	135	244	0.2	0.1	3.679	A

# 2027, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	20.71	C

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2027	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	943	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	483	100.000
3 - Rixon Road		ONE HOUR	✓	351	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	490	453
	2 - Finedon Road (SW)	321	0	162
	3 - Rixon Road	243	108	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	2	6
	2 - Finedon Road (SW)	4	0	5
	3 - Rixon Road	14	6	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.84	18.08	5.0	C	865	1298
2 - Finedon Road (SW)	0.85	36.71	5.1	E	443	665
3 - Rixon Road	0.42	6.68	0.7	A	322	483

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	710	177	81	1266	0.561	705	421	0.0	1.3	6.360	A
2 - Finedon Road (SW)	364	91	339	732	0.497	360	447	0.0	1.0	9.568	A
3 - Rixon Road	264	66	239	1001	0.264	263	459	0.0	0.4	4.865	A

#### 08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	848	212	97	1252	0.677	845	505	1.3	2.0	8.758	A
2 - Finedon Road (SW)	434	109	406	687	0.632	431	536	1.0	1.7	13.956	B
3 - Rixon Road	316	79	287	969	0.326	315	550	0.4	0.5	5.500	A

#### 08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	1038	260	119	1234	0.841	1027	613	2.0	4.8	16.588	C
2 - Finedon Road (SW)	532	133	494	627	0.848	520	652	1.7	4.6	30.835	D
3 - Rixon Road	386	97	346	929	0.416	386	668	0.5	0.7	6.610	A

#### 08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	1038	260	119	1234	0.841	1037	620	4.8	5.0	18.082	C
2 - Finedon Road (SW)	532	133	498	624	0.853	530	658	4.6	5.1	36.707	E
3 - Rixon Road	386	97	352	925	0.418	386	676	0.7	0.7	6.684	A

#### 08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	848	212	97	1252	0.677	859	516	5.0	2.2	9.412	A
2 - Finedon Road (SW)	434	109	413	682	0.637	447	544	5.1	1.8	16.118	C
3 - Rixon Road	316	79	297	962	0.328	316	563	0.7	0.5	5.584	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	710	177	81	1266	0.561	713	427	2.2	1.3	6.560	A
2 - Finedon Road (SW)	364	91	343	730	0.498	367	452	1.8	1.0	10.013	B
3 - Rixon Road	264	66	244	998	0.265	265	466	0.5	0.4	4.913	A

# 2027, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	7.70	A

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2027	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	517	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	398	100.000
3 - Rixon Road		ONE HOUR	✓	349	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	296	221
	2 - Finedon Road (SW)	289	0	109
	3 - Rixon Road	237	112	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	5	20
	2 - Finedon Road (SW)	4	0	9
	3 - Rixon Road	12	10	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.50	6.26	1.0	A	474	712
2 - Finedon Road (SW)	0.57	10.92	1.3	B	365	548
3 - Rixon Road	0.40	6.37	0.7	A	320	480

### Main Results for each time segment

#### 12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	389	97	84	1176	0.331	387	393	0.0	0.5	4.553	A
2 - Finedon Road (SW)	300	75	166	827	0.362	297	306	0.0	0.6	6.768	A
3 - Rixon Road	263	66	216	1019	0.258	261	247	0.0	0.3	4.744	A

#### 13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	465	116	101	1162	0.400	464	472	0.5	0.7	5.149	A
2 - Finedon Road (SW)	358	89	198	802	0.446	357	366	0.6	0.8	8.071	A
3 - Rixon Road	314	78	259	989	0.317	313	296	0.3	0.5	5.320	A

#### 13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	569	142	123	1144	0.498	568	577	0.7	1.0	6.236	A
2 - Finedon Road (SW)	438	110	243	768	0.571	436	448	0.8	1.3	10.780	B
3 - Rixon Road	384	96	317	950	0.404	383	362	0.5	0.7	6.340	A

#### 13:30 - 13:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	569	142	123	1144	0.498	569	579	1.0	1.0	6.265	A
2 - Finedon Road (SW)	438	110	243	768	0.571	438	449	1.3	1.3	10.917	B
3 - Rixon Road	384	96	318	949	0.405	384	363	0.7	0.7	6.368	A

#### 13:45 - 14:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	465	116	101	1162	0.400	466	475	1.0	0.7	5.182	A
2 - Finedon Road (SW)	358	89	199	801	0.446	360	368	1.3	0.8	8.188	A
3 - Rixon Road	314	78	261	988	0.318	315	298	0.7	0.5	5.353	A

14:00 - 14:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	389	97	84	1176	0.331	390	397	0.7	0.5	4.585	A
2 - Finedon Road (SW)	300	75	167	826	0.363	301	308	0.8	0.6	6.861	A
3 - Rixon Road	263	66	218	1017	0.258	263	249	0.5	0.4	4.777	A

# 2027, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	64.09	F

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2027	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	604	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	776	100.000
3 - Rixon Road		ONE HOUR	✓	647	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	392	212
	2 - Finedon Road (SW)	637	0	139
	3 - Rixon Road	495	152	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	2	9
	2 - Finedon Road (SW)	1	0	7
	3 - Rixon Road	3	3	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.56	6.84	1.3	A	554	831
2 - Finedon Road (SW)	1.05	129.40	32.2	F	712	1068
3 - Rixon Road	0.90	40.67	7.5	E	594	891

### Main Results for each time segment

#### 16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	455	114	113	1235	0.368	452	842	0.0	0.6	4.588	A
2 - Finedon Road (SW)	584	146	159	871	0.671	576	407	0.0	2.0	11.944	B
3 - Rixon Road	487	122	473	923	0.528	483	262	0.0	1.1	8.102	A

#### 16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	543	136	136	1217	0.446	542	1008	0.6	0.8	5.331	A
2 - Finedon Road (SW)	698	174	190	848	0.823	689	488	2.0	4.1	21.522	C
3 - Rixon Road	582	145	566	857	0.679	578	314	1.1	2.0	12.731	B

#### 16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	665	166	163	1194	0.557	663	1180	0.8	1.2	6.760	A
2 - Finedon Road (SW)	854	214	233	818	1.045	789	594	4.1	20.3	70.776	F
3 - Rixon Road	712	178	648	798	0.892	695	374	2.0	6.3	30.912	D

#### 17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	665	166	166	1192	0.558	665	1204	1.2	1.3	6.835	A
2 - Finedon Road (SW)	854	214	233	817	1.046	807	598	20.3	32.2	129.395	F
3 - Rixon Road	712	178	663	788	0.904	707	378	6.3	7.5	40.666	E

#### 17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	543	136	141	1212	0.448	545	1117	1.3	0.8	5.405	A
2 - Finedon Road (SW)	698	174	191	847	0.823	802	494	32.2	6.1	84.080	F
3 - Rixon Road	582	145	658	791	0.735	600	335	7.5	3.0	20.351	C

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	455	114	116	1233	0.369	456	871	0.8	0.6	4.638	A
2 - Finedon Road (SW)	584	146	160	870	0.672	600	412	6.1	2.1	14.054	B
3 - Rixon Road	487	122	492	909	0.536	494	267	3.0	1.2	8.824	A



# 2027 + Dev, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	4.90	A

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2027 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	365	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	248	100.000
3 - Rixon Road		ONE HOUR	✓	184	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	139	226
	2 - Finedon Road (SW)	139	0	109
	3 - Rixon Road	137	47	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	3	6
	2 - Finedon Road (SW)	2	0	2
	3 - Rixon Road	16	0	7

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.31	4.09	0.5	A	335	502
2 - Finedon Road (SW)	0.34	6.68	0.5	A	228	341
3 - Rixon Road	0.19	4.21	0.2	A	169	253

### Main Results for each time segment

#### 05:45 - 06:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	275	69	35	1295	0.212	274	207	0.0	0.3	3.522	A
2 - Finedon Road (SW)	187	47	169	867	0.215	186	139	0.0	0.3	5.275	A
3 - Rixon Road	139	35	104	1091	0.127	138	251	0.0	0.1	3.777	A

#### 06:00 - 06:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	328	82	42	1289	0.255	328	248	0.3	0.3	3.744	A
2 - Finedon Road (SW)	223	56	203	844	0.264	223	167	0.3	0.4	5.796	A
3 - Rixon Road	165	41	125	1077	0.154	165	301	0.1	0.2	3.949	A

#### 06:15 - 06:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	402	100	52	1282	0.314	401	303	0.3	0.5	4.087	A
2 - Finedon Road (SW)	273	68	249	812	0.336	272	205	0.4	0.5	6.668	A
3 - Rixon Road	203	51	153	1058	0.191	202	368	0.2	0.2	4.204	A

#### 06:30 - 06:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	402	100	52	1282	0.314	402	304	0.5	0.5	4.091	A
2 - Finedon Road (SW)	273	68	249	812	0.336	273	205	0.5	0.5	6.684	A
3 - Rixon Road	203	51	153	1058	0.191	203	369	0.2	0.2	4.207	A

#### 06:45 - 07:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	328	82	42	1289	0.255	329	249	0.5	0.3	3.751	A
2 - Finedon Road (SW)	223	56	203	843	0.264	224	167	0.5	0.4	5.814	A
3 - Rixon Road	165	41	125	1077	0.154	166	302	0.2	0.2	3.952	A

07:00 - 07:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	275	69	35	1295	0.212	275	208	0.3	0.3	3.530	A
2 - Finedon Road (SW)	187	47	170	866	0.216	187	140	0.4	0.3	5.304	A
3 - Rixon Road	139	35	105	1090	0.127	139	253	0.2	0.1	3.786	A

# 2027 + Dev, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	21.53	C

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2027 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	949	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	484	100.000
3 - Rixon Road		ONE HOUR	✓	353	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	490	459
	2 - Finedon Road (SW)	321	0	163
	3 - Rixon Road	245	108	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	2	6
	2 - Finedon Road (SW)	4	0	5
	3 - Rixon Road	15	6	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.85	18.69	5.2	C	871	1306
2 - Finedon Road (SW)	0.86	38.64	5.4	E	444	666
3 - Rixon Road	0.42	6.78	0.7	A	324	486

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	714	179	81	1266	0.564	709	423	0.0	1.3	6.412	A
2 - Finedon Road (SW)	364	91	343	729	0.500	360	447	0.0	1.0	9.664	A
3 - Rixon Road	266	66	239	995	0.267	264	464	0.0	0.4	4.914	A

#### 08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	853	213	97	1252	0.681	850	507	1.3	2.1	8.872	A
2 - Finedon Road (SW)	435	109	411	683	0.637	432	536	1.0	1.7	14.198	B
3 - Rixon Road	317	79	287	963	0.330	317	557	0.4	0.5	5.562	A

#### 08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	1045	261	119	1234	0.847	1033	614	2.1	4.9	17.045	C
2 - Finedon Road (SW)	533	133	500	623	0.856	521	652	1.7	4.8	32.021	D
3 - Rixon Road	389	97	345	924	0.421	388	675	0.5	0.7	6.706	A

#### 08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	1045	261	119	1234	0.847	1044	622	4.9	5.2	18.689	C
2 - Finedon Road (SW)	533	133	505	619	0.861	531	658	4.8	5.4	38.637	E
3 - Rixon Road	389	97	352	919	0.423	389	684	0.7	0.7	6.784	A

#### 08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	853	213	97	1252	0.681	865	519	5.2	2.2	9.576	A
2 - Finedon Road (SW)	435	109	418	678	0.642	449	544	5.4	1.9	16.589	C
3 - Rixon Road	317	79	298	956	0.332	318	570	0.7	0.5	5.655	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	714	179	81	1265	0.565	718	429	2.2	1.3	6.617	A
2 - Finedon Road (SW)	364	91	347	726	0.502	368	452	1.9	1.0	10.131	B
3 - Rixon Road	266	66	244	992	0.268	266	471	0.5	0.4	4.966	A

# 2027 + Dev, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	7.93	A

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2027 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	526	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	398	100.000
3 - Rixon Road		ONE HOUR	✓	350	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	296	230
	2 - Finedon Road (SW)	289	0	109
	3 - Rixon Road	238	112	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	5	23
	2 - Finedon Road (SW)	4	0	9
	3 - Rixon Road	12	10	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.51	6.55	1.0	A	483	724
2 - Finedon Road (SW)	0.58	11.34	1.4	B	365	548
3 - Rixon Road	0.41	6.38	0.7	A	321	482

### Main Results for each time segment

#### 12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	396	99	84	1161	0.341	394	394	0.0	0.5	4.682	A
2 - Finedon Road (SW)	300	75	172	819	0.366	297	306	0.0	0.6	6.876	A
3 - Rixon Road	263	66	216	1019	0.259	262	254	0.0	0.3	4.749	A

#### 13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	473	118	101	1147	0.412	472	473	0.5	0.7	5.325	A
2 - Finedon Road (SW)	358	89	206	792	0.452	357	366	0.6	0.8	8.255	A
3 - Rixon Road	315	79	259	989	0.318	314	304	0.3	0.5	5.327	A

#### 13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	579	145	123	1129	0.513	578	578	0.7	1.0	6.513	A
2 - Finedon Road (SW)	438	110	253	756	0.580	436	448	0.8	1.3	11.185	B
3 - Rixon Road	385	96	317	950	0.405	385	372	0.5	0.7	6.352	A

#### 13:30 - 13:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	579	145	123	1129	0.513	579	580	1.0	1.0	6.546	A
2 - Finedon Road (SW)	438	110	253	755	0.580	438	449	1.3	1.4	11.343	B
3 - Rixon Road	385	96	318	949	0.406	385	373	0.7	0.7	6.381	A

#### 13:45 - 14:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	473	118	101	1147	0.412	474	476	1.0	0.7	5.362	A
2 - Finedon Road (SW)	358	89	207	791	0.452	360	368	1.4	0.8	8.386	A
3 - Rixon Road	315	79	261	988	0.318	315	306	0.7	0.5	5.359	A



14:00 - 14:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	396	99	84	1160	0.341	397	398	0.7	0.5	4.718	A
2 - Finedon Road (SW)	300	75	173	818	0.366	301	308	0.8	0.6	6.975	A
3 - Rixon Road	263	66	218	1017	0.259	264	256	0.5	0.4	4.782	A

# 2027 + Dev, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finedon Road Rixon Road Roundabout	Mini-roundabout		1, 2, 3	68.63	F

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2027 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Finedon Road (NE)		ONE HOUR	✓	609	100.000
2 - Finedon Road (SW)		ONE HOUR	✓	776	100.000
3 - Rixon Road		ONE HOUR	✓	654	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	392	217
	2 - Finedon Road (SW)	637	0	139
	3 - Rixon Road	501	153	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1 - Finedon Road (NE)	2 - Finedon Road (SW)	3 - Rixon Road
From	1 - Finedon Road (NE)	0	2	12
	2 - Finedon Road (SW)	1	0	7
	3 - Rixon Road	3	3	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Finedon Road (NE)	0.57	7.09	1.3	A	559	838
2 - Finedon Road (SW)	1.06	141.15	35.4	F	712	1068
3 - Rixon Road	0.91	42.09	7.9	E	600	900

### Main Results for each time segment

#### 16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	458	115	114	1221	0.375	456	847	0.0	0.6	4.691	A
2 - Finedon Road (SW)	584	146	163	865	0.676	576	408	0.0	2.0	12.169	B
3 - Rixon Road	492	123	473	923	0.534	488	266	0.0	1.1	8.194	A

#### 16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	547	137	137	1203	0.455	547	1013	0.6	0.8	5.475	A
2 - Finedon Road (SW)	698	174	195	841	0.830	689	488	2.0	4.3	22.344	C
3 - Rixon Road	588	147	565	857	0.686	584	318	1.1	2.1	12.994	B

#### 16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	671	168	164	1181	0.568	669	1181	0.8	1.3	7.006	A
2 - Finedon Road (SW)	854	214	238	809	1.056	784	595	4.3	21.9	75.324	F
3 - Rixon Road	720	180	643	801	0.898	702	379	2.1	6.5	31.774	D

#### 17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	671	168	167	1178	0.569	670	1205	1.3	1.3	7.086	A
2 - Finedon Road (SW)	854	214	239	808	1.057	800	599	21.9	35.4	141.151	F
3 - Rixon Road	720	180	657	792	0.909	715	382	6.5	7.9	42.095	E

#### 17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	547	137	142	1199	0.457	549	1131	1.3	0.8	5.557	A
2 - Finedon Road (SW)	698	174	196	840	0.830	811	495	35.4	7.0	99.058	F
3 - Rixon Road	588	147	666	785	0.749	607	341	7.9	3.2	21.855	C

17:30 - 17:45

Am	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Finedon Road (NE)	458	115	117	1219	0.376	459	879	0.8	0.6	4.745	A
2 - Finedon Road (SW)	584	146	164	864	0.676	603	413	7.0	2.2	14.752	B
3 - Rixon Road	492	123	495	907	0.543	500	272	3.2	1.2	9.018	A



## **Appendix AD – Finedon Road / Meadow Close priority junction sensitivity test Junctions 9 Results**

<h1>Junctions 9</h1>
<h2>PICADY 9 - Priority Intersection Module</h2>
Version: 9.5.1.7462 © Copyright TRL Limited, 2019
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**Filename:** Finedon Road Meadow Close Rail Head Junction Sensitivity Test.j9  
**Path:** P:\2021\P21-340\T&T\Capacity Assessments\Junctions 9\Sensitivity Test  
**Report generation date:** 15/02/2022 13:07:07

- »2021, 06:00 - 07:00
- »2021, 08:00 - 09:00
- »2021, 13:00 - 14:00
- »2021, 16:30 - 17:30
- »2027, 06:00 - 07:00
- »2027, 08:00 - 09:00
- »2027, 13:00 - 14:00
- »2027, 16:30 - 17:30
- »2027 + Dev, 06:00 - 07:00
- »2027 + Dev, 08:00 - 09:00
- »2027 + Dev, 13:00 - 14:00
- »2027 + Dev, 16:30 - 17:30

**Summary of junction performance**

	06:00 - 07:00					08:00 - 09:00					13:00 - 14:00					16:30 - 17:30				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
<b>2021</b>																				
Stream B-C	D1	0.0	0.00	0.00	A	D2	0.0	6.17	0.03	A	D3	0.0	7.75	0.02	A	D4	0.1	10.22	0.12	B
Stream B-A		0.0	10.79	0.03	B		0.2	19.87	0.14	C		0.1	13.95	0.11	B		0.4	34.97	0.32	D
Stream C-AB		0.0	5.61	0.02	A		0.0	6.32	0.04	A		0.0	7.55	0.03	A		0.0	12.78	0.01	B
<b>2027</b>																				
Stream B-C	D5	0.0	0.00	0.00	A	D6	0.0	6.32	0.03	A	D7	0.0	7.94	0.02	A	D8	0.1	11.14	0.13	B
Stream B-A		0.0	10.98	0.03	B		0.2	22.15	0.16	C		0.1	14.90	0.12	B		0.6	45.35	0.39	E
Stream C-AB		0.0	5.65	0.02	A		0.0	6.44	0.05	A		0.0	7.73	0.04	A		0.0	13.31	0.01	B
<b>2027 + Dev</b>																				
Stream B-C	D9	0.0	0.00	0.00	A	D10	0.0	6.42	0.03	A	D11	0.0	8.16	0.02	A	D12	0.2	12.14	0.14	B
Stream B-A		0.0	12.46	0.04	B		0.2	24.65	0.19	C		0.2	18.91	0.19	C		0.9	61.39	0.49	F
Stream C-AB		0.0	5.68	0.02	A		0.1	6.68	0.05	A		0.1	9.93	0.07	A		0.0	16.94	0.04	C

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

## File summary

### File Description

<b>Title</b>	Finedon Road Meadows Close Junction
<b>Location</b>	Wellingborough
<b>Site number</b>	
<b>Date</b>	03/12/2021
<b>Version</b>	
<b>Status</b>	(new file)
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	
<b>Enumerator</b>	HQ\jake.blay
<b>Description</b>	

### Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

### Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

### Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D2	2021	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D3	2021	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D4	2021	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D5	2027	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D6	2027	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D7	2027	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D8	2027	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓
D9	2027 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓
D10	2027 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓
D11	2027 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓
D12	2027 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

### Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

# 2021, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		0.25	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description	Arm type
A	Finedon Road (S)		Major
B	Meadow Close		Minor
C	Finedon Road (N)		Major

### Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Finedon Road (N)	7.30		✓	3.65	215.0	✓	13.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

### Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Meadow Close	One lane plus flare	10.00	10.00	9.38	5.65	4.00		2.50	19	200

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	686	0.118	0.298	0.188	0.426
B-C	807	0.117	0.295	-	-
C-B	809	0.296	0.296	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.



## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	272	100.000
B - Meadow Close		ONE HOUR	✓	8	100.000
C - Finedon Road (N)		ONE HOUR	✓	470	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	11	261
	B - Meadow Close	8	0	0
	C - Finedon Road (N)	458	12	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	0	7
	B - Meadow Close	43	0	0
	C - Finedon Road (N)	3	9	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.00	0.00	0.0	A	0	0
B-A	0.03	10.79	0.0	B	7	11
C-AB	0.02	5.61	0.0	A	11	17
C-A					420	630
AB					10	15
AC					239	359

# 2021, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		0.48	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2021	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	600	100.000
B - Meadow Close		ONE HOUR	✓	43	100.000
C - Finedon Road (N)		ONE HOUR	✓	1061	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	44	556
	B - Meadow Close	26	0	17
	C - Finedon Road (N)	1037	24	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	20	8
	B - Meadow Close	17	47	0
	C - Finedon Road (N)	4	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.03	6.17	0.0	A	16	23
B-A	0.14	19.87	0.2	C	24	36
C-AB	0.04	6.32	0.0	A	22	33
C-A					952	1427
A-B					40	61
A-C					510	765

# 2021 , 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		0.56	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2021	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	595	100.000
B - Meadow Close		ONE HOUR	✓	39	100.000
C - Finedon Road (N)		ONE HOUR	✓	539	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	23	572
	B - Meadow Close	30	0	9
	C - Finedon Road (N)	524	15	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	19	9
	B - Meadow Close	19	0	25
	C - Finedon Road (N)	10	21	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.02	7.75	0.0	A	8	12
B-A	0.11	13.95	0.1	B	28	41
C-AB	0.03	7.55	0.0	A	14	21
C-A					481	721
A-B					21	32
A-C					525	787

# 2021, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		1.06	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2021	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	1152	100.000
B - Meadow Close		ONE HOUR	✓	85	100.000
C - Finedon Road (N)		ONE HOUR	✓	641	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	10	1142
	B - Meadow Close	43	0	42
	C - Finedon Road (N)	639	2	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	11	2
	B - Meadow Close	5	0	3
	C - Finedon Road (N)	5	50	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.12	10.22	0.1	B	39	58
B-A	0.32	34.97	0.4	D	39	59
C-AB	0.01	12.78	0.0	B	2	3
C-A					586	880
A-B					9	14
A-C					1048	1572

# 2027, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		0.25	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2027	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	283	100.000
B - Meadow Close		ONE HOUR	✓	8	100.000
C - Finedon Road (N)		ONE HOUR	✓	490	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	11	272
	B - Meadow Close	8	0	0
	C - Finedon Road (N)	477	13	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	0	7
	B - Meadow Close	43	0	0
	C - Finedon Road (N)	3	9	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.00	0.00	0.0	A	0	0
B-A	0.03	10.98	0.0	B	7	11
C-AB	0.02	5.65	0.0	A	12	18
C-A					438	657
A-B					10	15
A-C					250	374

# 2027, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		0.53	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2027	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	627	100.000
B - Meadow Close		ONE HOUR	✓	45	100.000
C - Finedon Road (N)		ONE HOUR	✓	1110	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	46	581
	B - Meadow Close	28	0	17
	C - Finedon Road (N)	1085	25	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	20	8
	B - Meadow Close	17	47	0
	C - Finedon Road (N)	4	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.03	6.32	0.0	A	16	23
B-A	0.16	22.15	0.2	C	26	39
C-AB	0.05	6.44	0.0	A	23	34
C-A					996	1493
A-B					42	63
A-C					533	800

# 2027, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		0.58	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2027	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	628	100.000
B - Meadow Close		ONE HOUR	✓	40	100.000
C - Finedon Road (N)		ONE HOUR	✓	569	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	24	604
	B - Meadow Close	31	0	9
	C - Finedon Road (N)	553	16	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	19	9
	B - Meadow Close	19	0	25
	C - Finedon Road (N)	10	21	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.02	7.94	0.0	A	8	12
B-A	0.12	14.90	0.1	B	28	43
C-AB	0.04	7.73	0.0	A	15	22
C-A					507	761
A-B					22	33
A-C					554	831

# 2027, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		1.33	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2027	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	1203	100.000
B - Meadow Close		ONE HOUR	✓	89	100.000
C - Finedon Road (N)		ONE HOUR	✓	670	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	10	1193
	B - Meadow Close	45	0	44
	C - Finedon Road (N)	668	2	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	11	2
	B - Meadow Close	5	0	3
	C - Finedon Road (N)	5	50	0

# Results

## Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.13	11.14	0.1	B	40	61
B-A	0.39	45.35	0.6	E	41	62
C-AB	0.01	13.31	0.0	B	2	3
C-A					613	919
A-B					9	14
A-C					1095	1642

# 2027 + Dev, 06:00 - 07:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		0.35	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2027 + Dev	06:00 - 07:00	ONE HOUR	05:45	07:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	289	100.000
B - Meadow Close		ONE HOUR	✓	11	100.000
C - Finedon Road (N)		ONE HOUR	✓	496	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	17	272
	B - Meadow Close	11	0	0
	C - Finedon Road (N)	483	13	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	31	7
	B - Meadow Close	59	0	0
	C - Finedon Road (N)	3	9	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.00	0.00	0.0	A	0	0
B-A	0.04	12.46	0.0	B	10	15
C-AB	0.02	5.68	0.0	A	12	18
C-A					443	665
A-B					16	23
A-C					250	374

# 2027 + Dev, 08:00 - 09:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		0.65	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2027 + Dev	08:00 - 09:00	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	630	100.000
B - Meadow Close		ONE HOUR	✓	48	100.000
C - Finedon Road (N)		ONE HOUR	✓	1113	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	49	581
	B - Meadow Close	31	0	17
	C - Finedon Road (N)	1087	26	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	24	8
	B - Meadow Close	25	47	0
	C - Finedon Road (N)	4	3	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.03	6.42	0.0	A	16	23
B-A	0.19	24.65	0.2	C	28	43
C-AB	0.05	6.68	0.1	A	24	36
C-A					997	1496
A-B					45	67
A-C					533	800

# 2027 + Dev, 13:00 - 14:00

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		1.07	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2027 + Dev	13:00 - 14:00	ONE HOUR	12:45	14:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	629	100.000
B - Meadow Close		ONE HOUR	✓	49	100.000
C - Finedon Road (N)		ONE HOUR	✓	578	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	24	605
	B - Meadow Close	40	0	9
	C - Finedon Road (N)	553	25	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	19	9
	B - Meadow Close	37	0	25
	C - Finedon Road (N)	10	50	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.02	8.16	0.0	A	8	12
B-A	0.19	18.91	0.2	C	37	55
C-AB	0.07	9.93	0.1	A	23	34
C-A					507	761
A-B					22	33
A-C					555	833

# 2027 + Dev, 16:30 - 17:30

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Finedon Road Meadow Close	T-Junction	Two-way		2.10	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2027 + Dev	16:30 - 17:30	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Finedon Road (S)		ONE HOUR	✓	1208	100.000
B - Meadow Close		ONE HOUR	✓	94	100.000
C - Finedon Road (N)		ONE HOUR	✓	675	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	10	1198
	B - Meadow Close	50	0	44
	C - Finedon Road (N)	668	7	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Finedon Road (S)	B - Meadow Close	C - Finedon Road (N)
From	A - Finedon Road (S)	0	11	2
	B - Meadow Close	15	0	3
	C - Finedon Road (N)	5	85	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.14	12.14	0.2	B	40	61
B-A	0.49	61.39	0.9	F	46	69
C-AB	0.04	16.94	0.0	C	6	10
C-A					613	919
A-B					9	14
A-C					1099	1649



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