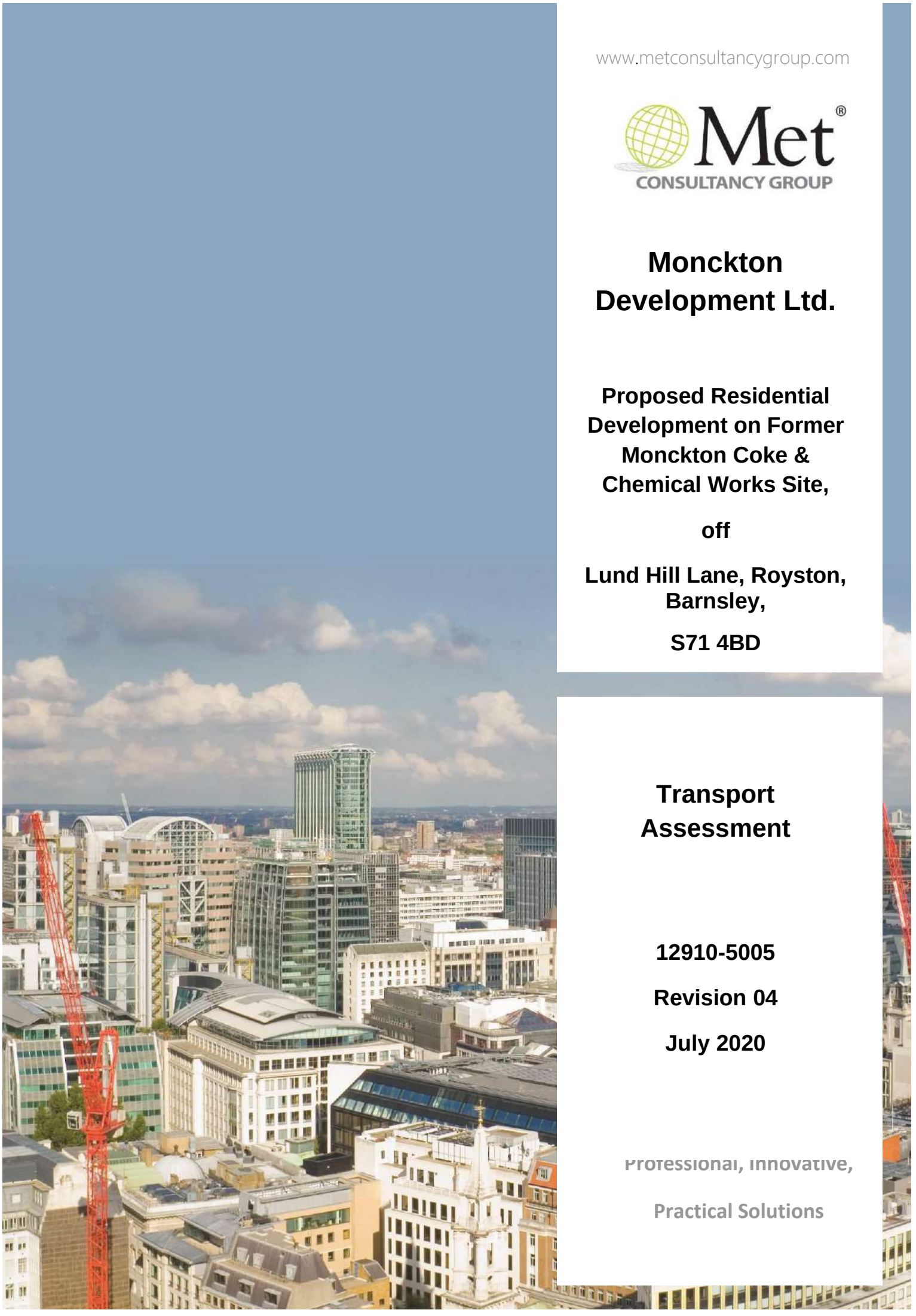


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Monckton Development Ltd.

Proposed Residential Development on Former Monckton Coke & Chemical Works Site,

off

Lund Hill Lane, Royston, Barnsley,

S71 4BD

Transport Assessment

12910-5005

Revision 04

July 2020

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CONTENTS

1. Revision Record 1

2. Introduction 2

3. Receiving Environment 4

4. Local / National Policy Guidelines and Sustainability 7

5. Personal Injury Accident Records 11

6. Non-Car Modes of Transport 15

7. Development Traffic Generated 19

8. Traffic Impacts on the Highway Network 22

9. Site Access and Layout Considerations 29

10. Construction Traffic 31

11. Summary and Conclusions 33

LIST OF TABLES

Table 6.1: Bus Services and Routes **17**

Table 7.1: Trip Generation Details- Proposed Development **19**

Table 8.1: Background Traffic Growth **22**

Table 8.2: 2018 Junction Model Results **25**

Tables 8.3: 2030 Junction Model Results **27**

Appendices

1. REVISION RECORD

Report Ref: P12910-5005 / Transport Assessment					
Rev	**Description**	**Date**	**Originator**	**Checked**	**Approved**
4	Text and development changes	29/07/20	TL	BJS	AK
3	Text and development changes	03/07/20	TL	BJS	AK
2	Development Layout Changes	16/06/20	TL	BJS	AK
1	First Issue	17/04/20	TL	BJS	AK

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Prepared For:	**Prepared By:**
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2. INTRODUCTION

2.1 Met Engineers Ltd have been appointed by Monckton Developments Ltd to prepare a Transport Assessment, for a proposed residential and commercial development and associated parking and landscaping on land at the former Monckton Coke & Chemical works site off Lund Hill Lane, Royston, S71 4BD, as detailed in Appendix A. The Transport Assessment is to support a planning application submission to Barnsley Metropolitan District Council (MDC).

2.2 The 15-hectare development site is located to the east of the railway line and to the west of Lund Hill Lane. It is proposed that the site, would accommodate up to 500 residential units (Class 3), a commercial unit (Class A1 to A5) up to 400m^2 Gross Floor Area (GFA) and 2 No. points of access onto Lund Hill Lane.

2.3 The details as provided by the design team for this development type and use form the basis of this assessment.

2.4 The development site which is now vacant previously contained the Monckton Coke and Chemical development works producing coke destined for use in the glass, detergents and steel manufacturing sectors. The development works closed in 2014.

2.5 The development site is situated circa 2.0km to the east of Royston village centre, as shown in Appendix A.

2.6 The Transport Assessment report has been prepared in accordance with the National Planning Policy Framework (NPPF) for England, Local Planning Guidelines, and best practice. Barnsley Metropolitan District Council (MDC) is the local planning and roads authority that will process the planning application.

2.7 The scope of works was developed and approved with input from the design team and Barnsley MDC. Due to the site's close proximity to the Barnsley MDC/Wakefield MDC boundary line, the developments impact within Wakefield MDC's jurisdiction was also assessed.

2.8 A copy of the relevant scoping correspondence is included in Appendix B.

3. RECEIVING ENVIRONMENT

Development Land and Surrounding Highway Network

3.1 The site which forms part of Royston's urban fabric has no specific zoning allocation, but does lie within the accessibility improvement zoning designated by Barnsley MDC. The site is approximately rectangular in shape, sloping gently downhill to the north, with an earth bund at the northern end, a steep embankment at the southern end sloping downhill to the boundary edge and as already mentioned previously contained the former Monckton Coke & Chemical development works.

3.2 The site is bounded by Lund Hill Lane to the east and south. The railway line and the disused Barnsley Canal, along which The Trans Pennine Trail runs are located to the west. To the north there are a small number of residential dwellings, and green belt beyond.

3.3 Lund Hill Lane and Midland Road links the Midland Road / High Street (B6428) / Station Road (B6132) / Church Street (B6132) traffic signal-controlled junction in the centre of Royston to Ryhill / Havercroft in the northeast.

3.4 High Street and Lee Lane to the west links Royston with Lee Lane/Wakefield Road/Shaw Lane, a staggered junction with separate right turn lanes on Wakefield Road and where traffic on Wakefield Road has priority.

3.5 Lund Hill Lane fronting the site is subject to a 30mph speed limit and has a system of street lighting. A 1.5m wide continuous footway exists on the east side of Lund Hill Lane with an intermittent footway, 1.5m wide, on its west side.

3.6 Lund Hill Lane is a bus route, with bus stops and shelters existing on the site frontage to the east of the railway line. However only one bus stops at each bus stop per day.

3.7 The development site has 2 No. points of access (7.0m and 18.0m wide) onto Lund Hill Lane.

3.8 A railway bridge crosses Lund Hill Lane, to the south west of the site, where only 3.3m headroom is provided at the underpass. This railway line now only operates as a limited use freight line over the public highway.

3.9 Adjacent to the northern eastern end of the development site, there is a bridge structure under Lund Hill Lane, where the load bearing capabilities have been question. This is currently being reviewed by Barnsley MDC.

3.10 125m west of the railway bridge, Lund Hill Lane becomes Midland Road and forms a priority junction with Cross Lane.

3.11 Cross Lane links up with Church Hill and provides an alternative link through a residential area between Lund Hill Lane / Midland Road and Royston Lane / Church Street (B6132).

3.12 Cross Lane is 7.3m wide with footways on both sides of the road and intermittent on street parking.

3.13 Church Hill is 6.75m wide with footways on both sides of the road and is traffic calmed. Cross Lane / Church Hill is a bus route.

3.14 Church Hill forms a priority-controlled junction with Royston Lane / Church Street where a right turn lane and ghost island exists on Royston Lane.

3.15 The Barnsley MDC / Wakefield MDC boundary line lies a short distance to the north of the development site.

3.16 Lund Hill Lane to the north of the development site links up with Church Lane at a cross roads and where traffic on Lund Hill Lane has priority.

3.17 There are no recorded public rights of way within the development site, and those that exist nearest the site are highlighted in Appendix C. Not shown in Appendix C is the Trans Pennines Trail route that runs adjacent to the disused Barnsley Canal which runs close to the western edge of the site.

Traffic Flows

3.18 In order to assess the traffic impacts of the proposed development on the highway network, traffic flow information was acquired at a number of key junction locations as detailed below and in Appendix D.

- Junction 1: Wakefield Road (A61)/B6428, staggered cross roads;
- Junction 2: Station Road/B6428, signalised cross roads;
- Junction 3: Cross Lane/B6428, T-junction;
- Junction 4: Church Lane/B6428, cross roads; and
- Junction 5: Development Access/B6428, T-junction.

3.19 AM and PM peak period traffic flow levels were established at the above junctions, from traffic surveys conducted by Nationwide Data Collection on the 12/03/2010. However due to COVID-19 and a road closure in the area at the time, the above surveys were supplemented with surveys undertaken by MHC Traffic Ltd on the 10/10/2018, in order to reflection the prevailing traffic levels on the ground. The traffic flows recorded and the resulting 2018 - 2020 AM and PM peak hour flows are presented in Appendix D.

4. LOCAL / NATIONAL POLICY GUIDELINES AND SUSTAINABILITY

4.1 When considering transport policy compliance for planning applications, the main thrust of local, regional and national policy is that new development should be conveniently accessible by a range of sustainable transport modes, including public transport, cycling and walking. This policy therefore sets out the framework for this Transport Statement and the project's compliance with the policy objectives. Further details of the relevant policy documents are set out below.

National Planning Policy Framework (2019) – Promoting Sustainable Transport

4.2 The National Planning Policy Framework (NPPF) relating to transport and development is set out in Section 9 of the NPPF.

4.3 Paragraph 111 of the NPPF states that "All developments that 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". Plans and decisions should take account of whether:

- *the opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, so as to reduce the need for major transport infrastructure;*
- *safe and suitable access to the site can be achieved for all people; and*
- *improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development.*

4.4 Development should only be prevented or refused on highway grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.

4.5 Within this context, Paragraph 110 of the NPPF states that "applications for development should:

a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;

b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;

c) create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;

d) allow for the efficient delivery of goods, and access by service and emergency vehicles; and

e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations".

4.6 The current development proposals are to include measures to ensure compliance with these requirements.

Local Transport Plans

4.7 **The South Yorkshire Local Transport Plan (2011 – 2026) (LTP**) covers the Sheffield City Region and is produced by the South Yorkshire LTP partnership which includes Barnsley, Doncaster, Rotherham, Sheffield Councils and South Yorkshire Passenger Transport Executive. The LTP sets out the long term vision for travel in South Yorkshire and has three main components which outline the strategy, implementation and the annual delivery programme.

4.8 The Vision is to offer people a great place in which to live, work, invest and visit. The vision has a primary focus on the area's prosperity and growth, aspiring to make a greater contribution to the UK economy by having a local economy less dependent on the public sector, providing conditions for businesses to grow to allow the area to become the prime national centre for advanced manufacturing and low-carbon industries.

4.9 The Transport Strategy has four main goals, set out below:

- *To support economic growth;*
- *To enhance social inclusion and health;*
- *To reduce emissions; and*
- *To maximise safety.*

4.10 In translating the Transport Strategy into action, the following four cross cutting principles will be followed:

- *Squeeze more from existing assets;*
- *Make growth sustainable;*
- *Give people choice; and*
- *Encourage a change in travel culture.*

4.11 **The Barnsley Local Plan (BLP) (2019-2033)** which was adopted in January 2019 provides local planning policy for the future development of the Barnsley Borough area, which includes Royston, up to 2033.

4.12 The core strategy discusses reducing the need to travel and encourages travel by sustainable modes. Relevant Core Policies within these documents include, Policy T3: New Development and Sustainable Travel, where it states that new development will be expected to:

- *Be located and designed to reduce the need to travel, be accessible to public transport and meet the needs of pedestrians and cyclists;*
- *Provide at least the minimum levels of parking for cycles, motorbikes, scooters, mopeds and disabled people set out in the relevant Supplementary Planning Documents;*
- *Provide a transport statement or assessment; and*
- *Provide a Travel Plan.*

4.13 Local policy maps in the immediate vicinity of the Monckton Coke and Chemical Works development site as shown in Appendix E indicate that there are no significant transport proposals that will impact on the proposed development. The only major transport proposals in the area is the proposed HS2 railway line (currently under Government review) which will be circa 6km to the east of the development site at its closest point.

4.14 The Supplementary Planning Document on Parking and adopted in March 2012, continues to provide guidance on the level of parking required to developers, architects, agents and landowners who are considering submitting planning applications.

5. PERSONAL INJURY ACCIDENT RECORDS

5.1 Details of all personal injury accidents that have occurred on the adjacent road network have been obtained from Crashmap.co.uk for the latest available 3-year period (2016 to 2018).

5.2 During this period, a total of 17 No. (3 No. serious and 14 No. slight) personal injury collisions were recorded in the vicinity of the proposed development location, as detailed below: -

- Ref. Nº 2016133A91677 occurred on Sunday 9th October 2016, at 21:05 hours, at the Lund Hill Lane/Church Lane crossroads, where surface conditions were damp or wet. This involved 3 vehicles, 2 which were travelling straight through and the other one turning right at the junction. All vehicles incurred a collision and where the vehicle occupants received slight injuries.

- Ref. Nº 2017134AG0909 occurred on Saturday 14th October 2017, at 12:20 hours, at the Lund Hill Lane/Church Lane crossroads, where surface conditions were dry. Two vehicles travelling through the cross-roads, collided with each other. The occupants of both vehicles received slight injuries.

- Ref. Nº 2018135C51032 occurred on Wednesday 5th December 2018, at 15:20 hours, at the Lund Hill Lane/Church Lane crossroads, where surface conditions were damp or wet. Two vehicles travelling through the cross-roads, collided with each other. The driver in one of the vehicles received slight injuries.

- Ref. Nº 20161332C0914 occurred on Friday 12th February 2016, at 15:41 hours, at the Lund Hill Lane/Church Lane crossroads, where surface conditions were damp or wet. A single vehicle incident where the vehicle lost control and hit a tree. The occupant in the vehicle received slight injuries.

- Ref. Nº 20161333G1098 occurred on Wednesday 16th March 2016, at 16:50 hours, at the Lund Hill Lane/Church Lane crossroads, where surface conditions were dry. The incident involved 3 vehicles colliding with each other, where 2 were travelling straight through and the other one turning right at the junction. Occupants in two of the vehicles received slight injuries.

- Ref. Nº 20181353R0275 occurred on Tuesday 27th March 2018, at 07:50 hours, at the Lund Hill Lane/Church Lane crossroads, where surface conditions were wet or damp. Two vehicles collided with each other, as they travelled through the junction. The occupant in one of the vehicles received slight injuries.

- Ref. Nº 201813558B1734 occurred on Friday 11th May 2018, at 19:05 hours, at the Lund Hill Lane/Church Lane crossroads, where surface conditions were dry. Two vehicles collided with each other, as they travelled through the junction. The occupants in both vehicles received slight injuries.

- Ref. Nº 2016140097153 occurred on Sunday 31th July 2016, at 09:48 hours, at the Midland Road / Milgate Street junction, where surface conditions were dry. A vehicle was in the act of turning right when a motorbike collided with it while traveling through the junction. The driver on the motorbike received serious injuries.

- Ref. Nº 2017134880307 occurred on Tuesday 08th August 2017, at 07:17 hours, at the Lund Hill Lane/Church Lane crossroads, where surface conditions were dry. Two vehicles travelling in the same direction collided with each other, in a rear end type collision. The occupant in one of the vehicles received slight injuries.

- Ref. Nº 2017140148382 occurred on Saturday 14th January 2017, at 08:30 hours, at the Midland Road / The Lane junction, where surface conditions were wet or damp. Two vehicles collided with each other in a side swipe collision, as they travelled through the junction. The occupant in one of the vehicles received slight injuries.

- Ref. Nº 2017140192090 occurred on Tuesday 30th May 2017, at 21:18 hours, on Lund Hill Lane 250m east of the railway bridge crossing, where surface conditions were wet or damp. Two vehicles traveling along the carriageway collided with each other. Occupants in one of the vehicles received slight injuries.

- Ref. Nº 2017140204798 occurred on Thursday 13th July 2017, at 15:15 hours, near the High Street / Church Street crossroads, where surface conditions were dry. A goods vehicle was in the act of turning left when it collided with a pedestrian. The pedestrian received serious injuries.

- Ref. Nº 2017140237034 occurred on Friday 06th October 2017, at 18:10 hours, at the Midland Road / Milgate Street junction, where surface conditions were dry. Incident involved a vehicle and a pedestrian, where the pedestrian received slight injuries.

- Ref. Nº 2018135670406 occurred on Thursday 07th June 2018, at 09:14 hours, at the Lund Hill Lane/Church Lane crossroads, where surface conditions were dry. Two vehicles traveling along the carriageway collided with each other. An occupant in one of the vehicles received slight injuries.

- Ref. Nº 2018140291661 occurred on Saturday 28th April 2018, at 17:30 hours, near the High Street / Church Street crossroads, where surface conditions were dry. The incident involved 3 vehicles colliding with each other, and where the occupants in one of the vehicles received slight injuries.

- Ref. Nº 2018140317799 occurred on Monday 30th July 2018, at 19:03 hours, near the Midland Road / Jack Close Orchard junction, where surface conditions were dry. A vehicle proceeding along the carriageway collided with a parked vehicle. The occupant in one of the vehicles received slight injuries.

- Ref. Nº 2018140330588 occurred on Monday 10th September 2018, at 17:30 hours, at the High Street / Church Street crossroads, where surface conditions were dry. A goods vehicle and car traveling along the carriageway, collided with each other. The occupant in the car received serious injuries.

5.3 Further details of the above accidents and locations are provided in Appendix F.

5.4 While there is no clear indication that the above accidents are as a result of deficient road geometry or otherwise, it is clear that the majority of these occurred at or near the Lund Hill Lane / Church Lane junction and to a lesser extent at the High Street / Church Street junction.

5.5 Given this clustering of accidents, it is recommended that further monitoring should be undertaken at these locations to ascertain if there are any deficiencies that put road users at risk.

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6. NON-CAR MODES OF TRANSPORT

6.1 The sustainability of a site is inherently linked to its location and access to facilities that encourage active travel and public transport use. This sustainable travel section comprises of an assessment of accessibility to the development site and other key areas in relation to the following categories.

- Walking
- Cycling
- Public Transport

6.2 Given the right conditions it is expected that the number of occupants (residents, and visitors) using sustainable modes of transport could be enhanced at this type of development.

Walking

6.3 Planning guidance identifies walking as the most important mode of transport at the local level and offers the greatest potential to replace short car trips in journeys under 2km. Therefore, this places most of Royston within an acceptable walking distance from the development site as detailed in Appendix G.

6.4 Leisure footpaths (Royston UD 11, 22 and 25 as detailed in Appendix B) exist across Rabbit Ings Country Park and to the south and the Trans Pennine Trail (suitable for walkers, and cyclists) exists along the disused Barnsley Canal, located adjacent to the site's western boundary.

6.5 Footways exist on both sides of Lundi Hill Lane towards Royston village centre, though not continuous on the development site side due to restrictions at the railway overpass.

6.6 It is considered that the pedestrian infrastructure will facilitate safe and direct pedestrian linkages, between the site and local destinations, however this is on the basis that continuous facilities are provided linking the site with Royston and the village centre, as highlighted in Appendix G.

Cycling

6.7 Planning guidance identifies that cycling has an important part to play in improving accessibility and reducing pollution. Cycling is generally considered to be a reasonable option for day to day trips up to 5km. Therefore, this places Royston, Notton, Cold Hiendley, Ryhill, Havercroft, South Hiendley and the Carlton area within an acceptable cycling distance from the development site, as detailed in Appendix G.

6.8 Lund Hill Lane is not on a cycle route, but does provide access to the National Cycle Network (National Route No. 67 as shown in Appendix G) immediately to the west of the site. National Route No. 67 which forms part of the Trans Pennine Trail, provides links to surrounding places such as Wakefield, Sheffield, Chesterfield and Leeds.

6.9 The site's internal layout is to be design so that it encourages low vehicular speeds, which in turn would assist cycle use and accessibility.

Public Transport

6.10 Bus services adjacent to the development site operate on Lund Hill Lane, Midlands Road and Cross Lanes.

6.11 There are bus stops, with shelters on both sides of Lund Hill Lane that will be within 100m of the site entrances to the east of the railway line.

6.12 To the west of the railway line and within 800m from the furthest proposed entrance, there are a further 4 No. bus stops, one on each side of Midlands Road and Cross Lane respectively, and where two of them have bus shelters.

6.13 The services which run on these roads are operated by Stagecoach Yorkshire and R & S Waterson Ltd, and run between Wakefield and Barnsley and a number of locations in between as detailed in Table 6.1 below.

Bus Stops	Service No. Operator	Route	Average Service Frequency per Direction (Mon – Fri)
Lund Hill Ln. opposite former Coke & Chemicals Works site and also adjacent to Cross Ln.	37ss R & S Waterson Ltd	Royston to Carlton and Athersley and return journey	Once daily (school days only)
Cross Lane adjacent to E End Crescent. (within 800m of dev. site entrances)	59 Stagecoach Ltd.	Wakefield to Barnsley via Royston and return journey	Between 30 mins. and 60 mins.
	59a Stagecoach Ltd.	Wakefield to Barnsley via Royston and return journey	60 mins.

Table 6.1: Bus Services and Routes

6.14 As established from Table 6.1 there are over 3 services per hour during weekdays, serving the above bus stops to the west of the railway line, which equates to a service frequency of less than 20-minutes for the area. Nearly all of these bus services provide journeys to Barnsley and Wakefield where bus connections to areas further afield via other services are on offer.

6.15 However only R & S Waterson provides a service once a day to the bus stops located to the east of the railway line adjacent to the site entrances on Lund Hill Lane.

6.16 To mitigate against this shortfall, the applicant proposes to make a substantial financial contribution towards sustainable travel, in accordance with the formula set out in the

Barnsley Sustainable Travel Supplementary Planning Documented, which will be utilised to assist in enhancing accessibility of the site and surrounding area by public transport, walking and cycling.

6.17 The current bus services do allow residents to be able to interchange with rail services in Barnsley and Wakefield. The nearest railway station to the development site is Fitzwilliam Railway Station located circa. 6km by road to the east. This station is on the Wakefield Line operated by Northern. During weekdays a half-hourly service operates towards Leeds via Wakefield Westgate and an hourly service operates both to Doncaster and Sheffield.

7. DEVELOPMENT TRAFFIC GENERATED

7.1 The proposed development is to accommodate, up to 500 residential units, a commercial unit up to 400m^2 Gross Floor Area, associated parking and landscaping on land off Lund Hill Lane. Access is to be gained from 2 No. existing points of access onto Lund Hill Lane.

7.2 So that the assessment is robust, it is taken that all of the proposed residential units are privately owned, and the commercial unit operates as retail use. Outline details of the development site are provided in Appendix A.

Development Traffic

7.3 The likely peak trip generation for the proposed development has been derived using the TRICS v7.6.3 database. The peak trip rates and the total trips generated by the proposed development that are most likely to coincide with the background commuter peak periods are outlined in Table 7.1 below. The full TRICS data output for this development composition can be found in Appendix H.

7.4 These traffic levels below equate to average values which are considered to be the most appropriate, as the proposed development will proceed on the basis that it encourages the use of sustainable modes of transport other than the private car.

Time Period	Use	Quantity		Trip Rate (vehs/unit or 100 m^2)		Trips Generated (vehs)		Total
				Arrive	Depart	Arrive	Depart	
AM Peak Hour (08:00 - 09:00)								
	Dwellings	500	Units	0.150	0.399	75	200	275
	Retail	400	m^2	7.499	7.531	30	30	60
	Less Pass-by (60%)					*-18*	*-18*	*-36*
					Total	87	212	299
PM Peak Hour (17:00 - 18:00))								
	Dwellings	500	Units	0.387	0.159	194	80	273
	Retail	400	m^2	10.200	9.088	41	36	77
	Less Pass-by (60%)					*-24*	*-22*	*-46*
					Total	210	94	304

Table 7.1: Trip Generation Details- Proposed Development

7.5 Not all trips generated by retail uses are new trips, many are already on the highway network and linked to adjacent development. In this case, it is considered reasonable to accepted that 60% of the retail trips generated will be linked to the residential element of the proposed development, and with the balance (40%) comprising new trips.

7.6 As outlined in Table 7.1 above, it is anticipated that overall, the proposed development will add no more than 304 two-way trips per hour to the adjacent road network during the peak background traffic flow period.

Trip Distribution

7.7 Having established the development traffic generation for the site, as shown in Table 7.1, a distribution exercise was then completed to predict the assignment of these trips onto the highway network. The latest census data (2011) has been interrogated for the Barnsley 002 super output area (middle layer) to predict the destination of residents travelling to work. The census data was used to establish the journey to work destinations for all car driver trips travelling from Barnsley 002 to areas within a 40-minute drive time, as detailed in Appendix I.

7.8 The development traffic has been distributed onto the local highway network using the following routes to/from the site:

- Wakefield Road (North);
- Wakefield Road (South);
- Shaw Lane;
- Station Road;
- Church Street;
- Cross Lane;
- Church Lane (North);
- Hall Field Lane; and
- Church Lane (South)

7.9 The resulting distribution figures on the above local road network are summarise in Appendix I. These distribution figures where then applied to the development traffic as shown in Table 7.1 above, to provide the development traffic flows on the adjacent highway network as detailed in Appendix I.

7.10 However, in order to provide a robust assessment of the access junctions, the majority of the development traffic was assigned to one of the junctions, and the design required to accommodate this traffic demand was applied in same measure to the other access junction.

7.11 Further it is assumed that the bridge structure under Lund Hill Lane adjacent to the northern end of the development site only accommodates light vehicle traffic movements along Lund Hill Lane.

Committed Development

7.12 The developments (residential / retail) as detailed below and in Appendix J were considered as committed developments, and therefore included in the junction assessment in this study.

- Lidl retail, Wakefield Road (Planning Ref. No.2017/1716);
- 102 No. residential units, Wakefield Road (20171718);
- 250 No. residential units, Wakefield Road (2016/0337 & 2017/0520);
- 250 No. residential units, Lee Lane (2019/0239), awaiting planning decision; and
- 166 No. residential units, Lee Lane (2018/0687).

7.13 The resulting peak period traffic generated by the above committed development on the adjacent highway network and included in the junction capacity assessment is depicted in Appendix J.

8. TRAFFIC IMPACTS ON THE HIGHWAY NETWORK

8.1 The impact of the proposed development has been assessed under future traffic conditions at key junction locations on the highway network. However, these junctions were initially modeled under current conditions, so that the traffic models could be validated against existing values. The future assessment was conducted so that the full impact of the development could be assessed on the adjacent highway network.

8.2 The future assessment year has been taken as year 2030 traffic, which is 10 years on from the planning application date, and by which time it is assumed that the development would be fully developed.

Background Traffic Growth

8.3 The Tempro v7.2 database was used to predict the future year traffic, ie year 2030 traffic. An unadjusted Tempro rate between 2020 and 2030, has been calculated using the Barnsley 002 Tempro area and all road types. The resulting rates are shown below in Table 8.1 and in more detail in Appendix K.

Time Period (2020 – 2030)	Growth Rate
AM Peak Hour	1.1289
PM Peak Hour	1.1278

Table 8.1: Background Traffic Growth

8.4 The above growth rates were then applied to the 2020 recorded traffic flows as depicted in Appendix D, to produce the 2030 base year flows, as depicted in Appendix K.

8.5 Where necessary the traffic growth factors were adjusted when applied to 2018 traffic flows.

Addition of Committed and Proposed Development to 2030 Traffic

8.6 Added to the 2030 base year flows were the proposed development and committed development traffic in order to assess the proposed development traffic impacts.

8.7 The resulting 2030 traffic flows with committed development and the 2030 traffic flows with committed and development traffic are depicted in Appendix K respectively.

8.8 Also included in the flow diagrams are the average daily traffic flows, which were established by factoring up the peak hour flows using the automatic traffic counter records obtained on Lund Hill Lane over a 7-day period in 2015.

Existing Junction Modelling

8.9 Junction capacity assessments were carried out for both existing and future year (2030 Design Year) traffic flow conditions on the existing junctions indicated in section 3.18. The models used included the PICADY 9 module within JUNCTIONS 9 for the priority-controlled junctions and the LinSig software for the signal-controlled junction,

8.10 The junction assessments using recent and existing traffic flow conditions were undertaken so that the traffic models could be validated against existing queues.

8.11 All LinSig modelling work on the existing Station Road signalised junction was undertaken by Sanderson Associates Ltd (consulting engineers). This junction operates under MOVA control, and where cycles times are typically 90 seconds duration. The signal model was developed using RR67 saturation flows, and Barnsley MBC signal data as shown in Appendix L.

8.12 When interpreting the output results from the computer models, the following terminology should be noted:

PICADY

- **Ratio of Flow to Capacity (RFC)**: The practical capacity threshold is normally 0.85. An RFC below 0.85 represents a junction which is operating in an efficient and stable condition. An RFC of between 0.85 and 1 represents variable operation, and may be said to be operating adequately, if the queueing and delay are deemed acceptable. RFC values in excess of 1 represent an oversaturated condition;
- **Queue**: This represents the maximum queue length of vehicles over the modelled period, waiting to enter the junction on each arm; and
- **Delay**: This represents the maximum delay over the modelled period, experienced by an 'average' vehicle.

LinSig

- **Degree of Saturation (DOS)**: The practical capacity threshold is normally 0.90. A DOS below 0.90 represents a junction which is operating in an efficient and stable condition. A DOS between 0.90 and 1.0 represents variable operation, and may be said to be operating adequately, if the queueing and delay are deemed acceptable. DOS values in excess of 1 represent an oversaturated condition;
- **Mean Maximum Queue (MMQ) Length**: This represents the mean of the sum of the maximum queue lengths for each cycle on each queuing lane.

2018 – 2020 Junction Traffic Models

8.13 Using the above traffic models the existing junctions as outlined in section 3.18 were modelled under 2018 to 2020 traffic flows. The resulting modelled outputs are summarised below in Table 8.2 and in more detail in Appendix M.

8.14 The modelled output tables also show the observed queue lengths at each junction. Using this observed data, the traffic models were where necessary, adjusted to reflected conditions on the ground.

2018 Wakefield Road - Junction 1

Arm (critical movement)	AM Peak Hour			PM Peak Hour		
	RFC	Modelled Queue (pcu's)	Recorded Queue (pcu's)	RFC	Modelled Queue (pcu's)	Recorded Queue (pcu's)
Shaw Lane	0.96	9.20	12.00	0.98	10.70	14.00
Wakefield Road (south)	0.12	0.10	1.00	0.38	0.60	2.00
Lee Lane	0.87	5.30	10.00	0.76	2.90	10.00
Wakefield Road (north)	0.20	0.20	1.00	0.28	0.40	2.00
	2.15			2.4		

2018 Station Road - Junction 2

Arm (critical movement)	AM Peak Hour			PM Peak Hour		
	DoS (%)	Modelled Queue (pcu's)	Recorded Queue (pcu's)	DoS (%)	Modelled Queue (pcu's)	Recorded Queue (pcu's)
Station Road	33.4	4.00	6.00	49.0	5.80	8.00
Midland Road	67.8	8.90	9.00	77.5	10.50	11.00
Church Street	69.1	9.60	10.00	78.2	10.30	12.00
High Street	67.0	5.60	5.00	76.9	8.20	8.00

2020 Cross Lane - Junction 3

Arm (critical movement)	AM Peak Hour			PM Peak Hour		
	RFC	Modelled Queue (pcu's)	Recorded Queue (pcu's)	RFC	Modelled Queue (pcu's)	Recorded Queue (pcu's)
Cross Lane	0.25	0.30	3.00	0.30	0.40	4.00
Lund Hill Lane (west)	0.03	0.00	0.00	0.10	0.10	0.00

2020 Church Lane - Junction 4

Arm (critical movement)	AM Peak Hour			PM Peak Hour		
	RFC	Modelled Queue (pcu's)	Recorded Queue (pcu's)	RFC	Modelled Queue (pcu's)	Recorded Queue (pcu's)
Church Lane (south)	0.91	7.40	13.00	0.64	1.70	9.00
Hall Field Lane	0.01	0.00	0.00	0.02	0.00	0.00
Church Lane (north)	0.42	0.70	9.00	0.76	2.90	10.00
Lund Hill Lane	0.13	0.20	0.00	0.14	0.20	0.00

Table 8.2: 2018 Junction Model Results

8.15 The summary results shown above in Table 8.2, indicate that at the Wakefield Road junction, Shaw Lane is operating at capacity during the morning and evening peak flow periods. At the Station Road and Cross Lane junctions all approach arms are operating below capacity throughout the day.

8.16 At the Church Lane junction, the minor arm approach from the south is operating at capacity during the morning peak flow period.

2030 Junction Traffic Models and Mitigation

8.17 The existing junctions as depicted in section 3.18 were then assessed with and without the proposed development, under 2030 traffic flows which include the committed development as depicted in Appendix K. The resulting modelled outputs are summarised below in Table 8.3 and provided in more detail in Appendix M.

2030 Wakefield Road - Junction 1

Arm (critical movement)	AM Peak Hour					
	Without Dev.			With Dev.		
	RFC	Queue (pcu's)	Delay (sec)	RFC	Queue (pcu's)	Delay (sec)
Shaw Lane	1.48	75.50	841.49	1.55	89.80	1023.41
Wakefield Road (south)	0.21	0.30	9.47	0.22	0.30	9.80
Lee Lane	1.53	92.50	955.38	1.58	99.50	1041.02
Wakefield Road (north)	0.31	0.40	14.03	0.31	0.40	14.42

Arm (critical movement)	PM Peak Hour					
	Without Dev.			With Dev.		
	RFC	Queue (pcu's)	Delay (sec)	RFC	Queue (pcu's)	Delay (sec)
Shaw Lane	1.61	106.00	1138.87	1.81	148.60	1609.79
Wakefield Road (south)	0.73	2.40	34.16	0.92	6.10	74.13
Lee Lane	1.61	62.30	831.40	2.01	92.50	1416.73
Wakefield Road (north)	0.37	0.60	11.30	0.39	0.60	12.11

3.5 3.7 4.3 5.1

2030 Station Road - Junction 2

Arm (critical movement)	AM Peak Hour					
	Without Dev.			With Dev.		
	DoS (%)	Queue (pcu's)	Delay (sec)	DoS (%)	Queue (pcu's)	Delay (sec)
Station Road	38.70	4.70	-	43.00	5.20	-
Midland Road	82.00	12.00	-	91.80	17.50	-
Church Street	81.50	12.50	-	92.60	16.40	-
High Street	80.10	8.30	-	92.70	12.50	-

Arm (critical movement)	PM Peak Hour					
	Without Dev.			With Dev.		
	DoS (%)	Queue (pcu's)	Delay (sec)	DoS (%)	Queue (pcu's)	Delay (sec)
Station Road	55.80	7.40	-	59.50	7.80	-
Midland Road	94.70	17.20	-	107.20	41.30	-
Church Street	93.00	16.70	-	106.70	40.30	-
High Street	94.10	15.30	-	106.30	43.00	-

2030 Cross Lane - Junction 3

Arm (critical movement)	AM Peak Hour					
	Without Dev.			With Dev.		
	RFC	Queue (pcu's)	Delay (sec)	RFC	Queue (pcu's)	Delay (sec)
Cross Lane	0.29	0.40	9.38	0.35	0.50	11.05
Lund Hill Lane (west)	0.04	0.00	6.27	0.04	0.00	6.66

Arm (critical movement)	PM Peak Hour					
	Without Dev.			With Dev.		
	RFC	Queue (pcu's)	Delay (sec)	RFC	Queue (pcu's)	Delay (sec)
Cross Lane	0.35	0.50	11.10	0.45	0.80	14.33
Lund Hill Lane (west)	0.11	0.10	6.97	0.12	0.10	7.02

conti.

2030 Church Lane - Junction 4

Arm (critical movement)	AM Peak Hour					
	Without Dev.			With Dev.		
	RFC	Queue (pcu's)	Delay (sec)	RFC	Queue (pcu's)	Delay (sec)
Church Lane (south)	1.05	24.80	164.96	1.12	37.10	236.70
Hall Field Lane	0.01	0.00	6.59	0.01	0.00	6.87
Church Lane (north)	0.49	0.90	15.56	0.55	1.20	19.09
Lund Hill Lane	0.15	0.20	6.93	0.20	0.20	7.31

Arm (critical movement)	PM Peak Hour					
	Without Dev.			With Dev.		
	RFC	Queue (pcu's)	Delay (sec)	RFC	Queue (pcu's)	Delay (sec)
Church Lane (south)	0.75	2.90	28.62	0.82	4.00	37.84
Hall Field Lane	0.02	0.00	6.69	0.02	0.00	6.81
Church Lane (north)	0.88	6.00	58.66	1.00	14.90	127.18
Lund Hill Lane	0.16	0.20	7.29	0.18	0.20	7.53

2030 Development Site Access - Junction 5

Arm (critical movement)	AM Peak Hour					
	Without Dev.			With Dev.		
	RFC	Queue (pcu's)	Delay (sec)	RFC	Queue (pcu's)	Delay (sec)
Dev. Access	0.00	0.00	0.00	0.50	1.00	16.16
Lund Hill Lane (north)	0.00	0.00	0.00	0.06	0.10	6.64

Arm (critical movement)	PM Peak Hour					
	Without Dev.			With Dev.		
	RFC	Queue (pcu's)	Delay (sec)	RFC	Queue (pcu's)	Delay (sec)
Dev. Access	0.00	0.00	0.00	0.25	0.30	12.03
Lund Hill Lane (north)	0.00	0.00	0.00	0.15	0.20	7.65

Tables 8.3: 2030 Junction Model Results

8.18 As demonstrated in Table 8.3 above, the growth in background traffic, and added development results in the increase in DOS/RFC, queue and delay values at the junctions. Where the flow demands well exceed capacity, ie DOS/RFC values far greater than 1.0 then the queues and delays tend to exponentiate to high values as shown at the Wakefield Road staggered junction, which are unrepresentative of the actual likely situation.

8.19 It is also noted that only one third of the increases to the above junction indicators are due to the addition of the proposed development.

8.20 For the Wakefield Road junction, it has been suggested that Barnsley MDC have a scheme in place to upgrade this junction and provide additional capacity.

8.21 With the growth in background traffic and the addition of development traffic the Station Road signalised junction will by 2030 operate at or near maximum capacity. However, with further optimisation of the green and cycle timings through MOVA, further capacity can be achieved.

8.22 At the Church Lane cross roads junction the Church Lane minor arm approaches will be operating close to or over capacity by 2030. To mitigate this and accommodate future traffic growth, will require road widening on the Church Lane approaches and or alternative junction control measures.

8.23 In order to ensure that the assessment is robust. the majority of the development traffic has been assigned to one of the development accesses.

8.24 Therefore, under this scenario, the development access onto Lund Hill Lane, operating under priority -control, with 6.0m turning radii and a minor road arm with a 5.5m wide carriageway, provides sufficient capacity to accommodate future traffic levels, as depicted in Table 8.3. This geometric arrangement is also to be applied to the other access junctions, which will ensure that these also operated below capacity.

9. SITE ACCESS AND LAYOUT CONSIDERATIONS

9.1 Access to the site, east of the railway line is proposed via the existing site entrance opposite the pedestrian entrance to Rabbit Ings County Park, and the existing industrial entrance at the southern end of the site.

9.2 Utilising the 'Manual for Streets' guidance, junction visibility well in excess of the required 43m 'x' distance which is commensurate with the 30mph speed limit on Lund Hill Lane can be achieved within the existing road corridor at these development access locations, as displayed in Appendix N.

9.3 If required this sight distance can be extended on either side of the accesses as the land is under the developer's control. However, as Lund Hill Lane becomes built up and urbanised it is anticipated that speeds in this area will reduce.

9.4 Vehicles should be prohibited from parking adjacent to these access junctions.

9.5 All development site access roads onto Lund Hill Lane are to have 5.5m wide carriageways, 6.0m kerbed turning radii, 2.0m wide footways on both sides and gradients not exceeding 3.0% at the bell-mouths. However if these accesses are to be used as bus routes then the carriageway widths should be increased to 6.0m.

9.6 Internal links within the development site should extend to the site boundaries, in order to maximise the site's future permeability to the surrounding lands and adjacent development, particularly for the vulnerable road users.

9.7 A 2.0m wide footway is also proposed on the west side of Lund Hill Lane, along part of the site's road frontage, and to include pedestrian crossings on Lund Hill Lane which would link up with the existing footway on the west-side, in order to enhance pedestrian movement between the site and the south-west.

9.8 All internal roads are to be designed in accordance with the guidance in the 'South Yorkshire Design Guide' and 'Manual for Streets'. Given the size of the development to the east of the railway line, a second access is beneficial during emergency periods.

9.9 The headroom restriction of 3.3m under the railway bridge on Lund Hill Lane will preclude rear steer Refuse Collection Vehicles (RCVs) accessing the site from the remainder of the collections in Royston.

9.10 RCVs presently collect in Cudworth and Shafton, up to the Greenside Estate and "The Singing Man" public house. To serve this development, RCVs would need to travel along Sandy Bridge Lane – Raven Lane – Church Lane to the Hall Field Lane / Lund Hill Lane crossroads, an additional distance of 2 miles. This route is physically suitable to accommodate vehicles of this type, even though part of it traverses through Wakefield MDC.

9.11 Therefore all service and refuse vehicles accessing the site to the east of the railway line will do so via the green gated entrance located on Lund Hill Lane adjacent to the north eastern end of the site. This route would avoid having to traverse the bridge structure on Lund Hill Lane immediately south of this site access.

9.12 Parking provision for the proposed development is to be provided in line with the guidance set out in Barnsley MDC's Supplementary Planning Document on Parking and adopted in March 2012. This parking provision is to include car parking for residents and visitors, cycle and motorcycle parking, disabled parking, and electric charge points.

9.13 Covered cycle parking is to be provided where a dwelling unit does not have a garage.

9.14 The internal layout is to be designed to ensure that the servicing and emergency requirements can be adequately accommodated within the development site.

10. CONSTRUCTION TRAFFIC

10.1 The construction of the proposed development will generate some traffic. Based upon extensive experience, it is considered that, during the construction phases the following traffic volumes will typically need to access the development each day:

- 50 cars or light vans;
- medium goods vehicles;
- 6 heavy goods vehicles.

10.2 However, at the initial stages, during the site remediation and fill importation period, it is estimated that in the region of 45 heavy goods vehicles will access the site each day, over a limited period.

10.3 A typical working day would result in most of the light vehicles arriving on site between 07:30 and 08:30 hours in the morning and departing between 16:00 and 17:00 hours in the evening, probably later in the spring and summer periods, with the heavy and commercial vehicles arriving and departing throughout the day.

10.4 Construction access to the site will be via the existing entrances on Lund Hill Lane. However large vehicles accessing the site to the east of the railway line will have to route via Lund Hill Lane to the north east, and the green gated entrance located adjacent to the north eastern end of the site, as these vehicles will be restricted from traverse the bridge structure on Lund Hill Lane further south, which is currently under review.

10.5 As a result, during the site remediation and fill importation period, the level of heavy goods vehicles may increase by up to 15 heavy goods vehicles per hour (100%) on Lund Hill Lane to the north east of the site, as heavy goods vehicles are restricted from using the bridges further south. Post the site remediation and earthworks stage, the increase in all construction traffic on all roads will reduce to 25% or less.

10.6 Therefore, during the site remediation and earthworks stage, the construction traffic will only have a medium to high effect on Lund Hill Lane to the north east, though for a limited period and at all other times a negligible effect on the highway network.

10.7 To minimise these impacts, the Contractor will provide a detailed Construction Management Plan (CMP) identifying how traffic will be managed throughout the duration of the construction period. A Construction Phase Health and Safety Plan (CPH+SP) will also be required for the construction of the proposed development.

10.8 With the implementation of the above measures, the impact on road users during the construction period will be controlled.

10.1 The total volume of traffic generated, through the building construction stages would not, in normal circumstances, exceed the total volume to be considered upon completion of the development.

11. SUMMARY AND CONCLUSIONS

11.1 A Transport Assessment has been undertaken for a proposed residential development, convenience store and associated parking and landscaping on land at and adjacent to the former Monckton Coke & Chemical works site off Lund Hill Lane, Royston, S71 4BD. The proposed development is to accommodate up to 500 residential units and a commercial unit comprising 400m^2 GFA and utilise existing access junctions on Lund Hill Lane. Details of the site location and concept development layout are presented in Appendix A.

11.2 The assessment has taken into account the temporary and longer-term effects of the development proposals. It is generally accepted that some discomforting impact will be experienced during temporary construction works involving the enabling movement of plant, machinery, materials and the workforce, but these can be mitigated to an acceptable level by appropriate working practices and the imposition of suitable planning conditions.

11.3 While there are no clear indications that the accident records assessed for the area, are as a result of deficient road geometry or otherwise, it is clear that the majority of these occurred at or near the Lund Hill Lane / Church Lane junction and to a lesser extent at the High Street / Church Street junction.

11.4 Therefore, it is recommended that further monitoring should be undertaken at these locations to ascertain if there are any deficiencies that put road users at risk.

11.5 Internal links within the development site should extend to the site boundaries, in order to maximise the site's future permeability to the surrounding lands and development for the vulnerable road users.

11.6 It is considered that the pedestrian infrastructure proposed at the development site will facilitate safe and direct pedestrian linkages in the area, however this is on the basis that continuous linkages are provided linking the site to Royston and the village centre.

11.7 The applicant proposes to make a substantial financial contribution towards sustainable travel, in accordance with the formula set out in the Barnsley Sustainable Travel Supplementary Planning Documented, which will be utilised to assist in enhancing accessibility of the site and surrounding area by public transport, walking and cycling.

11.8 The growth in background traffic, and added development results in the increase in DOS/RFC, queue and delay values at the modelled junctions. However only one third of these increases to the above junction indicators are due to the addition of the proposed development.

11.9 It has been suggested that Barnsley MDC have a scheme in place to upgrade the Wakefield Road junction and provide the additional capacity required at this location.

11.10 With the growth in background traffic and the addition of development traffic, the Station Road signalised junction will by 2030 operate at or near maximum capacity. However, with further optimisation of the green and cycle timings, further capacity improvements can be achieved.

11.11 By 2030 the Church Lane minor arm approaches at the Church Lane cross roads junction will be operating close to or over capacity. To mitigate against this and accommodate future traffic growth, will require road widening on the Church Lane approaches and or alternative junction control measures.

11.12 The traffic modelling indicates that the priority-controlled development accesses onto Lund Hill Lane will have sufficient capacity to accommodate future traffic levels.

11.13 The objectives of promoting more sustainable transport choices are considered to be satisfied and are further supported by the Travel Plan.

APPENDIX A

Development Site Location and Concept Layout Plan


Wakefield
Streethouse
Featherstone
Sharlston Common
N
Crofton
Nostell Priory and Parkland
East Hardwick
Walton
Nostell
Ackworth
Chapelthorpe
Thorpe Audlin
Newmillerdam
Wintersett
Fitzwilliam
Havercroft
Kinsley
Cold Hiendley
Pyhill
Development Site
Woolley
Notton
Hemsworth
South Hiendley
Upton
North Elmsall
Royston
Shafton
Brierley
South Elmsall
South Kirkby
Darton
Oxspring
Gilmethorpe
Clayton
Barnsley
Great Houghton


Monckton Grange

APPENDIX B

Scoping Correspondence

Notes of Meeting

SUBJECT:	FORMER MONCKTON COKE AND CHEMICAL WORKS
PURPOSE OF MEETING:	PRE-APPLICATION WITH BARNSELY COUNCIL
THOSE PRESENT:	Phil Robinson, Rebecca Dennis, Andrew Gilsenan, Graeme Blacklock, Tom Lyons, Gary Chapman, Adam Wilson, Rachel Woodhouse-Hague, Robert Tranter, David Frohnsdorff, Richard Hopkinson, Barnsley Council (Elaine Ward, Alan Hart, Chris Shields, John Scott, Paul Denton, Jason Thomas, Wayne Lake, Bridges)
VENUE:	BARNSLEY COUNCIL
DATE OF MEETING:	6th December 2019
REF: P19-1805	**DATE:** 9th December 2019

Policy / Principle

EW/AH identified the most relevant Local Plan policies as:

- Policy SD1 Presumption in Favour of Sustainable Development
- Policy GD1 General Development
- Policy E4 Protecting Existing Employment Land
- Policy H5 Residential Development on Large Non-allocated Sites

There are 18no. adopted SPDs and 8no. to be updated/adopted shortly. EW/AH identified the most relevant SPDs as:

- Sustainable Travel SPD (to be adopted shortly)
- Planning Obligations SPD (to be adopted shortly)
- Financial Contributions to Schools SPD (adopted May 2019)
- Open Space Provision on New Housing Developments SPD (adopted May 2019)

Key to achieve policy requirements to show the Council that this is a robust application.

Accessibility /Sustainable Location

The Council consider that sustainable transport and amenities seem to be 'lacking' in the area and to be given some thought. EW did note that there was 1no. bus along Lund Hill Lane.

The Local Plan identifies an Accessibility Improvement Zone, within which the site is located.

Consideration to be given to local facilities e.g Rabbit Ings- coffee etc. and whether some facilities are needed on site**.**

Consultations

Monckton Developments set out that there was a significant amount of consultation on the previous scheme, such that residents are fully aware that this site will be coming forwards for redevelopment, EW was very keen on us undertaking some community consultation as regards this new scheme as it's different to the previous one which was 50% commercial and 50% residential.

EW has informed the Local Councillors of this pre-application enquiry, but no response has been received to date.

Recommended that we write to Ward Councillors in the first instance providing plans and inviting meeting. EW directed us to the Council's Statement of Community Involvement for guidance.

Air Quality

Council want detail on construction phase for dust etc. GB to confirm in an email to CH/PD that the EA will regulate emissions via the permitting process and that this is something they shouldn't be concerning themselves with.

EV charging points to be considered and whether this is a 'medium / major' development for the purpose of identifying the requirement.

Design

This should not just consider what is within the red edge but take a wider view.

AG to consider play equipment provision (NEAP/MUGA) and effect on net developable area. Reference to be made to SPD in this regard.

EW noted guidance within the South Yorkshire Residential Design Guide.

Traffic / Highways

TL to update traffic surveys. JT happy with traffic survey scope and these need to also consider committed developments and construction movements. Contact with Wakefield also required.

Signalling scenarios must be robust and the geometry of the roads needs to be accurate.

JT requested updated speeds and topo survey for Lund Hill Lane in order to assess permanent and construction access locations.

Bridge on Lund Hill Lane identified as a potential issue as there are structural issues with the bridge and it was identified that the bridge cannot accommodate load over 3 tonne - there does not appear to be any restriction to this effect and there was no answer as to how the pallet yard can continue to trade. There is also a height restriction on the bridge between the site and Royston.

Council considering three options; get A.N. other to upgrade bridge; remove bridge and realign vertical profile; or close road. Some information due back to the Council before the end of this year – not hopeful that it will be.

Regarding construction access, the bridge issue needs investigation by RT.

Alternative access point required and considered by TL. RT looked at title issues with accessing the site at that point.

Pegasus to consider trainline safeguarding / issues and designations for the future including Barnsley Rail Vision 2019, Sheffield Integrated Rail Plan 2019. Mott McDonald have considered the potential to re-open as a passenger line and soundings are encouraging so far.

Remediation

Monckton Development's team attended in full to demonstrate to the LA that we are aware of the contamination issues at the site, have reviewed the extensive history of investigations at the site and are fully aware of the potential issues.

GC mentioned that there will be approximately 9m of cut and fill to be retained on site, depending on outcome of site investigations.

GC/AW/Dan - need to present the Site Investigation Strategy for review. Also to carry out costings to prove remediation is viable in monetary terms for submission with the application.

JS has details of western parcel; gas purification site and is to locate archived surveys and circulate.

Costings with respect of the remediation will be key for Members, as they will want to know that it is a viable site to remediate and bring forward for development

Ecology, Water and Trees

Ecology has been updated – in any case the Council would not accept anything over 2 years old.

Water – no issues raised so far. Run off rate based on the brownfield nature of the existing site.

Trees – survey to be undertaken, but Council acknowledge that all trees may have to be removed to facilitate the remediation strategy.

Viability

It was mentioned that viability will be considered as part of the application.

EW mentioned that viability studies we submit need to be scrutinised by a David Newman on behalf of the Council and his fees are to be paid by the applicant.

Any viability evidence we provide based on remediation costs may also have to be assessed independently for the Council and we would have to pay those fees - at the present time

they didn't have a consultant in mind so if our figures seem robust this may be capable of avoidance?

Financial Contributions

Contributions to be secured through s106 at the Outline stage and refined, if required, at the reserved matters stage.

- **Education contribution** is non-negotiable - cannot be avoided it is £16,000 per pupil, they are working on a basis of 180 pupils across a 500 plot site, if we put less houses on this will obviously reduce. Can pupil numbers be challenged on the basis of house types?
- **Sustainable Transport Contribution -** again non negotiable
- **10% affordable housing** - negotiable if we can show viability study to show that the remediation costs do not allow any contribution to be made
- **Open space contribution** - again can be reduced via the viability costings and depending on on-site provision. EW directed us to the Council's Green Space register to identify provision within the vicinity.

AOB

EW says she would not respond to this pre-application enquiry before Christmas.

EW will check if the application can be validated with the initial Bat surveys and will respond.

BARNSLEY
Metropolitan Borough Council

Planning & Building Control Service
Development Management
Westgate Plaza
PO Box 603, Barnsley, S70 9FE
Head of Service: Joe Jenkinson

Pegasus Group
Pavilion Court
Green Lane
Garforth
Leeds LS25 2AF

My Ref: 2019/ENQ/00838
Your Ref:
Date: 21st February 2020
Enquiries Elaine Ward
Direct Dial: 01226 774731
E-Mail: elaineward@barnsley.gov.uk

Dear Sir/Madam

RE: Planning Enquiry 2019\ENQ\00838

Hybrid planning application seeking full planning permission for remediation and means of access, along with outline planning permission (with all matters reserved except access) for redevelopment of the site to include up to 500 residential units (use class C3), along with ancillary parking, amenity, and all other associated public, semi public and private realm, soft/hard landscaping, infrastructure and highways works, access and a new internal road network connecting with the existing road network.

Monckton Coal and Chemical Co Ltd, Lund Hill Lane, Royston S71 4BD

I refer to the request made to the Council for pre-application advice relating to the above site. This letter provides advice and an assessment of the material planning considerations that would influence the outcome of any subsequent application.

The site is approximately 16 ha in size and comprises part of the former Monckton Coke and Chemical Works. Rabbit Ings is a Local Wildlife Site, as is the canal. The TPT runs close by, is located on the north eastern edge of Royston close to the neighbouring borough of Wakefield. The former coke and chemical works closed in 2014 and it is understood the site has been remediated to the condition it was in prior to 2002. An Environmental Permit has been surrendered to the EA by a previous owner. The site comprises two no. parcels of land, a 15-ha parcel to the west of the railway line and a smaller 1 ha parcel to the west. Existing vegetation is primarily to the site boundaries with a larger area of mature vegetation in the southern art of the site.

The site is physically separated from the main Royston settlement by the railway, canal and fields/greenspace, which includes some Green Belt. Currently, access to Royston is only via Lund Hill Lane, which runs under the railway bridge. A footpath is available on only one side of the road at this point and is of substandard quality. It is uncertain which, if any, bus services currently reach the

CUSTOMER SERVICE EXCELLENCE CSE

site and what their frequency is. The site is currently therefore not very accessible for anything other than access by car.

The proposal

The proposal comprises decontamination and remediation of the site followed by redevelopment to provide up to 500 residential units, together with ancillary parking, amenity and other public and private realm landscaping, infrastructure and highway works. The intention is to retain existing trees and green corridors where possible along the periphery and in the southern most part of the site. SUDs will be incorporated into the development with attenuation ponds provided within some open spaces and green corridors. Access to both parts of the site are is proposed to be from Lund Hill Lane using the existing access points. An indicative masterplan has been submitted.

A meeting was held on 5th December 2019 at Westgate Plaza Offices. Present from the Council were
Elaine Ward (Senior Planning Officer), Chris Shields (Air Quality Management), Wayne Lake (Highways), Jason Thomas(Highways), Babak Ahmadian(Bridge Manager), John Scott(Contaminated Land), Alan Hart(Planning Officer - Policy)

From the applicant side were: Phil Robinson, Rebecca Dennis, Andrew Gilsenan, Graeme Blacklock, Tom lyons, Gary Chapman, Adam Wiulson, Rachel Woodhouse-Hague, Rachel Tranter, Dacid Frohnsdorff.

The site has the potential to provide a substantial number of dwellings as a windfall site and could contribute substantially towards housing numbers in the borough as well as cleaning up a significant contaminated site. The proposal must however be judged against all relevant adopted policies and adopted supplementary planning documents to determine that the proposal is acceptable in terms of layout, design, and impacts, and that appropriate mitigation for all impacts are provided.

Planning Policy issues

The Development Plan for the Borough consists of the Barnsley Local Plan adopted January 2019 and the Barnsley Rotherham Doncaster Joint Waste Plan.

The site is identified as Urban Fabric within the Local Plan which has not specific allocation. Para 6.6 of the Local Plan states that development proposals will be assessed against all relevant Local Plan and Waste Plan policies, and that Planning Policy GD1 is the starting point for making decisions on all proposals, including those allocated as Urban Fabric and your application should meet the criteria in the policy, together with other policy requirements set out below.

Local Plan policy E4 seeks to protect land currently or last used for employment purposes. An application should address the criteria set out in this policy as to why employment use is not sought.

Policy H5 residential development on Large non-allocated sites – states that proposal on sites above 0.4 ha will be supported where they are on previously developed land; located within Urban Barnsley, Principal Towns and villages; **accessible by Public Transport; and have good access to a range of shops and services**.

Local Plan Policy I1 Infrastructure and Planning Obligations states that **development must be supported by appropriate physical, social economic and communications infrastructure, including provision for broadband. Development must contribute as necessary to meet all on and off-site**

infrastructure requirements to enable development to take place satisfactorily. Where necessary provision is not made directly by the developer, contributions will be secured through planning obligations.

Other key policies would include :
SD1 Presumption in favour of sustainable development
E4 Protecting Existing Employment Land
H1 number of new homes to be built
H2 Distribution of New Homes
H5 Residential Development on large non-allocated sites
H6 Housing Mix and Efficient use of land
H7 Affordable Housing
T2Safeguarding Former Railway Lines
T43 New Development and Sustainable Travel
T4 New Development and Transport Safety
T5 Reducing the Impact of Road Travel
D1 Design
TC5 Small Local Shops
GI1 Green Infrastructure
GI2 Canal – Safeguarded Routes
GS1 Greenspace
BIO1 Biodiversity and Geodiversity
CC1 Climate Change
CC2 Sustainable Design and Construction
CL1 Contaminated and Unstable Land
Poll1 pollution Control and Protection
I1 Infrastructure and Planning Obligations

Key adopted Guidance Documents are:

Affordable Housing SPD (adopted May 2019)
Biodiversity and Geodiversity SPD (adopted May 2019)
Design of Housing Development SPD (adopted May 2019)
Financial Contributions to Schools SPD (adopted May 2019)
Open Space Provision on New Housing Developments SPD (adopted May 2019)
Trees and Hedgerows SPD (adopted May 2019)
Planning Obligations SPD (adopted November 2019)
Sustainable Travel SPD (adopted November 2019
Parking SPD (adopted November 2019)
Development on Land affected by Contamination SPD (adopted November 2019

Adopted Best Practice – South Yorkshire Residential Design Guide.

Other adopted SPD's which may be useful include Section 278 Agreements SPD; and Section 278 Agreements Planning Advisory Note.

Local Plan Policy Requirements

General Design Principles

The general design should consider the National Design Guide and the South Yorkshire Residential Design Guide. The internal design of dwellings should as a minimum, meet with all the standards set out in the adopted SPD Design of Housing development and Table on page 130 and details on page 131 of the South Yorkshire

Residential design Guide for internal room sizes, external private amenity space requirements and acceptable separation distances between dwellings.

Page 136 of the SYRDG and the adopted SPD Parking sets out the requirements for driveways and parking standards. You should note that in terms of quality, the Council supports the Building for Life. The Design and Access Statement should include your own scoring assessment as to how many positive scores would be achieved in order to justify the design of the scheme. The application should contain Building for Life Assessment, street scenes and sections. There should be a maximum of 50% front of house parking and no more than 4 parking spaces in a row without significant separation, and these to be used only sparingly. Further details can be found in the SYRDG, and the adopted SPD Parking.
https://www.barnsley.gov.uk/media/10930/design-of-housing-development-spd.pdf
https://www.barnsley.gov.uk/media/13505/parking-spd-adopted-2019.pdf
The South Yorkshire Residential Design Guide sets out the appropriate hierarchy and design of streets which should be considered.
https://www2.barnsley.gov.uk/media/Development%20-%20Planning%20and%20Transportation/Planning%20Policy/South-Yorkshire-Residential-Design-Guide_2011.pdf

Applicant should also take account of the guidance set out in the national Design Guide
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/843468/National_Design_Guide.pdf

A site of 500 dwellings, relatively divorced from Royston by distance and the railway line would require at least a small retail element to serve the site, in accordance with Local Plan I1 and the Planning Obligations SPD, and Local Shops Policy TC5.

Parking provision – Recommended in Local Plan Supplementary Planning Document 'Parking' are 1 space for dwellings with 1 or 2 bedrooms and 2 spaces for dwellings with 3 or more bedrooms.
https://www.barnsley.gov.uk/media/13505/parking-spd-adopted-2019.pdf

Contamination Issues
The decontamination and remediation element of the proposal will be considered in the Environmental Statement and carried out under the element of the hybrid application with remediation to a standard suitable for residential use. As the previous scheme (planning enquiry 2016\ENQ\00453) intended to put commercial properties on the most contaminated are the Contaminated Land Officer is of the opinion that the previous information would need to be reviewed and reassessed. At the meeting your consultants appeared to propose a different remediation assessment and process for the site. The Contaminated land Officer required that in addition to submitting all the appropriate surveys and reports for the assessment of dealing with contamination and remediation, that a planning application should also provide detailed costings of the remediation to ensure the process is viable. The adopted SPD Development on land affected by contamination adopted November 2019 provides more details.
https://www.barnsley.gov.uk/media/13503/development-on-land-affected-by-contamination-spd-adoptiondocx.pdf

Mining Legacy
The South Yorkshire Mining Advisory Service note that in addition to the previous contaminating uses a Coal Mining Risk Assessment is required as the southern part of the site is potentially affected by a shallow coal seam of a workable quality/thickness. Intrusive site investigation should be required to safeguard

development from any potential shall mining voids and mine entries within the site should be evaluated in terms of ongoing safety and stability. Suitable development standoff's/exclusion should be considered.

Contributions
Policy I1 Infrastructure and Planning Obligations states that development must be supported by appropriate physical, social economic and communications infrastructure, including provision for broadband. Development must contribute as necessary to meet all on and off-site infrastructure requirements to enable development to take place satisfactorily. Where necessary provision is not made directly by the developer, contributions will be secured through planning obligations. Further details are found in the adopted SPD Planning Obligations https://www.barnsley.gov.uk/media/13506/planning-obligations-spd-adoption.pdf

Public Open Space - In accordance with GI1 and GS1 and the SPD Open Space Provision on New Housing Developments, all residential development over 20 units are expected to provide green space.

A minimum of 15% of the gross site area of new housing development must be open space of a type appropriate to the character of the site, its location and the layout and nature of the new housing and adjoining land uses. However, on occasions substantial landscaped strips may be required to protect the living conditions of residents or soften the boundary with countryside. The land used for landscaped strips is not available for development and will not usually make any significant contribution to recreational open space requirements. In these cases, the 15% requirement will be calculated based on the developable site area rather than the gross site area

Where it is impossible to make such provision on land either within or immediately adjacent to the site in a satisfactory and acceptable manner, or where the Council deem it appropriate, suitable off-site open space facilities, remote from the development land, maybe acceptable either as new facilities or improvements to those existing. A greenspace assessment will be carried out to determine what the most appropriate greenspace requirement is in line with identified local need. Where off-site contributions are considered acceptable, the contribution will be calculated using the figures set out in the Councils SPD Open Space Provision on New Housing Developments.

On this site the open space on this site would be expected to be central within the site and on developable land forming a NEAP and/or a MUGA. The SPD also requires that sites with over 200 dwellings should provide formal recreation provision on site. The actual requirement would be determined through a greenspace assessment on submission of a planning application. Internal roads should be peripheral in order to make the POS as large as possible. More specific information will be able to be provided once a Greenspace assessment has been undertaken at the application stage
https://www.barnsley.gov.uk/media/10938/open-space-provision-on-new-housing-developments-spd.pdf

Affordable Housing – The proposal is for 500 dwellings and is therefore of a size where the provision of affordable housing will be expected, unless it can be demonstrated through a viability assessment that the required figure would render the scheme unviable. Provision should meet the definition of affordable housing in the Local Plan and the NPPF and should be 10% of the overall number of dwellings, which is required in this area of the Borough in order to comply with H7. 'Affordable Housing'. A mix of tenure would be expected, and a draft S 106 agreement would be

expected with an application, which would be made of affordable rent and 20% 80% affordable home ownership. Affordable housing should be tenure blind.
https://www.barnsley.gov.uk/media/10927/affordable-housing-spd.pdf

Housing Mix –
Policy H6 requires that a suitable housing mix is required with a density of 40 dwellings per hectare.

Education
Local Plan Policy I1 requires all development to provide appropriate infrastructure, this is supported by the adopted SPD Financial contributions for schools
https://www.barnsley.gov.uk/media/10931/financial-contributions-to-schools-spd.pdf
There is a significant shortage of school places in the area and the SPD would require mitigation in the form of contributions towards school places at £16,000 per pupil place required, as a result of the development. The proposal would result in a requirement for a contribution towards 105 Primary School places of £1,680.000 and 75 secondary place at £1,200,000 to accommodate additional pupils generated from this development, total £2,880,000. The application would be refused unless the full contribution is made

Sustainable Travel
Planning Policy T1 (Accessibility Priorities) and T3 New Development and Sustainable Travel and the adopted SPD Sustainable Travel, aim to ensure that the accessibility of new development via public transport, walking and cycling is acceptable in order to promote sustainable transport and where possible, enhance the safety, efficiency and sustainability of the transport network to meet he council's economic health and air quality aspirations. It would clearly be inappropriate for the Local Planning Authority to grant planning permission for a development which without appropriate mitigation would either cause an unacceptable impact on the public transport system or exacerbate a situation which is already unsatisfactory. The developer would be required to provide the necessary mitigation in the form of contributions and/or mitigation through the Travel plan.

It is unclear the number or frequency of bus services which currently service the site and pedestrian and other non-car linkages to Royston centre and the services and facilities there are currently very poor. The existing pedestrian route along Lund Hill Road is substandard and it is unclear how this could be brought up to current standards. An access strategy should be developed to provide good pedestrian/cycle and sustainable transport links to Royston. If not provided, then the development would be considered as an unsustainable form of development and would be refused.

The site lies within the Accessibility Improvement Zone.(AIZ).Contribution where sustainable travel is less available. As such a contribution would be required of £1000 per unit, with a reduction of 25% as the site lies with in the AIZ.

The adopted SPD also requires one EV charging point per dwelling
https://www.barnsley.gov.uk/media/13508/sustainable-travel-spd-adopted-2019.pdf

Highways
New development will be expected to be designed and built to provide safe, secure and convenient access for all road users in accordance with Local Plan Policy T4. There are already congestion issues at Royston and the application must assess both impacts and propose suitable mitigation. A transport assessment and draft Travel Plan would be required for validation. Mitigation is likely to be required together with possible off-site contributions towards mitigation and highways

infrastructure. There are two bridges at Lund hill Lane, both of which are weak and/or unsuitable for construction traffic. It has been confirmed that at present the route is not suitable for any abnormal loads and/or heavy traffic volumes.

Waste management services cannot negotiate the bridge from Royston due to the size of the refuse vehicles.

Covered cycle parking is required at every dwelling which does not have a garage.

Public Rights of Way

There are no public rights of way running through the site although the indicative masterplan appear sot show access routes. The Council aspires to create a public bridleway at this location to connect existing bridleways to the northwest and east of the site. And would therefore look for funding through S106 contribution to help improve existing rights of way in particular to provide an all-weather surface along the Trans Pennine Trail which runs parallel to the railway to the west of the site. Other local routes would also benefit.

Ecology

Ecology will be dealt with in the Environmental Statement. Great Crested Newts have been found on the site as well as on Rabbit Ings, so a report will be needed in addition to the summary which has already been provided. If proposing a SUDs pond it could be used as dual purpose to support ecology, with part of a larger and preferably permanently wet. The biodiversity officer has supplied some standard pre-application comments and advice in undertaking the ecological assessment to submit with your application. The Trans Pennine Trail is a key route and wildlife corridor on the E side of the Towpath. Wakefield Council has designated Ellis Laiter woodland as a wildlife site

https://www.barnsley.gov.uk/media/10929/biodiversity-and-geodiversity-spd.pdf

Drainage

The Council is aware that part of the site appears on surface water flood maps from the EA an that there should be no increase in surface water runoff as a result of development; Further detailed comments are appended in the consultation response. The Council proposes SUDS techniques or control of surface water runoff. Yorkshire Water note that a YW sewerage asse crossed the site.

Flood Risk

As the site is greater than 1ha in size an FRA will be required

Air Quality

Air quality impacts will be assessed in the Environmental Statement and appropriate monitoring, assessment of existing and proposed impacts would be required to be undertaken together with mitigation proposals. Whilst it is acknowledged that the decontamination and remediation of the site will be undertaken with an EA permit, the LPA is of the opinion that following the decontamination and remediation exercise there would still be the possibility of some residual contamination within the ground which could impact upon the construction phase. Therefore, a construction phase mitigation assessment would be required to undertake off-site monitoring for air borne pollutants and odour during the construction phase. The developer is

Noise

Appropriate impact assessments, methodologies and mitigations proposals should be submitted for the noise generated by the railway line (to Ardagh Glass). Dust mitigation measures during both remediation work and during construction should be

proposed. Taking in to account the nature of the site, it is considered that there must be an agreed strategy at the outset for proposed monitoring and conditions.

Superfast South Yorkshire Broadband Programme
Information attached

Trees
The Forestry Officer notes that there are many trees located both on and just off the site close to the boundaries which will need to be taken into account as part of the development. The indicative layout provided shows some of the trees present with many of those shown being retained, however there are no details and so it is not possible to offer meaningful comments at this stage. The trees on the western boundary are the key feature but there are other trees which will need to be considered. As such when an application is submitted a full tree survey will be required and it will need to have been used to inform the final layout put forward.

If any trees are implicated then an arboricultrural impact assessment will also be required although given the nature of the site . Protection measures as part of an arboricultural method statement would be required. Further details and requirements can be found in the adopted SPD Trees and hedgerows
https://www.barnsley.gov.uk/media/10942/trees-and-hedgrows-spd.pdf

Refuse and Waste
My colleagues in Waste Management advise that the existing 26 tonne refuse collection vehicles cannot negotiate the overhead railway bridge to the west of the site due to their size, there do not appear to be any recycling hubs within the site, and all bins will be required to be brought to the nearest adopted highway for collection. These points should be considered in designing the layout of your proposals. The layout should designate bin stores for dwellings.

Community Consultation
Should you wish to undertake further community consultation prior to the submission of the application the local Ward councillors are currently:-

cllrtimcheetham@barnsley.gov.uk
cllrcarolinemakinson@barnsley.gov.uk
cllrpaulinemccarthy@barnsley.gov.uk

Please submit the community consultation responses you have received with your proposal.

Summary
This is a large contaminated site on the edge of Royston settlement. There would be significant benefits to Barnsley should the site be developed for housing. However, there are a number of significant issues which need to be satisfactorily addressed before an application for residential development could be considered for approval.

Environmental Impacts will be addressed through an Environmental Statement and it is acknowledged that decontaminating and remediating the site is likely to be costly. Nevertheless, the applicant would be expected to provide all necessary provisions and contributions mentioned above in order to mitigate the impacts of such a large development on existing infrastructure.

In addition, the site is relatively distant and severed from existing facilities and services in Royston, and the existing pedestrian access along Lund Hill Lane is poor. In order to be considered sustainable development, a variety of pedestrian and other

sustainable travel linkages, using a variety of measures, would need to be provided to facilities and services, reducing the reliance upon the private car. The application will also be assessed against the policies, SPD's and guidance mentioned above.

Validation requirements

The standard list of national planning application requirements would be expected for a full planning application and an outline of this nature and scale.

In addition please provide the following reports from our list of local requirements:-

- Planning statement
- Environmental Statement - Contaminated Land/Groundworks, Air Quality, Ecology, Highway/Transport Impacts
- Affordable housing statement.
- Air Quality Assessment and consideration of mitigation cumulative effects, plus monitoring and mitigation proposals for construction phase
- Archaeological desk top study(where appropriate)
- Community Consultation Statement
- Design and Access Statement, incorporating a short appraisal against Building for Life criteria
- Dust impact assessment and monitoring and mitigation proposals for construction phase
- Coal Mining Risk Assessment
- Energy/Sustainability Statement
- Flood Risk Assessment
- Full foul and surface water drainage details, which in the case of surface water should incorporate SuDS (unless it can be demonstrated that all types would be impractical) and be sufficient to maintain or reduce existing run-off rates.
- SuDs/Foul and surface water drainage strategy
- Landscaping proposals
- Noise impact assessment and mitigation proposals for remediation and construction phases,
- Planning Obligations/S106 Agreement draft heads of terms and your legal representatives contact details (our legal fees are normally £1000 to progress the Agreement to completion).
- Draft Travel Plan and Access Strategy
- Tree Survey/Implications assessment if any trees or the root protection zones of existing trees would be affected
- If it is considered that S106 planning obligations cannot be met in full then a detailed viability assessment should be submitted. This would be subject to an independent open book analysis

Please note that any survey or report submitted must be less than 2 years old unless they are accompanied with an addenda which has reviewed the original survey or report and updated findings and mitigation proposals to satisfy current requirements where appropriate.

I would also request that you show the following information on the plans:-

- Existing and proposed levels, including for the properties adjacent the site and relevant section/levels comparison drawings where appropriate.
- Street scene drawings
- Details of proposed building materials and boundary treatments
- Proposed hard and soft landscaping specifications
- Existing/proposed topography maps for full element relating to ground works

I am hopeful that this should cover everything that will be required. However the council reserves the right to request additional information should that be considered necessary or be identified through the consultation process. It may also be possible to look to combine some of the documents where appropriate.

Validation will depend upon receipt of all relevant forms, fees, plans and documents. These comments will be treated as a material consideration in relation to any planning application submitted in the next 2 years for a scheme that reflects the advice provided in this letter. Applications shall be expected to meet requirements set out in Local Plan Polices and in the adopted Supplementary Planning Documents identified above. Failure to do so may result in a refusal

However, please note that the views and opinions in this letter do not constitute a formal response or decision of the Council in relation to any future planning application.

I trust the contents of this letter answers your query to your satisfaction.

Yours sincerely

For and on behalf of:
Joe Jenkinson BA (Hons) MSc
Head of Planning and Building Control
www.barnsley.gov.uk/developmentmanagement

BARNSLEY
Metropolitan Borough Council

Planning & Building Control Service
Development Management
Westgate Plaza
PO Box 603, Barnsley, S70 9FE
Head of Service: Joe Jenkinson

Pegasus Group
Pavilion Court
Green Lane
Garforth
Leeds LS25 2AF

My Ref: 2019/ENQ/00928
Your Ref:
Date: 21st February 2020
Enquiries to: Elaine Ward
Direct Dial: 01226 774731
E-Mail: elaineward@barnsley.gov.uk

Dear Sir/Madam

TOWN & COUNTRY PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2017
REQUEST FOR A SCOPING OPINION
RE: FORMER MONCKTON COKE AND CHEMICALWORKS, LUND HILL LANE, ROYSTON, S71 4BD - PROPOSED REMEDIATION AND RESIDENTIAL DEVELOPMENT FOR UP TO 500 DWELLINGS

I refer to your letter of 12th December 2019 and the scoping report received in connection with the above proposed development and your request for a "scoping opinion" for an Environmental Statement which is scheduled to accompany a planning application.

The Council agrees that the topics listed in the scoping report dated November 2019 would provide sufficient coverage for the Environmental Statement which is scheduled to accompany the planning application. Namely these are:-

- Air Quality
- Transport and Traffic Movements
- Ecology
- Ground conditions

CONSULTATIONS
The following internal and external consultees were contacted in order to seek their views on the scope of the ES:-

Internal:-
Air Quality Pollution Control Officer – Chris Shields
Biodiversity Officer – Trevor Mayne
Contaminated Land – John Scott
Design - Nik King
Highways – Jason Thomas and Wayne Lake

CUSTOMER SERVICE EXCELLENCE CSE

Public Rights of Way – Rik Catling
Conservation Officer – Tony Wiles
Pollution Control – Paul Denton
Public Health – Julie Tolhurst
Drainage – Ian Grayson
Legal Services – Bob Power
Forestry Officer – Ed Jowett
South Yorkshire Mining Advisory Service – Paul James
South Yorkshire Archaeology Service – Andy Lines

External consultees:
Coal Authority
Wakefield Council
Environment Agency
NHS Barnsley Clinical Commissioning Group
South Yorkshire Archaeology Service
South Yorkshire Passenger Transport Executive
Yorkshire Water

The consultation responses received have been forwarded to you separately and should help inform the preparation of your Environmental Statement. I would remind you that it is a statutory requirement to prepare a non-technical summary to sit alongside the ES to enable non-experts to understand its findings

RECOMMENDATION

This letter represents the Council's "scoping opinion". The contents of this letter, including the comments from consultees, should be taken into account when preparing the version of the Environmental Statement to accompany the planning application.

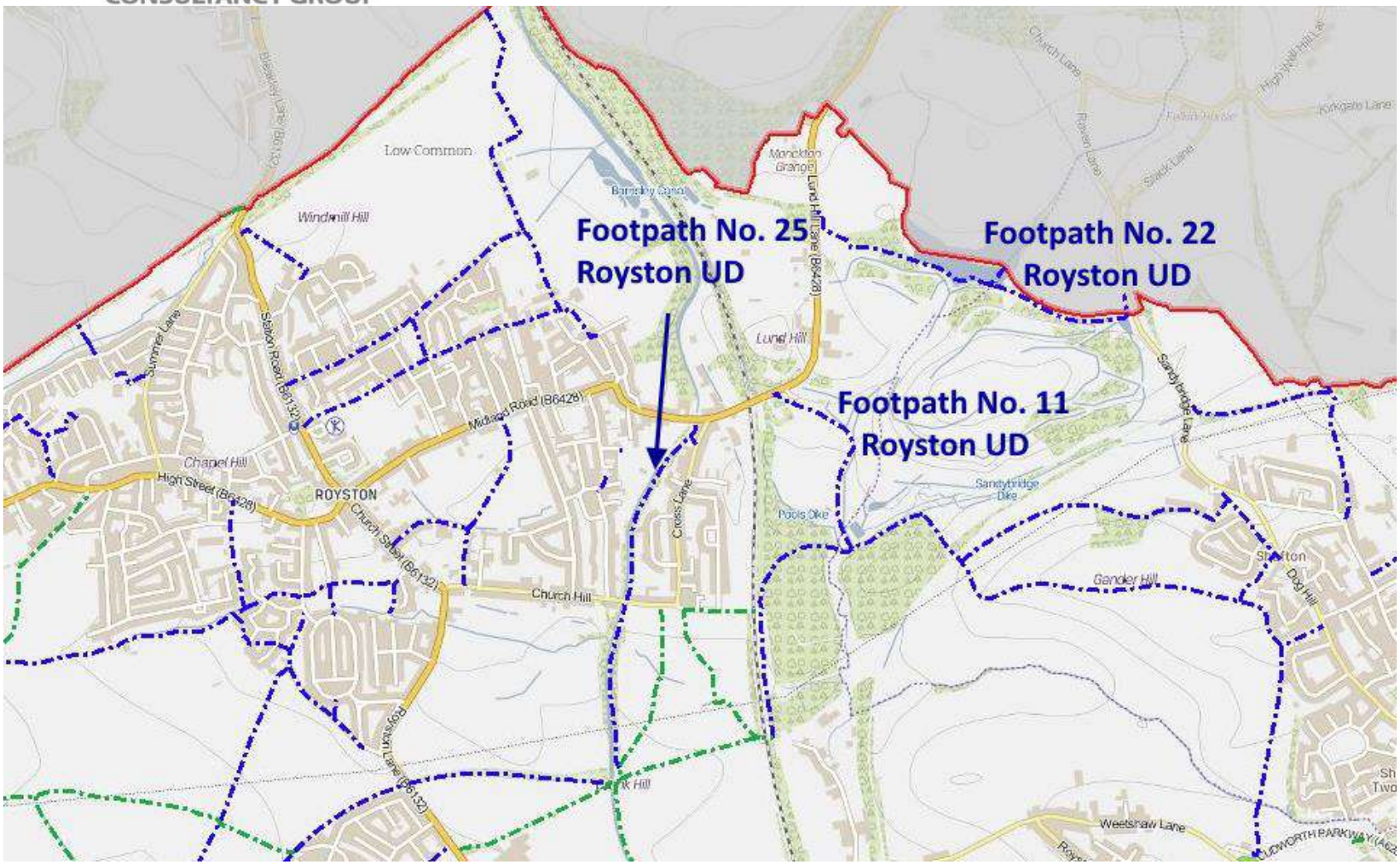
Any additional comments from consultees subsequently received will be forwarded on to you and should be taken into account when preparing the planning application and Environmental Statement.

Yours sincerely

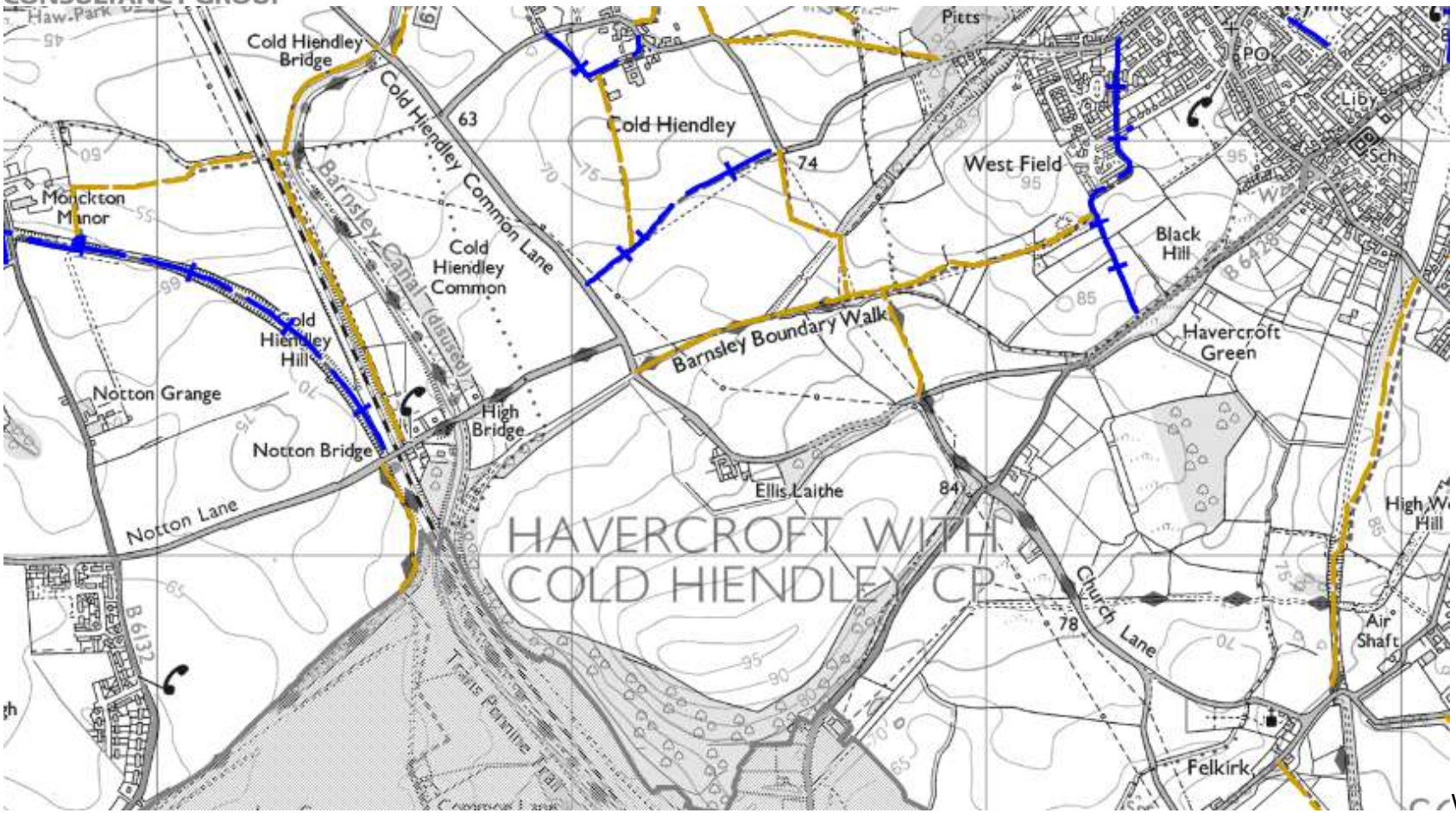
For and on behalf of:
Joe Jenkinson BA (Hons) MSc
Head of Planning and Building Control
www.barnsley.gov.uk/developmentmanagement

APPENDIX C

Public Rights of Way



Barnsley MDC



Wakefield MDC

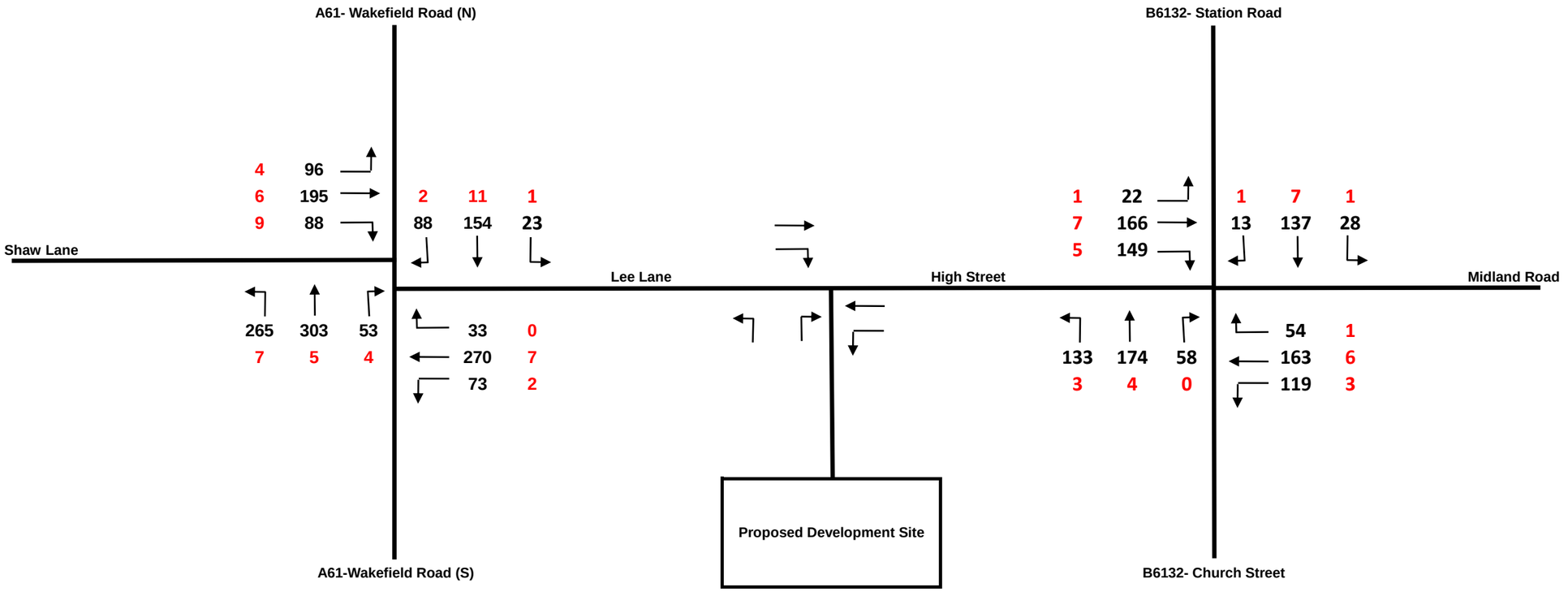
APPENDIX D

2018 -2020 Recorded Peak Period Traffic Flows

2018 -2020 Peak Hour Traffic Flows

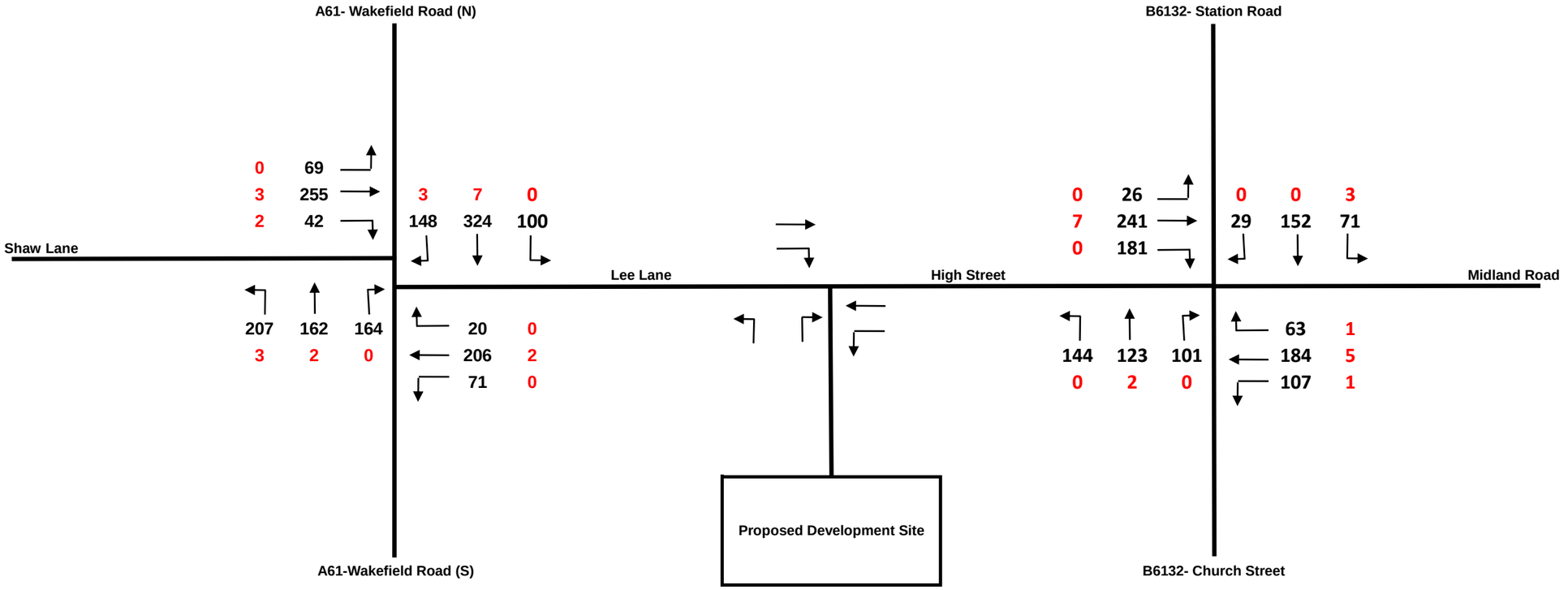

Notton
Woolley Park Golf Club
ELLIS LAITHE
4
FELKIRK
Royston
Rabbit Ings Country Park
3
2
Barnsley Golf Club
1
STAINCROSS
CARLTON
A628

Total Vehicles	0
HGV	0

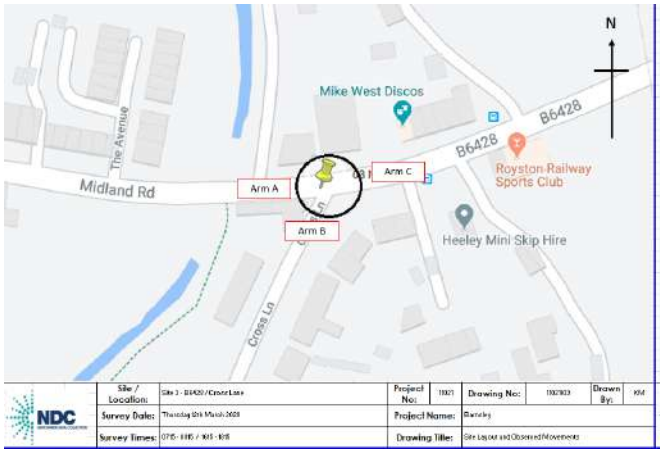


OPTIMA Intelligent Highways Solutions	Lee Road - Royston **AM PEAK HOUR TRAFFIC COUNTS (07:45-08:45)**	Figure: 10

Total Vehicles	0
HGV	0



OPTIMA Intelligent Highways Solutions	Lee Road - Royston **PM PEAK HOUR TRAFFIC COUNTS (16:30-17:30)**	Figure: 11





11021 / BARNSLEY
MARCH 20
MANUAL CLASSIFIED COUNT

SITE: 3 DAY: Thursday
LOCATION: B6428 / Cross Lane DATE: 12/03/2020

TIME	A - C CAR	LGV	HGV	PSV	MCL	PCL	TOT	A - B CAR	LGV	HGV	PSV	MCL	PCL	TOT	B - A TIME	CAR	LGV	HGV	PSV	MCL	PCL	TOT	B - C CAR	LGV	HGV	PSV	MCL	PCL	TOT	C - B TIME	CAR	LGV	HGV	PSV	MCL	PCL	TOT	C - A CAR	LGV	HGV	PSV	MCL	PCL	TOT
07:15	20	2	0	0	0	1	23	3	0	0	0	0	0	3	07:15	3	0	0	1	0	0	4	13	4	0	0	0	0	17	07:15	14	5	3	0	0	0	22	6	5	1	0	0	0	12
07:30	14	5	2	0	0	0	21	3	0	0	0	0	0	3	07:30	3	1	0	0	0	0	4	14	2	0	0	0	0	16	07:30	29	6	0	0	0	0	35	17	3	0	0	0	0	20
07:45	27	4	1	0	0	0	32	7	1	0	0	0	0	8	07:45	5	0	0	1	0	0	6	13	2	0	0	0	0	15	07:45	18	2	0	0	0	0	20	9	3	1	0	0	0	13
H/TOT	61	11	3	0	0	1	76	13	1	0	0	0	0	14	H/TOT	11	1	0	2	0	0	14	40	8	0	0	0	0	48	H/TOT	61	13	3	0	0	0	77	32	11	2	0	0	0	45
08:00	25	2	1	0	0	0	28	4	1	0	0	0	0	5	08:00	11	0	0	1	0	0	12	26	7	0	0	0	0	33	08:00	26	1	2	0	0	0	29	13	5	1	0	0	0	19
08:15	27	3	0	0	0	0	30	1	0	0	0	0	0	1	08:15	6	0	0	0	0	0	6	30	1	1	0	0	0	32	08:15	14	1	0	1	0	0	16	13	7	0	0	0	0	20
08:30	17	7	0	0	0	0	24	2	1	0	0	0	0	3	08:30	4	1	0	1	0	0	6	13	2	1	0	0	0	16	08:30	15	2	0	0	0	0	17	18	3	0	0	0	0	21
08:45	11	6	0	0	0	0	17	3	3	0	1	0	0	7	08:45	3	1	0	0	0	0	4	16	3	0	0	0	0	19	08:45	17	3	0	0	1	0	21	17	4	1	0	0	0	22
H/TOT	80	18	1	0	0	0	99	10	5	0	1	0	0	16	H/TOT	24	2	0	2	0	0	28	85	13	2	0	0	0	100	H/TOT	72	7	2	1	1	0	83	61	19	2	0	0	0	82
09:00	13	2	0	0	0	0	15	3	0	0	0	0	0	3	09:00	4	1	0	0	0	0	5	14	2	0	0	0	0	16	09:00	16	2	0	0	0	0	18	21	3	1	0	0	0	25
H/TOT	13	2	0	0	0	0	15	3	0	0	0	0	0	3	H/TOT	4	1	0	0	0	0	5	14	2	0	0	0	0	16	H/TOT	16	2	0	0	0	0	18	21	3	1	0	0	0	25
P/TOT	154	31	4	0	0	1	190	26	6	0	1	0	0	33	P/TOT	39	4	0	4	0	0	47	139	23	2	0	0	0	164	P/TOT	149	22	5	1	1	0	178	114	33	5	0	0	0	152

TIME	A - C CAR	LGV	HGV	PSV	MCL	PCL	TOT	A - B CAR	LGV	HGV	PSV	MCL	PCL	TOT	B - A TIME	CAR	LGV	HGV	PSV	MCL	PCL	TOT	B - C CAR	LGV	HGV	PSV	MCL	PCL	TOT	C - B TIME	CAR	LGV	HGV	PSV	MCL	PCL	TOT	C - A CAR	LGV	HGV	PSV	MCL	PCL	TOT
16:15	24	3	0	0	0	0	27	9	2	0	1	0	0	12	16:15	6	1	0	1	0	0	8	17	2	2	0	1	0	22	16:15	22	5	0	0	0	0	27	33	7	0	0	0	0	40
16:30	19	7	0	0	0	0	26	6	1	1	0	0	0	8	16:30	8	1	0	1	0	0	10	18	2	0	0	0	0	20	16:30	24	5	1	0	0	0	30	27	3	0	0	0	0	30
16:45	22	1	0	0	0	0	23	10	1	0	0	0	0	11	16:45	11	3	0	0	0	0	14	13	2	0	0	0	0	15	16:45	17	3	2	0	0	0	22	32	0	0	0	0	0	32
H/TOT	65	11	0	0	0	0	76	25	4	1	1	0	0	31	H/TOT	25	5	0	2	0	0	32	48	6	2	0	1	0	57	H/TOT	63	13	3	0	0	0	79	92	10	0	0	0	0	102
17:00	21	3	1	0	0	0	25	9	3	0	1	0	0	13	17:00	6	1	1	1	0	0	9	18	2	0	1	0	0	21	17:00	32	1	0	0	0	0	33	44	2	1	0	0	0	47
17:15	20	3	1	0	0	0	24	7	3	1	0	0	0	11	17:15	4	0	0	0	0	0	4	21	4	1	0	0	0	26	17:15	16	6	1	0	0	0	23	42	3	0	0	0	0	45
17:30	30	5	1	0	0	0	36	3	2	0	1	0	0	6	17:30	4	1	0	1	0	0	6	15	3	1	0	1	0	20	17:30	29	1	0	0	0	0	30	32	6	1	0	0	0	39
17:45	19	5	0	0	0	0	24	11	1	0	1	0	0	13	17:45	8	0	0	1	0	0	9	25	2	0	0	1	0	28	17:45	19	1	0	0	0	0	20	29	6	1	0	0	0	36
H/TOT	90	16	3	0	0	0	109	30	9	1	3	0	0	43	H/TOT	22	2	1	3	0	0	28	79	11	2	1	2	0	95	H/TOT	96	9	1	0	0	0	106	147	17	3	0	0	0	167
18:00	21	2	2	0	0	0	25	9	0	0	0	0	0	9	18:00	7	1	0	0	1	0	9	22	2	0	0	0	0	24	18:00	15	4	0	0	0	0	19	27	2	1	0	0	0	30
H/TOT	21	2	2	0	0	0	25	9	0	0	0	0	0	9	H/TOT	7	1	0	0	1	0	9	22	2	0	0	0	0	24	H/TOT	15	4	0	0	0	0	19	27	2	1	0	0	0	30
P/TOT	176	29	5	0	0	0	210	64	13	2	4	0	0	83	P/TOT	54	8	1	5	1	0	69	149	19	4	1	3	0	176	P/TOT	174	26	4	0	0	0	204	266	29	4	0	0	0	299

11021 / BARNSLEY
MARCH 20
MANUAL CLASSIFIED COUNT

SITE: 4 DAY: Thursday
LOCATION: B6428 / Church Lane DATE: 12/03/2020

TIME	A - D CAR	LGV	HGV	PSV	MCL	PCL	TOT	A - C CAR	LGV	HGV	PSV	MCL	PCL	TOT	A - B TIME	CAR	LGV	HGV	PSV	MCL	PCL	TOT	B - A CAR	LGV	HGV	PSV	MCL	PCL	TOT
07:15	0	0	0	0	0	0	0	21	6	1	0	0	0	28	07:15	1	0	0	0	0	0	1	1	1	1	0	0	0	3
07:30	1	0	0	0	0	0	1	38	4	1	0	0	0	43	07:30	1	0	3	0	0	0	4	0	0	2	0	0	0	2
07:45	3	0	0	0	0	0	3	36	4	1	0	0	0	41	07:45	1	0	0	0	0	0	1	1	0	2	0	0	0	3
H/TOT	4	0	0	0	0	0	4	95	14	3	0	0	0	112	H/TOT	3	0	3	0	0	0	6	2	1	5	0	0	0	8
08:00	0	0	0	0	0	0	0	43	10	1	0	0	0	54	08:00	2	0	1	0	0	0	3	3	1	0	0	0	0	4
08:15	1	1	0	0	0	0	2	35	5	1	0	0	0	41	08:15	2	0	1	0	0	0	3	2	0	2	0	0	0	4
08:30	1	1	0	0	0	0	2	43	7	1	0	0	0	51	08:30	5	0	2	0	0	0	7	4	0	1	0	0	0	5
08:45	0	0	0	0	0	0	0	33	11	2	0	0	0	46	08:45	2	0	1	0	0	0	3	0	2	2	0	0	0	4
H/TOT	2	2	0	0	0	0	4	154	33	5	0	0	0	192	H/TOT	11	0	5	0	0	0	16	9	3	5	0	0	0	17
09:00	1	2	2	0	0	0	5	35	3	0	0	0	0	38	09:00	1	0	1	0	0	0	2	1	0	0	0	0	0	1
H/TOT	1	2	2	0	0	0	5	35	3	0	0	0	0	38	H/TOT	1	0	1	0	0	0	2	1	0	0	0	0	0	1
P/TOT	7	4	2	0	0	0	13	284	50	8	0	0	0	342	P/TOT	15	0	9	0	0	0	24	12	4	10	0	0	0	26

TIME	A - D CAR	LGV	HGV	PSV	MCL	PCL	TOT	A - C CAR	LGV	HGV	PSV	MCL	PCL	TOT	A - B TIME	CAR	LGV	HGV	PSV	MCL	PCL	TOT	B - A CAR	LGV	HGV	PSV	MCL	PCL	TOT
16:15	1	0	0	0	0	0	1	57	9	2	0	1	0	69	16:15	2	0	0	0	0	0	2	1	0	0	0	0	0	1
16:30	2	1	0	0	0	0	3	64	11	1	0	1	0	77	16:30	2	1	0	0	0	0	3	1	0	0	0	0	0	1
16:45	1	0	0	0	0	0	1	69	14	0	0	0	0	83	16:45	1	0	0	0	0	0	1	2	0	0	0	0	0	2
H/TOT	4	1	0	0	0	0	5	190	34	3	0	2	0	229	H/TOT	5	1	0	0	0	0	6	4	0	0	0	0	0	4
17:00	4	0	0	0	0	0	4	69	12	1	0	1	0	83	17:00	5	1	0	0	0	0	6	3	0	0	0	0	0	3
17:15	0	1	0	0	0	0	1	77	9	0	0	0	0	86	17:15	1	0	0	0	0	0	1	3	0	0	0	0	0	3
17:30	1	0	0	0	0	0	1	90	7	3	0	0	1	101	17:30	2	0	0	0	0	0	2	5	2	0	0	0	0	7
17:45	2	0	0	0	0	0	2	71	5	0	0	0	0	76	17:45	2	0	0	0	0	0	2	3	0	0	0	0	0	3
H/TOT	7	1	0	0	0	0	8	307	33	4	0	1	1	346	H/TOT	10	1	0	0	0	0	11	14	2	0	0	0	0	16
18:00	0	0	0	0	0	0	0	36	5	1	0	0	0	42	18:00	0	0	0	0	0	0	0	2	0	0	0	0	0	2
H/TOT	0	0	0	0	0	0	0	36	5	1	0	0	0	42	H/TOT	0	0	0	0	0	0	0	2	0	0	0	0	0	2
P/TOT	11	2	0	0	0	0	13	533	72	8	0	3	1	617	P/TOT	15	2	0	0	0	0	17	20	2	0	0	0	0	22

11021 / BARNSLEY
MARCH 20
MANUAL CLASSIFIED COUNT

SITE: 4 DAY: Thursday
LOCATION: B6428 / Church Lane DATE: 12/03/2020

TIME	A - D CAR	LGV	HGV	PSV	MCL	PCL	TOT	A - C CAR	LGV	HGV	PSV	MCL	PCL	TOT
07:15	0	0	0	0	0	0	0	21	6	1	0	0	0	28
07:30	1	0	0	0	0	0	1	38	4	1	0	0	0	43
07:45	3	0	0	0	0	0	3	36	4	1	0	0	0	41
H/TOT	4	0	0	0	0	0	4	95	14	3	0	0	0	112
08:00	0	0	0	0	0	0	0	43	10	1	0	0	0	54
08:15	1	1	0	0	0	0	2	35	5	1	0	0	0	41
08:30	1	1	0	0	0	0	2	43	7	1	0	0	0	51
08:45	0	0	0	0	0	0	0	33	11	2	0	0	0	46
H/TOT	2	2	0	0	0	0	4	154	33	5	0	0	0	192
09:00	1	2	2	0	0	0	5	35	3	0	0	0	0	38
H/TOT	1	2	2	0	0	0	5	35	3	0	0	0	0	38
P/TOT	7	4	2	0	0	0	13	284	50	8	0	0	0	342

TIME	A - B CAR	LGV	HGV	PSV	MCL	PCL	TOT	B - A CAR	LGV	HGV	PSV	MCL	PCL	TOT
07:15	1	0	0	0	0	0	1	1	1	1	0	0	0	3
07:30	1	0	3	0	0	0	4	0	0	2	0	0	0	2
07:45	1	0	0	0	0	0	1	1	0	2	0	0	0	3
H/TOT	3	0	3	0	0	0	6	2	1	5	0	0	0	8
08:00	2	0	1	0	0	0	3	3	1	0	0	0	0	4
08:15	2	0	1	0	0	0	3	2	0	2	0	0	0	4
08:30	5	0	2	0	0	0	7	4	0	1	0	0	0	5
08:45	2	0	1	0	0	0	3	0	2	2	0	0	0	4
H/TOT	11	0	5	0	0	0	16	9	3	5	0	0	0	17
09:00	1	0	1	0	0	0	2	1	0	0	0	0	0	1
H/TOT	1	0	1	0	0	0	2	1	0	0	0	0	0	1
P/TOT	15	0	9	0	0	0	24	12	4	10	0	0	0	26

TIME	A - D CAR	LGV	HGV	PSV	MCL	PCL	TOT	A - C CAR	LGV	HGV	PSV	MCL	PCL	TOT
16:15	1	0	0	0	0	0	1	57	9	2	0	1	0	69
16:30	2	1	0	0	0	0	3	64	11	1	0	1	0	77
16:45	1	0	0	0	0	0	1	69	14	0	0	0	0	83
H/TOT	4	1	0	0	0	0	5	190	34	3	0	2	0	229
17:00	4	0	0	0	0	0	4	69	12	1	0	1	0	83
17:15	0	1	0	0	0	0	1	77	9	0	0	0	0	86
17:30	1	0	0	0	0	0	1	90	7	3	0	0	1	101
17:45	2	0	0	0	0	0	2	71	5	0	0	0	0	76
H/TOT	7	1	0	0	0	0	8	307	33	4	0	1	1	346
18:00	0	0	0	0	0	0	0	36	5	1	0	0	0	42
H/TOT	0	0	0	0	0	0	0	36	5	1	0	0	0	42
P/TOT	11	2	0	0	0	0	13	533	72	8	0	3	1	617

TIME	A - B CAR	LGV	HGV	PSV	MCL	PCL	TOT	B - A CAR	LGV	HGV	PSV	MCL	PCL	TOT
16:15	2	0	0	0	0	0	2	1	0	0	0	0	0	1
16:30	2	1	0	0	0	0	3	1	0	0	0	0	0	1
16:45	1	0	0	0	0	0	1	2	0	0	0	0	0	2
H/TOT	5	1	0	0	0	0	6	4	0	0	0	0	0	4
17:00	5	1	0	0	0	0	6	3	0	0	0	0	0	3
17:15	1	0	0	0	0	0	1	3	0	0	0	0	0	3
17:30	2	0	0	0	0	0	2	5	2	0	0	0	0	7
17:45	2	0	0	0	0	0	2	3	0	0	0	0	0	3
H/TOT	10	1	0	0	0	0	11	14	2	0	0	0	0	16
18:00	0	0	0	0	0	0	0	2	0	0	0	0	0	2
H/TOT	0	0	0	0	0	0	0	2	0	0	0	0	0	2
P/TOT	15	2	0	0	0	0	17	20	2	0	0	0	0	22

11021 / BARNSLEY
MARCH 20
MANUAL CLASSIFIED COUNT

SITE: 4 DAY: Thursday
LOCATION: B6428 / Church Lane DATE: 12/03/2020

TIME	A - D CAR	LGV	HGV	PSV	MCL	PCL	TOT	A - C CAR	LGV	HGV	PSV	MCL	PCL	TOT
07:15	0	0	0	0	0	0	0	21	6	1	0	0	0	28
07:30	1	0	0	0	0	0	1	38	4	1	0	0	0	43
07:45	3	0	0	0	0	0	3	36	4	1	0	0	0	41
H/TOT	4	0	0	0	0	0	4	95	14	3	0	0	0	112
08:00	0	0	0	0	0	0	0	43	10	1	0	0	0	54
08:15	1	1	0	0	0	0	2	35	5	1	0	0	0	41
08:30	1	1	0	0	0	0	2	43	7	1	0	0	0	51
08:45	0	0	0	0	0	0	0	33	11	2	0	0	0	46
H/TOT	2	2	0	0	0	0	4	154	33	5	0	0	0	192
09:00	1	2	2	0	0	0	5	35	3	0	0	0	0	38
H/TOT	1	2	2	0	0	0	5	35	3	0	0	0	0	38
P/TOT	7	4	2	0	0	0	13	284	50	8	0	0	0	342

TIME	A - B CAR	LGV	HGV	PSV	MCL	PCL	TOT	B - A CAR	LGV	HGV	PSV	MCL	PCL	TOT
07:15	1	0	0	0	0	0	1	1	1	1	0	0	0	3
07:30	1	0	3	0	0	0	4	0	0	2	0	0	0	2
07:45	1	0	0	0	0	0	1	1	0	2	0	0	0	3
H/TOT	3	0	3	0	0	0	6	2	1	5	0	0	0	8
08:00	2	0	1	0	0	0	3	3	1	0	0	0	0	4
08:15	2	0	1	0	0	0	3	2	0	2	0	0	0	4
08:30	5	0	2	0	0	0	7	4	0	1	0	0	0	5
08:45	2	0	1	0	0	0	3	0	2	2	0	0	0	4
H/TOT	11	0	5	0	0	0	16	9	3	5	0	0	0	17
09:00	1	0	1	0	0	0	2	1	0	0	0	0	0	1
H/TOT	1	0	1	0	0	0	2	1	0	0	0	0	0	1
P/TOT	15	0	9	0	0	0	24	12	4	10	0	0	0	26

TIME	A - D CAR	LGV	HGV	PSV	MCL	PCL	TOT	A - C CAR	LGV	HGV	PSV	MCL	PCL	TOT
16:15	1	0	0	0	0	0	1	57	9	2	0	1	0	69
16:30	2	1	0	0	0	0	3	64	11	1	0	1	0	77
16:45	1	0	0	0	0	0	1	69	14	0	0	0	0	83
H/TOT	4	1	0	0	0	0	5	190	34	3	0	2	0	229
17:00	4	0	0	0	0	0	4	69	12	1	0	1	0	83
17:15	0	1	0	0	0	0	1	77	9	0	0	0	0	86
17:30	1	0	0	0	0	0	1	90	7	3	0	0	1	101
17:45	2	0	0	0	0	0	2	71	5	0	0	0	0	76
H/TOT	7	1	0	0	0	0	8	307	33	4	0	1	1	346
18:00	0	0	0	0	0	0	0	36	5	1	0	0	0	42
H/TOT	0	0	0	0	0	0	0	36	5	1	0	0	0	42
P/TOT	11	2	0	0	0	0	13	533	72	8	0	3	1	617

TIME	A - B CAR	LGV	HGV	PSV	MCL	PCL	TOT	B - A CAR	LGV	HGV	PSV	MCL	PCL	TOT
16:15	2	0	0	0	0	0	2	1	0	0	0	0	0	1
16:30	2	1	0	0	0	0	3	1	0	0	0	0	0	1
16:45	1	0	0	0	0	0	1	2	0	0	0	0	0	2
H/TOT	5	1	0	0	0	0	6	4	0	0	0	0	0	4
17:00	5	1	0	0	0	0	6	3	0	0	0	0	0	3
17:15	1	0	0	0	0	0	1	3	0	0	0	0	0	3
17:30	2	0	0	0	0	0	2	5	2	0	0	0	0	7
17:45	2	0	0	0	0	0	2	3	0	0	0	0	0	3
H/TOT	10	1	0	0	0	0	11	14	2	0	0	0	0	16
18:00	0	0	0	0	0	0	0	2	0	0	0	0	0	2
H/TOT	0	0	0	0	0	0	0	2	0	0	0	0	0	2
P/TOT	15	2	0	0	0	0	17	20	2	0	0	0	0	22

11021/BARNSLEY
MARCH 20
QUEUE LENGTHS

SITE: 4 DAY: Thursday

LOCATION: B6428 / Church Lane DATE: 12/03/2020

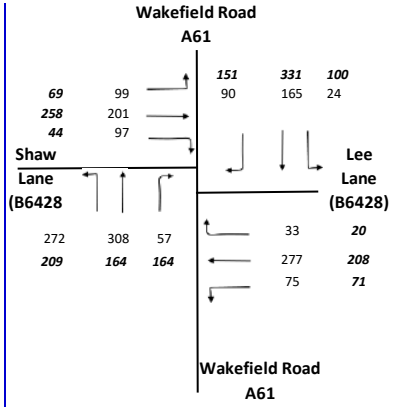
Note:
Lanes are numbered outwards from the nearside kerb in the direction of travel.
Lane 1 will always be nearest the footway. Queues measured in vehicle numbers.

	ARM A Church Lane N		ARM B B6428 S		ARM C Church Lane S		ARM D B6428 N	
TIME	LANE 1	LANE 2	LANE 1	LANE 2	LANE 1	LANE 2	LANE 1	LANE 2
07:15	5		0		5		0	
07:20	4		0		4		0	
07:25	2		0		8		0	
07:30	5		0		7		0	
07:35	2		0		6		0	
07:40	2		0		10		0	
07:45	2		0		8		0	
07:50	1		0		9		0	
07:55	9		0		9		0	
08:00	5		0		13		0	
08:05	6		0		8		0	
08:10	6		0		8		0	
08:15	3		0		7		0	
08:20	2		0		7		0	
08:25	4		0		4		0	
08:30	3		0		7		0	
08:35	3		0		4		0	
08:40	6		0		5		0	
08:45	4		0		2		0	
08:50	3		0		7		0	
08:55	2		0		5		0	
09:00	7		0		5		0	
09:05	3		0		3		0	
09:10	2		0		3		0	

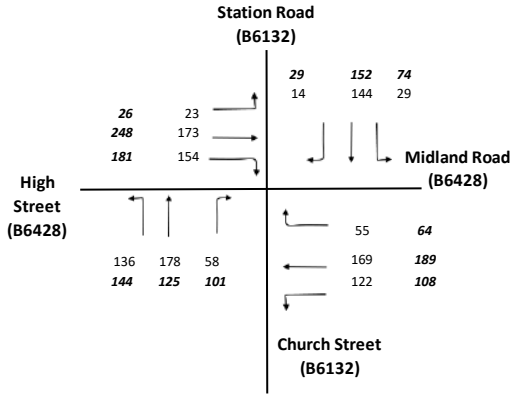
MAX	9	0	0	0	13	0	0	0
MIN	1	0	0	0	2	0	0	0

	ARM A Church Lane N		ARM B B6428 S		ARM C Church Lane S		ARM D B6428 N	
TIME	LANE 1	LANE 2	LANE 1	LANE 2	LANE 1	LANE 2	LANE 1	LANE 2
16:15	8		0		8		0	
16:20	4		0		3		0	
16:25	5		0		5		0	
16:30	4		0		2		0	
16:35	3		0		9		0	
16:40	7		0		6		0	
16:45	6		0		5		0	
16:50	3		0		4		0	
16:55	3		0		3		0	
17:00	4		0		6		0	
17:05	4		0		6		0	
17:10	7		0		4		0	
17:15	5		0		5		0	
17:20	4		0		7		0	
17:25	7		0		4		0	
17:30	10		0		5		0	
17:35	5		0		4		0	
17:40	3		0		3		0	
17:45	5		0		7		0	
17:50	5		0		2		0	
17:55	4		0		3		0	
18:00	3		0		6		0	
18:05	3		0		2		0	
18:10	3		0		4		0	

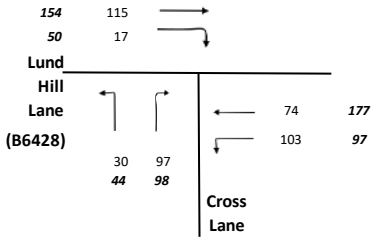
MAX	10	0	0	0	9	0	0	0
MIN	3	0	0	0	2	0	0	0



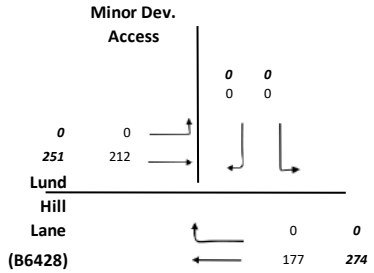
2018



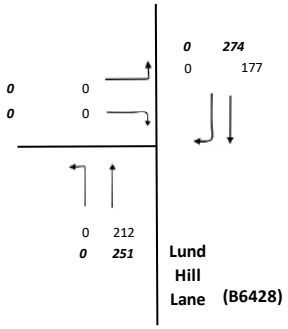
2018



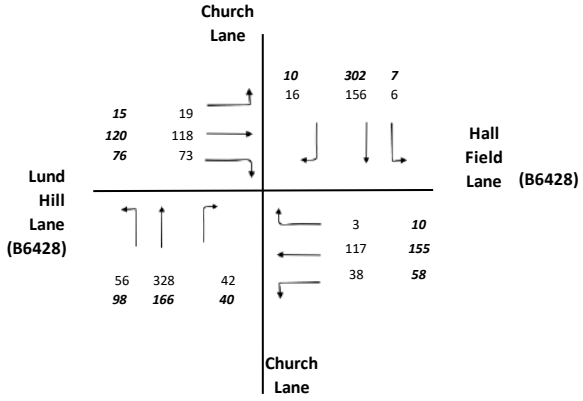
2020



2020



2020



2020

Key:
357 AM
478 PM

All values in PCU's

Survey Dates: 10th October 2018 and 12th March 2020

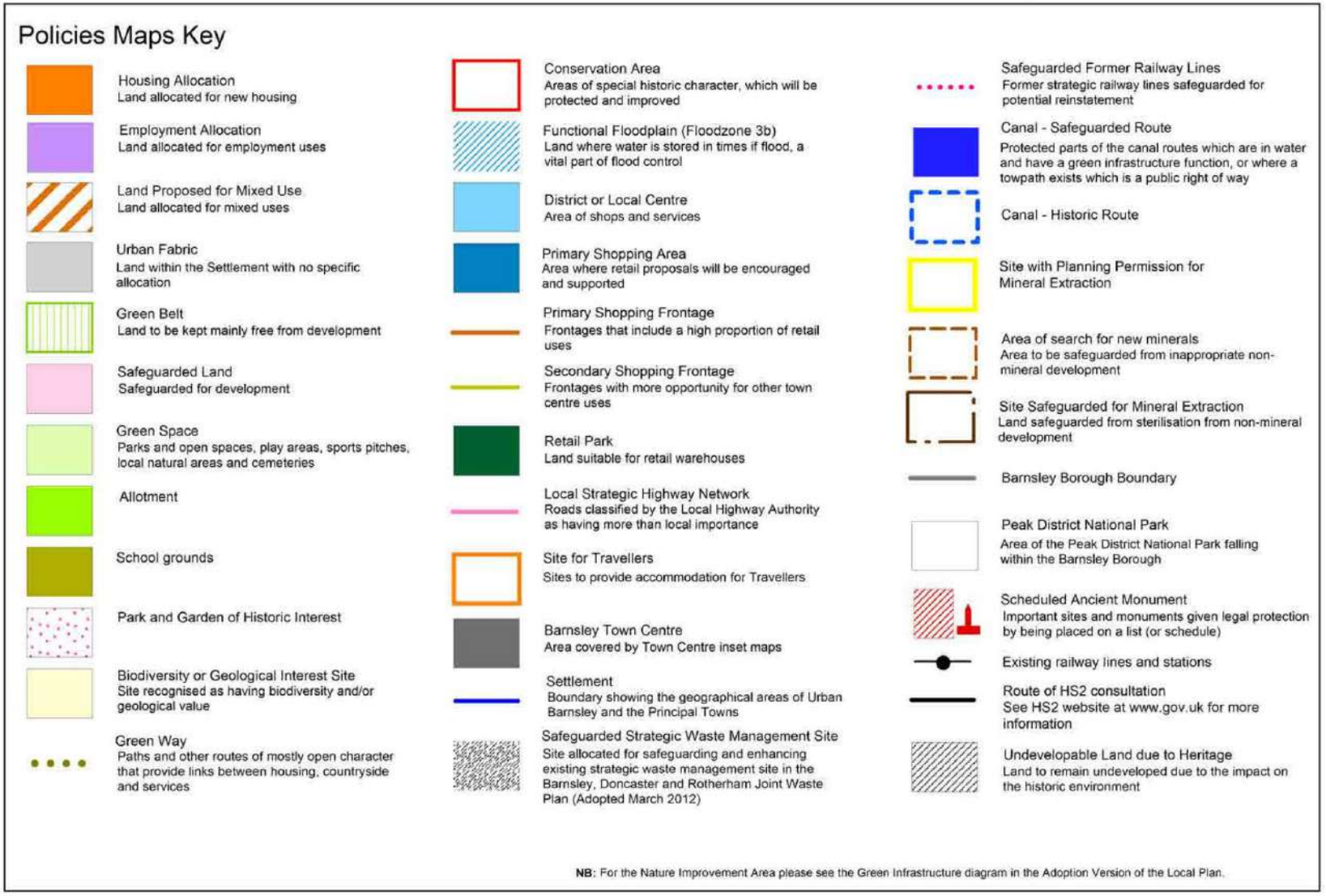
Peak hour Periods: 07:45 to 08:45 and 16:30 to 17:30

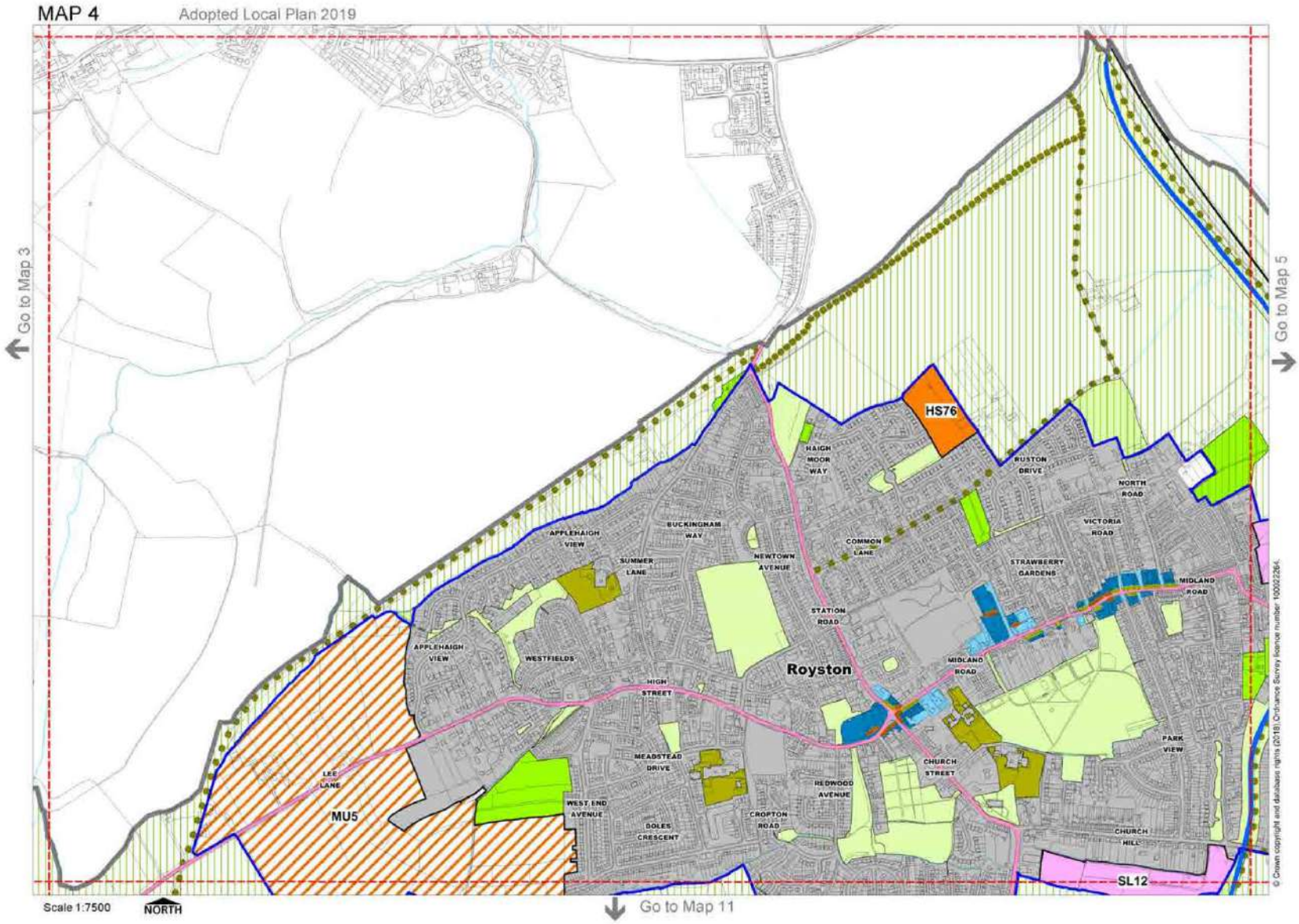
Peak Hour Recorded Flows

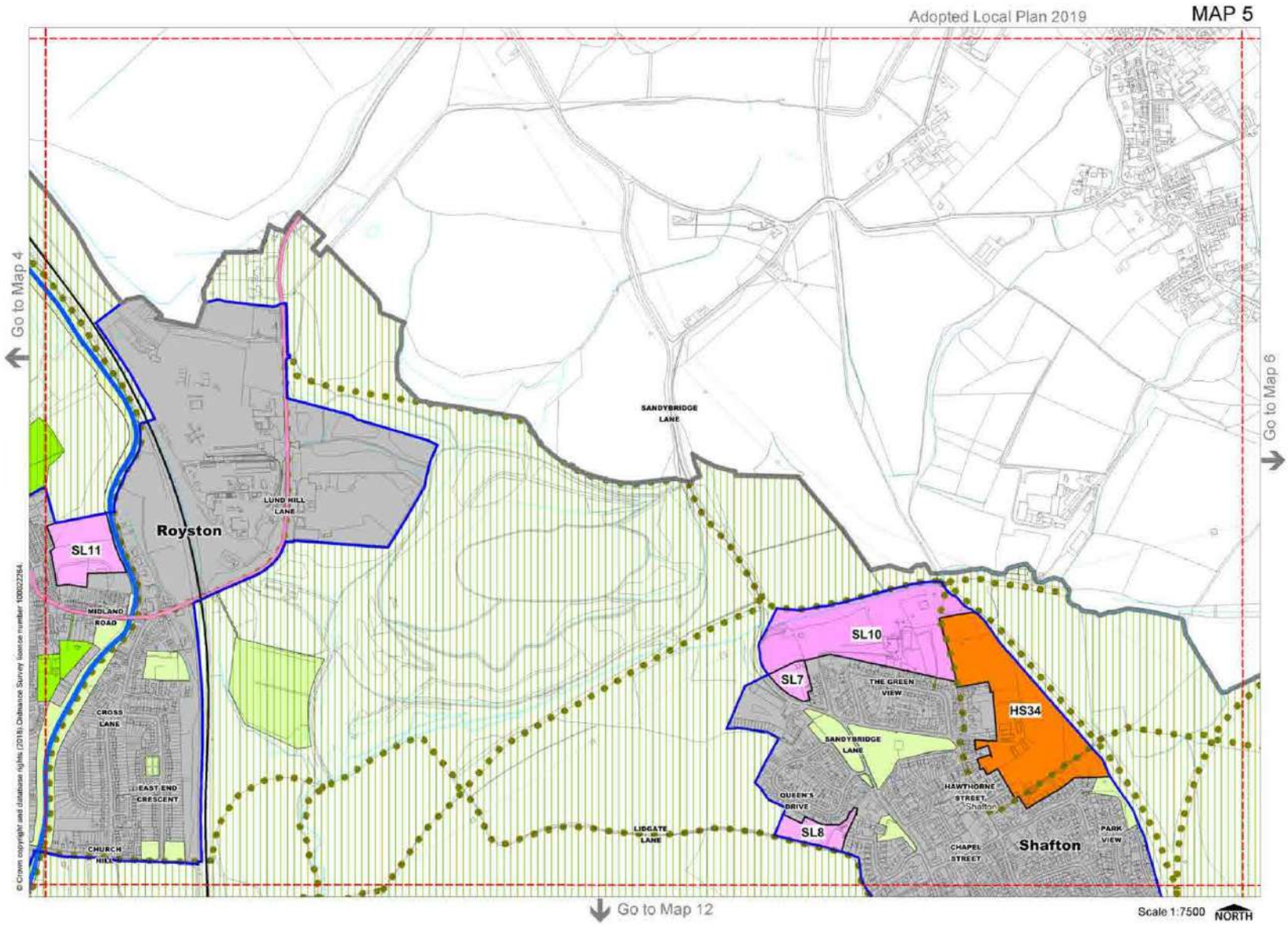
APPENDIX E

Policy Maps - Barnsley MDC Adopted Local Plan 2019

Adopted Local Plan 2019

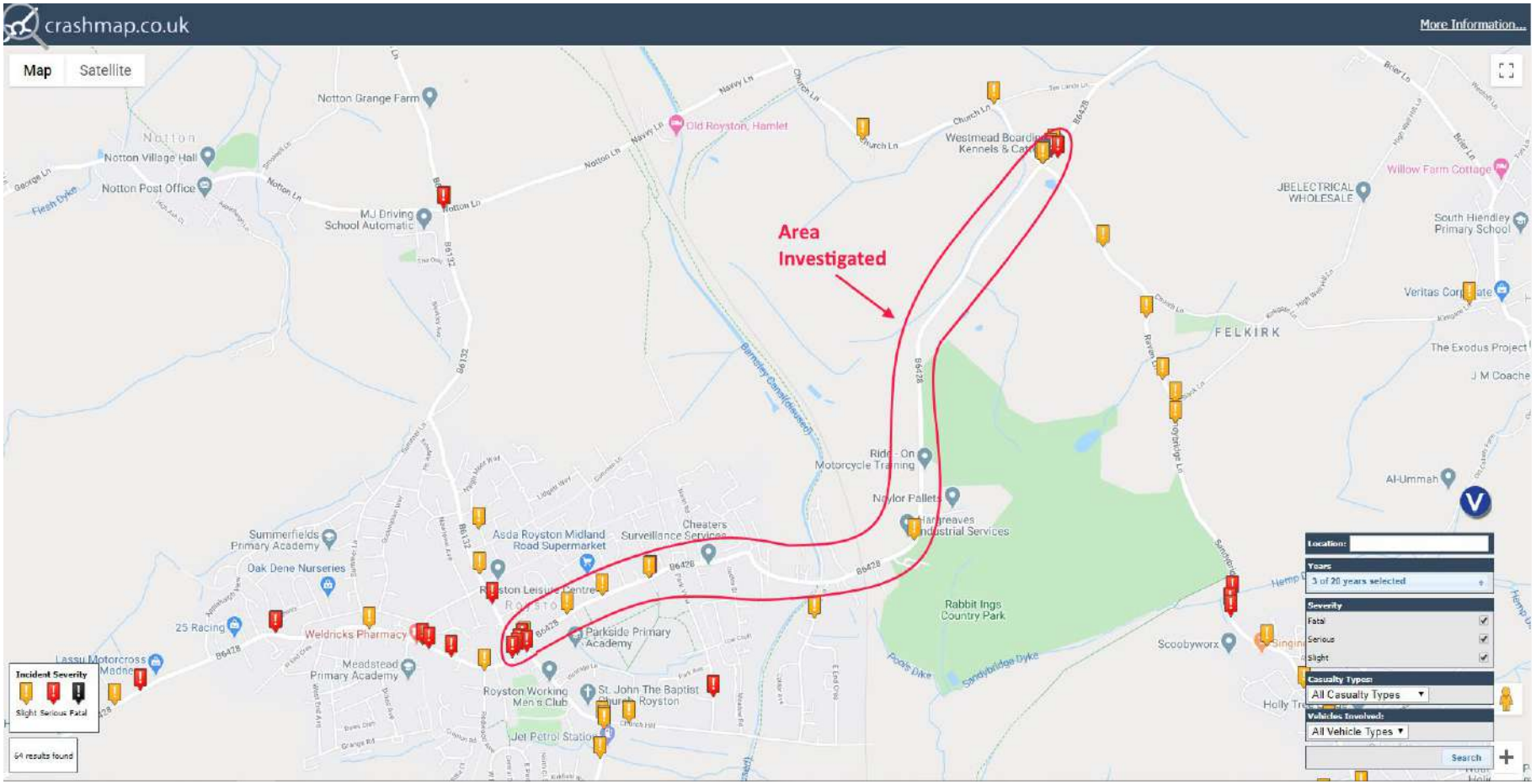



MAP 4
Adopted Local Plan 2019
Go to Map 3
Go to Map 5
Go to Map 11
HS76
MU5
SL12
Royston
HAIGH MOOR WAY
BUSTON DRIVE
NORTH ROAD
VICTORIA ROAD
BUCKINGHAM WAY
APPLEHAIGH VIEW
SUMMER LANE
NEWTOWN AVENUE
COMMON LANE
STRAWBERRY GARDENS
MIDLAND ROAD
STATION ROAD
WESTFIELDS
HIGH STREET
MEADSTEAD DRIVE
CHURCH STREET
PARK VIEW
LEE LANE
WEST END AVENUE
REDWOOD AVENUE
BOLES CRESCENT
CROPTON ROAD
CHURCH HILL
Scale 1:7500
NORTH
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Adopted Local Plan 2019
MAP 5
Go to Map 4
Go to Map 6
Go to Map 12
Royston
Shafton
SL11
SL10
SL7
SL8
HS34
SANDYBRIDGE LANE
LUND HILL LANE
MIDLAND ROAD
CROSS LANE
EAST END CRESCENT
CHURCH HILL
LIDGATE LANE
THE GREEN VIEW
QUEEN'S DRIVE
HAWTHORNE STREET
CHAPEL STREET
PARK VIEW
Scale 1:7500
NORTH

APPENDIX F

Accident Data


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More Information...
Map
Satellite
Area Investigated
Notton Grange Farm
Notton Village Hall
Notton Post Office
MJ Driving School Automatic
Old Royston, Hamlet
Westmead Boarding Kennels & Cattery
Willow Farm Cottage
JBELECTRICAL WHOLESALE
South Hiendley Primary School
FELKIRK
The Exodus Project
Ride - On Motorcycle Training
Naylor Pallets
Hanreaves Industrial Services
Al-Ummah
Summerfields Primary Academy
Oak Dene Nurseries
Asda Royston Midland Road Supermarket
Cheaters Surveillance Services
Royston Leisure Centre
25 Racing
Weldricks Pharmacy
Parkside Primary Academy
Meadstead Primary Academy
Royston Working Men's Club
St. John The Baptist Church, Royston
Jet Petrol Station
Rabbit Ings Country Park
Scoobyworx
Holly Tree
Incident Severity
Slight Serious Fatal
64 results found
Location:
Years
3 of 20 years selected
Severity
Fatal
Serious
Slight
Casualty Types
All Casualty Types
Vehicles Involved
All Vehicle Types
Search

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Crash Date:	Sunday, July 31, 2016	**Time of Crash:**	9:48:00 AM	**Crash Reference:**	**2016140097153**

Highest Injury Severity:	Serious	**Road Number:**	B6428	**Number of Casualties:**	1
Highway Authority:	Barnsley			**Number of Vehicles:**	2
Local Authority:	Barnsley Metropolitan Borough			**OS Grid Reference:**	436639 411698
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	20				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Using private drive or entrance				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Give way or uncontrolled				



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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
2	Motorcycle over 500cc	1	Male	26 - 35	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	None
1	Car (excluding private hire)	4	Male	56 - 65	Vehicle is in the act of turning right	Offside	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2	1	Serious	Driver or rider	Male	26 - 35	Unknown or other	Unknown or other

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Crash Date:	Tuesday, August 08, 2017	**Time of Crash:**	7:17:00 AM	**Crash Reference:**	**2017134880307**

Highest Injury Severity:	Slight	**Road Number:**	U0	**Number of Casualties:**	1
Highway Authority:	Wakefield			**Number of Vehicles:**	2
Local Authority:	Wakefield			**OS Grid Reference:**	438013 413168
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	30				
Light Conditions:	Darkness: street lighting unknown				
Carriageway Hazards:	None				
Junction Detail:	Crossroads				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Give way or uncontrolled				



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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
2	Car (excluding private hire)	14	Female	46 - 55	Vehicle is waiting to proceed normally but is held up	Back	Other	None	None
1	Car (excluding private hire)	-1	Unknown	Unknown	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2	1	Slight	Driver or rider	Female	46 - 55	Unknown or other	Unknown or other

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Crash Date:	Saturday, January 14, 2017	**Time of Crash:**	8:30:00 AM	**Crash Reference:**	**2017140148382**

Highest Injury Severity:	Slight	**Road Number:**	U0	**Number of Casualties:**	1
Highway Authority:	Barnsley			**Number of Vehicles:**	2
Local Authority:	Barnsley Metropolitan Borough			**OS Grid Reference:**	436469 411631
Weather Description:	Fine without high winds				
Road Surface Description:	Wet or Damp				
Speed Limit:	20				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Roundabout				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Roundabout				
Junction Control:	Give way or uncontrolled				



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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
2	Van or goods vehicle 3.5 tonnes mgw and under	19	Unknown	Unknown	Vehicle proceeding normally along the carriageway, not on a bend	Nearside	Other	None	None
1	Car (excluding private hire)	7	Male	26 - 35	Vehicle is waiting to proceed normally but is held up	Offside	Commuting to/from work	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Male	26 - 35	Unknown or other	Unknown or other

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Crash Date:	Tuesday, May 30, 2017	**Time of Crash:**	9:18:00 PM	**Crash Reference:**	**2017140192090**

Highest Injury Severity:	Slight	**Road Number:**	B6428	**Number of Casualties:**	2
Highway Authority:	Barnsley			**Number of Vehicles:**	2
Local Authority:	Barnsley Metropolitan Borough			**OS Grid Reference:**	437569 411834
Weather Description:	Raining without high winds				
Road Surface Description:	Wet or Damp				
Speed Limit:	30				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Not at or within 20 metres of junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Not Applicable				



Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
2	Car (excluding private hire)	9	Male	16 - 20	Vehicle proceeding normally along the carriageway, not on a bend	Offside	Other	None	None
1	Car (excluding private hire)	-1	Unknown	Unknown	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2	1	Slight	Driver or rider	Male	16 - 20	Unknown or other	Unknown or other
2	2	Slight	Vehicle or pillion passenger	Male	11 - 15	Unknown or other	Unknown or other

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Crash Date:	Thursday, July 13, 2017	**Time of Crash:**	3:15:00 PM	**Crash Reference:**	**2017140204798**

Highest Injury Severity:	Serious	**Road Number:**	B6428	**Number of Casualties:**	1
Highway Authority:	Barnsley			**Number of Vehicles:**	1
Local Authority:	Barnsley Metropolitan Borough			**OS Grid Reference:**	436174 411436
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	30				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Multiple junction				
Junction Pedestrian Crossing:	Pedestrian phase at traffic signal junction				
Road Type:	Single carriageway				
Junction Control:	Auto traffic signal				



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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Van or goods vehicle 3.5 tonnes mgw and under	-1	Female	26 - 35	Vehicle is in the act of turning left	Front	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Serious	Pedestrian	Male	66 - 75	Unknown or other	Unknown or other

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Crash Date:	Friday, October 06, 2017	**Time of Crash:**	6:10:00 PM	**Crash Reference:**	**2017140237034**

Highest Injury Severity:	Slight	**Road Number:**	B6428	**Number of Casualties:**	1
Highway Authority:	Barnsley			**Number of Vehicles:**	1
Local Authority:	Barnsley Metropolitan Borough			**OS Grid Reference:**	436632 411695
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	30				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Not at or within 20 metres of junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Not Applicable				



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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	12	Male	66 - 75	Vehicle proceeding normally along the carriageway, not on a bend	Did not impact	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Pedestrian	Male	11 - 15	In carriageway, crossing elsewhere	Crossing from driver's offside

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Crash Date:	Thursday, June 07, 2018	**Time of Crash:**	9:14:00 AM	**Crash Reference:**	**2018135670406**

Highest Injury Severity:	Slight	**Road Number:**	U0	**Number of Casualties:**	1
Highway Authority:	Wakefield			**Number of Vehicles:**	2
Local Authority:	Wakefield			**OS Grid Reference:**	438013 413164
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	60				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Crossroads				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Give way or uncontrolled				



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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
2	Car (excluding private hire)	4	Female	36 - 45	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	None
1	Car (excluding private hire)	12	Male	46 - 55	Vehicle proceeding normally along the carriageway, not on a bend	Offside	Commuting to/from work	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2	1	Slight	Driver or rider	Female	36 - 45	Unknown or other	Unknown or other

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Crash Date:	Saturday, April 28, 2018	**Time of Crash:**	5:30:00 PM	**Crash Reference:**	**2018140291661**

Highest Injury Severity:	Slight	**Road Number:**	B6428	**Number of Casualties:**	2
Highway Authority:	Barnsley			**Number of Vehicles:**	3
Local Authority:	Barnsley Metropolitan Borough			**OS Grid Reference:**	436194 411462
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	30				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Not at or within 20 metres of junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Not Applicable				



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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
3	Minibus (8 - 16 passenger seats)	20	Female	56 - 65	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	None
2	Car (excluding private hire)	11	Unknown	Unknown	Vehicle proceeding normally along the carriageway, not on a bend	Nearside	Other	None	None
1	Car (excluding private hire)	5	Male	21 - 25	Vehicle proceeding normally along the carriageway, not on a bend	Offside	Other	Kerb	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Male	21 - 25	Unknown or other	Unknown or other
1	2	Slight	Vehicle or pillion passenger	Female	16 - 20	Unknown or other	Unknown or other

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Crash Date:	Monday, July 30, 2018	**Time of Crash:**	7:03:00 PM	**Crash Reference:**	**2018140317799**

Highest Injury Severity:	Slight	**Road Number:**	B4628	**Number of Casualties:**	1
Highway Authority:	Barnsley			**Number of Vehicles:**	2
Local Authority:	Barnsley Metropolitan Borough			**OS Grid Reference:**	436344 411565
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	30				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	T or staggered junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Give way or uncontrolled				



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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
2	Van or goods vehicle 3.5 tonnes mgw and under	5	Male	36 - 45	Vehicle is parked in the carriageway	Front	Other	None	None
1	Motorcycle over 50cc and up to 125cc	25	Female	56 - 65	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	Parked vehicle	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Female	56 - 65	Unknown or other	Unknown or other

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Crash Date:	Monday, September 10, 2018	**Time of Crash:**	1:20:00 PM	**Crash Reference:**	**2018140330588**

Highest Injury Severity:	Serious	**Road Number:**	B6132	**Number of Casualties:**	1
Highway Authority:	Barnsley			**Number of Vehicles:**	2
Local Authority:	Barnsley Metropolitan Borough			**OS Grid Reference:**	436185 411454
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	30				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Crossroads				
Junction Pedestrian Crossing:	Pedestrian phase at traffic signal junction				
Road Type:	Single carriageway				
Junction Control:	Auto traffic signal				



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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
2	Van or goods vehicle 3.5 tonnes mgw and under	3	Male	46 - 55	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	None
1	Car (excluding private hire)	6	Female	56 - 65	Vehicle proceeding normally along the carriageway, not on a bend	Offside	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Serious	Driver or rider	Female	56 - 65	Unknown or other	Unknown or other

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Crash Date:	Sunday, October 09, 2016	**Time of Crash:**	9:05:00 PM	**Crash Reference:**	**2016133A91677**

Highest Injury Severity:	Slight	**Road Number:**	B6428	**Number of Casualties:**	6
Highway Authority:	Wakefield			**Number of Vehicles:**	3
Local Authority:	Wakefield			**OS Grid Reference:**	438007 413170
Weather Description:	Fine without high winds				
Road Surface Description:	Wet or Damp				
Speed Limit:	60				
Light Conditions:	Darkness: street lights present and lit				
Carriageway Hazards:	None				
Junction Detail:	Crossroads				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Give way or uncontrolled				



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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	13	Male	16 - 20	Vehicle proceeding normally along the carriageway, not on a bend	Nearside	Other	None	Road sign/Traffic signal
2	Car (excluding private hire)	10	Male	26 - 35	Vehicle is waiting to turn right	Front	Other	None	None
3	Car (excluding private hire)	-1	Male	46 - 55	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	Road sign/Traffic signal

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Male	16 - 20	Unknown or other	Unknown or other
1	2	Slight	Vehicle or pillion passenger	Male	21 - 25	Unknown or other	Unknown or other
2	3	Slight	Driver or rider	Male	26 - 35	Unknown or other	Unknown or other
3	4	Slight	Driver or rider	Male	46 - 55	Unknown or other	Unknown or other
3	5	Slight	Vehicle or pillion passenger	Female	36 - 45	Unknown or other	Unknown or other
3	6	Slight	Vehicle or pillion passenger	Female	6 - 10	Unknown or other	Unknown or other

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Crash Date:	Saturday, October 14, 2017	**Time of Crash:**	12:20:00 PM	**Crash Reference:**	**2017134AG0909**

Highest Injury Severity:	Slight	**Road Number:**	B6428	**Number of Casualties:**	2
Highway Authority:	Wakefield			**Number of Vehicles:**	2
Local Authority:	Wakefield			**OS Grid Reference:**	438013 413167
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	60				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Crossroads				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Give way or uncontrolled				



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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
2	Car (excluding private hire)	11	Female	21 - 25	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	None
1	Car (excluding private hire)	7	Female	46 - 55	Vehicle proceeding normally along the carriageway, not on a bend	Nearside	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2	1	Slight	Driver or rider	Female	21 - 25	Unknown or other	Unknown or other
2	2	Slight	Vehicle or pillion passenger	Male	21 - 25	Unknown or other	Unknown or other

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Crash Date:	Wednesday, December 05, 2018	**Time of Crash:**	3:20:00 PM	**Crash Reference:**	**2018135C51032**
Highest Injury Severity:	Slight	**Road Number:**	U0	**Number of Casualties:**	1
Highway Authority:	Wakefield			**Number of Vehicles:**	2
Local Authority:	Wakefield			**OS Grid Reference:**	438012 413168
Weather Description:	Fine with high winds				
Road Surface Description:	Wet or Damp				
Speed Limit:	60				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Crossroads				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Give way or uncontrolled				



For more information about the data please visit: *www.crashmap.co.uk/home/Faq*
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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
2	Car (excluding private hire)	2	Female	26 - 35	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	None
1	Car (excluding private hire)	4	Female	36 - 45	Vehicle proceeding normally along the carriageway, not on a bend	Offside	Other	None	Entered ditch

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2	1	Slight	Driver or rider	Female	26 - 35	Unknown or other	Unknown or other

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Crash Date:	Friday, February 12, 2016	**Time of Crash:**	3:41:00 PM	**Crash Reference:**	**20161332C0914**

Highest Injury Severity:	Slight	**Road Number:**	B6428	**Number of Casualties:**	1
Highway Authority:	Wakefield			**Number of Vehicles:**	1
Local Authority:	Wakefield			**OS Grid Reference:**	438014 413168
Weather Description:	Fine without high winds				
Road Surface Description:	Wet or Damp				
Speed Limit:	40				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Crossroads				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Give way or uncontrolled				



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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	5	Female	16 - 20	Vehicle proceeding normally along the carriageway, not on a bend	Nearside	Other	None	Tree

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Female	16 - 20	Unknown or other	Unknown or other

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Crash Date:	Wednesday, March 16, 2016	**Time of Crash:**	4:50:00 PM	**Crash Reference:**	**20161333G1098**

Highest Injury Severity:	Slight	**Road Number:**	U0	**Number of Casualties:**	4
Highway Authority:	Wakefield			**Number of Vehicles:**	3
Local Authority:	Wakefield			**OS Grid Reference:**	438014 413168
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	60				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Crossroads				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	One way street				
Junction Control:	Give way or uncontrolled				



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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
3	Van or goods vehicle 3.5 tonnes mgw and under	12	Male	46 - 55	Vehicle is waiting to turn right	Nearside	Other	None	None
1	Car (excluding private hire)	5	Male	16 - 20	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	None
2	Car (excluding private hire)	4	Male	46 - 55	Vehicle proceeding normally along the carriageway, not on a bend	Nearside	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2	1	Slight	Driver or rider	Male	46 - 55	Unknown or other	Unknown or other
2	2	Slight	Vehicle or pillion passenger	Female	46 - 55	Unknown or other	Unknown or other
2	3	Slight	Vehicle or pillion passenger	Female	56 - 65	Unknown or other	Unknown or other
3	4	Slight	Driver or rider	Male	46 - 55	Unknown or other	Unknown or other

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Crash Date:	Tuesday, March 27, 2018	**Time of Crash:**	7:20:00 AM	**Crash Reference:**	**20181353R0275**

Highest Injury Severity:	Slight	**Road Number:**	U0	**Number of Casualties:**	1
Highway Authority:	Wakefield			**Number of Vehicles:**	2
Local Authority:	Wakefield			**OS Grid Reference:**	438014 413166
Weather Description:	Fine without high winds				
Road Surface Description:	Wet or Damp				
Speed Limit:	60				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Crossroads				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Give way or uncontrolled				



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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
2	Car (excluding private hire)	2	Female	36 - 45	Vehicle proceeding normally along the carriageway, not on a bend	Offside	Other	None	None
1	Goods vehicle over 3.5 tonnes and under 7.5 tonnes mgw	-1	Male	26 - 35	Vehicle proceeding normally along the carriageway, not on a bend	Front	Journey as part of work	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2	1	Slight	Driver or rider	Female	36 - 45	Unknown or other	Unknown or other

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Crash Date:	Friday, May 11, 2018	**Time of Crash:**	7:05:00 PM	**Crash Reference:**	**20181355B1734**

Highest Injury Severity:	Slight	**Road Number:**	B6428	**Number of Casualties:**	2
Highway Authority:	Wakefield			**Number of Vehicles:**	2
Local Authority:	Wakefield			**OS Grid Reference:**	438013 413168
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	60				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Crossroads				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Give way or uncontrolled				



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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
2	Car (excluding private hire)	10	Male	16 - 20	Vehicle proceeding normally along the carriageway, not on a bend	Nearside	Other	None	None
1	Car (excluding private hire)	7	Female	16 - 20	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Female	16 - 20	Unknown or other	Unknown or other
2	2	Slight	Driver or rider	Male	16 - 20	Unknown or other	Unknown or other

APPENDIX G

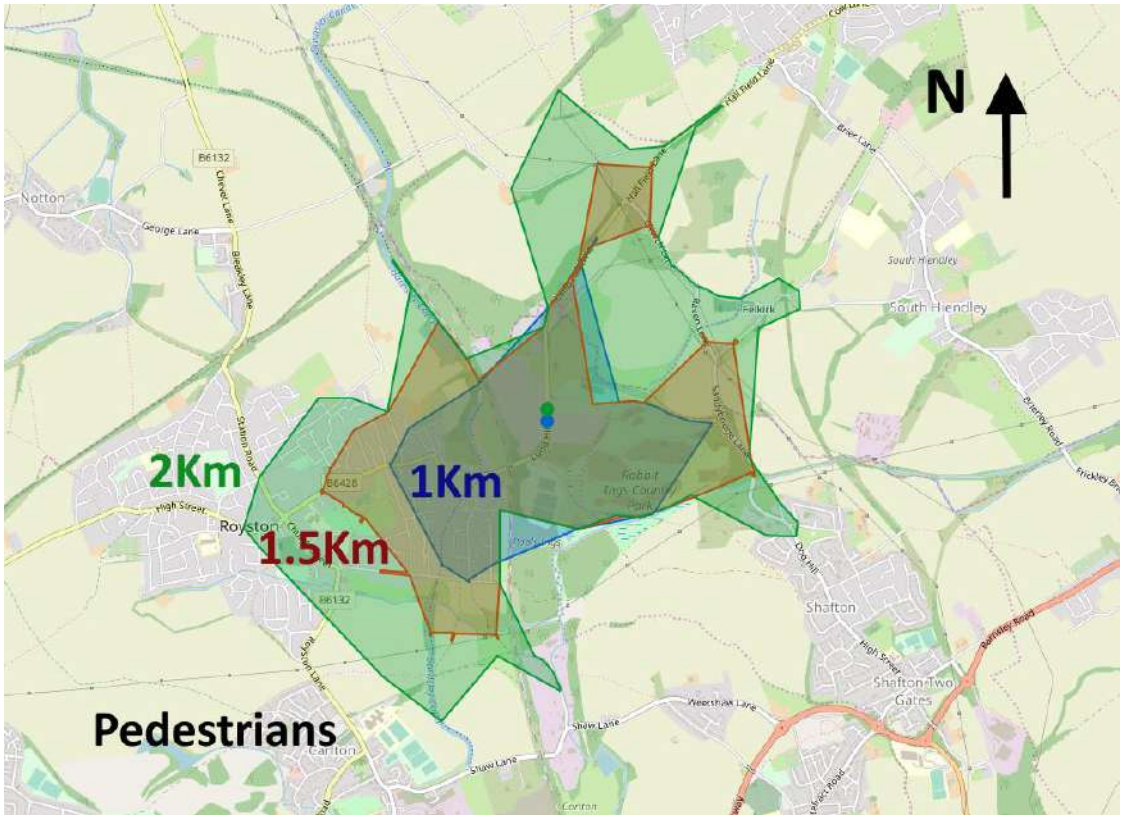
Isochrone distance maps

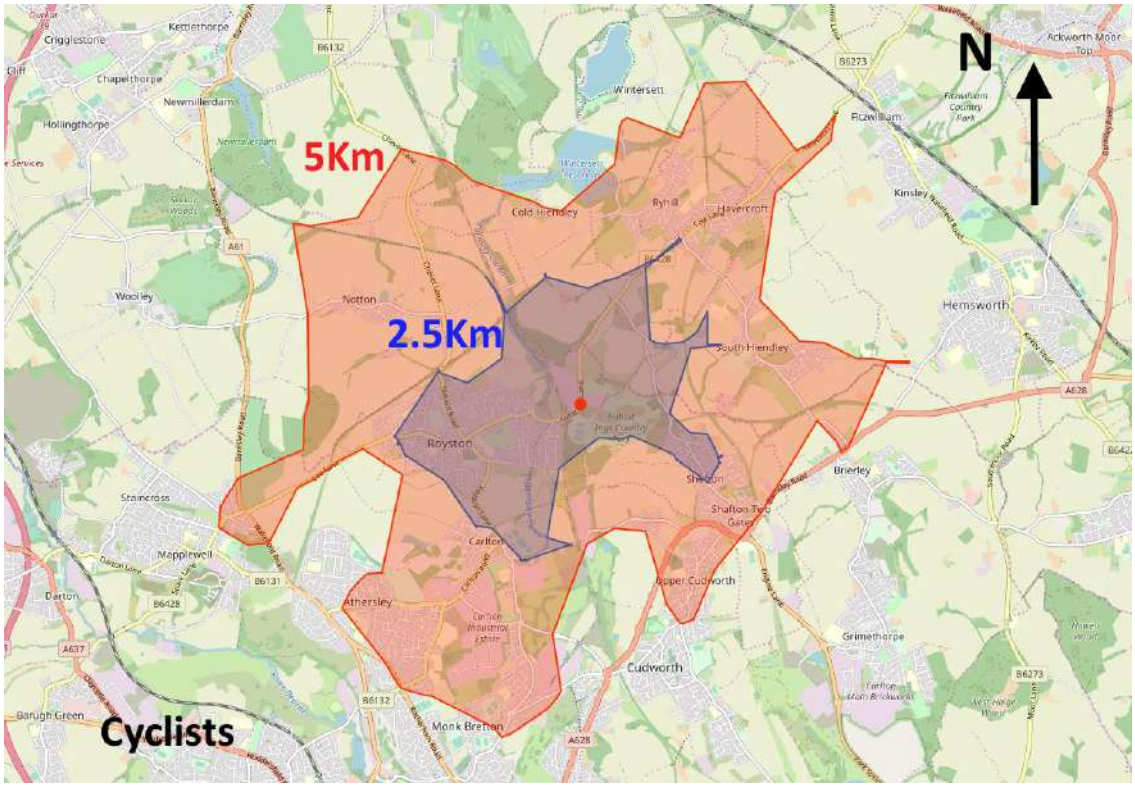
Pedestrians

Cyclists

Proposed pedestrian strategy along Lund Hill Lane

National Cycle Route No. 67

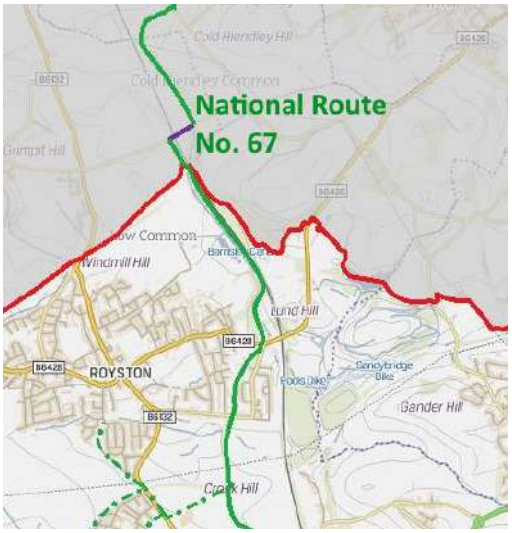




source: www.iso4app.net



Proposed pedestrian strategy along Lund Hill Lane



National Cycle Route No. 67 *(source: Barnsley MBC)*

APPENDIX H

TRICS

TRICS 7.6.2 250719 B19.14 Database right of TRICS Consortium Limited, 2019. All rights reserved **Wednesday 18/09/19**
Residential Dev. on former Monckton Coke and Chemical Works Site **Page 1**
MET Consulting Engineers Stourton Leeds Licence No: 240601

Calculation Reference: AUDIT-240601-190918-0909

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	**SOUTH EAST**		
	HC	HAMPSHIRE	2 days
	KC	KENT	3 days
	SC	SURREY	1 days
	WS	WEST SUSSEX	4 days
03	**SOUTH WEST**		
	SM	SOMERSET	2 days
04	**EAST ANGLIA**		
	NF	NORFOLK	2 days
	SF	SUFFOLK	1 days
05	**EAST MIDLANDS**		
	LE	LEICESTERSHIRE	1 days
	LN	LINCOLNSHIRE	1 days
06	**WEST MIDLANDS**		
	SH	SHROPSHIRE	2 days
	ST	STAFFORDSHIRE	1 days
07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	NY	NORTH YORKSHIRE	4 days
08	**NORTH WEST**		
	CH	CHESHIRE	1 days
09	**NORTH**		
	DH	DURHAM	1 days
17	**ULSTER (NORTHERN IRELAND)**		
	AN	ANTRIM	2 days
	DO	DOWN	1 days

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

Secondary Filtering selection:

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

Parameter: Number of dwellings
Actual Range: 10 to 918 (units:)
Range Selected by User: 6 to 1000 (units:)

Parking Spaces Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/11 to 09/05/19

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

Selected survey days:

Tuesday	13 days
Wednesday	9 days
Thursday	7 days

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

Selected survey types:

Manual count	29 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	9
Edge of Town	15
Neighbourhood Centre (PPS6 Local Centre)	5

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

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

Secondary Filtering selection:

Use Class:

C3	29 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

1,001 to 5,000	9 days
5,001 to 10,000	8 days
10,001 to 15,000	8 days
15,001 to 20,000	4 days

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

Population within 5 miles:

5,001 to 25,000	3 days
25,001 to 50,000	7 days
50,001 to 75,000	5 days
75,001 to 100,000	12 days
100,001 to 125,000	2 days

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

Car ownership within 5 miles:

0.6 to 1.0	6 days
1.1 to 1.5	21 days
1.6 to 2.0	2 days

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

Travel Plan:

Yes	5 days
No	24 days

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

PTAL Rating:

No PTAL Present	29 days

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

LIST OF SITES relevant to selection parameters

1 **AN-03-A-07** **SEMI DETACHED/TERRACED HOUSING** **ANTRIM**
CASTLE WAY
ANTRIM

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 55
Survey date: TUESDAY *20/12/11* *Survey Type: MANUAL*

2 **AN-03-A-09** **DETACHED & SEMI-DETACHED** **ANTRIM**
SLOEFIELD DRIVE
CARRICKFERGUS

Edge of Town
No Sub Category
Total Number of dwellings: 151
Survey date: WEDNESDAY *12/10/16* *Survey Type: MANUAL*

3 **CH-03-A-08** **DETACHED** **CHESHIRE**
WHITCHURCH ROAD
CHESTER
BOUGHTON HEATH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 11
Survey date: TUESDAY *22/05/12* *Survey Type: MANUAL*

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

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 50
Survey date: TUESDAY *28/03/17* *Survey Type: MANUAL*

5 **DO-03-A-03** **DETACHED/SEMI DETACHED** **DOWN**
OLD MILL HEIGHTS
BELFAST
DUNDONALD
Edge of Town
Residential Zone
Total Number of dwellings: 79
Survey date: WEDNESDAY *23/10/13* *Survey Type: MANUAL*

6 **HC-03-A-18** **HOUSES & FLATS** **HAMPSHIRE**
CANADA WAY
LIPHOOK

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 62
Survey date: TUESDAY *29/11/16* *Survey Type: MANUAL*

7 **HC-03-A-20** **HOUSES & FLATS** **HAMPSHIRE**
CANADA WAY
LIPHOOK

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 62
Survey date: TUESDAY *20/11/18* *Survey Type: MANUAL*

8 **KC-03-A-03** **MIXED HOUSES & FLATS** **KENT**
HYTHE ROAD
ASHFORD
WILLESBOROUGH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 51
Survey date: THURSDAY *14/07/16* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

9 **KC-03-A-07** **MIXED HOUSES** **KENT**
RECULVER ROAD
HERNE BAY

Edge of Town
Residential Zone
Total Number of dwellings: 288
Survey date: WEDNESDAY *27/09/17* *Survey Type: MANUAL*

10 **KC-03-A-08** **MIXED HOUSES** **KENT**
MAIDSTONE ROAD
CHARING

Neighbourhood Centre (PPS6 Local Centre)
Village
Total Number of dwellings: 159
Survey date: TUESDAY *22/05/18* *Survey Type: MANUAL*

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

Neighbourhood Centre (PPS6 Local Centre)
Village
Total Number of dwellings: 85
Survey date: THURSDAY *28/06/18* *Survey Type: MANUAL*

12 **LN-03-A-03** **SEMI DETACHED** **LINCOLNSHIRE**
ROOKERY LANE
LINCOLN
BOULTHAM
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 22
Survey date: TUESDAY *18/09/12* *Survey Type: MANUAL*

13 **NF-03-A-01** **SEMI DET. & BUNGALOWS** **NORFOLK**
YARMOUTH ROAD
CAISTER-ON-SEA

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 27
Survey date: TUESDAY *16/10/12* *Survey Type: MANUAL*

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

Edge of Town
Residential Zone
Total Number of dwellings: 10
Survey date: WEDNESDAY *16/09/15* *Survey Type: MANUAL*

15 **NY-03-A-07** **DETACHED & SEMI DET.** **NORTH YORKSHIRE**
CRAVEN WAY
BOROUGHBRIDGE

Edge of Town
No Sub Category
Total Number of dwellings: 23
Survey date: TUESDAY *18/10/11* *Survey Type: MANUAL*

16 **NY-03-A-10** **HOUSES AND FLATS** **NORTH YORKSHIRE**
BOROUGHBRIDGE ROAD
RIPON

Edge of Town
No Sub Category
Total Number of dwellings: 71
Survey date: TUESDAY *17/09/13* *Survey Type: MANUAL*

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

Edge of Town
Residential Zone
Total Number of dwellings: 23
Survey date: WEDNESDAY *18/09/13* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

18 **NY-03-A-13** **TERRACED HOUSES** **NORTH YORKSHIRE**
CATTERICK ROAD
CATTERICK GARRISON
OLD HOSPITAL COMPOUND
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 10
Survey date: WEDNESDAY 10/05/17 *Survey Type: MANUAL*

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

Edge of Town
Residential Zone
Total Number of dwellings: 71
Survey date: THURSDAY 23/01/14 *Survey Type: MANUAL*

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

Edge of Town
Residential Zone
Total Number of dwellings: 18
Survey date: WEDNESDAY 09/09/15 *Survey Type: MANUAL*

21 **SH-03-A-05** **SEMI-DETACHED/TERRACED** **SHROPSHIRE**
SANDCROFT
TELFORD
SUTTON HILL
Edge of Town
Residential Zone
Total Number of dwellings: 54
Survey date: THURSDAY 24/10/13 *Survey Type: MANUAL*

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

Edge of Town
Residential Zone
Total Number of dwellings: 16
Survey date: THURSDAY 22/05/14 *Survey Type: MANUAL*

23 **SM-03-A-02** **MIXED HOUSES** **SOMERSET**
HYDE LANE
NEAR TAUNTON
CREECH SAINT MICHAEL
Neighbourhood Centre (PPS6 Local Centre)
Village
Total Number of dwellings: 42
Survey date: TUESDAY 25/09/18 *Survey Type: MANUAL*

24 **SM-03-A-03** **MIXED HOUSES** **SOMERSET**
HYDE LANE
NEAR TAUNTON
CREECH ST MICHAEL
Neighbourhood Centre (PPS6 Local Centre)
Village
Total Number of dwellings: 41
Survey date: TUESDAY 25/09/18 *Survey Type: MANUAL*

25 **ST-03-A-07** **DETACHED & SEMI-DETACHED** **STAFFORDSHIRE**
BEACONSIDE
STAFFORD
MARSTON GATE
Edge of Town
Residential Zone
Total Number of dwellings: 248
Survey date: WEDNESDAY 22/11/17 *Survey Type: MANUAL*

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	29	101	0.078	29	101	0.300	29	101	0.378
08:00 - 09:00	29	101	0.150	**29**	**101**	**0.399**	**29**	**101**	**0.549**
09:00 - 10:00	29	101	0.142	29	101	0.169	29	101	0.311
10:00 - 11:00	29	101	0.123	29	101	0.151	29	101	0.274
11:00 - 12:00	29	101	0.132	29	101	0.158	29	101	0.290
12:00 - 13:00	29	101	0.160	29	101	0.140	29	101	0.300
13:00 - 14:00	29	101	0.155	29	101	0.164	29	101	0.319
14:00 - 15:00	29	101	0.170	29	101	0.188	29	101	0.358
15:00 - 16:00	29	101	0.253	29	101	0.170	29	101	0.423
16:00 - 17:00	29	101	0.293	29	101	0.182	29	101	0.475
17:00 - 18:00	**29**	**101**	**0.387**	29	101	0.159	29	101	0.546
18:00 - 19:00	29	101	0.296	29	101	0.178	29	101	0.474
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.339			2.358			4.697

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

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

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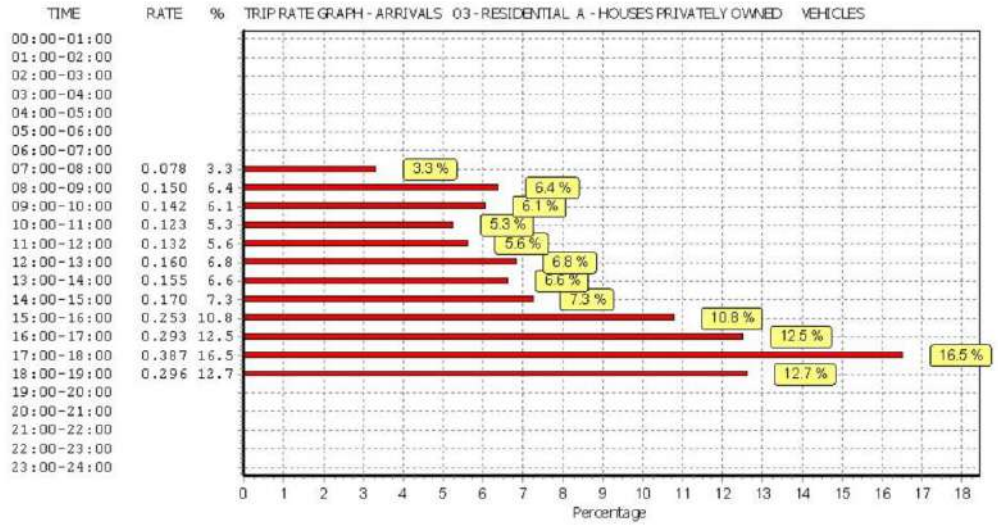
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Parameter summary

Trip rate parameter range selected:	10 - 918 (units:)
Survey date date range:	01/01/11 - 09/05/19
Number of weekdays (Monday-Friday):	29
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	2
Surveys manually removed from selection:	0

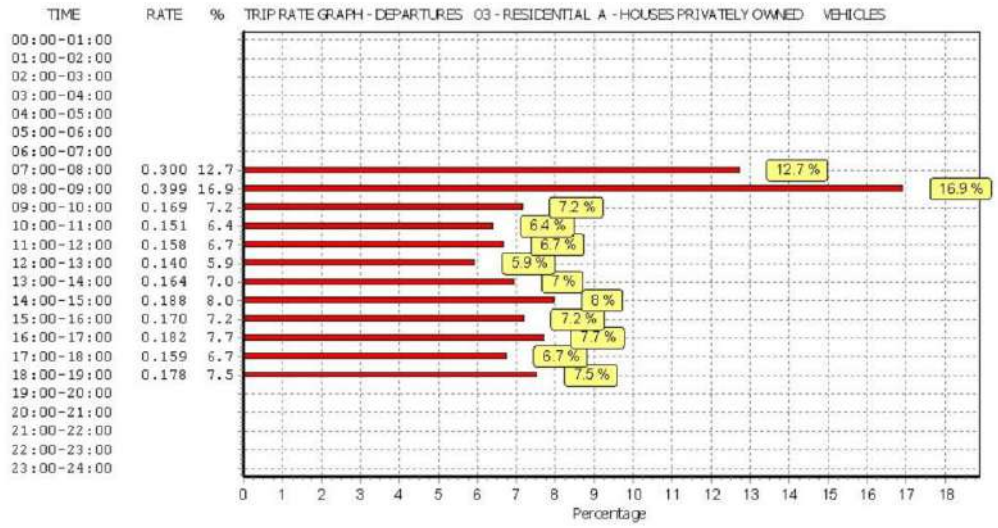
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected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

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Page 9
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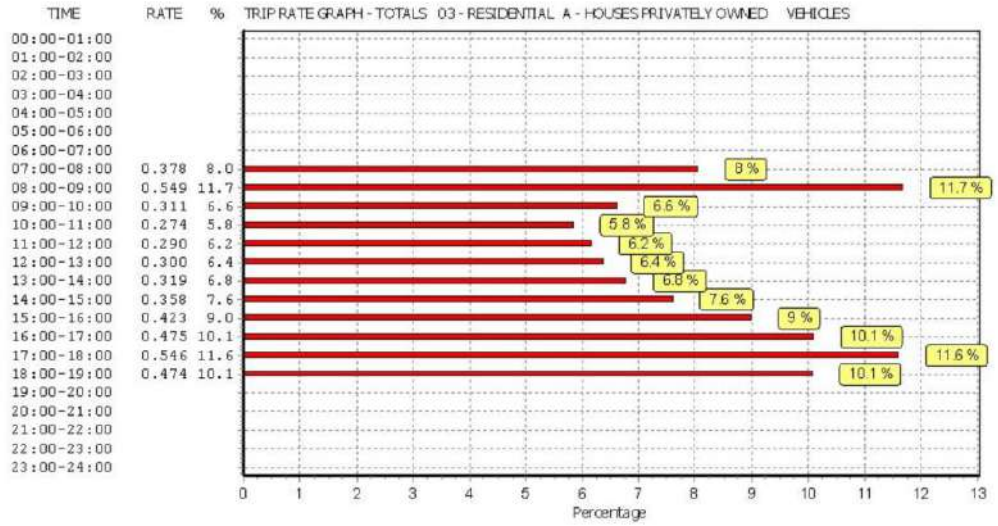
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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Residential Dev. on former Coke and Chemical Works Site **Page 1**
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Calculation Reference: AUDIT-240601-191119-1156

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : C - FLATS PRIVATELY OWNED
VEHICLES

Selected regions and areas:

04	**EAST ANGLIA**		
	NF	NORFOLK	1 days
	SF	SUFFOLK	2 days
07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	RI	EAST RIDING OF YORKSHIRE	1 days
09	**NORTH**		
	CB	CUMBRIA	1 days

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

Secondary Filtering selection:

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

Parameter: Number of dwellings
Actual Range: 20 to 85 (units:)
Range Selected by User: 100 to 1000 (units:)

Parking Spaces Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/11 to 13/11/18

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

Selected survey days:

Tuesday	1 days
Wednesday	2 days
Thursday	2 days

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

Selected survey types:

Manual count	5 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	2
Suburban Area (PPS6 Out of Centre)	1
Edge of Town	2

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

Selected Location Sub Categories:

Residential Zone	2
Built-Up Zone	2
No Sub Category	1

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

Secondary Filtering selection:

Use Class:

C3	5 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

10,001 to 15,000	4 days
15,001 to 20,000	1 days

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

Population within 5 miles:

5,001 to 25,000	1 days
50,001 to 75,000	4 days

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

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	4 days

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

Travel Plan:

No	5 days

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

PTAL Rating:

No PTAL Present	5 days

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

LIST OF SITES relevant to selection parameters

1	**CB-03-C-02** BRIDGE LANE PENRITH	**BLOCK OF FLATS**		**CUMBRIA**
	Edge of Town No Sub Category Total Number of dwellings:		35	
	Survey date: WEDNESDAY		*11/06/14*	*Survey Type: MANUAL*
2	**NF-03-C-01** PAGE STAIR LANE KING'S LYNN	**BLOCKS OF FLATS**		**NORFOLK**
	Edge of Town Centre Built-Up Zone Total Number of dwellings:		51	
	Survey date: THURSDAY		*11/12/14*	*Survey Type: MANUAL*
3	**RI-03-C-01** 465 PRIORY ROAD HULL	**FLATS**		**EAST RIDING OF YORKSHIRE**
	Edge of Town Residential Zone Total Number of dwellings:		20	
	Survey date: TUESDAY		*13/05/14*	*Survey Type: MANUAL*
4	**SF-03-C-01** STATION HILL BURY ST EDMUNDS	**BLOCKS OF FLATS**		**SUFFOLK**
	Edge of Town Centre Built-Up Zone Total Number of dwellings:		85	
	Survey date: THURSDAY		*18/12/14*	*Survey Type: MANUAL*
5	**SF-03-C-03** TOLLGATE LANE BURY ST EDMUNDS	**BLOCKS OF FLATS**		**SUFFOLK**
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings:		30	
	Survey date: WEDNESDAY		*03/12/14*	*Survey Type: MANUAL*

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	44	0.068	5	44	0.167	5	44	0.235
08:00 - 09:00	5	44	0.063	**5**	**44**	**0.190**	5	44	0.253
09:00 - 10:00	5	44	0.113	5	44	0.109	5	44	0.222
10:00 - 11:00	**5**	44	0.090	5	44	0.109	**5**	44	0.199
11:00 - 12:00	5	44	0.109	5	44	0.095	5	44	0.204
12:00 - 13:00	5	44	0.104	5	44	0.072	5	44	0.176
13:00 - 14:00	5	44	0.090	5	44	0.131	5	44	0.221
14:00 - 15:00	5	44	0.095	5	44	0.100	5	44	0.195
15:00 - 16:00	5	44	0.095	5	44	0.081	5	44	0.176
16:00 - 17:00	5	44	0.113	5	44	0.068	5	44	0.181
17:00 - 18:00	**5**	**44**	**0.240**	5	44	0.127	**5**	**44**	**0.367**
18:00 - 19:00	5	44	0.172	5	44	0.136	5	44	0.308
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.352			1.385			2.737

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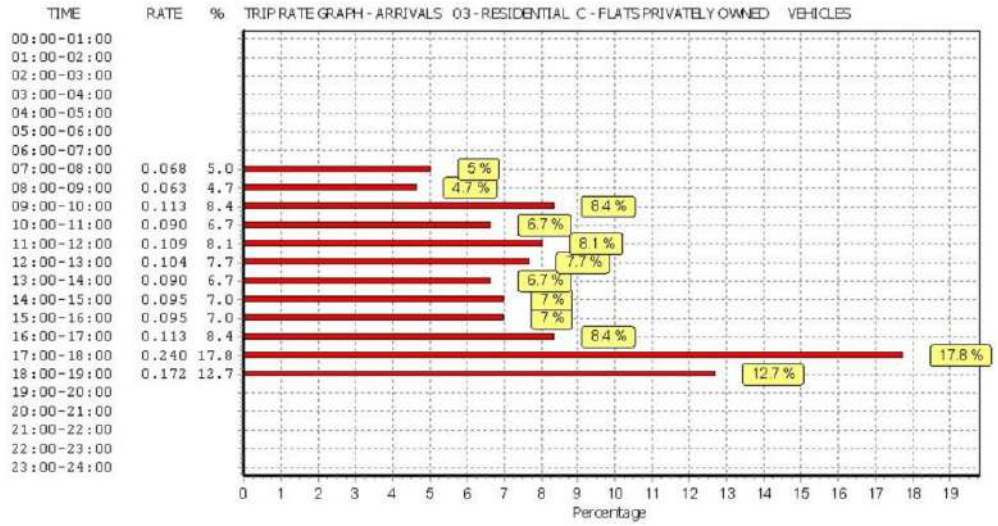
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Parameter summary

Trip rate parameter range selected:	20 - 85 (units:)
Survey date date range:	01/01/11 - 13/11/18
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

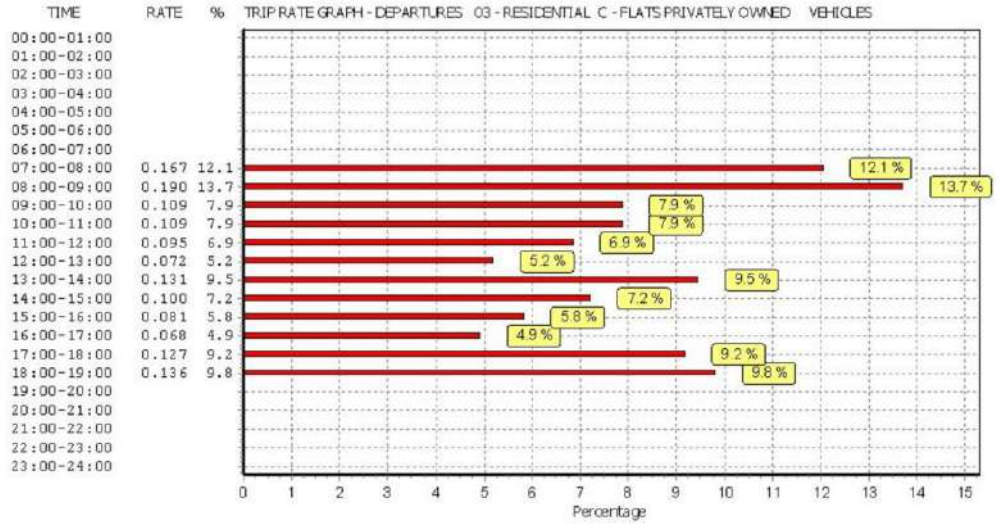
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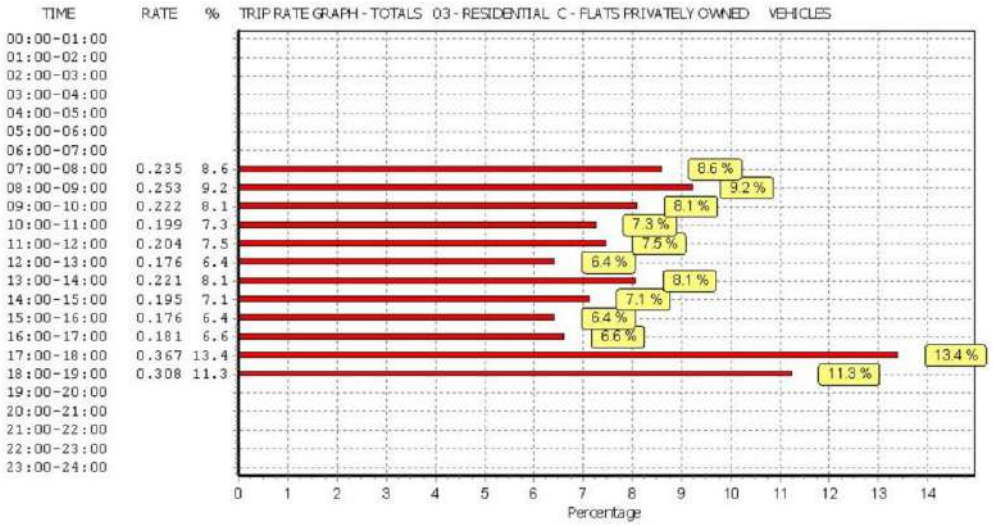
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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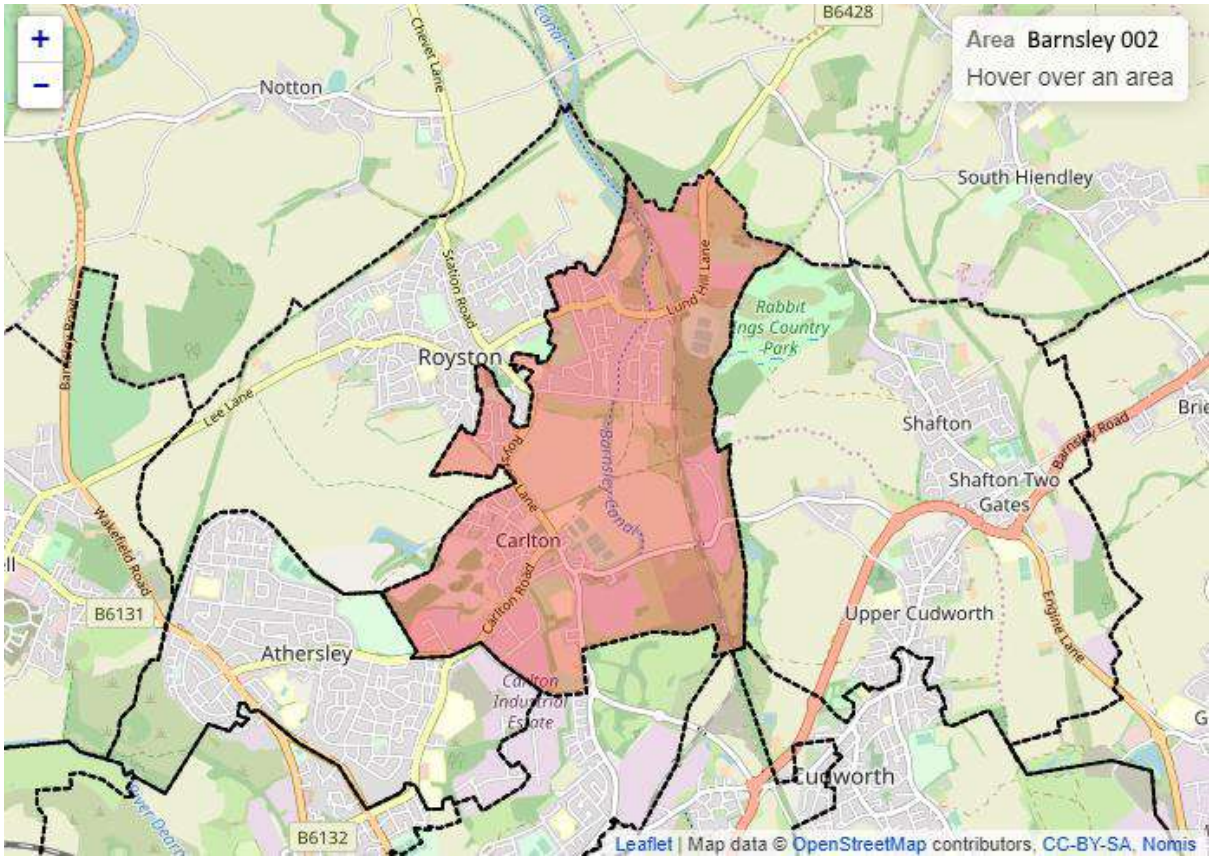


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APPENDIX I

Trip Distribution Data – Office for National Statistics

Development Peak Hour Traffic Flow Distribution


Area Barnsley 002
Hover over an area
Notton
Royston
South Hiendley
Shafton
Shafton Two Gates
Carlton
Athersley
Upper Cudworth
Cudworth
B6428
B6131
B6132
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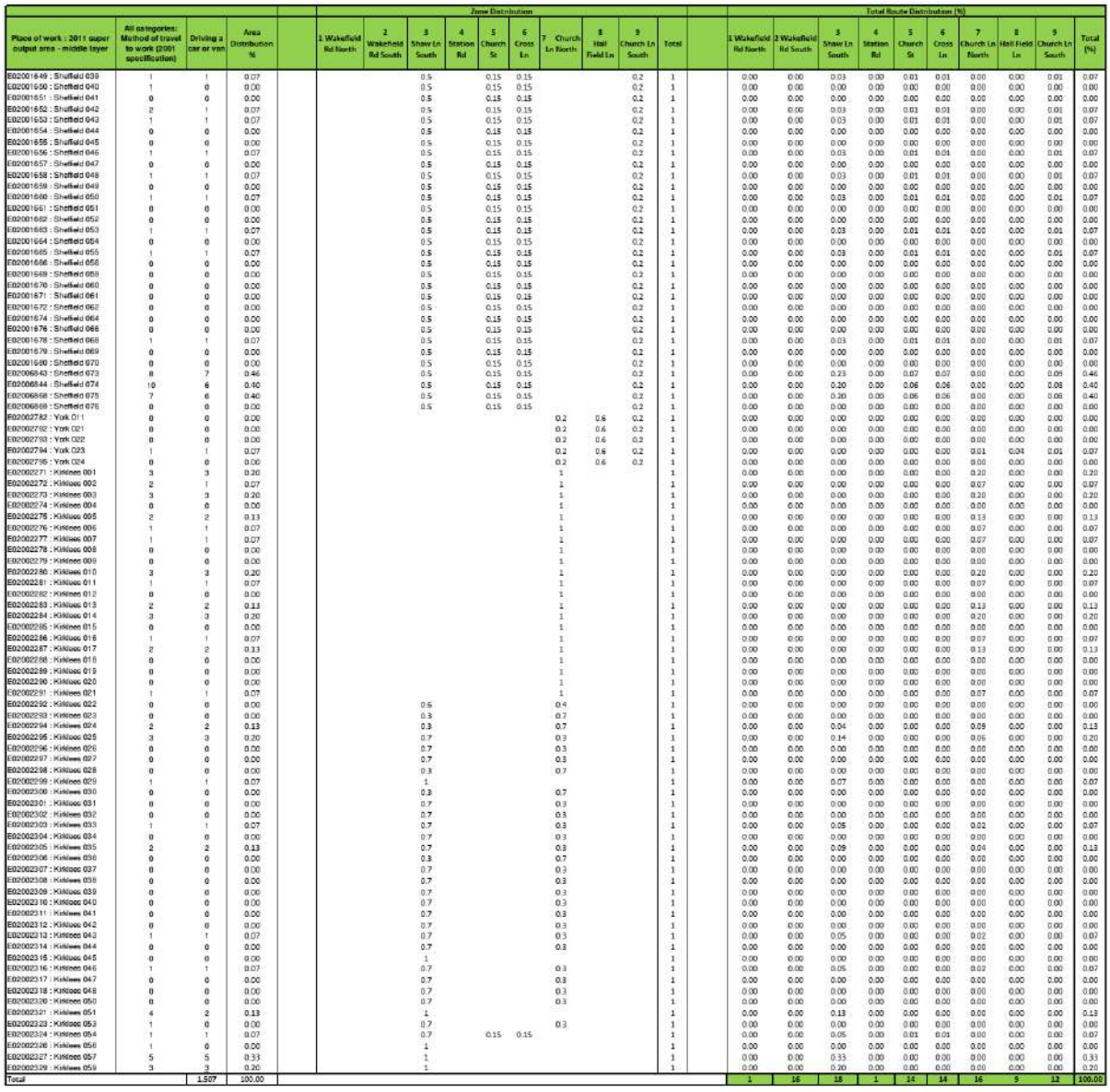
WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)

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population	All usual residents aged 16 and over in employment the week before the census
units	Persons
date	2011
usual residence	E02001510 : Barnsley 002 (2011 super output area - middle layer)

				Zone Distribution										Total Route Distribution (%)									
Place of work : 2011 super output area - middle layer	All categories: Method of travel to work (2001 specification)	Driving a car or van	Area Distribution %	1 Wakefield Rd North	2 Wakefield Rd South	3 Shaw Ln South	4 Station Rd	5 Church St	6 Cross Ln	7 Church Ln North	8 Hall Field Ln	9 Church Ln South	Total	1 Wakefield Rd North	2 Wakefield Rd South	3 Shaw Ln South	4 Station Rd	5 Church St	6 Cross Ln	7 Church Ln North	8 Hall Field Ln	9 Church Ln South	Total (%)
E02001509 : Barnsley 001	101	35	2.32		0.333		0.333	0.334					1	0.000	0.773	0.000	0.773	0.776	0.000	0.000	0.000	0.000	2.32
E02001510 : Barnsley 002	278	138	9.16		0.5			0.5					1	0.000	4.579	0.000	0.000	4.579	0.000	0.000	0.000	0.000	9.16
E02001511 : Barnsley 003	15	9	0.60									1	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.60
E02001512 : Barnsley 004	41	24	1.59	0.333	0.333	0.334							1	0.53	0.53	0.53	0.00	0.00	0.00	0.00	0.00	0.00	1.59
E02001513 : Barnsley 005	20	16	1.06			1							1	0.00	0.00	1.06	0.00	0.00	0.00	0.00	0.00	0.00	1.06
E02001514 : Barnsley 006	41	23	1.53								0.5	0.5	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.76	1.53
E02001515 : Barnsley 007	100	66	4.38		0.334			0.333	0.333				1	0.00	1.46	0.00	0.00	1.46	1.46	0.00	0.00	0.00	4.38
E02001516 : Barnsley 008	13	10	0.66					0.1	0.1			0.8	1	0.00	0.00	0.00	0.00	0.07	0.07	0.00	0.00	0.53	0.66
E02001517 : Barnsley 009	24	15	1.00					0.5	0.5				1	0.00	0.00	0.00	0.00	0.50	0.50	0.00	0.00	0.00	1.00
E02001518 : Barnsley 010	72	51	3.38		0.5			0.25	0.25				1	0.00	1.69	0.00	0.00	0.85	0.85	0.00	0.00	0.00	3.38
E02001519 : Barnsley 011	23	19	1.26					0.334	0.333			0.333	1	0.00	0.00	0.00	0.00	0.42	0.42	0.00	0.00	0.42	1.26
E02001520 : Barnsley 012	108	78	5.18		0.5	0.5							1	0.00	2.59	2.59	0.00	0.00	0.00	0.00	0.00	0.00	5.18
E02001521 : Barnsley 013	237	163	10.82		0.334	0.333			0.333					0.00	3.61	3.60	0.00	0.00	3.60	0.00	0.00	0.00	10.82
E02001522 : Barnsley 014	11	6	0.40									1	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.40
E02001523 : Barnsley 015	65	44	2.92					0.334	0.333			0.333	1	0.00	0.00	0.00	0.00	0.98	0.97	0.00	0.00	0.97	2.92
E02001524 : Barnsley 016	11	9	0.60			0.8		0.2					1	0.00	0.00	0.48	0.00	0.12	0.00	0.00	0.00	0.00	0.60
E02001525 : Barnsley 017	22	16	1.06		0.333			0.334	0.333				1	0.00	0.35	0.00	0.00	0.35	0.35	0.00	0.00	0.00	1.06
E02001526 : Barnsley 018	5	4	0.27					0.5	0.5				1	0.00	0.00	0.00	0.00	0.13	0.13	0.00	0.00	0.00	0.27
E02001527 : Barnsley 019	18	13	0.86			0.5		0.25	0.25				1	0.00	0.00	0.43	0.00	0.22	0.22	0.00	0.00	0.00	0.86
E02001528 : Barnsley 020	3	3	0.20									1	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.20
E02001529 : Barnsley 021	16	14	0.93					0.5	0.5				1	0.00	0.00	0.00	0.00	0.46	0.46	0.00	0.00	0.00	0.93
E02001530 : Barnsley 022	8	8	0.53									1	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.53
E02001531 : Barnsley 023	20	17	1.13					0.15	0.15			0.7	1	0.00	0.00	0.00	0.00	0.17	0.17	0.00	0.00	0.79	1.13
E02001532 : Barnsley 024	23	10	0.66			0.8		0.1	0.1				1	0.00	0.00	0.53	0.00	0.07	0.07	0.00	0.00	0.00	0.66
E02001533 : Barnsley 025	7	7	0.46									1	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.46
E02001534 : Barnsley 026	14	9	0.60					0.2	0.2			0.6	1	0.00	0.00	0.00	0.00	0.12	0.12	0.00	0.00	0.36	0.60
E02001535 : Barnsley 027	8	5	0.33			0.6		0.2	0.2				1	0.00	0.00	0.20	0.00	0.07	0.07	0.00	0.00	0.00	0.33
E02001536 : Barnsley 028	24	15	1.00					0.4	0.4			0.2	1	0.00	0.00	0.00	0.00	0.40	0.40	0.00	0.00	0.20	1.00
E02001537 : Barnsley 029	2	1	0.07					0.2	0.2			0.6	1	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.04	0.07
E02001538 : Barnsley 030	10	9	0.60					0.2	0.2			0.6	1	0.00	0.00	0.00	0.00	0.12	0.12	0.00	0.00	0.36	0.60
E02001539 : Doncaster 001	0	0	0.00						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001540 : Doncaster 002	3	3	0.20						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.02	0.00	0.20
E02001541 : Doncaster 003	0	0	0.00						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001542 : Doncaster 004	1	0	0.00						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001543 : Doncaster 005	1	0	0.00						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001544 : Doncaster 006	1	1	0.07						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.01	0.00	0.07
E02001545 : Doncaster 007	0	0	0.00						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001546 : Doncaster 008	2	1	0.07						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.01	0.00	0.07
E02001547 : Doncaster 009	0	0	0.00						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001548 : Doncaster 010	0	0	0.00						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001549 : Doncaster 011	0	0	0.00						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001550 : Doncaster 012	0	0	0.00						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001551 : Doncaster 013	0	0	0.00						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001552 : Doncaster 014	1	1	0.07						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.01	0.00	0.07
E02001553 : Doncaster 015	1	1	0.07						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.01	0.00	0.07
E02001554 : Doncaster 016	0	0	0.00						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001555 : Doncaster 017	0	0	0.00						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001556 : Doncaster 018	1	1	0.07						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.01	0.00	0.07
E02001557 : Doncaster 019	0	0	0.00						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001558 : Doncaster 020	1	0	0.00						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001559 : Doncaster 021	0	0	0.00						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001560 : Doncaster 022	18	14	0.93						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.84	0.00	0.09	0.00	0.93
E02001561 : Doncaster 023	0	0	0.00						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001562 : Doncaster 024	0	0	0.00						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001563 : Doncaster 025	1	1	0.07						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.01	0.00	0.07
E02001564 : Doncaster 026	0	0	0.00						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001565 : Doncaster 027	1	0	0.00						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001566 : Doncaster 028	8	6	0.40						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.04	0.00	0.40
E02001567 : Doncaster 029	2	2	0.13						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.01	0.00	0.13
E02001568 : Doncaster 030	1	1	0.07						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.01	0.00	0.07
E02001569 : Doncaster 031	1	1	0.07						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.01	0.00	0.07
E02001570 : Doncaster 032	0	0	0.00						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001571 : Doncaster 033	0	0	0.00						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001572 : Doncaster 034	2	2	0.13						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.01	0.00	0.13
E02001573 : Doncaster 035	1	1	0.07						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.01	0.00	0.07
E02001574 : Doncaster 036	0	0	0.00						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001575 : Doncaster 037	0	0	0.00						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001576 : Doncaster 038	0	0	0.00						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001577 : Doncaster 039	0	0	0.00						0.9		0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02005809 : Selby 001	2	2	0.13						0.2	0.6	0.2		1	0.00	0.00	0.00	0.00	0.00	0.03	0.08	0.03	0.00	0.13
E02005810 : Selby 002	0	0	0.00						0.2	0.6	0.2		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02005811 : Selby 003	0	0	0.00						0.2	0.6	0.2		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02005812 : Selby 004	4	3	0.20						0.2	0.6	0.2		1	0.00	0.00	0.00	0.00	0.00	0.04	0.12	0.04	0.00	0.20
E02005813 : Selby 005	1	1	0.07						0.2	0.6	0.2		1	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.01	0.00	0.07
E02005814 : Selby 006	1	1	0.07						0.2	0.6	0.2		1	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.01	0.00	0.07
E02005815 : Selby 007	0	0	0.00						0.2	0.6	0.2		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02005816 : Selby 008	0	0	0.00						0.2	0.6	0.2		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02005817 : Selby 009	0	0	0.00						0.2	0.6	0.2		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02005818 : Selby 010	11	11	0.73						0.2	0.6	0.2		1	0.00	0.00	0.00	0.00	0.00	0.15	0.44	0.15	0.00	0.73
E02002438 : Wakefield 001	1	1	0.07							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
E02002439 : Wakefield 002	16	12	0.80							0.2	0.8		1	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.64	0.00	0.80
E02002440 : Wakefield 003	0	0	0.00							0.2	0.8		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002441 : Wakefield 004	3	3	0.20							0.2	0.8		1	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.16	0.00	0.20
E02002442 : Wakefield 005	11	9	0.60							0.2	0.8		1	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.48	0.00	0.60
E02002443 : Wakefield 006	4	3	0.20							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.20
E02002444 : Wakefield 007	5	5	0.33							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.33
E02002445 : Wakefield 008	4	4	0.27							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.27
E02002446 : Wakefield 009	6	6	0.40							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.40
E02002447 : Wakefield 010	3	3	0.20								1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.20
E02002448 : Wakefield 011	1	1	0.07								1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.07
E02002449 : Wakefield 012	1	1	0.07								1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.07
E02002450 : Wakefield 013	16	13	0.86								1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86	0.00	0.86
E02002451 : Wakefield 014	18	16	1.06							1			1	0.00	0.00	0.00	0.00	0.00	0.00	1.06	0.00	0.00	1.06
E02002452 : Wakefield 015	7	6	0.40								1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.40
E02002453 : Wakefield 016	4	3	0.20							0.4	0.6		1	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.12	0.00	0.20
E02002454 : Wakefield 017	40	30	1.99							0.4	0.6		1	0.00	0.00	0.00	0.00	0.00	0.00	0.80	1.19	0.00	1.99
E02002455 : Wakefield 018	1	1	0.07								1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.07
E02002456 : Wakefield 019	33	26	1.73							0.4	0.6		1	0.00	0.00	0.00	0.00	0.00	0.00	0.69	1.04	0.00	1.73
E02002457 : Wakefield 020	1	1	0.07							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
E02002458 : Wakefield 021	8	6	0.40			0.2				0.8			1	0.00	0.00	0.08	0.00	0.00	0.00	0.32	0.00	0.00	0.40
E02002459 : Wakefield 022	6	5	0.33			0.2				0.8			1	0.00	0.00	0.07	0.00	0.00	0.00	0.27	0.00	0.00	0.33
E02002460 : Wakefield 023	0	0	0.00								1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002461 : Wakefield 024	6	5	0.33							0.2	0.8		1	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.27	0.00	0.33
E02002462 : Wakefield 025	2	2	0.13			0.2				0.8			1	0.00	0.00	0.03	0.00	0.00	0.00	0.11	0.00	0.00	0.13
E02002463 : Wakefield 026	4	4	0.27			0.3				0.7			1	0.00	0.00	0.08	0.00	0.00	0.00	0.19	0.00	0.00	0.27
E02002464 : Wakefield 027	8	5	0.33								1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.33
E02002465 : Wakefield 028	15	14	0.93							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.93	0.00	0.00	0.93
E02002466 : Wakefield 029	0	0	0.00							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002467 : Wakefield 030	27	20	1.33							1			1	0.00	0.00	0.00	0.00	0.00	0.00	1.33	0.00	0.00	1.33
E02002468 : Wakefield 031	5	5	0.33							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.33
E02002469 : Wakefield 032	3	3	0.20							0.3	0.7		1	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.14	0.00	0.20
E02002470 : Wakefield 033	16	14	0.93							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.93	0.00	0.00	0.93
E02002471 : Wakefield 034	0	0	0.00							0.8	0.2		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002472 : Wakefield 035	4	3	0.20			0.3				0.7			1	0.00	0.00	0.06	0.00	0.00	0.00	0.14	0.00	0.00	0.20
E02002473 : Wakefield 036	8	8	0.53			0.2				0.8			1	0.00	0.00	0.11	0.00	0.00	0.00	0.42	0.00	0.00	0.53
E02002474 : Wakefield 037	10	8	0.53			0.2				0.8			1	0.00	0.00	0.11	0.00	0.00	0.00	0.42	0.00	0.00	0.53
E02002475 : Wakefield 038	26	16	1.06				0.4			0.6			1	0.00	0.00	0.00	0.42	0.00	0.00	0.64	0.00	0.00	1.06
E02002476 : Wakefield 039	4	3	0.20								1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.20
E02002477 : Wakefield 040	7	5	0.33								1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.33
E02002478 : Wakefield 041	0	0	0.00								0.3	0.7	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002479 : Wakefield 042	6	6	0.40								0.3	0.7	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.28	0.40
E02002480 : Wakefield 043	15	10	0.66									1	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66	0.66
E02002481 : Wakefield 044	19	16	1.06									1	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06	1.06
E02002482 : Wakefield 045	1	1	0.07									1	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.07
E02002330 : Leeds 001	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002338 : Leeds 009	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002339 : Leeds 010	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002340 : Leeds 011	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002341 : Leeds 012	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002342 : Leeds 013	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002343 : Leeds 014	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002344 : Leeds 015	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002345 : Leeds 016	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002346 : Leeds 017	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002347 : Leeds 018	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002348 : Leeds 019	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002349 : Leeds 020	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002350 : Leeds 021	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002351 : Leeds 022	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

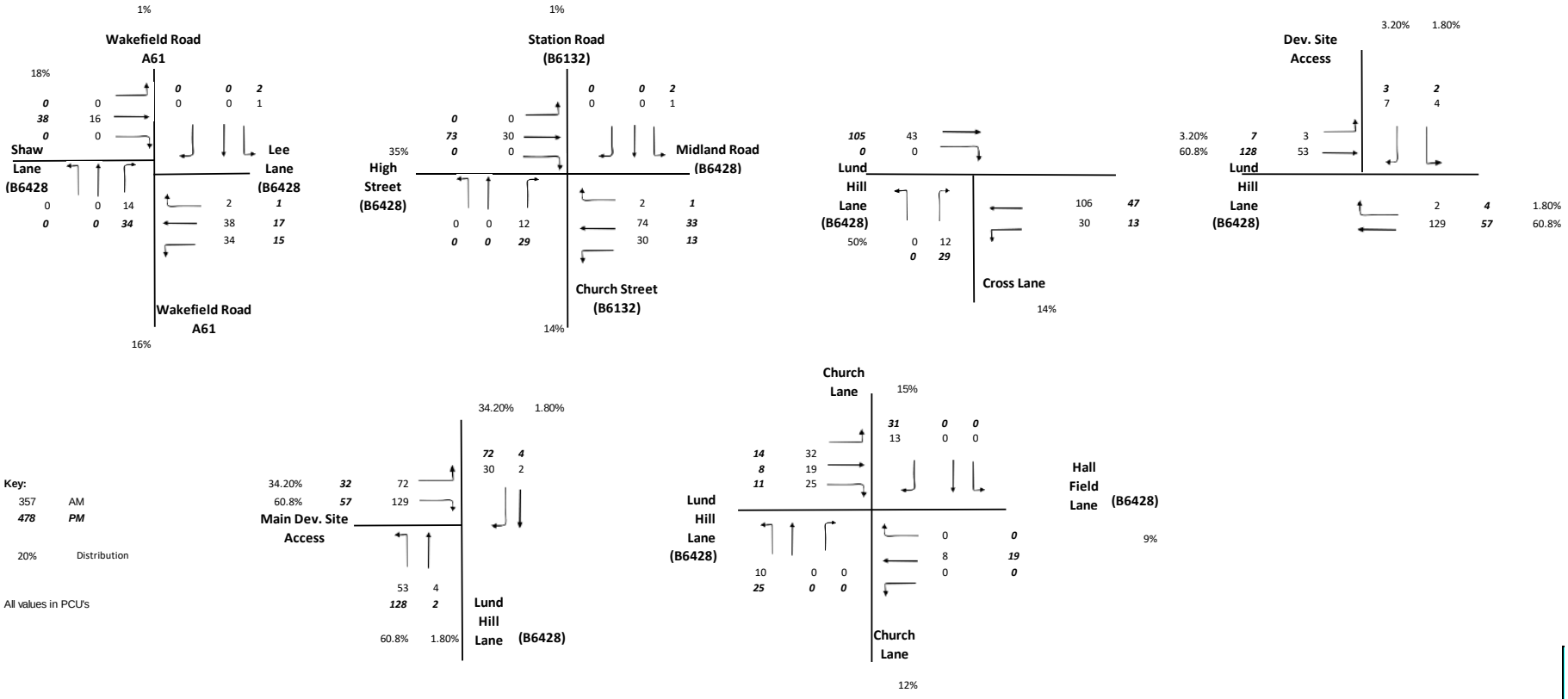
				Zone Distribution										Total Route Distribution (%)									
Place of work : 2011 super output area - middle layer	All categories: Method of travel to work (2001 specification)	Driving a car or van	Area Distribution %	1 Wakefield Rd North	2 Wakefield Rd South	3 Shaw Ln South	4 Station Rd	5 Church St	6 Cross Ln	7 Church Ln North	8 Hall Field Ln	9 Church Ln South	Total	1 Wakefield Rd North	2 Wakefield Rd South	3 Shaw Ln South	4 Station Rd	5 Church St	6 Cross Ln	7 Church Ln North	8 Hall Field Ln	9 Church Ln South	Total (%)
E02002352 : Leeds 023	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002353 : Leeds 024	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002354 : Leeds 025	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002356 : Leeds 027	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002357 : Leeds 028	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002358 : Leeds 029	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002359 : Leeds 030	2	2	0.13			0.3				0.6	0.1		1	0.00	0.00	0.04	0.00	0.00	0.00	0.08	0.01	0.00	0.13
E02002360 : Leeds 031	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002361 : Leeds 032	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002362 : Leeds 033	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002363 : Leeds 034	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002364 : Leeds 035	1	1	0.07			0.3				0.6	0.1		1	0.00	0.00	0.02	0.00	0.00	0.00	0.04	0.01	0.00	0.07
E02002366 : Leeds 037	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002367 : Leeds 038	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002368 : Leeds 039	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002369 : Leeds 040	1	1	0.07			0.3				0.6	0.1		1	0.00	0.00	0.02	0.00	0.00	0.00	0.04	0.01	0.00	0.07
E02002370 : Leeds 041	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002371 : Leeds 042	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002373 : Leeds 044	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002374 : Leeds 045	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002375 : Leeds 046	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002376 : Leeds 047	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002377 : Leeds 048	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002379 : Leeds 050	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002380 : Leeds 051	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002381 : Leeds 052	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002382 : Leeds 053	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002383 : Leeds 054	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002384 : Leeds 055	7	6	0.40			0.3				0.6	0.1		1	0.00	0.00	0.12	0.00	0.00	0.00	0.24	0.04	0.00	0.40
E02002385 : Leeds 056	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002386 : Leeds 057	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002387 : Leeds 058	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002388 : Leeds 059	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002389 : Leeds 060	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002390 : Leeds 061	3	2	0.13			0.3				0.6	0.1		1	0.00	0.00	0.04	0.00	0.00	0.00	0.08	0.01	0.00	0.13
E02002391 : Leeds 062	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002392 : Leeds 063	3	2	0.13			0.3				0.6	0.1		1	0.00	0.00	0.04	0.00	0.00	0.00	0.08	0.01	0.00	0.13
E02002393 : Leeds 064	4	4	0.27			0.3				0.6	0.1		1	0.00	0.00	0.08	0.00	0.00	0.00	0.16	0.03	0.00	0.27
E02002394 : Leeds 065	1	1	0.07			0.3				0.6	0.1		1	0.00	0.00	0.02	0.00	0.00	0.00	0.04	0.01	0.00	0.07
E02002395 : Leeds 066	1	1	0.07			0.3				0.6	0.1		1	0.00	0.00	0.02	0.00	0.00	0.00	0.04	0.01	0.00	0.07
E02002396 : Leeds 067	1	1	0.07			0.3				0.6	0.1		1	0.00	0.00	0.02	0.00	0.00	0.00	0.04	0.01	0.00	0.07
E02002397 : Leeds 068	2	2	0.13			0.3				0.6	0.1		1	0.00	0.00	0.04	0.00	0.00	0.00	0.08	0.01	0.00	0.13
E02002398 : Leeds 069	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002399 : Leeds 070	2	2	0.13			0.3				0.6	0.1		1	0.00	0.00	0.04	0.00	0.00	0.00	0.08	0.01	0.00	0.13
E02002400 : Leeds 071	6	5	0.33			0.3				0.6	0.1		1	0.00	0.00	0.10	0.00	0.00	0.00	0.20	0.03	0.00	0.33
E02002401 : Leeds 072	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002402 : Leeds 073	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002403 : Leeds 074	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002404 : Leeds 075	1	1	0.07			0.3				0.6	0.1		1	0.00	0.00	0.02	0.00	0.00	0.00	0.04	0.01	0.00	0.07
E02002405 : Leeds 076	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002406 : Leeds 077	1	1	0.07			0.3				0.6	0.1		1	0.00	0.00	0.02	0.00	0.00	0.00	0.04	0.01	0.00	0.07
E02002407 : Leeds 078	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002408 : Leeds 079	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002409 : Leeds 080	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002410 : Leeds 081	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002411 : Leeds 082	1	1	0.07			0.3				0.6	0.1		1	0.00	0.00	0.02	0.00	0.00	0.00	0.04	0.01	0.00	0.07
E02002412 : Leeds 083	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002414 : Leeds 085	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002415 : Leeds 086	1	1	0.07			0.3				0.6	0.1		1	0.00	0.00	0.02	0.00	0.00	0.00	0.04	0.01	0.00	0.07
E02002416 : Leeds 087	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002417 : Leeds 088	2	2	0.13			0.3				0.6	0.1		1	0.00	0.00	0.04	0.00	0.00	0.00	0.08	0.01	0.00	0.13
E02002418 : Leeds 089	1	1	0.07			0.3				0.6	0.1		1	0.00	0.00	0.02	0.00	0.00	0.00	0.04	0.01	0.00	0.07
E02002419 : Leeds 090	7	6	0.40			0.3				0.6	0.1		1	0.00	0.00	0.12	0.00	0.00	0.00	0.24	0.04	0.00	0.40
E02002420 : Leeds 091	2	2	0.13			0.3				0.6	0.1		1	0.00	0.00	0.04	0.00	0.00	0.00	0.08	0.01	0.00	0.13
E02002421 : Leeds 092	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002422 : Leeds 093	1	1	0.07			0.3				0.6	0.1		1	0.00	0.00	0.02	0.00	0.00	0.00	0.04	0.01	0.00	0.07
E02002423 : Leeds 094	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002424 : Leeds 095	1	1	0.07			0.3				0.6	0.1		1	0.00	0.00	0.02	0.00	0.00	0.00	0.04	0.01	0.00	0.07
E02002425 : Leeds 096	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002426 : Leeds 097	1	1	0.07			0.3				0.6	0.1		1	0.00	0.00	0.02	0.00	0.00	0.00	0.04	0.01	0.00	0.07
E02002427 : Leeds 098	1	1	0.07			0.3				0.6	0.1		1	0.00	0.00	0.02	0.00	0.00	0.00	0.04	0.01	0.00	0.07
E02002428 : Leeds 099	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002429 : Leeds 100	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002430 : Leeds 101	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002431 : Leeds 102	1	1	0.07			0.3				0.6	0.1		1	0.00	0.00	0.02	0.00	0.00	0.00	0.04	0.01	0.00	0.07
E02002432 : Leeds 103	1	1	0.07			0.3				0.6	0.1		1	0.00	0.00	0.02	0.00	0.00	0.00	0.04	0.01	0.00	0.07
E02002433 : Leeds 104	5	5	0.33			0.3				0.6	0.1		1	0.00	0.00	0.10	0.00	0.00	0.00	0.20	0.03	0.00	0.33
E02002434 : Leeds 105	1	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002435 : Leeds 106	1	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002436 : Leeds 107	5	5	0.33			0.3				0.6	0.1		1	0.00	0.00	0.10	0.00	0.00	0.00	0.20	0.03	0.00	0.33
E02002437 : Leeds 108	1	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02006852 : Leeds 109	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02006861 : Leeds 110	0	0	0.00			0.3				0.6	0.1		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02006875 : Leeds 111	18	13	0.86			0.3				0.6	0.1		1	0.00	0.00	0.26	0.00	0.00	0.00	0.52	0.09	0.00	0.86
E02006876 : Leeds 112	16	14	0.93			0.3				0.6	0.1		1	0.00	0.00	0.28	0.00	0.00	0.00	0.56	0.09	0.00	0.93
E02001578 : Rotherham 001	20	19	1.26			0.3		0.15	0.15			0.4	1	0.00	0.00	0.38	0.00	0.19	0.19	0.00	0.00	0.50	1.26
E02001579 : Rotherham 002	44	36	2.39			0.3		0.15	0.15			0.4	1	0.00	0.00	0.72	0.00	0.36	0.36	0.00	0.00	0.96	2.39
E02001580 : Rotherham 003	1	1	0.07			0.3		0.15	0.15			0.4	1	0.00	0.00	0.02	0.00	0.01	0.01	0.00	0.00	0.03	0.07
E02001581 : Rotherham 004	0	0	0.00			0.3		0.15	0.15			0.4	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001582 : Rotherham 005	0	0	0.00			0.3		0.15	0.15			0.4	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001583 : Rotherham 006	0	0	0.00			0.3		0.15	0.15			0.4	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001584 : Rotherham 007	1	1	0.07			0.3		0.15	0.15			0.4	1	0.00	0.00	0.02	0.00	0.01	0.01	0.00	0.00	0.03	0.07
E02001585 : Rotherham 008	3	3	0.20			0.3		0.15	0.15			0.4	1	0.00	0.00	0.06	0.00	0.03	0.03	0.00	0.00	0.08	0.20
E02001586 : Rotherham 009	4	4	0.27			0.3		0.15	0.15			0.4	1	0.00	0.00	0.08	0.00	0.04	0.04	0.00	0.00	0.11	0.27
E02001587 : Rotherham 010	0	0	0.00			0.3		0.15	0.15			0.4	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001588 : Rotherham 011	2	2	0.13			0.3		0.15	0.15			0.4	1	0.00	0.00	0.04	0.00	0.02	0.02	0.00	0.00	0.05	0.13
E02001589 : Rotherham 012	2	1	0.07			0.3		0.15	0.15			0.4	1	0.00	0.00	0.02	0.00	0.01	0.01	0.00	0.00	0.03	0.07
E02001590 : Rotherham 013	0	0	0.00			0.3		0.15	0.15			0.4	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001591 : Rotherham 014	3	3	0.20			0.3		0.15	0.15			0.4	1	0.00	0.00	0.06	0.00	0.03	0.03	0.00	0.00	0.08	0.20
E02001592 : Rotherham 015	1	1	0.07			0.3		0.15	0.15			0.4	1	0.00	0.00	0.02	0.00	0.01	0.01	0.00	0.00	0.03	0.07
E02001593 : Rotherham 016	4	4	0.27			0.3		0.15	0.15			0.4	1	0.00	0.00	0.08	0.00	0.04	0.04	0.00	0.00	0.11	0.27
E02001594 : Rotherham 017	10	10	0.66			0.3		0.15	0.15			0.4	1	0.00	0.00	0.20	0.00	0.10	0.10	0.00	0.00	0.27	0.66
E02001595 : Rotherham 018	3	2	0.13			0.3		0.15	0.15			0.4	1	0.00	0.00	0.04	0.00	0.02	0.02	0.00	0.00	0.05	0.13
E02001596 : Rotherham 019	0	0	0.00			0.3		0.15	0.15			0.4	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001598 : Rotherham 021	0	0	0.00			0.3		0.15	0.15			0.4	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001599 : Rotherham 022	1	1	0.07			0.3		0.15	0.15			0.4	1	0.00	0.00	0.02	0.00	0.01	0.01	0.00	0.00	0.03	0.07
E02001600 : Rotherham 023	2	2	0.13			0.3		0.15	0.15			0.4	1	0.00	0.00	0.04	0.00	0.02	0.02	0.00	0.00	0.05	0.13
E02001601 : Rotherham 024	0	0	0.00			0.3		0.15	0.15			0.4	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001602 : Rotherham 025	2	2	0.13			0.3		0.15	0.15			0.4	1	0.00	0.00	0.04	0.00	0.02	0.02	0.00	0.00	0.05	0.13
E02001603 : Rotherham 026	0	0	0.00			0.3		0.15	0.15			0.4	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001604 : Rotherham 027	0	0	0.00			0.3		0.15	0.15			0.4	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001607 : Rotherham 030	0	0	0.00			0.3		0.15	0.15			0.4	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001611 : Sheffield 001	1	1	0.07			0.5		0.15	0.15			0.2	1	0.00	0.00	0.03	0.00	0.01	0.01	0.00	0.00	0.01	0.07
E02001612 : Sheffield 002	1	1	0.07			0.5		0.15	0.15			0.2	1	0.00	0.00	0.03	0.00	0.01	0.01	0.00	0.00	0.01	0.07
E02001613 : Sheffield 003	1	1	0.07			0.5		0.15	0.15			0.2	1	0.00	0.00	0.03	0.00	0.01	0.01	0.00	0.00	0.01	0.07
E02001614 : Sheffield 004	10	8	0.53			0.5		0.15	0.15			0.2	1	0.00	0.00	0.27	0.00	0.08	0.08	0.00	0.00	0.11	0.53
E02001615 : Sheffield 005	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001616 : Sheffield 006	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001617 : Sheffield 007	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001618 : Sheffield 008	1	1	0.07			0.5		0.15	0.15			0.2	1	0.00	0.00	0.03	0.00	0.01	0.01	0.00	0.00	0.01	0.07
E02001619 : Sheffield 009	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001620 : Sheffield 010	1	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001621 : Sheffield 011	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001622 : Sheffield 012	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001623 : Sheffield 013	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001624 : Sheffield 014	4	3	0.20			0.5		0.15	0.15			0.2	1	0.00	0.00	0.10	0.00	0.03	0.03	0.00	0.00	0.04	0.20
E02001625 : Sheffield 015	2	2	0.13			0.5		0.15	0.15			0.2	1	0.00	0.00	0.07	0.00	0.02	0.02	0.00	0.00	0.03	0.13
E02001626 : Sheffield 016	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001627 : Sheffield 017	2	2	0.13			0.5		0.15	0.15			0.2	1	0.00	0.00	0.07	0.00	0.02	0.02	0.00	0.00	0.03	0.13
E02001628 : Sheffield 018	17	13	0.86			0.5		0.15	0.15			0.2	1	0.00	0.00	0.43	0.00	0.13	0.13	0.00	0.00	0.17	0.86
E02001629 : Sheffield 019	1	1	0.07			0.5		0.15	0.15			0.2	1	0.00	0.00	0.03	0.00	0.01	0.01	0.00	0.00	0.01	0.07
E02001630 : Sheffield 020	1	1	0.07			0.5		0.15	0.15			0.2	1	0.00	0.00	0.03	0.00	0.01	0.01	0.00	0.00	0.01	0.07
E02001631 : Sheffield 021	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001632 : Sheffield 022	15	12	0.80			0.5		0.15	0.15			0.2	1	0.00	0.00	0.40	0.00	0.12	0.12	0.00	0.00	0.16	0.80
E02001633 : Sheffield 023	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001634 : Sheffield 024	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001635 : Sheffield 025	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001636 : Sheffield 026	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001637 : Sheffield 027	4	4	0.27			0.5		0.15	0.15			0.2	1	0.00	0.00	0.13	0.00	0.04	0.04	0.00	0.00	0.05	0.27
E02001638 : Sheffield 028	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001639 : Sheffield 029	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001640 : Sheffield 030	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001642 : Sheffield 032	6	6	0.40			0.5		0.15	0.15			0.2	1	0.00	0.00	0.20	0.00	0.06	0.06	0.00	0.00	0.08	0.40
E02001643 : Sheffield 033	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001646 : Sheffield 036	2	2	0.13			0.5		0.15	0.15			0.2	1	0.00	0.00	0.07	0.00	0.02	0.02	0.00	0.00	0.03	0.13
E02001647 : Sheffield 037	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001648 : Sheffield 038	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



Place of work : 2011 super output area - middle layer	All categories: Method of travel to work (2001 specification)	Driving a car or van	Area Distribution %	Zone Distribution										Total Route Distribution (%)									
				1 Wakefield Rd North	2 Wakefield Rd South	3 Shaw Ln South	4 Station Rd	5 Church St	6 Cross Ln	7 Church Ln North	8 Hall Field Ln	9 Church Ln South	Total	1 Wakefield Rd North	2 Wakefield Rd South	3 Shaw Ln South	4 Station Rd	5 Church St	6 Cross Ln	7 Church Ln North	8 Hall Field Ln	9 Church Ln South	Total (%)
E02001649 : Sheffield 039	1	1	0.07			0.5		0.15	0.15			0.2	1	0.00	0.00	0.03	0.00	0.01	0.01	0.00	0.00	0.01	0.07
E02001650 : Sheffield 040	1	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001651 : Sheffield 041	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001652 : Sheffield 042	2	1	0.07			0.5		0.15	0.15			0.2	1	0.00	0.00	0.03	0.00	0.01	0.01	0.00	0.00	0.01	0.07
E02001653 : Sheffield 043	1	1	0.07			0.5		0.15	0.15			0.2	1	0.00	0.00	0.03	0.00	0.01	0.01	0.00	0.00	0.01	0.07
E02001654 : Sheffield 044	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001655 : Sheffield 045	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001656 : Sheffield 046	1	1	0.07			0.5		0.15	0.15			0.2	1	0.00	0.00	0.03	0.00	0.01	0.01	0.00	0.00	0.01	0.07
E02001657 : Sheffield 047	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001658 : Sheffield 048	1	1	0.07			0.5		0.15	0.15			0.2	1	0.00	0.00	0.03	0.00	0.01	0.01	0.00	0.00	0.01	0.07
E02001659 : Sheffield 049	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001660 : Sheffield 050	1	1	0.07			0.5		0.15	0.15			0.2	1	0.00	0.00	0.03	0.00	0.01	0.01	0.00	0.00	0.01	0.07
E02001661 : Sheffield 051	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001662 : Sheffield 052	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001663 : Sheffield 053	1	1	0.07			0.5		0.15	0.15			0.2	1	0.00	0.00	0.03	0.00	0.01	0.01	0.00	0.00	0.01	0.07
E02001664 : Sheffield 054	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001665 : Sheffield 055	1	1	0.07			0.5		0.15	0.15			0.2	1	0.00	0.00	0.03	0.00	0.01	0.01	0.00	0.00	0.01	0.07
E02001666 : Sheffield 056	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001669 : Sheffield 059	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001670 : Sheffield 060	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001671 : Sheffield 061	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001672 : Sheffield 062	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001674 : Sheffield 064	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001676 : Sheffield 066	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001678 : Sheffield 068	1	1	0.07			0.5		0.15	0.15			0.2	1	0.00	0.00	0.03	0.00	0.01	0.01	0.00	0.00	0.01	0.07
E02001679 : Sheffield 069	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02001680 : Sheffield 070	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02006643 : Sheffield 673	8	7	0.46			0.5		0.15	0.15			0.2	1	0.00	0.00	0.23	0.00	0.07	0.07	0.00	0.00	0.09	0.46
E02006644 : Sheffield 674	10	8	0.40			0.5		0.15	0.15			0.2	1	0.00	0.00	0.20	0.00	0.06	0.06	0.00	0.00	0.08	0.40
E02006668 : Sheffield 675	7	6	0.40			0.5		0.15	0.15			0.2	1	0.00	0.00	0.20	0.00	0.06	0.06	0.00	0.00	0.08	0.40
E02006669 : Sheffield 676	0	0	0.00			0.5		0.15	0.15			0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002782 : York 011	0	0	0.00							0.2	0.6	0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002792 : York 021	0	0	0.00							0.2	0.6	0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002793 : York 022	0	0	0.00							0.2	0.6	0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002794 : York 023	1	1	0.07							0.2	0.6	0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.01	0.07
E02002795 : York 024	0	0	0.00							0.2	0.6	0.2	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002271 : Kirklees 001	3	3	0.20							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.20
E02002272 : Kirklees 002	2	1	0.07							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
E02002273 : Kirklees 003	3	3	0.20							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.20
E02002274 : Kirklees 004	0	0	0.00							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002275 : Kirklees 005	2	2	0.13							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.13
E02002276 : Kirklees 006	1	1	0.07							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
E02002277 : Kirklees 007	1	1	0.07							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
E02002278 : Kirklees 008	0	0	0.00							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002279 : Kirklees 009	0	0	0.00							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002280 : Kirklees 010	3	3	0.20							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.20
E02002281 : Kirklees 011	1	1	0.07							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
E02002282 : Kirklees 012	0	0	0.00							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002283 : Kirklees 013	2	2	0.13							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.13
E02002284 : Kirklees 014	3	3	0.20							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.20
E02002285 : Kirklees 015	0	0	0.00							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002286 : Kirklees 016	1	1	0.07							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
E02002287 : Kirklees 017	2	2	0.13							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.13
E02002288 : Kirklees 018	0	0	0.00							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002289 : Kirklees 019	0	0	0.00							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002290 : Kirklees 020	0	0	0.00							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002291 : Kirklees 021	1	1	0.07							1			1	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
E02002292 : Kirklees 022	0	0	0.00			0.6				0.4			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002293 : Kirklees 023	0	0	0.00			0.3				0.7			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002294 : Kirklees 024	2	2	0.13			0.3				0.7			1	0.00	0.00	0.04	0.00	0.00	0.00	0.09	0.00	0.00	0.13
E02002295 : Kirklees 025	3	3	0.20			0.7				0.3			1	0.00	0.00	0.14	0.00	0.00	0.00	0.06	0.00	0.00	0.20
E02002296 : Kirklees 026	0	0	0.00			0.7				0.3			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002297 : Kirklees 027	0	0	0.00			0.7				0.3			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002298 : Kirklees 028	0	0	0.00			0.3				0.7			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002299 : Kirklees 029	1	1	0.07			1							1	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.07
E02002300 : Kirklees 030	0	0	0.00			0.3				0.7			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002301 : Kirklees 031	0	0	0.00			0.7				0.3			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002302 : Kirklees 032	0	0	0.00			0.7				0.3			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002303 : Kirklees 033	1	1	0.07			0.7				0.3			1	0.00	0.00	0.05	0.00	0.00	0.00	0.02	0.00	0.00	0.07
E02002304 : Kirklees 034	0	0	0.00			0.7				0.3			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002305 : Kirklees 035	2	2	0.13			0.7				0.3			1	0.00	0.00	0.09	0.00	0.00	0.00	0.04	0.00	0.00	0.13
E02002306 : Kirklees 036	0	0	0.00			0.3				0.7			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002307 : Kirklees 037	0	0	0.00			0.7				0.3			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002308 : Kirklees 038	0	0	0.00			0.7				0.3			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002309 : Kirklees 039	0	0	0.00			0.7				0.3			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002310 : Kirklees 040	0	0	0.00			0.7				0.3			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002311 : Kirklees 041	0	0	0.00			0.7				0.3			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002312 : Kirklees 042	0	0	0.00			0.7				0.3			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002313 : Kirklees 043	1	1	0.07			0.7				0.3			1	0.00	0.00	0.05	0.00	0.00	0.00	0.02	0.00	0.00	0.07
E02002314 : Kirklees 044	0	0	0.00			0.7				0.3			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002315 : Kirklees 045	0	0	0.00			1							1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002316 : Kirklees 046	1	1	0.07			0.7				0.3			1	0.00	0.00	0.05	0.00	0.00	0.00	0.02	0.00	0.00	0.07
E02002317 : Kirklees 047	0	0	0.00			0.7				0.3			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002318 : Kirklees 048	0	0	0.00			0.7				0.3			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002320 : Kirklees 050	0	0	0.00			0.7				0.3			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002321 : Kirklees 051	4	2	0.13			1							1	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.13
E02002323 : Kirklees 053	1	0	0.00			0.7				0.3			1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002324 : Kirklees 054	1	1	0.07			0.7		0.15	0.15				1	0.00	0.00	0.05	0.00	0.01	0.01	0.00	0.00	0.00	0.07
E02002326 : Kirklees 056	1	0	0.00			1							1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E02002327 : Kirklees 057	5	5	0.33			1							1	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.33
E02002329 : Kirklees 059	3	3	0.20			1							1	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.20
Total		1,507	100.00											1	16	18	1	14	14	16	9	12	100.00

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

Total Route Distribution (%)									
1 Wakefield Rd North	2 Wakefield Rd South	3 Shaw Ln South	4 Station Rd	5 Church St	6 Cross Ln	7 Church Ln North	8 Hall Field Ln	9 Church Ln South	Total (%)
1	16	18	1	14	14	16	9	12	100.00

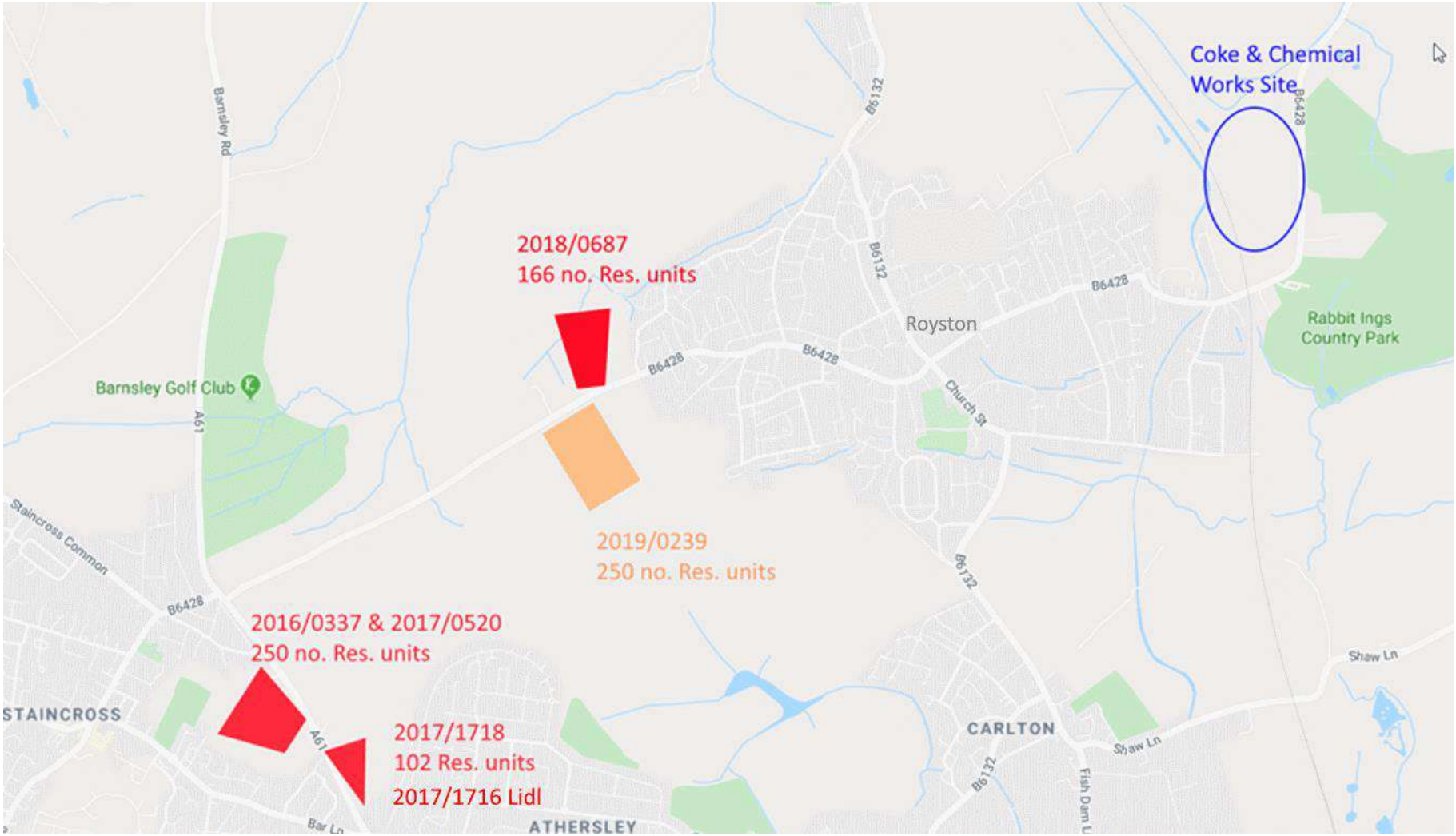


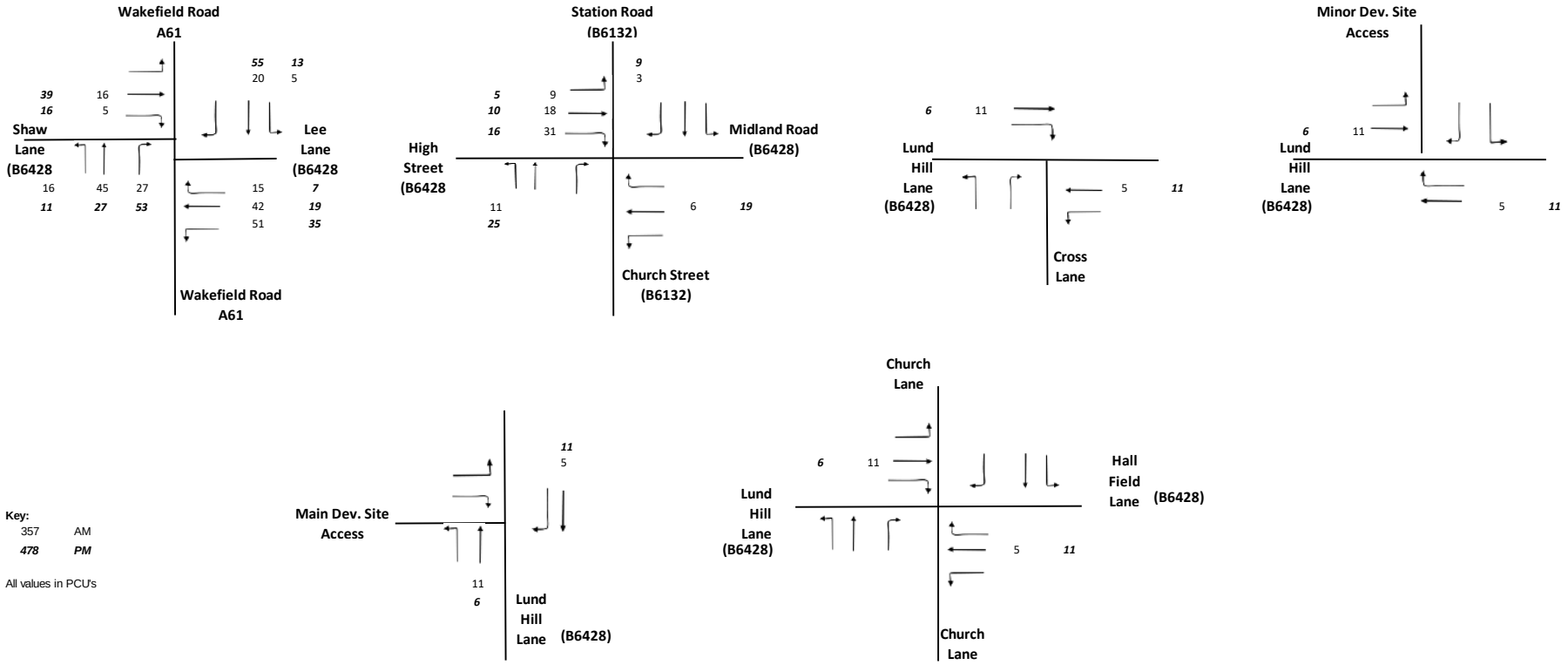
Development Peak Hour Flows

APPENDIX J

Committed Development Locations

Committed Development Peak Hour Traffic Flows


Coke & Chemical
Works Site
2018/0687
166 no. Res. units
2019/0239
250 no. Res. units
2016/0337 & 2017/0520
250 no. Res. units
2017/1718
102 Res. units
2017/1716 Lidl
Royston
Barnsley Golf Club
Rabbit Ings
Country Park
STAINCROSS
CARLTON
ATHERSLEY
Barnsley Rd
B6132
B6428
A61
Church St
Staincross Common
Shaw Ln
Fish Dam L
Bar Ln



Peak Hour Flows - Committed Dev.

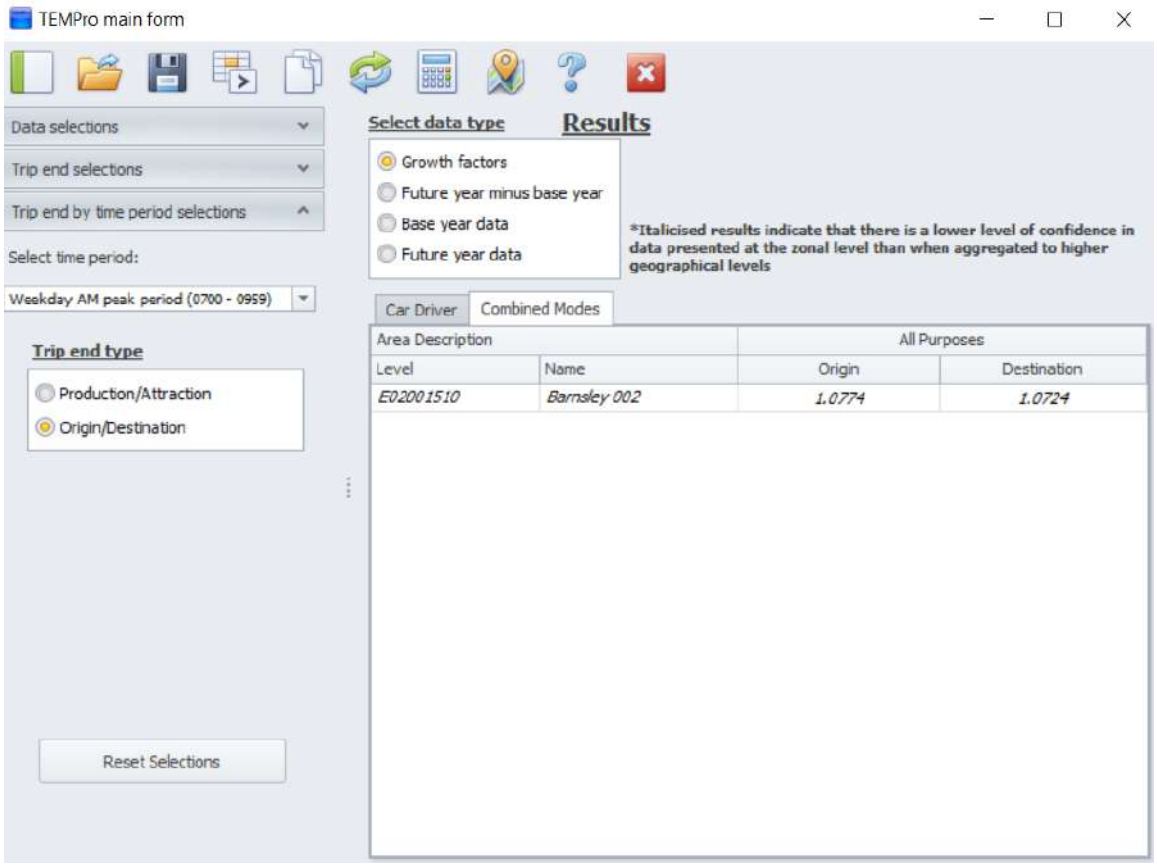
APPENDIX K

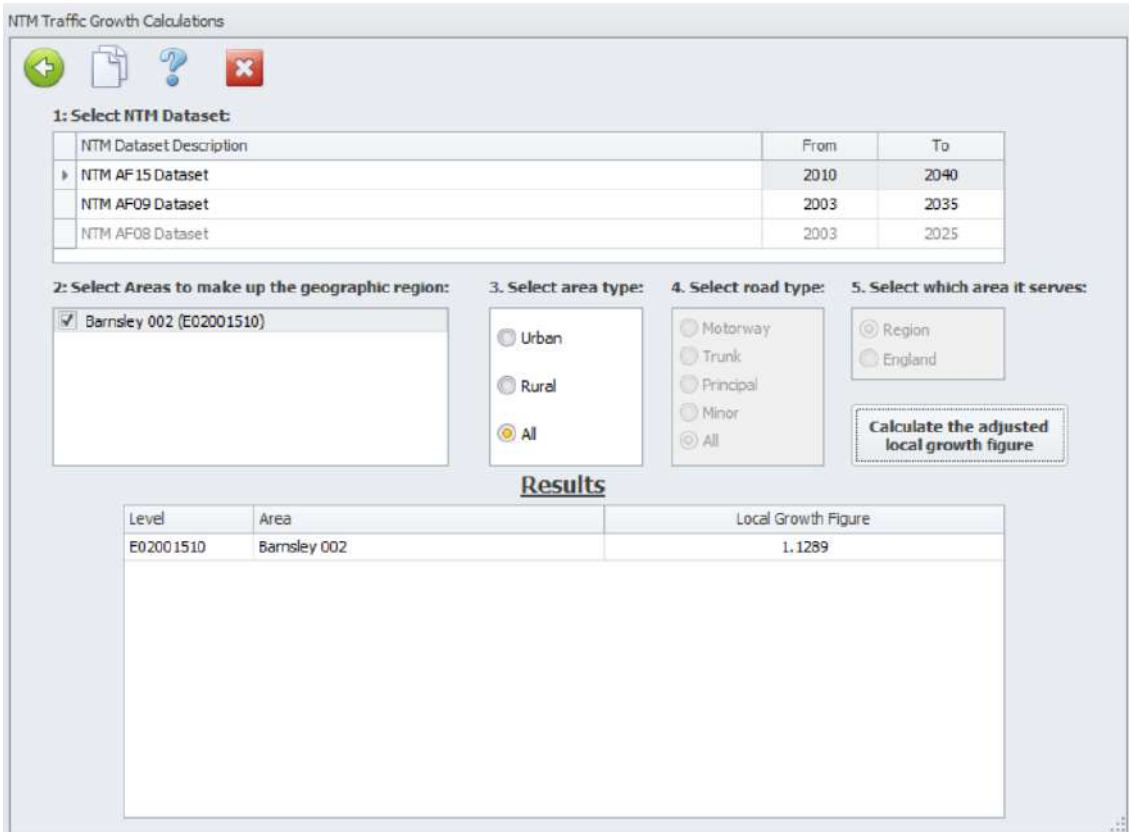
Traffic Growth -TEMPro

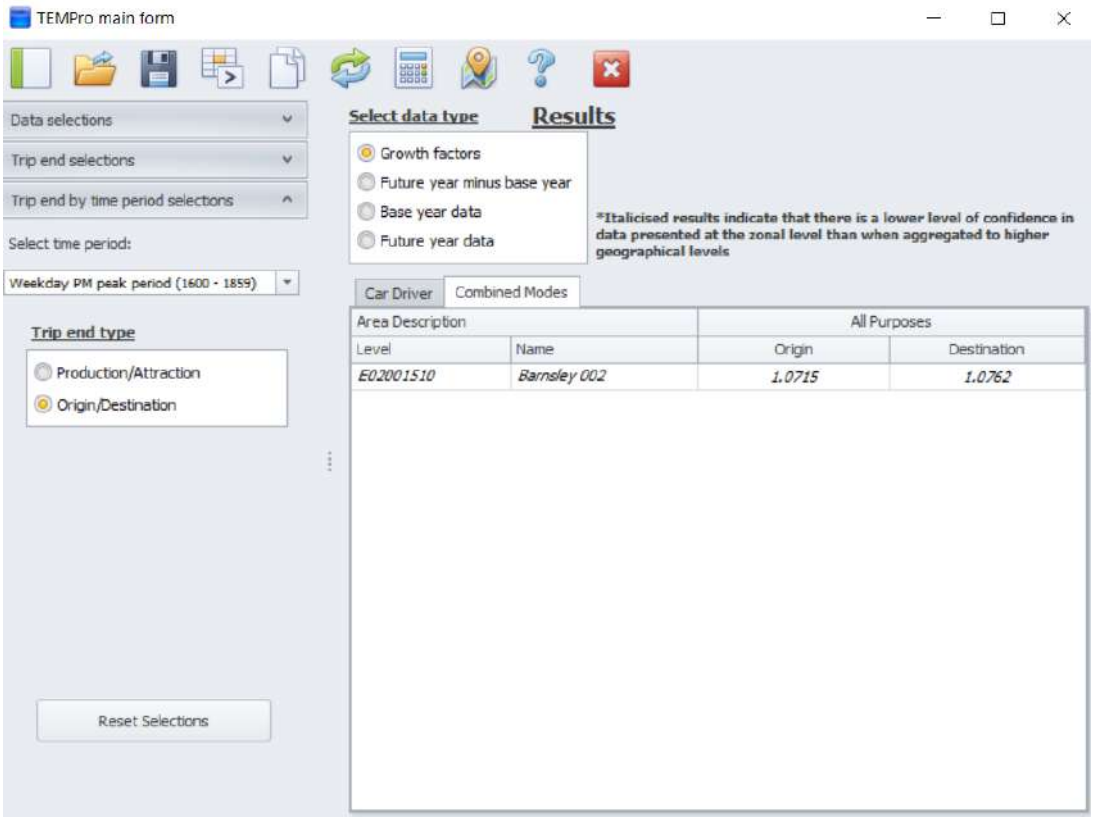
2030 Peak Hour Traffic Flows

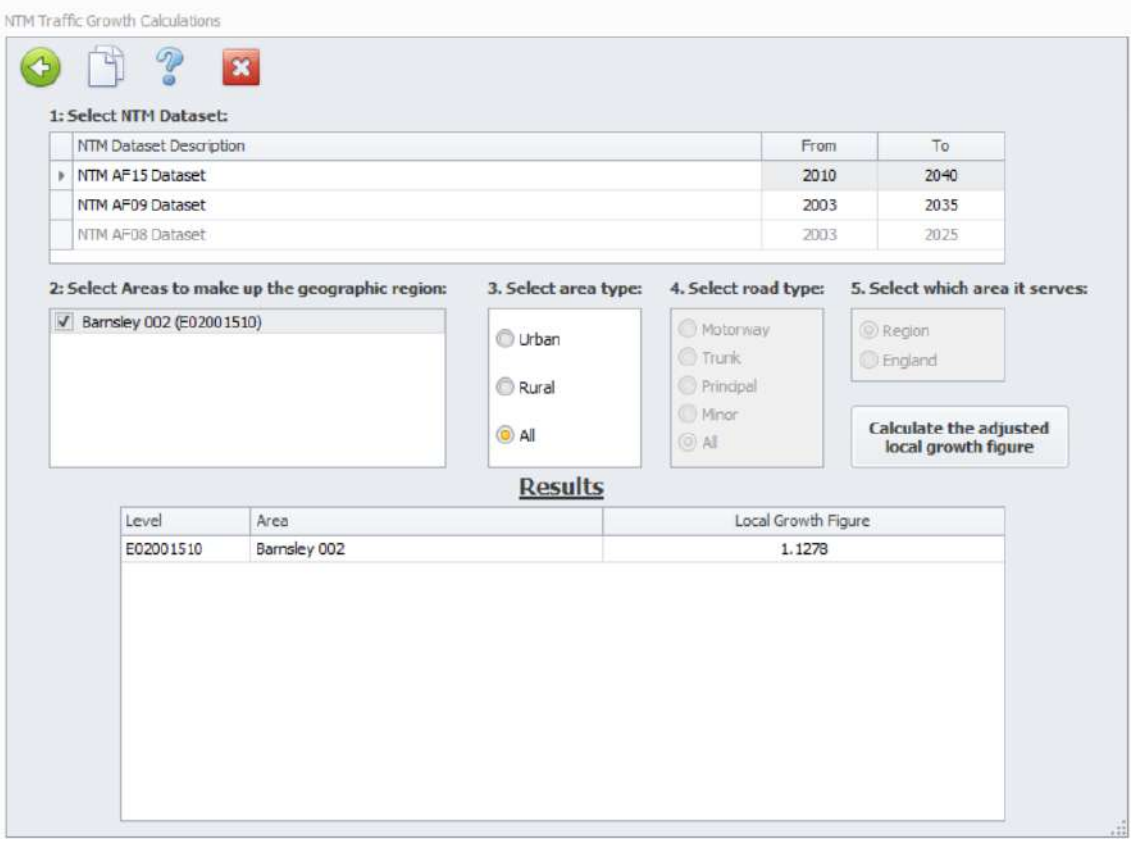
2030 Peak Hour Traffic Flows + Committed Development

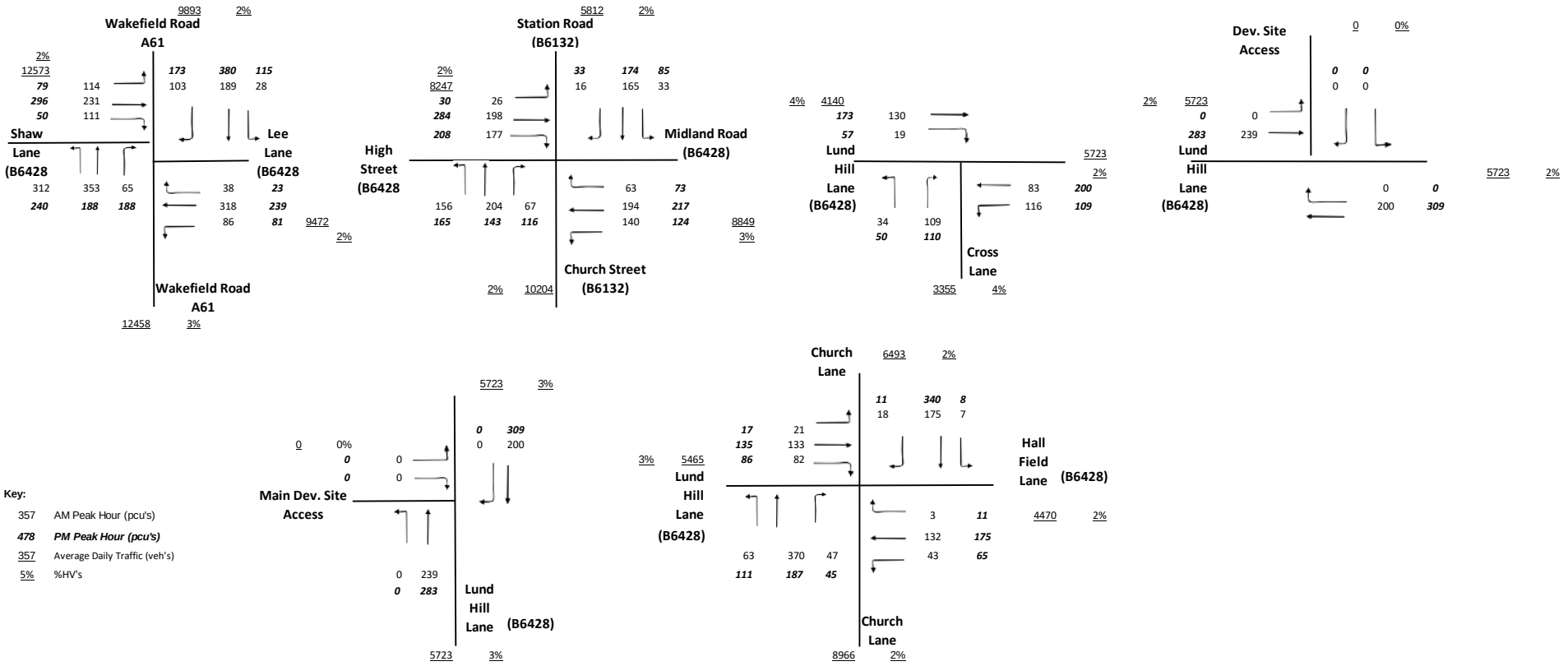
2030 Peak Hour Traffic Flows + Committed and Proposed Developments


TEMPro main form
Data selections
Trip end selections
Trip end by time period selections
Select time period:
Weekday AM peak period (0700 - 0959)
Trip end type
Production/Attraction
Origin/Destination
Reset Selections
Select data type
Growth factors
Future year minus base year
Base year data
Future year data
Results
*Italicised results indicate that there is a lower level of confidence in data presented at the zonal level than when aggregated to higher geographical levels
Car Driver
Combined Modes
Area Description
All Purposes
Level
Name
Origin
Destination
E02001510
Barnsley 002
1.0774
1.0724

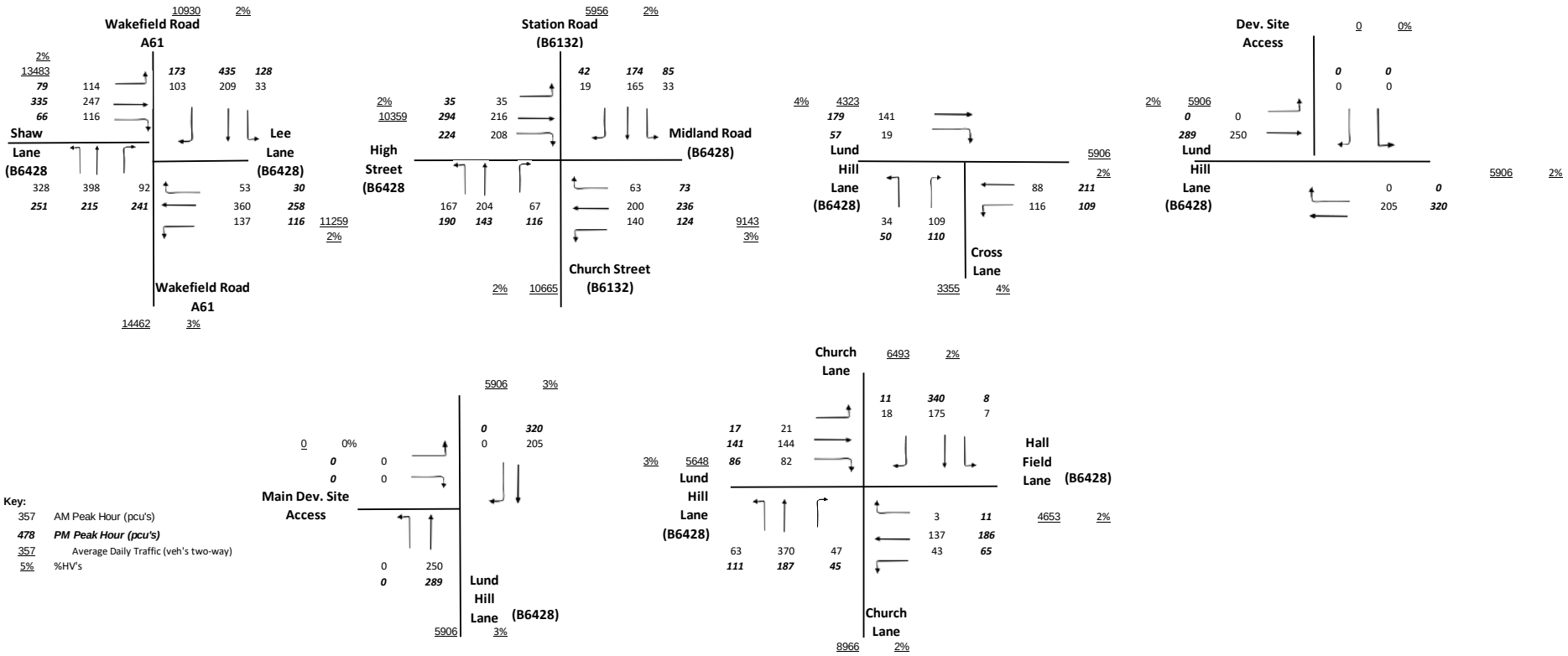

NTM Traffic Growth Calculations
1: Select NTM Dataset:
NTM Dataset Description
From
To
NTM AF15 Dataset
2010
2040
NTM AF09 Dataset
2003
2035
NTM AF08 Dataset
2003
2025
2: Select Areas to make up the geographic region:
Barnsley 002 (E02001510)
3. Select area type:
Urban
Rural
All
4. Select road type:
Motorway
Trunk
Principal
Minor
All
5. Select which area it serves:
Region
England
Calculate the adjusted local growth figure
Results
Level
Area
Local Growth Figure
E02001510
Barnsley 002
1.1289


TEMPro main form
Data selections
Trip end selections
Trip end by time period selections
Select time period:
Weekday PM peak period (1600 - 1859)
Trip end type
Production/Attraction
Origin/Destination
Reset Selections
Select data type
Growth factors
Future year minus base year
Base year data
Future year data
Results
*Italicised results indicate that there is a lower level of confidence in data presented at the zonal level than when aggregated to higher geographical levels
Car Driver
Combined Modes
Area Description
All Purposes
Level
Name
Origin
Destination
E02001510
Barnsley 002
1.0715
1.0762

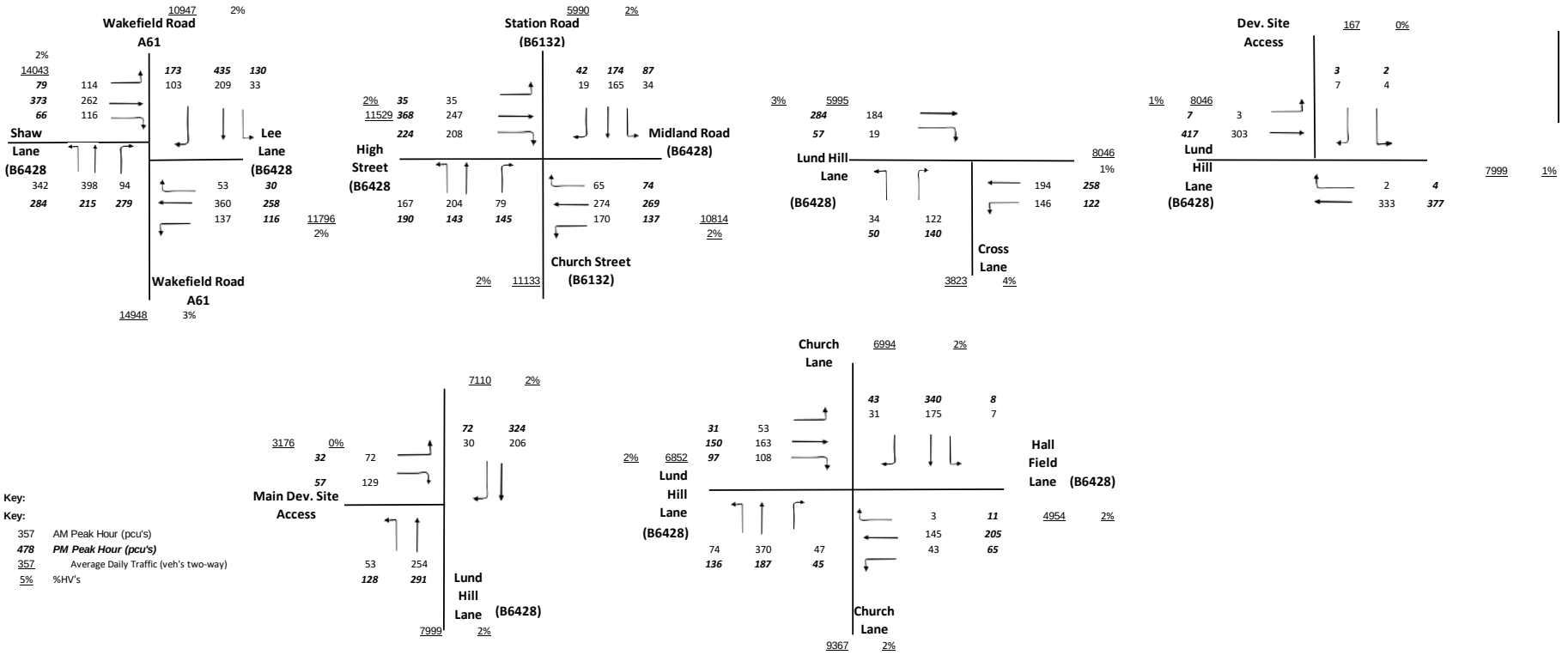

NTM Traffic Growth Calculations
1: Select NTM Dataset:
NTM Dataset Description
From
To
NTM AF15 Dataset
2010
2040
NTM AF09 Dataset
2003
2035
NTM AF08 Dataset
2003
2025
2: Select Areas to make up the geographic region:
Barnsley 002 (E02001510)
3. Select area type:
Urban
Rural
All
4. Select road type:
Motorway
Trunk
Principal
Minor
All
5. Select which area it serves:
Region
England
Calculate the adjusted local growth figure
Results
Level
Area
Local Growth Figure
E02001510
Barnsley 002
1.1278



2030 Traffic Flows



2030 Peak Hour Flows + Committed

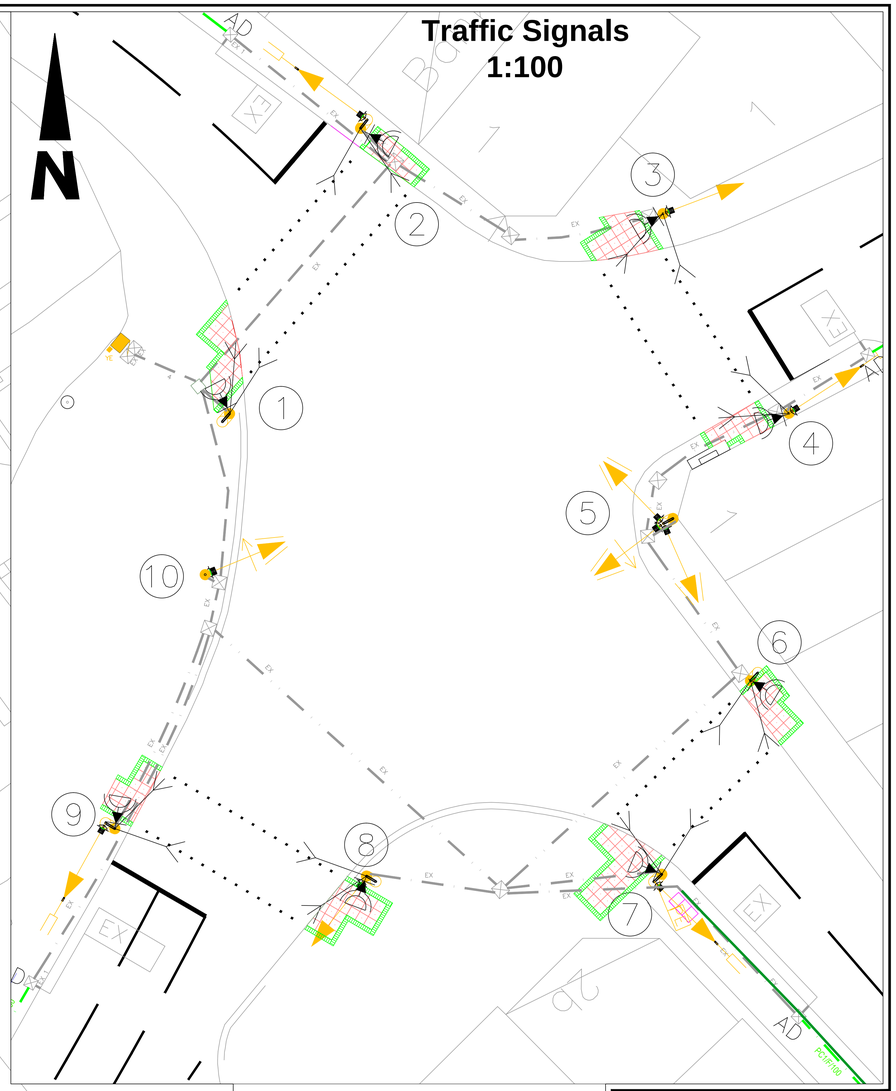


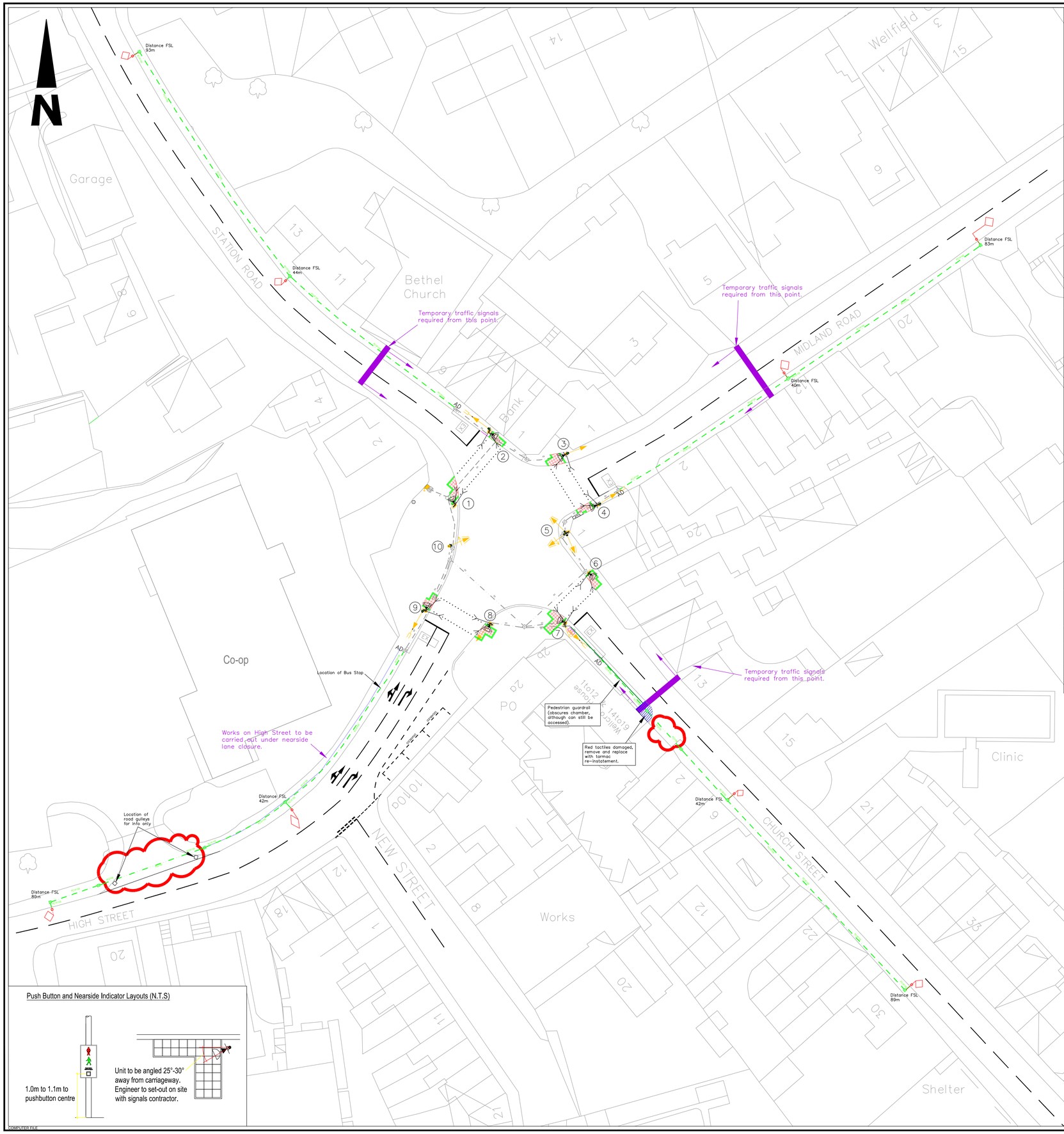
2030 Peak Hour Flows+Committed+Development

APPENDIX L

Station Road Junction - Signal Data

Traffic Signals
1:100





Push Button and Nearside Indicator Layouts (N.T.S)

COMPUTER FILE

TRAFFIC SIGNALS KEY (NOT TO SCALE)

DUCTING & CHAMBERS

- Existing polyethylene 100mm ducts
- New 1 No. Polyethylene 100mm duct (PC1/F)
- New 2 No. Polyethylene 100mm duct (PC2)
- Existing access chamber to remain
- New access chamber 450mmx450mm (AC/1/450)
- NAL carriageway loop box
- MOVA Detector Loop
- Existing Presence Detector Loop
- Above ground pedestrian detector (on-crossing)
- Above ground pedestrian detector (Kerb-side)
- ELV LED, Combined nearside R/G indicator with push button facility (including tactile indicator), incl. all fixings, for use on Puffin Crossing
- Adapt existing chamber to accept new 100mm Signal duct.
- Existing Traffic Signals
- Area which indicates possible out of hours working due to tight footways and carriageway or disruption to businesses. To be confirmed with BMBC Engineer and Streetworks.
- Tarmac re-instatement of footway. Excavate to a depth of 60mm and remove spoil off site, and resurface with 6mm wearing course (20mm thick) and 20mm basecourse (40mm thick).

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Notes

1. All works to be carried out in accordance with the BMBC Standard Details (Traffic Signal Schemes) and Specifications.
2. Detectors to be set up on site with signal engineer.
3. Existing far side red /green man aspects to be removed to store, including standard pedestrian push button units.
4. Any equipment which can be reused for spares should be taken to Traffic Groups store by a Siemens Field Engineer.
5. All LED ELV equipment to be fully monitored by signal controller.
6. Where required, cables to be upgraded to accept nearside facilities.
7. Traffic Signal Controller configuration to be upgraded to accept new nearside pedestrian facilities, including updating RMS configuration.
8. This drawing is to be read in conjunction with all other issued contract drawings.
9. Scheme contact: Adam Davis (01226) 787635

Rev.	By	Amendments	Date

BARNSLEY
Metropolitan Borough Council

Project

The Wells, Royston

J0087

Drawing title

Traffic Signal

Proposed MOVA Upgrade

Scale	Drawn	Checked	Date
1:250 (unless stated)	AD		12/08/14

Drawing No.	Revision	File
TR/TS/3707/01		3707

M Gladstone, Executive Director
Development, Environment & Culture
Westgate Plaza One, Westgate
S70 2DR
Tel. (01226) 773555 Fax. (01226) 772110

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Administration

General Specifications

Customer Name	Barnsley M.B.C.	Customer Order No.	
Intersection/ General Description	High Street / Midlands Road / The Wells - Royston Barnsley	Controller/ Serial Number	
		S.T.S. /EM Number	41104 Issue 3
Controller	(•) New ( ) Modification	Equipment Installation by	Siemens
Area Specifications/ Customer Drawings	TR/TS/3707/01	Slot Cutting by	
Specification Section		Civil Works by	
Contract/Tender Ref:		Customer's Engineer	Luke Athey
Quotation No.		Telephone Number	01226 772014
Works Order No.	460966136		

Signal Company Use Only

Signal Engineer: Stuart Mulliner

(IF PROM Label as >) PROM Number: 16777 PROM Variant: 104

Configuration Check Value: 91 10 23 48

Controller Options

Hardware: ST900 ELV | Firmware Type and Issue: PB801 ISS 13 | Other Options

ST950/ST900/ST750 Series Cabinet Options

Cabinet/Rack: Cabinet | Kit Type Options: (•) UK-Std ( ) Non-UK ( ) ( )

Cabinet/Rack Variant: Grey | Cuckoo Options: None | Gemini Unit Fitted: ☑

Mains Supply	230 Volts	50 Hz			
Peak Lamp Current	3 Amps	Dimming Voltage	27.5	Answer Issue	2
Average Lamp Power	750 Watts	Low Inrush Transformer	☐	Date Created	26/03/10
Total Average Power	1025 Watts			Edit Issue	7

Power feed fuse rating: requires 30 Amp minimum for controller, 15 Amp minimum for pelican/lightly loaded controller

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Phases, Stages and Streams

Phases, Stages and Streams

Add/Delete/Insert Streams:

Streams
(•) Current Number of Streams: 1

Phases
( ) Current Total Number of Phases: 10
(•) Number of Real Phases: 9
( ) Number of Dummy Phases: 1

Stages
( ) Current Number of stages (inc. ALL-RED stages): 6

Switched Signs
( ) Number of Switched Signs: 0

Action
[Add At] [Delete At]

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Facilities/Modes Enabled and Mode Priority Levels

Facilities

UTC
- [x] Serial/Internal UTMC OTU
- [ ] Free-standing OTU
- [ ] Integral TC12 OTU
- [x] Serial MOVA

- [x] Master Time Clock
- [ ] Holiday Clock
- [x] FT To Current MAX
- [ ] Linked Fixed Time
- [x] Lamp Monitoring
- [x] RED Lamp Monitoring
- [x] Pelican/Puffin/Toucan
- [ ] Standalone Manual
- [ ] Extend All Red
- [ ] Speed Measurement
- [ ] Ripple Change
- [ ] London IMU
- [ ] Non-UK
- [ ] Fail to Part Time
- [ ] Fail To Hardware Flashing
- [ ]
- [ ] Download To Level 3

9 Starting Intergreen

Mode Priority

	1	2	3	4	5	6	7	8	9	10	11	12	13
[ ] Part Time	○	○	○	○	○	○	○	○	○	○	○	○	○
[ ] Emergency Vehicles	○	○	○	○	○	○	○	○	○	○	○	○	○
[ ] Hurry Call	○	○	○	○	○	○	○	○	○	○	○	○	○
[ ]	○	○	○	○	○	○	○	○	○	○	○	○	○
[ ] Priority Vehide	○	○	○	○	○	○	○	○	○	○	○	○	○
[x] Manual Control	○	◉	○	○	○	○	○	○	○	○	○	○	○
[ ] Manual Step On	○	○	○	○	○	○	○	○	○	○	○	○	○
[x] Selected FT or VA or CLF	○	○	◉	○	○	○	○	○	○	○	○	○	○
[x] UTC	◉	○	○	○	○	○	○	○	○	○	○	○	○
[ ]	○	○	○	○	○	○	○	○	○	○	○	○	○
[ ] CLF (Non-Base Time)	○	○	○	○	○	○	○	○	○	○	○	○	○
[x] CLF (Base Time)	○	○	○	◉	○	○	○	○	○	○	○	○	○
[x] Vehicle Actuated	○	○	○	○	○	○	○	○	○	○	○	◉	○
[x] Fixed Time	○	○	○	○	○	○	○	○	○	○	○	○	◉

Configuration Complexity

○ Low ○ Medium ○ High ◉ Maximum

standardPB801.8df
Default PROM data file

Correspondence Monitoring to inc.

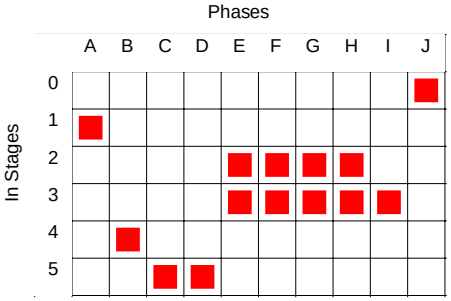
- [x] Reds
- [ ] Switched Signs
- [x] Ambers
- [ ] Ignore Reds and Ambers during

Flash Rate (ms)

400 Off 400 On

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Phases in Stages



Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Stages in Streams

Stages in Streams

	0	1	2	3	4	5	6	7
Phase or Stage to revert to in absence of demands/extensions								
Startup Stage	1							
Switch Off Stage								
Standalone Pedestrian	☐	☐	☐	☐	☐	☐	☐	☐

Note: For a Stand-Alone Stream, the reversion must be to All Red stage or Traffic stage/phase to meet the relevant standard or specification.

Stages In Stream

	0	1	2	3	4	5
0	■	■	■	■	■	■

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Phase Type and Conditions

Phase Type and Conditions

◉ Phases A to P ○ Manual Output Allocation ☑

Phase	Title	Type	App. Type	Term. Type	Assoc. Phase	No. of Drive Outputs "R"	"A"	"G"
A	High Street	0 - UK Traffic	0	0 - E		1	1	1
B	Midland Road	0 - UK Traffic	0	0 - E		1	1	1
C	Station Road	0 - UK Traffic	0	0 - E		1	1	1
D	Church Street	0 - UK Traffic	0	0 - E		1	1	1
E	Pedestrians across High Street	3 - UK Near Side Pedestrian	0	0 - E		1	1	2
F	Pedestrians across Station Road	3 - UK Near Side Pedestrian	0	0 - E		1	1	2
G	Pedestrians across Midland Road	3 - UK Near Side Pedestrian	0	0 - E		1	1	2
H	Pedestrians across Church Street	3 - UK Near Side Pedestrian	0	0 - E		1	1	2
I	Audible Driver	2 - UK GreenArrow	0	0 - E		0	0	1
J	Dummy for All Red	2 - UK GreenArrow	0	0 - E				

1) App Types: 0 = Always Appears, 1 = Appears if dem'd prior to interstage, 2 = If dem'd, 3 = If dem'd before end of window time
2) Term Types: 0 = Term's at end of stage, 1 = Term's when Assoc phase gains R.O.W, 2 = Term's when Assoc phase loses R.O.W.
3) The H/W Fail Flash fields are for information only on all but ST900ELV Controllers. For other controllers, physical switches or links (etc.) select which aspects flash and these need to be set up manually.

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Opposing and Conflicting Phases

Select Stream(s) To Configure

○ All ○ 0 ○ ○ ○ ○ ○ ○ ○ ○

Initialise

☑ Amber Conflict Monitoring

To Phase

From Phase	A	B	C	D	E	F	G	H	I	J
A	■	Co	Co	Co	Co	Co	Co	Co	Co	o
B	Co	■	Co	Co	Co	Co	Co	Co	Co	o
C	Co	Co	■	o	Co	Co	Co	Co	Co	o
D	Co	Co	o	■	Co	Co	Co	Co	Co	o
E	Co	Co	Co	Co	■	o	o	o	o	o
F	Co	Co	Co	Co	o	■	o	o	o	o
G	Co	Co	Co	Co	o	o	■	o	o	o
H	Co	Co	Co	Co	o	o	o	■	o	o
I	Co	Co	Co	Co	o	o	o	o	■	o
J	o	o	o	o	o	o	o	o	o	■

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Phase Minimums, Maximums, Extensions, Ped Leaving Periods

Phase Minimums, Maximums, Extensions, Ped Leaving Periods

◉ Phases A to P ○

Phase	Min Green	Min Ped Clr	Extensions	Maximums A	B	C	D	E	F	G	H	Pre-timed
A	7	0	0.0	20	16	15	18	14	14	14	14	☐
B	7	0	0.0	25	22	26	23	22	22	22	22	☐
C	7	0	0.0	30	22	25	25	25	25	25	25	☐
D	7	0	0.0	30	22	25	25	25	25	25	25	☐
E	5	3	0.0	0	0	0	0	0	0	0	0	☐
F	6	3	0.0	0	0	0	0	0	0	0	0	☐
G	5	3	0.0	0	0	0	0	0	0	0	0	☐
H	5	3	0.0	0	0	0	0	0	0	0	0	☐
I	0	0	0.0	0	0	0	0	0	0	0	0	☐
J	3	0	0.0	0	0	0	0	0	0	0	0	☐

Note: For Standalone Streams see Help for use of Max Sets.

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Phase Intergreen Times

Select Stream(s) To Configure

○ All ○ 0 ○ ○ ○ ○ ○ ○ ○ ○

Note: On a Stand Alone Pelican/Toucan/Puffin Stream the Intergreens between Pedestrian and Traffic Phases are controlled by the timings (PBT, PIT, CMX, CDY, CRD and PAR), therefore 0 should be entered for the appropriate intergreen times in grid below.

To Phase

From Phase	A	B	C	D	E	F	G	H	I	J
A		7	6	6	8	8	8	8	8	3
B	6		7	7	8	8	8	8	8	3
C	7	7			8	8	8	8	8	3
D	7	7			8	8	8	8	8	3
E	0	0	0	0						0
F	0	0	0	0						0
G	0	0	0	0						0
H	0	0	0	0						0
I	0	0	0	0						
J					2	2	2	2	2	

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Intergreen Handset Limits

HIGH 30

Copy Intergreen Values

To Phase

From Phase	A	B	C	D	E	F	G	H	I	J
A		6	5	5	7	7	7	7	7	3
B	5		6	6	7	7	7	7	7	3
C	6	6			7	7	7	7	7	3
D	6	6			7	7	7	7	7	3
E										
F										
G										
H										
I										
J					1	1	1	1	1	

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Phase Timing Handset Ranges

Phase Timing Handset Ranges

Initialise Min Green Limits

Phase	Min. Green Min.	Min. Green Max.
A	7	20
B	7	20
C	7	20
D	7	20
E	5	20
F	6	20
G	5	20
H	5	20
I	0	0
J	3	20
K		
L		
M		
N		
O		
P		

Phase	Min. Green Min.	Min. Green Max.
Q		
R		
S		
T		
U		
V		
W		
X		
Y		
Z		
A2		
B2		
C2		
D2		
E2		
F2		

Max. Green: Min. 0 Max. 255

Vehicle Extension: Min. 0.0 Max. 10.0

Phase Delay: Min. 0 Max. 3

Starting I/G: Min. 7 Max. 15

Min Pedestrian Clearance (PBT): Min. 1 Max. 5

Traffic Phase Leaving: Min. 3.0 Max. 3.0

Traffic Phase Red/Amber: Min. 2 Max. 2

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

VA Demand and Extend Definitions

VA Demand and Extend Definitions

(•) Phases A to P ( )

Demands

For Unlatched demands precede the name with a #.
Conditioning MUST be used to specify unlatched demands.

Phase				
A	AX2	AX3	ASL4	
B	BX6	BSL7		
C	CX9	CSL10		
D	DX12	DSL13		
E	PEDE8	PEDE9		
F	PEDF1	PEDF2		
G	PEDG3	PEDG4		
H	PEDH6	PEDH7		
I				
J				

Extensions

AX2	AX3	ASL4	
BX6	BSL7		
CX9	CSL10		
DX12	DSL13		

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Phase Internal/Revertive Demands

Phase Internal/Revertive Demands

Start-up Vehicle Responsive Demands

A	B	C	D	E	F	G	H	I	J
☑	☑	☑	☑	☑	☑	☑	☑	☐	☐

Demands Inserted When Leaving Manual and Fixed Time Modes

A	B	C	D	E	F	G	H	I	J
☑	☑	☑	☑	☐	☐	☐	☐	☐	☐

Unlatched Demands that Start Max Timers

A	B	C	D	E	F	G	H	I	J
☑	☑	☑	☑	☑	☑	☑	☑	☑	☑

Revertive Phase Demands

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
A	B	C	D												

Q	R	S	T	U	V	W	X	Y	Z	A2	B2	C2	D2	E2	F2

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Phase - On Crossing and Kerbside Detector Definitions

On Crossing and Kerbside Input Definitions

◉ Phases A to P ○

Phase	On Crossing				Kerbside			
A								
B								
C								
D								
E	ONXE8	ONXE9			KSDE8	KSDE9		
F	ONXF1	ONXF2			KSDF1	KSDF2		
G	ONXG3	ONXG4			KSDG3	KSDG4		
H	ONXH6	ONXH7			KSDH6	KSDH7		
I								
J								

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Stream - Pelican/Puffin/Toucan Times

Stream - Pelican/Puffin/Toucan Times

Pedestrian Enable VA Mode (PEV)

Streams 0 1 2 3 4 5 6 7

Pedestrian All Red Times (Vehicle to Pedestrian)

Streams	0	1	2	3	4	5	6	7	Handset Range Limits Min	Max
(PAR n 0) VA Gap Change										
(PAR n 1) VA Max Change										
(PAR n 2) FVP Change									0	0
(PAR n 3) UTC Change										
(PAR n 4) Local Link Change										

Pelican Intergreen times

	Handset Range Limits Min	Max
(PIT n 0) Veh Red/Ped Flash Green	0	0
(PIT n 1) Veh Flash Amber/Ped Flash Green	0	0
(PIT n 2) Veh Flash Amber/Ped red	0	0
(PIT n 3) Veh Flash Amber/Ped Red Quiescent	0	0

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Phase - Pelican, Puffin and Toucan Times

Phase - Pelican, Puffin and Toucan Times

Phases A to P ○

Phase	PDD Ped Demand Delay	PDX Ped Demand Hold	CMX Clearance Maximum	CDY 0 Clearance Delay Gap Change	CDY 1 Clearance Delay Max Change	CRD Clearance Minimum Red
A	0	0.0	0	0	0	0
B	0	0.0	0	0	0	0
C	0	0.0	0	0	0	0
D	0	0.0	0	0	0	0
E	1	1.0	8	0	0	0
F	1	1.0	10	0	0	0
G	1	1.0	8	0	0	0
H	1	1.0	7	0	0	0
I	0	0.0	0	0	0	0
J	0	0.0	0	0	0	0

Pedestrian Handset Range Limits

	MIN	MAX
Demand Delay PDD	0	3
Demand Hold PDX	0.0	5.0
Clearance Maximum CMX	0	15
Clearance Delays CDY 0 and CDY1	0	3
Clearance Minimum Red CRD	0	0

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

IO and Link - Pelican/Puffin/Toucan Times

I/O and Link - Pelican/Puffin/Toucan Times

Streams 0 1 2 3 4 5 6 7

Computer Control

PV

Window Time
UIE

Local Link

PV1

Link Delay Time
LKD

Link Window Time
LKW

Link Override Time
LKO

Kerbside Mat Test Output

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Pelican, Puffin, Toucan Pushbutton/Kerbside Associations

Pelican, Puffin, Toucan Pushbutton/Kerbside Associations

	Phase	Demand	KBS
0	E	PEDE8	KSDE8
1	E	PEDE9	KSDE9
2	F	PEDF1	KSDF1
3	F	PEDF2	KSDF2
4	G	PEDG3	KSDG3
5	G	PEDG4	KSDG4
6	H	PEDH6	KSDH6
7	H	PEDH7	KSDH7
8			
9			
10			
11			
12			
13			
14			
15			

	Phase	Demand	KBS
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			

	Phase	Demand	KBS
32			
33			
34			
35			
36			
37			
38			
39			
40			
41			
42			
43			
44			
45			
46			
47			

	Phase	Demand	KBS
48			
49			
50			
51			
52			
53			
54			
55			
56			
57			
58			
59			
60			
61			
62			
63			

Note:Any association pushed off the screen will have any previous association blanked.

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Stages - Prohibited, Alternative, Ignored Moves

Stages - Prohibited, Alternative, Ignored Moves

Sets
- (•) 1
- ( ) 2
- ( ) 3
- ( ) 4

Modes	Restrictions Apply To:	No Restrictions
Urban Traffic Control	(•)	( )
Cableless Linking	(•)	( )
Vehicle Actuated	(•)	( )
	( )	( )
Fixed Time	(•)	( )
	( )	( )

Modes	Restrictions Apply To:	No Restrictions
Manual	(•)	( )
	( )	( )
	( )	( )
	( )	( )
	( )	( )

To Stage

From Stage \ To Stage	0	1	2	3	4	5
0	■			2		
1		■		2		
2			■			
3			X	■		
4				2	■	
5				2		■

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Stage Internal Demands/Pedestrian Window Times

Stage Internal Demands/Pedestrian Window Times

Start-up Vehicle Responsive Demands

0	1	2	3	4	5
☐	☐	☐	☐	☐	☐

Demands Inserted When Leaving Manual and Fixed Time Modes

0	1	2	3	4	5
☐	☐	☐	☐	☐	☐

Unlatched Demands that Start Maximum Timers

0	1	2	3	4	5
☑	☑	☑	☑	☑	☑

Window Times

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0	0	0	0	0	0										

16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

Exceptional Stages

☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Fixed Time

Fixed Time

Stage Moves & Times (Not Fixed Time to Current Max)

Current Stage	0	1	2	3	4	5	6	7
Next Stage								
Time								
Current Stage	8	9	10	11	12	13	14	15
Next Stage								
Time								
Current Stage	16	17	18	19	20	21	22	23
Next Stage								
Time								
Current Stage	24	25	26	27	28	29	30	31
Next Stage								
Time								

Phases Demanded and Extended under Fixed Time to Current Max.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Demand	☑	☑	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Extend	☑	☑	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

	Q	R	S	T	U	V	W	X	Y	Z	A2	B2	C2	D2	E2	F2
Demand	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Extend	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

CLF - Base Time

CLF - Base Time

Controller Base Date: XX/XX/XX

Controller Base Time: 02:00:00

Plan Offset

	Minutes	Seconds		Minutes	Seconds
Plan 0	0	0	Plan 8	0	0
Plan 1	0	0	Plan 9	0	0
Plan 2	0	0	Plan 10	0	0
Plan 3	0	0	Plan 11	0	0
Plan 4	0	0	Plan 12	0	0
Plan 5	0	0	Plan 13	0	0
Plan 6	0	0	Plan 14	0	0
Plan 7	0	0	Plan 15	0	0

Handset Range Limits

	Minutes	Seconds
Min	0	0
Max	4	59

UTC General Data

UTC General Data

Type of UTC

(•) 106 ( ) 316

Integral OTUAddress

2 Number of Control Words

2 Number of Reply Words

[ ] Controller to respond to TC bit.

[ ] Introduction of UTC to be disabled by Priority and LRT M

[ ] Non UTC RTC synchronisation input name

RTC Synchronisation Times

Clock Synchronise Time (UTCTS input)

Day	Time
Saturday	00:00:00

Clock Confirm Time (UTC RT output)

Day	Time
Saturday	00:00:00

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

UTC Control and Reply Data Format

UTC Control and Reply Data Format

Control Words

	Bit 1	Bit 2	Bit 3	Bit 4	Bit 5	Bit 6	Bit 7	Bit 8
Word 1	F1	F2	F3	F4	F5			
Word 2								
Word 3								
Word 4								

Reply Words

Word 1	G1	G2	G3	G4	G5			
Word 2								
Word 3								
Word 4								
Word 5								
Word 6								
Word 7								
Word 8								
Word 9								
Word 10								
Word 11								
Word 12								
Word 13								
Word 14								

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

UTC Stage and Mode Data Definitions

UTC Stage and Mode Data Definitions

Stage	Force Bit	Green Confirm Bit	Demand Confirm Bit	Stage	Force Bit	Green Confirm Bit	Demand Confirm Bit
0	F5	G5		16			
1	F1	G1		17			
2	*ROUGH2			18			
3	*ROUGH3			19			
4	F3	G3		20			
5	F4	G4		21			
6				22			
7				23			
8				24			
9				25			
10				26			
11				27			
12				28			
13				29			
14				30			
15				31			

Mode Data Definitions

Manual Mode Operative:
☐ G1/G2 ☐ RR ☐

Manual Mode Selected:
☐ G1/G2 ☐ RR ☐

No Lamp Power, or Lamps Off due to RLM or Part Time:
☐ G1/G2 ☐ ☐

Detector Fault:
☐ ☐ ☐ DF

Normal NOT selected on the Manual Panel:
☐ G1/G2 ☐ RR ☐

RR Button Selected:
☐ G1/G2 ☐ RR ☐

If UTC Reply Confirms are required for a Controller Fault (CF) OR for separate MC and RR replies, Conditioning must be used.

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

UTC and MOVA Detectors

UTC and MOVA Detectors

Detector Mapping: ☑ Combined

Set Selection: ○ ○ ○ ○ ○

1	AIN1	2	AX2	3	AX3	4	ASL4	5	BIN5	6	BX6	7	BSL7	8	CIN8
9	CX9	10	CSL10	11	DIN11	12	DX12	13	DSL13	14		15		16	
17		18		19		20		21		22		23		24	
25		26		27		28		29		30		31		32	
33		34		35		36		37		38		39		40	
41		42		43		44		45		46		47		48	
49		50		51		52		53		54		55		56	
57		58		59		60		61		62		63		64	

Note - only 32 detectors available on MOVA 4.0

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

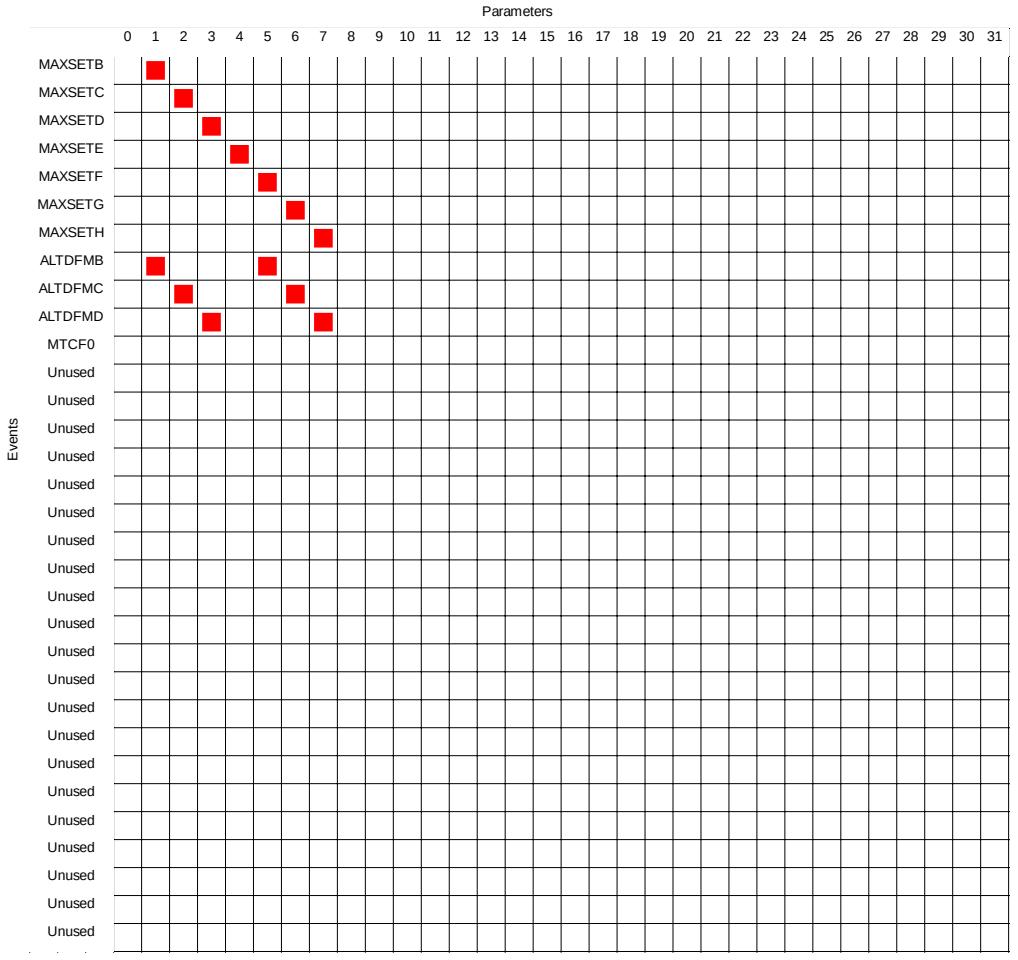
MTC - Time Switch Parameters

MTC - Time Switch Parameters

	Type	Event		Type	Event
0	Alternate Max	MAXSETB	16	No Action	
1	Alternate Max	MAXSETC	17	No Action	
2	Alternate Max	MAXSETD	18	No Action	
3	Alternate Max	MAXSETE	19	No Action	
4	Alternate Max	MAXSETF	20	No Action	
5	Alternate Max	MAXSETG	21	No Action	
6	Alternate Max	MAXSETH	22	No Action	
7	Alternate DFM	ALTDFMB	23	No Action	
8	Alternate DFM	ALTDFMC	24	No Action	
9	Alternate DFM	ALTDFMD	25	No Action	
10	Conditioning	MTCF0	26	No Action	
11	No Action		27	No Action	
12	No Action		28	No Action	
13	No Action		29	No Action	
14	No Action		30	No Action	
15	No Action		31	No Action	

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

MTC - Time Switch Parameters Array



Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

MTC - Day Type

MTC - Day Type

No.	Mon	Tue	Wed	Thu	Fri	Sat	Sun
0	☐	☐	☐	☐	☐	☑	☐
1	☐	☐	☐	☐	☐	☐	☑
2	☑	☐	☐	☐	☐	☐	☐
3	☐	☑	☐	☐	☐	☐	☐
4	☐	☐	☑	☐	☐	☐	☐
5	☐	☐	☐	☑	☐	☐	☐
6	☐	☐	☐	☐	☑	☐	☐
7	☑	☑	☑	☑	☑	☑	☑
8	☑	☑	☑	☑	☑	☑	☐
9	☑	☑	☑	☑	☑	☐	☐
10	☐	☐	☐	☐	☐	☐	☐
11	☐	☐	☐	☐	☐	☐	☐
12	☐	☐	☐	☐	☐	☐	☐
13	☐	☐	☐	☐	☐	☐	☐
14	☐	☐	☐	☐	☐	☐	☐
15	☐	☐	☐	☐	☐	☐	☐

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

MTC - Timetable

MTC - Timetable

View Timetable Settings: (•) 0 - 15 ( ) 16 - 31 ( ) 32 - 47 ( ) 48 - 63

No.	Day Type	Time	Description	Function Code	Plan/ Parameter
0	9	07:00:00	Maxset A and DFM set A	2	0
1	9	09:30:00	Maxset B and DFM set B	2	1
2	9	12:00:00	Maxset C and DFM set C	2	2
3	9	15:00:00	Maxset D and DFM set D	2	3
4	9	16:00:00	Maxset A and DFM set A	1	0
5	9	18:30:00	Maxset B and DFM set B	2	1
6	9	18:15:00	Maxset D and DFM set D	2	3
7	0	18:00:00	Maxset A and DFM set A	2	0
8	0	09:30:00	Maxset B and DFM set B	2	1
9	0	16:00:00	Maxset C and DFM set C	2	2
10	0	18:00:00	Maxset D and DFM set D	2	3
11	1	09:00:00	Maxset B and DFM set B	2	1
12	1	16:30:00	Maxset D and DFM set D	2	3
13	0			0	0
14	0			0	0
15	0			0	0

Function Codes:

0 = Isolate From CLF

1 = Introduce a CLF Plan

2 = Introduce a Parameter (Combination of event switches)

3 = Selects an Individual event switch to be set

4 = Selects an Individual event switch to be cleared.

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

MTC - Timetable

MTC - Timetable

View Timetable Settings: ○ 0 - 15 ○ 16 - 31 ○ 32 - 47 ◉ 48 - 63

No.	Day Type	Time	Description	Function Code	Plan/ Parameter
48	0			0	0
49	0			0	0
50	0			0	0
51	0			0	0
52	0			0	0
53	0			0	0
54	0			0	0
55	0			0	0
56	0			0	0
57	0			0	0
58	0			0	0
59	0			0	0
60	0			0	0
61	0			0	0
62	7	08:00:00	Enable Audibles	4	10
63	7	23:00:00	Disable Audibles	3	10

Function Codes:

0 = Isolate From CLF

1 = Introduce a CLF Plan

2 = Introduce a Parameter (Combination of event switches)

3 = Selects an Individual event switch to be set

4 = Selects an Individual event switch to be cleared.

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

LMU - General

LMU - General

Lamp Monitoring - LMU Voltage: ○ ◉ 48 ○ ○

Red Lamp Monitoring

Max Red Bulb Wattage

First Red Lamp Fault Speed: 2

☑ RLF2 Cancels RLM additional Intergreens

☑ RLF2 Only Cleared by RFL = 1

☐ RLF1 Only Cleared by RFL = 1

RLM Additional Intergreen Handset Limits

Minimum	Maximum
2	10

Streams with Phase BlackOut on RLF2

☐ 0 ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

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Integral LMU Onboard Sensors

Integral LMU Onboard Sensors

No. of LSLS cards fitted	HPU Connection
1	1

Sensor Configuration For LSLS 1 (Cabinet 1)

Phase	Aspect	Sensor #	Sensor Type	Phase	Aspect	Sensor #	Sensor Type
A	Red	1	As Seq.	F	Red	7	R,G
A	Amber	1	As Seq.	F	Amber	8	Wait
A	Green	1	As Seq.	F	Green	7	R,G
B	Red	2	As Seq.	F	Green	N/A	
B	Amber	2	As Seq.	G	Red	9	R,G
B	Green	2	As Seq.	G	Amber	10	Wait
C	Red	3	As Seq.	G	Green	9	R,G
C	Amber	3	As Seq.	G	Green	N/A	
C	Green	3	As Seq.	H	Red	11	R,G
D	Red	4	As Seq.	H	Amber	12	Wait
D	Amber	4	As Seq.	H	Green	11	R,G
D	Green	4	As Seq.	H	Green	N/A	
E	Red	5	R,G	N/A	N/A		
E	Amber	6	Wait	N/A	N/A		
E	Green	5	R,G	N/A	N/A		
E	Green	N/A		I	Green	N/A	

Note : A (*) character next to a sensor number indicates that the sensor would also be available on the External sensors screen. Please be sure you wish to use these sensors here, as they will then become unavailable for Regulatory Signs.

Works Order : 460966136
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Integral LMU External Sensors for Regulatory Signs

Integral LMU External Sensors for Regulatory Signs

External Sensors (1)

Sensor	Sensor Type
48	Regulatory Sign
47	Regulatory Sign
46	Regulatory Sign
45	Regulatory Sign

External Sensors (2)

Sensor	Sensor Type

External Sensors (3)

Sensor	Sensor Type

External Sensors (4)

Sensor	Sensor Type

External Sensors (5)

Sensor	Sensor Type

External Sensors (6)

Sensor	Sensor Type

Note: Sensors which have been used as Onboard sensors will not be available here.

Works Order : 460966136
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LMU Sensor Load Types

LMU Sensor Load Types

Screen Select

1 of 1

Sensor	Phase	Sensor Type	LED R+W	Load Type	LLF Profile
1	A	As Seq.		1: Siemens Helios ELV	
2	B	As Seq.		1: Siemens Helios ELV	
3	C	As Seq.		1: Siemens Helios ELV	
4	D	As Seq.		1: Siemens Helios ELV	
5	E	R,G		3: Siemens LED Near Side Indicator	
6	E	Wait		2: Siemens LED Demand Indicator	
7	F	R,G		3: Siemens LED Near Side Indicator	
8	F	Wait		2: Siemens LED Demand Indicator	
9	G	R,G		3: Siemens LED Near Side Indicator	
10	G	Wait		2: Siemens LED Demand Indicator	
11	H	R,G		3: Siemens LED Near Side Indicator	
12	H	Wait		2: Siemens LED Demand Indicator	
45	N/A	Regulatory Sign		4: Siemens ELV Regulatory Sign	
46	N/A	Regulatory Sign		4: Siemens ELV Regulatory Sign	
47	N/A	Regulatory Sign		4: Siemens ELV Regulatory Sign	
48	N/A	Regulatory Sign		4: Siemens ELV Regulatory Sign	

Works Order : 460966136
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RLM Additional Intergreens

Phases Delayed

Phases with RLF1	A	B	C	D	E	F	G	H	I	J
A					3	3	3	3	3	
B					3	3	3	3	3	
C					3	3	3	3	3	
D					3	3	3	3	3	
E										
F										
G										
H										
I										
J										

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RLM Phase Inhibits

Phases Inhibited/Blacked-Out

Phases with RLF2

	A	B	C	D	E	F	G	H	I	J
A					■	■	■	■	■	
B					■	■	■	■	■	
C					■	■	■	■	■	
D					■	■	■	■	■	
E										
F										
G										
H										
I										
J										

Works Order : 460966136
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Manual Panel

Manual Panel

Stage Buttons and LEDs

Button No.	Title	Called Stage for Stream 0	1	2	3	4	5	6	7
0	All Red	0							
1	High Street	1							
2	Pedestrians	3							
3	Midland Road	4							
4	Church Street	5							
5									
6									
7									

General LEDs

	AUX 1	AUX 2	AUX 3	AUX 4 (Hurry Call)	AUX 5 (Higher Priority)
Conditioned	☑	☑	☑	☐	☑

Manual Mode Enable

- ◉ Always
- ○ When Handset Plugged in (Note 1)
- ○ When 'MND' Command Entered

NOTE:
For this to operate Special Conditioning is required.

General Buttons

	None	SW1	SW2	SW3
Momentary		☐	☐	☐
Dim Override	◉	○	○	○
RR	◉	○	○	○

Manual Signals On

- ○ Immediate Signals On
- ◉ As Start-Up

Mode Select Switches Disabled

☐ VA ☐ Fixed Time ☐ CLF

Special Conditioning

```
; T800/900 SPECIAL FACILITIES
; ---------------------------

   DOORSW::=MNCONT                                  ; DOOR CLOSED DISABLES MANUAL CONTROL
          *=MSCONT
          *=ESPTX0                                  ; DOOR SWITCH ALSO SENT ALONG SERIAL LINK

   MAXSETB+MAXSETF=ESPTX1                           ; MAXSET INFORMATION ALSO SENT ALONG SERIAL LINK
   MAXSETC+MAXSETG=ESPTX2
   MAXSETD+MAXSETH=ESPTX3

   TRUE=ESPTX4                                      ; FLAG TO DETECT SERIAL LINK DISCONNECTION

   (NOT FFH22).(LMUINHE+LMUINHF+LMUINHG+LMUINHH):::=+UCST1
                                                   *=+UCST2
                                                   *=+UCST4
                                                   *=+UCST5

                                                    ; DEMAND ALL STAGES IF DOUBLE RED FAIL JUST CLEARED
                                                    ; BUT PEDESTRIAN PHASE(S) STILL INHIBITED



; ADDITIONAL MOVA FUNCTIONS
; -------------------------

   VRDMNDE=MOVADET27                                ; PEDESTRIAN DEMAND CONFIRMS
   VRDMNDF=MOVADET28
   VRDMNDG=MOVADET29
   VRDMNDH=MOVADET30
   VRDMNDE+VRDMNDF+VRDMNDG+VRDMNDH=MOVADET31



; CONTROL READY BIT
; -----------------

; Manual to be TOP Priority, Higher Priority LED and AUX1 LED to be enabled in conditioning
; Manual Panel Switch 1 and LED 1 used to disable MOVA, reallocate if SW1/LED1 used for other purposes
; PIR92 - Lamps off Delay Timer   Set at 1.0   Limits 1.0 - 5.0
; PIR93 - Mova Overide Timer      Set at 10.0  limits 5.0 - 31.8
; PIR94 - CRB Delay Timer         Set at 255   Limits 180 - 255
; PIR95 - CRB Pulse Timer         Set at 2.0   Limits 1.0 - 31.8

   IFT SCRT0+CNDTER94 THN                             ; START CRB PULSE TIMER IF CRB DELAY TIMER
   RUN <95>                                           ; JUST TIMED OFF OR IF CONTROLLER HAS JUST
   END                                                ; DROPPED OFF MOVA CONTROL

   IFT (MODE0 EQL <6>)+(PRVMOD0 EQL <6>) THN          ; THIS BLOCK OF CONDITIONING WILL PULSE CRB BIT FOR
   TRUE=SCRT0                                         ; PIR95 SECONDS EVERY PIR94 SECONDS IF MOVA IS NOT
                                                      ; IN CONTROL ON THIS OR LAST CYCLE
   CNDTMA92.(NOT(SSMAN+SSVA+SSFIX+SSCLF+MAUXSW1))=MOVACRB  ; IT WILL ALSO DROP CRB IF LAMPS ARE OFF OR NORMAL
   ELS                                                ; NOT SELECTED OR SW1 PRESSED
   FALSE=SCRT0
   CNDTMA92.(NOT(SSMAN+SSVA+SSFIX+SSCLF+MAUXSW1+CNDTMA95))=MOVACRB
   END

   IFT (NOT MOVACRB)+CNDTER95 THN                     ; RESET CRB DELAY TIMER IF CRB NOT PRESENT
   RUN <94>                                           ; OR IF CRB PULSE TIMER HAS JUST FINISHED
```


Works Order : 460966136
EM Number : 41104
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Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Special Conditioning

```
   END

   NOT CNDTMA93=DISUTC0                               ; MOVA OVERIDE TIMER WILL DISABLE MOVA IF IT HAS
   IFT MOVACRB THN                                    ; NOT RELEASED CONTROL AFTER LOSING CRB
   RUN <93>
   END

   IFT PRSLMPRA+PRSLMPAA+PRSLMPGA THN                 ; LAMPS SUPPLY DELAY TIMER
   RUN <92>
   END

   IFT (NOT MOVACRB).SCRT0 THN                        ; IF MOVA IS IN CONTROL BUT CRB IS NOT PRESENT
   INC 2SCRTCH31                                      ; FLASH THE HIGHER PRIORITY L.E.D. ON THE
   2SCRT248=MIL17                                     ; MANUAL PANEL OTHERWISE THE LED IS FULLY
   ELS                                                ; LIT DURING MOVA MODE
   (MODE0 EQL <6>)=MIL17
   END

   MAUXSW1=MIL22                                      ; AUX1 LED CONFIRMS MOVA DISABLED BY SW1



; TIMESWITCHED AUDIBLES
; ---------------------
; Ensure ALL moves to second stage are via the first stage in ALL modes
; Ensure move from second stage to first stage is prevented in ALL modes
; Green confirm reply needs to be conditioned and the "F" bit should force both stages except in MOVA,
; (See below)
; Marked block **below** should ONLY be used in MOVA
; See CAUTION note regarding Flexible Lamp Sequencing


   FALSE:=.LCPHI                                      ; PREVENT ANY DEMANDS FOR THE AUDIBLE EXCEPT
        *=.UCPHI                                      ; FOR THE ONE PRODUCED IN THE FOLLOWING BLOCK

   (NOT(PHASEE.PHASEF.PHASEG.PHASEH)).PHASEI=1AUXCMDI4  ; DELETE AUDIBLE DRIVER PHASE UNLESS ALL
                                                      ; PEDESTRIAN PHASES ARE AT GREEN
                                                      ; CAUTION:- ENSURE FLEXIBLE LAMP SEQUENCING IS
                                                      ; *******   ENABLED FOR GREEN ARROW PHASES

   IFT (NXTSTG0 EQL <2>) THN                          ; IF CONTROLLER IS GOING TO STAGE 2 THE AUDIBLE
   SCRT1+(NOT(PHASEE.PHASEF.PHASEG.PHASEH))=PRVPHI    ; DRIVER PHASE IS PREVENTED UNLESS ALL PEDESTRIAN
   ELS                                                ; PHASES ARE AT GREEN AND TIMESWITCH FLAG IS NOT SET
   SCRT1.(NOT PHASEI)=PRVPHI                          ; AT ALL OTHER TIMES THE AUDIBLE DRIVER PHASE IS
   END                                                ; PREVENTED WHEN TIMESWITCH FLAG IS SET

   PHASEE.PHASEF.PHASEG.PHASEH=.SCRT1                 ; TIMESWITCH FLAG SET WHEN SWITCH 10 IS SET
   MTCF0.(NOT(MODE0 EQL <4>))=+SCRT1                  ; N.B. THE FLAG CANNOT BE RESET IF
                                                      ; THE PEDESTRIAN PHASES ARE AT GREEN
                                                      ; WHEN TIMESWITCH CHANGES

   (PHASEE.PHASEF.PHASEG.PHASEH).(NOT(PRVPHI+PHASEI)):::::::::=FTCONT
                                                             *=CLCONT
                                                             *=HYCONT
                                                             *=UTCONT
                                                             *=+MNCONT
                                                             *=+MSCONT
                                                             *=BUSCONT
                                                             *=SSCONT
                                                             *=EVCONT
```

Special Conditioning

```
                                                *=+UCPHI

                                               ; THE ABOVE BLOCK OF CONDITIONING WILL FORCE AN
                                               ; IMMEDIATE 2-3 CHANGE TO ALLOW AUDIBLE DRIVER PHASE
                                               ; TO APPEAR PROVIDING ALL PEDESTRIAN PHASES ARE AT
                                               ; GREEN AND THE AUDIBLE DRIVER PHASE IS NOT
                                               ; PREVENTED

   IFT (STAGE0+STAGE1+STAGE4+STAGE5) THN       ; TIMESWITCH ENABLES AUDIBLE MODULE BUT IT CANNOT
   NOT MTCF0=AUDIO                             ; CHANGE STATE UNLESS ALL PEDESTRIANS ARE AT RED
   END                                         ; (For ELV controllers only)

   CNDTMA10=.AUDIO                             ; AUDIBLE CUT OFF TIMER EXPIRING WILL STOP AUDIBLES

   IFT (NOT PHASEI) THN                        ; IF AUDIBLE PHASE IS NOT AT GREEN RESET AUDIBLE
   RUN <10>                                    ; CUT OFF TIMER
   END

   (NXTSTG0 EQL <2>)+(NXTSTG0 EQL <3>)=.SCRT2  ; GREEN CONFIRM IS EITHER STAGE PLUS INTERSTAGE
   STAGE2+STAGE3=+SCRT2                        ; BETWEEN THEM
   (NOT SCRT2)=G2

   ((F1+F2+F3+F4).UTCONT)+(F2.STAGE3)=ROUGH3   ; FORCE STAGE 3 IF THE ABOVE MOVE IS REQUIRED OR
                                               ; F2 FORCES STAGE 3 DURING STAGE 3
   F2.(NOT ROUGH3)=ROUGH2                      ; F2 FORCES STAGE 2 UNLESS IT IS FORCING STAGE 3


   FALSE=UTCONT                                ; PREVENT DROPPING OFF UTC IF MOVA IS IN USE



; DELAYED REVERSION
; -----------------

; Add phase _stage demands as required to suit configuration and ensure no reversion specified
; on the revertive stage/phase page of the IC4 file.
; Remove movadetxx and duplicate from first block if not required.

   NOT(CNDTMA0+SCRT10):=+UCPHJ                 ; REVERSION DELAY EXPIRED DEMANDS DUMMY
                       *=MOVADET32             ; PHASE IN ALL RED STAGE


   FALSE=.SCRT10                               ; FLAG TO ALLOW TIMER TO BE SET TO ZERO

   IFT (VRDMNDA+VRDMNDB+VRDMNDC+VRDMNDD+VRDMNDE+VRDMNDF+VRDMNDG+VRDMNDH) THN
   RUN <0>
   TRUE=+SCRT10
   END

   IFT (VRDMND1+VRDMND2+VRDMND3+VRDMND4+VRDMND5) THN    ; ANY DEMAND OR EXTENSION OR INTERGREEN WILL
   RUN <0>                                     ; RESET THE DELAYED REVERSION TIMER
   TRUE=+SCRT10
   END

   IFT (EXOA+EXTAA+EXOB+EXTAB+EXOC+EXTAC+EXOD+EXTAD) THN
   RUN <0>
   TRUE=+SCRT10
   END

   IFT (NOT(STAGE1+STAGE2+STAGE3+STAGE4+STAGE5)) THN
```


Works Order : 460966136
EM Number : 41104
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Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Special Conditioning

```
   RUN <0>
   TRUE=+SCRT10
   END
```

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Special Conditioning Timers

Special Conditioning Timers

Timers: 0-31

No	Value	Min	Max	200ms	Description	No	Value	Min	Max	200ms	Description
0	10	0	255	☐	Reversion Delay Timer	16		0	255	☐	
1		0	255	☐		17		0	255	☐	
2		0	255	☐		18		0	255	☐	
3		0	255	☐		19		0	255	☐	
4		0	255	☐		20		0	255	☐	
5		0	255	☐		21		0	255	☐	
6		0	255	☐		22		0	255	☐	
7		0	255	☐		23		0	255	☐	
8		0	255	☐		24		0	255	☐	
9		0	255	☐		25		0	255	☐	
10	5	5	20	☐	Audible Cutoff Timer	26		0	255	☐	
11		0	255	☐		27		0	255	☐	
12		0	255	☐		28		0	255	☐	
13		0	255	☐		29		0	255	☐	
14		0	255	☐		30		0	255	☐	
15		0	255	☐		31		0	255	☐	

Works Order : 460966136
EM Number : 41104
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Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Special Conditioning Timers

Special Conditioning Timers

Timers: 64-95

No	Value	Min	Max	200ms	Description	No	Value	Min	Max	200ms	Description
64		0	255	☐		80		0	255	☐	
65		0	255	☐		81		0	255	☐	
66		0	255	☐		82		0	255	☐	
67		0	255	☐		83		0	255	☐	
68		0	255	☐		84		0	255	☐	
69		0	255	☐		85		0	255	☐	
70		0	255	☐		86		0	255	☐	
71		0	255	☐		87		0	255	☐	
72		0	255	☐		88		0	255	☐	
73		0	255	☐		89		0	255	☐	
74		0	255	☐		90		0	255	☐	
75		0	255	☐		91		0	255	☐	
76		0	255	☐		92	1.0	1.0	5.0	☑	Lamps off delay
77		0	255	☐		93	10.0	5.0	30.0	☑	MOVA Overide
78		0	255	☐		94	180	120	255	☐	CRB Delay
79		0	255	☐		95	2.0	1.0	30.0	☑	CRB Pulse

Works Order : 460966136
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Special Instructions

The existing controller will be modified to become a 5 stage / 8 phase T900ELV controller incorporating manual, V.A, fixed time to current maximums, C.L.F, red & general lamp monitoring, timeswitched audibles, red & general lamp monitoring, delayed reversion to all red and Siemens semi-integral OMU/MOVA. The CLF is for possible future use.

When all phases in stage 2 have reached green and immediate change to stage 3 will occur, (timeswitch permitting), to bring phase I to green. This phase will provide the audible drive voltage. The audibles can also be switched off by the AUDIO output after (PIR10) seconds of phase I green. Once switched off they cannot restart in that cycle. F2/G2 will apply to both stages and interstage.

In the absence of demands and extensions the controller will revert to all red. The reversion is delayed by PIR0 timer. This timer is reset by any demand, extension or intergreen.

ADDITIONAL MOVA OUTPUTS

Pedestrian phase E demand = MOVA 27
Pedestrian phase F demand = MOVA 28
Pedestrian phase G demand = MOVA 29
Pedestrian phase H demand = MOVA 30
Any pedestrian demand = MOVA 31

Reversion request = MOVA 32

TIMESWITCHED AUDIBLES

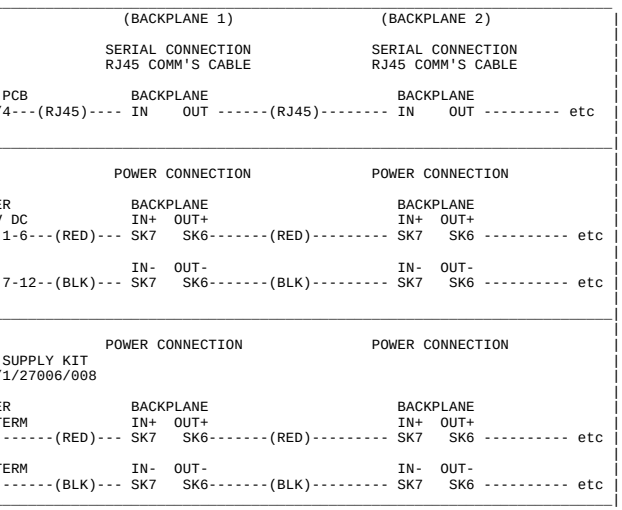
Connect Phase I green and signal retur to LSLS I/P and RET on audio module

Connect EN+ and COM to AUDIO output on I/O card

Works Order : 460966136
EM Number : 41104
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Special Instructions

SIEMENS ST900 INTERNAL DETECTOR BACKPLANE POWER AND SERIAL COMMUNICATION CONNECTION



NOTE 1 If more than one backplane power Linking between B/Planes to be made using the Black 24/0.2 PVC wire 998/4/200075/605

NOTE 2 PHS RJ45 connections. It is recomended that the Detector Backplanes are cabled on one daisy-chain from the PHS and the IO cards are cabled on a separate daisy-chain from the PHS (ie do not mix IO cards and Backplanes on the same daisy-chain)

NOTE 3 Card addressing (1 to 15) is shared between IO cards and Backplane Controllers.(ie if an IO card is set to address 1, then no Backplane Controller may use address 1)

NOTE 4 Address 0 must not be used on an IO card or on Backplane Controller

Special Instructions

SIEMENS ST900 INTERNAL DETECTOR BACKPLANE INSTRUCTIONS SHEET

DETECTOR BACKPLANE ADDRESS: 001
POSITION OF LOOP TERMINATION BOARD: 2LT1

LOOP DESIGNATION

DET CARD "A" No.	DET CARD "A" LOOP ID	DET CARD "A" TERMINATIONS	DET CARD "A" PANEL
1	AIN1	2LT1/A1L & A1R	UPPER
2	AX2	2LT1/A2L & A2R	UPPER
3	AX3	2LT1/A3L & A3R	UPPER
4	ASL4	2LT1/A4L & A4R	UPPER

DET CARD "B" No.	DET CARD "B" LOOP ID	DET CARD "B" TERMINATIONS	DET CARD "B" PANEL
1	BIN5	2LT1/B1L & B1R	UPPER
2	BX6	2LT1/B2L & B2R	UPPER
3	BSL7	2LT1/B3L & B3R	UPPER
4	Not In Use	2LT1/B4L & B4R	UPPER

DET CARD "C" No.	DET CARD "C" LOOP ID	DET CARD "C" TERMINATIONS	DET CARD "C" PANEL
1	CIN8	2LT1/C1L & C1R	UPPER
2	CX9	2LT1/C2L & C2R	UPPER
3	CSL10	2LT1/C3L & C3R	UPPER
4	Not In Use	2LT1/C4L & C4R	UPPER

DET CARD "D" No.	DET CARD "D" LOOP ID	DET CARD "D" TERMINATIONS	DET CARD "D" PANEL
1	DIN11	2LT1/D1L & D1R	UPPER
2	DX12	2LT1/D2L & D2R	UPPER
3	DSL13	2LT1/D3L & D3R	UPPER
4	Not In Use	2LT1/D4L & D4R	UPPER

N.B. L=L.H. TERMINAL R=R.H. TERMINAL

Works Order : 460966136
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Special Instructions

T900 SERIAL I/O BOARD - INPUT PORTS

	INPUT NAME	INPUT NAME					
0	Phase E push buttons pole 8	Phase G push buttons pole 4	12	12	12		
1	Phase E kerbside pole 8	Phase G kerbside pole 4	13	13	13		
2	Phase E on crossing pole 8	Phase G on crossing pole 8	14	14	14		
3			15	15	15		
4	Phase E push buttons pole 9		16	16	16		
5	Phase E kerbside pole 9		17	17	17		
6	Phase E on crossing pole 9		18	18	18		
7			19	19	19		
8	Phase G push buttons pole 3		20	20	20		
9	Phase G kerbside pole 3		21	21	21		
10	Phase G on crossing pole 3		22	22	22		
11			23	23	23		

SERIAL I/O BOARD No:-001

	0 Volts - INPUT COMMON	0 Volts - INPUT COMMON					
	0 Volts - INPUT COMMON	0 Volts - INPUT COMMON					
	0 Volts - INPUT COMMON	0 Volts - INPUT COMMON					
	0 Volts - INPUT COMMON	0 Volts - INPUT COMMON					
	0 Volts - INPUT COMMON	0 Volts - INPUT COMMON					
	0 Volts - INPUT COMMON	0 Volts - INPUT COMMON					
	0 Volts - INPUT COMMON	0 Volts - INPUT COMMON					
	0 Volts - INPUT COMMON	0 Volts - INPUT COMMON					

BOARD ADDRESS 002

SPECIAL NOTE:-
Unless otherwise indicated ALL above ground detectors (MVD, kerbside & on crossing, etc) MUST be wired as open circuit for vehicle/pedestrian presence.

Works Order : 460966136
EM Number : 41104
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Special Instructions

T900 SERIAL I/O BOARD - OUTPUT PORTS

SERIAL I/O BOARD No:-001

N/C	C	N/O	OUTPUT NAME	OUTPUT NAME	N/O	C	N/C
	X	X	Connect to EN+ & COM on AUDIO module	O/P 8		X	
	X			O/P 8		X	
	X		O/P 1	O/P 9		X	
	X		O/P 1	O/P 9		X	
	X		O/P 2	O/P 10		X	
	X		O/P 2	O/P 10		X	
	X		O/P 3	O/P 11		X	
	X		O/P 3	O/P 11		X	

FOR OUTPUT NAMES USE ONLY THE TERMINALS MARKED - "X"

N/C	C	N/O	OUTPUT NAME	OUTPUT NAME	N/O	C	N/C
	X		O/P 4	O/P 12		X	
	X		O/P 4	O/P 12		X	
	X		O/P 5	O/P 13		X	
	X		O/P 5	O/P 13		X	
	X		O/P 6	O/P 14		X	
	X		O/P 6	O/P 14		X	
	X		O/P 7	O/P 15		X	
	X		O/P 7	O/P 15		X	

BOARD ADDRESS 002

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Special Instructions

T900 SERIAL I/O BOARD - INPUT PORTS

	INPUT NAME	INPUT NAME			
0	0	0	Phase F push buttons pole 1	Phase H push buttons pole 7	12	12	12
1	1	1	Phase F kerbside pole 1	Phase H kerbside pole 7	13	13	13
2	2	2	Phase F on crossing pole 1	Phase H on crossing pole 7	14	14	14
3	3	3			15	15	15
4	4	4	Phase F push buttons pole 2		16	16	16
5	5	5	Phase F kerbside pole 2		17	17	17
6	6	6	Phase F on crossing pole 2		18	18	18
7	7	7			19	19	19
8	8	8	Phase H push buttons pole 6		20	20	20
9	9	9	Phase H kerbside pole 6		21	21	21
10	10	10	Phase H on crossing pole 6		22	22	22
11	11	11			23	23	23

SERIAL I/O BOARD No:-002

			0 Volts - INPUT COMMON	0 Volts - INPUT COMMON			
			0 Volts - INPUT COMMON	0 Volts - INPUT COMMON			
			0 Volts - INPUT COMMON	0 Volts - INPUT COMMON			
			0 Volts - INPUT COMMON	0 Volts - INPUT COMMON			
			0 Volts - INPUT COMMON	0 Volts - INPUT COMMON			
			0 Volts - INPUT COMMON	0 Volts - INPUT COMMON			
			0 Volts - INPUT COMMON	0 Volts - INPUT COMMON			
			0 Volts - INPUT COMMON	0 Volts - INPUT COMMON			

BOARD ADDRESS 003

SPECIAL NOTE:-
Unless otherwise indicated ALL above ground detectors (MVD, kerbside & on crossing, etc) MUST be wired as open circuit for vehicle/pedestrian presence.

Special Instructions

T900 SERIAL I/O BOARD - OUTPUT PORTS

SERIAL I/O BOARD No:-002

N/C	C	N/O	OUTPUT NAME		OUTPUT NAME	N/O	C	N/C
	X		O/P 0		O/P 8		X	
	X		O/P 0		O/P 8		X	
	X		O/P 1		O/P 9		X	
	X		O/P 1		O/P 9		X	
	X		O/P 2		O/P 10		X	
	X		O/P 2		O/P 10		X	
	X		O/P 3		O/P 11		X	
	X		O/P 3		O/P 11		X	

FOR OUTPUT NAMES USE ONLY THE TERMINALS MARKED - "X"

N/C	C	N/O	OUTPUT NAME		OUTPUT NAME	N/O	C	N/C
	X		O/P 4		O/P 12		X	
	X		O/P 4		O/P 12		X	
	X		O/P 5		O/P 13		X	
	X		O/P 5		O/P 13		X	
	X		O/P 6		O/P 14		X	
	X		O/P 6		O/P 14		X	
	X		O/P 7		O/P 15		X	
	X		O/P 7		O/P 15		X	

BOARD ADDRESS 003

N.B. THE 24/0 BOARD HAS NO OUTPUT RELAYS FITTED. THE 24/4 BOARD ONLY HAS OUTPUT RELAYS 0-3 FITTED

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Special Instructions

41104

Card Type	Rack Posn	Addr.	Port	Type	Line	Term Posn
Intelligent Backplane 16/0	Rack	01	0	I	000 - 007	2 LT1
Intelligent Backplane 16/0	Rack	01	1	I	008 - 015	2 LT1
Serial IO 24/4	1 I/O1	02	2	I	016 - 023	1 I/O1
Serial IO 24/4	1 I/O1	02	3	I	024 - 031	1 I/O1
Serial IO 24/4	1 I/O1	02	4	I	032 - 039	1 I/O1
Serial IO 24/4	1 I/O1	02	5	O	040 - 043	1 I/O1
Serial IO 24/4	1 I/O2	03	6	I	048 - 055	1 I/O2
Serial IO 24/4	1 I/O2	03	7	I	056 - 063	1 I/O2
Serial IO 24/4	1 I/O2	03	8	I	064 - 071	1 I/O2
Serial IO 24/4	1 I/O2	03	9	O	072 - 075	1 I/O2
CPU	A					

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Special Instructions

ST900 ELV CONTROLLER ITEMS LIST SHEET 1 (*I*L*)

ITEM	DRAWING NUMBER	DESCRIPTION	QTY	TOT	REMARKS
1					
2	667/1/32900/020	ST900 ELV Cabinet UK 20A 1 LSLS - Grey	1		
3	667/1/32900/040	ST900 ELV Cabinet UK 40A 1 LSLS - Grey			
4	667/1/32900/021	ST900 ELV Cabinet UK 20A 1 LSLS - Black			
5	667/1/32900/041	ST900 ELV Cabinet UK 40A 1 LSLS - Black			
6	667/1/32900/520	ST900ELV 20A SGL LSLS LOW INRUSH - Grey			
7	667/1/32900/521	ST900ELV 20A SGL LSLS LOW INRUSH - Black			
8					
9	667/1/32943/001	ELV Lamp switch (LSLS) kit			
10	667/1/32960/001	ELV Lamp switch (LSLS) backplane kit			
11	667/1/32995/002	ST900 I/O card kit (4 outputs)	2		
12	667/1/32995/001	ST900 I/O card kit (16 outputs)			
13					
14					
15					
16	667/1/27004/000	Integral TC12 OTU kit			
17	667/1/27005/000	SDE Facility kit			
18	667/1/32910/000	ST900 Intelligent detector backplane kit	1		
19	667/1/33002/000	ELV detector 6U rack expansion kit			
20	667/1/33074/000	ST900 ELV 24 V detector supply Kit (6A)			
21	667/1/20690/001	19" Detector Rack			
22					
23	667/1/32980/040	ELV 20A to 40A upgrade kit			
24					
25					
26	667/1/33070/000	ELV Regulatory Sign expansion kit			
27	667/1/32955/000	ELV Audible supply kit			
28	667/1/27117/000	ST900 300mA RCD kit			
29					
30	667/1/32900/001	Expansion cabinet kit - Black			
31	667/1/32900/000	Expansion cabinet kit - Grey			
32	667/1/33072/000	Cabinet mounted cut-out connection kit			
33	667/1/33007/000	LSLS Expansion cabinet kit			
34					
35					
36	667/1/27056/001	Manual Panel Full kit			
37	667/1/27110/000	Manual Panel RS232 kit			
38					
39					
40	667/1/16777/104	Configuration Eprom (Issue 4. 0)	1		

Note 1:
Please refer to special instruction pages for additional information on items marked with an '*'.

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Special Instructions

ST900 ELV CONTROLLER ITEMS LIST SHEET 2 (*I*L*)

ITEM	DRAWING NUMBER	DESCRIPTION	QTY	TOT	REMARKS
41					
42	667/1/32900/920	ST900 ELV cuckoo Kit - T200			
43	667/1/32900/921	ST900 ELV cuckoo Kit - T400			
44	667/1/32900/922	ST900 ELV cuckoo Kit - T800			
45	667/1/32900/923	ST900 ELV cuckoo Kit - Microsense			
46	667/1/32900/925	ST900 ELV cuckoo Kit - Peek			
47					
48					
49					
50					
51					
52	667/1/33073/000	ST900 Isolator locking kit			
53	667/2/20234/000	Screw Lock Key			
54					
55					
56	667/1/27104/000	ST800 / ST900 DFM Lens Kit			
57	667/1/21150/002	ST800 / ST900 Gas Plinth			
58	667/2/27096/000	ST800 / ST900 Mounting Stool			
59					
60					
61					
62	667/1/26271/000	Telephone Kit (Lightning protection)			
63	667/1/27118/000	Surge Arrester (Lightning protection)			
64					
65					
66					
67	667/1/32900/120	ST900 ELV Cabinet Export 20A 1 LSLS - Grey			
68	667/1/32900/140	ST900 ELV Cabinet Export 40A 1 LSLS - Grey			
69					
70					
71					
72					
73	667/1/32900/900	ST900 ELV export rack Kit			
74	667/1/32945/000	ST900 ELV additional LSLS rack wiring kit			
75					
76	667/1/27007/000	IRM Facility			
77					
78					
79					
80	667/1/45200/001	SLD4 Standard 4 Channel loop detector	4		

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Inputs and Outputs

Inputs and Outputs

☐ Enable Signal Required Check boxes
☐ Manual Allocation

Port Number & Type — Port: 0 — ○ Inputs ○ Outputs ◉ Inputs & Outputs

Card Type & Address — Intelligent Backplane 16/0 — Card Address: 1

	DET No	Bit No	Type I or O	Name	Req'd	BP	Inv	U/D	Misc	DFM	DFM Group	Ext time	Used By: Phs	UTC	SDE	Pri	HC	CC	IG	UD	LRT	Term Block	Terminal No
○	0	0	I	AIN1	☑	☑	☐	☐	☐	Y	0	0.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	2 LT1	A1
○	1	1	I	AX2	☑	☑	☐	☐	☐	Y	0	4.2	☑	☐	☐	☐	☐	☐	☐	☐	☐	2 LT1	A2
○	2	2	I	AX3	☑	☑	☐	☐	☐	Y	0	3.6	☑	☐	☐	☐	☐	☐	☐	☐	☐	2 LT1	A3
○	3	3	I	ASL4	☑	☑	☐	☐	☐	Y	0	1.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	2 LT1	A4
○	4	4	I	BIN5	☑	☑	☐	☐	☐	Y	0	0.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	2 LT1	B1
○	5	5	I	BX6	☑	☑	☐	☐	☐	Y	0	4.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	2 LT1	B2
○	6	6	I	BSL7	☑	☑	☐	☐	☐	Y	0	1.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	2 LT1	B3
○	7	7	I		☐	☐	☐		☐				☐	☐	☐	☐	☐	☐	☐	☐	☐	2 LT1	B4

Add | Delete | Move | Clear Used By | Move to/from backplane
Manual Map Optimisation

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Inputs and Outputs

Inputs and Outputs

☐ Enable Signal Required Check boxes
☐ Manual Allocation

Port Number & Type — Port: 1 — ○ Inputs ○ Outputs ◉ Inputs & Outputs

Card Type & Address — Intelligent Backplane 16/0 — Card Address: 1

	DET No	Bit No	Type I or O	Name	Req'd	BP	Inv	U/D	Misc	DFM	DFM Group	Ext time	Used By: Phs	UTC	SDE	Pri	HC	CC	IG	UD	LRT	Term Block	Terminal No
○	8	0	I	CIN8	☑	☑	☐	☐	☐	Y	0	0.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	2 LT1	C1
○	9	1	I	CX9	☑	☑	☐	☐	☐	Y	0	4.4	☑	☐	☐	☐	☐	☐	☐	☐	☐	2 LT1	C2
○	10	2	I	CSL10	☑	☑	☐	☐	☐	Y	0	1.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	2 LT1	C3
○	11	3	I		☐	☐	☐	☐	☐				☐	☐	☐	☐	☐	☐	☐	☐	☐	2 LT1	C4
○	12	4	I	DIN11	☑	☑	☐	☐	☐	Y	0	0.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	2 LT1	D1
○	13	5	I	DX12	☑	☑	☐	☐	☐	Y	0	4.2	☑	☐	☐	☐	☐	☐	☐	☐	☐	2 LT1	D2
○	14	6	I	DSL13	☑	☑	☐	☐	☐	Y	0	1.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	2 LT1	D3
○	15	7	I		☐	☐	☐		☐				☐	☐	☐	☐	☐	☐	☐	☐	☐	2 LT1	D4

Add | Delete | Move | Clear Used By | Move to/from backplane
Manual Map Optimisation

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Inputs and Outputs

Inputs and Outputs

☐ Enable Signal Required Check boxes
☐ Manual Allocation

Port Number & Type — Port: 2 — ○ Inputs ○ Outputs ◉ Inputs & Outputs

Card Type & Address — Serial IO 24/4 Card Address: 2

	DET No	Bit No	Type I or O	Name	Req'd	BP	Inv	U/D	Misc	DFM	DFM Group	Ext time	Used By: Phs	UTC	SDE	Pri	HC	CC	IG	UD	LRT	Term Block	Line No
○	16	0	I	PEDE8	☑	☐	☐	☐	☐	Y	1	2.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	1I/O1	I-0
○	17	1	I	KSDE8	☑	☐	☑	☐	☐	Y	4	2.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	1I/O1	I-1
○	18	2	I	ONXE8	☑	☐	☑	☐	☐	Y	3	0.6	☑	☐	☐	☐	☐	☐	☐	☐	☐	1I/O1	I-2
○	19	3	I		☐	☐	☐	☐	☐				☐	☐	☐	☐	☐	☐	☐	☐	☐	1I/O1	I-3
○	20	4	I	PEDE9	☑	☐	☐	☐	☐	Y	1	2.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	1I/O1	I-4
○	21	5	I	KSDE9	☑	☐	☑	☐	☐	Y	4	2.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	1I/O1	I-5
○	22	6	I	ONXE9	☑	☐	☑	☐	☐	Y	3	0.6	☑	☐	☐	☐	☐	☐	☐	☐	☐	1I/O1	I-6
○	23	7	I		☐	☐	☐		☐				☐	☐	☐	☐	☐	☐	☐	☐	☐	1I/O1	I-7

Add | Delete | Move | Clear Used By | Move to/from backplane | Manual Map Optimisation

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Inputs and Outputs

Inputs and Outputs

☐ Enable Signal Required Check boxes
☐ Manual Allocation

Port Number & Type — Port: 3 — ○ Inputs ○ Outputs ◉ Inputs & Outputs

Card Type & Address — Serial IO 24/4 Card Address: 2

	DET No	Bit No	Type I or O	Name	Req'd	BP	Inv	U/D	Misc	DFM	DFM Group	Ext time	Used By: Phs	UTC	SDE	Pri	HC	CC	IG	UD	LRT	Term Block	Line No
○	24	0	I	PEDG3	☑	☐	☐	☐	☐	Y	1	2.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	1I/O1	I-8
○	25	1	I	KSDG3	☑	☐	☑	☐	☐	Y	4	2.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	1I/O1	I-9
○	26	2	I	ONXG3	☑	☐	☑	☐	☐	Y	3	0.6	☑	☐	☐	☐	☐	☐	☐	☐	☐	1I/O1	I-10
○	27	3	I		☐	☐	☐	☐	☐				☐	☐	☐	☐	☐	☐	☐	☐	☐	1I/O1	I-11
○	28	4	I	PEDG4	☑	☐	☐	☐	☐	Y	1	2.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	1I/O1	I-12
○	29	5	I	KSDG4	☑	☐	☑	☐	☐	Y	4	2.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	1I/O1	I-13
○	30	6	I	ONXG4	☑	☐	☑	☐	☐	Y	3	0.6	☑	☐	☐	☐	☐	☐	☐	☐	☐	1I/O1	I-14
○	31	7	I		☐	☐	☐		☐				☐	☐	☐	☐	☐	☐	☐	☐	☐	1I/O1	I-15

Add | Delete | Move | Clear Used By | Move to/from backplane | Manual Map Optimisation

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Inputs and Outputs

Inputs and Outputs

☐ Enable Signal Required Check boxes
☐ Manual Allocation

Port Number & Type — Port: 5 — ○ Inputs ○ Outputs ◉ Inputs & Outputs

Card Type & Address — Serial IO 24/4 Card Address: 2

	DET No	Bit No	Type I or O	Name	Req'd	BP	Inv	U/D	Misc	DFM	DFM Group	Ext time	Used By: Phs	UTC	SDE	Pri	HC	CC	IG	UD	LRT	Term Block	Line No
○	40	0	O	AUDIO	☑	☐	☐	☐	☐	N		0.0	☐	☐	☐	☐	☐	☐	☐	☐	☐	1I/O1	O-0
○	41	1	O		☐	☐	☐	☐	☐				☐	☐	☐	☐	☐	☐	☐	☐	☐	1I/O1	O-1
○	42	2	O		☐	☐	☐	☐	☐				☐	☐	☐	☐	☐	☐	☐	☐	☐	1I/O1	O-2
○	43	3	O		☐	☐	☐	☐	☐				☐	☐	☐	☐	☐	☐	☐	☐	☐	1I/O1	O-3
○	44	4	O		☐	☐	☐	☐	☐				☐	☐	☐	☐	☐	☐	☐	☐	☐	1I/O1	O-4
○	45	5	O		☐	☐	☐	☐	☐				☐	☐	☐	☐	☐	☐	☐	☐	☐	1I/O1	O-5
○	46	6	O		☐	☐	☐	☐	☐				☐	☐	☐	☐	☐	☐	☐	☐	☐	1I/O1	O-6
○	47	7	O		☐	☐	☐		☐				☐	☐	☐	☐	☐	☐	☐	☐	☐	1I/O1	O-7

Add | Delete | Move | Clear Used By | Move to/from backplane | Manual Map Optimisation

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Inputs and Outputs

Inputs and Outputs

☐ Enable Signal Required Check boxes
☐ Manual Allocation

Port Number & Type — Port: 6 — ○ Inputs ○ Outputs ◉ Inputs & Outputs

Card Type & Address — Serial IO 24/4 Card Address: 3

	DET No	Bit No	Type I or O	Name	Req'd	BP	Inv	U/D	Misc	DFM	DFM Group	Ext time	Used By: Phs	UTC	SDE	Pri	HC	CC	IG	UD	LRT	Term Block	Line No
○	48	0	I	PEDF1	☑	☐	☐	☐	☐	Y	1	2.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	1I/O2	I-0
○	49	1	I	KSDF1	☑	☐	☑	☐	☐	Y	4	2.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	1I/O2	I-1
○	50	2	I	ONXF1	☑	☐	☑	☐	☐	Y	3	0.6	☑	☐	☐	☐	☐	☐	☐	☐	☐	1I/O2	I-2
○	51	3	I		☐	☐	☐	☐	☐				☐	☐	☐	☐	☐	☐	☐	☐	☐	1I/O2	I-3
○	52	4	I	PEDF2	☑	☐	☐	☐	☐	Y	1	2.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	1I/O2	I-4
○	53	5	I	KSDF2	☑	☐	☑	☐	☐	Y	4	2.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	1I/O2	I-5
○	54	6	I	ONXF2	☑	☐	☑	☐	☐	Y	3	0.6	☑	☐	☐	☐	☐	☐	☐	☐	☐	1I/O2	I-6
○	55	7	I		☐	☐	☐		☐				☐	☐	☐	☐	☐	☐	☐	☐	☐	1I/O2	I-7

Add | Delete | Move | Clear Used By | Move to/from backplane | Manual Map Optimisation

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Inputs and Outputs

Inputs and Outputs

☐ Enable Signal Required Check boxes
☐ Manual Allocation

Port Number & Type
Port: 7
○ Inputs ○ Outputs ◉ Inputs & Outputs

Card Type & Address
Serial IO 24/4
Card Address: 3

	DET No	Bit No	Type I or O	Name	Req'd	BP	Inv	U/D	Misc	DFM	DFM Group	Ext time	Used By: Phs	UTC	SDE	Pri	HC	CC	IG	UD	LRT	Term Block	Line No
○	56	0	I	PEDH6	☑	☐	☐	☐	☐	Y	1	2.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	1I/O2	I-8
○	57	1	I	KSDH6	☑	☐	☑	☐	☐	Y	4	2.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	1I/O2	I-9
○	58	2	I	ONXH6	☑	☐	☑	☐	☐	Y	3	0.6	☑	☐	☐	☐	☐	☐	☐	☐	☐	1I/O2	I-10
○	59	3	I		☐	☐	☐	☐	☐				☐	☐	☐	☐	☐	☐	☐	☐	☐	1I/O2	I-11
○	60	4	I	PEDH7	☑	☐	☐	☐	☐	Y	1	2.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	1I/O2	I-12
○	61	5	I	KSDH7	☑	☐	☑	☐	☐	Y	4	2.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	1I/O2	I-13
○	62	6	I	ONXH7	☑	☐	☑	☐	☐	Y	3	0.6	☑	☐	☐	☐	☐	☐	☐	☐	☐	1I/O2	I-14
○	63	7	I		☐	☐	☐		☐				☐	☐	☐	☐	☐	☐	☐	☐	☐	1I/O2	I-15

Add | Delete | Move | Clear Used By | Move to/from backplane
Manual Map Optimisation

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

Aspect Drives (ELV Controllers)

Aspect Drives (ELV Controllers)

☐ Card Reversed HPU Connection 1

Aspect Drive Configuration for LSLS 1 of 1 cards (Cabinet 1)

Output	Phase	Aspect	Use	Output	Phase	Aspect	Use
32	A	Red	Phase	16	F	Red	Phase
31	A	Amber	Phase	15	F	Amber	Phase
30	A	Green	Phase	14	F	Green	Phase
29	B	Red	Phase	13	F	Green	Phase
28	B	Amber	Phase	12	G	Red	Phase
27	B	Green	Phase	11	G	Amber	Phase
26	C	Red	Phase	10	G	Green	Phase
25	C	Amber	Phase	9	G	Green	Phase
24	C	Green	Phase	8	H	Red	Phase
23	D	Red	Phase	7	H	Amber	Phase
22	D	Amber	Phase	6	H	Green	Phase
21	D	Green	Phase	5	H	Green	Phase
20	E	Red	Phase	4	N/A	N/A	N/A
19	E	Amber	Phase	3	N/A	N/A	N/A
18	E	Green	Phase	2	N/A	N/A	N/A
17	E	Green	Phase	1	I	Green	Phase

Works Order : 460966136
EM Number : 41104
Engineer : Stuart Mulliner
Intersection : High Street / Midlands Road / The Wells - Royston Barnsley

I/O - DFM Group Timings

I/O - DFM Group Timings

Input Group	State	SET A	SET B	SET C	SET D
Group 0	Active (Mins)	60	60	60	60
	InActive (Hrs)	18	18	18	18
Group 1	Active (Mins)	10	10	10	10
	InActive (Hrs)	72	72	72	72
Group 2	Active (Mins)	90	90	90	90
	InActive (Hrs)	48	48	48	48
Group 3	Active (Mins)	60	60	60	60
	InActive (Hrs)	18	18	18	18
Group 4	Active (Mins)	90	90	90	90
	InActive (Hrs)	48	48	48	48
Group 5	Active (Mins)	60	60	60	60
	InActive (Hrs)	18	18	18	18
Group 6	Active (Mins)				
	InActive (Hrs)				
Group 7	Active (Mins)				
	InActive (Hrs)				

Note - 255 or blank disables DFM monitoring of that state (active or inactive) during that timeset (A to D)

Handset Limiting Values

State	Min	Max
Active (Mins)	0	254
InActive (Hrs)	0	254

Index

1 General Junction Data
- 1.1 Administration
- 1.2 Phases, Stages and Streams
- 1.3 Facilities/Modes Enabled and Mode Priority Levels
- 1.4 Phases in Stages
- 1.5 Stages in Streams

2 Phases
- 2.1 Phase Type and Conditions
- 2.2 Opposing and Conflicting Phases
- 2.3 Timings
  - 2.3.1 Phase Minimums, Maximums, Extensions, Ped Leaving Periods
  - 2.3.2 Phase Intergreen Times
  - 2.3.3 Intergreen Handset Limits
  - 2.3.4 Phase Timing Handset Ranges
- 2.4 VA Demand and Extend Definitions
- 2.5 Phase Internal/Revertive Demands
- 2.6 Pelicans, Puffins and Toucans
  - 2.6.1 Phase - On Crossing and Kerbside Detector Definitions
  - 2.6.2 Stream - Pelican/Puffin/Toucan Times
  - 2.6.3 Phase - Pelican, Puffin and Toucan Times
  - 2.6.4 IO and Link - Pelican/Puffin/Toucan Times
  - 2.6.5 Pelican, Puffin, Toucan Pushbutton/Kerbside Associations

3 Stage Movements
- 3.1 Stages - Prohibited, Alternative, Ignored Moves
- 3.2 Stage Internal Demands/Pedestrian Window Times
- 3.3 Phase Delays (No configuration data to print)

4 Modes and Facilities - Detailed
- 4.1 Fixed Time
- 4.2 Cableless Linking
  - 4.2.1 CLF - Plan(s) (No configuration data to print)
  - 4.2.2 CLF - Base Time
  - 4.2.3 CLF - Demand Dependent Moves (No configuration data to print)
- 4.3 UTC and MOVA
  - 4.3.1 UTC General Data
  - 4.3.2 UTC Control and Reply Data Format
  - 4.3.3 UTC Data Definitions
    - 4.3.3.1 UTC Phase Demand and Extend Definitions (No configuration data to print)
    - 4.3.3.2 UTC Stage and Mode Data Definitions
    - 4.3.3.3 UTC Demand Dependent Forces (No configuration data to print)
  - 4.3.4 UTC and MOVA Detectors
- 4.4 Master Time Clock
  - 4.4.1 MTC - Time Switch Parameters
  - 4.4.2 MTC - Time Switch Parameters Array
  - 4.4.3 MTC - Day Type
  - 4.4.4 MTC - Timetable
- 4.5 Integral Lamp Monitoring
  - 4.5.1 LMU - General
  - 4.5.2 Integral LMU Onboard Sensors
  - 4.5.3 Integral LMU External Sensors for Regulatory Signs
  - 4.5.4 LMU Sensor Load Types
  - 4.5.5 RLM Additional Intergreens
  - 4.5.6 RLM Phase Inhibits
- 4.6 Manual
  - 4.6.1 Manual Panel
  - 4.6.2 Manual Mode - Optional Phases Appearance (No configuration data to print)

5 Conditioning Data
- 5.1 Special Conditioning
- 5.2 Special Conditioning Timers
- 5.3 Fault Log Flags (No configuration data to print)

6 Special Instructions

7 I/O
- 7.1 Call Cancel (No configuration data to print)
- 7.2 Inputs and Outputs
- 7.3 Aspect Drives (ELV Controllers)
- 7.4 I/O - DFM Group Timings

APPENDIX M

Traffic Model Outputs for

Year 2018 – 20202

Year 2030

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.1.7462
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Filename: Wakefield.j9
Path: G:\12910 Hargreaves Services plc\12910-5005 Monckton Coke Works\Calcs
Report generation date: 06/04/2020 11:06:39

»Wakefield/Shaw/Lee Junction - 2018 Existing, AM
»Wakefield/Shaw/Lee Junction - 2018 Existing, PM
»Wakefield/Shaw/Lee Junction - 2030+Com, AM
»Wakefield/Shaw/Lee Junction - 2030+Com, PM
»Wakefield/Shaw/Lee Junction - 2030+Com +Dev, AM
»Wakefield/Shaw/Lee Junction - 2030+Com +Dev, PM

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	Wakefield/Shaw/Lee Junction - 2018 Existing											
Stream B-C	D1	4.8	160.62	0.95	F	40.97	D2	4.3	207.74	0.92	F	36.32
Stream B-AD		9.2	106.51	0.96	F			10.7	120.58	0.98	F	
Stream A-D		0.1	7.48	0.12	A			0.6	12.25	0.38	B	
Stream D-A		0.6	24.85	0.36	C			0.3	14.09	0.23	B	
Stream D-BC		5.3	60.66	0.87	F			2.9	43.57	0.76	E	
Stream C-B		0.2	9.12	0.20	A			0.4	8.54	0.28	A	
	Wakefield/Shaw/Lee Junction - 2030+Com											
Stream B-C	D3	24.3	882.96	1.45	F	428.55	D4	21.5	1206.65	1.55	F	391.04
Stream B-AD		75.5	841.49	1.48	F			106.0	1138.87	1.61	F	
Stream A-D		0.3	9.47	0.21	A			2.4	34.16	0.73	D	
Stream D-A		31.3	989.24	1.49	F			25.6	933.69	1.58	F	
Stream D-BC		92.5	955.38	1.53	F			62.3	831.40	1.61	F	
Stream C-B		0.4	14.03	0.31	B			0.6	11.30	0.37	B	
	Wakefield/Shaw/Lee Junction - 2030+Com +Dev											
Stream B-C	D5	27.7	1066.22	1.51	F	489.91	D6	27.4	1677.00	1.76	F	589.67
Stream B-AD		89.8	1023.41	1.55	F			148.6	1609.79	1.81	F	
Stream A-D		0.3	9.80	0.22	A			6.1	74.13	0.92	F	
Stream D-A		33.6	1075.56	1.54	F			37.4	1445.19	2.01	F	
Stream D-BC		99.5	1041.02	1.58	F			92.5	1416.73	2.01	F	
Stream C-B		0.4	14.42	0.31	B			0.6	12.11	0.39	B	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

File summary

File Description

Title	Royston Development
Location	Wakefield/Shaw/Lee
Site number	
Date	05/03/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	MET\TomL
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	PCU	PCU	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	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018 Existing	AM	Wakefield Rd/Shaw/Lee Ln	ONE HOUR	07:30	09:00	15	✓
D2	2018 Existing	PM	Wakefield Rd/Shaw/Lee Ln	ONE HOUR	16:15	17:45	15	✓
D3	2030+Com	AM	Wakefield Rd/Shaw/Lee Ln	ONE HOUR	07:30	09:00	15	✓
D4	2030+Com	PM	Wakefield Rd/Shaw/Lee Ln	ONE HOUR	16:15	17:45	15	✓
D5	2030+Com +Dev	AM	Wakefield Rd/Shaw/Lee Ln	ONE HOUR	07:30	09:00	15	✓
D6	2030+Com +Dev	PM	Wakefield Rd/Shaw/Lee Ln	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Name	Description	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Wakefield/Shaw/Lee Junction	Wakefield/Shaw/Lee Junction	✓	100.000	100.000

Wakefield/Shaw/Lee Junction - 2018 Existing, AM

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	Wakefield/Shaw/Lee	Right-Left Stagger	Two-way		40.97	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Wakefield (south)		Major
B	Shaw		Minor
C	Wakefield (north)		Major
D	Lee		Minor

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)
A	7.10		✓	3.00	100.0		-
C	7.10		✓	3.00	250.0		-

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	One lane plus flare	10.00	7.40	4.50	3.60	3.50		1.00	100	45
D	One lane plus flare	10.00	8.00	6.30	4.80	4.20		4.00	100	80

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
A-D	687	-	-	-	0.253	0.253	0.253	-	0.253	-	-
B-AD	610	0.106	0.268	-	-	-	0.168	0.382	0.168	0.106	0.268
B-C	642	0.094	0.237	-	-	-	-	-	-	0.094	0.237
C-B	781	0.288	0.288	-	-	-	-	-	-	0.288	0.288
D-A	645	-	-	-	0.238	0.094	0.238	-	0.094	-	-
D-BC	645	0.178	0.178	0.404	0.283	0.112	0.283	-	0.112	-	-

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	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018 Existing	AM	Wakefield Rd/Shaw/Lee Ln	ONE HOUR	07:30	09:00	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	637	100.000
B		ONE HOUR	✓	397	100.000
C		ONE HOUR	✓	279	100.000
D		ONE HOUR	✓	385	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	272	308	57
	B	97	0	99	201
	C	165	90	0	24
	D	75	277	33	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.95	160.62	4.8	F	91	136
B-AD	0.96	106.51	9.2	F	273	410
A-B					250	374
A-C					283	424
A-D	0.12	7.48	0.1	A	52	78
D-A	0.36	24.85	0.6	C	69	103
D-BC	0.87	60.66	5.3	F	284	427
C-D					22	33
C-A					151	227
C-B	0.20	9.12	0.2	A	83	124

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	75	19	422	0.177	74	0.0	0.2	10.309	B
B-AD	224	56	443	0.506	220	0.0	1.0	15.896	C
A-B	205	51			205				
A-C	232	58			232				
A-D	43	11	594	0.072	43	0.0	0.1	6.526	A
D-A	56	14	505	0.112	56	0.0	0.1	8.013	A
D-BC	233	58	475	0.491	230	0.0	0.9	14.445	B
C-D	18	5			18				
C-A	124	31			124				
C-B	68	17	588	0.115	67	0.0	0.1	6.902	A

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	89	22	330	0.270	88	0.2	0.4	14.875	B
B-AD	268	67	406	0.660	265	1.0	1.8	24.916	C
A-B	245	61			245				
A-C	277	69			277				
A-D	51	13	575	0.089	51	0.1	0.1	6.873	A
D-A	67	17	452	0.149	67	0.1	0.2	9.341	A
D-BC	279	70	442	0.631	276	0.9	1.6	21.372	C
C-D	22	5			22				
C-A	148	37			148				
C-B	81	20	550	0.147	81	0.1	0.2	7.675	A

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	109	27	137	0.798	100	0.4	2.6	84.848	F
B-AD	328	82	348	0.944	308	1.8	6.8	70.203	F
A-B	299	75			299				
A-C	339	85			339				
A-D	63	16	549	0.114	63	0.1	0.1	7.397	A
D-A	83	21	275	0.300	82	0.2	0.4	18.534	C
D-BC	341	85	395	0.863	330	1.6	4.6	47.825	E
C-D	26	7			26				
C-A	182	45			182				
C-B	99	25	497	0.199	99	0.2	0.2	9.034	A

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	109	27	115	0.947	100	2.6	4.8	160.619	F
B-AD	328	82	342	0.959	318	6.8	9.2	106.513	F
A-B	299	75			299				
A-C	339	85			339				
A-D	63	16	544	0.115	63	0.1	0.1	7.477	A
D-A	83	21	226	0.365	82	0.4	0.6	24.850	C
D-BC	341	85	392	0.870	338	4.6	5.3	60.662	F
C-D	26	7			26				
C-A	182	45			182				
C-B	99	25	494	0.201	99	0.2	0.2	9.124	A

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	89	22	275	0.324	106	4.8	0.5	23.481	C
B-AD	268	67	395	0.677	296	9.2	2.3	43.096	E
A-B	245	61			245				
A-C	277	69			277				
A-D	51	13	567	0.090	51	0.1	0.1	6.987	A
D-A	67	17	428	0.157	69	0.6	0.2	10.058	B
D-BC	279	70	436	0.639	292	5.3	1.9	27.034	D
C-D	22	5			22				
C-A	148	37			148				
C-B	81	20	545	0.149	81	0.2	0.2	7.773	A

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	75	19	411	0.181	76	0.5	0.2	10.753	B
B-AD	224	56	442	0.508	229	2.3	1.1	17.338	C
A-B	205	51			205				
A-C	232	58			232				
A-D	43	11	592	0.073	43	0.1	0.1	6.562	A
D-A	56	14	500	0.113	57	0.2	0.1	8.134	A
D-BC	233	58	474	0.493	237	1.9	1.0	15.419	C
C-D	18	5			18				
C-A	124	31			124				
C-B	68	17	586	0.116	68	0.2	0.1	6.950	A

Wakefield/Shaw/Lee Junction - 2018 Existing, PM

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	Wakefield/Shaw/Lee	Right-Left Stagger	Two-way		36.32	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2018 Existing	PM	Wakefield Rd/Shaw/Lee Ln	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	537	100.000
B		ONE HOUR	✓	371	100.000
C		ONE HOUR	✓	582	100.000
D		ONE HOUR	✓	299	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	209	164	164
	B	44	0	69	258
	C	331	151	0	100
	D	71	208	20	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.92	207.74	4.3	F	63	95
B-AD	0.98	120.58	10.7	F	277	416
A-B					192	288
A-C					150	226
A-D	0.38	12.25	0.6	B	150	226
D-A	0.23	14.09	0.3	B	65	98
D-BC	0.76	43.57	2.9	E	209	314
C-D					92	138
C-A					304	456
C-B	0.28	8.54	0.4	A	139	208

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	52	13	433	0.120	51	0.0	0.1	9.429	A
B-AD	227	57	428	0.531	223	0.0	1.1	17.231	C
A-B	157	39			157				
A-C	123	31			123				
A-D	123	31	547	0.226	122	0.0	0.3	8.462	A
D-A	53	13	501	0.107	53	0.0	0.1	8.029	A
D-BC	172	43	432	0.398	169	0.0	0.6	13.589	B
C-D	75	19			75				
C-A	249	62			249				
C-B	114	28	651	0.175	113	0.0	0.2	6.682	A

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	62	16	326	0.190	62	0.1	0.2	13.584	B
B-AD	271	68	393	0.690	268	1.1	2.0	27.823	D
A-B	188	47			188				
A-C	147	37			147				
A-D	147	37	519	0.284	147	0.3	0.4	9.682	A
D-A	64	16	459	0.139	64	0.1	0.2	9.091	A
D-BC	205	51	390	0.525	203	0.6	1.1	19.086	C
C-D	90	22			90				
C-A	298	74			298				
C-B	136	34	625	0.217	135	0.2	0.3	7.353	A

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	76	19	84	0.908	64	0.2	3.2	145.160	F
B-AD	333	83	343	0.969	310	2.0	7.7	78.422	F
A-B	230	58			230				
A-C	181	45			181				
A-D	181	45	480	0.376	180	0.4	0.6	11.957	B
D-A	78	20	352	0.222	78	0.2	0.3	13.078	B
D-BC	251	63	334	0.752	245	1.1	2.6	38.125	E
C-D	110	28			110				
C-A	364	91			364				
C-B	166	42	589	0.282	166	0.3	0.4	8.489	A

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	76	19	83	0.917	71	3.2	4.3	207.736	F
B-AD	333	83	340	0.978	321	7.7	10.7	120.576	F
A-B	230	58			230				
A-C	181	45			181				
A-D	181	45	475	0.381	181	0.6	0.6	12.250	B
D-A	78	20	333	0.234	78	0.3	0.3	14.089	B
D-BC	251	63	331	0.760	250	2.6	2.9	43.568	E
C-D	110	28			110				
C-A	364	91			364				
C-B	166	42	588	0.283	166	0.4	0.4	8.544	A

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	62	16	273	0.227	78	4.3	0.3	19.937	C
B-AD	271	68	401	0.676	305	10.7	2.3	46.432	E
A-B	188	47			188				
A-C	147	37			147				
A-D	147	37	509	0.290	148	0.6	0.4	10.009	B
D-A	64	16	448	0.143	64	0.3	0.2	9.400	A
D-BC	205	51	385	0.532	212	2.9	1.2	21.492	C
C-D	90	22			90				
C-A	298	74			298				
C-B	136	34	622	0.218	136	0.4	0.3	7.411	A

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	52	13	421	0.124	53	0.3	0.1	9.802	A
B-AD	227	57	427	0.533	232	2.3	1.2	18.868	C
A-B	157	39			157				
A-C	123	31			123				
A-D	123	31	545	0.227	124	0.4	0.3	8.575	A
D-A	53	13	497	0.107	54	0.2	0.1	8.115	A
D-BC	172	43	430	0.399	174	1.2	0.7	14.161	B
C-D	75	19			75				
C-A	249	62			249				
C-B	114	28	650	0.175	114	0.3	0.2	6.724	A

Wakefield/Shaw/Lee Junction - 2030+Com, AM

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	Wakefield/Shaw/Lee	Right-Left Stagger	Two-way		428.55	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2030+Com	AM	Wakefield Rd/Shaw/Lee Ln	ONE HOUR	07:30	09:00	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	818	100.000
B		ONE HOUR	✓	477	100.000
C		ONE HOUR	✓	345	100.000
D		ONE HOUR	✓	550	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	328	398	92
	B	116	0	114	247
	C	209	103	0	33
	D	137	360	53	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	1.45	882.96	24.3	F	105	157
B-AD	1.48	841.49	75.5	F	333	500
A-B					301	451
A-C					365	548
A-D	0.21	9.47	0.3	A	84	127
D-A	1.49	989.24	31.3	F	126	189
D-BC	1.53	955.38	92.5	F	379	568
C-D					30	45
C-A					192	288
C-B	0.31	14.03	0.4	B	95	142

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	86	21	311	0.276	84	0.0	0.4	15.811	C
B-AD	273	68	395	0.692	265	0.0	2.0	26.291	D
A-B	247	62			247				
A-C	300	75			300				
A-D	69	17	571	0.121	69	0.0	0.1	7.153	A
D-A	103	26	416	0.248	102	0.0	0.3	11.425	B
D-BC	311	78	422	0.737	301	0.0	2.5	27.836	D
C-D	25	6			25				
C-A	157	39			157				
C-B	78	19	534	0.145	77	0.0	0.2	7.862	A

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	102	26	118	0.871	91	0.4	3.2	109.668	F
B-AD	326	82	341	0.958	305	2.0	7.3	75.827	F
A-B	295	74			295				
A-C	358	89			358				
A-D	83	21	547	0.151	83	0.1	0.2	7.748	A
D-A	123	31	124	0.997	104	0.3	5.1	136.146	F
D-BC	371	93	379	0.981	346	2.5	8.7	79.714	F
C-D	30	7			30				
C-A	188	47			188				
C-B	93	23	483	0.192	92	0.2	0.2	9.200	A

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	126	31	92	1.361	89	3.2	12.4	381.711	F
B-AD	400	100	286	1.399	283	7.3	36.4	307.833	F
A-B	361	90			361				
A-C	438	110			438				
A-D	101	25	511	0.198	101	0.2	0.2	8.781	A
D-A	151	38	111	1.364	108	5.1	15.8	409.772	F
D-BC	455	114	316	1.437	315	8.7	43.8	329.522	F
C-D	36	9			36				
C-A	230	58			230				
C-B	113	28	410	0.277	113	0.2	0.4	12.099	B

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	126	31	87	1.449	86	12.4	22.3	747.624	F
B-AD	400	100	270	1.482	269	36.4	68.9	689.678	F
A-B	361	90			361				
A-C	438	110			438				
A-D	101	25	481	0.210	101	0.2	0.3	9.470	A
D-A	151	38	101	1.492	101	15.8	28.3	796.350	F
D-BC	455	114	298	1.528	297	43.8	83.1	744.396	F
C-D	36	9			36				
C-A	230	58			230				
C-B	113	28	369	0.307	113	0.4	0.4	14.034	B

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	102	26	96	1.070	95	22.3	24.3	882.961	F
B-AD	326	82	301	1.085	300	68.9	75.5	841.494	F
A-B	295	74			295				
A-C	358	89			358				
A-D	83	21	479	0.173	83	0.3	0.2	9.090	A
D-A	123	31	112	1.097	111	28.3	31.3	989.244	F
D-BC	371	93	334	1.112	334	83.1	92.5	955.376	F
C-D	30	7			30				
C-A	188	47			188				
C-B	93	23	390	0.237	93	0.4	0.3	12.128	B

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	86	21	105	0.814	101	24.3	20.4	798.611	F
B-AD	273	68	331	0.825	327	75.5	62.0	757.897	F
A-B	247	62			247				
A-C	300	75			300				
A-D	69	17	495	0.140	69	0.2	0.2	8.464	A
D-A	103	26	124	0.829	121	31.3	26.9	871.200	F
D-BC	311	78	371	0.837	367	92.5	78.4	838.395	F
C-D	25	6			25				
C-A	157	39			157				
C-B	78	19	428	0.181	78	0.3	0.2	10.309	B

Wakefield/Shaw/Lee Junction - 2030+Com, PM

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	Wakefield/Shaw/Lee	Right-Left Stagger	Two-way		391.04	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2030+Com	PM	Wakefield Rd/Shaw/Lee Ln	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	707	100.000
B		ONE HOUR	✓	480	100.000
C		ONE HOUR	✓	736	100.000
D		ONE HOUR	✓	404	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	251	215	241
	B	66	0	79	335
	C	435	173	0	128
	D	116	258	30	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	1.55	1206.65	21.5	F	72	109
B-AD	1.61	1138.87	106.0	F	368	552
A-B					230	345
A-C					197	296
A-D	0.73	34.16	2.4	D	221	332
D-A	1.58	933.69	25.6	F	106	160
D-BC	1.61	831.40	62.3	F	264	396
C-D					117	176
C-A					399	599
C-B	0.37	11.30	0.6	B	159	238

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	59	15	260	0.229	58	0.0	0.3	17.738	C
B-AD	302	75	384	0.785	290	0.0	3.1	34.576	D
A-B	189	47			189				
A-C	162	40			162				
A-D	181	45	503	0.361	179	0.0	0.6	11.057	B
D-A	87	22	438	0.200	86	0.0	0.2	10.218	B
D-BC	217	54	356	0.609	211	0.0	1.5	23.934	C
C-D	96	24			96				
C-A	327	82			327				
C-B	130	33	618	0.211	129	0.0	0.3	7.355	A

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	71	18	66	1.078	55	0.3	4.4	221.420	F
B-AD	360	90	340	1.060	322	3.1	12.6	114.415	F
A-B	226	56			226				
A-C	193	48			193				
A-D	217	54	464	0.467	215	0.6	0.9	14.417	B
D-A	104	26	266	0.393	103	0.2	0.6	21.908	C
D-BC	259	65	300	0.862	248	1.5	4.3	58.976	F
C-D	115	29			115				
C-A	391	98			391				
C-B	156	39	584	0.266	155	0.3	0.4	8.381	A

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	87	22	61	1.435	59	4.4	11.5	582.345	F
B-AD	442	110	285	1.549	284	12.6	52.0	439.067	F
A-B	276	69			276				
A-C	237	59			237				
A-D	265	66	405	0.655	262	0.9	1.8	24.511	C
D-A	128	32	86	1.484	81	0.6	12.3	348.527	F
D-BC	317	79	221	1.436	218	4.3	29.1	317.238	F
C-D	141	35			141				
C-A	479	120			479				
C-B	190	48	537	0.355	190	0.4	0.5	10.341	B

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	87	22	56	1.552	56	11.5	19.3	1005.219	F
B-AD	442	110	274	1.612	274	52.0	93.9	909.516	F
A-B	276	69			276				
A-C	237	59			237				
A-D	265	66	365	0.727	263	1.8	2.4	34.164	D
D-A	128	32	81	1.584	80	12.3	24.3	792.429	F
D-BC	317	79	197	1.607	197	29.1	59.1	747.684	F
C-D	141	35			141				
C-A	479	120			479				
C-B	190	48	508	0.375	190	0.5	0.6	11.304	B

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	71	18	63	1.127	62	19.3	21.5	1206.647	F
B-AD	360	90	313	1.153	312	93.9	106.0	1138.867	F
A-B	226	56			226				
A-C	193	48			193				
A-D	217	54	372	0.582	220	2.4	1.5	24.288	C
D-A	104	26	100	1.039	99	24.3	25.6	933.694	F
D-BC	259	65	247	1.048	246	59.1	62.3	831.400	F
C-D	115	29			115				
C-A	391	98			391				
C-B	156	39	518	0.300	156	0.6	0.4	9.972	A

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	59	15	70	0.850	67	21.5	19.7	1111.310	F
B-AD	302	75	349	0.865	346	106.0	95.0	1046.892	F
A-B	189	47			189				
A-C	162	40			162				
A-D	181	45	396	0.459	184	1.5	0.9	17.201	C
D-A	87	22	120	0.728	115	25.6	18.5	693.884	F
D-BC	217	54	295	0.735	290	62.3	43.9	661.587	F
C-D	96	24			96				
C-A	327	82			327				
C-B	130	33	546	0.239	131	0.4	0.3	8.680	A

Wakefield/Shaw/Lee Junction - 2030+Com +Dev, AM

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	Wakefield/Shaw/Lee	Right-Left Stagger	Two-way		489.91	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2030+Com +Dev	AM	Wakefield Rd/Shaw/Lee Ln	ONE HOUR	07:30	09:00	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	834	100.000
B		ONE HOUR	✓	492	100.000
C		ONE HOUR	✓	345	100.000
D		ONE HOUR	✓	550	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	342	398	94
	B	116	0	114	262
	C	209	103	0	33
	D	137	360	53	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	1.51	1066.22	27.7	F	105	157
B-AD	1.55	1023.41	89.8	F	347	520
A-B					314	471
A-C					365	548
A-D	0.22	9.80	0.3	A	86	129
D-A	1.54	1075.56	33.6	F	126	189
D-BC	1.58	1041.02	99.5	F	379	568
C-D					30	45
C-A					192	288
C-B	0.31	14.42	0.4	B	95	142

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	86	21	292	0.294	84	0.0	0.4	17.236	C
B-AD	285	71	394	0.723	275	0.0	2.3	28.541	D
A-B	257	64			257				
A-C	300	75			300				
A-D	71	18	569	0.124	70	0.0	0.1	7.216	A
D-A	103	26	411	0.251	102	0.0	0.3	11.592	B
D-BC	311	78	418	0.743	301	0.0	2.6	28.557	D
C-D	25	6			25				
C-A	157	39			157				
C-B	78	19	531	0.146	77	0.0	0.2	7.913	A

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	102	26	101	1.012	85	0.4	4.8	159.189	F
B-AD	340	85	340	1.000	313	2.3	9.2	90.169	F
A-B	307	77			307				
A-C	358	89			358				
A-D	85	21	543	0.156	84	0.1	0.2	7.841	A
D-A	123	31	122	1.009	104	0.3	5.2	140.879	F
D-BC	371	93	374	0.993	344	2.6	9.3	84.195	F
C-D	30	7			30				
C-A	188	47			188				
C-B	93	23	480	0.193	92	0.2	0.2	9.288	A

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	126	31	91	1.382	88	4.8	14.0	454.833	F
B-AD	416	104	284	1.464	283	9.2	42.5	360.282	F
A-B	377	94			377				
A-C	438	110			438				
A-D	103	26	505	0.205	103	0.2	0.3	8.961	A
D-A	151	38	108	1.393	106	5.2	16.5	434.797	F
D-BC	455	114	310	1.467	308	9.3	45.9	353.306	F
C-D	36	9			36				
C-A	230	58			230				
C-B	113	28	405	0.280	113	0.2	0.4	12.308	B

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	126	31	83	1.509	83	14.0	24.8	858.227	F
B-AD	416	104	268	1.550	268	42.5	79.5	795.173	F
A-B	377	94			377				
A-C	438	110			438				
A-D	103	26	471	0.220	103	0.3	0.3	9.796	A
D-A	151	38	98	1.539	98	16.5	29.8	856.027	F
D-BC	455	114	289	1.576	288	45.9	87.5	803.719	F
C-D	36	9			36				
C-A	230	58			230				
C-B	113	28	363	0.313	113	0.4	0.4	14.420	B

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	102	26	92	1.119	91	24.8	27.7	1066.225	F
B-AD	340	85	299	1.136	299	79.5	89.8	1023.413	F
A-B	307	77			307				
A-C	358	89			358				
A-D	85	21	465	0.182	85	0.3	0.2	9.471	A
D-A	123	31	109	1.134	108	29.8	33.6	1075.563	F
D-BC	371	93	323	1.148	323	87.5	99.5	1041.017	F
C-D	30	7			30				
C-A	188	47			188				
C-B	93	23	382	0.243	93	0.4	0.3	12.492	B

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	86	21	100	0.854	97	27.7	24.9	977.814	F
B-AD	285	71	329	0.865	326	89.8	79.5	937.050	F
A-B	257	64			257				
A-C	300	75			300				
A-D	71	18	478	0.148	71	0.2	0.2	8.858	A
D-A	103	26	120	0.858	117	33.6	30.2	984.836	F
D-BC	311	78	359	0.866	355	99.5	88.4	952.315	F
C-D	25	6			25				
C-A	157	39			157				
C-B	78	19	416	0.186	78	0.3	0.2	10.647	B

Wakefield/Shaw/Lee Junction - 2030+Com +Dev, PM

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	Wakefield/Shaw/Lee	Right-Left Stagger	Two-way		589.67	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2030+Com +Dev	PM	Wakefield Rd/Shaw/Lee Ln	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	778	100.000
B		ONE HOUR	✓	518	100.000
C		ONE HOUR	✓	738	100.000
D		ONE HOUR	✓	404	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	284	215	279
	B	66	0	79	373
	C	435	173	0	130
	D	116	258	30	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	1.76	1677.00	27.4	F	72	109
B-AD	1.81	1609.79	148.6	F	403	604
A-B					261	391
A-C					197	296
A-D	0.92	74.13	6.1	F	256	384
D-A	2.01	1445.19	37.4	F	106	160
D-BC	2.01	1416.73	92.5	F	264	396
C-D					119	179
C-A					399	599
C-B	0.39	12.11	0.6	B	159	238

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	59	15	190	0.313	58	0.0	0.4	26.852	D
B-AD	331	83	381	0.867	312	0.0	4.5	44.678	E
A-B	214	53			214				
A-C	162	40			162				
A-D	210	53	495	0.424	207	0.0	0.7	12.375	B
D-A	87	22	425	0.206	86	0.0	0.3	10.613	B
D-BC	217	54	337	0.643	210	0.0	1.7	27.103	D
C-D	98	24			98				
C-A	327	82			327				
C-B	130	33	611	0.213	129	0.0	0.3	7.462	A

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	71	18	60	1.190	51	0.4	5.4	278.488	F
B-AD	395	99	338	1.166	330	4.5	20.7	168.453	F
A-B	255	64			255				
A-C	193	48			193				
A-D	251	63	454	0.553	249	0.7	1.2	17.426	C
D-A	104	26	169	0.619	100	0.3	1.4	49.490	E
D-BC	259	65	277	0.936	242	1.7	6.0	79.526	F
C-D	117	29			117				
C-A	391	98			391				
C-B	156	39	575	0.270	155	0.3	0.4	8.556	A

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	87	22	54	1.613	53	5.4	13.9	769.820	F
B-AD	483	121	282	1.716	281	20.7	71.2	624.618	F
A-B	313	78			313				
A-C	237	59			237				
A-D	307	77	386	0.796	299	1.2	3.2	38.325	E
D-A	128	32	74	1.734	71	1.4	15.6	525.221	F
D-BC	317	79	188	1.684	187	6.0	38.5	496.669	F
C-D	143	36			143				
C-A	479	120			479				
C-B	190	48	525	0.363	190	0.4	0.6	10.712	B

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	87	22	49	1.758	49	13.9	23.3	1447.289	F
B-AD	483	121	267	1.812	267	71.2	125.4	1345.271	F
A-B	313	78			313				
A-C	237	59			237				
A-D	307	77	335	0.918	296	3.2	6.1	74.130	F
D-A	128	32	64	2.008	63	15.6	31.7	1411.525	F
D-BC	317	79	158	2.012	157	38.5	78.4	1365.422	F
C-D	143	36			143				
C-A	479	120			479				
C-B	190	48	487	0.391	190	0.6	0.6	12.108	B

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	71	18	55	1.283	55	23.3	27.3	1651.473	F
B-AD	395	99	302	1.307	302	125.4	148.6	1576.805	F
A-B	255	64			255				
A-C	193	48			193				
A-D	251	63	331	0.758	261	6.1	3.6	55.923	F
D-A	104	26	82	1.275	82	31.7	37.4	1445.193	F
D-BC	259	65	203	1.277	203	78.4	92.5	1416.731	F
C-D	117	29			117				
C-A	391	98			391				
C-B	156	39	487	0.319	156	0.6	0.5	10.900	B

17:30 - 17:45

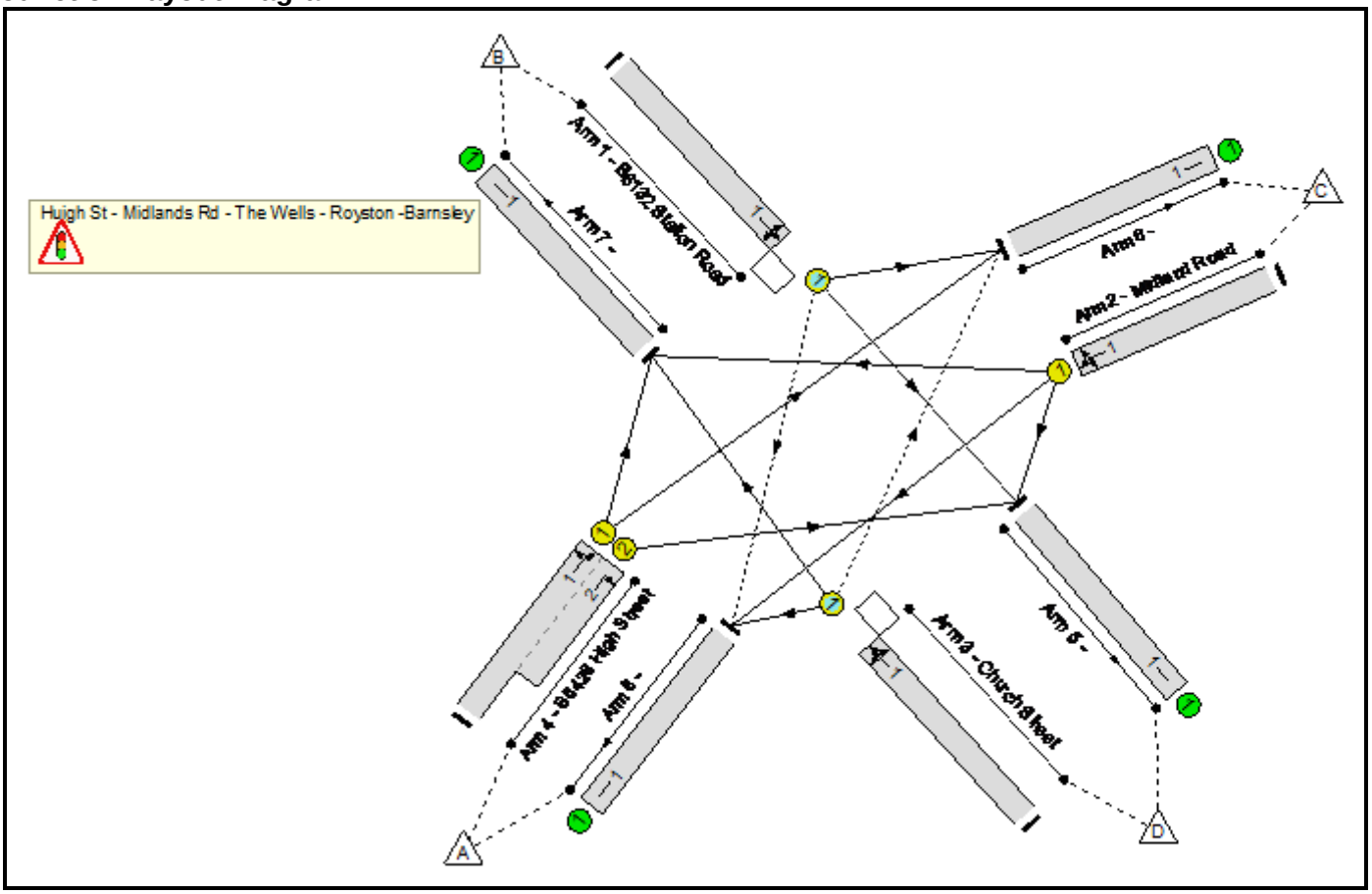
Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	59	15	61	0.975	59	27.3	27.4	1677.000	F
B-AD	331	83	334	0.989	333	148.6	147.9	1609.789	F
A-B	214	53			214				
A-C	162	40			162				
A-D	210	53	345	0.609	218	3.6	1.7	29.834	D
D-A	87	22	101	0.862	99	37.4	34.5	1312.447	F
D-BC	217	54	251	0.863	248	92.5	84.6	1283.321	F
C-D	98	24			98				
C-A	327	82			327				
C-B	130	33	504	0.258	131	0.5	0.4	9.660	A

11491 Monckton Coke Works - Royston

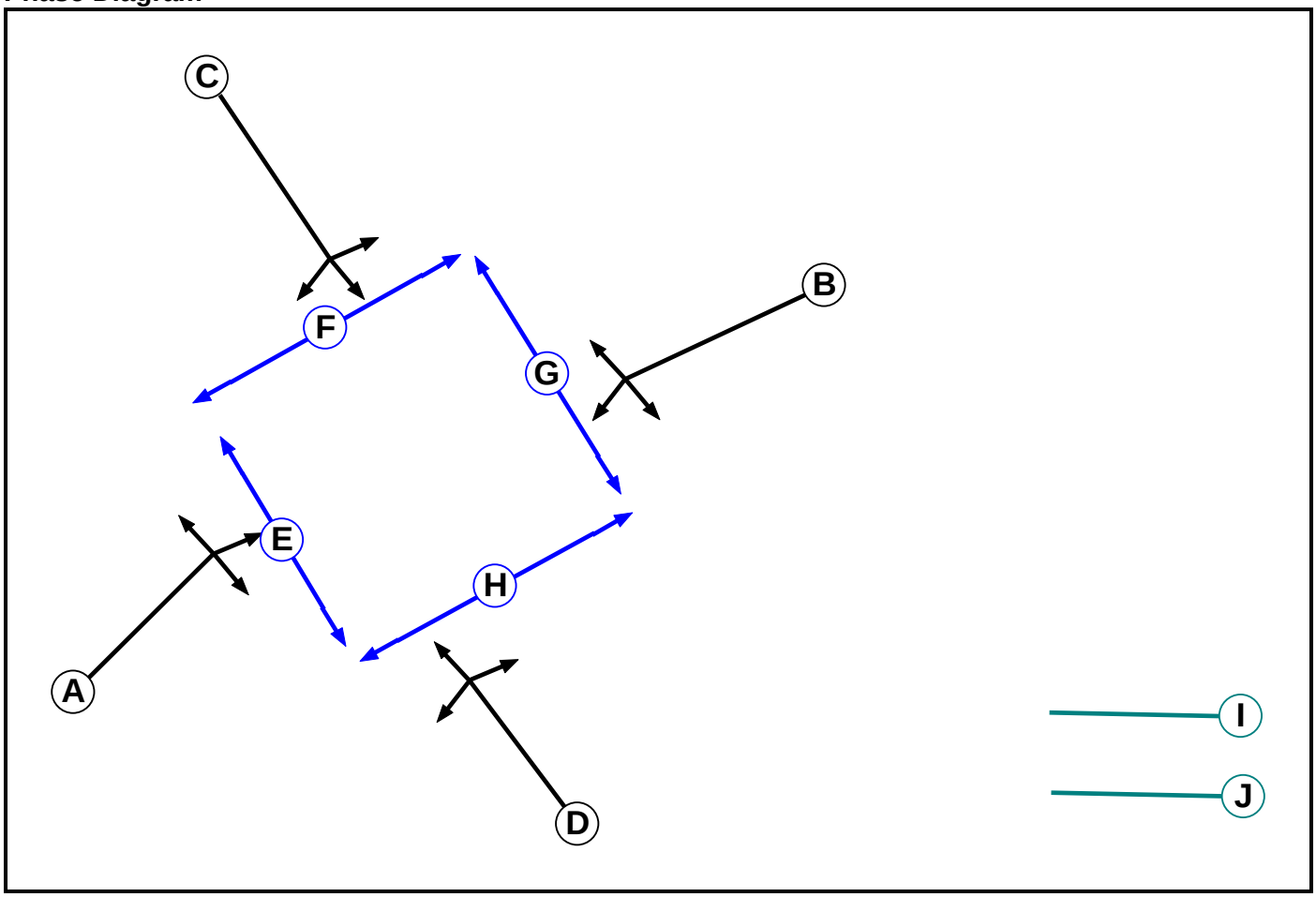
User and Project Details

Project:	**Huigh St - Midlands Rd - The Wells - Royston -Barnsley**
Title:	
Location:	
Site Ref(s):	j0087
Date Completed:	April 2020
Additional detail:	
File name:	The Wells Royston - Barnsley.lsg3x
Author:	Sanderson Associates
Company:	Sanderson Associates
Address:	

Junction Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Pedestrian		5	5
F	Pedestrian		6	6
G	Pedestrian		5	5
H	Pedestrian		5	5
I	Dummy		0	0
J	Dummy		3	3

11491 Monckton Coke Works - Royston

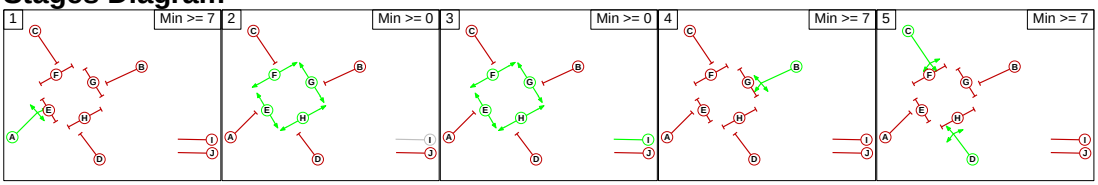
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J
A		7	6	6	8	8	8	8	8	3
B	6		7	7	8	8	8	8	8	3
C	7	7		-	8	8	8	8	8	3
D	7	7	-		8	8	8	8	8	3
E	5	5	5	5		-	-	-	-	0
F	5	5	5	5	-		-	-	-	0
G	5	5	5	5	-	-		-	-	0
H	5	5	5	5	-	-	-		-	0
I	0	0	0	0	-	-	-	-		-
J	0	0	0	0	2	2	2	2	-	

Phases in Stage

Stage No.	Phases in Stage
1	A
2	E F G H
3	E F G H I
4	B
5	C D

Stages Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Changes

From Stage \ To Stage	1	2	3	4	5
1		8	8	7	6
2	5		0	5	5
3	5	0		5	5
4	6	8	8		7
5	7	8	8	7	

Lane Input Data

Junction: Huigh St - Midlands Rd - The Wells - Royston -Barnsley

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (B6132 Station Road)	O	C	2	3	60.0	Geom	-	3.30	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Left	15.00
											Arm 8 Right	18.00
2/1 (Midland Road)	U	B	2	3	60.0	Geom	-	3.70	0.00	Y	Arm 5 Left	6.00
											Arm 7 Right	18.00
											Arm 8 Ahead	Inf
3/1 (Church Street)	O	D	2	3	60.0	Geom	-	3.40	0.00	Y	Arm 6 Right	10.00
											Arm 7 Ahead	Inf
											Arm 8 Left	12.00
4/1 (B6428 High Street)	U	A	2	3	60.0	Geom	-	2.80	0.00	Y	Arm 6 Ahead	Inf
											Arm 7 Left	25.00
4/2 (B6428 High Street)	U	A	2	3	8.0	Geom	-	2.80	0.00	Y	Arm 5 Right	12.00
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2018 Base Traffic Flows AM'	08:00	09:00	01:00	
2: '2018 Base Traffic Flows PM'	17:00	18:00	01:00	
3: '2030 Base Traffic Flows AM'	08:00	09:00	01:00	F1*1.147
4: '2030 Base Traffic Flows PM'	17:00	18:00	01:00	F2*1.147
5: 'Committed Dev Flows AM '	08:00	09:00	01:00	
6: 'Committed Dev Flows PM '	17:00	18:00	01:00	
7: 'Development Traffic AM'	08:00	09:00	01:00	
8: 'Development Traffic PM'	17:00	18:00	01:00	
9: '2030 Base + Committed AM '	08:00	09:00	01:00	F3+F5
10: '2030 Base + Committed PM '	17:00	18:00	01:00	F4+F6
11: '2030 Base + Committed + Dev AM '	08:00	09:00	01:00	F3+F5+F7
12: '2030 Base + Committed + Dev PM '	17:00	18:00	01:00	F4+F6+F8

Link Results

Scenario 1: '2018 Base Traffic flows AM ' (FG1: '2018 Base Traffic Flows AM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	**76.3%**	**11.1**	**15.5**	-
Huigh St - Midlands Rd - The Wells - Royston -Barnsley	-	-	-		-	-	-	-	-	**76.3%**	**11.1**	**15.5**	-
1/1	B6132 Station Road Ahead Left Right	O	C		1	23	-	187	508	36.8%	1.4	1.7	4.1
2/1	Midland Road Left Right Ahead	U	B		1	22	-	346	461	75.1%	3.0	4.4	9.4
3/1	Church Street Right Ahead Left	O	D		1	23	-	372	488	76.3%	3.1	4.7	10.0
4/1+4/2	B6428 High Street Right Ahead Left	U	A		1	12	-	350	272+239	72.1 : 64.4%	3.6	4.6	5.7

C1 PRC for Signalled Lanes (%): 18.0 Total Delay for Signalled Lanes (pcuHr): 15.53 Cycle Time (s): 90
PRC Over All Lanes (%): 18.0 Total Delay Over All Lanes(pcuHr): 15.53

Scenario 2: '2018 Base Traffic flows PM ' (FG2: '2018 Base Traffic Flows PM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	**85.4%**	**13.0**	**21.4**	-
Huigh St - Midlands Rd - The Wells - Royston -Barnsley	-	-	-		-	-	-	-	-	**85.4%**	**13.0**	**21.4**	-
1/1	B6132 Station Road Ahead Left Right	O	C		1	22	-	255	479	53.3%	2.0	2.7	6.0
2/1	Midland Road Left Right Ahead	U	B		1	20	-	361	425	84.9%	3.3	5.9	11.2
3/1	Church Street Right Ahead Left	O	D		1	22	-	370	433	85.4%	3.3	6.1	11.4
4/1+4/2	B6428 High Street Right Ahead Left	U	A		1	15	-	455	332+219	82.5 : 82.5%	4.4	6.7	8.8

C1 PRC for Signalled Lanes (%): 5.4 Total Delay for Signalled Lanes (pcuHr): 21.36 Cycle Time (s): 90
PRC Over All Lanes (%): 5.4 Total Delay Over All Lanes(pcuHr): 21.36

Scenario 3: '2030 Base + Committed Traffic flows AM ' (FG9: '2030 Base + Committed AM ', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	**91.3%**	**13.9**	**24.9**	-
Huigh St - Midlands Rd - The Wells - Royston -Barnsley	-	-	-		-	-	-	-	-	**91.3%**	**13.9**	**24.9**	-
1/1	B6132 Station Road Ahead Left Right	O	C		1	23	-	217	507	42.8%	1.6	2.1	4.8
2/1	Midland Road Left Right Ahead	U	B		1	21	-	403	441	91.3%	3.7	8.0	14.0
3/1	Church Street Right Ahead Left	O	D		1	23	-	438	487	90.0%	3.9	7.8	14.3
4/1+4/2	B6428 High Street Right Ahead Left	U	A		1	13	-	459	292+262	85.9 : 79.4%	4.7	7.0	8.4

C1 PRC for Signalled Lanes (%): -1.5 Total Delay for Signalled Lanes (pcuHr): 24.89 Cycle Time (s): 90
PRC Over All Lanes (%): -1.5 Total Delay Over All Lanes(pcuHr): 24.89

Scenario 4: '2030 Base + Committed Traffic flows PM ' (FG10: '2030 Base + Committed PM ', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	**104.8%**	**17.6**	**62.6**	-
Huigh St - Midlands Rd - The Wells - Royston -Barnsley	-	-	-		-	-	-	-	-	**104.8%**	**17.6**	**62.6**	-
1/1	B6132 Station Road Ahead Left Right	O	C		1	23	-	301	499	60.4%	2.4	3.3	7.3
2/1	Midland Road Left Right Ahead	U	B		1	20	-	433	427	101.5%	4.4	16.5	23.1
3/1	Church Street Right Ahead Left	O	D		1	23	-	449	444	101.2%	4.3	16.4	23.3
4/1+4/2	B6428 High Street Right Ahead Left	U	A		1	14	-	553	314+214	104.8 : 104.8%	6.6	26.3	29.1

C1 PRC for Signalled Lanes (%): -16.5 Total Delay for Signalled Lanes (pcuHr): 62.57 Cycle Time (s): 90
PRC Over All Lanes (%): -16.5 Total Delay Over All Lanes(pcuHr): 62.57

Scenario 5: '2030 Base + Committed + Dev Traffic flows AM ' (FG11: '2030 Base + Committed + Dev AM ', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	**103.4%**	**16.6**	**56.1**	-
Huigh St - Midlands Rd - The Wells - Royston -Barnsley	-	-	-		-	-	-	-	-	**103.4%**	**16.6**	**56.1**	-
1/1	B6132 Station Road Ahead Left Right	O	C		1	21	-	218	465	46.9%	1.8	2.3	5.0
2/1	Midland Road Left Right Ahead	U	B		1	24	-	509	504	101.0%	4.8	17.4	25.5
3/1	Church Street Right Ahead Left	O	D		1	21	-	450	445	101.0%	4.5	16.4	23.2
4/1+4/2	B6428 High Street Right Ahead Left	U	A		1	12	-	489	272+212	103.4 : 98.3%	5.6	20.0	21.6

C1 PRC for Signalled Lanes (%): -14.9 Total Delay for Signalled Lanes (pcuHr): 56.06 Cycle Time (s): 90
PRC Over All Lanes (%): -14.9 Total Delay Over All Lanes(pcuHr): 56.06

Scenario 6: '2030 Base + Committed + Dev Traffic flows PM ' (FG12: '2030 Base + Committed + Dev PM ', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	**120.8%**	**28.3**	**158.5**	-
Huigh St - Midlands Rd - The Wells - Royston -Barnsley	-	-	-		-	-	-	-	-	**120.8%**	**28.3**	**158.5**	-
1/1	B6132 Station Road Ahead Left Right	O	C		1	23	-	303	499	60.8%	2.4	3.2	7.3
2/1	Midland Road Left Right Ahead	U	B		1	19	-	480	407	118.0%	7.3	46.8	53.4
3/1	Church Street Right Ahead Left	O	D		1	23	-	478	419	114.0%	7.4	40.7	47.5
4/1+4/2	B6428 High Street Right Ahead Left	U	A		1	15	-	626	333+185	120.8 : 120.8%	11.2	67.8	71.7

C1 PRC for Signalled Lanes (%): -34.2 Total Delay for Signalled Lanes (pcuHr): 158.53 Cycle Time (s): 90
PRC Over All Lanes (%): -34.2 Total Delay Over All Lanes(pcuHr): 158.53

Scenario 7: '2018 Base Traffic flows AM Peds Alt ' (FG1: '2018 Base Traffic Flows AM', Plan 2: 'Peds alt Cycle ')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	**69.1%**	**10.4**	**13.9**	-
Huigh St - Midlands Rd - The Wells - Royston -Barnsley	-	-	-		-	-	-	-	-	**69.1%**	**10.4**	**13.9**	-
1/1	B6132 Station Road Ahead Left Right	O	C		2	51	-	187	561	33.4%	1.3	1.6	4.0
2/1	Midland Road Left Right Ahead	U	B		2	49	-	346	511	67.8%	2.8	3.8	8.9
3/1	Church Street Right Ahead Left	O	D		2	51	-	372	539	69.1%	2.9	4.0	9.6
4/1+4/2	B6428 High Street Right Ahead Left	U	A		2	26	-	350	293+230	67.0 : 67.0%	3.5	4.5	5.6

C1 PRC for Signalled Lanes (%): 30.3 Total Delay for Signalled Lanes (pcuHr): 13.88 Cycle Time (s): 180
PRC Over All Lanes (%): 30.3 Total Delay Over All Lanes(pcuHr): 13.88

Scenario 8: '2018 Base Traffic flows PM Peds Alt ' (FG2: '2018 Base Traffic Flows PM', Plan 2: 'Peds alt Cycle ')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	**78.2%**	**12.3**	**18.0**	-
Huigh St - Midlands Rd - The Wells - Royston -Barnsley	-	-	-		-	-	-	-	-	**78.2%**	**12.3**	**18.0**	-
1/1	B6132 Station Road Ahead Left Right	O	C		2	48	-	255	520	49.0%	1.9	2.5	5.8
2/1	Midland Road Left Right Ahead	U	B		2	44	-	361	466	77.5%	3.1	4.8	10.5
3/1	Church Street Right Ahead Left	O	D		2	48	-	370	473	78.2%	3.1	4.9	10.3
4/1+4/2	B6428 High Street Right Ahead Left	U	A		2	34	-	455	356+235	76.9 : 76.9%	4.2	5.8	8.2

C1 PRC for Signalled Lanes (%): 15.1 Total Delay for Signalled Lanes (pcuHr): 18.02 Cycle Time (s): 180
PRC Over All Lanes (%): 15.1 Total Delay Over All Lanes(pcuHr): 18.02

Scenario 9: '2030 Base + Committed Traffic flows AM Peds Alt ' (FG9: '2030 Base + Committed AM ', Plan 2: 'Peds alt Cycle ')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	**82.0%**	**13.1**	**19.8**	-
Huigh St - Midlands Rd - The Wells - Royston -Barnsley	-	-	-		-	-	-	-	-	**82.0%**	**13.1**	**19.8**	-
1/1	B6132 Station Road Ahead Left Right	O	C		2	51	-	217	560	38.7%	1.5	1.9	4.7
2/1	Midland Road Left Right Ahead	U	B		2	47	-	403	491	82.0%	3.4	5.6	12.0
3/1	Church Street Right Ahead Left	O	D		2	51	-	438	538	81.5%	3.6	5.7	12.5
4/1+4/2	B6428 High Street Right Ahead Left	U	A		2	28	-	459	313+260	80.1 : 80.1%	4.6	6.5	8.3

C1 PRC for Signalled Lanes (%): 9.7 Total Delay for Signalled Lanes (pcuHr): 19.81 Cycle Time (s): 180
PRC Over All Lanes (%): 9.7 Total Delay Over All Lanes(pcuHr): 19.81

Scenario 10: '2030 Base + Committed Traffic flows PM Peds Alt ' (FG10: '2030 Base + Committed PM ', Plan 2: 'Peds alt Cycle ')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	**94.7%**	**15.6**	**33.6**	-
Huigh St - Midlands Rd - The Wells - Royston -Barnsley	-	-	-		-	-	-	-	-	**94.7%**	**15.6**	**33.6**	-
1/1	B6132 Station Road Ahead Left Right	O	C		2	50	-	301	539	55.8%	2.3	3.0	7.4
2/1	Midland Road Left Right Ahead	U	B		2	43	-	433	457	94.7%	4.0	10.0	17.2
3/1	Church Street Right Ahead Left	O	D		2	50	-	449	483	93.0%	3.9	9.2	16.7
4/1+4/2	B6428 High Street Right Ahead Left	U	A		2	33	-	553	350+238	94.1 : 94.1%	5.4	11.4	15.3

C1 PRC for Signalled Lanes (%): -5.3 Total Delay for Signalled Lanes (pcuHr): 33.57 Cycle Time (s): 180
PRC Over All Lanes (%): -5.3 Total Delay Over All Lanes(pcuHr): 33.57

Scenario 11: '2030 Base + Committed + Dev Traffic flows AM Peds Alt ' (FG11: '2030 Base + Committed + Dev AM ', Plan 2: 'Peds alt Cycle ')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	**92.7%**	**15.0**	**30.1**	-
Huigh St - Midlands Rd - The Wells - Royston -Barnsley	-	-	-		-	-	-	-	-	**92.7%**	**15.0**	**30.1**	-
1/1	B6132 Station Road Ahead Left Right	O	C		2	46	-	218	507	43.0%	1.7	2.1	5.2
2/1	Midland Road Left Right Ahead	U	B		2	53	-	509	554	91.8%	4.3	8.9	17.5
3/1	Church Street Right Ahead Left	O	D		2	46	-	450	486	92.6%	4.0	9.0	16.4
4/1+4/2	B6428 High Street Right Ahead Left	U	A		2	27	-	489	303+224	92.7 : 92.7%	5.0	10.1	12.5

C1 PRC for Signalled Lanes (%): -3.0 Total Delay for Signalled Lanes (pcuHr): 30.14 Cycle Time (s): 180
PRC Over All Lanes (%): -3.0 Total Delay Over All Lanes(pcuHr): 30.14

Scenario 12: '2030 Base + Committed + Dev Traffic flows PM Peds Alt ' (FG12: '2030 Base + Committed + Dev PM ', Plan 2: 'Peds alt Cycle ')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	**107.2%**	**30.8**	**99.2**	-
Huigh St - Midlands Rd - The Wells - Royston -Barnsley	-	-	-		-	-	-	-	-	**107.2%**	**30.8**	**99.2**	-
1/1	B6132 Station Road Ahead Left Right	O	C		2	47	-	303	509	59.5%	2.7	3.5	7.8
2/1	Midland Road Left Right Ahead	U	B		2	42	-	480	448	107.2%	8.4	30.1	41.3
3/1	Church Street Right Ahead Left	O	D		2	47	-	478	448	106.7%	9.1	30.2	40.3
4/1+4/2	B6428 High Street Right Ahead Left	U	A		2	37	-	626	378+211	106.3 : 106.3%	10.5	35.4	43.0

C1 PRC for Signalled Lanes (%): -19.2 Total Delay for Signalled Lanes (pcuHr): 99.22 Cycle Time (s): 180
PRC Over All Lanes (%): -19.2 Total Delay Over All Lanes(pcuHr): 99.22

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.1.7462
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Filename: Cross.j9
Path: G:\12910 Hargreaves Services plc\12910-5005 Monckton Coke Works\Calcs
Report generation date: 06/04/2020 09:52:09

»Midland/Cross Junction - 2020, AM
»Midland/Cross Junction - 2020, PM
»Midland/Cross Junction - 2030+Com, AM
»Midland/Cross Junction - 2030+Com, PM
»Midland/Cross Junction - 2030+Com+Dev, AM
»Midland/Cross Junction - 2030+Com+Dev, PM

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	Midland/Cross Junction - 2020											
Stream B-AC	D1	0.3	8.75	0.25	A	2.79	D2	0.4	9.97	0.30	A	2.84
Stream C-AB		0.0	6.18	0.03	A			0.1	6.78	0.10	A	
	Midland/Cross Junction - 2030+Com											
Stream B-AC	D3	0.4	9.38	0.29	A	2.88	D4	0.5	11.10	0.35	B	3.05
Stream C-AB		0.0	6.27	0.04	A			0.1	6.97	0.11	A	
	Midland/Cross Junction - 2030+Com+Dev											
Stream B-AC	D5	0.5	11.05	0.35	B	2.65	D6	0.8	14.33	0.45	B	3.45
Stream C-AB		0.0	6.66	0.04	A			0.1	7.02	0.12	A	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

File summary

File Description

Title	Royston Development
Location	Midland/Cross Junction
Site number	3
Date	05/03/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	MET\TomL
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	PCU	PCU	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	2020	AM	ONE HOUR	07:30	09:00	15	✓
D2	2020	PM	ONE HOUR	16:15	17:45	15	✓
D3	2030+Com	AM	ONE HOUR	07:30	09:00	15	✓
D4	2030+Com	PM	ONE HOUR	16:15	17:45	15	✓
D5	2030+Com+Dev	AM	ONE HOUR	07:30	09:00	15	✓
D6	2030+Com+Dev	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A3	Midland/Cross Junction	✓	100.000	100.000

Midland/Cross Junction - 2020, AM

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
3	Midland/Cross Junction	T-Junction	Two-way		2.79	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Midland (east)		Major
B	Cross		Minor
C	Midland (west)		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	7.00			120.0	✓	1.00

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	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.80	18	100

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	575	0.100	0.253	0.159	0.362
B-C	742	0.109	0.275	-	-
C-B	643	0.238	0.238	-	-

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	2020	AM	ONE HOUR	07:30	09:00	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	177	100.000
B		ONE HOUR	✓	127	100.000
C		ONE HOUR	✓	132	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	103	74
	B	97	0	30
	C	115	17	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.25	8.75	0.3	A	117	175
C-AB	0.03	6.18	0.0	A	16	24
C-A					105	158
A-B					95	142
A-C					68	102

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	96	24	569	0.168	95	0.0	0.2	7.580	A
C-AB	13	3	613	0.021	13	0.0	0.0	5.992	A
C-A	87	22			87				
A-B	78	19			78				
A-C	56	14			56				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	114	29	562	0.203	114	0.2	0.3	8.040	A
C-AB	15	4	608	0.025	15	0.0	0.0	6.072	A
C-A	103	26			103				
A-B	93	23			93				
A-C	67	17			67				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	140	35	551	0.254	139	0.3	0.3	8.737	A
C-AB	19	5	601	0.031	19	0.0	0.0	6.183	A
C-A	126	32			126				
A-B	113	28			113				
A-C	81	20			81				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	140	35	551	0.254	140	0.3	0.3	8.751	A
C-AB	19	5	601	0.031	19	0.0	0.0	6.183	A
C-A	126	32			126				
A-B	113	28			113				
A-C	81	20			81				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	114	29	562	0.203	114	0.3	0.3	8.060	A
C-AB	15	4	608	0.025	15	0.0	0.0	6.072	A
C-A	103	26			103				
A-B	93	23			93				
A-C	67	17			67				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	96	24	569	0.168	96	0.3	0.2	7.611	A
C-AB	13	3	613	0.021	13	0.0	0.0	5.993	A
C-A	87	22			87				
A-B	78	19			78				
A-C	56	14			56				

Midland/Cross Junction - 2020, PM

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
3	Midland/Cross Junction	T-Junction	Two-way		2.84	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	2020	PM	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	274	100.000
B		ONE HOUR	✓	142	100.000
C		ONE HOUR	✓	204	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	97	177
	B	98	0	44
	C	154	50	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.30	9.97	0.4	A	130	195
C-AB	0.10	6.78	0.1	A	47	70
C-A					140	211
A-B					89	134
A-C					162	244

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	107	27	550	0.195	106	0.0	0.2	8.099	A
C-AB	38	10	602	0.063	38	0.0	0.1	6.382	A
C-A	115	29			115				
A-B	73	18			73				
A-C	133	33			133				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	128	32	536	0.238	127	0.2	0.3	8.802	A
C-AB	46	11	595	0.077	46	0.1	0.1	6.549	A
C-A	138	34			138				
A-B	87	22			87				
A-C	159	40			159				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	156	39	517	0.302	156	0.3	0.4	9.946	A
C-AB	57	14	588	0.096	57	0.1	0.1	6.775	A
C-A	168	42			168				
A-B	107	27			107				
A-C	195	49			195				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	156	39	517	0.302	156	0.4	0.4	9.972	A
C-AB	57	14	588	0.096	57	0.1	0.1	6.778	A
C-A	168	42			168				
A-B	107	27			107				
A-C	195	49			195				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	128	32	536	0.238	128	0.4	0.3	8.837	A
C-AB	46	11	595	0.077	46	0.1	0.1	6.551	A
C-A	138	34			138				
A-B	87	22			87				
A-C	159	40			159				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	107	27	549	0.195	107	0.3	0.2	8.145	A
C-AB	38	10	602	0.063	38	0.1	0.1	6.389	A
C-A	115	29			115				
A-B	73	18			73				
A-C	133	33			133				

Midland/Cross Junction - 2030+Com, AM

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
3	Midland/Cross Junction	T-Junction	Two-way		2.88	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
D3	2030+Com	AM	ONE HOUR	07:30	09:00	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	204	100.000
B		ONE HOUR	✓	143	100.000
C		ONE HOUR	✓	160	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	116	88
	B	109	0	34
	C	141	19	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.29	9.38	0.4	A	131	197
C-AB	0.04	6.27	0.0	A	18	26
C-A					129	194
A-B					106	160
A-C					81	121

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	108	27	562	0.191	107	0.0	0.2	7.886	A
C-AB	14	4	609	0.024	14	0.0	0.0	6.050	A
C-A	106	27			106				
A-B	87	22			87				
A-C	66	17			66				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	129	32	553	0.232	128	0.2	0.3	8.461	A
C-AB	17	4	603	0.028	17	0.0	0.0	6.141	A
C-A	127	32			127				
A-B	104	26			104				
A-C	79	20			79				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	157	39	541	0.291	157	0.3	0.4	9.358	A
C-AB	21	5	595	0.035	21	0.0	0.0	6.267	A
C-A	155	39			155				
A-B	128	32			128				
A-C	97	24			97				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	157	39	541	0.291	157	0.4	0.4	9.379	A
C-AB	21	5	595	0.035	21	0.0	0.0	6.267	A
C-A	155	39			155				
A-B	128	32			128				
A-C	97	24			97				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	129	32	553	0.232	129	0.4	0.3	8.490	A
C-AB	17	4	603	0.028	17	0.0	0.0	6.144	A
C-A	127	32			127				
A-B	104	26			104				
A-C	79	20			79				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	108	27	562	0.191	108	0.3	0.2	7.927	A
C-AB	14	4	609	0.024	14	0.0	0.0	6.052	A
C-A	106	27			106				
A-B	87	22			87				
A-C	66	17			66				

Midland/Cross Junction - 2030+Com, PM

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
3	Midland/Cross Junction	T-Junction	Two-way		3.05	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
D4	2030+Com	PM	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	320	100.000
B		ONE HOUR	✓	160	100.000
C		ONE HOUR	✓	236	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	109	211
	B	110	0	50
	C	179	57	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.35	11.10	0.5	B	147	220
C-AB	0.11	6.97	0.1	A	54	81
C-A					163	244
A-B					100	150
A-C					194	290

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	120	30	538	0.224	119	0.0	0.3	8.570	A
C-AB	44	11	596	0.073	43	0.0	0.1	6.513	A
C-A	134	34			134				
A-B	82	21			82				
A-C	159	40			159				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	144	36	522	0.275	143	0.3	0.4	9.493	A
C-AB	53	13	589	0.089	52	0.1	0.1	6.707	A
C-A	160	40			160				
A-B	98	24			98				
A-C	190	47			190				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	176	44	500	0.352	176	0.4	0.5	11.056	B
C-AB	65	16	582	0.112	65	0.1	0.1	6.968	A
C-A	195	49			195				
A-B	120	30			120				
A-C	232	58			232				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	176	44	500	0.352	176	0.5	0.5	11.099	B
C-AB	65	16	582	0.112	65	0.1	0.1	6.974	A
C-A	195	49			195				
A-B	120	30			120				
A-C	232	58			232				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	144	36	522	0.275	144	0.5	0.4	9.541	A
C-AB	53	13	589	0.089	53	0.1	0.1	6.712	A
C-A	160	40			160				
A-B	98	24			98				
A-C	190	47			190				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	120	30	538	0.224	121	0.4	0.3	8.635	A
C-AB	44	11	596	0.073	44	0.1	0.1	6.520	A
C-A	134	34			134				
A-B	82	21			82				
A-C	159	40			159				

Midland/Cross Junction - 2030+Com+Dev, AM

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
3	Midland/Cross Junction	T-Junction	Two-way		2.65	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
D5	2030+Com+Dev	AM	ONE HOUR	07:30	09:00	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	340	100.000
B		ONE HOUR	✓	156	100.000
C		ONE HOUR	✓	203	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	146	194
	B	122	0	34
	C	184	19	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.35	11.05	0.5	B	143	215
C-AB	0.04	6.66	0.0	A	18	26
C-A					169	253
A-B					134	201
A-C					178	267

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	117	29	532	0.221	116	0.0	0.3	8.645	A
C-AB	14	4	586	0.025	14	0.0	0.0	6.299	A
C-A	138	35			138				
A-B	110	27			110				
A-C	146	37			146				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	140	35	517	0.271	140	0.3	0.4	9.528	A
C-AB	17	4	576	0.030	17	0.0	0.0	6.447	A
C-A	165	41			165				
A-B	131	33			131				
A-C	174	44			174				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	172	43	498	0.345	171	0.4	0.5	11.006	B
C-AB	21	5	562	0.038	21	0.0	0.0	6.658	A
C-A	202	51			202				
A-B	161	40			161				
A-C	214	53			214				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	172	43	498	0.345	172	0.5	0.5	11.045	B
C-AB	21	5	562	0.038	21	0.0	0.0	6.660	A
C-A	202	51			202				
A-B	161	40			161				
A-C	214	53			214				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	140	35	517	0.271	141	0.5	0.4	9.575	A
C-AB	17	4	576	0.030	17	0.0	0.0	6.448	A
C-A	165	41			165				
A-B	131	33			131				
A-C	174	44			174				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	117	29	532	0.221	118	0.4	0.3	8.707	A
C-AB	14	4	586	0.025	14	0.0	0.0	6.299	A
C-A	138	35			138				
A-B	110	27			110				
A-C	146	37			146				

Midland/Cross Junction - 2030+Com+Dev, PM

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
3	Midland/Cross Junction	T-Junction	Two-way		3.45	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	2030+Com+Dev	PM	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	380	100.000
B		ONE HOUR	✓	190	100.000
C		ONE HOUR	✓	341	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	122	258
	B	140	0	50
	C	284	57	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.45	14.33	0.8	B	174	262
C-AB	0.12	7.02	0.1	A	55	82
C-A					258	387
A-B					112	168
A-C					237	355

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	143	36	509	0.281	142	0.0	0.4	9.763	A
C-AB	44	11	591	0.075	44	0.0	0.1	6.574	A
C-A	213	53			213				
A-B	92	23			92				
A-C	194	49			194				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	171	43	488	0.350	170	0.4	0.5	11.293	B
C-AB	53	13	585	0.091	53	0.1	0.1	6.767	A
C-A	253	63			253				
A-B	110	27			110				
A-C	232	58			232				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	209	52	460	0.455	208	0.5	0.8	14.209	B
C-AB	67	17	580	0.115	67	0.1	0.1	7.015	A
C-A	309	77			309				
A-B	134	34			134				
A-C	284	71			284				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	209	52	460	0.455	209	0.8	0.8	14.331	B
C-AB	67	17	580	0.115	67	0.1	0.1	7.019	A
C-A	309	77			309				
A-B	134	34			134				
A-C	284	71			284				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	171	43	488	0.350	172	0.8	0.5	11.416	B
C-AB	53	13	585	0.091	53	0.1	0.1	6.771	A
C-A	253	63			253				
A-B	110	27			110				
A-C	232	58			232				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	143	36	509	0.281	144	0.5	0.4	9.880	A
C-AB	44	11	591	0.075	44	0.1	0.1	6.584	A
C-A	213	53			213				
A-B	92	23			92				
A-C	194	49			194				

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.1.7462
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Filename: ChurchLane.j9
Path: G:\12910 Hargreaves Services plc\12910-5005 Monckton Coke Works\Calcs
Report generation date: 06/04/2020 11:40:42

»Church/Lund Hill/Hall Field Junction - 2020, AM
»Church/Lund Hill/Hall Field Junction - 2020 , PM
»Church/Lund Hill/Hall Field Junction - 2030+Com, AM
»Church/Lund Hill/Hall Field Junction - 2030+Com, PM
»Church/Lund Hill/Hall Field Junction - 2030+Com+Dev, AM
»Church/Lund Hill/Hall Field Junction - 2030+Com+Dev, PM

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
Church/Lund Hill/Hall Field Junction - 2020												
Stream B-ACD	D1	7.4	60.95	0.91	F	29.66	D2	1.7	19.18	0.64	C	15.58
Stream A-BCD		0.0	6.47	0.01	A			0.0	6.56	0.02	A	
Stream D-ABC		0.7	13.21	0.42	B			2.9	31.46	0.76	D	
Stream C-ABD		0.2	6.73	0.13	A			0.2	7.00	0.14	A	
Church/Lund Hill/Hall Field Junction - 2030+Com												
Stream B-ACD	D3	24.8	164.96	1.05	F	74.67	D4	2.9	28.62	0.75	D	26.14
Stream A-BCD		0.0	6.59	0.01	A			0.0	6.69	0.02	A	
Stream D-ABC		0.9	15.56	0.49	C			6.0	58.66	0.88	F	
Stream C-ABD		0.2	6.93	0.15	A			0.2	7.29	0.16	A	
Church/Lund Hill/Hall Field Junction - 2030+Com+Dev												
Stream B-ACD	D5	37.1	236.70	1.12	F	99.35	D6	4.0	37.84	0.82	E	48.91
Stream A-BCD		0.0	6.87	0.01	A			0.0	6.81	0.02	A	
Stream D-ABC		1.2	19.09	0.55	C			14.9	127.18	1.00	F	
Stream C-ABD		0.2	7.31	0.20	A			0.2	7.53	0.18	A	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

File summary

File Description

Title	Royston Development
Location	Church/Lund Hill/Hall Field Junction
Site number	5
Date	05/03/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	MET\TomL
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	PCU	PCU	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	2020	AM	ONE HOUR	07:30	09:00	15	✓
D2	2020	PM	ONE HOUR	16:15	17:45	15	✓
D3	2030+Com	AM	ONE HOUR	07:30	09:00	15	✓
D4	2030+Com	PM	ONE HOUR	16:15	17:45	15	✓
D5	2030+Com+Dev	AM	ONE HOUR	07:30	09:00	15	✓
D6	2030+Com+Dev	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Name	Description	Include in report	Use specific Demand Set(s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A5	Church/Lund Hill/Hall Field Junction	Church/Lund Hill/Hall Field Junction	✓	✓	D1,D2,D3,D4,D5,D6	100.000	100.000

Church/Lund Hill/Hall Field Junction - 2020, AM

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
5	Church/Lund Hill\Hall Field	Crossroads	Two-way		29.66	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Hall Field		Major
B	Church (south)		Minor
C	Lund Hill		Major
D	Church (north)		Minor

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)
A	7.30			80.0	✓	2.00
C	7.30			140.0	✓	2.00

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	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	4.00	40	100
D	One lane	3.80	70	30

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
A-D	620	-	-	-	-	-	-	0.227	0.324	0.227	-	-	-
B-A	594	0.102	0.258	0.258	-	-	-	0.162	0.369	-	0.258	0.258	0.129
B-C	756	0.109	0.276	-	-	-	-	-	-	-	-	-	-
B-D, nearside lane	594	0.102	0.258	0.258	-	-	-	0.162	0.369	0.162	-	-	-
B-D, offside lane	594	0.102	0.258	0.258	-	-	-	0.162	0.369	0.162	-	-	-
C-B	655	0.239	0.239	0.342	-	-	-	-	-	-	-	-	-
D-A	694	-	-	-	-	-	-	0.254	-	0.100	-	-	-
D-B, nearside lane	556	0.152	0.152	0.345	-	-	-	0.242	0.242	0.096	-	-	-
D-B, offside lane	556	0.152	0.152	0.345	-	-	-	0.242	0.242	0.096	-	-	-
D-C	556	-	0.152	0.345	0.121	0.242	0.242	0.242	0.242	0.096	-	-	-

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	2020	AM	ONE HOUR	07:30	09:00	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	158	100.000
B		ONE HOUR	✓	426	100.000
C		ONE HOUR	✓	210	100.000
D		ONE HOUR	✓	178	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	38	117	3
	B	42	0	56	328
	C	118	73	0	19
	D	6	156	16	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.91	60.95	7.4	F	391	586
A-BCD	0.01	6.47	0.0	A	3	4
A-B					35	52
A-C					107	161
D-ABC	0.42	13.21	0.7	B	163	245
C-ABD	0.13	6.73	0.2	A	67	101
C-D					17	26
C-A					108	162

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	321	80	547	0.586	315	0.0	1.4	15.207	C
A-BCD	2	0.56	579	0.004	2	0.0	0.0	6.240	A
A-B	29	7			29				
A-C	88	22			88				
D-ABC	134	34	499	0.269	133	0.0	0.4	9.795	A
C-ABD	55	14	627	0.088	55	0.0	0.1	6.284	A
C-D	14	4			14				
C-A	89	22			89				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	383	96	534	0.717	379	1.4	2.3	22.617	C
A-BCD	3	0.67	571	0.005	3	0.0	0.0	6.334	A
A-B	34	9			34				
A-C	105	26			105				
D-ABC	160	40	486	0.329	160	0.4	0.5	11.002	B
C-ABD	66	16	622	0.106	66	0.1	0.1	6.469	A
C-D	17	4			17				
C-A	106	26			106				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	469	117	517	0.908	453	2.3	6.3	47.644	E
A-BCD	3	0.83	560	0.006	3	0.0	0.0	6.467	A
A-B	42	10			42				
A-C	129	32			129				
D-ABC	196	49	469	0.418	195	0.5	0.7	13.102	B
C-ABD	81	20	616	0.131	81	0.1	0.2	6.726	A
C-D	21	5			21				
C-A	130	32			130				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	469	117	517	0.908	465	6.3	7.4	60.951	F
A-BCD	3	0.83	560	0.006	3	0.0	0.0	6.467	A
A-B	42	10			42				
A-C	129	32			129				
D-ABC	196	49	468	0.418	196	0.7	0.7	13.208	B
C-ABD	81	20	616	0.131	81	0.2	0.2	6.729	A
C-D	21	5			21				
C-A	130	32			130				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	383	96	534	0.717	401	7.4	2.8	30.061	D
A-BCD	3	0.67	571	0.005	3	0.0	0.0	6.334	A
A-B	34	9			34				
A-C	105	26			105				
D-ABC	160	40	485	0.330	161	0.7	0.5	11.118	B
C-ABD	66	16	622	0.106	66	0.2	0.1	6.472	A
C-D	17	4			17				
C-A	106	26			106				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	321	80	547	0.587	326	2.8	1.5	16.653	C
A-BCD	2	0.56	579	0.004	2	0.0	0.0	6.244	A
A-B	29	7			29				
A-C	88	22			88				
D-ABC	134	34	498	0.269	135	0.5	0.4	9.910	A
C-ABD	55	14	627	0.088	55	0.1	0.1	6.294	A
C-D	14	4			14				
C-A	89	22			89				

Church/Lund Hill/Hall Field Junction - 2020 , PM

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
5	Church/Lund Hill\Hall Field	Crossroads	Two-way		15.58	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 segment length (min)	Run automatically
D2	2020	PM	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	223	100.000
B		ONE HOUR	✓	304	100.000
C		ONE HOUR	✓	211	100.000
D		ONE HOUR	✓	319	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	58	155	10
	B	40	0	98	166
	C	120	76	0	15
	D	7	302	10	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.64	19.18	1.7	C	279	418
A-BCD	0.02	6.56	0.0	A	9	14
A-B					53	80
A-C					142	213
D-ABC	0.76	31.46	2.9	D	293	439
C-ABD	0.14	7.00	0.2	A	70	105
C-D					14	21
C-A					110	165

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	229	57	560	0.408	226	0.0	0.7	10.688	B
A-BCD	8	2	579	0.013	7	0.0	0.0	6.301	A
A-B	44	11			44				
A-C	117	29			117				
D-ABC	240	60	494	0.486	236	0.0	0.9	13.798	B
C-ABD	57	14	615	0.093	57	0.0	0.1	6.447	A
C-D	11	3			11				
C-A	90	23			90				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	273	68	544	0.502	272	0.7	1.0	13.159	B
A-BCD	9	2	571	0.016	9	0.0	0.0	6.409	A
A-B	52	13			52				
A-C	139	35			139				
D-ABC	287	72	481	0.596	285	0.9	1.4	18.145	C
C-ABD	68	17	608	0.113	68	0.1	0.1	6.676	A
C-D	13	3			13				
C-A	108	27			108				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	335	84	522	0.641	332	1.0	1.7	18.638	C
A-BCD	11	3	559	0.020	11	0.0	0.0	6.563	A
A-B	64	16			64				
A-C	171	43			171				
D-ABC	351	88	464	0.758	346	1.4	2.8	29.230	D
C-ABD	84	21	598	0.141	84	0.1	0.2	7.001	A
C-D	16	4			16				
C-A	132	33			132				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	335	84	522	0.642	335	1.7	1.7	19.180	C
A-BCD	11	3	559	0.020	11	0.0	0.0	6.564	A
A-B	64	16			64				
A-C	171	43			171				
D-ABC	351	88	463	0.758	351	2.8	2.9	31.457	D
C-ABD	84	21	598	0.141	84	0.2	0.2	7.003	A
C-D	16	4			16				
C-A	132	33			132				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	273	68	544	0.502	276	1.7	1.0	13.582	B
A-BCD	9	2	570	0.016	9	0.0	0.0	6.411	A
A-B	52	13			52				
A-C	139	35			139				
D-ABC	287	72	481	0.596	292	2.9	1.5	19.594	C
C-ABD	68	17	608	0.113	69	0.2	0.1	6.682	A
C-D	13	3			13				
C-A	108	27			108				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	229	57	560	0.409	230	1.0	0.7	10.962	B
A-BCD	8	2	579	0.013	8	0.0	0.0	6.303	A
A-B	44	11			44				
A-C	117	29			117				
D-ABC	240	60	494	0.486	242	1.5	1.0	14.456	B
C-ABD	57	14	615	0.093	57	0.1	0.1	6.460	A
C-D	11	3			11				
C-A	90	23			90				

Church/Lund Hill/Hall Field Junction - 2030+Com, AM

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
5	Church/Lund Hill\Hall Field	Crossroads	Two-way		74.67	F

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	2030+Com	AM	ONE HOUR	07:30	09:00	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	183	100.000
B		ONE HOUR	✓	480	100.000
C		ONE HOUR	✓	247	100.000
D		ONE HOUR	✓	200	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	43	137	3
	B	47	0	63	370
	C	144	82	0	21
	D	7	175	18	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	1.05	164.96	24.8	F	440	661
A-BCD	0.01	6.59	0.0	A	3	4
A-B					39	59
A-C					126	189
D-ABC	0.49	15.56	0.9	C	184	275
C-ABD	0.15	6.93	0.2	A	76	113
C-D					19	29
C-A					132	198

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	361	90	537	0.673	354	0.0	1.9	18.958	C
A-BCD	2	0.56	572	0.004	2	0.0	0.0	6.316	A
A-B	32	8			32				
A-C	103	26			103				
D-ABC	151	38	488	0.308	149	0.0	0.4	10.548	B
C-ABD	62	15	623	0.099	61	0.0	0.1	6.410	A
C-D	16	4			16				
C-A	108	27			108				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	432	108	522	0.827	423	1.9	4.0	33.925	D
A-BCD	3	0.67	563	0.005	3	0.0	0.0	6.428	A
A-B	39	10			39				
A-C	123	31			123				
D-ABC	180	45	474	0.380	179	0.4	0.6	12.191	B
C-ABD	74	18	617	0.120	74	0.1	0.1	6.622	A
C-D	19	5			19				
C-A	129	32			129				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	528	132	501	1.054	481	4.0	16.0	94.370	F
A-BCD	3	0.83	550	0.006	3	0.0	0.0	6.587	A
A-B	47	12			47				
A-C	151	38			151				
D-ABC	220	55	453	0.486	219	0.6	0.9	15.281	C
C-ABD	91	23	610	0.149	91	0.1	0.2	6.924	A
C-D	23	6			23				
C-A	158	40			158				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	528	132	501	1.054	493	16.0	24.8	164.958	F
A-BCD	3	0.83	550	0.006	3	0.0	0.0	6.588	A
A-B	47	12			47				
A-C	151	38			151				
D-ABC	220	55	451	0.488	220	0.9	0.9	15.556	C
C-ABD	91	23	610	0.149	91	0.2	0.2	6.927	A
C-D	23	6			23				
C-A	158	40			158				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	432	108	522	0.827	501	24.8	7.3	125.002	F
A-BCD	3	0.67	563	0.005	3	0.0	0.0	6.429	A
A-B	39	10			39				
A-C	123	31			123				
D-ABC	180	45	471	0.382	181	0.9	0.6	12.480	B
C-ABD	74	18	617	0.120	74	0.2	0.1	6.626	A
C-D	19	5			19				
C-A	129	32			129				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	361	90	536	0.674	382	7.3	2.2	25.854	D
A-BCD	2	0.56	572	0.004	2	0.0	0.0	6.320	A
A-B	32	8			32				
A-C	103	26			103				
D-ABC	151	38	487	0.309	151	0.6	0.5	10.733	B
C-ABD	62	15	623	0.099	62	0.1	0.1	6.416	A
C-D	16	4			16				
C-A	108	27			108				

Church/Lund Hill/Hall Field Junction - 2030+Com, PM

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
5	Church/Lund Hill\Hall Field	Crossroads	Two-way		26.14	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 segment length (min)	Run automatically
D4	2030+Com	PM	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	262	100.000
B		ONE HOUR	✓	343	100.000
C		ONE HOUR	✓	244	100.000
D		ONE HOUR	✓	359	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	65	186	11
	B	45	0	111	187
	C	141	86	0	17
	D	8	340	11	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.75	28.62	2.9	D	315	472
A-BCD	0.02	6.69	0.0	A	10	15
A-B					60	89
A-C					171	256
D-ABC	0.88	58.66	6.0	F	329	494
C-ABD	0.16	7.29	0.2	A	79	119
C-D					16	23
C-A					129	194

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	258	65	548	0.472	255	0.0	0.9	12.158	B
A-BCD	8	2	572	0.014	8	0.0	0.0	6.381	A
A-B	49	12			49				
A-C	140	35			140				
D-ABC	270	68	483	0.559	265	0.0	1.2	16.179	C
C-ABD	65	16	608	0.107	64	0.0	0.1	6.613	A
C-D	13	3			13				
C-A	106	27			106				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	308	77	529	0.583	306	0.9	1.3	16.057	C
A-BCD	10	2	563	0.018	10	0.0	0.0	6.508	A
A-B	58	15			58				
A-C	167	42			167				
D-ABC	323	81	469	0.689	319	1.2	2.1	23.586	C
C-ABD	78	19	600	0.129	78	0.1	0.1	6.888	A
C-D	15	4			15				
C-A	126	32			126				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	378	94	502	0.752	372	1.3	2.7	26.568	D
A-BCD	12	3	550	0.022	12	0.0	0.0	6.690	A
A-B	72	18			72				
A-C	205	51			205				
D-ABC	395	99	448	0.882	383	2.1	5.2	47.529	E
C-ABD	95	24	589	0.162	95	0.1	0.2	7.286	A
C-D	19	5			19				
C-A	155	39			155				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	378	94	501	0.753	377	2.7	2.9	28.621	D
A-BCD	12	3	550	0.022	12	0.0	0.0	6.691	A
A-B	72	18			72				
A-C	205	51			205				
D-ABC	395	99	448	0.882	392	5.2	6.0	58.659	F
C-ABD	95	24	589	0.162	95	0.2	0.2	7.289	A
C-D	19	5			19				
C-A	155	39			155				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	308	77	527	0.585	314	2.9	1.5	17.276	C
A-BCD	10	2	563	0.018	10	0.0	0.0	6.512	A
A-B	58	15			58				
A-C	167	42			167				
D-ABC	323	81	468	0.689	337	6.0	2.4	29.787	D
C-ABD	78	19	600	0.129	78	0.2	0.2	6.898	A
C-D	15	4			15				
C-A	126	32			126				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	258	65	547	0.472	260	1.5	0.9	12.663	B
A-BCD	8	2	572	0.014	8	0.0	0.0	6.386	A
A-B	49	12			49				
A-C	140	35			140				
D-ABC	270	68	483	0.559	275	2.4	1.3	17.593	C
C-ABD	65	16	608	0.107	65	0.2	0.1	6.627	A
C-D	13	3			13				
C-A	106	27			106				

Church/Lund Hill/Hall Field Junction - 2030+Com+Dev, AM

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
5	Church/Lund Hill\Hall Field	Crossroads	Two-way		99.35	F

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	2030+Com+Dev	AM	ONE HOUR	07:30	09:00	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	191	100.000
B		ONE HOUR	✓	491	100.000
C		ONE HOUR	✓	324	100.000
D		ONE HOUR	✓	213	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	43	145	3
	B	47	0	74	370
	C	163	108	0	53
	D	7	175	31	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	1.12	236.70	37.1	F	451	676
A-BCD	0.01	6.87	0.0	A	3	4
A-B					39	59
A-C					133	200
D-ABC	0.55	19.09	1.2	C	195	293
C-ABD	0.20	7.31	0.2	A	100	150
C-D					48	73
C-A					149	223

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	370	92	526	0.703	361	0.0	2.2	20.849	C
A-BCD	2	0.56	557	0.004	2	0.0	0.0	6.487	A
A-B	32	8			32				
A-C	109	27			109				
D-ABC	160	40	471	0.340	158	0.0	0.5	11.430	B
C-ABD	82	20	623	0.131	81	0.0	0.2	6.634	A
C-D	40	10			40				
C-A	122	31			122				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	441	110	508	0.868	430	2.2	5.0	41.005	E
A-BCD	3	0.67	545	0.005	3	0.0	0.0	6.642	A
A-B	39	10			39				
A-C	130	33			130				
D-ABC	191	48	453	0.423	191	0.5	0.7	13.682	B
C-ABD	98	24	619	0.158	98	0.2	0.2	6.910	A
C-D	47	12			47				
C-A	146	36			146				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	541	135	484	1.117	472	5.0	22.1	123.881	F
A-BCD	3	0.83	528	0.006	3	0.0	0.0	6.865	A
A-B	47	12			47				
A-C	160	40			160				
D-ABC	235	59	427	0.549	233	0.7	1.2	18.369	C
C-ABD	121	30	614	0.197	120	0.2	0.2	7.298	A
C-D	58	14			58				
C-A	178	45			178				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	541	135	484	1.117	481	22.1	37.1	236.703	F
A-BCD	3	0.83	528	0.006	3	0.0	0.0	6.866	A
A-B	47	12			47				
A-C	160	40			160				
D-ABC	235	59	423	0.555	234	1.2	1.2	19.085	C
C-ABD	121	30	614	0.197	121	0.2	0.2	7.306	A
C-D	58	14			58				
C-A	178	45			178				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	441	110	508	0.869	495	37.1	23.8	224.438	F
A-BCD	3	0.67	544	0.005	3	0.0	0.0	6.646	A
A-B	39	10			39				
A-C	130	33			130				
D-ABC	191	48	445	0.430	193	1.2	0.8	14.389	B
C-ABD	98	24	619	0.158	98	0.2	0.2	6.922	A
C-D	47	12			47				
C-A	146	36			146				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	370	92	526	0.703	454	23.8	2.7	76.402	F
A-BCD	2	0.56	557	0.004	2	0.0	0.0	6.493	A
A-B	32	8			32				
A-C	109	27			109				
D-ABC	160	40	467	0.344	161	0.8	0.5	11.830	B
C-ABD	82	20	623	0.131	82	0.2	0.2	6.651	A
C-D	40	10			40				
C-A	122	31			122				

Church/Lund Hill/Hall Field Junction - 2030+Com+Dev, PM

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
5	Church/Lund Hill\Hall Field	Crossroads	Two-way		48.91	E

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	2030+Com+Dev	PM	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	281	100.000
B		ONE HOUR	✓	368	100.000
C		ONE HOUR	✓	278	100.000
D		ONE HOUR	✓	391	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	65	205	11
	B	45	0	136	187
	C	150	97	0	31
	D	8	340	43	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.82	37.84	4.0	E	338	507
A-BCD	0.02	6.81	0.0	A	10	15
A-B					60	89
A-C					188	282
D-ABC	1.00	127.18	14.9	F	359	538
C-ABD	0.18	7.53	0.2	A	90	135
C-D					28	42
C-A					137	206

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	277	69	547	0.506	273	0.0	1.0	12.947	B
A-BCD	8	2	566	0.015	8	0.0	0.0	6.456	A
A-B	49	12			49				
A-C	154	39			154				
D-ABC	294	74	471	0.625	288	0.0	1.6	19.062	C
C-ABD	73	18	606	0.121	73	0.0	0.1	6.756	A
C-D	23	6			23				
C-A	113	28			113				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	331	83	527	0.628	328	1.0	1.6	17.909	C
A-BCD	10	2	555	0.018	10	0.0	0.0	6.602	A
A-B	58	15			58				
A-C	184	46			184				
D-ABC	352	88	454	0.775	346	1.6	3.0	31.679	D
C-ABD	88	22	597	0.147	88	0.1	0.2	7.071	A
C-D	28	7			28				
C-A	134	34			134				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	405	101	498	0.814	397	1.6	3.7	33.156	D
A-BCD	12	3	540	0.022	12	0.0	0.0	6.813	A
A-B	72	18			72				
A-C	226	56			226				
D-ABC	430	108	430	1.002	400	3.0	10.6	80.993	F
C-ABD	108	27	586	0.184	108	0.2	0.2	7.525	A
C-D	34	8			34				
C-A	164	41			164				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	405	101	496	0.817	404	3.7	4.0	37.837	E
A-BCD	12	3	540	0.022	12	0.0	0.0	6.814	A
A-B	72	18			72				
A-C	226	56			226				
D-ABC	430	108	429	1.003	413	10.6	14.9	127.184	F
C-ABD	108	27	586	0.184	108	0.2	0.2	7.531	A
C-D	34	8			34				
C-A	164	41			164				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	331	83	524	0.632	340	4.0	1.8	20.378	C
A-BCD	10	2	555	0.018	10	0.0	0.0	6.607	A
A-B	58	15			58				
A-C	184	46			184				
D-ABC	352	88	453	0.775	394	14.9	4.2	73.520	F
C-ABD	88	22	597	0.147	88	0.2	0.2	7.080	A
C-D	28	7			28				
C-A	134	34			134				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	277	69	546	0.507	280	1.8	1.1	13.667	B
A-BCD	8	2	566	0.015	8	0.0	0.0	6.459	A
A-B	49	12			49				
A-C	154	39			154				
D-ABC	294	74	471	0.625	304	4.2	1.8	22.660	C
C-ABD	73	18	606	0.121	73	0.2	0.1	6.776	A
C-D	23	6			23				
C-A	113	28			113				

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.1.7462
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Filename: DevAccess.j9
Path: G:\12910 Hargreaves Services plc\12910-5005 Monckton Coke Works\Calcs
Report generation date: 08/04/2020 09:03:56

»Midland/Cross Junction - 2030+Com+Dev, AM
»Midland/Cross Junction - 2030+Com+Dev, PM

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	Midland/Cross Junction - 2030+Com+Dev											
Stream B-AC	D1	1.0	16.16	0.50	C	4.63	D2	0.3	12.03	0.25	B	1.80
Stream C-AB		0.1	6.64	0.06	A			0.2	7.65	0.15	A	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

File summary

File Description

Title	Royston Development
Location	Dev. Access/Lund Hill Junction
Site number	4
Date	05/03/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	MET\TomL
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	PCU	PCU	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	2030+Com+Dev	AM	ONE HOUR	07:30	09:00	15	✓
D2	2030+Com+Dev	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A4	Midland/Cross Junction	✓	100.000	100.000

Midland/Cross Junction - 2030+Com+Dev, AM

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
4	Dev Access/Lund Hill Junction	T-Junction	Two-way		4.63	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Lund Hill (south)		Major
B	Dev Access		Minor
C	Lund Hill (north)		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	6.10			150.0	✓	2.00

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	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	2.75	50	60

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	510	0.093	0.234	0.147	0.334
B-C	645	0.098	0.249	-	-
C-B	661	0.255	0.255	-	-

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	2030+Com+Dev	AM	ONE HOUR	07:30	09:00	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	307	100.000
B		ONE HOUR	✓	201	100.000
C		ONE HOUR	✓	236	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	53	254
	B	129	0	72
	C	206	30	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.50	16.16	1.0	C	184	277
C-AB	0.06	6.64	0.1	A	28	41
C-A					189	284
A-B					49	73
A-C					233	350

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	151	38	478	0.316	150	0.0	0.5	10.889	B
C-AB	23	6	602	0.038	22	0.0	0.0	6.208	A
C-A	155	39			155				
A-B	40	10			40				
A-C	191	48			191				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	181	45	464	0.390	180	0.5	0.6	12.649	B
C-AB	27	7	591	0.046	27	0.0	0.0	6.383	A
C-A	185	46			185				
A-B	48	12			48				
A-C	228	57			228				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	221	55	444	0.499	220	0.6	1.0	15.980	C
C-AB	33	8	575	0.057	33	0.0	0.1	6.637	A
C-A	227	57			227				
A-B	58	15			58				
A-C	280	70			280				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	221	55	444	0.499	221	1.0	1.0	16.161	C
C-AB	33	8	575	0.057	33	0.1	0.1	6.637	A
C-A	227	57			227				
A-B	58	15			58				
A-C	280	70			280				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	181	45	464	0.390	182	1.0	0.7	12.832	B
C-AB	27	7	591	0.046	27	0.1	0.0	6.387	A
C-A	185	46			185				
A-B	48	12			48				
A-C	228	57			228				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	151	38	478	0.316	152	0.7	0.5	11.058	B
C-AB	23	6	602	0.038	23	0.0	0.0	6.211	A
C-A	155	39			155				
A-B	40	10			40				
A-C	191	48			191				

Midland/Cross Junction - 2030+Com+Dev, PM

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
4	Dev Access/Lund Hill Junction	T-Junction	Two-way		1.80	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
D2	2030+Com+Dev	PM	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	419	100.000
B		ONE HOUR	✓	89	100.000
C		ONE HOUR	✓	396	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	128	291
	B	57	0	32
	C	324	72	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.25	12.03	0.3	B	82	123
C-AB	0.15	7.65	0.2	A	67	100
C-A					297	445
A-B					117	176
A-C					267	401

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	67	17	447	0.150	66	0.0	0.2	9.430	A
C-AB	54	14	583	0.093	54	0.0	0.1	6.807	A
C-A	244	61			244				
A-B	96	24			96				
A-C	219	55			219				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	80	20	426	0.188	80	0.2	0.2	10.379	B
C-AB	65	16	569	0.115	65	0.1	0.1	7.146	A
C-A	291	73			291				
A-B	115	29			115				
A-C	262	65			262				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	98	24	397	0.247	98	0.2	0.3	12.002	B
C-AB	80	20	551	0.146	80	0.1	0.2	7.648	A
C-A	356	89			356				
A-B	141	35			141				
A-C	320	80			320				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	98	24	397	0.247	98	0.3	0.3	12.034	B
C-AB	80	20	551	0.146	80	0.2	0.2	7.654	A
C-A	356	89			356				
A-B	141	35			141				
A-C	320	80			320				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	80	20	426	0.188	80	0.3	0.2	10.418	B
C-AB	65	16	569	0.115	65	0.2	0.1	7.157	A
C-A	291	73			291				
A-B	115	29			115				
A-C	262	65			262				

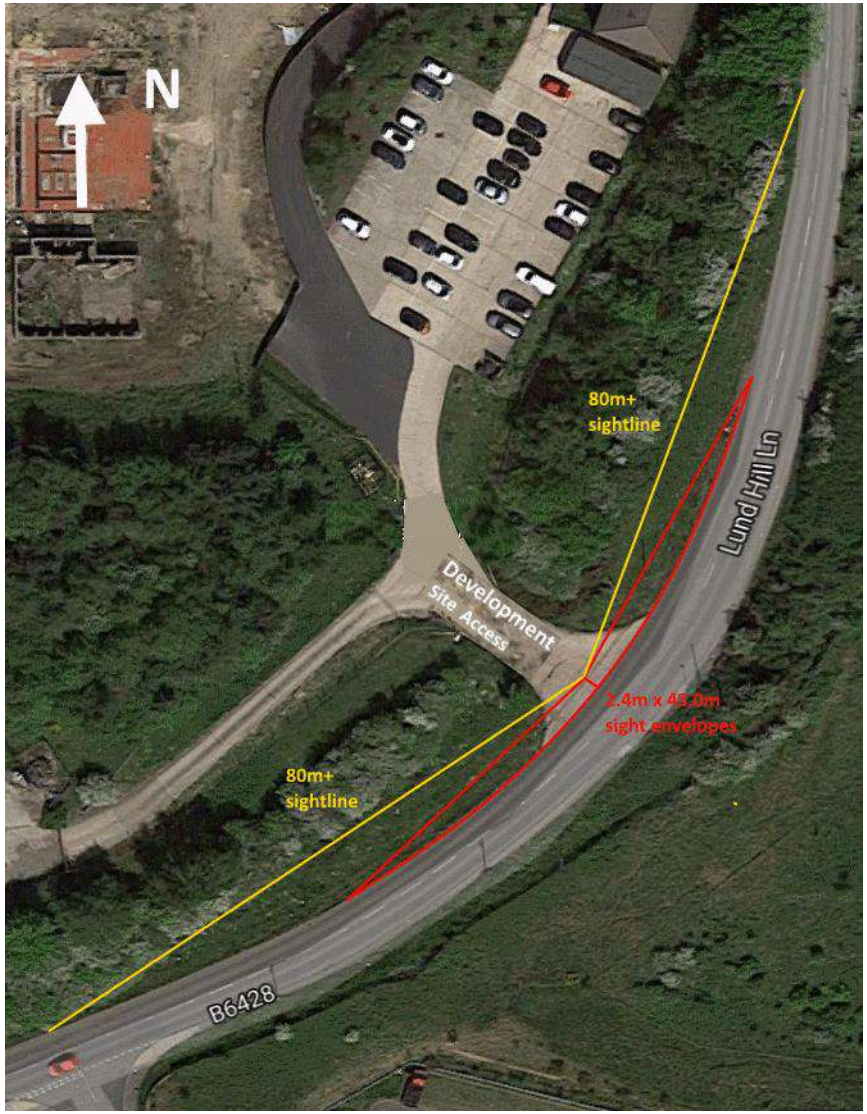
17:30 - 17:45

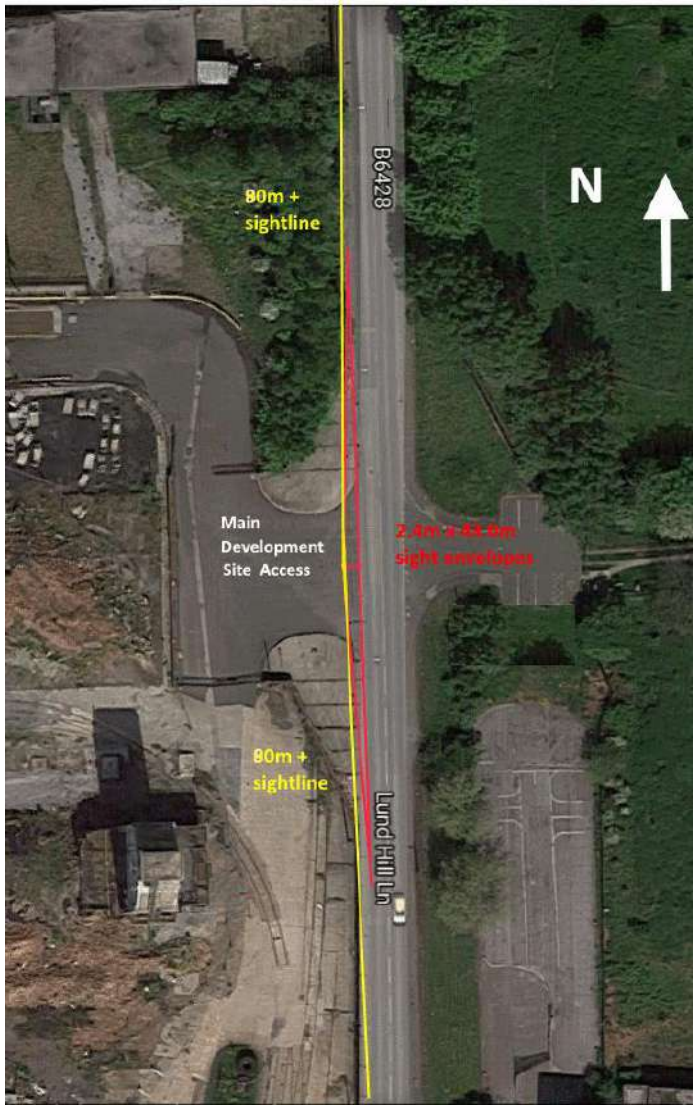
Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	67	17	447	0.150	67	0.2	0.2	9.480	A
C-AB	54	14	583	0.093	55	0.1	0.1	6.818	A
C-A	244	61			244				
A-B	96	24			96				
A-C	219	55			219				

APPENDIX N

Visibility Envelopes

(dimensions as specified)


N
80m+
sightline
Lund Hill Ln
Development
Site Access
2.4m x 43.0m
sight envelopes
80m+
sightline
B6428


B6428
N
80m +
sightline
Main
Development
Site Access
80m +
sightline
Lund Hill Ln